
**GATEWAY WATER MANAGEMENT AUTHORITY
REGIONAL ADVANCED METER INFRASTRUCTURE
PROGRAM
FUNDING GROUP 2**

**WaterSMART:
Water and Energy Efficiency Grants for FY 2014**

FOA: R14AS00001

Gateway Water Management Authority

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5 Technical Proposal and Evaluation Criteria

5.a Executive Summary

Date: January 22, 2014

Applicant Name: Gateway Regional Water Management Authority

City, County, State: Total 26 Cities and Water Districts in the Gateway Region

Cities of: Artesia, Bell, Bell Gardens, Bellflower, Cerritos, Commerce, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Mirada, Lakewood, Long Beach, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Whittier (24 Cities)

Central Basin Municipal Water District and Long Beach Water Department (2 Water Districts)

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Estimated Construction Completion: December 9, 2017

Reclamation District: No

The Gateway Regional Water Management Authority (GWMA) is proposing the *Gateway Regional Advanced Metering Infrastructure Project* (Gateway Regional AMI). The Gateway Regional AMI will assist the Gateway Regional cities and water district members improve regional water management practices by converting a total of 6,263 antiquated meters into "smart" meters with advanced reading technology capabilities. GWMA members have come together to develop a region-wide water conservation program that will produce significant and measurable water savings through the implementation of this project. The Cities and water districts share water resources; have common water quality; and share demographic similarities. These common traits provide a unique opportunity to jointly find common, integrated, and coordinated solutions to water conservation and water management planning. The Gateway Regional AMI also provides a secondary benefit, that of supporting a regional approach to water conservation and encourages further cooperation between agencies and consumers in achieving their individual water conservation goals, an objective that is strongly emphasized by local and state agencies. This proposed project presents the opportunity for a large "conservation footprint" within the GWMA service area, in the Southeastern area of Los Angeles County serving more than 2 million people.

Technical Project Summary

Estimated Water Savings: 53,020 acre-feet over the course of 20 years

Estimated Water Better Managed: Up to 53,020 acre-feet over the course of 20 years, averaging 2,651 acre-feet per year.

Estimated Water Conserved: 1% of the total Gateway Region Water Supply

The Gateway Regional AMI will include 5,516 residential accounts, 730 commercial/landscape accounts, and 17 industrial accounts. In this Region, over 90% of the meters are more than a decade old, have surpassed their expected project life, and have diminished operational efficiency. This operational inefficiency leads to undetected leaks and unaccounted for water usage and losses, thereby resulting in higher costs for both the Region and its water customers. It is estimated that over 95% of the Regional water losses are due to unpreventable water leaks. The Gateway Regional AMI project will help mitigate these losses in a timely and efficient manner with 24/7 monitoring and alert capabilities. This capability will result in conservation of the Region's precious water resources.

The Gateway Regional Cities and water district customers will also benefit from AMI technology by having reliable, secure, and real time access to their water usage data through a specially designed AMI customer portal. This is especially helpful for large commercial and landscape clients who tend to have higher usage. The level of monitoring provided through the implementation of this project will enable customers to adjust water usage during peak times.

All in all, the project is well aligned with the Bureau of Reclamation's (BOR's) overarching goals to manage, develop, and protect water and other resources in an environmentally and economically sound manner.

In sum, the project addresses each of the following Tasks Areas:

Task Area A: “Water Conservation and Improved Water Management”: The Gateway Regional AMI project will conserve approximately 2,651 acre feet per year (AFY) of water within the Gateway Region. This is based on a 10% reduction in actual 2013 water usage for the defined project area.

A recent analysis of the water balance within the Gateway Region revealed that the Region as a whole will have just enough water to satisfy demand through 2030, with about 4% surplus during average years and about 2% surplus during drought conditions.

On an individual basis, out of the 26 water purveyors included in the water balance:

In an average year (2030):

- 15 water suppliers are expected to break even, and
- 6 water suppliers are expected to be in total deficit.

In a drought year (2030):

- 13 water suppliers are expected to break even, and
- 9 water suppliers are expected to be in total deficit (*Focused Area of this Gateway Regional AMI*).

Task B: “Energy Water Nexus”: The Gateway Regional AMI project will help improve the efficacy of water and energy management by helping to reduce the use of imported water supplies, thereby reducing energy demands associated with importing water from the California State Water Supply and Colorado River.

- a) Of total current supplies for the Gateway Region, 66.7% is groundwater, 28.8% is imported water, 4.4% is recycled water, and less than 1% of the water can be classified as other, which includes sources such as banked groundwater
- b) In addition to the water-energy nexus achieved through reduced importation, groundwater pumping can also be curtailed if water usage is optimized. This can result in further energy savings through reduced pumping.

The State of California is currently working diligently to encourage cities to use local water resources rather than relying on imported water sources. This is because it is estimated to take more than 3,000 kWh of energy to pump just one acre foot of water over the mountain ranges and into southern California. The Gateway Regional AMI project will help reduce the Region’s cumulative burden on the State-wide energy demands.

Task C: “Benefits to Endangered Species”: As mentioned in Task Area B, the Gateway Regional AMI project will help reduce the reliance on State Water Supply resources and as a result there will be a need for less imported water. This reduction in demands on imported water supplies will help contribute to the protection of endangered species in the Bay Delta Estuary such as the Delta Smelt that are endangered due to the effects of drought and the powerful demand on the pumps to carry State Water Supply water to customers throughout the State. It will also help protect four endangered species in the Colorado River Aqueduct.

Task D: “Water Marketing”: The project will provide access to data that will assist the Region in identifying new water markets through the use of advanced metered capabilities. With this "smart" metering technology, the Region as a whole will be able to identify potential “new” users for things such as reclaimed water that will later translate into new water markets in the future. This noteworthy project benefit will become key to the large sized commercial and landscape clients that are located in the Gateway Region, which will have the potential to provide further net water savings through the use of this potential “new market.”

The GWMA submits this application for funding to the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grant Program for FY2014 specific to Funding Opportunity Announcement (FOA) No.R14AS00001 for Federal Funding in Category 2. This application is seeking federal funding assistance of \$1,000,000 for implementation of the Gateway Regional AMI Project. It is expected that project benefits will be realized immediately after completion of this project.

The GWMA funding request is for 40 percent of the total project costs amounting to \$1 million dollars. The GWMA, in turn, commits 60 percent of the total project cost amounting to \$1,557,418.00. The funding request supported by this project application will provide the resources needed to assist the Gateway Region with the implementation of this AMI project. This project is an important first step in a multiple-year program, with a Region-wide goal of AMI smart meter installation throughout the entire Region by 2030. The project schedule is expected to take less than 36-months, start to finish (from the date of the grant agreement), with metering installation beginning in early 2015 and all work completed by January 2018.

5.b Background Data

Geographic Location and Map- The Gateway Region is located in Southeast Los Angeles County, an area that includes a large expanse of flat land located around the lower reaches of the Los Angeles River and San Gabriel River watersheds (Figure 5-1).

There are currently 26 signatories to the Gateway Region.

Figure 5-2 displays the boundary of the Region and current cities that are participating in the Gateway Region.



Figure 5-1: Geographic Location

The Project identified for the Gateway Regional AMI facilities located within

the Gateway Cities of Southern California are those located in southeastern Los Angeles County. There is some cross-over between these cities and those composing South Los Angeles, East Los Angeles, the South Bay, and the San Gabriel Valley.

Gateway Water Management Authority (GWMA)

Purpose- The Gateway Water Management Authority (GWMA) is a growing coalition - currently comprised of 24 cities and 2 government entities - responsible for the regional water planning needs of 2 million people in the

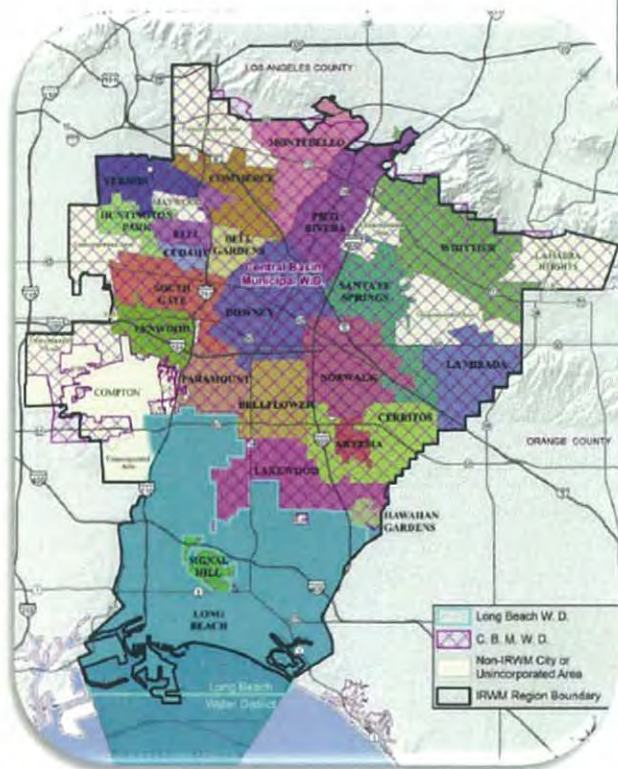


Figure 5-2: Gateway Regional Boundaries

Gateway Cities Region. Distinctive hydrogeological, topographic, demographic and political elements bring the Gateway Authority together as a cohesive, interdependent, self-governing body.

Value of the Gateway Water Management Authority

- Synergize efforts to organize and coordinate economical and efficient water management activities across city boundaries
- Produce strong, focused, accountable leadership and governance
- Receive state and federal funding not available to individual government entities
- Provide specific benefits to regional disadvantaged communities
- Continue Gateway Cities COG's long history of working together to address complex regional issues

Benefits to the Community of the Gateway Water Management Authority

- Work with individuals/groups to promote their needs
- Tailor legislative and advocacy work to the needs of the Gateway communities, especially disadvantaged communities
- Support of Federal legislators for Gateway Water Management Authority projects (funding)
- Eligible for grant funds
- Share information and develop regional best practices

Sources of Water Supply - Groundwater is the primary source of supply for the Gateway Region. Groundwater supplies are supplemented by surface water imported from wholesalers and recycled water purveyors.

Groundwater

The majority of the Gateway Region overlies Central Sub-Basin of the Coastal Plain of the Los Angeles Groundwater Basin. The Central Sub-Basin (Central Basin) occupies a large portion of the southeastern part of the Los Angeles Coastal Plain, bounded on the north by the La Brea High and on the northeast and east by less permeable tertiary rocks. The Southeast boundary is formed by the Newport-Inglewood fault system and associated formations (DWR Bulletin 118). Throughout the Central Basin, groundwater occurs in Holocene and Pleistocene age sediments at relatively shallow depths.

The Central Basin is historically divided into forebay and pressure areas. Recharge to the sub-basin is accomplished through both natural and artificial recharge. The Watermaster reported natural recharge for the sub-basin to be 38,982 acre-feet and artificial recharge to be 80,234 acre-feet for 2010 (DWR 2010). Additionally, the sub-basin receives 27,000 acre-feet of water per year through the Whittier Narrows from the San Gabriel Valley Basin in the form of subsurface flow (SWRB 1952). Urban extractions for the sub-basin were 196,758 acre-feet in 2010.

This groundwater basin, which had flowing artesian wells in the early 1900s, is now troubled with issues such as declining water levels, drying wells, and seawater intrusion due to overdraft.

Efforts of water agencies, political entities, and the judicial courts implemented three measures to address these problems, still in effect today:

- *Installation of Sea Water Barrier Injection Wells*
 - 1) 1950s – Over the past 50 years, nearly 300 freshwater injection wells have been installed along 16 miles of coastline to help stop seawater from intruding into the fresh groundwater basins. The WRD is currently the agency responsible for manning the wells and replenishing groundwater.

- *The Formation of the WRD*
 - 1) 1959 – WRD was formed through a special election in LA County. The WRD manages artificial replenishment and groundwater quality protection efforts in the Central and West Coast Basins.

- *Groundwater Adjudication*
 - 1) 1961 – West Coast Basin adjudication took effect and limited groundwater extractions to 64,468 acre-ft per year (afy).
 - 2) 1965 (later amended in 1991) – Central Basin adjudication took effect and limited groundwater extractions to 217,367 afy, still greater than the natural safe yield of the 1962 DWR determination of 173,000 afy.

Groundwater Suppliers

The Central Basin is the primary source of water supply to the region. Most retailers employ production wells to provide at least a portion of their municipal supply, if not the majority of their supply.

Groundwater Quality

Protecting groundwater quality from contamination is especially important to the Gateway Region, particularly in light of its historical role as a center of manufacturing and technology. Efforts to improve groundwater quality are ongoing, including recent efforts to clean up a waste solvent and hydrocarbon plume under the cities of Whittier, Santa Fe Springs and Norwalk.

Groundwater supplies are generally of acceptable quality. Total dissolved solids (TDS) content in the Central Basin ranges from 250 to 750 mg/l according to 2010 data from 293 public supply wells. The average for these 293 wells is 453 mg/l.

Surface Water

Imported and local surface water is mainly provided by the Metropolitan Water District of Southern California (MWDSC) to the Central Basin Municipal Water District (CBMWD) or other wholesale agencies, which in turn provide water to cities, retail water districts, and water companies for distribution to the consumer. There are many interties between individual retailers, including the Los Angeles Department of Water and Power, which receives much of its water from the Los Angeles Aqueduct and the Owens Valley system, as well as local capture of storm runoff.

Recycled Water

Recycled water in the Gateway Region is produced by the Los Angeles County Sanitation Districts (LACSD) and distributed by various purveyors. This recycled water is provided to most cities in the

Gateway Region by CBMWD. In response to increasing demands for water, limitations on imported water supplies and the threat of drought, CBMWD developed a regional water recycling program, comprised of two distribution systems - the E. Thornton Ibbetson Century Water Recycling Project and the Esteban Torres Rio Hondo Water Recycling Project - as well as three pumping stations and a reservoir. The Ibbetson Project and Torres Project are interconnected by an intricate 50-mile distribution system and operate as one recycled water supply system. The combined projects are referred to as the "Central Basin Water Recycling Project".

In constructing the 50-mile pipeline system, CBMWD is able to distribute treated recycled water obtained through LACSD. The Central Basin Water Recycling Project delivers approximately 3,100 acre-feet of recycled water annually to more than 210 industrial, commercial and landscape irrigation sites.

Recycled water produced by LACSD is also provided to the Gateway Region by other purveyors including the cities of Bellflower, Cerritos, and Long Beach, and the San Gabriel Valley Water Company.

Water Rights- The rights to water in the Central Basin are in two categories, surface water and groundwater. Both of these waters are controlled and regulated by court judgments of long standing.

