FUNDING CATEGORY 1

ROSAMOND COMMUNITY SERVICES DISTRICT (RCSD)

Rosamond Regional Water Conservation Infrastructure Project (Rosamond Regional Project)

WaterSMART: Water and Energy Efficiency Grants for FY 2017

(FOA: BOR-DO-17-F012) January 2017

ROSAMOND COMMUNITY SERVICES DISTRICT
REGIONAL WATER CONSERVATION
INFRASTRUCTURE REPLACEMENT PROGRAM

PROGRAM

FUNDING GROUP 1

WaterSMART:
Water and Energy Efficiency Grants for FY 2017

Funding Opportunity Announcement No. BOR-DO-17-F012

Rosamond Community Services District

3179 35th Street West
Rosamond CA 93560

Project Manager: Mr. Ronald Smith, General Manager
Email: rsmith@rosamondcsd.com
Phone: (661) 256-3411 Fax: (661) 256-2557

January 18, 2017

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4.a Executive Summary

Date: January 18, 2017
Applicant Name: Rosamond Community Services District

City, County, State: Rosamond, Kern County, California

Contact: Ronald Smith, Project Manager/General Manager
Email: rsmith@rosamondcsd.com
Phone: 661-256-3411
Fax: 661-256-2557

Estimated Construction Completion: July 2019
Reclamation District: No

The Rosamond Community Services District (RCSD) is proposing the ***Rosamond Regional Water Conservation Infrastructure Project*** (Rosamond Regional Project). The Rosamond Regional Project will assist the RCSD in improving regional water management practices by replacing approximately 10,000 linear feet of antiquated asbestos cement pipe (ACP). The RCSD has come together to develop this water conservation program that will produce significant and measurable water savings. The Rosamond Regional Project also provides a secondary benefit, that of supporting a regional and state-wide 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 RCSD service area, the Antelope Valley, Kern and Los Angeles counties, and southern California.

Technical Project Summary

Estimated Water Savings: 12,000 acre-feet over the course of 60 years

Estimated Water Better Managed: Up to 12,000 acre-feet over the course of 60 years, averaging 200 acre-feet per year.

Estimated Water Conserved: 7.4% of the total RCSD Water Supply

The Rosamond Regional Project will includes 10,000 linear feet of ACP distribution main replacement. The District currently has approximately 10,000 linear feet of ACP that is approximately 50 years old and is also experiencing operation inefficiencies. AC pipes can deteriorate as a result of a variety of factors, including working environment and operational conditions, and eventually, when stresses exceed their strength, they can fail resulting in system leaks and losses. As such there is a great need to develop effective renewal strategies for this infrastructure. Currently, RCSD is experiencing over 11% water loss and unaccounted for water within its distribution system. It is estimated that over 95% of the water losses

are due to unpreventable water leak. The project will mitigate against future losses by the pipe replacement that aids in alleviating current losses stemming from leaky and antiquated pipes. The result is conservation of the District's and the Region's precious water resources, which is particularly important because of the recent adjudication that severely reduced the District's available supplies.

RCSD will directly benefit from utilizing technology such as the American Water Works Association's (AWWA's) free Water Audit Software program. This software will allow RCSD to compile a preliminary audit in a standardized and transparent manner advocated by AWWA. The Water Research Foundation (WRF) in partnership with the EPA and Water Systems Optimization developed a real loss component analysis tool. The Component Analysis tool is developed to work with data from the AWWA Water Audit Software.

These tools will assist RCSD in responding in a timely manner to failures in the form of leaks and breaks (ruptures) in their distribution system. The results of a leakage software programs will be used to effective leakage control and response strategies for the District.

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 Rosamond Regional Project will conserve approximately 200 acre-feet per year (AFY) of water within the RCSD service area. The conservation is determined based on the average annual water use for 2005-10 for the District reduced by 20% to account for the mandated reduction by the State of California. Current water production was determined to underestimate the savings because it represents not just the mandated conservation by the State but the conservation efforts of the community in response to California's 5-year drought.

A recent analysis of the water balance indicates that as a whole RCSD will have just enough water to satisfy demand through 2035, with about 4% surplus during average years and about 2% surplus during drought conditions.

Task B: "Energy-Water Nexus": The Rosamond Regional Project will help improve the efficiency of water and energy management of existing supplies by helping to reduce the use of imported water supplies, thereby reducing energy demands associated with importing water from the California State Water Supply.

a) Of total current supplies for the RCSD, 89% is from groundwater and 11% is imported water deliveries from the Antelope Valley East Kern Water Agency (AVEK) and banked groundwater from the Willow Springs Water Bank (WSWB).

b) In addition to the water-energy nexus achieved through reduced importation, groundwater pumping can also be curtailed if water usage is improved. This can result in further energy savings through reduced pumping.

The State of California is currently working diligently to encourage water purveyors 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 Tehachapi mountain ranges and into the Antelope Valley. The Rosamond Regional Project will help reduce the cumulative burden on the Regional and State-wide energy demands.

Task C: "Benefits to Endangered Species": As mentioned in Task Area B, the Rosamond Regional 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 to indirectly protect four endangered species in the Colorado River Aqueduct.

The District submits this application for funding to the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grant Program for FY2017 specific to Funding Opportunity Announcement (FOA) No.BOR-DO-17-F012 for Federal Funding in Category 1. This application is seeking federal funding assistance of $300,000 for implementation of the Rosamond Regional Project. It is expected that project benefits will be realized immediately after completion of this project.

The funding request is for 19 percent of the total project costs amounting to $300,000. The District, in turn, commits 81 percent of the total project cost amounting to $1,269,230. The funding request supported by this project application will provide the resources needed to assist the RCSD with the implementation of this Project. The project is an important step in extending the resources within and without the Antelope Valley. The project schedule is expected to take less than 24 months, start to finish (from the date of the grant agreement), with installation beginning in 2018 and all work completed by July 2019.

4.b Background Data

Geographic Location and Map - The City of Rosamond is located in southern California's Antelope Valley, Rosamond is an unincorporated town of around 18,000 people at the hub of what has been called "Aerospace Valley". Rosamond is the gateway to Edwards Air Force Base, and is just south of the emerging civilian spaceport at Mojave. To the south of Rosamond are the twin cities of Lancaster & Palmdale. (Figure 4-1).

Figure 4-1: Geographic Location

Rosamond Community Services District (RCSD) Purpose - The RCSD is a public agency of the State of California formed by the Community Services District Law under Section 61000 et. seq. of the Government Code.

In 1966, the citizens of Rosamond voted to create the Rosamond Community Services District (RCSD), a special district, for the purpose of providing water for domestic, irrigation, and fire flow use, collection and treatment of waste and storm waters, and for the maintenance of street lights. In 1998, the voters added two additional powers, graffiti abatement and parks and recreation to those originally approved in 1966.

The District's mission is to enhance the quality of life in the community by providing the essential services of safe drinking water, treatment and disposal of sewage, and other funded services in an environmentally effective and fiscally responsible manner.

The overall mission of the RCSD is to:

- Beneficially use recycled water
- Craft water acquisitions, additional sources and storage
- Identify sustainable funding for parks and recreation
- Provide water and waste water capacity for growth
- Improve our public image with an enhanced public relations program
- Have an active succession plan in place for our workforce
- Have a well devised rate process

- Employ a viable chromium 6 and arsenic strategy

The District currently maintains three wells, a waste water treatment facility, two parks, graffiti removal, 16 evaporation ponds, water banking, and over 550 street lights.

In 2005, RCSD participated in the formation, and became a joint banking partner, of the Semitropic-Rosamond Water Bank Authority (SRWBA), which merged with Semitropic Water Storage District (Semitropic) Stored Water Recovery Unit (SWRU) and the Antelope Valley Water Bank (AVWB), now the WSWB. These water banks provide water bank customers with a diversity of assets, operational flexibility, and unparalleled reliability. Today, the water bank is known as the WSWB. The unique combination of the AVWB and SWRU, which are located in different geographic areas within Kern County, provides customers with the ability to acquire, exchange and deliver water throughout California providing reliable, cost effective water supplies. RCSD is always looking to further secure Rosamond's water resources through water banking and other alternative resources.

Antelope Valley Integrated Regional Water Management Group

The District is also an active participant and stakeholder of the Antelope Valley Integrated Regional Water Management (AVIRWM) group which recently completed the update (2013) of the Antelope Valley IRWM Plan to comply with new State integrated planning requirements, improve the content, and make the group eligible for future grant funding. The 2013 Antelope Valley IRWM Plan provides a mechanism for: 1) coordinating, refining and integrating existing planning efforts within a comprehensive, regional context; 2) identifying specific regional and watershed-based priorities for implementation projects; and 3) providing funding support for the plans, programs, projects and priorities of existing agencies and stakeholders. The 2013 Antelope Valley IRWM Plan update allows stakeholders to revisit the Plan's goals, objectives and priorities in light of changes that have occurred since 2007.

Benefits to the Community

- Work with individuals/groups to promote their needs
- Tailor legislative and advocacy work to the needs of the Antelope Valley communities, especially disadvantaged communities
- Support of Federal legislators for Antelope Valley Regional projects (funding)
- Aids in sharing information and develop regional best practices

Sources of Water Supply – The District relies on two basic sources of water supply. These are groundwater from the Antelope Valley Groundwater Basin and imported water from the State Water Project (SWP) delivered by the 3rd largest SWP Contractor, AVEK.

Groundwater

Groundwater makes up as much as 90 percent of the total water supply for the District. Groundwater pumped by the District comes entirely from the Antelope Valley Groundwater Basin.

The AVIRWMP meets the AB 3030 requirements and serves as the region's groundwater management plan based on the Lahontan RWQCB Basin Plan. In 1995, RCSD also developed a groundwater management plan in accordance with AB 3030.

