

SF424- Cover Page



Project Title: Quincy 1Water: Resource Management
Improvement Feasibility Study
Applicant: City of Quincy, Washington

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Funding Application for:

US Bureau of Reclamation

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WaterSMART:

Development of Feasibility Studies under the Title XVI

Water Reclamation and Reuse Program for Fiscal Year 2017

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1. Executive Summary

Date: January 5, 2017

Applicant: City of Quincy, Grant County, Washington

Project length: Less than 18 months

Completion date for the project: June 1, 2018

The City of Quincy (City), a land-locked community in a high plains desert, surrounded by irrigated fields primarily served by the U.S. Bureau of Reclamation (Reclamation) Columbia Basin Irrigation Project, will use these grant funds to complete a study of the development of the “Quincy 1 Water Utility”, or the Q1W project. The feasibility study contributes to accomplishing the goals of this Funding Opportunity Announcement (FOA) by providing Quincy with a plan to supplement and diversify its water supply, improve efficiency, provide flexibility during water short periods, while also satisfying a Reclamation legal requirement that the City remove its treated wastewater effluent from a local Reclamation canal (see Evaluation Criterion 1). The Q1W is a critical coordinated water management strategy that will allow the City to recognize and respond to forecasted water supply shortages predicted in the next 5 or 6 years. The project will provide the City with valuable information to (1) address rapidly growing water demands, (2) meet Reclamation’s requirement for removal of discharge from its canal, (3) manage dwindling reserves of water rights and the need for higher water quality, and (4) promote economic sustainability, all while recharging groundwater and reducing withdrawal from the local aquifer. The project is the first of its kind in Washington State to ultimately replace all wastewater disposal with reuse to create a virtual zero discharge system. With the Q1W, the City’s growth management planning can improve water use by providing a stable, sustainable future water supply by un-tapping more than 1 mgd of treated effluent in reserve at the City’s industrial wastewater treatment plant (IWTP) to generate more than 1 mgd of high quality reuse water. Implementation of this ground-breaking solution will be an example for other rural, and often agricultural, communities facing water supply and quality concerns throughout the West to promote water reuse, reclamation and water resource management. The Q1W plan utilizes existing infrastructure (reducing stranded assets) to integrate and resolve water-related problems. The Q1W project plan acknowledges that groundwater is the single, ultimate water source flowing into the City’s interconnected streams of potable water, municipal and industrial wastewater and reuse water utilities. The Q1W project will reduce the strain on the City’s domestic water system, avoiding the future cost to purchase water rights, and permit and develop more drinking water supply wells. The Q1W project has and will increase revenues to the City and allow it to attract and retain industry to increase the economic resources and livability of this small, rural, low to moderate income (LMI), largely Hispanic (74%) community. Fortunately, the City already has customers that will use and pay for their fair share of the reuse water, once the facilities are operational. Grants are needed to help the City cost-effectively pay remaining costs in an effort to retain local industry, create and conserve limited water resources for the entire community and remedy costly environmental water quality problems that will burden all residents if the project isn’t built (see Evaluation Criterion 1).

2. Study Description

The study description will address the requirements of a Title XVI feasibility study described in Section 4.B of the Reclamation Feasibility Study D&S. To ensure that a Title XVI feasibility study report complies with Pub. L. 102-575, as amended, other Federal laws, and to otherwise allow Reclamation to assess the feasibility of the

proposed Title XVI project, at a minimum the following task items shall be included. Detailed data required for each task will be provided in accordance with the Title XVI Feasibility Study D&S.

The City has completed three initial studies for the Project including the *Q1W Plan* (updated April 2016), *City of Quincy Industrial Wastewater New Outfall Plan* (Outfall Plan, December 2012) and the *Industrial Reuse Water Treatment Plant Stage 1 Engineering Report* (Engineering Report, October 2016), that describe the City's proposed reuse project and rank it as the highest priority project in the City. Much of the information required in the *Title XVI Feasibility Study Report Contents* is included in the initial studies and would not need to be redeveloped to meet the *Title XVI* criteria. However, through continuous work on the project and in discussions with Reclamation, stakeholders and new customers locating in the area, the City is pursuing a change in the treatment and discharge options described in previous studies. Importantly, the City's recent Water System Plan update has revealed increasing water demands on the City's domestic groundwater supply that can be reduced via implementing a potential closed loop reuse water utility, the subject of the afore-mentioned technical studies. In addition to engineering consultants working on the project, the City has hired an economic analyst/financial consultant to help the City to review the cost effectiveness of the project and determine cost of service alternatives and customer rates required to support the projects' chosen alternative. The proposed feasibility study will include several elements from the studies already developed, or a crosswalk of information contained therein, and an evaluation of the following:

- Under the regulatory guidance of the Washington State Department of Health's (DOH) cyclically required water system planning process, update industrial user surveys to support refinement of water growth demand projections and seek maximum customer opportunity for reuse water supply.
- Conduct domestic water systems hydraulic modeling under the scenario of maximum reuse water distribution to determine effects on storage and pressure zone requirements.
- Based on customer opportunity review outcome, conduct water reuse distribution utility planning to target the most cost effective distribution of reuse water supply.
- Correlate current water system plan issues with reuse water utility development to identify shared benefits and conflicts between reuse water implementation and domestic water planning.
- Under the Q1W Plan, City wastewater systems will eventually discharge all unused/un-reusable water to groundwater via percolation or direct injection. In addition to water quantity management improvements, the study will identify and describe water improvements to be recognized from the industrial reuse water treatment plant (IRWTP) state of the art operations required to permit groundwater discharge and recovery.
- The IWTP produces residual solids, nutrients and biogas. The IRWTP will produce new residuals including lime softening sludge and dissolved solids. Identify a new centralized and optimized IWTP/IRWTP residuals management facility for the new technologies such as ion exchange and reverse osmosis.
- Study and development for a groundwater recharge system as recommended by Reclamation. The recharge system will allow any excess treated effluent not used for industrial reuse or irrigation to be recharged to the aquifer, providing a long-term solution to the City's wastewater management needs and its number one

federal priority - to remove wastewater discharge from the Reclamation canal. Groundwater recharge development will include evaluation of both shallow percolation and deep aquifer injection with subsequent recovery via an aquifer storage and recovery (ASR) program.

