Presented to: ***Bureau of Reclamation***

City of Corona –
Department of Water & Power

2015

Advanced Metering Infrastructure Final Project Report

Agreement# R12AP35356

Presented by:

City of Corona
Department of Water & Power
755 Public Safety Way
Corona, CA 92880

August 25, 2015

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City of Corona
Department of Water and Power
"Protecting Public Health"

Office: 951.736.2234
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755 Public Safety Way
Corona, CA 92880 – www.discovercorona.com

August 25, 2015

U.S. Department of the Interior
Bureau of Reclamation
Attn: Debra Whitney
27708 Jefferson Ave., Suite 202
Temecula CA 92590

Subject: Final Project Report (Closeout) for Agreement# R12AP35356, Advanced Metering Infrastructure

Dear Ms. Whitney:

The City of Corona Department of Water & Power (DWP) is proud to present the final project report (closeout) for Agreement# R12AP35356, Advanced Metering Infrastructure (Project). The original agreement was executed on September 26, 2012. Upon final modification# 003, the project completion date was May 31, 2015.

The total project budget was $598,131, with a 50% fund match. DWP spent a total of $622,693.61, exceeding Corona's match portion of $299,065.50 by $24,562.61. The entire grant amount of $299,065.50 was eligible for reimbursement and was withdrawn from the ASAP system. There are no available grant funds remaining on the project.

Should you have any questions about this project, please contact Tracy Martin at (951) 817-5880 or by e-mail at tracy.martin@ci.corona.ca.us or Rob Schunk at (951) 817-5748 robert.schunk@ci.corona.ca.us.

Best regards,

Jonathan Daly
DWP General Manager

Final Progress Report

1. Recipient Information

Agreement Number:	R12AP35356
Project Name:	Advanced Metering Infrastructure
Grant Administrator/Contact:	Debra Whitney
	Bureau of Reclamation
	27708 Jefferson Avenue
	Suite 202
	Temecula, CA 92590
dwhitney@usbr.gov	or (951) 695-5310
Grantee/Recipient:	City of Corona – Department of Water & Power
Grant Recipient Project Manager:	Jacqueline Zukeran
Phone:	(951) 739-4983
Email:	Jacqueline.Zukeran@ci.corona.ca.us
Date of Award:	September 26, 2012
Estimated Completion Date:	May 31, 2015
Actual Completion Date:	May 31, 2015
Date Submitted:	August 25, 2015
	Corona Tracking# 68650570

2. Final Funding Information

	Funding Amount
Non-Federal Entities	
1) City of Corona	299,065.50
Non-Federal Subtotal:	**299,065.50**
Other Federal Entities	
1)	N/A
Other Federal Subtotal:	**$0.00**
Reclamation Funding	
Requested Reclamation Funding:	**299,065.50**
Total Project Funding:	**$598,131.00**

3. One Paragraph Project Summary:

The City of Corona Department of Water & Power (DWP) proposed to convert outdated water meters into "smart" meters with advanced metering infrastructure (AMI) technology capabilities (Project). The final Project encompassed a total of 1,311 new meters and existing meters retrofitted with the AMI technology. A total of 1,213 meters were either replaced or retrofitted within the Eagle Glen area. Replaced meters located within the Eagle Glen area are now able to be read via data collectors, with remaining meters retrofitted for real-time data for a system water balance check to this area. The balance of 98 AMI meters were placed elsewhere throughout the City, in difficult to access areas that were completely inaccessible by our meter readers, that previously resulting in estimated readings. These can now be read using in-house data collection software on a regular basis. The Project expands the City's current water conservation efforts by utilizing advanced technology advancements in metering infrastructure as a cost-effective means of improving operational efficiencies, accurate meter reading data for maximum revenue optimization and aid as tool in identifying potential waste location of a precious resource, water.

4. Final Project Description

Briefly describe components of the project and the work completed, including each element of the scope of work and the work completed at each stage of the project. Please include maps, sketches, and/or drawing of the features of the completed project, as appropriate. In addition, please describe any changes in the project scope.

The following tasks were completed during the project:

Task No.	High Level Activities/Milestones	Work Completed at each Stage of the Project
RFP/Bidding		
1	Develop RFP plans, specifications, and estimates	A preliminary study and design of a scope of work for the installation of meters, radios and meter lids was performed. Additionally, DWP researched different products and software currently on the market for AMI solutions. The DWP conducted follow-up meetings with four vendors to find the product and software not only for this project but with an eye to the future. DWP carefully sought the right solution for this AMI conversion project to pave the way for future expansion throughout the DWP service area at some point in the future. Therefore careful consideration during initial software selection will help to determine the best AMI software solution for both our operations and to our customers. Learning from past experiences, i.e. radio transmitters

		installed approximately 10 years ago in a portion of our service area, we examined in particular at not only cost but the durability of the product to withstand the hostile environments that can be found in water meter boxes in the ground, such as snails, weather, and water, and also battery life, to ensure that the devices installed will last. Previously, DWP hired a contractor to perform an audit of all meters within our service area. The information obtained through this audit proved beneficial when it came to upgrading our water meter system. In addition, some of the AMI transmitters (radios) on the market do not require control towers, data collectors or repeaters to be installed. Therefore DWP looked at several different solutions that would be cost-effective for this project and the long-term. After requesting a modification for a scope change to reflect the final solution, a new scope was executed on May 27, 2014. Modification# 002 changed the original contract scope to convert existing meters to "smart" meters. Areas throughout the City that are difficult to access or are completely inaccessible by our meter readers currently result in estimated reads. Converting these meters to "smart" meters will save the cost of relocation (which would otherwise be necessary to obtain accurate reads), encourage conservation, and provide the City with an accurate measure of how a citywide "smart" meter deployment would function. Additional meters would then be installed in the Eagle Glen area. These would be able to be read via data collectors installed at newly constructed Montecito Apartments. The modified project scope as of Modification# 003, resulted in an revised meter total count of 1,301 to be bid for installation. This Project is estimated to conserve approximately 82 acre feet of water per year.
2	Prepare RFP package for construction	As much preliminary preparation was made during Task No. 1, the bid document was near completion September 2014. A Notice Inviting Bids for the project was advertised
3	Notice Inviting Bids (NIB) Issued/ Request for Proposals (RFP) / Review of Bids & Proposals	A Notice Inviting Bids for the project was advertised on October 24, 2014. Proposals were due November 12, 2014. As no contractor submitted an original bid for the software aspect, it delayed the bidding process as it subsequently had to be separately bid. Contractor Golden Meters Service Inc. was the most responsive, responsible bidder for the construction portion of the bid; unfortunately, no contractor submitted a bid for the