The Antelope Valley Groundwater Basin is comprised of two primary aquifers: the upper and lower aquifer. The upper aquifer is an unconfined aquifer. Separated from the principal aquifer by clay layers, the deep aquifer is generally considered to be confined. In general, the principal aquifer is thickest in the southern portion of the Valley near the San Gabriel Mountains, while the deep aquifer is thickest in the vicinity of the dry lakes on Edwards Air Force Base. The Antelope Valley Groundwater Basin is divided into twelve subunits. The subunits are Finger Buttes, West Antelope, Neenach, Willow Springs, Gloster, Chaffee, Oak Creek, Pearland, Buttes, Lancaster, North Muroc, and Peerless. The groundwater basin is principally recharged by deep percolation of precipitation and runoff from the surrounding mountains and hills.

Groundwater extractions between 1926 and 1972 resulted in the overdraft of the aquifer that caused groundwater levels to drop 200 to 300 feet or an average of four to six feet per year. The importation of the SWP supply beginning in the 1970s has since stabilized groundwater levels in some areas of the Antelope Valley. According to RCSD records, the water table continued to decline an average of two to three feet per year until 1995. With the increased usage of surface water sources and decreasing deep well usage, the water table has been rising an average of two to three feet per year. Studies performed by the United States Geological Survey (USGS) and DWR indicate that groundwater levels appear to be generally dropping in the eastern areas of the basin and rising in the western areas. Ultimately, the conditions led to the adjudication of the groundwater basin in 2015.

RCSD has been actively participating in the WSWB, formerly the AVWB. The WSWB aims to enhance water reliability and flexibility through a water bank that is both cost-effective and environmentally sound. The WSWB is helping to reduce the rate of aquifer overdraft and encourages conjunctive use not only by retailers within the Antelope Valley region but throughout all of southern California. The WSWB helps to implement a water market/bank as a mechanism to make water available to meet RCSD's existing and future demands. The groundwater bank provides up to 500,000 AF of groundwater storage. The annual intake and return capacities are 10,000 AFY.

Groundwater Suppliers

The Antelope Valley 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 District, particularly in light of heightened regulatory standards surrounding arsenic and chromium VI. Efforts to improve groundwater quality are ongoing and include recent to consolidate with several small water systems that are dependent on groundwater containing elevated arsenic concentrations. RCSD plans on this consolidation in an effort to provide safe drinking water supplies to these mutual water companies. This planning and design effort was conducted in conjunction with the State Water Resources Control Board via the Rosamond Regional Arsenic Consolidation Project. This Project was identified as the largest state

funded grant project in the State of California. Planning efforts were completed December 2016 and construction is expected to begin July 2017.

Groundwater supplies are generally of acceptable quality. Total dissolved solids (TDS) content in the northeastern portion of the Antelope Valley Groundwater Basin ranges from 180 to 920 mg/l according to a 2013 water quality evaluation study performed on behalf of the District.

Surface Water
Imported water is the main source of surface water supply to the region. Imported water is from the SWP and is supplied through the AVEK. Surface water in the Antelope Valley is intermittent and depends on rainfall. Most, if not all of the local runoff, is percolated to the groundwater and not a direct source of supply. The District does not have any local surface water supplies.

Recycled Water
Recycled water from the Lancaster Wastewater Treatment Plant (WWTP) is used to offset some of the groundwater uses within the basin. The District operates the Rosamond WWTP. However, at this time it is not economical to provide this water as a source of supply for non-potable uses.

Desalinated Water
Desalination plants can provide water supplies by taking sea water or brackish water and removing the salts to bring the water quality to acceptable levels. The Antelope Valley is isolated from the ocean and the groundwater basin has been adjudicated. At this time, there are no desalination opportunities.

Water Rights - The rights to water in the Antelope Valley Basin are specific to groundwater. Rights to pump the groundwater are strictly regulated based on the court adjudication of the basin. SWP contractors are allocated imported water rights based on their prescriptive Table A allowance. AVEK is the contractor from which the District receives SWP supplies and the delivery of water is determined by DWR.

Groundwater Rights
Groundwater pumping is governed by the 2015 adjudication of the basin, which severely reduced the District's groundwater pumping allocation from almost 3,000 AF of pumping rights to 404 AF by Year 2022.

Pumping right allocation ramp downs pertinent to the RCSD are summarized below. As such, this Project becomes a critical component in meeting the District's future demands.

2015 - 2,885 AF
2016 - 2,885 AF
2017 - 2,885 AF
2018 - 2,389 AF
2019 - 1,893 AF
2020 - 1,397 AF
2021 - 901 AF
2022 - 404 AF

Imported Water Rights – State Water Project Contractors

SWP is governed via the contract with the State. However, court actions such as restrictions on pumping in the Sacramento-San Joaquin Delta (Delta) can affect the reliability of the yield for the contracts. The only imported water supply for RCSD is SWP water contracted through the AVEK. Water imported to the Antelope Valley through the SWP first became available in 1978. The SWP is the nation's largest state-built water and power development and conveyance system. It includes pumping and power plants, reservoirs, lakes, storage tanks, canals, tunnels, and pipelines that capture, store, and convey water to 29 water agency contractors.

The SWP is operated by DWR for the benefit of SWP contractors. The SWP includes 660 miles of aqueduct and conveyance facilities, from Lake Oroville in the north to Lake Perris in the south. The SWP is contracted to deliver a maximum 4.17 million AFY of Table A water to 29 contracting agencies. Table A water is a reference to the amount of water listed in Table A of the contract between the SWP and the contracting agencies and represents the maximum amount of water an agency may request each year.

AVEK, the third largest SWP contractor, has a current contractual Table A Amount of 141,400 AFY. AVEK provides this water for both agricultural and municipal and industrial (M&I) use. AVEK's three largest M&I customer agencies are District No. 40, RCSD, and QHWD.

Each year by October 1, the SWP contractors provide DWR with a request for water delivery up to their full Table A Amount. Actual delivery from DWR may vary from the request due to variances in supply availability resulting from hydrology, storage availability, regulatory or operating constraints, etc. When supply is limited, a reduction of the requested amount is determined per the water allocation rules governing the SWP. Except for fluctuations in the availability of SWP water, during drought-related or regulatory supply interruptions within the state, sufficient infrastructure has been constructed adequate for RCSD to use SWP water to meet all water demands in its service area even during peak summer demand periods. It is estimated that approximately 80 percent of AVEK's allocation each year will be available to serve its retail agencies, of which RCSD receives approximately 5 percent. This percentage was taken from AVEK's 2015 UWMP draft and is based on their demand projections and the historic amount of water each retailer has purchased from AVEK. The percentage is subject to change dependent on the development and usage patterns in the Antelope Valley in the future but represents the best available estimate for planning purposes. Additionally, this percentage is subject to change based on the specific changes in allowed groundwater production as specified in the adjudication.

Current Water Uses - Current water supplies for the RCSD consists of groundwater, imported water, with the potential of future recycled water availability. As a whole, the RCSD is heavily dependent on groundwater. That said, there is still a large dependence on imported water supplies from AVEK, via SWP. Total current supplies for the RCSD, 89% is groundwater and 11% is imported water deliveries from AVEK and banked groundwater from the WSWB. Forecasting to 2035, the average water supply portfolio completely shifts resulting in a dramatic increase in imported water supplies due to the Antelope Valley Adjudication (Judgement) reducing the District's groundwater pumping rights from approximately 3,000 AF to just over 400 AF. See Figure 4-2 for a comparison in current and future water supplies.

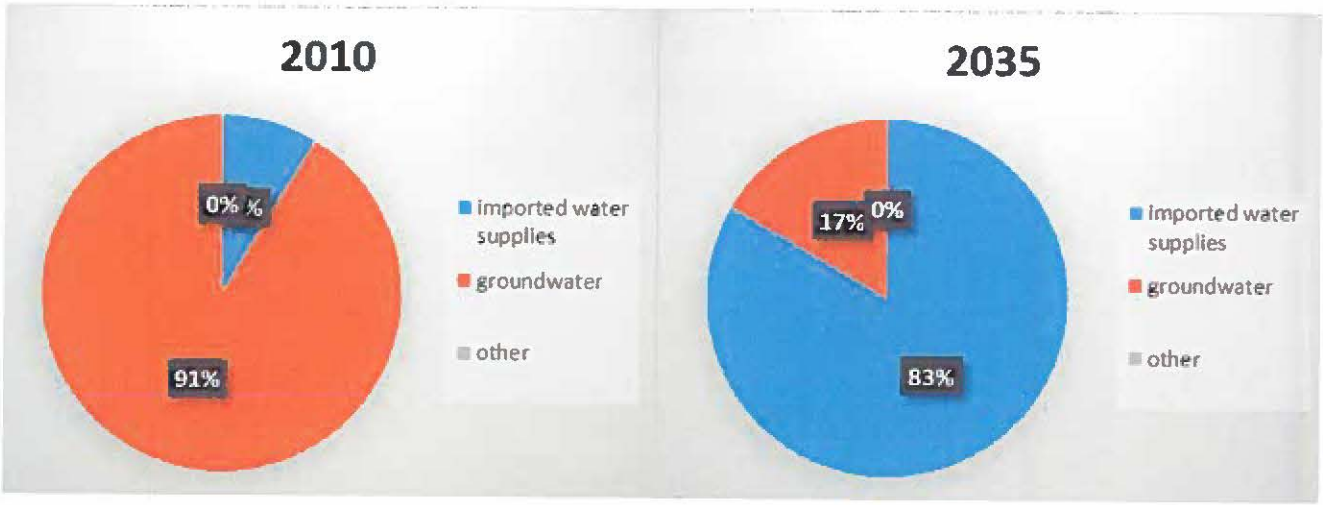


Figure 4-2: Current and Planned Water Supplies (AFY)

Current and Projected Water Demand - The need for additional water conservation and better management is widely recognized by all the stakeholders in both the Antelope Valley Region and in California. 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.

Historically, land uses within the Antelope Valley have focused primarily on agriculture; however, the Antelope Valley is in transition from predominately agricultural uses to predominately residential and industrial uses. As this transition continues, water demand is expected to increase.

Growth in the Antelope Valley proceeded at a slow pace until 1985. However, between 1985 and 1990, the growth rate increased approximately 1,000 percent from the average growth rate between the years 1956 to 1985. Since 2000, population growth in the area has slowed from the boom at the end of the last century. It is anticipated that approximately 20,000 people will reside in RCSD's service area by 2040. This represents an increase of a little over 10 percent from the current population.