Surface Water Rights

The use of surface water in the Central Basin is for groundwater recharge. Beginning in the 1800s surface water was diverted in the Whittier Narrows for irrigation use. This use ceased however as water use increased in the San Gabriel Valley decreasing the flow at Whittier Narrows and as the use of water in the Central Basin changed to urban use. Other than some early established surface rights to water in the San Gabriel Canyon above Foothill Blvd, the surface water rights are held by the San Gabriel Valley Protective Association (SGVPA). These rights are held for the purpose of groundwater recharge on behalf of all of the groundwater pumpers in the San Gabriel Valley and the lower area below Whittier Narrows. The rights are in the form of a license granted to the SGVPW by the State of California, Division of Water Rights. That Division has also declared the San Gabriel River System a fully appropriated River System.

The operation of the surface water spreading is by the LADPW. A portion of the local storm water is captured in three reservoirs located in the San Gabriel Mountains. A Distribution Committee of the SGVPA meets with the LADPW as needed to determine the distribution of the stored local storm water for groundwater recharge. An equitable division of the local waters between the area above and the area below Whittier Narrows has been accomplished through the San Gabriel River adjudication, sometimes referred to as the Long Beach case. The lower area filed suit in 1959 against the groundwater pumpers in the San Gabriel Valley. Five person negotiating committees were formed by each area and a statement of principals' was developed. The principals were crafted into a stipulated judgment which became effective October 1, 1963. The basic provision is that the area below Whittier Narrow is entitled to an average flow of 98,415 acre-feet of water per year over a period of average rainfall. The Judgment is administered by a three person Watermaster, one appointed by the upper area, one by the lower area and a joint appointee. The Watermaster issues an annual report in which there is a determination of the prior years flow and if there is a credit or debit in the water received. If a debit exists, the upper area must make-up the deficit.

Groundwater Rights

Groundwater use in Central Basin developed in the early 1900s as it provided a well distributed source of clean water. Initially groundwater levels were above sea level, and in many areas wells were artesian. With the increase use of groundwater, the groundwater levels declined and dropped to as much as 100 feet below sea level, especially at those areas more distant from the forebay area of the Whittier Narrows. The decline of water levels was caused by two factors. One was the removal of more water than was naturally supplied. The other factor was the loss of pressure caused by friction as the water moved from the source of supply towards the more distant wells.

General agreement by a large number of pumpers was reached in 1961 that some action needed to be taken to alleviate the continued lowering of water levels. To facilitate the action, the WRD filed a suit on January 2, 1962, to quit title to the use of groundwater, secure a judicial determination of rights and to protect the water supply from deterioration. The parties and their attorneys crafted a stipulated judgment and on October 11, 1965 a final judgment was signed to be effective October 1, 1966. The Allowed Pumping Allocation of each party was determined based on the theory of prescription and adverse use of each party against each other party as developed in the prior adjudications of the Raymond Basin and the West Coast Basin. This pumping right was developed from a history of pumping of at least five years prior to filing of the suite. The Allowed Pumping Allocation of each party was computed to be eighty percent of the historic five year pumping. This reduction from the historic five year history of pumping was necessary to bring the total pumping to a quantity that could be sustained from a combination of natural local inflow and artificial recharge with imported and recycled water purchased by the WRD.

The judgment and reduction in pumping could be accomplished because imported water was available from the MWD. Since all ground water producers did not have connections to Metropolitan the judgment provided for an exchange pool whereby those with connections would decrease pumping allowing those without connections to pump more water. Funds were exchanged through the exchange pool to equalize the costs. In recent years the exchange pool has not been used because lease arrangements between parties were developed.

The Central Basin Adjudication selected the State Department of Water Resources as the Watermaster for the Central Basin. The Watermaster collects pumping, tests water meters, administers the judgment, and provides an annual report.

As of 2012, there were 67 active pumpers with an allowed pumping allocation of 217,367 AF. The pumping in the basin was 185,914 Acre-feet and an additional 128,465 AF was imported for direct use. It is noted that the native yield of the Central Basin is on the order of 140,000 Acre-feet per year. To provide for the pumping which can reach 217,367 AFY the WRD has taken on an obligation of providing about 77,000 Acre feet per year of artificial recharge. This water is provided by spreading of imported and recycled water in the Montebello Forebay and injection of water along the coast.

Current Water Uses- Current water supplies for the Gateway Region consists of groundwater, imported water, and recycled water. As a whole, the Gateway Region is heavily dependent on groundwater, with a majority of the water suppliers receiving most, if not all, of their supply from groundwater. That said, there is still a large dependence on imported water supplies from MWDSC, via CBMWD. Of total current supplies for the Gateway Region, 66.7% is groundwater, 28.8% is imported water, 4.4% is recycled water, and less than 1% of the water can be classified as other, which includes sources such as banked groundwater. Forecasting to 2030, the average water supply distribution will remain essentially the same, with a small increase in recycled water use. See Figure 5-3 for a comparison in current and future water supplies.

City/Agency	2010 Population	2010 Baseline GPCD
Bell Gardens	4,950	200
BSMWC	46,000	106
Downey	110,452	113
Lakewood	59,660	106
Long Beach	462,257	120
Lynwood	73,212	67
Norwalk	18,361	118
Paramount	57,805	101
Pico Rivera	62,942	102
Santa Fe Springs	17,438	350
Signal Hill	11,465	161
South Gate	94,746	79
Vernon	90	81643
Whittier	87,128	71
Total	1,106,506	

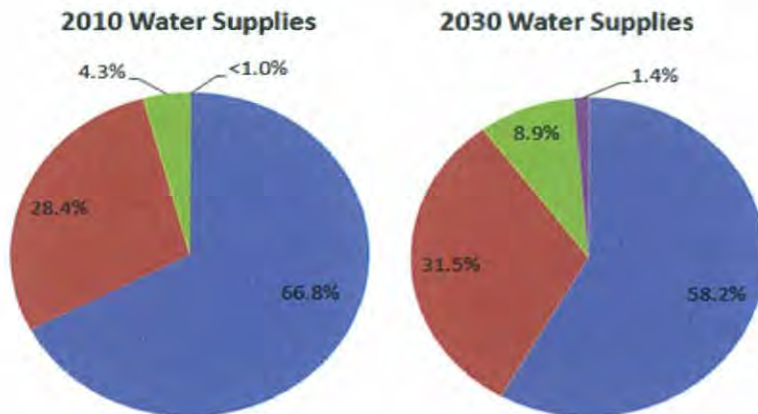


Figure 5-3: Current and Planned Water Supplies (AFY)

Table 5-1: GPCD Demand Gateway Region

Current and Projected Water Demand- The need for additional water conservation and better management is widely recognized by all the stakeholders in both the Gateway Region and in California water. DWR estimates that California’s population will increase by 17 million by 2030 and will result in an increased water demand of 3.5 to 6.0 million acre-feet (MAF) per year in normal years.

In the Gateway Region alone population is anticipated to grow from 2,220,443 people in 2010 to 2,401,907 in 2035. Forecasters expect the population to continue to swell. This forecasted increase in population equates to 8%. As the number of people living and working in the Gateway Region increases, the challenge of maintaining reliable water resource and better management becomes more and more pivotal. The Gateway Regional AMI Project would help to support current and future growth demands by providing additional supplies to alleviate future water needs. The Gateway Region’s goal is to conserve water and reduce the amount of water usage in the Gateway AMI service area by a minimum of 10% per year through the installation of AMI meters in alignment with industry standards for AMI water savings projections.

As a baseline for future comparison, in 2010 the total GPCD use was 83,337 or approx 143,935 acre feet

per year of water was used in the proposed Gateway Regional AMI Project service area by a combination of residential, commercial, industrial and landscape clients. NOTE: Some Gateway Cities opted for individual baseline conservation goals.

The Gateway Region will closely track and monitor the water usage of these existing water clients to determine the water conservation savings that are achieved post AMI meter installation. Additional environmental benefits will also be achieved through the Gateway Regional AMI Project through the elimination of excessive field visits involving vehicle trips to obtain monthly meter readings. This will reduce greenhouse gas emissions and help promote clean air conservation efforts throughout the Region.

Potential Shortfalls in Water Supply- Southern California is vulnerable to potential shortfalls in water supply for various reasons. Plausible scenarios include: unplanned interruptions resulting from levee failure or pipeline rupture, natural disasters (earthquakes), hydrology (low rainfall), and homeland security concerns (terrorist acts).

The loss of any one of the three major sources of imported supply (California, Colorado River or Los Angeles Aqueducts) would place additional and unendurable stress on the entities dependant on these supplies. Should a situation arise where the aqueducts are unable to meet the demand, southern California will need to rely heavily on either surface storage (i.e., Diamond Valley Lake) or on groundwater supplies, and supplemented with conservation. SWP deliveries throughout California could also be temporarily or permanently reduced by up to 50 percent under stringent environmental restrictions.

The Gateway Regional AMI project will help reduce the Region's use of SWP and Colorado River Water resources and will assist in conserving water in line with the goals of this WaterSMART: Water and Energy Efficiency Grant Program. To further stress the necessity for conservation, California has experienced three significant periods of severe drought in the past century. As of recent, January 17, 2014, a California drought emergency has been declared by California Governor Jerry Brown. The state struggles with the least amount of rainfall in its 153-year history, and reservoirs are demonstrating water levels that are at an all time low.

"California's dry weather is expected to last for another three months according to federal scientists. The Obama administration declared 27 California counties, including most of the Bay Area, as natural disaster areas."

Major Crops and Total Acres Served- The entire Gateway Region is nearly all urban, comprised of residential, commercial, and industrial. As such, there are no major cropping activities to report of within this Region.

Water Delivery System- As mentioned, the Gateway Region is comprised of 24 Gateway Cities and 2 water districts. Each of these agencies operates and maintains their own water delivery system that is comprised of potable water distribution system pipeline, groundwater wells and pumping facilities, non-potable transmission lines.

Energy Efficiency Elements - The Gateway Regional AMI project will help improve the efficacy of water and energy management by helping to reduce the use of imported water supplies, thereby reducing

energy demands associated with importing water from the California State Water Supply and Colorado River.

- Of total current supplies for the Gateway Region, 66.7% is groundwater, 28.8% is imported water, 4.4% is recycled water, and less than 1% of the water can be classified as other, which includes sources such as banked groundwater
- In addition to the water-energy nexus achieved through reduced importation, groundwater pumping can also be curtailed if water usage is optimized. This can result in further energy savings through reduced pumping.
- The State of California is currently working diligently to encourage cities to use local water resources rather than relying on imported water sources. This is because it is estimated to take more than 3,000 kWh of energy to pump just one acre foot of water over the mountain ranges and into Southern California. The Gateway Regional AMI project will help reduce the Region's cumulative burden on the State-wide energy demands.

Past Working Relationships with Reclamation- The Gateway Water Management Authority does not have a past working relationship with the Bureau of Reclamation.

5.c Technical Project Description

General Scope- The Gateway Region, via the implementation of the **Gateway Regional AMI**, proposes to improve regional water management practices by converting 6,263 antiquated meters into "smart" meters with advanced reading technology capabilities within the Gateway Region. The Gateway Region service area is located in Southeastern Los Angeles County, servicing over 2 million water consumers.

Project Work- The Project's critical goal is to expand, protect and conserve local water resources

This Project will include installation of 6,263 smart meters which are broken down as follows: 5,516 residential accounts, 730 commercial/landscape account 17 industrial accounts. Although the commercial/industrial and landscape clients represent a smaller number of overall meters installed, it is important to note that these clients are much larger water users, and often exceed their current monthly water usage allotment, and therefore will benefit the most from having access to computerized data that will allow them to monitor their own water usage.

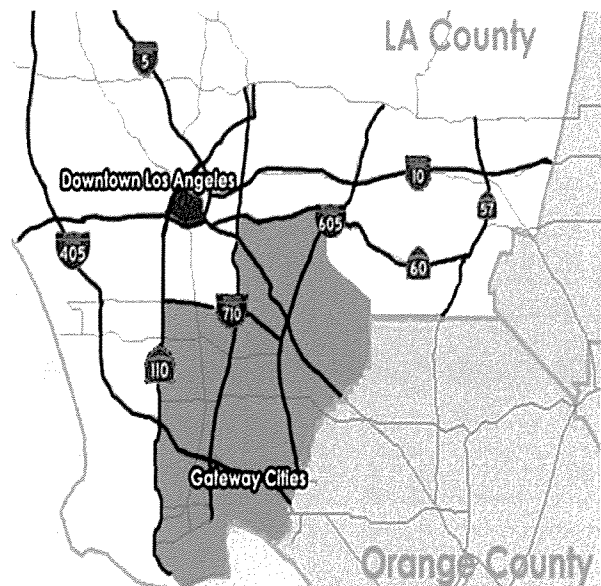
The actual project work associated with the Gateway Regional AMI Project is extremely straightforward. The Gateway Region will use grant funds to purchase and complete the meter infrastructure project. Once AMI installation is completed, the Gateway Cities will install all necessary software and work with the vendor to develop 24/7 real time computer access for both staff and water customers.

The table below identifies the quantity and type of each meter to be installed through this Project.