- Economic analysis and a financial capability assessment of the project as described in the *Title XVI Feasibility Study Report Contents* and other data to support the equitable and sufficient funding of the overall Project.
- Environmental consultation and review.

Below is a summary of the main elements of the Section 4B. Title XVI Feasibility Study Report Contents that will be included in the Feasibility Study.

- (1) **Introductory Information.**
- (2) **Statement of Problems and Needs.**
- (3) **Water Reclamation and Reuse Opportunities.**
- (4) **Description of Alternatives.**
- (5) **Economic Analysis.**
- (6) **Selection of the Proposed Title XVI Project.**
- (7) **Environmental Consideration and Potential Effects.**
- (8) **Legal and Institutional Requirements.**
- (9) **Financial Capability of Sponsor.**
- (10) **Research Needs.**

3. Evaluation Criteria

Evaluation Criterion 1—Statement of Problems and Needs (10 points)

Describe in detail the water resource management problems and needs in the area and explain how water reclamation and reuse may address those problems and needs.

Water Resource Problem and Needs: Quincy is a land-locked community in a high plains desert, surrounded by irrigated fields primarily served by the U.S. Bureau of Reclamation Columbia Basin Irrigation Project, which provides source water from the Columbia River stored at Banks Lake and behind Grand Coulee Dam. Federal and state restrictions on surface water management (see *Quincy groundwater management subarea*; Chapter 173-124 WAC) limit and complicate the City's water resource management and wastewater discharge options.

For 50 years, the City has operated under an agreement with Reclamation to use a local canal to discharge treated effluent from its IWTP that serves the local food processing industry (Lamb Weston and Quincy Foods primarily, and to a lesser degree, Amway). The agreement with Reclamation expired in 2015 and the City has been operating under a temporary extension pending the timely completion of the City's innovative IRWTP and Q1W Utility project. Reclamation will not indefinitely renew the long-term agreement with the City to use the canal because of its current policy to eliminate non-agricultural discharges into the Columbia Basin Project system.

Industrial users in the area consume significant amounts of potable and groundwater for industrial processing and cooling. The City is projecting growth in both of its economic

clusters – food processing and cloud computing, which is creating new wastewater treatment needs and increasing the demand on the City’s water supply. Recent planning has shown that without the water reuse project to offset current customer projected use, ***the City will use up its current reserve of water rights within five or six years.*** Groundwater studies suggest the Columbia Basin groundwater supply is limited and could prove to be a costly and unreliable long-term alternative source for the City. The local food processors that provide the backbone employment and economic stability in the community, have stated that their wastewater rates are a considerable burden on their economic performance and ability to finance the new water utility Project (required due to the loss of the canal discharge), to pay for long term operations, and to provide employment stability. In addition, groundwater monitoring by the Washington State Department of Ecology (Ecology) has determined an increasing and unacceptable trend in total dissolved solids (TDS) at the Municipal Water Reclamation Facility (MWRF) percolation beds. Ecology is requiring the City to provide environmental restoration that would be costly to local ratepayers without the Q1W solution.

Climate Change Impacts: Climate change and declining groundwater will eventually detrimentally impact the future of the Columbia Basin water rights and drinking water supply. Water rights are a current source of conflict in the area and climate change would impair natural groundwater recharge and only exacerbate the water supply problems in Quincy’s arid climate. There is a water supply limitation forecasted on the City’s current water rights portfolio based on current customer demand, and as future climate conditions and growth increase demand for potable water, the situation will only get worse without water reuse to support local water needs. The project will provide groundwater recharge to improve water quality and help to replenish the aquifer to avoid a water crisis created by customer growth and climate change.

Reclamation Project Solution: In response to the competing needs to (1) eliminate industrial discharge into the Reclamation canal, (2) meet growing water supply challenges and (3) cost effectively upgrade the system to meet regulatory changes, the City developed the Q1W Plan which includes the creation of a water reuse utility that links all four City water utilities under a single management plan.

Without the water reuse project to enhance the water supply, the City will consume its current water rights reserve within five or six years to meet existing customer needs. This would cause the City to pursue more annual and instantaneous water rights, drill one or more wells and invest significantly in its domestic water infrastructure; all while still seeking an alternative discharge for its industrial wastewater. The Q1W project that is the result of this the feasibility study addresses will reduce demand on potable supply and improve the City’s water balance and sustainability. The Q1W Plan integrates all four of the City’s water utilities and creates a closed loop water reuse system that will, among other beneficial uses, provide a solution to meet the City’s requirement to remove its wastewater discharge from Reclamation’s canal by redirecting/reusing treated industrial wastewater to create an alternative water supply for data centers and aquifer storage. Importantly, the Q1W construction project, that will be the subject of this feasibility study, will allow the City to reduce its discharge into the canal by over 50 percent within 18 months.