		software aspect of the project. At second RFP for software aspect of proposal, price negotiations were performed for the software bid. The final vendor selected for the software was Smart Utility Systems.
4	Contract Award at City Council Meeting (if applicable)	Contract award at a City Council meeting was not applicable, as both the contractor and the software vendor fell below dollar thresholds requiring Council award as per Corona Municipal Code (CMC) regulations and the City's Purchasing Policy and Procedures Manual. The contract for automated metering replacement and installation services was awarded and completed through an informal bidding procedure to contractor Golden Meters Service, Inc. in the amount of $78,065. Pending final review and execution of the software Agreement, the vendor selected for the software was Smart Utility Systems. Their bid of $9,999 was accepted by applying the City's alternative bidding procedures.
Installation of Meters		
5	Vendor Installation of meters	A Modification No. 003 was submitted in March 2015 due to a procurement process delay affecting the contractor's time to install the meters. A time extension through May 31, 2015 was granted which to allow ample time for the installation and City's review of the work performed by contractor. The City ordered and furnished equipment and materials once internal purchasing policies were met. Final installation of all meters, radios, and registers occurred from actual service orders of 1,292 meter exchanges and retrofits. The difference of 19 meter exchanges and retrofits necessary upon field check and conditions were performed in-house by City Staff. A final total of 1,045 meter exchanges and 266 retrofits were completed by the end of this project. The combined final total increased to 1,311 meters equipped with "smart" technology. In addition, postcards were made and mailed to affected residents explaining the project's "smart" meters in March 2015. Additional awareness of the "smart" meters to the residents and community was established through magnets placed on the outside of each of the contractor vehicles while performing the project's meter installation.
Software Training		
6	Software Training	Staff met with vendor and discussed software solutions in March 2015. Software set-up for project was expected to

		begin in April 2015 with training anticipated for final task completion in May 2015. Currently, Staff has the ability now to pull data and read the data remotely for the installed meters using in-house software. This additional software will expand use to the end-user (customer) for real-time data. The remaining portion of this task for end-users was completed after the project completion date and subsequent payment balance would be paid by City funds.

5. Accomplishment of Project Goals:

Describe the goals and objectives of the project and whether each of these was met. Where appropriate, state the reasons why goals and objectives were not met, and describe any problems or delays encountered in completing the project. Please include whether or not the project was completed within cost.

Goals and objectives of the Project:

One of the goals of this Project was to convert existing meters to "smart" meters which were spread throughout the City. Many of which were difficult to access or completely inaccessible by our meter readers, resulting in estimated reads. Conversion to "smart" meters would then save the cost of relocation (which would otherwise have been necessary to obtain accurate reads), encourage conservation, and provide the City with an accurate measure and indicator of how a citywide "smart" meter deployment would function, as these meters are spread throughout the City instead of being located in the same general area.

A second goal was to install the remaining meters within southern Corona, in the Eagle Glen area to be read via data collectors installed at newly constructed Montecito apartments. The City was able to measure water supplied to 265 of the original existing 986 meters in Eagle Glen. This conversion allows us to perform a true system water balance for the area.

The objectives were met as a combined total of 1,311 meters were converted to AMI technology (1,045 existing meters and 266 retrofitted) by this Project. Ninety-eight (98) of the meters (new and retrofitted) were placed throughout Corona, with the remaining balance of 1,213 placed in Eagle Glen area.

6. Discussion of Amount of Water Conserved, Marketed or Better Managed:

In responding to the questions set forth below, Recipients should rely on the best data or information available. Actual field measurements should be used whenever possible (e.g., baseline data or post-project data derived from measuring devices, diversion records, seepage tests, etc.) Where actual field measurements are not available, water savings (or amounts marketed or better managed) may be estimated based on studies, other similar improvement projects, or anecdotal evidence.

A. Recipient's total water supply (average, annual, available water supply in acre-feet per year):

The 2014 calendar year total water supply was approximately 32,309.72 acre-feet per year (AFY).

B. Amount of water conserved, marketed or better managed as a result of the project (in acre-feet per year):

The current number of accounts served by DWP is roughly 43,000. Approximately 5,000 commercial/governmental/industrial accounts are serviced by the City of Corona., with the remaining as residential accounts estimated at 38,000. The 1,311 newly installed and retrofitted meters is approximately 3% of the total number of accounts

providing a good representative sample.

An initial sampling was taken in 2015 of a 5-month residential and a 4-month commercial period from the Project's newly retrofitted meters. A comparison of same period was then taken from one-year ago (2014) before the meter retrofit showed initial savings. Our sampling of retrofitted meters rendered the results as shown in Attachment I - Preliminary Water Data table.

As we are also locally in Stage 2 of our Water Conservation Ordinance and with recent State restrictions on usage, our customers have made improvements in reduced usage. We will continue to monitor usage on a regular basis, manage the completed AMI Project meters, and expand AMI technology in the future as funding exists.

C. Describe how the amounts stated in response to 6.B were calculated or estimated:
In responding to this question, please address (1) – (3) below.

(1) Describe the information/data being relied on to calculate/estimate the project benefits. State how that data/information was obtained, if appropriate. Provide any other information necessary to explain how the final calculation/estimate of project benefits was made.