5/8	3/4	1	1 1/2	2	3	4	6	8	12	Total
42	0	186	1	20	1	1	0	0	0	251
10	15	103	76	249	20	26	12	1	0	512
0	500	0	0	0	0	0	0	0	0	500
0	779	122	43	104	21	18	3	0	0	1,090
0	260	0	0	0	0	0	0	0	0	260
0	1509	340	80	60	6	4	1	0	0	2,000
400	0	0	0	0	0	0	0	0	0	400
0	650	0	0	0	0	0	0	0	0	650
600	0	0	0	0	0	0	0	0	0	600
										6,263

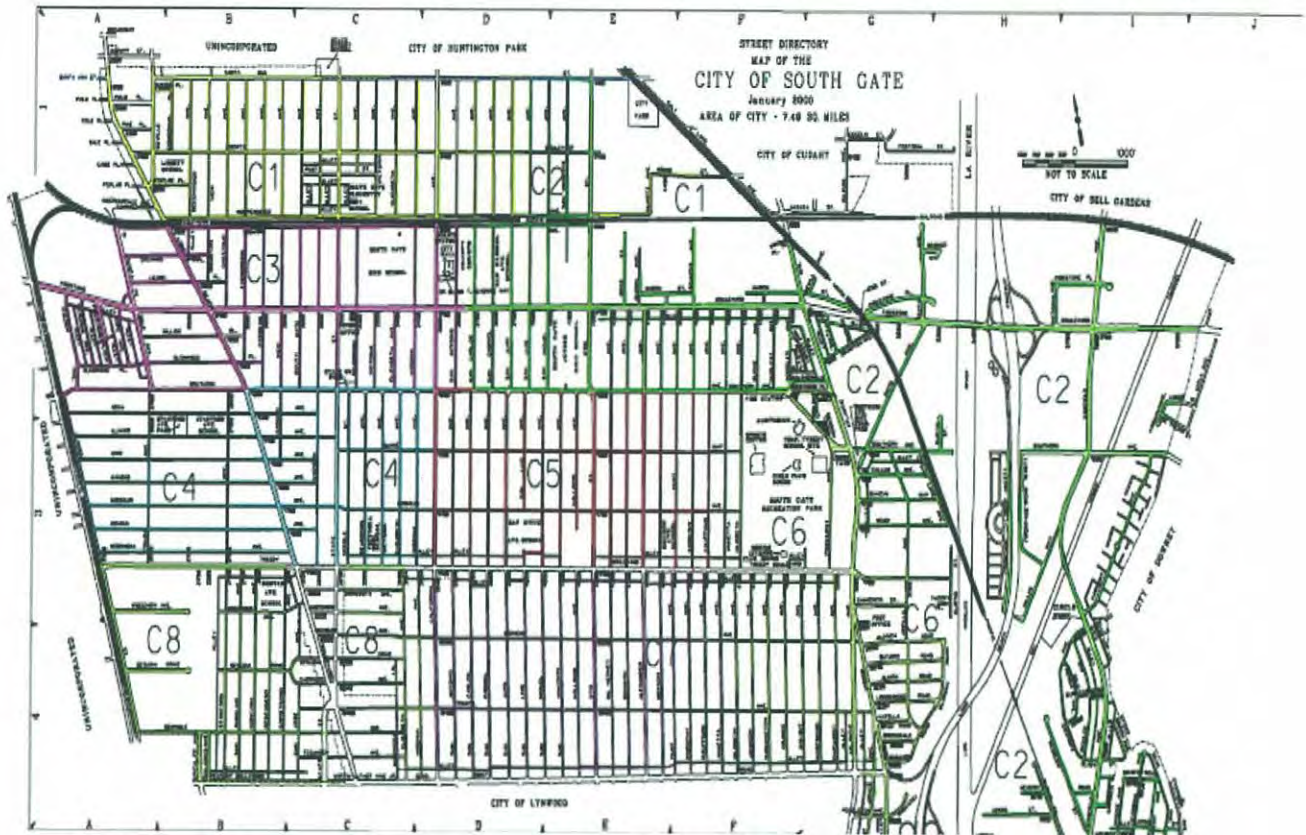
Table 5-2: Quantity and Type of Meter

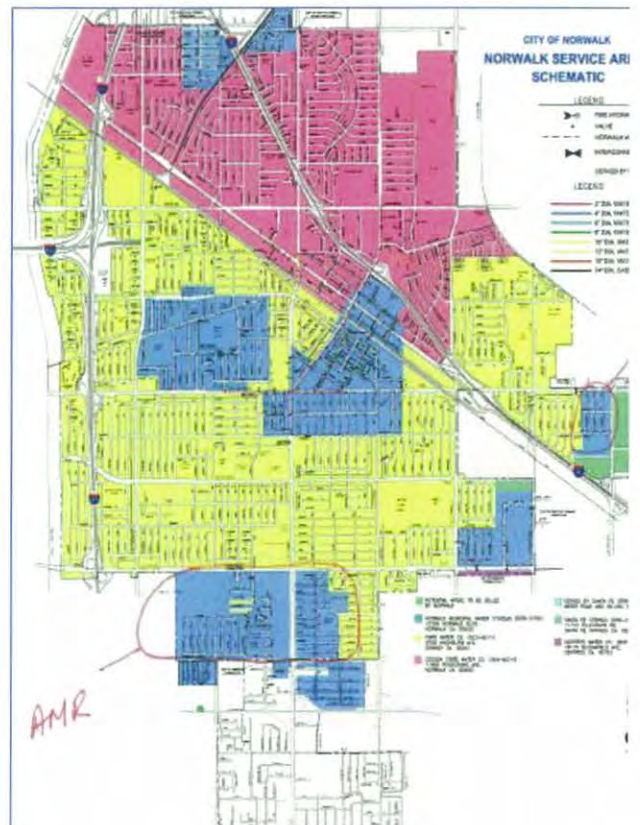
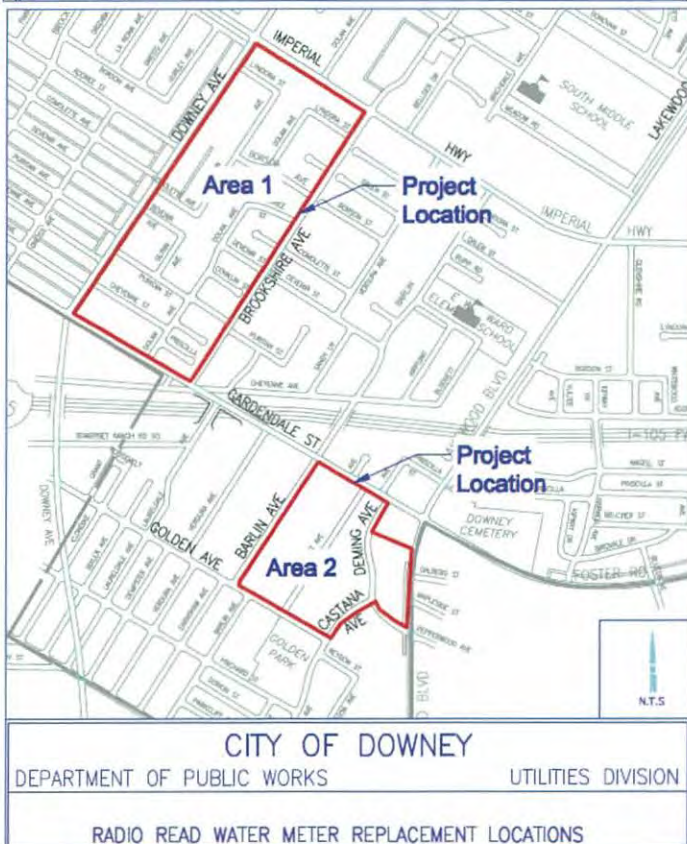
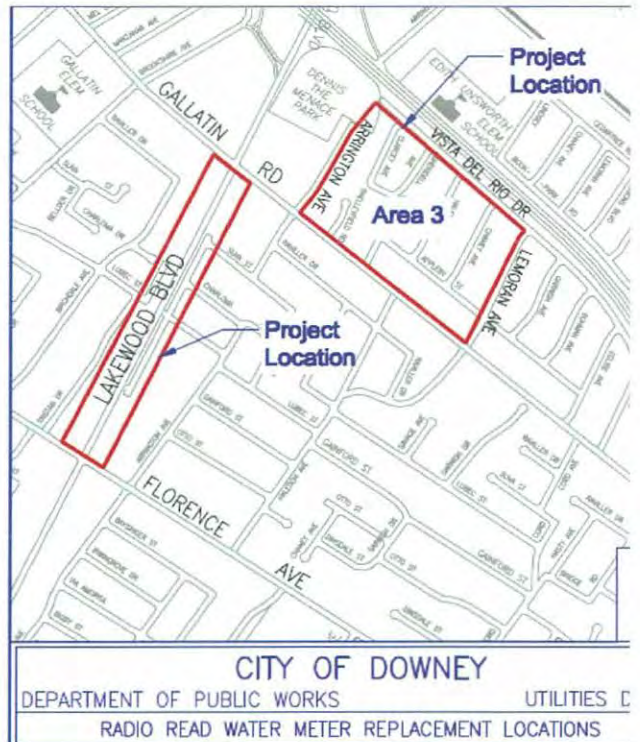
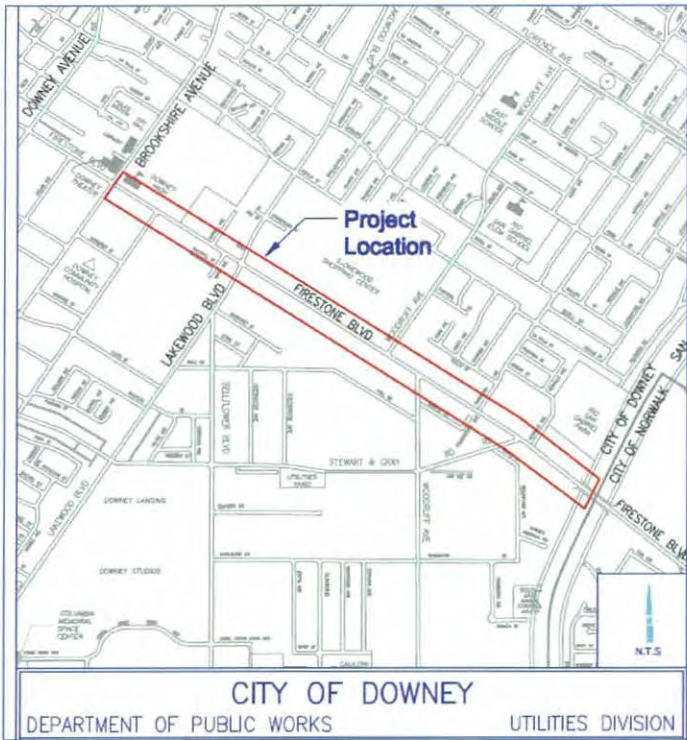
This proposed service area was carefully selected as the Region’s first AMI installation site given that the phase of distribution will represent both the area with the most distribution system losses and the heaviest route of operation management. This is an area that requires the most intensive staff time and travel to perform meter reads or mitigate problems in the area. To access the AMI project area, City staff must travel by freeways including the I-710 605, I-5 405, 105 and I-91, as well as heavily congested surface streets. Both of these systems are heavily crowded with daily gridlock. In addition, another secondary project benefit is that project implementation will help alleviate and reduce greenhouse gas emissions and improving overall air quality due to reduced travel.



Meter installation maps identifying locations are provided below.

Figure 5-4: Meter Installation Maps





Project Approach- Several tasks, listed below, are defined to accomplish the Project Work and organized to track with Budget and Schedule items. An installation start date is in January 2015 with an estimated completion date of December 2017.

Task 1: Administration

Activities include coordination of all Project activities, including budget, schedule, communication, and grant and cost-share administration (preparation of invoices and maintenance of financial records).

Deliverables: Preparation of invoices and other deliverables as required.

Task 2: Reporting

Report on the financial status and project progress on a quarterly basis. Significant development reports and a final project report will be prepared. In addition, the project will comply with any other reporting requirements specified in the Grant Agreement.

Deliverables: Submission of quarterly, annual, and final reports as specified in the grant agreement.

Task 3: Design

None required.

Deliverables: None

Task 4: Environmental Documentation

The Gateway Regional AMI project is categorically exempt and will simply install meters and install data collection towers in existing meter boxes and vaults and City owned property. As a result the Gateway Region does not anticipate environmental impacts associated with the proposed AMI project. That said, an environmental assessment satisfying Federal requirements (NEPA), associated with Federal contracting/grant agreements will be completed.

Deliverables: Confirm completed and approved environmental documentation

Task 5: Permitting

The Gateway Region does not anticipate that permits will be required for the Gateway Regional AMI Project. This is due to the fact that all meters will be installed in the place of existing water meters. Control towers will be installed on City-owned property and will therefore not require advanced permits or specialty approvals. All project-related approvals will be handled by City staff and will be executed in a timely and efficient manner.

Deliverables: Appropriate permitting and approvals will be obtained.

Task 6: Installation

This involves the installing of all Project works, which includes a total of 6,263. A contract for this task will be awarded to the successful bidder. The Gateway Region may use some of its own employees for portions of the work.

Deliverables: Reference Task 7: Construction Management

Task 7: Construction Management

This task involves everything from the advertisement for bids to filing a Notice of Completion for the Project works. The activities can generally be categorized as field inspection and contract administration, where the latter includes many items, such as the Notice to Proceed, pre-contractor conference, correspondence with the Contractor, submittal review, progress payments, Contract Change Orders, etc.

Deliverables: Bid Support and Field Inspection support needed for this effort.

The Project will be performed under the direction of the Gateway Region, in conjunction with GEI who will provide administrative, environmental and reporting assistance as needed. Grace J. Kast, GWMA’s Executive Director, will have responsibility of Project Manager. Gateway Cities will provide the technical Project Management on behalf of the GWMA. The sequencing of work is addressed in the next section which presents and discusses the Project schedule.

Project Schedule- Based on the above-described tasks, a Project schedule has been prepared. Table 5-3 summarizes the anticipated tasks to be completed. Final reporting and grant closeout would occur within months following the completion of the installation.

Table 5-3: Project Schedule

Task	Item	Timing
1	Administration	Completed by December 2017
2	Reporting	Semiannual, Annual and Final Reports as required; Completed by December 2017.
3	Design	NA
4	Environmental Documentation	Completed by March 2015
5	Permitting	Completed by March 2015 (as needed)
6	Installation	Completed by December 2017
7	Construction Management	Completed by December 2017

Project Mechanism- The Gateway Regional AMI Project proposes to install smart meter technology (advanced meters) in areas where high concentrations of antiquated and inefficient metering systems exist. A total of 6,263 meters will be installed through this project.

A water smart meter is usually an electronic device that operates by recording consumption of water in intervals of an hour or less and communicates that information at least daily back to the City for monitoring and billing purposes. Smart meters enable two-way communication between the meter and the central system. Smart meters gather this data for remote reporting, and this mechanism will be used in place of the standard in person or manual reading that is utilized today. Such an advanced metering infrastructure (AMI) differs from traditional automatic meter reading (AMR) in that it enables two-way communications with the meter.

A sample meter report would be generated demonstrating a water usage pattern is located below.