The primary source of non-potable reuse water will be effluent from Quincy’s IWTP. This effluent reuse water stream is a highly viable alternate water source to groundwater and

contains nutrients currently being wasted to the environment. Implementation of the City's water reuse utility will reduce demand on the City's limited potable supply and eliminate future costs to purchase additional water rights. In addition, the treatment technologies utilized to generate the high quality IWTP effluent allows the reuse water to be directly injected into the surrounding Quincy aquifer. This approach can also include direct injection/recovery from one well to create a seasonally-equalized stored water source. It may further allow for eventual withdrawal by a new well for indirect potable reuse via aquifer storage and recovery. The completion of the closed loop water cycle project will reduce demand for potable water, eliminate discharge issues and Ecology's TDS concerns, and provide for long term increased capacity to accommodate residential and industrial growth within the community.

The proposed facilities will increase revenues to the City and allow it to attract and retain industry and increase the economic resources and livability of this small, rural, LMI, largely Hispanic (74%) community. Fortunately, the City already has customers that will use and help pay for their fair share of the reuse water once the facilities are operational. However, grants are needed because the project and its cost burden will also be shared by other customers benefitting from the project as well.

The City has already begun significant stakeholder outreach to generate input and support for the project solution. The project has support from local officials, staff, stakeholders, customers, the Quincy Valley Leadership Group (*12th & 13th District state legislators, Grant County BOCC, Quincy Chamber of Commerce, Grant County Health Department, and Quincy Port District, Grant County Public Hospital District #2, Grant County Fire District #3, Serve Quincy, Quincy Public School District and others*), and state agencies (Ecology, Commerce, Governor's Office of Regulatory Innovation and Assistance (ORIA)). The City has received positive feedback from regulatory agencies encouraging groundwater recharge and industrial water reuse, and in support of the City's environmentally innovative water reuse utility project. For the past 2 years, the City has conducted monthly technical coordination meetings with Reclamation, Ecology, food processing industry, Quincy Columbia Basin Irrigation District, and ORIA regarding the discharge extension and completion of the Q1W. This request has been reviewed and discussed during these meetings, with no party expressing any objection.

The City hired a lobbyist to promote support for the project at state and national legislative and agency levels. The Mayor led the City's delegation in numerous meetings with state legislators and agency executive management in Olympia, and with federal congressional leaders and agency officials in Washington, D.C. to secure project support. Funding partners include the U.S. Department of Commerce, Economic Development Administration (EDA), the state Community Economic Revitalization Board (CERB), state legislature (via capital budget grants), State Public Works Board (PWB), Grant County, City revenue (\$5 million), a previous Reclamation WaterSMART grant, and local utility customers (via rates and charges). Notably, although the City's water utility project has been on the state's PWB's recommended project list for 2014, 2016, and 2017, the Governor and legislature has routinely swept these and other capital funds to help resolve their 2013-15, 2015-17, and 2017-19 budget shortfalls. In addition, the City has secured an estimated \$6 million from a public/private partnership with its largest data center that transferred the company's demineralization facility to the City, which is being retrofitted with reverse osmosis (RO) to generate reuse water to meet immediate and future

industrial, commercial and residential demand while increasing the City's water supply portfolio.

The project has already received significant financial assistance to work toward a solution. Since 2007, the City has secured significant federal, state and local financial support for the overall wastewater project (Phases 1-3) totaling over \$25 million. To summarize, the Q1W utility project has secured \$14.2 million in competitive local, state and federal grant and loan funds, spent or dedicated \$5 million in City revenues, and negotiated a public-private partnership that resulted in the City receiving a \$6 million infrastructure asset. With these funds and customer contributions, the City has completed Phases 1, 1a (in lieu of 2), and a substantial amount of engineering and some early construction of Phase 3. The remaining components to be funded are completion of Phase 3 (estimated remaining cost: \$13 million by 2018 and another \$4 million by 2020) and Phase 4 (estimated remaining cost between \$7 and \$10 million). Total estimated cost to complete the Q1W is approximately \$24 to \$27 million. However, the most critical infrastructure requires the City to secure \$13 million for Phase 3, through grant requests (including this one) and customer rates, to complete engineering and construction by a March, 2018 deadline.

City officials and customers have supported rate increases to fund utility operations and build reserves. The City hired a rate and funding specialist to conduct a rate study to determine the most effective financing strategy for the project. Importantly, the City already has customers that will use and help pay for the reuse water once the facilities are operational and new industry is planning to locate in the area contingent on services being available. Data centers will pay rates for wastewater service and will also buy a significant amount of reclaimed water to help pay the annual cost of the project. In addition, the largest data center is building \$12 million of its own wastewater facilities. While, new industry has agreed to fund its fair share of the project costs, reparation of environmental concerns, long term water supplies and discharge facilities that integrate the City's four water utilities affect the entire community. Retaining and attracting industry and keeping costs low for the project will significantly benefit Quincy's relatively small, rural population. Hence, grant funds are being requested to alleviate the potential cost burden to local ratepayers in this small rural, largely Hispanic (74%) LMI community of 7,000 people and expedite completion of the Project to meet the negotiated timeline to eliminate the City's discharge into Reclamation's wasteway and avoid a water supply crisis. The proposed facilities can also be expanded to attract additional users (limited by the alternative natural water supply) while providing a stable future water source to replenish a depleting groundwater supply. Long term water right conflicts will be reduced by having a flexible alternative City-managed water supply.

Evaluation Criterion 2—Water Reclamation and Reuse Opportunities (15 points)

- 1. Describe how the feasibility study will investigate potential uses for reclaimed water (e.g., environmental restoration, fish and wildlife, groundwater recharge, municipal, domestic, industrial, agricultural, power generation, and recreation).***

The Project already has a demand for reclaimed water use for industrial cooling from local industry, including data centers (see more below), that is equal to an estimated 20 percent of current water demand, and is projected to increase to 30 percent in the next three to five years. The project will also benefit the domestic/ municipal water system by providing

reused or reclaimed water to remedy TDS and other environmental concerns at the City's MWRF.