The District will closely track and monitor the water usage of these existing water clients to determine the water conservation savings that are achieved post project. Additional environmental benefits will also be achieved through the Rosamond Regional Project through the elimination of excessive repairs of the antiquated ACP. 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 dependent 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 Rosamond Regional Project will help reduce the Region's use of SWP supplies 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. 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."

According to the U.S. Drought Monitor, a recent report (2017) underscores what experts have been saying for several months. A series of storms have hit northern California this winter (2016/17) and the drought picture there is improving, but water supply remains a concern in southern California and the Central Valley. At present, conditions are considered normal in almost all of the state north of the Bay Area, according to the new federal drought report. However, conditions south of the Bay Area including Kern, Los Angeles and Orange counties, along with much of central California, are locked in what officials classify as "extreme drought" – or worse. Areas of Ventura and Santa Barbara counties remain in "exceptional drought."

Major Crops and Total Acres Served - The entire District service area 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 - The District has a network of distribution mains throughout the community. RCSD maintains two (or is it three) connections with AVEK that deliver treated water into RCSD's system. In addition, the District has three active wells connected to the delivery system.

Energy Efficiency Elements - The Rosamond Regional Project will help improve the efficiency 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.

- Of total current supplies for RCSD, 89% is groundwater, 11% is imported 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 agencies 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 Rosamond Regional Project will help reduce the Region's cumulative burden on the State-wide energy demands.

Past Working Relationships with Reclamation - The RCSD has had a direct working relationship with the Bureau of Reclamation in the past. In both 2009 and 2013, the Semitropic-Rosamond Water Bank Authority (SRWBA) entered into a grant agreement with BOR, via ARRA WaterSMART grants, for the development of the Antelope Valley Water Bank Project. This included the development of 320 acres of recharge facilities and supporting infrastructure. The SRWBA performed and fulfilled all of the grant agreement and BOR expectations of the project as proposed in the grant application.

4.c Technical Project Description

General Scope - The Rosamond Regional Project will assist the RCSD in improving regional water management practices by replacing approximately 10,000 linear feet of antiquated ACP. The RCSD has come together to develop this water conservation program that will produce significant and measurable water savings. The Rosamond Regional Project also provides a secondary benefit, that of supporting a regional and state-wide 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 RCSD service area, the Antelope Valley, Kern and Los Angeles counties, and southern California.

Project Work - The Rosamond Regional Project will includes 10,000 linear feet of ACP distribution main replacement. The District currently has approximately 10,000 linear feet of ACP that is approximately 50 years old and is also experiencing operation inefficiencies. AC pipes can deteriorate as a result of a variety of factors, including working environment and operational conditions, and eventually, when stresses exceed their strength, they can fail resulting in system leaks and losses. As such there is a great need to develop effective renewal strategies for this infrastructure. Currently, RCSD is experiencing over 11% water loss and unaccounted for water within its distribution system. It is estimated that over 95% of the water losses are due to unpreventable water leak. The project will mitigate against future losses through the pipe replacement that aids in alleviating current losses stemming from leaky and antiquated pipes. The result is conservation of the District's and the Region's precious water resources, which is particularly important because of the recent adjudication that severely reduced the District's available supplies.

RCSD will directly benefit from utilizing technology such as the American Water Works Association's (AWWA's) free Water Audit Software program. This software will allow RCSD to compile a preliminary audit in a standardized and transparent manner advocated by AWWA. The Water Research Foundation (WRF) in partnership with the EPA and Water Systems Optimization developed a real loss component analysis tool. The Component Analysis tool is developed to work with data from the AWWA Water Audit Software.

These tools will assist RCSD in responding in a timely manner to failures in the form of leaks and breaks (ruptures) in their distribution system. The results of a leakage software programs will be used to effective leakage control and response strategies for the District.

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.

The actual project work associated with the Rosamond Regional Project is extremely straightforward. The District will use grant funds to complete distribution main infrastructure for the area that has been identified as a consistent source of water loss.

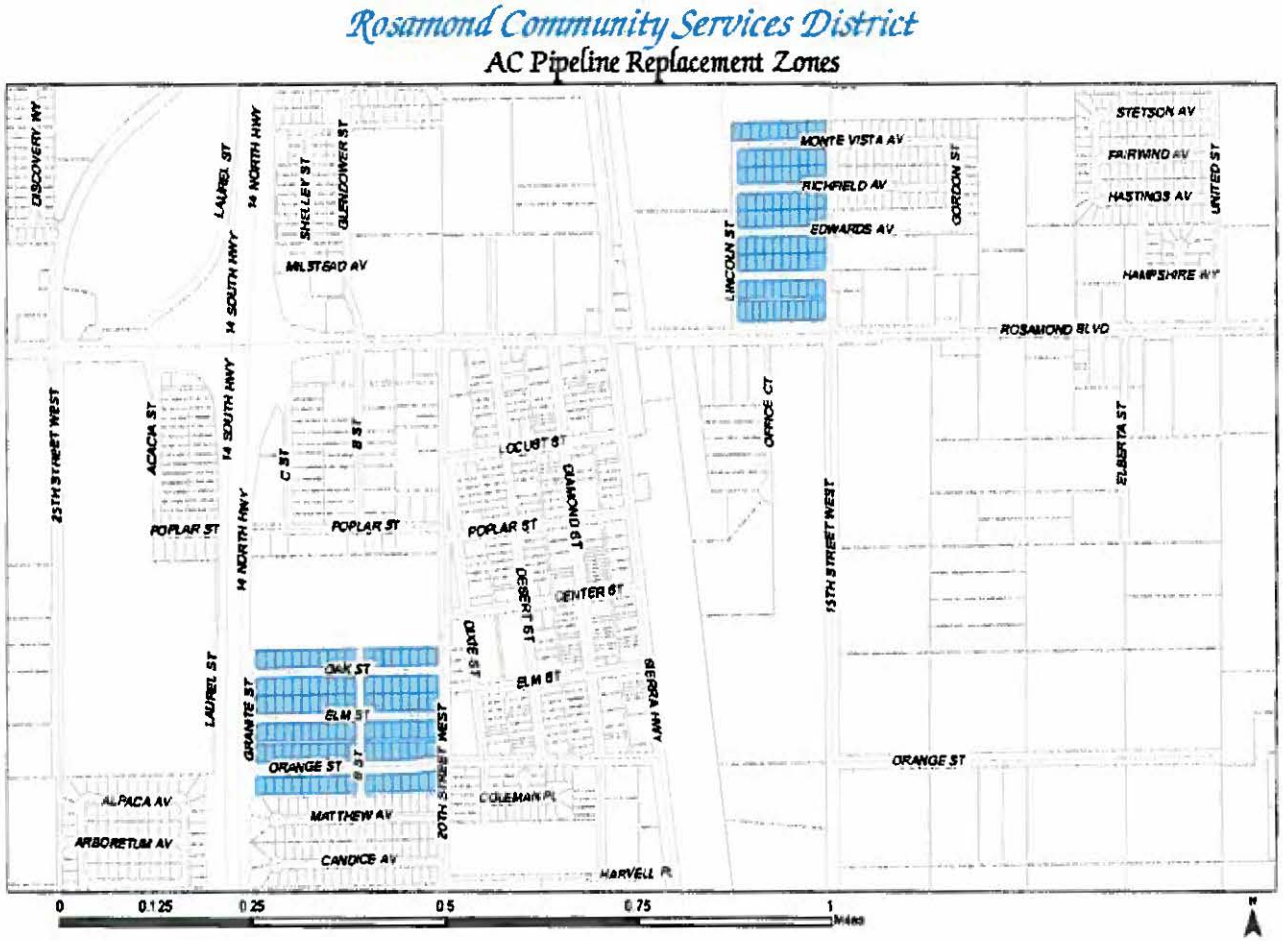


Figure 4-3 Distribution Main Replacement Map

Project Approach - Several tasks, listed below, are developed to complete the proposed project work and organized in a way to facilitate budget tracking and efficient schedule implementation. The installation start date is anticipated in October 2018 with an estimated completion date of July 2019.

Task 1: Administration

Activities include coordination of all Project activities, 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 semi-annual basis, with a Final Progress Report due at the end of the Project term. 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 semi-annual, and annual final reports as specified in the grant agreement.

Task 3: Environmental Documentation

The Rosamond Regional Project is expected to be categorically exempt as it will simply install the pipe replacement portion will occur in areas that have previously been disturbed. Existing ACP is expected to be abandoned in-place and remain buried. As a result the District does not anticipate environmental impacts associated with the proposed 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 4: Permitting

All project-related approvals will be handled by District staff, as needed, and will be executed in a timely and efficient manner. The necessary excavation permits needed for the distribution main replacement will be obtained from Kern County Roads Department.

Deliverables: Appropriate permitting and approvals will be obtained.

Task 5: Design

Distribution main design will required. The design will provide the details for connecting in the new distribution main to the existing system, abandonment details of the existing ACP and connection details for customer connections.

Deliverables: Bid packages and design of replacement mains.

Task 6: Installation

This involves the installing of 10,000 linear feet of pipeline. A contract for this task will be awarded to the successful bidder. The District 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 District, in conjunction with GEI who will provide administrative, environmental and reporting assistance as needed. Ronald Smith, District's General Manager, will have responsibility of Project Manager. 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, the Project Schedule has been prepared. Table 4-1 summarizes the anticipated tasks to be completed. Final reporting and grant closeout would occur within months following the completion of the installation.

Table 4-1: Project Schedule

Task	Item	Timing
1	Administration	Completed by October 2019
2	Reporting	Semiannual, Annual and Final Reports as required; Completed by October 2019
3	Design	NA
4	Environmental Documentation	Completed by October 2018
5	Permitting	Completed by October 2018
6	Installation	Completed by July 2019
7	Construction Management	Completed by July 2019

Project Mechanism- The Rosamond Regional Project proposes to install 10,000 of linear feet of ACP replacement through this project.