DWP's current estimated initial water conservation savings was tabulated by the DWP Customer Care Division using the software for in-house monitoring and pulling a sampling of meters retrofitted after the Project in comparison to before the Project. The initial results proved promising; however, the data is still being analyzed as drought conditions have impacted customer usage. We believe that a one-year comparative period may provide more accurate results to infer data from. We will continue to monitor Project benefits.

(2) As appropriate, please include an explanation of any concerns or factors affecting the reliability of the data/information relied on.

A one-year comparative period may provide more accurate results to infer data from rather than less than a six-month period of data. We will continue to monitor Project benefits and review usage data and trends.

(3) Attach any relevant data, reports or other support relied on in the calculation/estimate of project benefits, if available. Please briefly describe the data/information attached, if any.

Refer to report data results as shown in Attachment I - Preliminary Water Data spreadsheet table. Internal software is also used to flag accounts that potentially have a leak. Customers are notified and a Technician is sent to perform a site visit and

address any issues.

D. Use of Conserved Water:
Please explain where the water saved, better managed, or marketed as a result of the project is going (e.g. used by the recipient, in stream flows, available to junior water users, etc.

This project comes at a time where State mandates of decreasing water usage is a must and real-time data at any given date/time is a necessity for the Department of Water & Power as a Utility provider. Water conserved is water that can be used elsewhere or saved for future needs. It is estimated that Project will conserve approximately 82 AF of water per year. A year's worth of data sampled and collected would provide a better estimate of water conserved by using the AMI technology.

Once implemented in full, including the customer's ability to view their usage on a real-time basis would help the consumer be proactive in understanding their usage.

E. Future tracking of project benefits: *Please state whether and how the recipient plans to track the benefits of the project (water saved, marketed or better managed) in the future. If no actual field measurements are currently available to support the estimate of project benefits in 6.B., please state whether actual field measurements will become available in the future. If so, please state whether the Recipient is willing to provide such data to Reclamation on a voluntary basis once it is available.*

DWP already regularly monitors account usage and trends, the new meter technology will reduce errors in readings and result in accurate billings which signals to the end-user that water is being conserved or increased. Any significant account increases will be contacted by our Water Resources Division for a free water audit and to access ways to reduce their usage. We can now get accurate reads in areas that were previously estimated, providing us with a true calculation of usage.

We will get a better assessment of project benefits as we continue to monitor. Should the Bureau of Reclamation wish to receive a random sampling of meter data collected in real-time throughout Corona from the Project or from those concentrated in the Eagle Glen area collected via data collectors, we could voluntarily provide summary data on an annual basis for a total of three years.

7. Discussion of Amount of Renewable Energy Added:

If your project included the installation of a renewable component, please describe the amount of energy the system is generating annually. Please provide any data/reports in support of this calculation.

Not applicable.

8. Describe how the project demonstrates collaboration, stakeholder involvement or the formation of partnerships, if applicable:

Please describe the collaboration involved in the project, and the role of any cost-share or other types of partners. If there were any additional entities that provided support (financial or otherwise) please list them.

An opportunity for stakeholders was provided at a City Council meeting and at the time a resolution was made for adoption of this grant. City staff then coordinated all aspects of the project inter-departmentally, working cohesively and collaboratively to achieve the desired results of retrofitting and new installation of "smart" meter technology, including inspection.

9. Describe any other pertinent issues regarding the project:

As the price of the meters came in significantly higher than originally estimated, the grant funds were then primarily used for new meter exchanges, retrofits and towards the installation. The data collectors themselves were instead purchased with City funds outside of the grant to meet the primary objectives of the grant of purchasing the "smart" meters and installation.

The software was not finalized at the end of the contract date. The remaining balance due to this vendor will be handled in-house by the City of Corona upon completion.

10. Feedback to Reclamation regarding the WaterSMART Program:

Please let us know if there is anything we can do to improve the WaterSMART program in general, including the process for applying for or completing a WaterSMART project. Your feedback is important to us.

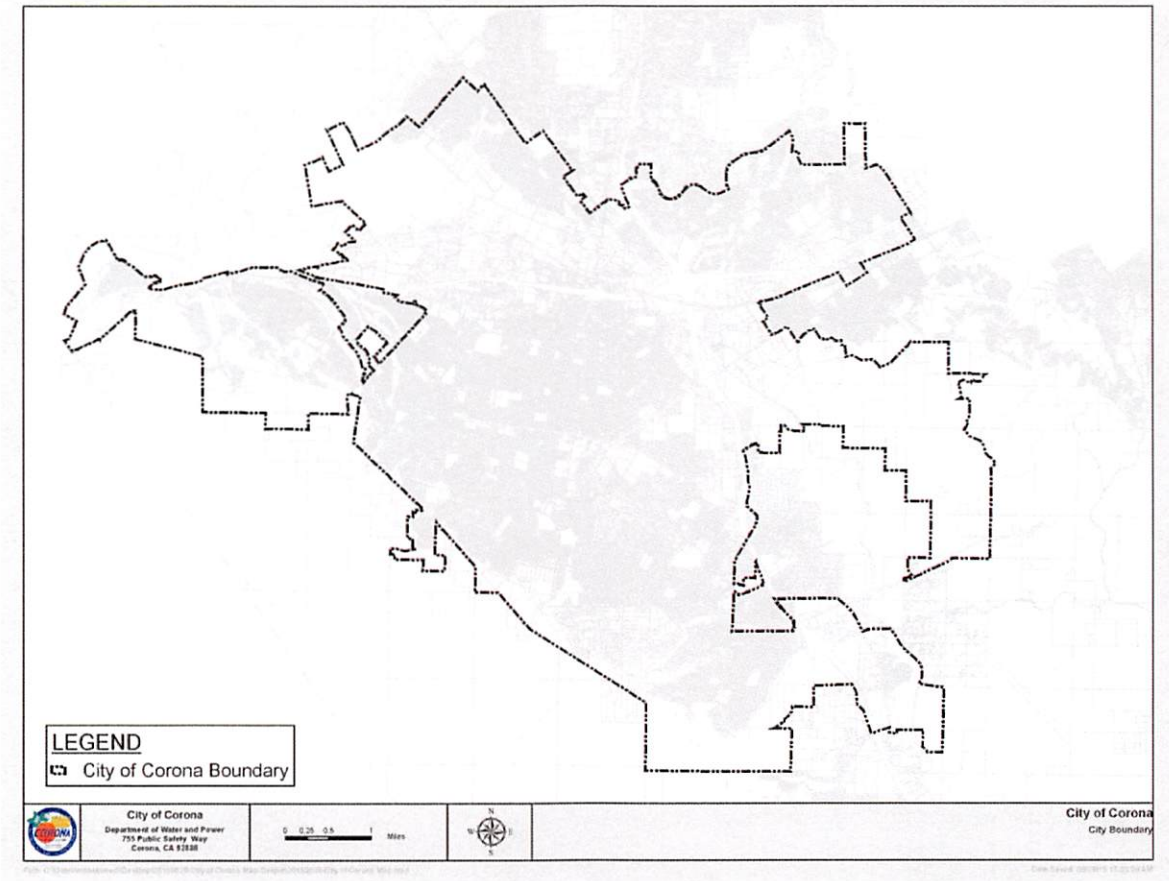
No issues at this time.