The project will provide environmental restoration and groundwater/aquifer recharge. The primary source of non-potable reuse water will be effluent from Quincy's IWTP. This high quality effluent reuse water stream is a viable alternate water source to groundwater. Implementation of the City's water reuse utility will reduce demand on the City's limited potable supply and eliminate future costs to purchase additional water rights. In addition, the treatment technologies utilized to generate the high quality IWTP effluent allows the reuse water to be directly injected into the surrounding Quincy aquifer. This approach can also include direct injection/recovery from one well to create a seasonally-equalized stored water source. It may further allow for eventual withdrawal by a new well for indirect potable reuse via aquifer storage and recovery. The project will enhance water quality as described in Evaluation Criterion 5, and could benefit fish and wildlife through environmental restoration.

The City has evaluated the cost effectiveness of using the reclaimed water for third party crop irrigation. The feasibility study will evaluate providing reclaimed water for irrigation if it is competitively cost effective compared to the other uses considered. Additionally, the City is examining opportunities for irrigation of City facilities (parks, schools, etc.) using reclaimed water, facilitated by the proposed utility improvements. It is anticipated that the Study will be a tool to educate and inform community and state leaders about the value of utilizing reclaimed and reuse water in our state to address future water supply needs. This will be increasingly relevant as our area of the state witnesses the effects of a declining regional ground water resource and a weather pattern that will increase the propensity for drought conditions.

Reclaimed water will not be used to directly provide power generation but the Q1W project includes bio-gas recovery that can provide an alternative source of power generation (see Evaluation Criterion 7). Energy efficiency opportunities include the use of variable frequency motors and avoidance of peaking operations via storage of reuse water.

The City proposes to investigate the above-mentioned uses of reclaimed water in the feasibility study by using Washington State water system planning guidelines and conducting a cost/benefit/risk analysis for routing piping to each possible reuse customer with expectations that some smaller customers won't allow for cost effective piping. The study will also investigate additional uses for reclaimed water. See more detail in item 2 below.

2. Describe the potential water market available to use any recycled water that might be produced upon completion of a water reuse project, as well as potential methods to stimulate recycled water demand and/or methods to eliminate obstacles for use of reclaimed water.

The City already has a significant potential reuse water market located in the community from industrial users. Demand projections for industrial reuse are based on discussions with local industries, most notably Microsoft, which operates the Columbia and Project Oxford Data Centers in the City. The company's data center water use and demand, along with other local data centers and the City's long standing food processing industries demands, have been factored into the City's water use projections, which range from 15 to

30 percent of the City's water needs; representing a significant market. Based on current water rights available to the City, the City anticipates there will be a water supply shortage to serve existing customers within 5 to 6 years. The reuse project will mitigate that problem. Data centers customers will pay for their fair share of system improvements through capital contributions and/or user rates to eliminate obstacles for the use of reclaimed water.

Initially, reuse water will be marketed through individual sales to industrial users based on projected demand for cooling water. It is assumed that the duration of the currently identified water market will be at least 20 years. However, the feasibility study will investigate other potential uses for reclaimed water since the infrastructure will be in place and reuse water will be of a suitable quality to provide water for alternative uses including landscape irrigation at industrial facilities, public parks, ballfields and street landscaping. Because the IRWTP will be the first in Washington State to use reverse osmosis, Quincy has an opportunity to attract assorted industries with its unique water supply.

Irrigation demand has been evaluated based on discussions with prospective irrigation users regarding the amount of land that could be placed into production if water were available, and standard agricultural methods for calculating crop use.

To eliminate obstacles the City is involving customers, regulators and other stakeholders in the project planning efforts (see Evaluation Criteria 1). The City has contracted with an engineering firm to evaluate potential obstacles and alternatives to determine the most viable project solution. This feasibility study will further assist with that effort. As the project moves forward, the City will continue to enlist customers and local agencies to help contribute to the financing of the up-front and on-going project costs to eliminate obstacles associated with financing and maintaining the system.

3. Describe the sources of water that will be investigated for potential reclamation, including impaired surface and ground waters.

The primary source of water for reclamation is the current effluent from the City IWTP. To make this source compatible with industrial reuse demands, the required treatment includes hardness, silica and TDS removal. The required technologies include lime softening, membrane filtration and reverse osmosis treatment. If industry were to instead use groundwater for its needs, these technologies with the approximate same treatment capacity would be needed. Thus, the capital requirements for treatment would be similar. The IWTP effluent is owned by the City, requiring no water rights purchases and it is readily accessible to tap into and divert to the new technologies.

The level of treatment needed for industrial reuse is similar to that needed for groundwater recharge. Thus, the technologies can produce one new water stream that can be balanced across reuse that offsets domestic use and provides reclamation to the aquifer to store up water for future withdrawal. Use of an aquifer allows for much larger storage volumes and maintains water quality until it is later withdrawn. In the Columbia Basin with distinct, confined basalt flow zones, ASR is considered a better option than investment and maintenance of surface water impoundments. The City's existing MWRF reclaimed water stream is discharging to a groundwater surface percolation system and it may be recovered, where feasible, for uses such as landscape irrigation.

Evaluation Criterion 3—Description of Potential Alternatives (15 points)

1. Describe the objectives that all alternatives will be designed to meet. What other water supply alternatives will be investigated as part of the feasibility study?

All alternatives will be designed to meet the City’s primary objective of providing smart and effective planning for its long-term water supply and wastewater treatment and reuse needs. This objective is advanced with the recognition that the Quincy regional ground water resource is under stress from withdrawal and is not expected to improve, and to minimize the impact of this condition on the City’s water needs. For each of a set of water uses, water supply will be employed based on the needs of a specific use: domestic, industrial, agronomic and return to environment. Energy efficiency will be achieved by proper equipment selection, including the use of variable frequency motors.