The mechanism that will be utilized to monitor water savings stemming from the pipeline replacement will include the District's use of the AWWA software. This software will allow RCSD to compile a preliminary audit in a standardized and transparent manner advocated by AWWA.

In addition, the WRF in partnership with the EPA and Water systems Optimization developed a real loss component analysis tool. The Component Analysis tool is developed to work with the data from the AWWA Water Audit Software. These tools will assist RCSD in responding in a timely manner to failures in the form of leaks and breaks (ruptures) in their distribution system. The results of a leakage software program will be used to affect leakage control and response strategies for the District.

Importance of Project- The need for additional water storage south of the Delta is widely recognized by all stakeholders in California water. As will be reflected in the California Water Plan Update 2018, 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 are increasing. The initial allocation for 2017 is 20 percent allocation as announced by DWR. A 50 percent SWP year means that only 5 percent of the annual amount of water under contract with 29 State Water Contractors 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 WSWB 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.

- Protection of endangered species.

Engineering Plans- Engineering design and plans will be developed for the installation of the distribution main. The purpose of the design and plans is to identify the location of existing utilities in the area, where connections will need to be performed and where and how to abandoned existing distribution main that will be abandoned.

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 Rosamond Regional Project, of imported water demands from the Delta.

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

Identify funding sources- The Rosamond Regional Project will utilize approximately 81 percent of the funds from the District's cost share contribution. This contribution is derived from funds already identified within the respective Infrastructure Fund/annual budgets and in-kind services. The remaining 19 percent of the Project funding will come from Reclamation grant funding. Documentation supporting the District's funding sources is provided in Section 9, Funding Plan. The District has included its most recent Fiscal Annual Report (2016) supporting the District's cost share requirement.

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

4.d Evaluation Criteria

Evaluation Criterion A: Water Conservation

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

Water Saved: It is expected that the RCSD will conserve approximately 12,000 acre-feet of water over the course of the Project, and 200 AFY as a direct benefit of the proposed Rosamond Regional Project.

This savings is obtained using the following estimates and calculations:

In preparation for the project, the District's water usage was evaluated for 2010 and 2015, including losses. Usage for 2015 is not fully indicative of actual demands due to the District realizing increases in conservation. Conservation has been driven by two factors. First is the 20X2020 action as defined in SBx7-7. This is mandated conservation by the state. In addition, the severe drought conditions experienced in last 5 years have increased conservation beyond the mandated conservation. As such, the approach was to take the average production from 2005 to 2010 and then reduce by 20 percent for the State mandated conservation. This will more accurately represent actual demands than current production.

Water losses were determined to be 11.4% for the system and a reasonable estimate of production is considered to be 2,702 AF annually, approximately 20% lower than production in 2010. The life of the Project is expected to be 60 years as distribution mainlines have demonstrated that service life. Therefore, water savings for the life of the entire Project life may actually be larger than identified below. That said, the water saving calculations demonstrated are noted to be on the conservative end and may exceed what is presented.

Water loss (AF) = Water Production (AF) – Water System Loss (%)
Water loss = 2,702 AF * 0.114 (System Losses)
District Water Loss = 308 AF

Efficient system =Expected Losses (4%)*Water Production (AF)
Efficient System = 0.04*2,702 AF

System Losses = 108 AF

Savings (AF) = Actual Losses – Optimal Losses
= 308 AF – 108 AF
Water Savings = 200 AF

Thus Realized Quantifiable Water Savings generated by this Project is 200 AFY
Or
12,000 AF over the 60 year life of the Project.

Realized Water Savings- The District estimates that the proposed Project will result in a minimum of 200 AFY saved.

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

Amount of Water Better Managed: The proposed project is estimated to better manage approximately 7.4% of the District's annual water supply. This is the amount that is currently being estimated by the District as loss. This is further calculated and described as follows:

Total water supply managed by the District as a result of this Project* = 200 AFY

Total Water Supply Better Managed by this Project = 200 AFY

Estimated Annual Amount of Water Better Managed = 200 AFY

Avg. Annual Water Supply = 2,702 AFY

Result

Percent of Water Better Managed = 7.4% of the District'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 service area, estimated to be 2,702 AFY.

The elimination of water losses is the cornerstone for all water management improvements. The use of software tools to track leaks and ruptures will provide the District with the means to effectively maintain their water system. In doing so, the District will provide better service and reduce the financial burdens to their customers.

Subcriterion No. A.2 – Percentage of Total Supply

Describe the percentage of total water supply conserved.

This project is estimated to conserve approximately 9.4% of the District's annual water supply, calculated as follows:

Average annual water supply: 2,702 AFY
Estimated water conserved as result of project: 200 AFY

Calculation:

Total Water Supply Conserved= Estimated Water Conserved
Avg. Annual Water Supply

$$\frac{200\ \text{AFY}}{2{,}702\ \text{AFY}} = 0.074$$

Total Water Supply Conserved = 7.4%

This project is estimated to save a total of 9.4% of the District's Annual Water Supply (2,702 AFY).

Subcriterion No. A.3 – Reasonableness of Cost

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

This project is estimated to cost $130.77 per acre foot of water over a 60-year project useful life.

Total Project Cost:	$1,569,230
Estimated water better managed:	200 AFY
Life of Improvements:	60 years*
Calculation:	200 AFY x 60 years = 12,000 AF of water better managed over the useful lifetime of the distribution mains
	Cost per AF = $1,569,230/12,000 AF
	= $130.77/AF

*Project Life (60-year life span) is based on engineer's judgment and experience with pipelines in southern California and a Utah State study indicating that PVC has a useful life of 100 years.

The project cost alternative is the purchase of imported water supplies via AVEK at a cost of $521/AF. These costs will continue to escalate.

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 Rosamond Regional 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 RCSD currently receives approximately 11% of its water from the AVEK via the SWP.

With an estimated 12,000 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 acre-foot over the mountains from the California Bay- Delta the fiscal energy savings is calculated to be $79,440 based on energy costs of $0.1324 per kWh.

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

= 200 AFY X 3,000 kWh * $0.1324/kWh

Total Energy Fiscal Savings =$79,440 annually

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, 2016.

Table 4-2
Cost Comparison of Developing Alternative Water Sources (Costs/AF)

Project Water	Brackish Groundwater	Wastewater	Seawater
$130.77	$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

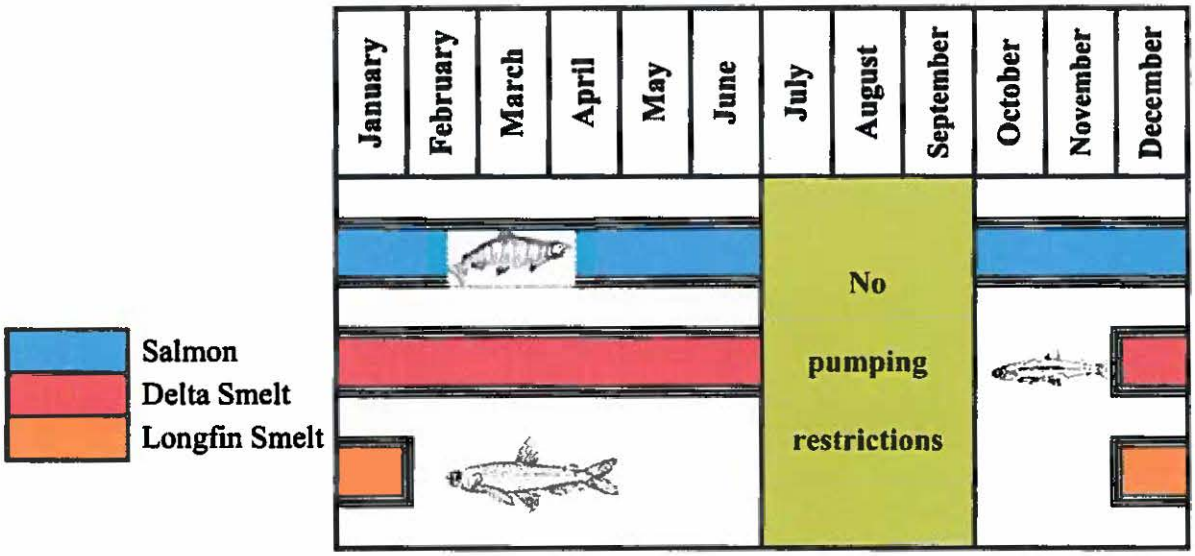
It has been identified that projects *resulting in reduced demand on imported water supplies* will play a key role in resolving the problem of the Delta, which is the number one infrastructure problem in California.

By implementing this 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 (2013/2014). 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 capturing water losses will help to ease the stress on California's water resources.

Figure 4-4, below, illustrates the pumping restrictions that are currently being implemented in the Delta in efforts to restore these fish species' populations.

Figure 4-4: Delta Pumping Schedule



By utilizing California Urban Water Use Efficiency (CUWWC) approved Best Management Practices (BMPs) such as capturing water losses/unaccounted for water, 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 (SB1, 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 Rosamond Regional Project will not specifically open new external water markets, but will provide a unique opportunity for the District 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 District in planning for and developing water markets in the future for things such as reclaimed or recycled water that have far reaching capabilities for water conservation efforts. With a large recreational parks, schools, and other public facilities such as District headquarter all located within District boundaries, the District can anticipate the ability to open additional water markets in the future for non-residential customers which will significantly contribute to water conservation efforts and assist 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

d) Generally make more water available in the basin and improve the overall health of the basin where the proposed work is located

The Rosamond Regional Project 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, by aiding in operational flexibilities, 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 has experienced in 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015, and 2016. In addition to typical climate variability, climate change is reducing snowpack storage in the Sierra Nevada Mountains[1]. The 2017 allocation has initially been set at 20%[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 12,000 AF over the course of the project. Without the Project that increment of supply would be lost and unavailable.

The Rosamond Regional Project will make significant contributions to the sustainability of local water supplies, by targeting some of the District's largest residential water users in the proposed boundary. The District will be able to make timely adjustments to account for drought conditions or District-wide Stage II alerts by having the ability to target (through the AMI system) the biggest users and request/provide incentives for reduced use during peak or problematic times. This will help ensure that the District will have the ability to prevent or curtail water supply shortages when the time arises.