<u>Account #</u>	<u>Meter SN</u> <u>Meter EID</u>	<u>Customer Name</u> <u>Service Address</u>	<u>Previous Reading</u>	<u>New Reading</u>	<u>Usage</u>	<u>Reading Date/Time</u>
003600200006	5472696 4864175	1 GORSKI, KATHERINE T 384 W COLORADO ST	567	667	100	10/21/10 09:42
003600300023	6706352 5581127	1 OCONNOR, MICHAEL 378 W COLORADO ST	343	433	90	10/21/10 09:42
003600800005	6706350 5581416	1 HSIEH, DAVID 344 W COLORADO ST	296	373	77	10/21/10 09:42
003601100042	6528071 5437798	1 VARGAS, ALAN 322 W COLORADO ST	634	939	305	10/21/10 09:42
003601400005	6753542 5140097	1 ROACH, DR MONICA M 301 HARVARD DR	901	1183	282	10/21/10 09:41
003601500037	6527900 5096013	1 NG, TUNG PING 301 OXFORD DR	564	752	188	10/21/10 09:41
003601600053	5474707 4894298	1 TAT, JONATHAN 309 OXFORD DR	373	476	103	10/21/10 09:41
003601700006	6527906 5096369	1 NG-LIANG, VIVIAN 315 OXFORD DR	225	234	9	10/21/10 09:41
003601800043	5470705 4896058	1 LEW, JANICE 321 OXFORD DR	830	1078	246	10/21/10 09:41
003601900027	6527909 5446065	1 AMBROSINI, JULIE 327 OXFORD DR	931	1242	311	10/21/10 09:41
003602000005	6527902 5445109	1 WONG, BERTRAM 335 OXFORD DR	607	784	177	10/21/10 09:41

Table 5-4: Sample Meter Output Report

This type of reporting mechanism will be an essential part in furthering water conservation and water use patterns within the Gateway Region.

Importance of Project- The need for additional water storage south of the Sacramento-San Joaquin Delta (Delta) is widely recognized by all stakeholders in California water. As will be reflected in the California Water Plan Update 2013, DWR recognizes the importance of groundwater to the overall water supply and quality portfolio in California. As a result, the benefits of this Project are particularly important in light of the following factors:

- Restrictions on California’s use of water from the SWP increasing. In November 2013, a 5 percent allocation was announced. A 50 percent SWP year means that only 5 percent of the

annual amount of water under contract with 29 water agencies with long-term SWP contracts was available for allocation.

- Because the SWP has not completed facilities to meet its contract obligation, a reduction in allocations can result in water shortages at the local level. As a local and regional project, the AVWB helps increase water supply reliability in drought years to close the shortfall in the State's contract obligations.
- The impact of global warming on snowpack and surface water storage capacity.
- Predicted population growth trends.
- Protection of the groundwater basin from future overdraft.

Engineering Plans- Not applicable

Improved System Operation Flexibility for Deliveries- The Project will increase the operational flexibility for delivery of SWP water to other Southern California SWP contractors as a result of reduced demands, stemming from the Gateway Regional AMI, of imported water demands from the Delta.

In addition, this Project lends the opportunity for increased operational flexibility for all 26 water purveyors within the Gateway Region, and allows for each one to optimize water operations and management actions to achieve conservation and water supply goals.

Identify funding sources- The Gateway Regional AMI Project will utilize approximately 61 percent of the funds from the Gateway Region's cost share contribution. This contribution is derived from funds already identified within the respective Cities Infrastructure Fund/ Gateway City's annual budgets and in-kind services. The remaining 39 percent of the Project funding will come from Reclamation grant funding. Documentation supporting the Gateway Region funding sources is provided in Section 10, Funding Plan.

As described in Section 9, Funding Plan, if Reclamation is unable to provide the total funding request, the Gateway Region may consider scaling back the scope of the Project to match the available funds. However, the Gateway Regional Cities will continue to implement the AMI project elements as funding becomes available.

5.d Evaluation Criteria

Evaluation Criterion A: Water Conservation

Subcriterion No. A.1(a) – Quantifiable Water Savings

Water Saved: It is expected that the Gateway Region will conserve approximately 2,651 acre feet of water per year as a direct benefit of the proposed Gateway Regional AMI project.

This savings is obtained using the following estimates and calculations:

Installing AMI Meters- As part of this Gateway Regional AMI Project the Region will install 6,263 AMI meters in the area as defined by the Gateway Region service territory boundaries as identified within the previous section. The total Gateway Regional AMI Project identified within this proposed project accounts for approximately 10% of the meters in the entire Gateway Region service area (Phase 1).

In preparation for the project, the Gateway Region initiated and completed a Gateway Region Water Balance Study (dated July 13, 2013), which evaluated each Gateway City and water district report to ascertain water usage information as of the 2013 Fiscal Year.

This technical memorandum estimated the following:

- Gateway Regional water supply 332,200 AFY
- Gateway Regional water production 331,400 AFY

Further evaluation identified that the demand (331,400 AFY) was very close to the total water supply available to the Region. In fact, forecasted demands for 2015 will result in a water supply surplus of only 800 AFY for the entire Gateway Regional area.

$$\begin{aligned} \text{Water loss (AF)} &= \text{Water Production (AF)} - \text{Water System Loss (\%)} \\ \text{Water loss} &= 331,400 \text{ AF} * 0.10 \text{ (System Losses)} \\ \text{Actual Gateway Regional Water Loss} &= 33,140 \text{ AF} \end{aligned}$$

$$\begin{aligned} \text{Efficient system} &= \text{EPA Standard (2\%)} * \text{Water Production (AF)} \\ \text{Efficient System} &= 0.02 * 331,400 \text{ AF} \\ \text{Optimal System Losses} &= 6,628 \text{ AF} \end{aligned}$$

$$\begin{aligned} \text{Savings (AF)} &= \text{Actual Losses} - \text{Optimal Losses} \\ &= 33,140 \text{ AF} - 6,628 \text{ AF} \\ \text{Water Savings AF} &= 26,512 \text{ AF} * \end{aligned}$$

**Gateway Regional AMI Project will install AMI meters in 10% of the entire Gateway Service Area, as such:*

$$\begin{aligned} \text{Realized Quantifiable Water Savings (AF)} &= 26,512 \text{ AF} * 0.10 \\ \text{Or} & \end{aligned}$$

Thus Realized Quantifiable Water Savings generated by this Project is 2,651 AFY

Or
53,020 AF over the 20 year life of the Project.

Realized Water Savings- The Gateway Region estimates that the proposed Gateway Regional AMI Project will result in a minimum of 2,651 AFY saved.

Subcriterion No. A.1(b) – Improved Water Management

Amount of Water Better Managed: The proposed project is estimated to better manage approximately 10% of the Gateway Region’s annual water supply. This is the amount that is currently being estimated by the Region as loss. This is further calculated and described as

follows:

Total water supply managed by the Gateway Region as a result of this Project* = 33,220 AFY

*Meter installation will occur in 10% of Gateway's entire service territory (332,200 x 10%)

Total Water Supply Better Managed by this Project = 2,651 AFY

$$\frac{\text{Estimated Annual Amount of Water Better Managed} = 2,651 \text{ AFY}}{\text{Avg. Annual Water Supply} = 33,220 \text{ AFY}}$$

Result

Percent of Water Better Managed = 1% of the Gateway Region's Total Water Supply

The amount of water which will be better managed is comprised of the total water usage in acre feet per year in the defined Gateway Regional AMI service territory which according to the 2013 Gateway Region Water Balance Technical Memorandum, July 2013 water supply is 332,200 acre feet of water.

Improved water management is a cornerstone of AMI systems. By installing an AMI system, the Gateway Region will eliminate the need for time consuming meter reading to be completed manually by City staff member, which is subject to human inaccuracies. Through the use of AMI meters, real-time data is immediately available 24/7 simultaneously to City staff and consumers. This eliminates water loss issues through alerts that help Cities respond to problems immediately, therefore reducing safety hazards and improving overall customer satisfaction. Another important aspect of water management that will be made possible as a result of the AMI project is adjustments for water use during peak problem times, such as staged alerts, seasonally high usages, or droughts. This will be made possible as the Gateway Cities will be able to closely monitor its largest users and request that they adjust their water usage for a particular time period to reduce burden on the water supply.

Subcriterion No. A.2 – Percentage of Total Supply

Describe the percentage of total water supply conserved.

This project is estimated to conserve approximately 1% of the Region annual water supply, calculated as follows:

Average annual water supply: 332,200 AFY

Estimated water conserved as result of project: 2,651 AFY

Calculation:

$$\text{Total Water Supply Conserved} = \frac{\text{Estimated Water Conserved}}{\text{Avg. Annual Water Supply}}$$

$$\frac{2,651 \text{ AFY}}{332,200 \text{ AFY}} = .008$$

332,200 AFY

Total Water Supply Conserved =
1%

This project is estimated to save a total of 1% of the entire Gateway Regions Annual Water Supply (332,200 AFY)

**Subcriterion No. A.3 –
Reasonableness of Cost**

Total Project Cost divided by
(Acre-Feet Conserved, or Better
Managed x Improvement Life)

	Current	7/1/2013	1/1/2014
MWD Commodity	\$847	\$847	\$890
MWD RTS	\$30	\$50	\$58
MWD Total	\$877	\$897	\$948
CB Admin Surcharge	\$70	\$74	\$74
CB Infrastructure Surcharge	\$20	\$20	\$20
CB Total	\$90	\$94	\$94
MWD & CB Total	\$967	\$991	\$1,042

*The MWD Tier 1 Commodity Rate will increase to \$890 and the RTS to \$58 on January 1, 2014

Table 5-5: Proposed Central Basin Imported Water Rates

This project is estimated to cost \$48.23 per acre foot of water over a 20-year project useful life.

The project cost alternative is the purchase of imported water supplies (via MWDCS), through CBMWD, at a cost of \$1042/ AF. These costs will continue to escalate.

Gateway Regional AMI Project costs present a substantial savings to the Region, as compared to the costs associated with the alternative imported water supply.

Total Project Cost:	\$2,557,418
*Estimated water better managed:	2,651 AFY
Life of Improvements:	20 years *
Calculation:	2,651 AFY x 20 years= 53,020 AF of Water Better Managed over the Useful Lifetime of AMI Meters

Total Project Cost= \$2,557,418 divided by
53,020

Total Project Cost= \$48.23/AF

*Project Life (20-year life span) is determined by both AMI Industry standards and is also supported by referencing the Water Technology Journal “Go with the Flow of Advanced Meter Technology”(October 2010).

Evaluation Criterion B: Energy-Water Nexus

Subcriterion No. B.1 – Increasing Energy Efficiency in Water Management

Describe the efficiencies that are expected to result from implementation of the water conservation or water management project

Reducing reliance on Imported Water. In the State of California, it is estimated that the SWP pumps water almost 2,000 feet over the Tehachapi Mountains. The SWP Project is the largest single user of energy in California. It consumes an average of 5 billion kWh/yr, accounting for roughly two to three percent of all electricity consumed in California. (<http://www.epa.gov/region9/waterinfrastructure/waterenergy.html>).

The proposed Gateway AMI project will result in increased energy efficiency in water management and water conservation practices by reducing the amount of water currently being imported by pumping water in through imported water resources. The Gateway Region receives approximately 30% of its water from the MWDSC via CBMWD. As noted previously, this water is drawn from the Colorado River Project and the State Water Project.

With an estimated 2,651 AFY of potable water that will be saved by this project, the end result is a significant measurable energy savings (see calculations below).

Based on energy consumption of 3,000 kWh to pump one AF over the mountains from the California Bay Delta the fiscal energy savings is calculated to be \$1,052,977 based on energy costs of .1324 per kWh.

Energy Cost Savings (\$) = Actual Water Savings * Energy Consumption (\$/AF pumped) * Energy Costs (\$)

$$= 2,651 \text{ AFY} \times 3,000 \text{ kWh} \times 0.1324/\text{kWh}$$

Total Energy Fiscal Savings = \$1,052,977.

Kilowatt-hours required were determined based on the Natural Resources Defense Council report entitled, Energy Down the Drain: The Hidden Costs of California's Water Supply, (page 9}. Average cost of kWh in California was derived from the U.S. Energy Information Administration Form EIA-861 Annual Electric Power Industry Report, 2009.

The Gateway Regional AMI project will also help reduce energy costs associated with local City pumping processes that have to work in "overdrive" conditions when water leaks or losses occur. The National Resources Defense Council, many drinking water systems lose treated drinking water each year due to leaks in the pipe networks. AMI meters will help the Cities reduce the amount, frequency, and duration of leaks and as a result will net energy savings associated with a reduction in local pumping efforts.

In addition, the Gateway Regional AMI project will also reduce energy use by increasing the efficiency of the meters being used. Currently over 90% of the meters that will be replaced are more than 10 years old and are past their useful life. This also means that they are not energy efficient and require more energy to operate. By changing to AMI "smart" meters, the City will also reduce energy use for meters.

Lastly, by reducing the number of vehicle trips made by meter readers, the City will decrease energy

use and improve air quality. A reduction in vehicle miles traveled will reduce emissions and save fuel; therefore, resulting in less energy use by the City's service fleet.

*Table 5-6
Cost Comparison of Developing Alternative Water Sources (Costs/AF)*

AVWB Project Water	Brackish Groundwater	Wastewater	Seawater
\$61.92	\$946	\$1,022	\$2,064

In addition, the costs related to the Project's operations will be substantially less as compared to alternative measures to fulfilling California's water supply needs.

Evaluation Criterion C: Benefits to Endangered Species

Addressing Endangered Species Concerns

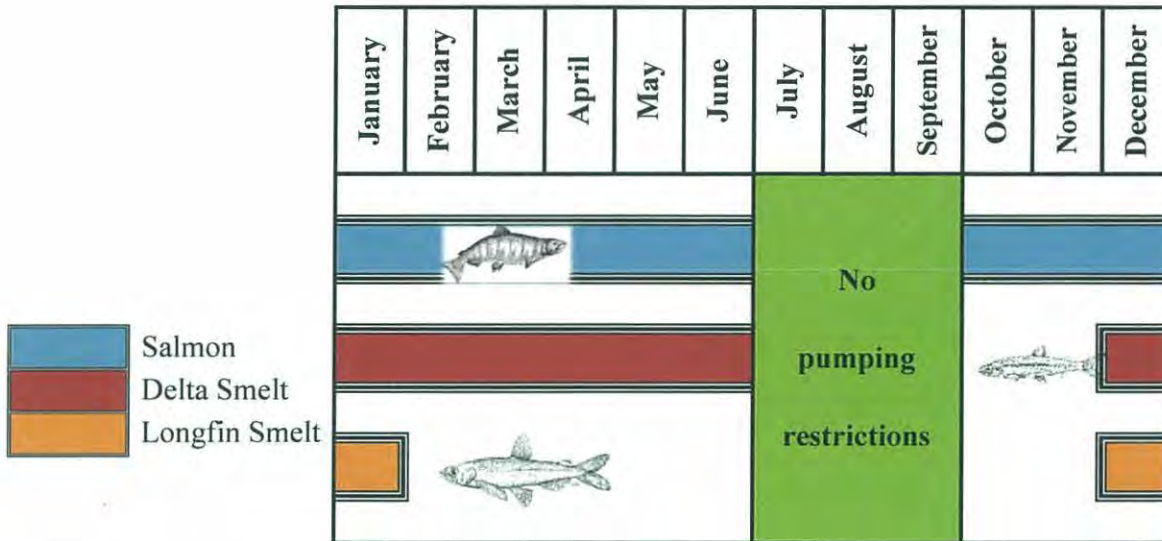
It has been identified that projects *resulting in reduced demand on imported water supplies* will play a key role in resolving the problem of the Delta, which is the number one infrastructure problem in California.