The water supply alternatives to be investigated and compared, using a business case evaluation tool, include:

- Status quo development of the deep groundwater management zone withdrawal to meet current and projected City supply needs, and identification of discharge outlets for the increased flow of water through the city.
- Direct industries to develop their own water and wastewater solution.
- Develop a reuse water supply to:
 - Serve industrial, municipal and other interested customers projected water needs into the foreseeable future.
 - Replace the existing IWTP outfall in response to the expiration of the City’s agreement with Reclamation.
 - Recharge the aquifer and replenish groundwater supply (City’s sole source).
 - Offset and reduce the City’s current groundwater withdrawal rates.

The City completed the Q1W Plan Update, Outfall Plan and Engineering Report to develop integrated multi-water utility improvements. The existing studies describe the City’s proposed project to address these issues. The Outfall Plan recommended replacement of the NPDES outfall with a beneficial reuse system as the preferred alternative that includes industrial reuse, irrigation, and surface and groundwater recharge. The Engineering Report further refined and developed this alternative, including the recommendation to evaluate percolation in the City and recharge a deep groundwater zone. The feasibility study will investigate all of these using a comparison based on cost of development, revenue potential, environmental/ecological benefit and reliability.

2. Provide a general description of the proposed project that will be the subject of a feasibility study.

The proposed project is the Quincy IRWTP and reuse water utility expansion that will result in the Q1W approach, which is a holistic, virtual closed-loop, regional solution that links the domestic water supply and industrial and municipal wastewater treatment systems. The proposed project addresses the replacement of the NPDES outfall into the Reclamation wasteway, rectifying the MWRP percolation bed’s unacceptably high groundwater TDS and water supply demand and shortages. The City has already

determined that an alternative surface water discharge is not preferred and will no longer be pursued. New percolation areas in the City and deep aquifer injection / ASR are being planned. The City is continuing discussions with Reclamation and is working to further develop these concepts as part of the feasibility study planning. This feasibility study will specifically help the City to develop these solutions and refine existing study results, by developing the groundwater recharge demands, to identify and maximize reuse water customers that can be removed from the City's domestic groundwater supply system. The recharge system will allow any excess treated effluent not used for industrial reuse or irrigation to be recharged to the aquifer and recovered with an ASR system, providing a long-term solution to remove the City's wastewater discharge into a Reclamation canal and extend the City's water supplies.

3. *Describe alternative measures or technologies for water reclamation, distribution, and reuse that will be investigated as part of the feasibility study.*

The feasibility study will investigate two alternatives for completing the City's virtual closed-loop reuse system:

1. Seasonal or year-round discharge to deep aquifer injection wells with the goal of subsequent water recovery via an ASR program.
2. Percolation in areas within the city, away from agricultural drain tiles and with possible opportunity for recovery.

These alternatives will provide a seasonal use or discharge for highly treated effluent not recharged at the MWRP percolation beds or used by industrial and irrigation customers. The City prefers to implement the ASR over percolation or the QDA2 option, but the ASR timeline requires the local Reclamation office to extend a temporary extension of the existing surface water discharge agreement for up to 10 years. Percolation and QDA2 may be a permanent solution if ASR is limited financially or by regulations.

Evaluation Criterion 4—Stretching Water Supplies (15 points)

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address activities that will help to secure and stretch water supplies. For each of the following sub-criteria, include descriptions of any specific issues that will be investigated or information that will be developed as part of the feasibility study.

1. *Describe the potential for the project to reduce, postpone, or eliminate the development of new or expanded water supplies.*

Total water demand by industry in Quincy represents approximately 60 percent of the city's annual water system demands, of which roughly one-half (or 30 percent of City total demand) is a candidate for reuse water supply. The Project will reduce or eliminate the need for new or expanded water supplies, distribution systems and storage reservoirs to serve those candidate customers. Currently potable groundwater is used for industrial processing and cooling, and this water use requires treatment upgrades to address high naturally occurring silica as well as the TDS issue at the MWRP. Additional industry is considering locating in the area contingent on the proposed alternative water supply and

services being available. Recent groundwater studies by the U.S. Geological Survey and Columbia Basin Ground Water Management Area suggest the Columbia Basin groundwater supply is limited and could prove to be a costly and unreliable long-term alternative source of water supply for the City. The Project will specifically reduce or eliminate the need for costly new or expanded water supplies by serving these customers with reuse water, conservation and groundwater recharge.

2. *Describe the potential for the project to reduce or eliminate the use of existing diversions from natural watercourses or withdrawals from aquifers.*

The project will reduce the use of existing withdrawals from aquifers by replacing City potable and private water rights used for industrial cooling, sourced from groundwater, with reclaimed water and industrial reuse water. The City is currently using about 80 percent of its available water rights, maintaining a 20 percent reserve. Continued use of groundwater for projected industry growth will require more than the City's currently available water rights as early as 2022. Initial estimates demonstrate that shifting to reuse water supplies will allow the City to maintain or even increase its 20 percent reserve by 2022. Directing water to aquifer storage will allow the city to recover the water without the need for a water right. Thus, the project will result in quantifiable water conservation by treating and quantifying groundwater recharge via percolation basins or aquifer recharge for a portion of the water currently discharged to the wasteway. The Project will conserve between 1,000 and 1,500 acre-feet/year of groundwater currently used for industrial cooling by replacing groundwater with reclaimed or reuse water, saving groundwater for drinking water supply and residential growth. Additionally, the project will recharge another 1,000 to 1,500 acre-feet/year of groundwater, and/or make 1,000 to 1,500 acre-feet/year available for irrigation. The net water reuse volume will be approximately 3,000 acre-feet/year.