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

As the Antelope Valley Region continues to grow (see prior population rate increases totaling 8%), the project will help the District take the first step to improve water management and water conservation practices through the installation of 10,000 linear feet of new pipe to replace old ACP. With State mandates that require the District to reduce its water consumption by 20%, despite increased demands from population growth, the RCSD will benefit significantly by adopting new water management styles.

In addition to conserving water, the project has the potential to 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 200 AFY of savings associated with the pipeline change out effort.

Does the project promote and encourage collaboration among parties?

The Rosamond Regional Project has widespread support from the various stakeholders, California State Legislative Representatives and Assembly members representing multiple districts Antelope Valley area, and the California Regional Water Quality Control Board, Lahontan.

a) **State Water Resources Control Board, Division of Drinking Water (dated January 17, 2017):** Endorses and supports the District'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. – SWRCB, Sanitary Survey Engineer.

b) **Rosamond Community Services District Board of Directors:** All parties of the RCSD Board of Directors 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 Rosamond Regional Project. 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.

c) **Antelope Valley East Kern Water Agency –State Water Project Water Contractor (dated January 17, 2017):** AVEK endorses and supports the District'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 in meeting statewide, regional and local water conservation initiatives set forth by 20x2020. This water savings initiative will also prove essential in helping to alleviate demands on SWP supplies which have been unreliable due to extended drought conditions- AVEK.

Letters of Project support that have been received 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? This project helps to propel and address regional water supply issues and needs for conservation. The key issues, needs, challenges, and priorities for the Antelope Valley Region with respect to water supplies include the following, which are discussed in greater detail below:

- Regional reliance on imported water and the associated energy;
- Groundwater use is not managed;
- Mismatch between supplies and demands
- Existing facility limitations; and
- Land subsidence effects

The Antelope Valley Region relies on SWP for approximately 46 percent of its total supply in an average year, approximately 31 percent of its total supply in a multi-dry year, and approximately 11 percent of its total supply in a single-dry year.

The availability of SWP supply is known to be variable. It fluctuates from year to year depending on precipitation, regulatory restrictions, legislative restrictions, and operational conditions, and is particularly unreliable during dry years. The DWR Reliability Report (2012) anticipates a minimum delivery of 9 percent of full Table A Amounts for 2011 demand conditions and 11 percent of full Table A Amounts for 2031 demand conditions. The Antelope Valley Region likely cannot meet expected demands without imported water, and the variable nature of the supply presents management challenges to ensure flexibility.

In fact, as cited in the 2013 AVIRWMP Update, a few of the major resource management strategies needed to help meet the Region's objectives include:

- Urban Water Use Efficiency – reduce urban demands
- Conveyance- increasing reliability and control of water movement
- System reoperation- increase reliability and control of water movement

As such this project, will directly support region-wide objectives within the Antelope Valley.

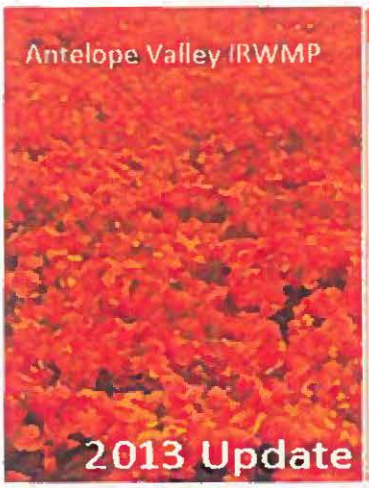
Evaluation Criterion F: Implementation and Results

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 is supported by the recently updated AV IRWMP (2013) of which RCSD is a stakeholder and participant in. 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 Antelope Valley Regional Integrated Regional Water Management Plan (IRWMP), dated June 2013.

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



Objectives	Planning Targets
Water Supply Management	
Provide reliable water supply to meet the Antelope Valley Region's expected demand between now and 2035; and adapt to climate change.	Maintain adequate supply and demand in average years.
	Provide adequate reserves (61,200 AFY) to supplement average condition supply to meet demands during single-dry year conditions, starting 2009.
	Provide adequate reserves (164,800 AF / 4-year period) to supplement average condition supply to meet demands during multi-dry year conditions, starting 2009.
	Adapt to additional 7-10% reduction in imported deliveries by 2050, and additional 21-25% reduction in imported water deliveries by 2100.

Reduce Water Demand	Improve Operational Efficiency and Transfers
• Agricultural Water Use Efficiency • Urban Water Use Efficiency	• Conveyance – Regional/Local • System Reoperation • Water Transfers

In addition, the Rosamond Regional Project also supports the planning efforts established in the District's and the AVIRMWP Regional UWMPs, last updated in 2015, that identifying capturing water losses and conservation as one of their BMPs to help achieve water conservation and water management goals. These are scheduled for revision and updates again in 2020.

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 –

The replacement of the distribution main will examine future projected growth in the area such that adequately sized distribution main is installed. In addition, the design plans will include details on all connections for customers and to the existing system are documented as to location and any special requirements. A review will be performed of all other utilities in the area. The design will ensure that this information is included to meet any regulations and protect those facilities.

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) –

The District assesses the need water main repairs throughout its service area. RCSD identified areas within their service area that had higher rates of call-outs for repairs. The result was to identify an area which requires the replacement of aging and antiquated ACP distribution main.

Meets Goals of State/Regional Water Plan: The Rosamond Regional Project is in direct alignment with the:

a) Metropolitan Water District's Integrated Water Resources Plan, (IWRP)

b) Antelope Valley Integrated Regional 2015 Urban Water Management Plan

   1) Water reliability is one of the main objectives outlined in the 2015 Regional Water Management Plan. The proposed project will assist in reducing reliance on SWP, which currently comprises a good percentage of the Region's water supply.

c) State of California 20x2020 Water Conservation Plan

   1) The water conservation strategies inherent in the project will also assist the District and the 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 Rosamond Regional Project is ready to proceed. Assuming a grant agreement is executed in September 2017, the District will be able to develop a bid process for the project effective immediately and will have the entire project completed in a 24-month period, or by July 2019.

The District then expects 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 commence in October 2018, with all project activities expected to be closed in the summer of 2019. The District will comply with all BOR reporting requirements including filing the SF-425, Federal Financial and Interim Progression Reports, on a semi-annual basis, and by submitting final performance report in the form of a final report, as stipulated in the FOA.

Table 4-3: Project Schedule

Task	Item	Timing
1	Administration	Completed by October 2019
2	Reporting	Semiannual, Annual and Final Reports as required; Completed by October 2019
3	Design	NA
4	Environmental Documentation	Completed by October 2018
5	Permitting	Completed by October 2018
6	Installation	Completed by July 2019
7	Construction Management	Completed by July 2019

Permits and Process: The District anticipates that only permits for the excavation of the trench will be required. These permits will be obtained through Kern County Road Department.

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 District will use the following performance measures to evaluate the Project after project completion as follows:

a) **Amount of water conserved.** This will be measured by having District staff review water usage reports for the service territory for 2016/2017 directly compared with usage post pipeline installation in 2019. This will allow the District to evaluate the actual amount of acre-feet per year saved as directly correlated with the project installation.

b) **Amount of water losses mitigated/unaccounted for water recuperated.** District staff will review water usage reports as well as review water bills for the project service territory to ascertain the reduction in water losses and unaccounted for water that has been recuperated in relation to the Project.

c) **Amount of staff reduced.** The District will compare the number of callouts for main repair year to year.

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 RCSD as a whole receives approximately 11% of its imported water from the State Water Project, which is a Bureau of Reclamation facility. The proposed project will reduce the District's reliance on imported water supplies and help contribute to the conservation of Bureau of Reclamation water supplies through the direct conservation of water supplies.

5.e Performance Measures

RCSD supports the importance of measuring project realizations and quantifications through project performance. Quantification of Project benefits are an important means of determining the relative effectiveness of water management efforts and 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 District will utilize several water management performance measures to track the performance of the Rosamond Regional Project.

These post-project quantification measures are in line with Reclamation's objectives, specifically those outlined in this FOA, 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) will be compared to post-project water use and modifications in this demand pattern will quantify the overall success of the Rosamond Regional Project (post-project performance).

Post-Project Benefits - Realized Water Savings

These post-project performance measures will include the following:

- Compare post-project water measurement (deliveries versus consumption) data to historical water uses.
- Maintenance database for the installed distribution main.

In preparation for this Rosamond Regional Project, the District has evaluated the total water use versus land use concentrations (December 2016), during the development of the RCSD 2015 UWMP's SBx7-7 baseline and water conservation goals. This data is helpful in developing the baseline water consumption patterns within the project area boundaries. 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.

Table 4-4: Average Per Capita Per Day -RCSD

Base period year*		Distribution system population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar year			
1	2001	14,600	2.8	192
2	2002	14,900	2.9	195
3	2003	15,300	2.7	176
4	2004	15,400	2.8	182
5	2005	17,300	2.7	156
6	2006	16,700	3.1	186
7	2007	17,900	3.3	184
8	2008	17,300	3.3	191
9	2009	17,700	2.8	158
10	2010	17,700	2.7	153
10-year Baseline Daily Per Capita Water Use				**177**
2020 Target (20% Reduction)				**142**
2015 Interim Target (Average of Baseline and 2020 Target)				**160**

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 District 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. District 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 District as a result of reducing reliance on imported water from AVEK/SWP thereby resulting in a lower average cost per acre-foot of water. In addition, the conserved water provides supplies for RCSD to store for future use.