By implementing this Regional Gateway AMI Project, water users can be more flexible in the timing of water deliveries so that they may aid the restoration of the Delta habitats. The Project will provide a mechanism to meet water demands (during environmentally sensitive windows) while allowing the endangered Delta fish (Delta Smelt/Salmon) species to recover. The Project is a critical way of meeting the State's co-equal goals, as defined in the Amended Memorandum of Agreement Regarding Collaboration on Planning, Design and Environmental Compliance for the Delta Habitat Conservation and Conveyance Program in Connection with the California Bay Delta Conservation Plan (December 13, 2013). The implementation of co-equal goals is a way of providing reliable water supply for California while enhancing, protecting, restoring, and enhancing the Delta ecosystem and habitat (SB1, Steinberg- Section 85054).

As the urgency of rebuilding the State's water infrastructure increases, and in the face of issues such as climate change, the ability to implement water management strategies such as water banks will help to ease the stress on California's water resources.

Figure 5-5, below, illustrates the pumping restrictions that are currently being implemented in the Delta in efforts to restore these fish species' populations.

Figure 5-5: Delta Pumping Schedule



By utilizing water banking, water users can be more flexible in the timing of water deliveries so that they may aid the restoration of the Delta habitats. The Project will provide a mechanism to meet water demands (during environmentally sensitive windows) while allowing the Delta fish species to recover. The Project is a critical way of meeting the State's co-equal goals, as defined in the California Bay Delta Conservation Plan. The implementation of co-equal goals is a way of providing reliable water supply for California while enhancing, protecting, restoring, and enhancing the Delta ecosystem (SBI, Steinberg- Section 85054).

Evaluation Criterion D: Water Marketing

Briefly describe any water marketing elements included in the proposed project.

Estimated Amount of Water to be Marketed –The Gateway Regional AMI project will not specifically open new external water markets, but will provide a unique opportunity for the Gateway Cities to closely track customer water usage and identify new needs for water markets in the future. New abilities to closely monitor and understand the way in which commercial, industrial, landscape and residential customers are using water will assist the Gateway Cities in planning for and developing new inter-City water markets in the future in south Corona for things such as reclaimed or recycled water that have far reaching capabilities for water conservation efforts. With a large Region-wide sport parks, golf courses and schools located in the AMI service territory, the Gateway Cities can anticipate the ability to open additional water markets in the future for non-residential customers will significantly contribute to water conservation efforts and assist the Cities in meeting state mandates.

Evaluation Criterion E: Other Contributions to Water Supply Sustainability

Will the project make water available to address a specific concern?

Southern California is facing an unprecedented water crisis spurred by climate change, drought, court decisions and new restrictions to protect a failing Delta ecosystem, and a weakened economy. Stored water resources and the ability to recover and distribute these resources will play an important role in dealing with this crisis.

The Project will serve to:

- a) Meet water supply shortages resulting from climate variability;
- b) Reduce competition for limited water supplies through the Delta;
- c) Provide a reliable local water supplies to users; and
- d) Generally make more water available in the basin and improve the overall health of the basin where the proposed work is located.

The Gateway Regional AMI will provide benefits as a result of the objectives listed above. The Project, as defined in this grant application, aims to implement water conservation/management strategy that will help to achieve water reliability, conservation, and improved efficiency all crucial elements to ensuring future water supply sustainability. In a time of shrinking budgets, growing water demands and uncertain supply reliability, cooperative regional planning mechanism, a water conservation project, presents a viable solution to meeting those challenges.

This Project also contributes to the collaboration and formation of regional and local partnerships which will enhance water supply reliability, promote a regional common goal and add flexibility to water portfolios and distribution systems.

Drought conditions, diminished water storage levels, and regulatory restrictions on water deliveries from northern California have combined to severely limit water supplies in much of California. The challenge to meet water supply demand is greatest during dry years and droughts, which California experienced in 2007, 2008, 2009, 2010, 2011 and 2013. In addition to typical climate variability, climate change is reducing snowpack storage in the Sierra Nevada Mountains¹. The 2014 allocation has initially been set at 5%¹.

Many water agencies around the state are grappling with the supply shortages. The Project is specifically designed to help alleviate those impacts on water agencies due to shortages related to climate variability and Delta pumping restrictions.

Specifically, the Project, if funded, would provide a place to regulate an additional 2,651 AFY. Without the Project that increment of supply would be lost and unavailable.

The Gateway Regional AMI project will make significant contributions to the sustainability of local water supplies, by targeting some of the City's largest commercial water users in the proposed AMI territory. The Cities will be able to make timely adjustments to account for drought conditions or City-wide Stage II alerts by having the ability to target (through the AMI system) the biggest users and

¹ DWR news release (<http://www.water.ca.gov/swpao/docs/notices/13-11.pdf>)

request/provide incentives for reduced use during peak or problematic times. This will help ensure that the Gateway Cities have the ability to prevent water supply shortages when the time arises.

As the Gateway Region continues to grow (see prior population rate increases totaling 8%), the AMI project will help the Cities take the first step to improve water management and water conservation practices through the installation of "smart" meters first in the most affected areas of the Region (based on land use and water usage patterns) and later Region-wide by 2035. With State mandates that require the Gateway Region to reduce its water consumption by 20%, despite increased demands from population growth, the Gateway Cities will benefit significantly by adopting new water management styles.

In addition to conserving water, the real-time data and information access, the AMI project will also help identify potential markets for reclaimed/recycled water use in the region, home to some of the largest commercial retailers and landscape applications. This has the potential to help further increase water conservation above and beyond the projected 2,651 AFY of savings associated with the metering change out effort.

Does the project promote and encourage collaboration among parties?

The Gateway Regional AMI project has widespread support from the various stakeholders (26 City and Water Districts), California State Legislative Representatives and Assembly members representing multiple districts throughout the entire Los Angeles area, and the California Regional Water Quality Control Board, Los Angeles District.

- a) **California Legislature (dated January 15th, 2014)**-The Gateway Regional AMI project is in direct alignment with the One Water One Watershed (OWOW) sustainability initiative that emphasizes water use efficiency as a key element to long-term sustainability for water in the region. This project will provide increased accessibility to water supplies that would otherwise be lost and helps to further water conservation investments in the Los Angeles area. – Assembymember 58th District, Senator 33rd District, Assemblymen 57th District, Assemblymember 57th District, Assembymember 63rd District, Assembymember 70th District.
- b) **California Regional Water Quality Control Board, Los Angeles Region** (dated January 17, 2014)- Endorses and supports the Gateway Water Management Authority's plan to implement this project. This Project will aid in helping to promote the critical need for water conservation throughout the Region. In addition, this Project will further aid in the Region's meeting statewide water conservation initiatives set forth by 20x2020. – CRWQCB, Executive Director.
- c) **Gateway Regional Water Management Authority Participating Agencies:** All parties of the GWMA voted and approved the furtherance of this project and application submission to BOR. This area wide approval was given in hopes of furthering the "conservation footprint" resulting from the Gateway Regional AMI. All stakeholders have a vested interest in reducing water waste and conserving resources. Residents of the area are also very supportive of the AMI system as it will help them have 24/7 access to their water use and will help them better manage their water bills.

Letters of Project support have been received by the agencies listed above and are included in Section 10.

Does the project help to expedite future on-farm irrigation improvements? This project will not be used to expedite on-farm irrigation improvements.

Does the project increase awareness of water and/or energy conservation and efficiency efforts? The Gateway Region will use the AMI project as a tool to teach the importance of water conservation and educate residential and commercial clients about how to take a proactive role in their water usage by taking advantage of the computerized interface and educational tools the AMI system will provide. The Region plans to couple educational materials and trainings around the new AMI system and will help reach out to residents to actively engage them in taking part in water conservation strategies such as monitoring water usage, leak detection, reporting, and more.

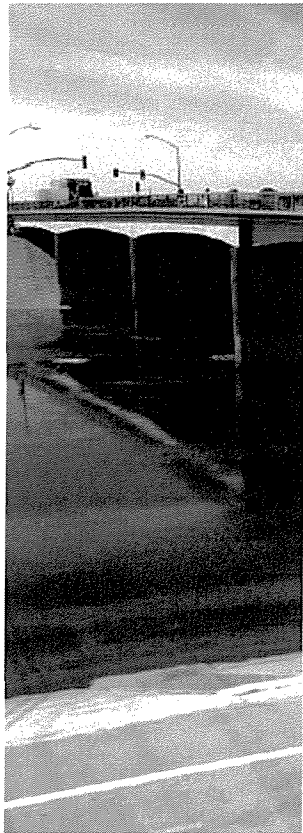
Evaluation Criterion F: Implementation and Results

Subcriterion No. F.1 – Project Planning

Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place?

Identify any district-wide, or system-wide, planning that provides support for the proposed project – The Project itself does not have a Water Conservation Plan, System Optimization Review or a drought contingency plan. However, the Project aims to both conserve and better manage water and provide a drought contingency solution for the local users in the Project area. In addition, the Project is identified as a priority project in the planning efforts of the Gateway Regional Integrated Regional Water Management Plan (IRWMP), dated June 2013.

The proposed Gateway AMI project and associated scope of work is in line with the Gateway Regional IRWMP's planning efforts as follows:



The Gateway IRWMP development process has the following major steps:

1. Gather information on the region's water management
2. Define the region's water problems
3. Suggest strategies that will help alleviate those issues
4. Brainstorm projects that will implement those strategies
5. Filter the projects to make sure the projects are feasible, integrated so that they are both compatible and complementary of other suggested or existing projects, do not adversely affect certain populations, and meet other requirements
6. Prioritize filtered projects for implementation
7. Develop a procedure to implement projects collectively
8. Determine methods and tools to monitor implementation of the projects within the IRWMP as well as the overall plan
9. Complete a written Plan
10. Adoption of the Plan by GWMA and member agencies.

In addition, the Gateway Regional AMI also supports the planning efforts established in each of the Cities respective UWMPs, last updated in 2010, that identify AMI's as one of their BMPs to help achieve water conservation and water management. These are scheduled for revision and updates in 2015.

Other planning efforts supported by this project include:

- a) Water Conservation Ordinance in the categories of water management, water conservation and water use efficiency; and
- b) Water Use Efficiency Master Planning

Identify and describe any engineering or design work performed specifically in support of the proposed project –

Not applicable

Describe how the project conforms to and meets the goals of any applicable State or regional water plans, and identify any aspect of the project that implements a feature of an existing water plan(s) –

In 2010, the Region began to assess the need for AMI meters Region-wide. The Gateway Region

identified areas of their service territories as a prime target area to implement a first phase of AMI meter replacement due to its diversity in customer type and water usage and high percentage of outdated meters. Engineering and design work has not yet been completed. Given the nature of the AMI project, once a grant agreement is executed the Region, they will be able to contract with a vendor, have a propagation study completed, and have a design plan executed within a short timeframe.

Meets Goals of State/Regional Water Plan: The Gateway Regional AMI project is in direct alignment with the:

- a) Metropolitan Water District's Integrated Water Resources Plan, {IWRP};
- b) Central Basin Municipal Water District's 2010 Urban Water Management Plan;
 - 1) Water reliability is one of the main objectives outlined in CBMWD's 2010 Urban Water Management Plan. The proposed AMI project will assist CBMWD in reducing reliance on State Water Project and Colorado River Water, which currently comprises a good percentage of CBMWD's water supply.
- c) State of California Water Plan Update;
 - 2) The State of California Water Plan outlines metering as a top Best Management Practice (BMP) in Section 3: Urban Water Use Efficiency.
- d) State of California 20 x 2020 Water Conservation Plan
 - 3) The water conservation strategies inherent in the project will also assist the Gateway Region in doing its part to help the State of California reach its goal of reducing per capita water consumption by 20 percent by the year 2020.

The Project will also help in achieving the Bureau of Reclamation's overall planning objectives of:

- a) Increasing water supply reliability;
- b) Providing groundwater resource protection by reducing the groundwater overdraft to the greatest extent possible in the region; and
- c) Facilitate conjunctive water management in Kern County, as well as in participating agency's respective counties.

Subcriterion No. F.2 – Readiness to Proceed

The Gateway AMI project is ready to proceed. Assuming a grant agreement is executed in September 2014, the Gateway Cities will be able to develop a bid process for the project effective immediately and will have the entire project completed in a 36- month period, or by December 2017.

The Gateway Cities then expect to award the construction contract and have a kick-off meeting where a refined timeline and expectations will be developed with the successful contractor. Installation of the project is scheduled to begin in January 2015. Installation will commence in February 2015. All project activities are expected to be closed out in fall of 2017. The Gateway Region will comply with all BOR

reporting requirements including filing the SF-425, Federal Financial Report, on a semi-annual basis, submitting semi-annual performance reports and a final report.

Table 5-7: Project Schedule

Task	Item	Timing
1	Administration	Completed by December 2017
2	Reporting	Semi annual, Annual and Final Reports as required; Completed by December 2017.
3	Design	NA
4	Environmental Documentation	Completed by March 2015
5	Permitting	Completed by March 2015 (as needed)
6	Installation	Completed by December 2017
7	Construction Management	Completed by December 2017

Permits and Process: The Gateway Cities do not anticipate that permits will be required for the AMI Project. This is due to the fact that all meters will be installed in the place of existing meter vaults/boxes. Control towers will be installed on City property and will not require specialty permits.

Subcriterion No. F.3 – Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project

The Gateway Regional Cities will use the following performance measures to evaluate the Advanced Metering Infrastructure Project after project completion as follows:

- a) **Amount of water conserved.** This will be measured by having Gateway City staff review water usage reports for the AMI service territory for 2012/2013 directly compared with usage post AMI meter installation in 2015/2016. This will allow the Gateway Cities to evaluate the actual amount of acre feet per year saved as directly correlated with the AMI project installation.
- b) **Amount of water losses mitigated/unaccounted for water recuperated.** Gateway City staff will review water usage reports as well as review water bills for the AMI project service territory to ascertain the reduction in water losses and unaccounted for water that has been recuperated in relation to the AMI Project.

- c) **Amount of metering staff/contractors reduced.** The Gateway Cities will compare staff/metering contract costs with previous years to ascertain budget savings associated with metering staff and contractors reduced as directly related to the Gateway Regional AMI project. Currently the City pays \$0.93 per meter per month for meter readings performed by contractors. It is estimated that more than \$5,824 in savings will be actualized as a result of eliminating 6,263 meter readings per month.