11. Attachments: Please attach the following

- ☐ Any available data or information relied on in responding to paragraph 7, above;
- ☒ A map or illustration showing the location of the recipient's facilities (see paragraph 4, above);
- ☒ A table showing the total expenditures for the completed project;
- ☒ Representative before and after photographs, if available;
- ☒ Maps, sketches, and/or drawings of the features of the completed project, as appropriate (see paragraph 5, above);
- ☒ Other

Attachment A: Map of Project Area

AMI project area of citywide deployment is within various locations throughout the City of Corona



Corona's Eagle Glen community area boundary (balance of "smart" meters and retrofitted meters with v

Attachment B: Total Expenditures (Actual)

Table: Actual Budget						
Budget Item Description	**Recipient**	**Reclamation**	**Total Cost**	**Actual (Cumulative)**	**% Grant Used**	**Difference**
Salaries and Wages				**$2,400.03**		
Fringe Benefits				**$1,152.27**		
Supplies/ Materials				**$536,549.41**		
Contractual /Construction				**$82,591.90**		
Total Actual Project Costs	**$323,628.11**	**$299,065.50**	**$622,693.61**	**$622,693.61**		
Grant Match & Funding	**$299,065.50**	**$299,065.50**	**$598,131.00**	**$622,693.61**	**100%**	**<$24,562.61>**
Percentage Contribution	50%	50%	100%			

Attachment C: SF425 Federal Financial Report

FEDERAL FINANCIAL REPORT

(Follow form instructions)

1. Federal Agency and Organizational Element to Which Report is Submitted	2. Federal Grant or Other Identifying Number Assigned by Federal Agency (To report multiple grants, use FFR Attachment)	Page	of
Bureau of Reclamation	R12AP35356	1	pages

3. Recipient Organization (Name and complete address including Zip code)

City of Corona, Department of Water & Power

400 S. Vicentia Avenue
Corona, CA 92882-2187

4a. DUNS Number	4b. EIN	5. Recipient Account Number or Identifying Number (To report multiple grants, use FFR Attachment)	6. Report Type	7. Basis of Accounting
088513155	95-6000697		☐ Quarterly ☐ Semi-Annual ☐ Annual X Final	☐ Cash x Accrual

8. Project/Grant Period From: (Month, Day, Year)	To: (Month, Day, Year)	9. Reporting Period End Date (Month, Day, Year)
9/26/2012	5/31/2015	5/31/2015

10. **Transactions**	Cumulative
(Use lines a-c for single or multiple grant reporting)	
Federal Cash (To report multiple grants, also use FFR Attachment):	
a. Cash Receipts	$0.00
b. Cash Disbursements	$0.00
c. Cash on Hand (line a minus b)	$0.00
(Use lines d-o for single grant reporting)	
Federal Expenditures and Unobligated Balance:	
d. Total Federal funds authorized	$299,065.50
e. Federal share of expenditures	$299,065.50
f. Federal share of unliquidated obligations	$0.00
g. Total Federal share (sum of lines e and f)	$299,065.50
h. Unobligated balance of Federal funds (line d minus g)	$0.00
Recipient Share:	
i. Total recipient share required	$299,065.50
j. Recipient share of expenditures	$323,628.11
k. Remaining recipient share to be provided (line i minus j)	($24,562.61)
Program Income:	
l. Total Federal program income earned	$0.00
m. Program income expended in accordance with the deduction alternative	$0.00
n. Program income expended in accordance with the addition alternative	$0.00
o. Unexpended program income (line l minus line m or line n)	$0.00

	a. Type	b. Rate	c. Period From	Period To	d. Base	e. Amount Charged	f. Federal Share
11. Indirect Expense	N/A	N/A	N/A	N/A	N/A	N/A	N/A
				g. Totals:	N/A		

12. *Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation:*

13. **Certification: By signing this report, I certify that it is true, complete, and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent information may subject me to criminal, civil, or administrative penalities. (U.S. Code, Title 218, Section 1001)**

a. Typed or Printed Name and Title of Authorized Certifying Official	c. Telephone (Area code, number and extension)
Jonathan Daly General Manager City of Corona, Department of Water & Power	(951) 736-2477 d. Email address Jonathan.Daly@ci.corona.ca.us
b. Signature of Authorized Certifying Official	e. Date Report Submitted (Month, Day, Year) 8/25/2015
	14. Agency use only:

Standard Form 425
OMB Approval Number: 0348-0061
Expiration Date: 10/31/2011

Paperwork Burden Statement
According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is 0348-0061. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0061), Washington, DC 20503.