The water currently used for industrial cooling is primarily lost to evaporation; it is estimated based on industrial user water consumption and discharge records that substantiate that approximately 65 percent of water used for cooling is evaporated. Water not lost to evaporation is discharged via sewer to the City's MWRF, where it is treated and recharged to the shallow groundwater unit through percolation beds. Conserved groundwater resulting from the replacement of potable or groundwater currently used for industrial cooling will remain in the aquifer, while conserved water resulting from elimination of the wasteway discharge will recharge groundwater supplies. In both cases, the conserved water replenishes stressed groundwater supplies.

3. *Describe, if applicable, the potential for the project to reduce the demand on existing Federal water supply facilities.*

The Q1W project will reduce the City's reliance on outside sources of water. If the feasibility study demonstrates that reclaimed water used for irrigation is a beneficial alternative, then it could provide an alternative supply that could potentially result in a reduction in the withdrawal of water from a Federal Reclamation facility

Evaluation Criterion 5—Environment and Water Quality (15 points)

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address the potential for a water reclamation and reuse project to improve surface, groundwater, or effluent discharge quality;

1. Describe the potential for the project to improve the quality of surface or groundwater, including description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.

The project is the first of its kind in Washington State that uses industrial/municipal/reclaimed/ground-water to replace surface disposal with reuse water to create a nearly zero discharge system and provide groundwater recharge. The current discharge flows through Reclamation's wasteway system, eventually reaching the Potholes reservoir. The project will remove the IWTP discharge from Reclamation's wasteway, contributing to Reclamations goal to remove all non-agricultural discharges from the Columbia Basin Irrigation Project System. Reduction of discharge could also improve water quality in the Lower Crab Creek Reservoir, a 303d listed water body. The City's IWTP will treat industrial effluent to remove TDS and percolate the treated effluent at the City's municipal percolation beds. Percolation of low-TDS water will counteract the trend of increasing groundwater TDS observed at the beds, improving groundwater quality over time. Water used for recharge will be sourced from industrial and municipal wastewater, treated to comply with state standards for groundwater recharge, with additional treatment to reduce TDS to comply with Ecology anti-degradation rules.

2. Describe the potential for the project to improve flow conditions in a natural stream channel, including a description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.

Does Not Apply.

3. Describe the potential for the project to provide water or habitat for federally listed threatened or endangered species, including description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.

The improved water quality efforts will improve the threatened or endangered species (fish and wildlife) affected by the Reclamation wasteway discharge by improving local habitat and the water bodies described in question 1 above.

The overall reuse project will provide an additional environmental benefit by replacing fossil-fuel derived natural gas in the energy market with natural gas derived from renewable sources. Since the City's current volume of natural bio-gas recovered at the IWTP is flared for disposal, burning this same volume of biogas-derived natural gas will not add to overall carbon emissions. Other beneficiaries of the renewable energy system will be natural gas customers, who will have a new source of renewable natural gas.

The review of a Title XVI feasibility study report does not require National Environmental Policy Act (NEPA) compliance. However, specific environmental issues that will be investigated or information that will be developed as part of the feasibility study will include sufficient information on each alternative to allow Reclamation to assess the potential measures and costs that may be necessary to comply with NEPA, and any other applicable Federal laws.

Evaluation Criterion 6—Legal and Institutional Requirements (10 Points)

How will the feasibility study address legal or institutional requirements or barriers to implementing a project, including water rights issues and any unresolved issues associated with implementation of a water reclamation and reuse project?

While there are no legal or institutional barriers to implementing the Q1W Project, including water rights issues and any unresolved issues associated with implementation of a water reclamation and reuse project, there are several legal and institutional requirements in the area that will be addressed by the Q1W Project.

As discussed above, the City's legal agreement with Reclamation to use its wasteway canal expired in September 2015 and will not be renewed by Reclamation, although a temporary extension is being negotiated between the two parties, the final terms and timeframe are uncertain. Wasteway canal operation and use is regulated by Reclamation, which has an NPDES exemption. To maintain that exemption, Reclamation's goal is to discontinue non-agricultural discharges to its canal systems. Reclamation's rationale is to eliminate non-agricultural discharges into the Columbia Basin Irrigation Project (CBP) system to reduce the potential loss of its current agricultural exemption under the federal Clean Water Act, which Congress is likely to consider for reauthorization in coming years. Since 2007, the City has been planning, designing and seeking funding for an alternative solution. The preferred alternative to replace the outfall with beneficial reuse facilities was recommended in the Engineering Report prepared for the City and provided to Reclamation. In collaboration with Reclamation, the City needs to do further planning, as part of this feasibility study, to develop either temporary or permanent surface percolation areas that recharge the area's shallow groundwater management zone. The recharge system will allow any excess treated effluent not used for industrial reuse or irrigation to be recharged to the aquifer, providing a long-term solution for the City's annual wastewater flow balance. Importantly, the project also removes the IWTP discharge from Reclamation's canal, contributing to Reclamation's goal to remove all non-agricultural discharges from the CBP system.

If an alternative to the Reclamation wasteway discharge is not constructed prior to the temporary extension expiration date, the industrial customers that support the town may be required to shut down or significantly reduce operations and possibly be forced to relocate. The City has legal requirements that obligate industrial customers to repay the debt on the IWTP through annual capacity charges as long as the City provides adequate treatment and discharge services at the IWTP. Under this scenario, the City would be in non-compliance with its customer agreements and the predominately low to moderate income residents would be required to assume the resulting systems costs and debt, which could potentially bankrupt the town. The Project will address this issue and prevent any future interruption of customer services.