Direct and indirect qualitative project benefits

Qualitatively, when the Project is implemented and better water management is achieved it will bring more water into the area, improves water supply reliability, improves water quality, mitigates short-term water supplies and emergencies, and provides an economical alternative to spot market it makes economic sense. While all of these benefits cannot be quantified at this time, they will become obvious in time from the records of the use, monitoring data, and costs of this Project going forward.

Evaluation Criterion G: Connection to Reclamation Project Activities

The Gateway Region as a whole receives approximately 30% of its imported water from the Colorado River Aqueduct, which is a Bureau of Reclamation facility. The proposed AMI Project will reduce the Cities reliance on imported water supplies and help contribute to the conservation of Bureau of Reclamation water supplies.

6 Performance Measures for Quantifying Post-Project Benefits

The Gateway Region supports the importance of measuring project realizations and quantifications through project performance. Quantification of Gateway AMI Project benefits is an important means of determining the relative effectiveness of various water management efforts and for improving program level implementation.

Additionally, with shrinking local, state and federal budgets, it is imperative to demonstrate the effectiveness of any water management expenditure. The Gateway Cities will utilize several water management performance measures to track the performance of the Gateway Regional AMI Project.

These post-project quantification measures are in line with Reclamation's and the California- Bay Delta Water Use Efficiency Program (WUE). In this case these performance measures will be applied to determine estimated savings. The pre-project baseline conditions (historical water use data) estimated will be compared to post-project water use and modifications in this demand pattern will quantify the overall success of the Gateway Regional AMI (post-project performance).

Post-Project Benefits - Realized Water Savings

These post-project performance measures will include the following:

- Compare post-project water measurement (deliveries or consumption) data to historical water uses.
- Survey users to determine utility of the devices for decision making.
- Document rate structure changes such as volumetric or tiered water pricing due to the use of measurement devices (assumes non-metered to metered district) so that water users are billed for actual water used instead of at a flat rate.

In preparation for this Gateway Regional AMI Project, the Gateway Cities evaluated the total water use versus land use concentrations (June 2013), during the development of the Gateway Region Water Balance. This data is helpful in developing the baseline water consumption patterns within the project area boundaries (see Figure 6-1 and 6-2). The baseline water consumption patterns that have been documented in this study identify patterns in usage as a function of GPCD, land use patterns, and when implementing the proposed project, new water use data will be generated and an additional Geographic Information System (GIS) will be added to the data set. The differences in water usage (data nodules) will appear in contrast to the existing data.

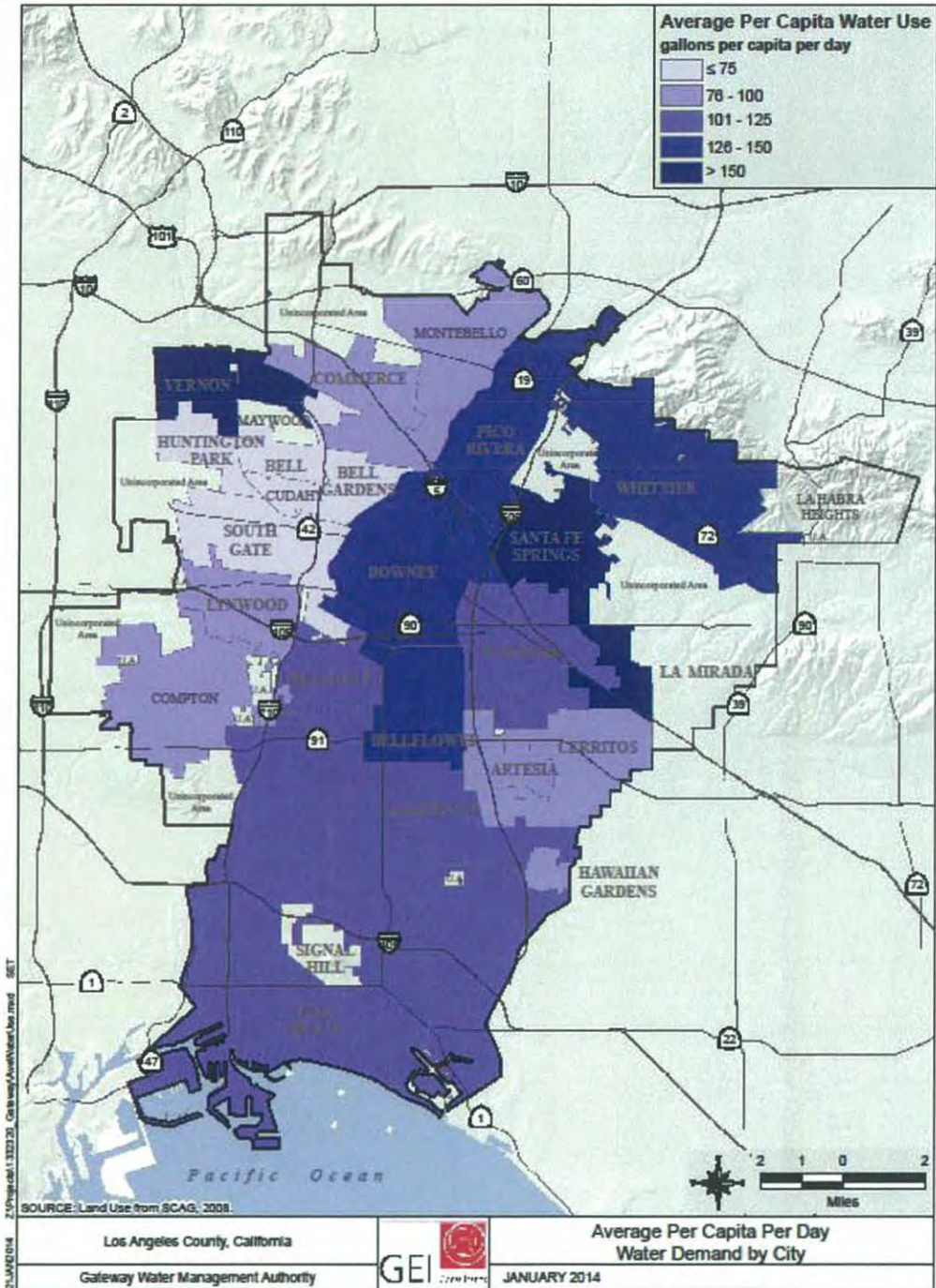


Figure 6-1: Average Per Capita Per Day – Water Demand by City

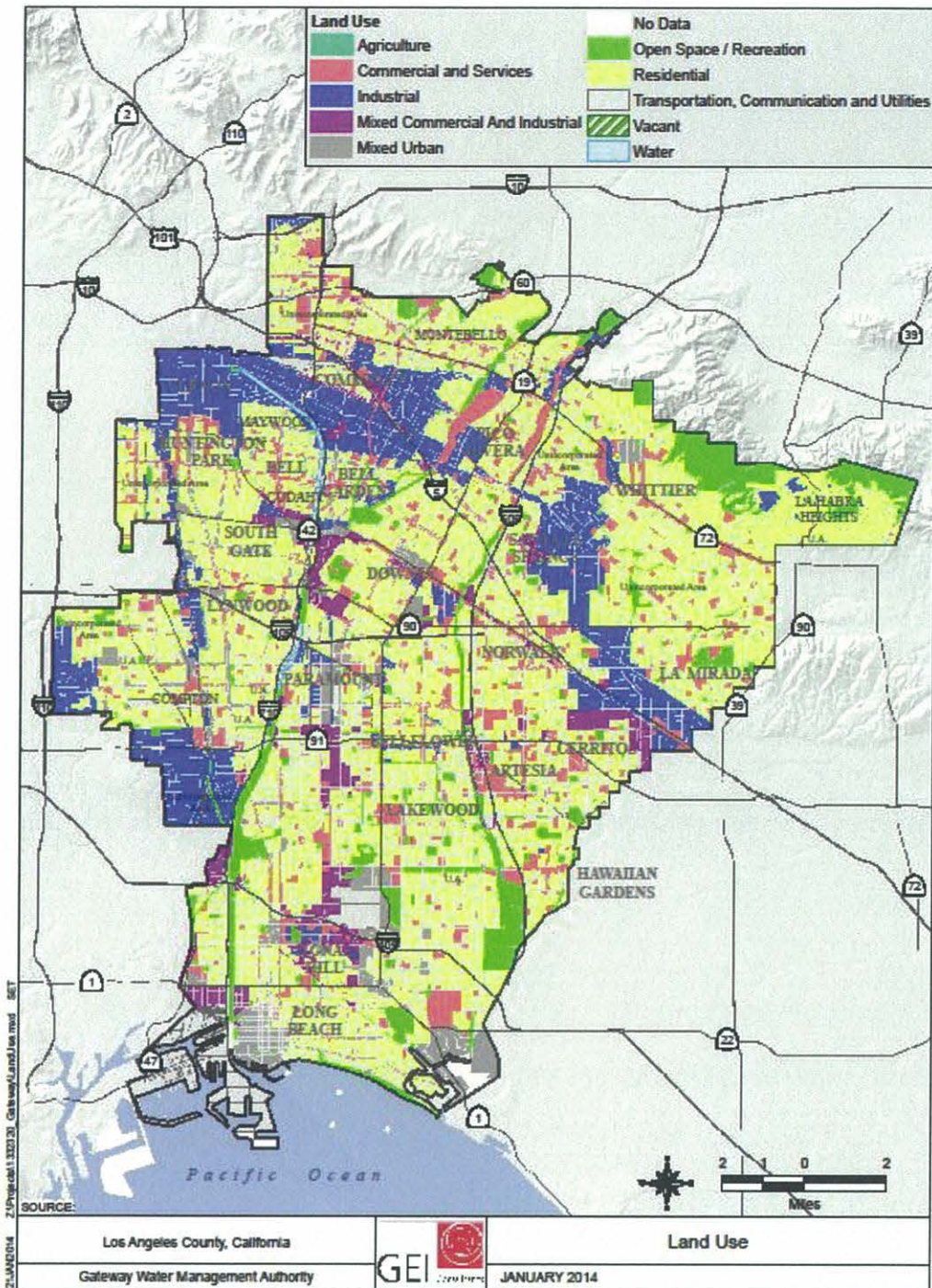


Figure 6-2: Land Use

Example variables to be analyzed moving forward will include

- 1) Water Conserved
- 2) Water Losses
- 3) Reduced Metering Costs
- 4) Reduced Imported Water

Water Conserved: Water that is conserved will be determined by the Gateway City staff through the water usage reports. Staff will compare the current water usage to that of future years' usage.

Water Losses: Water production and water billings will be examined each year. Gateway City staff will compare the differences from year to year to determine the reduction in water loss.

Reduced Metering Costs: Metering costs will be evaluated using current budgets and comparing to future budgets related to the cost of metering.

Reduced Imported Water: Conservation achieved through this Project provides the benefit to the Gateway Cities because they reduce their reliance on imported water from MWDSC resulting in a lower average cost per acre-foot of water. In addition, the conserved water provides supplies for MWD to distribute to its member agencies from Calleguas MWD in Ventura County to SDCWA.

Consumer Post Project Quantifiable Benefits:

Another post-project benefit associated with this project is the educational and public outreach factors that will help to mold future behavior patterns resulting in measurable water savings. The Gateway Region adheres to the following philosophy:

- A water savings benefit not communicated to customers = no benefit
- Assume that a water efficiency capability not measured will not deliver customer benefit
- Specific and significant utility actions are required to maximize customer benefits.

“This new program reinforces the idea that using water resources intelligently needs to be part of everything we do in the Gateway Region of Los Angeles County.”

The Gateway Region will regularly poll customers regarding new water use bills, user-friendliness of portals and data systems to ensure that all elements of water conservation are appropriately communicated. Cities will also continue to hold public education sessions to emphasize the importance of water conservation and measures to determine the impact of these public information sessions will be conducted.

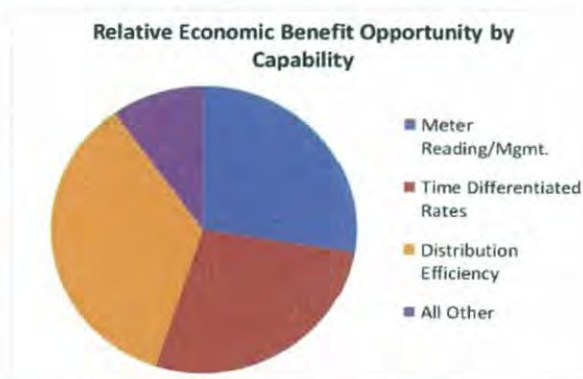


Figure 6-3: Relative Economic Benefit Opportunity by Capability

7 Potential Environmental Impacts

To allow Reclamation to assess the probable environmental impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the requirements of the NEPA, ESA, and NHPA.

The Gateway Regional AMI project is categorically exempt and will simply install meters and install data collection towers in existing meter boxes and vaults and City owned property. As a result the Gateway Region does not anticipate environmental impacts associated with the proposed AMI project.

- a) *Will the project impact the surrounding environment (i.e., soil [dust], air, water [quality and quantity], animal habitat, etc.)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

No.

- b) *Are you aware of any species listed or proposed to be listed as a Federal endangered or threatened species, or designated Critical Habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

Not applicable.

- c) *Are there wetlands or other surface waters inside the project boundaries that potentially fall under Federal Clean Water Act Jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.*

No.

- d) *When was the water delivery system constructed?*

Not Applicable.

- e) *Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

No.

f) *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

No.

g) *Are there any known archeological sites in the proposed project area?*

No.

h) *Will the project have a disproportionately high and adverse effect on low income or minority populations?*

No.

i) *Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

No.

j) *Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

No.

8 Required Permits and Approvals

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

The Gateway Region does not anticipate that permits will be required for the Gateway Regional AMI Project. This is due to the fact that all meters will be installed in the place of existing water meters. Any required control towers will be installed on City-owned property and will therefore not require advanced permits or specialty approvals. All project-related approvals will be handled by City staff and will be executed in a timely and efficient manner.

9 Funding Plan

Describe how the non-Reclamation share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability. Project funding provided by a source *other than the applicant* shall be supported with letters of commitment from these additional sources.

(1) How you will make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

The Gateway Region will provide its cost share contribution through the Gateway Infrastructure Funds in the amount of \$1,557,418. These funds will be available immediately and will be officially appropriated as a Gateway CIP Project upon contract signing with Reclamation. Some level of effort will be expended towards this project in the form of in-kind contributions specific to the oversight of the meter installation and contractor facilitation.