Attachment D: Project Schedule, Original/Revised Compared to Actual

Task	Milestone	Original/ Revised Start Date	Actual Start Date	Original/ Revised End Date	Actual End Date
1	Develop RFP plans, specifications, and estimates	August 2014	August 2014	October 2014	October 2014
2	Prepare RFP package for construction	October 2014	October 2014	October 2014	October 2014
3	Request for Proposals	October 2014	October 2014	November 2014	November 2014
4	Review of Proposals	November 2014	November 2014	December 2014	November 2014
5	Notice of Award	December 2014	November 2014	December 2014	November 2014
6	City Furnished Equipment/Material Procurement Process	December 2014	January 2015	February 2015	January 2015
7	Vendor installation of meters	February 2015	February 2015	March 2015	March 2015
8	Software Training	February 2015	May 2015	March 2015	July 2015

Attachment E: Corona City Council and Corona Utility Authority Action

COUNCIL ACTION: (For City Clerk use only)
☐ ADOPTED RESOLUTION NO. _____
☐ APPROVED ☐ APPROVED WITH CHANGES
☐ CONTINUED TO _____ ☐ DENIED
☐ INTRODUCED ORDINANCE NO. _____
☐ NO ACTION TAKEN/DID NOT PASS
☐ RECEIVED AND FILED ☐ RETURNED TO STAFF
☐ REFERRED TO _____
☐ SET FOR PUBLIC HEARING

Agenda Report No. 6.D.2

AGENDA REPORT
REQUEST FOR CITY COUNCIL AND CORONA UTILITY AUTHORITY ACTION

DATE: January 4, 2012

TO: Honorable Mayor and City Council Members
Honorable President and Board Members

FROM: Department of Water and Power

SUBJECT: CITY COUNCIL AND CORONA UTILITY AUTHORITY CONSIDERATION OF A RESOLUTION APPROVING AN APPLICATION FOR FEDERAL ASSISTANCE FROM THE UNITED STATES DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION, WATER AND ENERGY EFFICIENCY GRANT PROGRAM, AND DIRECTING THE GENERAL MANAGER OF THE DEPARTMENT OF WATER AND POWER TO NEGOTIATE AND EXECUTE ANY AND ALL AGREEMENTS OR DOCUMENTS NECESSARY FOR THE WATER AND ENERGY EFFICIENCY GRANT PROGRAM

RECOMMENDED ACTION:

That the:

1. City Council adopt Resolution No. 2012-_____ approving an application for Federal Assistance from the United States Department of Interior, Bureau of Reclamation, Water and Energy Efficiency Grant Program, and directing the General Manager of the Department of Water and Power to negotiate and execute any and all agreements or documents necessary for the Water and Energy Efficiency Grant Program.

2. City Council authorize and direct the Department of Water and Power General Manager to negotiate and execute any agreements or other documents related to this item, and verifying the "capability" of the City to provide a 50 percent local funding match.

3. City Council direct staff to apply for grant funds through the Water and Energy Efficiency Grant Program for the installation of AMI water meters.

4. Corona Utility Authority (CUA) review, ratify and to the extent necessary direct that the City Council take the above actions.

File No. CC - _____.

ANALYSIS:

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. The Water and Energy Efficiency Grant Program provides cost-sharing funding on a competitive basis for water use efficiency and conservation activities.

The Department of Water & Power (DWP) proposes to begin a program installing approximately 5,000 Advanced Metering Infrastructure (AMI) "smart-meters" in the southern portion of its water system. These meters will provide DWP and the customers with real time data on their water usage. This technology will allow for faster identification of water leak issues. It will provide customers the ability to make active changes in their consumption. It will provide for a reduction in the need for staff time to make manual reads of meters. It will provide real time data to customer service staff, which will allow them to provide more accurate information to the customers. On average, studies have reported an estimated water savings of 10-15 percent of their annual usage once the system is in place. For these reasons, staff recommends proceeding with an application for grant funds to proceed with this project.

FISCAL IMPACT:

The estimated project cost is approximately $1,400,000. The proposed application will request $300,000 in funds from the Water and Energy Efficiency Grant Program. A local match of 50 percent of project costs is required for this grant program, and the City Council must verify the City's "capability" to provide the local match. Staff has verified there are available resources to meet the City's match requirement. Once a grant award is made and a funding agreement has been prepared for execution, DWP will bring a request for acceptance and appropriation before the City Council.

ENVIRONMENTAL ANALYSIS:

No environmental review is required because the proposed action is exempt under the California Environmental Quality Act, or CEQA.

REVIEWED BY:

Greg Irvine
Assistant City Manager

SUBMITTED BY:

Bradly L. Robbins
City Manager & Executive Director

REVIEWED BY:

Barbara Thierjung
Acting Finance Director

REVIEWED BY:

For Jonathan Daly
DWP General Manager

PREPARED BY:

Kerry Eden
Assistant General Manager

Attachment F: Resolution No. 2012-002

RESOLUTION NO. 2012-002

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORONA, CALIFORNIA AND CORONA UTILITY AUTHORITY APPROVING AN APPLICATION FOR FEDERAL ASSISTANCE FROM THE UNITED STATES DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION, WATER AND ENERGY EFFICIENCY GRANT PROGRAM, AND DIRECTING THE GENERAL MANAGER OF THE DEPARTMENT OF WATER AND POWER TO NEGOTIATE AND EXECUTE ANY AND ALL AGREEMENTS OR DOCUMENTS NECESSARY FOR THE WATER AND ENERGY EFFICIENCY GRANT PROGRAM

WHEREAS, the United States Department of Interior, Bureau of Reclamation, makes financial assistance available to local agencies through the Water and Energy Efficiency Grant Program; and

WHEREAS, the City of Corona has a project which is eligible for financial assistance through the Water and Energy Efficiency Grant Program: the installation of AMI Meters; and