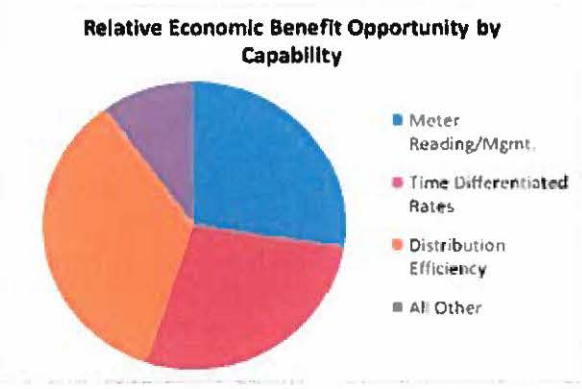


Figure 4-5: Relative Economic Benefit Opportunity by Capability

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 District adheres to the following philosophy:

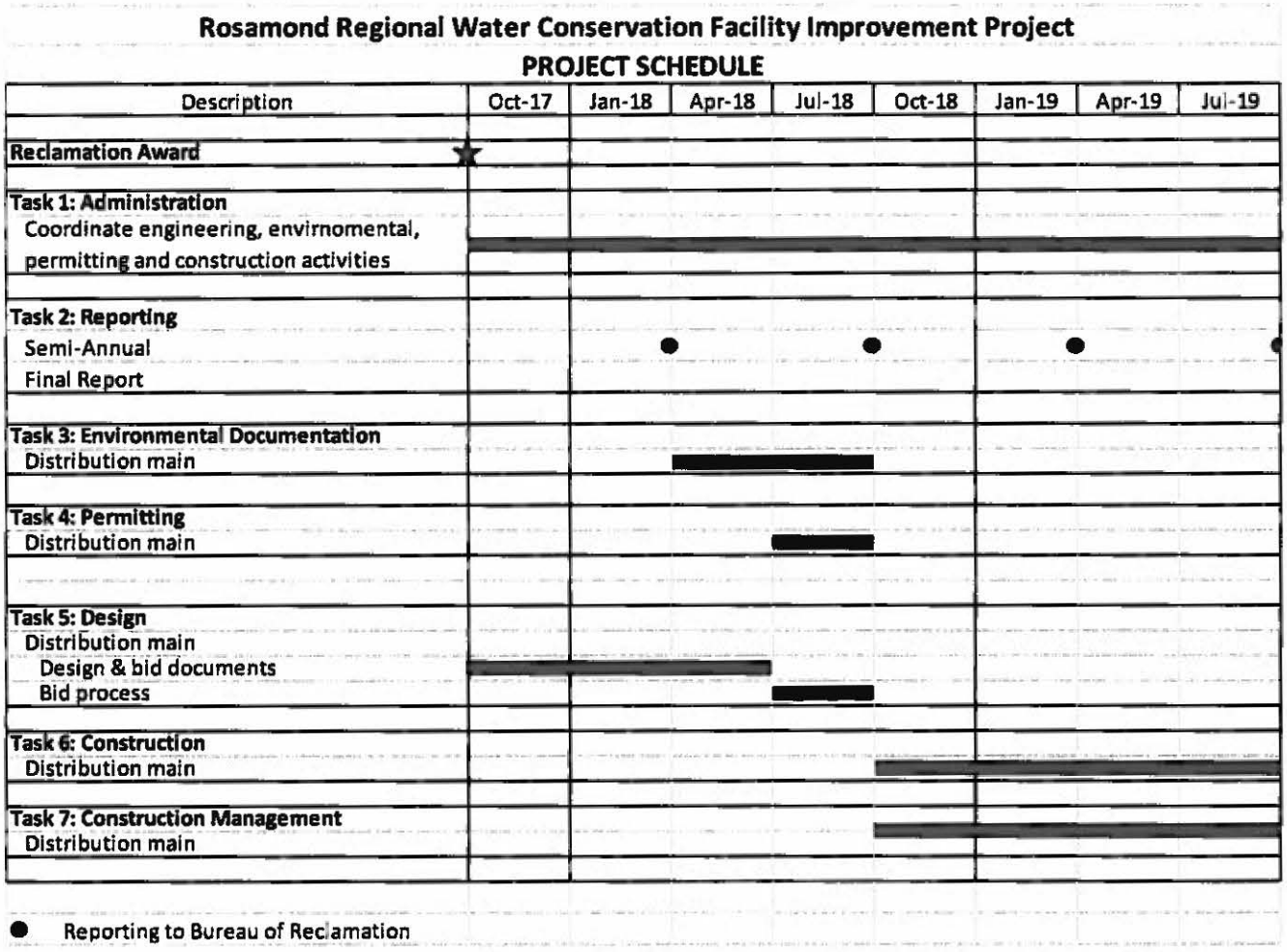
- A water savings benefit not communicated to customers = no benefit
- Assume that a water efficiency capability not measured will not deliver customer benefit

- 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 Antelope Valley Region of Kern County."

The District 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. RCSD may also 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 4-6: Project Schedule



5 Environmental and Cultural Resource Compliance

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 Rosamond Regional Project is categorically exempt and will simply install meters and pipeline in existing facilities that are located in District owned property. As a result the District does not anticipate environmental impacts associated with the proposed 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.*

The installation of the distribution main will require the excavation of soils but does not involve any waterways. Excavation of material will occur in roadways, along corridors that have already been disturbed for the installation of utilities that service the area. Air quality will have temporary impacts from the operation of equipment during installation. All soils that are excavated will be protected against erosion from rainfall and wind. The Project will comply with the requirements for protection of the air quality within the Antelope Valley.

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?*

While there are endangered species within the Antelope Valley, the Project installation will not result in any disturbance of their habitat. The habitat is urban and there are no sensitive biological receptors within the proposed project area or alignment.

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, there are no wetlands or surface waters inside the project boundaries.

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

The distribution system was originally developed and constructed shortly following

establishment of RCSD in 1966.

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.

6 Letters of Support

The Rosamond Regional Project has widespread support from the various AVIRWM Group stakeholders, State Water Contractors and the a) State Water Resources Control Board, Division of Drinking Water.

a) **State Water Resources Control Board, Division of Drinking Water (dated January 17, 2017)**: Endorses and supports the District'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.

b) **Rosamond Community Services District Board of Directors (via Official Resolution dated January 17, 2017):** All parties of the RCSD Board of Directors 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 Rosamond Regional Project. 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.

c) **Antelope Valley East Kern Water Agency – State Water Project Water Contractor (dated January 17, 2017):** AVEK endorses and supports the District'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 in meeting statewide, regional, and local water conservation initiatives set forth by 20x2020. This water savings initiative will also prove essential in helping to alleviate demands on SWP supplies which have been unreliable due to extended drought conditions - AVEK Water Agency.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board
Division of Drinking Water

January 17, 2017

Mr. Ronald Smith, General Manager
Rosamond Community Services District (RCSD)
3179 35th Street West
Rosamond CA 93560

RE: Grant Application- Bureau of Reclamation WaterSMART: Rosamond Community Services District "*Rosamond Regional Water Conservation Infrastructure Replacement Project (Rosamond Regional Project*" (FOA No. BOR-DO-17-F012)

Dear Mr. Smith,

The California State Water Resources Control Board, Division of Drinking Water (hereinafter Division), endorses and supports the Rosamond Community Services District's (hereinafter District) plan to implement the "*Rosamond Regional Water Conservation Infrastructure Replacement Project.*" This project will provide increased accessibility to water supplies that would otherwise be lost or unaccounted, in addition to promoting the critical need for water conservation throughout the region. The proposed Rosamond Regional Project would allow for replacement of approximately 1,800 antiquated meters with advanced metering technologies, as well as the replacement of 10,000 linear feet of Asbestos Cement Pipe (ACP). This project improves local, state and federal water conservation objectives by enhancing production and/or leakage quantification that will result in measurable water savings.

The District demonstrates the collaboration that is necessary to ensure a reliable water future by diversifying its water supply portfolio. Water conservation is an important component of this portfolio, which is urgently needed to meet the future water demands of a growing population and a reduced water supply stemming from the recently enacted Antelope Valley groundwater basin adjudication. In addition, water supplies better managed in this region will further aid in meeting state wide water conservation goals identified within the *2013 Antelope Valley Regional Integrated Water Management Plan Report and the 2015 RCSD Urban Water Management Plan*, submitted to the California Department of Water Resources.

The Antelope Valley Region is a growing coalition - currently comprised of 42 stakeholders and water purveyors - responsible for the regional water planning needs of 465,000 people in the Antelope Valley Region of Kern County, of which RCSD is an active collaborative member. Distinctive hydrogeological, topographic, demographic and political elements bring the Region

together as a cohesive, interdependent, self-governing body. The District is continually striving to create innovative solutions to extend its water supplies and maximize its long-term water supply reliability. This project also helps to further investments in water conservation in the Antelope Valley Region to the benefit of both our agencies.

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 Division of Drinking Water staff would be happy to do so.

Sincerely,

Jaswinder Dhaliwal

Jaswinder (Jesse) S. Dhaliwal, P.E.
Senior Sanitary Engineer
Tehachapi District (#19)
Division of Drinking Water

CC: Kern County Dept. of Public Health, Environmental Health Services Division
Lorena Ospina, GEI Consultants (via email)

ANTELOPE VALLEY - EAST KERN WATER AGENCY
AVEK
ESTABLISHED 1959

A PUBLIC AGENCY

January 17, 2017

Mr. Ronald Smith
General Manager
Rosamond Community Services District
3179 35th Street West
Rosamond CA 93560

RE: Grant Application- Bureau of Reclamation WaterSMART: Rosamond Community Services District *"Rosamond Regional Water Conservation Infrastructure Replacement Project (Rosamond Regional Project"* (FOA No. BOR-DO-17-F012)

Dear Mr. Smith,

The Antelope Valley East Kern Water Agency (AVEK), endorses and supports the Rosamond Community Services District's plan to implement the *"Rosamond Regional Water Conservation Infrastructure Replacement Project."* This project will provide increased accessibility to water supplies that would otherwise be lost or unaccounted, in addition to promoting the critical need for water conservation throughout the region. The proposed Rosamond Regional Project would allow for replacement of approximately 1,800 antiquated meters with advanced metering technologies, as well as the replacement of 10,000 linear feet of Asbestos Cement Pipe (ACP). This project improves local, state and federal water conservation objectives by enhancing production and/or leakage quantification that will result in measurable water savings.