(2) Describe any in-kind costs incurred before the anticipated project start date that you seek to include as project costs. Include:

None

(a) What project expenses have been incurred to date:

- *Gateway Regional Water Balance Study, June 2013*
- *Gateway Regional Integrated Water Management Plan, Completed June 2013 (water conservation elements only)*
- *Water Meter Infrastructure Assessment*

(b) How have they benefited the Project:

These studies that have been completed to date have generated data pertinent to current and forecasted Gateway Regional Water Demand and Supplies. This data, in conjunction with Gateway Regional IRMWP population, 20x2020 goals, and BMP measures were data that were directly applicable to this project application.

(c) The amount of the expense

- *Gateway Regional Water Balance Study, June 2013 - \$ 7,623*
- *Gateway Regional Integrated Water Management Plan, Completed June 2013 (water conservation elements only)- \$27,520*

- *Water Meter Infrastructure Assessment (January 2014) - \$25,000*

(d) The date of cost incurrence

- *Gateway Regional Water Balance Study, June 2013 - \$ 7,623*
- *Gateway Regional Integrated Water Management Plan, Completed June 2013 (water conservation elements only)- \$27,520*
- *Water Meter Infrastructure Assessment (January 2014) - \$25,000*

(3) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.

The Gateway Region is not reliant on outside partners to help fund the AMI Project. All matching funds will be provided by the Gateway Cities. Commitment letters are not applicable. Please see the attached Resolution for funding assurances from the multiple Cities and Water districts of Region. A Final Resolution is expected to be executed on January 29, 2014, shortly after the submission of this grant application. As allowable as per the FOA, the *Gateway Regional AMI Project Official Resolution* will be submitted well in advance of the 30-day allowance after the application deadline.

In addition to the Official Resolution demonstrating support of each participating agency, the Cities have included copies of their most current *Comprehensive Annual Financial Reports* (2012-2013) that identify funds for Infrastructure Improvements, as those associated with the Gateway Regional AMI.

(4) Describe any funding requested or received from other Federal partners. Note: Other sources of Federal funding may not be counted towards the applicant's 50 percent cost share unless otherwise allowed by statute.

None

(5) Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

There are no pending funding requests.

10 Commitment Letters

The GMWA does not have any funding partners outside of the Gateway Regional Cities that would be required to help fund the Gateway Regional AMI Project. Commitment has been expressed by the Gateway participating agencies in this project via, Official Board Resolution (to be executed on January 29, 2014) and demonstration of funding commitment through both Non-Federal Funding Match and In-Kind Contributions. No third party commitment letters are necessary. However, letters of support for the Project have been included in this section.

Statement of Net Positions for Business Activities (July 1, 2013)	
Whittier	27,223,943
South Gate	5,744,980
Signal Hill	21,223,495
Pico Rivera	12,606,891
Norwalk	29,492,801
Bellflower (a)	(306,609)
Lakewood	33,384,685
Downey	4,354,000
	133,724,186
(a) Net position for governmental activities in excess of \$88 million.	

The Gateway Regional AMI project has widespread support from the various stakeholders (26 City and Water Districts), California State Legislative Representatives and Assembly members representing multiple districts throughout the entire Los Angeles area, and the California Regional Water Quality Control Board, Los Angeles District.

- a) **California Legislature (dated January 15th, 2014)**-The Gateway Regional AMI project is in direct alignment with the One Water One Watershed (OWOW) sustainability initiative that emphasizes water use efficiency as a key element to long-term sustainability for water in the region. This project will provide increased accessibility to water supplies that would otherwise be lost and helps to further water conservation investments in the Los Angeles area. – Assemblymember 58th District, Senator 33rd District, Assemblymen 57th District, Assemblymember 57th District, Assemblymember 63rd District, Assemblymember 70th District.

- b) **California Regional Water Quality Control Board, Los Angeles Region** (dated January 17, 2014)- Endorses and supports the Gateway Water Management Authority’s plan to implement this project. This Project will aid in helping to promote the critical need for water conservation throughout the Region. In addition, this Project will further aid in the Region’s meeting statewide water conservation initiatives set forth by 20x2020. – CRWQCB, Executive Director.

- c) **Gateway Regional Water Management Authority Participating Agencies:** All parties of the GWMA voted and approved the furtherance of this project and application submission to BOR. This area wide approval was given in hopes of furthering the “conservation footprint” resulting from the Gateway Regional AMI. All stakeholders have a vested interest in reducing water waste and conserving resources. Residents of the area are also very supportive of the AMI system as it will help them have 24/7 access to their water use and will help them better manage their water bills.



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

January 17, 2014

Ms. Grace J. Kast
Executive Director
Gateway Water Management Authority
16401 Paramount Blvd
Paramount, CA 90723

Dear Ms. Grace J. Kast

RE: Bureau of Reclamation WaterSMART Grant Application: Gateway Water Management Authority "Gateway Region Advanced Water Meter Replacement Program" (FOA R14AS00001)

Dear Ms. Kast,

The California Regional Water Quality Control Board, Los Angeles Region, endorses and supports the Gateway Water Management Authority's "GWMA" plan to implement the "Gateway Region Advanced Water Meter Replacement Program." This project will provide increased accessibility to water supplies that would otherwise be lost or unaccounted for, in addition to promoting the critical need for water conservation throughout the Region. The Gateway Region demonstrates the collaboration that is necessary to ensure a reliable water future by diversifying their water portfolios with an important component, water conservation, to help meet the future water demands of a growing population. In addition, water supplies better managed resulting from this project will further aid this Region in meeting state wide water conservation goals as identified within their 20x2020 Gateway Regional Alliance Report, submitted to the California Department of Water Resources.

The Gateway Water Management Authority is a growing coalition - currently comprised of 26 cities and water districts - responsible for the regional water planning needs of 2 million people in the Gateway Cities Region of Los Angeles County. Distinctive hydrogeological, topographic, demographic and political elements bring the GWMA together as a cohesive, interdependent, self-governing body. The GWMA is continually striving to create innovative solutions to extend its water supplies and maximize its long-term water supply reliability. The proposed Gateway Region Advanced Water Meter Replacement Program would allow for the replacement of approximately 15,000 antiquated meters with advanced metering technologies. This project enhances local, state and federal water conservations objectives by generating production and/or leakage quantifications that will result in measurable water savings. It also helps to further investments in water conservation in the Los Angeles area to the economic benefit of both our agencies.

MARIA MEHRANIAN, CHAIR | SAMUEL UNGER, EXECUTIVE OFFICER

320 West 4th St., Suite 200, Los Angeles, CA 90013 | www.waterboards.ca.gov/losangeles

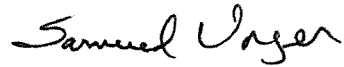
Ms. Grace J. Kast
Gateway Water Management Authority

- 2 -

January 13, 2014

I hope that this expression of support is helpful in your efforts to secure grant funding assistance to implement your plans. If the funding agency would like to discuss our interest and support for your project, the California Regional Water Quality Control Board's Los Angeles Region staff would be happy to do so.

Sincerely,

A handwritten signature in black ink that reads "Samuel Unger". The signature is written in a cursive style with a large, stylized 'S' and 'U'.

Samuel Unger
Executive Officer

California Legislature

January 15, 2014

Ms. Grace J. Kast
Executive Director
Gateway Water Management Authority
16401 Paramount Blvd
Paramount, CA 90723

RE: Bureau of Reclamation WaterSMART Grant Application: Gateway Water Management Authority "Gateway Region Advanced Water Meter Replacement Program" (FOA R14AS00001)

Dear Ms. Kast,

As legislators representing the Gateway Region, we endorse and support the Gateway Water Management Authority's "GWMA" plan to implement the "*Gateway Region Advanced Water Meter Replacement Program*." This project will provide increased accessibility to water supplies that would otherwise be lost or unaccounted for, in addition to promoting the critical need for water conservation throughout the Region. The Gateway Region demonstrates the collaboration that is necessary to ensure a reliable water future by diversifying their water portfolios with an important component, water conservation, to help meet the future water demands of a growing population. In addition, water supplies better managed resulting from this project will further aid this Region in meeting state wide water conservation goals as identified within their *20x2020 Gateway Regional Alliance Report*, submitted to the California Department of Water Resources.

The Gateway Water Management Authority is a growing coalition - currently comprised of 26 cities and water districts - responsible for the regional water planning needs of 2 million people in the Gateway Cities Region of Los Angeles County. Distinctive hydrogeological, topographic, demographic and political elements bring the GWMA together as a cohesive, interdependent, self-governing body. The GWMA is continually striving to create innovative solutions to extend its water supplies and maximize its long-term water supply reliability. The proposed Gateway Region Advanced Water Meter Replacement Program would allow for the replacement of approximately 15,000 antiquated meters with advanced metering technologies. This project enhances local, state and federal water conservations objectives by generating production and/or leakage quantifications that will result in measurable water savings. It also helps to further



investments in water conservation in the Los Angeles area to the economic benefit of both our agencies.

We hope that this expression of support is helpful in your efforts to secure grant funding assistance to implement your plans.

Sincerely,



CRISTINA GARCIA
Assemblymember, 58th District



RICARDO LARA
Senator, 33rd District



IAN CALDERON
Assemblymember, 57th District



ED CHAU
Assemblymember, 49th District



ANTHONY RENDON
Assemblymember, 63rd District



BONNIE LOWENTHAL
Assemblymember, 70th District



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

January 16, 2014

Ms. Grace J. Kast
Executive Director
Gateway Water Management Authority
16401 Paramount Blvd
Paramount, CA 90723

RE: Bureau of Reclamation WaterSMART Grant Application: Gateway Water Management Authority "Gateway Region Advanced Water Meter Replacement Program" (FOA R14AS00001)

Dear Ms. Kast,

As Vice Chair of the California State Water Resources Control Board, I support the Gateway Water Management Authority's "GWMA" plan to implement the "Gateway Region Advanced Water Meter Replacement Program." This project will provide improved water quality, increased accessibility to water supplies that would otherwise be lost or unaccounted for, in addition to reducing greenhouse gases that result from imported water and other water uses. In addition, water supplies better managed resulting from this project will further aid this Region in meeting state wide water quality, supply and climate.

The proposed Gateway Region Advanced Water Meter Replacement Program would allow for the replacement of approximately 15,000 antiquated meters with advanced metering technologies. This project enhances local, state and federal water quality and conservations objectives by generating production and/or leakage quantifications that will result in measurable water quality savings and greenhouse gas reductions.

If the funding agency would like to discuss my interest and support for your project, I would be happy to do so.

Sincerely,

A handwritten signature in cursive script that reads "Frances Spivy-Weber".

Frances Spivy-Weber
Vice-Chair
State Water Resources Control Board

11 Official Resolution

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE GATEWAY WATER MANAGEMENT AUTHORITY
JOINT POWERS AUTHORITY

IN THE MATTER OF:

RESOLUTION NO. 14-01

IN SUPPORT OF FILING AN APPLICATION WITH THE BUREAU OF
RECLAMATION FOR A GRANT UNDER THE *WATERSMART PROGRAM: WATER
AND ENERGY EFFICIENCY GRANTS FOR FY 2014*

WHEREAS, the Gateway Water Management Authority is to serve as the prime applicant for the filing of the application with the Bureau of Reclamation pertinent to the WaterSMART Grant Program for FY 2014 (R14AS00001);

WHEREAS, the Gateway Water Management Authority ("Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority") is part of a Joint Powers Authority (JPA) that was created under the Joint Exercise of Powers Act, California Government Code Sections 6500, et seq and Formed through a directive of COG (Gateway Cities Council of Governments) in 2007; and

WHEREAS, the JPA is a large and growing coalition representing an area of 26 cities and more than 2 million people in Southeast Los Angeles County and serves to collaboratively manage water supply reliability, water quality, wastewater, storm water, and flood control resources; and

WHEREAS, the JPA represents 24 cities and 2 water agencies including: Artesia, Bell, Bell Gardens, Bellflower, Cerritos, Commerce, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Mirada, Lakewood, Long Beach, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Whittier, Central Basin Municipal Water District and the Long Beach Water Department; and

WHEREAS, the arrangement between the signatories has been successful in helping the JPA regulate water supplies and resources available to its Region; and

WHEREAS, JPA plans to implement further water conservation measures through the implementation of an advanced meter replacement program that will aid in the identification of unaccounted for water loss within the entire Region, as well as help to better manage water resources consumed within the Gateway Region; and

WHEREAS, the water saving measures, managed by the JPA, can be expanded if improvements are made to the existing facilities and capacities; and

WHEREAS, staff has formulated a plan of improvements, referred to as the *Gateway Regional Advanced Metering Infrastructure Project*, which has the support of the California Regional Water Quality Control Board, Los Angeles, local California Legislative Representatives, and all of the 26 signatories within the Gateway Region; and

WHEREAS, the United States Bureau of Reclamation is currently soliciting proposals for grant funding assistance under their *WaterSMART: Water and Energy Efficiency Grants for FY 2014* (Funding Opportunity No. R14AS00001); and

WHEREAS, Gateway JPA staff has prepared a grant application under Reclamation's *WaterSMART Grant Program*.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Gateway JPA as follows:

1. The Gateway JPA's Board of Directors has reviewed and supports the submission of a grant application to Reclamation for the *Gateway Regional Advanced Metering Infrastructure Project*; and
2. The Gateway JPA Executive Director, Grace Kast, is directed to submit the grant application and is authorized to enter into an agreement with Reclamation on behalf of Gateway JPA for grant funding under Reclamation's *WaterSMART: Water and Energy Efficiency Grants for FY 2014* program; and
3. The Applicant is capable of providing the amount of funding and in-kind contributions specified in the application; and
4. The Applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

ALL THE FOREGOING, being on motion of _____, Director and seconded by _____, Director was authorized by the following vote:

AYES:

NOES: None
ABSENT: None
ABSTAIN: None

Grace Kast, Executive Director

12 Project Budget Application

12.a Budget Proposal

Project Completion Costs

The Technical Proposal included in Section 5 identifies and describes seven Project tasks, which are listed as follows:

- 1) Administration
- 2) Reporting
- 3) Design
- 4) Environmental Documentation
- 5) Permitting
- 6) Construction
- 7) Construction Management

The total project budget for these tasks is estimated at \$2,557,418 with \$2,490,557 of this amount for Installation, which includes furnishing and installing, mobilization and contingency of related Project elements. Ultimately, the construction cost will be determined when bids are received for constructing the Project elements.

The \$1,000,000 in requested grant funds (Federal cost share) would be allocated to this construction cost, and would amount to 39 percent of total Project costs, with the remainder 61 percent funded by the Applicant (non-Federal cost share), through cost-share and In-Kind services. Several tables have been prepared in support of these budget estimates, which immediately follow the text of this section in the order shown below.