WHEREAS, if financial assistance is awarded through the Water and Energy Efficiency Grant Program, the City of Corona is required to provide 50 percent of the project costs as a local match; and

WHEREAS, the Bureau of Reclamation requires an official resolution certifying review and support of application(s) by the applicant's governing board before submission of said application(s), providing the identity of the official with legal authority to enter into any necessary agreements, verifying that the City is capable of providing the local match, and verifying that the applicant will work within deadlines established for the Water and Energy Efficiency Grant Program; and

WHEREAS, the City Council and the Board of Directors of the Corona Utility Authority wish to seek financial assistance through the Water and Energy Efficiency Grant Program.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Corona, California, as follows:

SECTION 1. The City Council and Board of Directors of the Corona Utility Authority hereby support and authorize the submittal of an Application for Federal Assistance to

the United States Department of Interior, Bureau of Reclamation, for City projects eligible for the Water and Energy Efficiency Grant Program.

SECTION 2. The General Manager of the City of Corona Department of Water and Power is hereby directed to deliver a copy of this Resolution to the United States Department of Interior, Bureau of Reclamation, and is hereby authorized and empowered, in the name of the City of Corona, to work within timelines established for the Water and Energy Efficiency Program and to execute all necessary agreements and documents to implement and carry out the purposes of this Resolution, including but not limited to any Applications for Federal Assistance, any Funding Agreements, and any Cooperative Agreements required by the United States for the Water and Energy Efficiency Grant Program.

SECTION 3. The City of Corona is capable of providing the 50 percent matching funding required for the City projects eligible for the Water and Energy Efficiency Grant Program.

PASSED, APPROVED AND ADOPTED this 4th day of January, 2012.

Mayor of the City of Corona, California

ATTEST:

City Clerk of the City of Corona, California

27157.02700\7111998.2

CERTIFICATION

I, Lisa Mobley, Chief Deputy City Clerk of the City of Corona, California, do hereby certify that the foregoing Resolution was regularly introduced and adopted by the City Council of the City of Corona, California, at an adjourned meeting thereof held on the 4th day of January, 2012, by the following vote:

AYES:	**MONTANEZ, NOLAN, SCOTT, SKIPWORTH, SPIEGEL**
NOES:	**NONE**
ABSENT:	**NONE**
ABSTAINED:	**NONE**

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Corona, California, this 4th day of January, 2012.

City Clerk of the City of Corona, California

[SEAL]

Attachment G: Release of Claims

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Southern California Area Office

Agreement Number

R12AP35356

Agreement Date

09/26/12

RELEASE OF CLAIMS

WHEREAS, by the terms of the above-identified agreement for

ADVANCED METERING INFRASTRUCTURE PROJECT

entered into by the United States of America, hereinafter also referred to as the United States, and the grant recipient whose name appears on the agreement as

CITY OF CORONA

it is provided that after completion of all work, the grant recipient will furnish the United States with a release of all claims;

NOW, THEREFORE, in consideration of the above premises and the payment by the United States to the recipient the total amount of

$299,065.50

the grant recipient hereby remises, releases, and forever discharges the United States, its officers, agents, and employees, of and from all manner of debts, dues, liabilities, obligations, accounts, claims, and demands whatsoever, in law and equity, under or by virtue of the said agreement except:

IN WITNESS WHEREOF, the agreement recipient has executed this release this **25th** day of **August, 2015**.

By _____
(Signature)

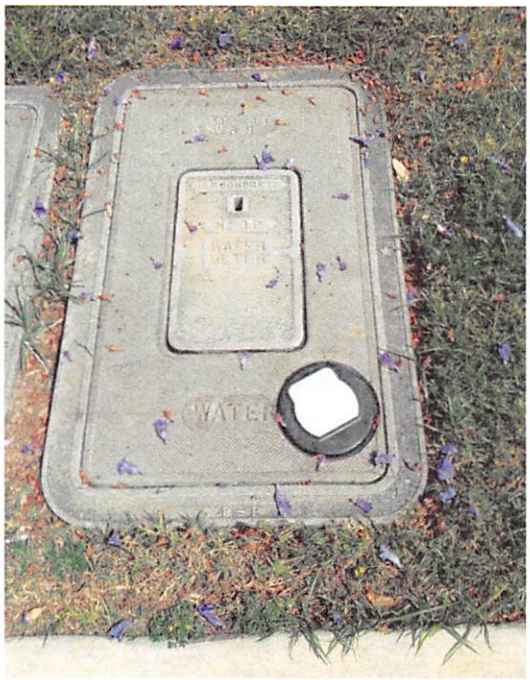
Jonathan Daly
(Name -- Type or Print)

General Manager
(Title)

City of Corona
(Agreement Recipient)

Attachment H: Photographs

Actual meter lids installed (random sampling for illustration)