The District demonstrates the collaboration that is necessary to ensure a reliable water future by diversifying its water supply portfolio. Water conservation is an important component of this portfolio, which is urgently needed to meet the future water demands of a growing population and a reduced water supply stemming from the recently enacted Antelope Valley groundwater basin adjudication. In addition, water supplies better managed in this region will further aid in meeting state wide water conservation goals identified within the *2013 Antelope Valley Regional Integrated Water Management Plan Report and the 2015 RCSD Urban Water Management Plan*, submitted to the California Department of Water Resources.

The Antelope Valley Region is a growing coalition - currently comprised of 42 stakeholders and water purveyors - responsible for the regional water planning needs of 465,000 people in the Antelope Valley Region of Kern County, of which RCSD and AVEK are active collaborative members. Distinctive hydrogeological, topographic, demographic and political elements bring the Region together as a cohesive, interdependent, self-governing body. The District is continually striving to create innovative solutions to extend its water supplies and maximize its long-term water supply reliability. This project also helps to further investments in water conservation in the Antelope Valley Region to the benefit of both our agencies. As the 3rd largest State Water Project (SWP) Contractor, AVEK understands the importance of alleviating the burden on unreliable SWP supplies.
January 17, 2017

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 AVEK staff would be happy to do so.

Sincerely,

Tom Barnes
Resources Manager
AVEK Water Agency

7 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.

RCSD anticipates that only excavation permits from the Kern County Roads Department may be required. These permits may be needed for the installation of the replacement of the ACP with new distribution main lines. No other permits are anticipated as a result of the area being has previously disturbed by the installation of the original ACP.

8 Official Resolution

RESOLUTION NO. 2017-03

RESOLUTION OF THE BOARD OF DIRECTORS OF THE ROSAMOND COMMUNITY SERVICES DISTRICT 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 2017

WHEREAS, the Rosamond Community Services District 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 2017 (Funding Opportunity Announcement No. BOR-DO-17-F012)

WHEREAS, the Rosamond Community Services District ("District") is a public agency of the State of California formed by the Community Services District Law under Section 61000 et. seq. of the Government Code; and

WHEREAS, arrangements between stakeholders in the Region has been successful in helping the District regulate water supplies and resources available to its Region; and

WHEREAS, the District plans to implement further water conservation measures through the implementation of an advanced meter replacement program and asbestos cement pipe (ACP) replacement that will aid in the identification and capture of unaccounted for water loss within the entire service area, as well as help to better manage water resources consumed within the District; and

WHEREAS, the water saving measures, managed by the District, 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 *Rosamond Regional Water Conservation Infrastructure Replacement Project*, which has the support of the California State Water Resources Control Board, Lahontan Region, State Water Contractors and other signatories within the Antelope Valley Region; and

WHEREAS, the United States Bureau of Reclamation is currently soliciting proposals for grant funding assistance under the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grants for FY 2017 (Funding Opportunity No. BOR-DO-17-F012); and

WHEREAS, District staff has prepared a grant application under the Bureau of Reclamation's *WaterSMART Grant Program.*

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED BY THE BOARD OF DIRECTORS OF ROSAMOND COMMUNITY SERVICES DISTRICT AS FOLLOWS:

1. The District's Board of Directors has reviewed and supports the submission of a grant application to the Bureau of Reclamation for the *Rosamond Regional Water Conservation Infrastructure Replacement Program*; and

2. The District's General Manager, Ronald Smith, is directed to submit the grant application and is authorized to enter into an agreement with the Bureau of Reclamation on behalf of the District for grant funding under the Bureau of Reclamation's *WaterSMART: Water and Energy Efficiency Grants for FY 2017* 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 the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

ADOPTED this 17th day of January, 2017.

Olaf Landsgaard
President of the Board of Directors of the
Rosamond Community Services District

ATTEST:

Lizette Guerrero
Secretary of the Rosamond Community
Services District and Its Board of Directors

9 Project Budget Application

9.a 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 District will provide its cost share contribution through monetary and in-kind contributions in the amount of $1,269,230. These funds will be available immediately and will be officially appropriated 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 installation, contractor facilitation, contract oversight, and reporting.

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

No in-kind costs have been incurred to date.

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

No project expenses costs have been incurred to date.

(b) How have they benefited the Project?

Although not part of the project costs, the District has completed its 2015 UWMP. This study has generated data pertinent to current and forecasted RCSD Water Demand and Supplies. This data, in conjunction with District's 2015 UWMP, 20x2020 goals, and BMP measures were data that were directly applicable to this project application.

(c) The amount of the expense

No project expenses costs have been incurred to date.

(d) The date of cost incurrence

No project expenses costs have been incurred to date.

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

The District is not reliant on outside partners to help fund the Rosamond Regional Project. All matching funds will be provided by the District. Commitment letters are not applicable. Please see the attached Resolution for funding assurances from the District. A Final Resolution is expected to be executed on January 17, 2017, shortly after the submission of this grant application. As allowable per the FOA, the *Rosamond Regional 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 the District, included is a copy of the most current *Comprehensive Annual Financial Reports* (2015-16) that identify funds for Infrastructure Improvements, as those associated with the Rosamond Regional Project.

(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.

9.b 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 $1,569,230 with $1,269,230 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 $300,000 in requested grant funds (Federal cost share) would be allocated to this construction cost, and would amount to 19 percent of total Project costs, with the remainder 81 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 9-1 provides a summary of the Project budget, broken down by Reclamation Funding and Applicant funding per task.
- Table 9-2 provides the Project Budget by Year.
- Table 9-3 through Table 9-10 provide the cost breakdown per tasks.
- Table 9-11provides a breakdown Federal and non-Federal Funding.
- Standard Form 424C.

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

9.c Budget Narrative

General Description

Salaries and Wages – Ronald Smith, General Manager, is the representative for the Applicant and will provide overall Project Management. RCSD 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 RCSD will provide technical, administrative, environmental, and reporting assistance as needed. RCSD operates with a minimal professional staff and has maintained a long-standing relationship with GEI, who is familiar with district facilities and operations.

For any project work completed by the RCSD staff and GEI, the fringe benefits are included as part of the hourly rate. RCSD staff are shown as a base salary rate plus benefits. An example calculation showing daily and hourly rates is found in Table 9-10. If awarded the WaterSMART Grant, RCSD 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 2017 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 9-10. GEI is also committed to meeting Reclamation's requirement for Fringe Benefits and Indirect Cost accounting by working through RCSD who would be the lead Agency contracting with Reclamation.

Fringe Benefits – For the District 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 – Neither RCSD 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 $0.535 /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 RCSD 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, District 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 RCSD 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 9-2, 9-8a and 9-8b 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 9-3 through 9-9 and Standard Form 424C. The District contracts directly with a Consultant using hourly rates for services. The Consultant rates are presented in Table 9-10.

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 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 RCSD does 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 RCSD 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 RCSD's In-Kind Contribution.

Table 9-1
Project Budget

$/Hour	Reclamation Funding	Applicant Funding		Total Cost
		Monetary Contribution	"In-Kind" Contribution	
Task 1 - Administration	$0	$26,526	$4,396	$30,922
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	$22,280	$2,767	$25,047
Quarterly and annual progress reports, draft and final project report.				
Task 3 - Environmental Documentation	$0	$29,382	$1,623	$31,005
NEPA/CEQA				
Task 4 - Permitting	$0	$2,980	$2,728	$5,708
Excavation permitting				
Task 5 - Design	$0	$118,338	$7,861	$126,199
Design of distribution mains and connections.				
Task 6 - Installation	$300,000	$961,975	$0	$1,261,975
Includes procurement and installation of Project materials				
Task 7 - Construction Management	$0	$78,008	$10,366	$88,374
TOTALS	$300,000	$1,239,489	$29,741	$1,569,230

Cost Estimating Notes:

1) Cost estimate based on similar work recently completed by GEI/B-E in 2010.

2) Estimate based on approximately 1% of the Construction costs

Table 9-2
Project Budget By Year

$/Hour	Total Cost	2018	2019	2020
Task 1 - Administration	**$30,922**	**$9,277**	**$9,277**	**$12,369**
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	**$25,047**	**$7,514**	**$7,514**	**$10,019**
Quarterly and annual progress reports, draft and final project report.				
Task 3 - Environmental Documentation	**$31,005**	**$9,301**	**$9,301**	**$12,402**
NEPA/CEQA				
Task 4 - Permitting	**$5,708**	**$1,712**	**$1,712**	**$2,283**
Excavation permitting				
Task 5 - Design	**$126,199**	**$37,860**	**$37,860**	**$50,480**
Design of distribution mains and connections.				
Task 6 - Installation	**$1,261,975**	**$378,593**	**$378,593**	**$504,790**
Includes procurement and installation of Project materials				
Task 7 - Construction Management	**$88,374**	**$26,512**	**$26,512**	**$35,350**
Includes spot inspection of meter installation, field CM work related to distribution main, and CM oversight by project engineer.				
TOTALS	$1,569,230	$470,769	$470,769	$627,692

Cost Estimating Notes:

1) Cost estimate based on similar work recently completed by GEI.

2) Estimate based on recent costs for similar project funded through WaterSMART.

Table 9-3

Task 1 - Administration

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	8	$798	$0	$798
Administrator	$ 83.12	16	$1,330	$0	$1,330
Engineer	$ 68.20	0	$0	$0	$0
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	49	$2,268	$0	$2,268
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Project Manager	$ 201	69	$13,869	$0	$13,869
Engineer	$ 149	69	$10,281	$0	$10,281
Admin Asst	$ 99	24	$2,376	$0	$2,376
TOTAL DIRECT COSTS			**$30,922**	**$0**	**$30,922**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 30,922**	**$ -**	**$30,922**

The compensation rate includes fringe benefits.

Table 9-4
Task 2 - Reporting

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	8	$798	$0	$798
Administrator	$ 83.12	17	$1,413	$0	$1,413
Engineer	$ 68.20	0	$0	$0	$0
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	12	$555	$0	$555
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Project Manager	$ 201	58	$11,658	$0	$11,658
Engineer	$ 149	58	$8,642	$0	$8,642
Admin Asst	$ 99	20	$1,980	$0	$1,980
TOTAL DIRECT COSTS			**$25,047**	**$0**	**$25,047**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 25,047**	**$ -**	**$25,047**

The compensation rate RCSD Staff includes fringe benefits.