- Table 12-1 provides a summary of the available income for the Project, the Project costs and annual expenditures.
- Table 12-2 provides a summary of costs broken down by funding source.
- Table 12-3 provides the cost breakdown for all tasks.
- Standard Form 424C.

Annual O&M Costs - The Project is not expected to increase the annual O&M costs for the Cities. In fact, the Cities may realize a reduction in O&M costs because of reduced staff time for reading the meters.

12.b Budget Narrative

General Description

Salaries and Wages – Grace Kast, Executive Director for GWMA, is the representative for the Applicant and will provide overall Project Management. GWMA will have an Administrative Assistant

responsible for tracking costs and helping with reporting of the work completed by contractors. GEI Consultants, Inc. (GEI), consulting engineers to GWMA will provide technical, administrative, environmental and reporting assistance as needed. GWMA operates with a minimal professional staff and has maintained a long-standing relationship with the consultant, GEI Consultants, Inc., who is familiar with district facilities and operations.

For any project work completed by the Gateway Cities' staff and GEI, the fringe benefits are included as part of the hourly rate. GWMA and City staff are shown as a base salary rate plus benefits. An example calculation showing daily and hourly rates is found in Table 12-12. If awarded the WaterSMART Grant, GWMA is committed to meeting Reclamation's requirements for Fringe Benefits and Indirect Cost accounting. The main component of this Project focuses on contractual/installation. The Applicant is committed to ensuring that all accounting of Project costs incurred by the Cities conforms to Reclamation's requirements.

For the Consultant, GEI 2014 Billing Rates consist of a Base Salary, overhead (that includes fringe benefits), plus a minimum of 10 percent for profit, which is illustrated at the end of Table 12-12. GEI is also committed to meeting Reclamation's requirement for Fringe Benefits and Indirect Cost accounting by working through GMWA who would be the lead Agency contracting with Reclamation.

Fringe Benefits – For the member City employees an average daily salary has been calculated as the annual salary plus benefits divided by 260 days (2,080 hours). A percentage of the amount of the daily compensation rate is for Fringe Benefit items, including health care, retirement, Social Security, paid vacation, sick leave, and holidays. Fringe benefit details can be provided prior to the time of the initial grant agreement, if needed; however, for this Project, all of the requested Reclamation funding is allocated to construction costs.

Travel – None of the GWMA Cities employees nor their Consultants will be charging travel expenses to the federally funded component of this Project, nor will they be asking for reimbursement of any incidental travel costs from the federally funded component. This Project will be integrated into regular work that their employees travel for routinely. All travel expenses will be for local travel. Accordingly, travel expenses will be determined by the number of miles driven for a roundtrip to the project site at the mileage rate of compensation determined by the Internal Revenue Service (currently \$0.56 /mile). For instance, during construction of the work, the inspector will be required to travel to the project site during the course of construction. The project manager will also travel to the project site, approximately once a week during construction of the work to attend weekly construction progress meeting.

Equipment – Equipment will be furnished and installed (by the Gateway Cities' staff or successful Contractor) as permanent features of the Project, including meters and transmitters. With regard to the equipment required to carry out the Project work, such as pick-up trucks, service trucks, cranes, etc. 25 percent of the installation costs were allocated to such equipment.

Materials and Supplies – Acquisition of supplies for office use is not anticipated; rather, City staff will provide any incidental supplies. Acquisitions of supplies and materials that will become part of permanent Project works are shown in the cost estimate Task 6 - Installation.

Contractual – It is anticipated that the Gateway Cities will contract with a local contractor(s) who has worked successfully with the applicant and consultants on past construction activity. Once the bid documents are completed, the items will be put out for bid and obtain price estimates to “furnish and install” the necessary components. The estimated budget for this work is based on preliminary pricing received from industry standard references and previous work completed on previous recharge project elements. Construction costs had been going up during the past several years; however, construction costs have recently retreated due to the slowdown in construction locally. Tables 12-2, 12-8a and 12-8b relate to these costs.

The Applicant will also contract with GEI to provide design, construction management, administrative, environmental and reporting assistance as needed. The Project budget includes estimates of these costs; in particular, reference is made to Tables 12-3 through 12-9 and Standard Form 424C. The JPA contracts directly with a Consultant using hourly rates for services. The Consultant rates are presented in Table 12-10.

Environmental and Regulatory Compliance Costs – According to the Funding Opportunity Announcement (FOA), “If the amount budgeted is less than 1-2 percent of the total project costs, the applicant must include a compelling explanation of why less than 1-2 percent was budgeted.” In this regard, no environmental documentation is anticipated. The Project consists of the installation of AMI meters in existing meter vaults.

Reporting - *Task 2* includes quarterly, annual and final reporting. The reports will provide all information required in the grant funding agreement.

Other Costs – No other miscellaneous items were identified for the project budget.

Indirect Costs – The Gateway Cities do not have a Federally-approved Indirect Cost Rate Agreement in place. In this regard, costs for the time plus fringe benefits of district employees are provided. These will be used for District In-Kind match and not included in the construction costs to which the requested grant funds will be allocated. Similarly, grant funds will not be applied to project administrative costs; rather, they will be funded through a combination of Monetary Contributions and In-Kind services, all provided by the Applicant. The Gateway Cities and the Consultants use an hourly rate for compensation of time for project work that is directly related to the scope of their projects. If an incidental administrative or non-project-related task occurs during the Project, that time is charged to a general accounting number, which is included in the basis for the Overhead within the hourly rates. For this Project, all of *Task 1 – Administration* that is directly related to the project is planned to be included in Gateway’s In-Kind Contribution.

**Table 12-1
Project Budget**

S/Hour	Reclamation Funding	Applicant Funding		Total Cost
		Monetary Contribution	"In-Kind" Contribution	
Task 1 - Administration	\$0	\$25,296	\$3,555	\$28,851
Coordination of engineering, environmental, permitting, and construction activities, operation and assessment and evaluation program, preparation and invoicing and maintenance of financial records.				
Task 2 - Reporting	\$0	\$19,260	\$2,419	\$21,679
Quarterly and annual progress reports, draft and final project report.				
Task 3 - Design	\$0	\$0	\$0	\$0
No design required.				
Task 4 - Environmental Documentation	\$0	\$15,497	\$833	\$16,331
Task 5 - Permitting	\$0	\$0	\$0	\$0
No permitting required.				
Task 6 - Installation	\$1,000,000	\$483,211	\$1,007,346	\$2,490,557
Includes procurement and installation of Project materials				
Task 7 - Construction Management	\$0	\$0	\$0	\$0
TOTALS	\$1,000,000	\$543,264	\$1,014,153	\$2,557,418

**Table 12-2
Project Budget By Year**

S/Hour	Total Cost	2015	2016	2017
Task 1 - Administration	\$28,851	\$8,655	\$8,655	\$11,540
Coordination of engineering, environmental, permitting, and construction activities, operation and assessment and evaluation program, preparation and invoicing and maintenance of financial records.				
Task 2 - Reporting	\$21,679	\$6,504	\$6,504	\$8,671
Quarterly and annual progress reports, draft and final project report.				
Task 3 - Design	\$0	\$0	\$0	\$0
No design required.				
Task 4 - Environmental Documentation	\$16,331	\$16,331	\$0	\$0
Task 5 - Permitting	\$0	\$0	\$0	\$0
No permitting required.				
Task 6 - Installation	\$2,490,557	\$498,111	\$996,223	\$996,223
Includes procurement and installation of Project materials				
Task 7 - Construction Management	\$0	\$0	\$0	\$0
TOTALS	\$2,557,418	\$529,601	\$1,011,382	\$1,016,435

Table 12-3
Task 1 - Administration

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	24	\$2,040		\$2,040
Water Distribution Leadworker	\$ 47.66	0	\$0		\$0
Water Maintenance Worker	\$ 38.35	0	\$0		\$0
Administrative Assistant	\$ 31.56	48	\$1,515		\$1,515
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	72	\$13,248		\$13,248
Engineer	\$ 137	72	\$9,864		\$9,864
Admin Asst	\$ 91	24	\$2,184		\$2,184
TOTAL DIRECT COSTS			\$28,851		\$28,851
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ 28,851		\$28,851

The compensation rate includes fringe benefits.

Table 12-4
Task 2 - Reporting

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	24	\$2,040		\$2,040
Water Distribution Leadworker	\$ 47.66	0	\$0		\$0
Water Maintenance Worker	\$ 38.35	0	\$0		\$0
Administrative Assistant	\$ 31.56	12	\$379		\$379
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	60	\$11,040		\$11,040
Engineer	\$ 137	60	\$8,220		\$8,220
Admin Asst	\$ 91	0	\$0		\$0
TOTAL DIRECT COSTS			\$21,679		\$21,679
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ 21,679		\$21,679

The compensation rate RCSD Staff includes fringe benefits.

**Table 12-5
Task 3 - Design**

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALERIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	0	\$0		\$0
Water Distribution Leadworker	\$ 65.88	0	\$0		\$0
Water Maintenance Worker	\$ 60.26	0	\$0		\$0
Administrative Assistant	\$ 38.35	0	\$0		\$0
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	0	\$0		\$0
Engineer	\$ 137	0	\$0		\$0
Admin Asst	\$ 91	0	\$0		\$0
TOTAL DIRECT COSTS			\$0		\$0
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ -		\$0

The compensation rate includes fringe benefits.

Table 12-6
Task 4 - Environmental Documentation

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	8	\$680		\$680
Water Distribution Leadworker	\$ 65.88	0	\$0		\$0
Water Maintenance Worker	\$ 60.26	0	\$0		\$0
Administrative Assistant	\$ 38.35	4	\$153		\$153
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachment 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	40	\$7,360		\$7,360
Engineer	\$ 137	48	\$6,576		\$6,576
Admin Asst	\$ 91	8	\$728		\$728
TOTAL DIRECT COSTS			\$15,497		\$15,497
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ 15,497		\$15,497

The compensation rate includes fringe benefits.

Table 12-7
Task 5 - Permitting

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALERIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	0	\$0		\$0
Water Distribution Leadworker	\$ 65.88	0	\$0		\$0
Water Maintenance Worker	\$ 60.26	0	\$0		\$0
Administrative Assistant	\$ 38.35	0	\$0		\$0
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	0	\$0		\$0
Engineer	\$ 137	0	\$0		\$0
Admin Asst	\$ 91	0	\$0		\$0
TOTAL DIRECT COSTS			\$0		\$0
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ -		\$0

The compensation rate includes fringe benefits.

Table 12-8A
Task 6 - Installation
Cost Estimate - Breakdown into Materials, Equipment, and Labor Costs

Item	Quantity	Unit Cost	Materials	Equipment	Labor	Total
Mobilization - None (Construction performed "in-house")			\$ -	\$ -	\$ -	\$ -
Meter Replacement Program						
	6,263	\$236.82	\$ 1,483,211	\$ -	\$ -	\$ 1,483,211
Operations Manager	5460	65.88	\$ -	\$ 143,968	\$ 359,705	\$ 503,673
Field Technician	5460	38.35	\$ -	\$ 143,968	\$ 359,705	\$ 503,673
Total Capital Cost			\$ 1,483,211	\$ 287,936	\$ 719,410	\$ 2,490,557

**Table 12-8B
Task 6 - Installation**

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	0	\$0		\$0
Operations Manager	\$ 65.88	5460	\$359,705		\$359,705
Administrative Assistant	\$ 60.26	0	\$0		\$0
Field Technician	\$ 38.35	5460	\$209,391		\$209,391
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachment 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	0	\$0		\$0
Engineer	\$ 137	0	\$0		\$0
Admin Asst	\$ 91	0	\$0		\$0
TOTAL DIRECT COSTS			\$569,096		\$569,096
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ 569,096		\$569,096

The compensation rate RCSD Staff includes fringe benefits.

Table 12-9
Task 7 - Construction Management

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALERIES AND WAGES	\$/Hour	Hours			
General Manger	\$ 85.00	0	\$0		\$0
Operations Manager	\$ 65.88	0	\$0		\$0
Administrative Assistant	\$ 60.26	0	\$0		\$0
Field Technician	\$ 38.35	0	\$0		\$0
FRINGE BENEFITS (included in the \$/unit rate as shown on Attachment 1)					
CONTRACTUAL					
Engineer - Project Manager	\$ 184	0	\$0		\$0
Engineer	\$ 137	0	\$0		\$0
Admin Asst	\$ 91	0	\$0		\$0
TOTAL DIRECT COSTS			\$0		\$0
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			\$ -		\$0

The compensation rate RCSD Staff includes fringe benefits.

**Table 12-10
GWMA and GEI Consultant Rates**

Calculation Daily Rate for District Engineer, Manager, and Staff				
District Employees	Position	Hourly Rate ¹	Fringe Benefits ²	Total Hourly Rate
	General Manger	\$ 59.50	\$ 25.50	\$ 85.00
	Water Distribution Leadworker	\$ 33.36	\$ 14.30	\$ 47.66
	Water Maintenance Worker	\$ 26.84	\$ 11.51	\$ 38.35
	Administrative Assistant	\$ 22.09	\$ 9.47	\$ 31.56

2) Annual benefits divided by 2080 hours.

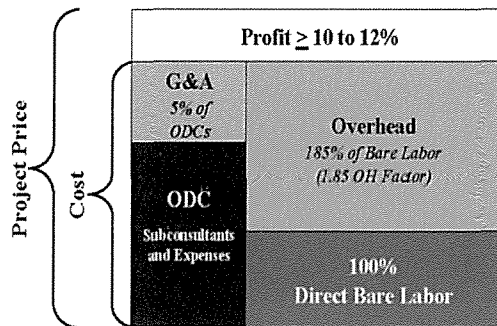
GEI/B-E Consultants	Principal Engineer/ Geologist	Managing Senior Engineer	Associate Engineer	Staff Engineer	Construction Inspector/ Admin
Grade Range	Grade 7	Grade 6	Grade 4	Grade 1	
Hourly Billing Rate	\$218	\$184	\$137	\$101	\$91
Engineer	184	X	X		

GEI Billing Rate consists of a Base Salary plus 1.85 times Base Salary for overhead, including fringe benefits, plus a minimum of 0.10 for profit.
Billing Rates shown are for 2014

GEI/B-E Consultants	Hourly Rate ³		
Chief Design Manager	218.00		
Principal Hydrogeologist	218.00		
Engineer - Project Manager	184.00		
Engineer	137.00		
Engineer	137.00		
Admin Asst	86.00		

3) Fixed annual salary plus benefits divided by 2080 hours.

GEI Consultants Project Pricing



Overhead Factor = Total Overhead / Direct Labor