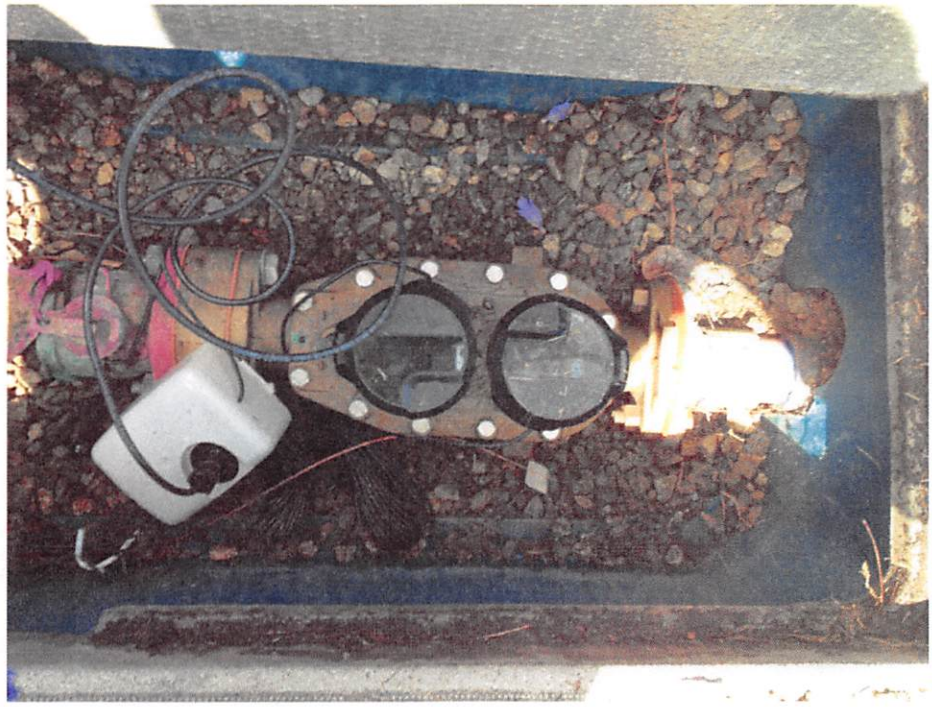


Meter Lid 6B

Meter Lid 5F

Attachment H: Photographs, Continued

Actual meters installed (random sampling for illustration)



2" Compound Meter

Attachment H: Photographs, Continued

Actual meters installed (random sampling for illustration)

¾" Meter

Attachment H: Photographs, Continued

Actual meters installed (random sampling for illustration)

1" Meter

Attachment I: Preliminary Water Data – AMI Retrofit Sample

Type of Modification	Account Type	Service Type	Meter Size	Usage 5 Months After Installation	Usage of the Corresponding 5 Months from the Previous Year	Difference	Difference Per Month	% Decrease
AMI Retrofit	Residential Single Family	Domestic	5/8" meter	76	101	-25	-5	-25%
AMI Retrofit	Residential Single Family	Domestic	5/8" meter	82	83	-1	-0.2	-1%
AMI Retrofit	Residential Single Family	Domestic	5/8" meter	22	27	-5	-1	-19%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	147	173	-26	-5.2	-15%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	236	362	-126	-25.2	-35%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	88	111	-23	-4.6	-21%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	109	145	-36	-7.2	-25%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	212	230	-18	-3.6	-8%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	196	241	-45	-9	-19%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	120	140	-20	-4	-14%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	192	205	-13	-2.6	-6%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	101	130	-29	-5.8	-22%
AMI Retrofit	Residential Single Family	Domestic	3/4" meter	121	136	-15	-3	-11%
AMI Retrofit	Residential Single Family	Domestic	1" meter	263	383	-120	-24	-31%
AMI Retrofit	Residential Single Family	Domestic	1" meter	88	94	-6	-1.2	-6%
AMI Retrofit	Residential Single Family	Domestic	1" meter	213	215	-2	-0.4	-1%
AMI Retrofit	Residential Single Family	Domestic	1" meter	87	131	-44	-8.8	-34%
AMI Retrofit	Residential Single Family	Domestic	1" meter	171	223	-52	-10.4	-23%
AMI Retrofit	Residential Single Family	Domestic	1" meter	114	159	-45	-9	-28%
AMI Retrofit	Residential Single Family	Domestic	1" meter	60	125	-65	-13	-52%
AMI Retrofit	Residential Single Family	Domestic	1" meter	111	140	-29	-5.8	-21%
AMI Retrofit	Residential Single Family	Domestic	1 1/2" meter	64	749	-685	-137	-91%
AMI Retrofit	Residential Single Family	Domestic	1 1/2" meter	317	411	-94	-18.8	-23%
				Usage 4 Months After Installation	Usage of the Corresponding 4 Months from the Previous Year			
AMI Retrofit	Commercial	Landscape	2" meter	2,158	3,425	-1,267	-316.75	-37%
AMI Retrofit	Commercial	Reclaimed	2" meter	824	1,352	-528	-132	-39%
AMI Retrofit	Commercial	Reclaimed	2" meter	423	523	-100	-25	-19%
AMI Exchange	Governmental	Reclaimed	3" meter	3,061	4,022	-961	-240.25	-24%
AMI Exchange	Governmental	Reclaimed	4" meter	7,849	12,290	-4,441	-1110.25	-36%
AMI Exchange	Commercial	Reclaimed	6" meter	40,481	64,062	-23,581	-5895.25	-37%

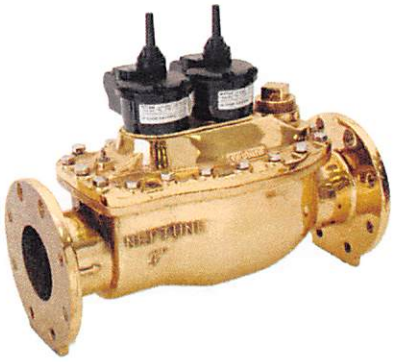
Attachment J: Various Product Specification Sheets

ARB® UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

TRU/FLO® COMPOUND METER

SIZES: 2"HP, 3", 4", 6" AND 6"x8"



TRU/FLO® meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.

All TRU/FLO® Compound water meters meet or exceed the latest performance and accuracy requirements set by the AWWA C702, and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

APPLICATION

The TRU/FLO Compound water meter is designed to register wide-flow ranges where varying flow rates are typical. TRU/FLO meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.

OPERATION

The hydraulic valve transfers flow smoothly between the disc section and turbine section of the meter, minimizing the loss of accuracy in the crossover range. The turbine measuring element registers high flows and the disc measuring element registers low flows, ensuring accurate measurement at all flow rates.

CONSTRUCTION

The TRU/FLO consists of a durable no-lead high copper alloy maincase, Neptune Turbine measuring element, Neptune T-10 chamber, and two magnetic-driven, roll-sealed registers.

The 6" x 8" TRU/FLO assembly consists of two 8" x 6" concentric reducers, a 6" Neptune strainer, and a 6" Neptune TRU/FLO Compound meter.