The City of Quincy resides in the state designated Quincy Ground Water Subarea, established in 1973, which set forth rules for the administration of all ground waters within the subarea, including among others, commingled public ground waters and artificially stored ground waters from Reclamation's CBP which provides river water for irrigation. Shallow ground water (200 feet below surface) is managed as CBP water. Relatively small amounts of public waters (in the range of not more than 4,000 acre-feet

annually) are available for appropriation in the shallow unit. Such small amounts are reserved for withdrawal for domestic and group domestic uses. Withdrawals of public waters of the deeper ground water management unit are controlled by state issued permits. However, historical issues over the use and access to water exists among land owners who are CBP participants and the land owners utilizing deep and shallow ground water resources. This Project will help reduce that water rights issue by 1) decreasing demand on ground water resources from municipal and industrial permit holders, 2) increasing ground water supply through aquifer recharge and storage and 3) potentially providing a new source of irrigation water for purchase.

The City also has a contractual agreement with its largest data center to provide reuse water for the company's cooling towers. The company and the City negotiated a transfer of its \$6 million treatment facility to provide City-wide reuse facilities to accomplish the project for the benefit of the entire community. The company has agreed to pay its fair share of rates and charges for the proportional costs of providing service to them directly and that includes the company's direct capital contribution of facilities to the project. The Data Center customer has already or will soon invest over \$12 million dollars to construct its own local water distribution system to serve its facilities, including a water softening system that will be available to the City to incorporate into the IRWTP. This private-public partnership, combined with previous state and local infrastructure and planning capital investments and dedicated City revenues, will allow the City to fully leverage this significant private infrastructure investment and develop the reuse project.

Because water rights in this area are an on-going source of conflict among multiple water users, having an alternative City managed water supply will also help prevent further water right conflicts and reduce the potential for a water supply crisis. Purchasing potable water to serve large scale industrial cooling tower operations is costly and not sustainable over the long-term. To retain those and other customers in the area that help support the City's water utilities, the City needs to complete this QIW Project and provide the required levels of service. As described in this application, groundwater recharge is an important tool for the City to remove IWTP discharge into Reclamation's canal, improve regional water quality, replenish groundwater resources, and avoid an impending water supply crisis.

Evaluation Criterion 7—Renewable Energy and Energy Efficiency (10 points)

How will the feasibility study address methods to incorporate the use of renewable energy or will otherwise address energy efficiency aspects of the water reclamation and reuse project being investigated?

The facilities identified in the feasibility study will incorporate the use of renewable energy and/or energy efficient equipment where feasible. The feasibility study will link to the existing studies related to the City's 4 phase comprehensive reuse project, to provide the final planning and analysis of the virtual closed loop water system, that will include energy recovery and energy efficiency upgrades at the City's IWTP. Electrical power for the IWTP is supplied by the Grant County Public Utilities District. The proposed reuse system will replace the existing IWTP aeration blowers with high-efficiency units. Additionally, new mechanical equipment (pumps, treatment equipment, etc.) will be

installed with energy efficient (variable frequency) motors. Energy savings is estimated at 900,000 kW-h/year. The facilities identified in the feasibility study will incorporate the use of renewable energy and/or energy efficient equipment where feasible.

The overall reuse project will recover natural biogas from methane. The biogas facility can generate a viable commercial grade product for reuse and/or resale. Proposed reuse options include drying and evaporating residuals solids and brine generated by the IWTP and IRWTP. The first treatment stage of the City's IWTP is a covered anaerobic pre-digestion lagoon. Treatment of nutrient-rich food processing wastewater discharged to the lagoon produces biogas, a mixture of methane (natural gas) and other constituents. Currently, biogas is burned off using a flare. As part of the proposed Project, a treatment system will be installed to remove other constituents from the biogas and produce commercial fuel grade natural gas for sale. The reuse system will continue to produce approximately 210 million cubic feet of gas per year. Since the natural gas is already flared for disposal, burning this same volume of biogas-derived natural gas will not add to overall carbon emissions. Other beneficiaries of the renewable energy system will be natural gas customers, who will have a new source of renewable natural gas. The system requires only the current food processing wastewater, and does not add to the project's overall water needs. As rates for service increase with the repayment of the loans for this project, it is common for customers billed based on usage to implement conservation and efficiency efforts to attempt to decrease rates.

Evaluation Criterion 8—Watershed Perspective (10 points)

How will the feasibility study address alternatives that promote and apply a regional or watershed perspective to water resource management?

The feasibility study will address alternatives that promote regional benefits to water resource management (alternative water supply, storage and aquifer recharge) by 2018. The project is the first of its kind in Washington State that uses industrial/municipal/reclaimed/ground-water to replace surface disposal with reuse water to create a nearly zero discharge system that provides groundwater recharge and improves the City's water balance. Success and implementation of this historic solution can be an example to promote reuse and reclamation water resource management to other water resource challenges communities in the West. This is of particular importance in the Columbia Basin, where a declining regional groundwater system poses significant water supply challenges to 23 municipalities. The recharge system developed in this study will address the option of excess treated effluent, not used for industrial reuse or irrigation, to be recharged to the aquifer, supporting water supplies in the region while eliminating the City's discharge to a Reclamation canal and the subsequent discharge into the regional Columbia River basin. The project will contribute to Reclamation's regional goal to remove all non-agricultural discharges from the CBP. By example, the City will encourage the use of reclaimed water and set policy and precedent for future water resource management and economic development in the region.

Letters of Support

To ensure your proposal is accurately reviewed, please attach all letters of support/partnership letters (attached to the application).

Since 2007, the City has secured significant on-going local and legislative support for the project (See Evaluation Criterion 1). Selected letters of support are attached to the application. Senator Murray's office sent a letter of support directly to Commissioner Estevan. Additional letters of support are available upon request.