Table 9-5

Task 3 - Environmental Documentation

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	12	$1,197	$0	$1,197
Administrator	$ 83.12	4	$332	$0	$332
Engineer	$ 68.20	0	$0	$0	$0
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	2	$93	$0	$93
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Project Manager	$ 201	120	$24,120	$0	$24,120
Engineer	$ 149	30	$4,470	$0	$4,470
Admin Asst	$ 99	8	$792	$0	$792
TOTAL DIRECT COSTS			**$31,005**	**$0**	**$31,005**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 31,005**	**$ -**	**$31,005**

The compensation rate includes fringe benefits.

Table 9-6

Task 4 - Permitting

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	0	$0	$0	$0
Administrator	$ 83.12	0	$0	$0	$0
Engineer	$ 68.20	40	$2,728	$0	$2,728
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	0	$0	$0	$0
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Project Manager	$ 201	0	$0	$0	$0
Engineer	$ 149	20	$2,980	$0	$2,980
Admin Asst	$ 99	0	$0	$0	$0
TOTAL DIRECT COSTS			**$5,708**	**$0**	**$5,708**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 5,708**	**$ -**	**$5,708**

The compensation rate includes fringe benefits.

Table 9-7

Task 5 - Design

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	20	$1,996	$0	$1,996
Administrator	$ 83.12	0	$0	$0	$0
Engineer	$ 68.20	86	$5,865	$0	$5,865
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	0	$0	$0	$0
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Principle Engineer	$ 267	120	$32,040	$0	$32,040
Engineer	$ 149	402	$59,898	$0	$59,898
Engineer	$ 110	240	$26,400	$0	$26,400
TOTAL DIRECT COSTS			**$126,199**	**$0**	**$126,199**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 126,199**	**$ -**	**$ 126,199**

The compensation rate includes fringe benefits.

Table 9-8A

Task 6 - Installation

Cost Estimate - Breakdown into Materials, Equipment, and Labor Costs

Item	Quantity	Unit Cost	Materials	Equipment	Labor	Total
Mobilization			$ -	$ 42,500	$ 42,500	$ 85,000
Distribution Main Replacement Program						
Materials	10,000		$ 388,402	$ -	$ -	$ 388,402
Equipment			$ -	$ 58,849	$ -	$ 58,849
Labor			$ -	$ -	$ 729,724	$ 729,724
Total Capital Cost			**$ 388,402**	**$ -**	**$ 729,724**	**$ 1,261,975**

Table 9-8B

Task 6 - Installation

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	$/Unit and Unit	Quantity			
SALERIES AND WAGES	$/Hour	Hours			
General Manger	$ 99.79	0	$0	$0	$0
Administrator	$ 83.12	0	$0	$0	$0
Engineer	$ 68.20	0	$0	$0	$0
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	0	$0	$0	$0
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Contractor			$ 961,975	$300,000	$1,261,975
Contractor			$0	$0	$0
Engineer	$ 137	0	$0	$0	$0
Admin Asst	$ 91	0	$0	$0	$0
TOTAL DIRECT COSTS			**$961,975**	**$300,000**	**$1,261,975**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 961,975**	**$ 300,000**	**$ 1,261,975**

The compensation rate RCSD Staff includes fringe benefits.

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	$ 99.79	0	$0	$0	$0
Administrator	$ 83.12	0	$0	$0	$0
Engineer	$ 68.20	152	$10,366	$0	$10,366
Field Staff	$ 44.08	0	$0	$0	$0
Administrative Assistant	$ 46.29	0	$0	$0	$0
FRINGE BENEFITS (included in the $/unit rate as shown on Attachement 1)					
CONTRACTUAL					
Principle Engineer	$ 267	24	$6,408	$0	$6,408
Engineer	$ 149	200	$29,800	$0	$29,800
Engineer	$ 110	380	$41,800	$0	$41,800
TOTAL DIRECT COSTS			**$88,374**	**$0**	**$88,374**
INDIRECT COSTS - 0 %					
TOTAL TASK 1 COSTS			**$ 88,374**	**$ -**	**$88,374**

The compensation rate RCSD Staff includes fringe benefits.

Table 9-10
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		$ 76.76	$ 23.03	$ 99.79
Administrator		$ 63.94	$ 19.18	$ 83.12
Engineer		$ 52.46	$ 15.74	$ 68.20
Field Staff		$ 33.91	$ 10.17	$ 44.08
Administrative Assistant		$ 35.61	$ 10.68	$ 46.29

1)Annual benefits divided by 2080 hours.

2)Fringe benefits are approximately 30 percent.

GEI/B-E Consultants	Principal Engineer/ Geologist	Principal Engineer/ Geologist	Managing Senior Engineer	Associate Engineer	Staff Engineer	Construction Inspector/ Admin	
Grade Range	Grade 8	Grade 7	Grade 6	Grade 4	Grade 1		
Hourly Billing Rate	$267	$238	$201	$149	$110	$99	

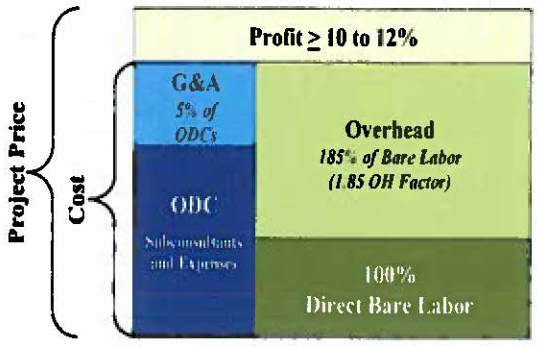
GEI Billing Rate consists of a Base Salary plus 1.85 times Base Salary for overhead, including fringe benefits, plus a minimum of 0.10 for profit.

Billing Rates shown are for 2017

GEI/B-E Consultants	Hourly Rate[3]		
Chief Design Manager	267.00		
Principal Hydrogeologist	238.00		
Engineer - Project Manager	201.00		
Engineer	149.00		
Engineer	110.00		
Admin Asst	99.00		

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

GEI Consultants Project Pricing



Overhead Factor = Total Overhead / Direct Labor

Table 9-11
Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCE	AMOUNT
Non Federal Entities	
RCSD	$1,269,230
Other Federal Entities	
None	$0
REQUESTED RECLAMATION FUNDING	$300,000

STAFF REPORT

Rosamond Community Services District

DATE: October 04, 2016

TO: Board of Directors

FROM: Brad Rockabrand, Director of Finance

SUBJECT: Cash Balances – June 2016

RECOMMENDATION:

By motion, discuss and receive Cash Balances – June 2016 report.

EXECUTIVE SUMMARY:

The Cash Balances Report details the District's cash position as of the month end to allow for transparency, accountability and relevant financial data from which to make prudent fiscal decisions and policy. The Cash Balances Report is different than a financial update report which is given quarterly and compares budgeted revenues and expenditures with actual activity, as its only purpose is to report on cash balances. It also differs from the Treasurer's Report which reports on the investments of the District.

This report, which reports on balances as of June 30, 2016, shows that District cash balances total $2,267,946.56.

Cash Balances are allocated based on the original source the funds are generated or used from. As such, the above cash balance is broken out in the District funds as follows:

Water (Fund 01):	$ 66,978.37
Sewer (Fund 02):	4,725,397.97
Street Lighting (Fund 03):	(101,105.12)*
Lighting Assessment District (Fund 04):	48,418.52
Park (Fund 05):	(2,152,412.58)*
Park Maintenance (Fund 51):	(319,330.60)*
Total	**$2,267,946.56**

****balances in parenthesis are negative and reported as Due To / From other funds***

DISCUSSION/ANALYSIS:

Not applicable

FISCAL IMPACT:

Not applicable

ENVIRONMENTAL IMPACT:

Not applicable

PRIOR BOARD REVIEW:

Not applicable

COMMISSION/COMMITTEE/BOARD REVIEW AND RECOMMENDATIONS:

Not applicable

NOTIFICIATION:

Not applicable

ATTACHMENTS:

Attachment 1 – Normal Trial Balance – Cash Reconciliations

Rosamond Community Services District
Normal Trial Balance - Normal Trial Balance - Cash Reconciliations
From 6/1/2016 Through 6/30/2016

Account Title	Account Code	Debit Balance	Credit Balance
Water Service	01		
Cash Holding	10050	0.00	
Cash Holding - Wells Fargo	10060	13,483,625.04	
General Checking	10100	0.00	
General Checking - Wells Fargo	10101		13,416,646.67
Water Service	Total 01	13,483,625.04	13,416,646.67
Sewer Service	02		
Cash Holding	10050	0.00	
Cash Holding - Wells Fargo	10060	11,430,890.66	
General Checking	10100	0.00	
General Checking - Wells Fargo	10101		6,705,492.69
Sewer Service	Total 02	11,430,890.66	6,705,492.69
Street Lighting	03		
Cash Holding	10050	0.00	
Cash Holding - Wells Fargo	10060	348,689.68	
General Checking	10100	0.00	
General Checking - Wells Fargo	10101		449,794.80
Street Lighting	Total 03	348,689.68	449,794.80
Landscape & Lighting District #2	04		
Cash Holding - Wells Fargo	10060	71,046.99	
General Checking - Wells Fargo	10101		22,628.47
Landscape & Lighting District #2	Total 04	71,046.99	22,628.47
Park Recreation & Development	05		
Cash Holding	10050	0.00	
Cash Holding - Wells Fargo	10060		131,951.78
General Checking	10100	0.00	
General Checking - Wells Fargo	10101		2,020,460.80
Park Recreation & Development	Total 05	0.00	2,152,412.58
Park Maintenance	51		
Cash Holding - Wells Fargo	10060	342,686.15	
General Checking	10100	0.00	
General Checking - Wells Fargo	10101		662,016.75
Park Maintenance	Total 51	342,686.15	662,016.75
Report Total		25,676,938.52	23,408,991.96
Report Difference		2,267,946.56	