The no-lead high copper maincase is corrosion resistant, lightweight, and easy to handle.

A calibration vane allows field calibration of the UME to lengthen service life and to ensure accurate registration.

The two magnetic-driven, roll-sealed registers simplify the meter's design and reduce long-term maintenance by eliminating complicated combining drive mechanisms. For reading convenience, the registers can be mounted in any one of four positions on the meter.

WARRANTY

Neptune provides a limited warranty with respect to its TRU/FLO Compound water meters for performance, materials and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of major components, or a factory calibrated UME.

KEY FEATURES

- Minimum loss of accuracy in the crossover range increases revenue
- Spring-loaded valve eliminates need for frequent adjustment and service
- Combined Turbine and Disc Measuring Elements
  - Industry-leading flow ranges at 98.5%–101.5% accuracy ensure maximum revenue
  - Direct coupling of rotor to gear train ensures accurate registration
  - Unitized Measuring Element (UME) makes maintenance easier and faster with less downtime
  - Calibration vane allows in-line service to extend life and ensure accurate registration
- Compact Maincase
  - Made from no-lead high copper alloy
  - NSF/ANSI 61, Annex G certified and Annex F compliant
  - Lifetime guarantee
  - Compact, lightweight design provides for easy installation and in-line serviceability

SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility.

ARB® UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

T-10 METER

SIZES: 1 1/2" and 2"

T-10 water meters are warranted for performance, materials, and workmanship.

Every T-10 water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

CONSTRUCTION

The T-10 water meter consists of three major assemblies: a register, a lead free high copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant lead free high copper alloy maincase will withstand most service conditions: internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element protects the chamber from frost damage while the unique chamber seal extends the low flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

WARRANTY

Neptune provides a limited warranty with respect to its T-10 water meters for performance, materials, and workmanship.

When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

KEY FEATURES

- Register
  - Magnetic drive, low torque registration ensures accuracy
  - Impact-resistant register
  - High resolution, low flow leak detection
  - Bayonet style register mount allows in-line serviceability
  - Tamperproof seal pin deters theft
  - Date of manufacture, size, and model stamped on dial face
- Lead Free Maincase
  - Made from lead free high copper alloy
  - NSF/ANSI 61 Certified, Annex G and Annex F compliant
  - Lifetime guarantee
  - Resists internal pressure stresses and external damage
  - Handles in-line piping variations and stresses
  - Lead free high copper alloy provides residual value vs. plastic
  - Electrical grounding continuity
- Nutating Disc Measuring Chamber
  - Positive displacement
  - Widest effective flow range for maximum revenue
  - Proprietary polymer materials maximize long term accuracy
  - Floating chamber design is unaffected by meter position or in-line piping stresses

SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility is available only with Neptune's ARB® Utility Management Systems™.

ARB® UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

T-10 METER

SIZES: 5/8", 3/4", and 1"

T-10 water meters are warranted for performance, materials, and workmanship.

Every T-10 water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

CONSTRUCTION

The T-10 water meter consists of three major assemblies: a register, a lead free high copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant lead free high copper alloy maincase will withstand most service conditions; internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element protects the chamber from frost damage while the unique chamber seal extends the low flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

WARRANTY

Neptune provides a limited warranty with respect to its T-10 water meters for performance, materials, and workmanship.

When desired, maintenance is easily accomplished either by replacement of major assemblies or individual components.

GUARANTEED SYSTEMS COMPATIBILITY

All T-10 water meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VI) AutoDetect, E-Coder® (ARB VII), E-Coder)R900*i*™, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

KEY FEATURES

- Register
  - Magnetic drive, low torque registration ensures accuracy
  - Impact-resistant register
  - High resolution, low flow leak detection
  - Bayonet style register mount allows in-line serviceability
  - Tamperproof seal pin deters theft
  - Date of manufacture, size, and model stamped on dial face
- Lead Free Maincase
  - Made from lead free high copper alloy
  - NSF/ANSI 61 certified, Annex F and Annex G compliant
  - Lifetime guarantee
  - Resists internal pressure stresses and external damage
  - Handles in-line piping variations and stresses
  - Lead free high copper alloy provides residual value vs. plastic or composite
  - Electrical grounding continuity
- Nutating Disc Measuring Chamber
  - Positive displacement
  - Widest effective flow range for maximum revenue
  - Proprietary polymer materials maximize long-term accuracy
  - Floating chamber design is unaffected by meter position or in-line piping stresses

SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility is available only with Neptune's ARB® Utility Management Systems™.

Attachment K: Water Conservation Field Services Program Project Benefits

WATER CONSERVATION FIELD SERVICES PROGRAM
PROJECT BENEFITS

Please check the appropriate water management benefits for agricultural or urban measures that you anticipate addressing in you proposal. Where available, please provide an estimate of the benefit to units (i.e. Acre Feet, Dollars, Percentages)

It is essential to establish benefits of the Program. Please help us with your best estimate.

Reduces Leaks and Seepage _____ Acre Feet/Year

Reduces System Spills _____ Acre Feet/Year

Makes More Water Available 82____ Acre Feet/Year

Reduces Operation Costs _____ $ /Year

Reduces Energy Costs _____ $ /Year

Reduces Waste Treatment Costs _____ $ /Year

Improves Crop Yield _____ Percent/Year

Reduces On-Farm Costs _____ $ /Year

Reduces Per Capita Use _____ Gallons/Capita/Day

Provides Technical Training _____ # of People

Provides Water Conservation Education _____ # of People

Improves Water Supply Reliability _____ Frequency (Years)*
* Estimate of how often the improvement will occur (i.e. 1 = each year)

Delays Construction of New Supplies _____ Years

Reduces Drainage/Erosion _____ Tons

Improves Water Quality _____ % reduction of _____

Enhances Aquatic/Riparian Habitat _____ Years