Required Permits or Approvals

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

No permits or approvals are required to develop the proposed feasibility study. The City will hire an environmental permitting firm to be part of the feasibility study project team. The environmental specialists will be tasked with identifying all permitting requirements and constraints. Presently, the following permits are anticipated to be required to obtain project approval from the regulatory agencies:

- IRWTP will require water reuse permit from Ecology
- Endangered Species Act Section 7 – Biological Evaluation
- National Historic Preservation Act – Cultural Resources Report
- CZM Consistency Determination – CZM Form
- NPDES General Construction Permit – Notice of Intent
- State Environmental Protection Act – Environmental Checklist
- Feasibility Study – Submit for Project Approval
- Design Criteria/Drawings – Submit for Project Approval
- Washington Department of Health and Ecology
- Reclaimed Water Permit – Application
- Local Permits
- Critical Area Review – Critical Areas Study
- Design Review – Application
- Flood Hazard Area Development Permit – Application
- Land Clearing – Application
- Road Use – TBD

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or, for state government entities, a signed statement from an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this FOA.

Attached to the application.

Study Budget

The study budget includes:

- (1) Funding plan and letters of commitment
- (2) Budget proposal
- (3) Budget narrative

Funding Plan and Letters of Commitment

The funding plan must include all project costs, as follows:

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).

City sewer and reuse rates, charges and/or reserves will provide the local cost share of the Feasibility Study.

Describe any project expenditures that have been incurred or may be incurred before the anticipated award date that you may seek to include as project costs. For each cost, identify:

- ***The project expenditure and the amount:***

Planning costs are projected to start in the spring/summer 2017. Costs included in the City provided share of the costs, may be incurred (at the City's risk) prior to the anticipated authorization from Reclamation in May 2017.

- ***Whether the expenditure is or will be in the form of in-kind services or donations***

None

- ***How the expenditure benefits the project?***

Consulting fees to advance the reuse project efforts, maintain the project schedule and continue stakeholder outreach.

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

Project partners have provided over \$21 million in funds and contributions toward the project, but other outside funding has not been sought for the feasibility study (letters of commitment for non-feasibility study project funding available upon request).

Describe any funding requested or received from other Federal partners.

EDA and Reclamation have provided federal funds toward the overall project, but will not provide funds for the feasibility study.

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

No planning funds have been applied for at this time.

Describe how the non-Federal share of study costs will be provided. Reclamation will use this information in making a determination of financial capability.

Non-federal feasibility study costs will be provided by City rates, charges and/or reserves. The City has already contributed \$5 million in City funds toward consultant planning and design related to the Q1W facility project. The feasibility study will allow the City to coordinate its planning efforts and provide a final road map for its inter-related utility management and operations.

Please include the following chart (Table 1) to summarize all funding sources. Denote in-kind contributions with an asterisk (*).

Table 1. Summary of Non-Federal and Federal Funding Sources

Funding sources	Funding amount
Non-Federal entities	
City Funds (via rates, charges & reserves)	\$150,000
Other (City funds already spent)	
<i>Non-Federal subtotal:</i>	\$150,000
Other Federal entities	
Other	
<i>Other Federal subtotal:</i>	\$0
<i>Requested Reclamation funding:</i>	\$150,000
<i>Total project funding:</i>	\$300,000

Budget Proposal

The budget proposal should include detailed information on the categories listed below and must clearly identify all study costs. Unit costs shall be provided for all budget items including the cost of work to be provided by contractors. The budget proposal should also include any in-kind contributions of goods and services that will be provided to complete the study. It is strongly advised that applicants use the budget proposal format shown below on Table 2 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs. Costs associated with Reclamation’s review of the feasibility study report should not be included.

Table 2. Sample Budget Proposal Format

Budget item description	Computation		Quantity type (hours/days)	Total cost
	\$/Unit	Quantity		
Salaries and wages				
Tim Snead: Project Manager				Included in City O&M cost
Ariel Belino, City Engineer: Reporting/staff time				Included in City O&M cost
Contractual				
Engineering Planning				\$245,000
Economic/ Financial				\$25,000
Environmental				\$15,000
Other				\$15,000
Total project costs				\$ 300,000

Budget Narrative

Submission of a budget narrative is mandatory. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. Include the value of in-kind contributions of goods and services and donations that will be provided

to complete the study. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections.

Salaries and Wages

Indicate program manager and other key personnel by name and title. Other personnel may be indicated by title alone.

Paid as part of the City Annual Budget costs and funds are not being requested to pay these expenses in this application.

Fringe Benefits

Indicate rates/amounts, what costs are included in this category, and the basis of the rate computations.

Paid as part of the City Annual Budget costs and funds are not being requested to pay these expenses in this application

Travel. Does Not Apply

Equipment Does Not Apply

Itemize costs of all equipment having a value of over \$5,000 and include information as to the need for this equipment, as well as how the equipment was priced if being purchased for the agreement.

Materials and Supplies Does Not Apply

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, past experience, engineering estimates, or other methodology).

Contractual

Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. If a subrecipient, consultant, or contractor is proposed and approved at the time of award, no other approvals will be required. Any changes or additions will require a request for approval. Identify how the budgeted costs for subrecipients, consultants, or contractors were determined to be fair and reasonable.

The budget includes costs for engineering, financial and environmental planning estimated to be paid under a single contract to Brown and Caldwell as the prime consultant. Brown and Caldwell (or the City) may hire sub-consultants to conduct the environmental and financial planning work.

Other Expenses Does Not Apply

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

Indirect Costs Does Not Apply

Indirect costs that will be incurred and which will not otherwise be recovered, may be included as part of the applicant's project budget.

Total Costs

Indicate total amount of project costs, including the Federal and non-Federal cost share amounts.

Total Amount: \$300,000: Federal Share: \$150,000 / Non-Federal Share: \$150,000

Unique Entity Identifier and System for Award Management (SAM)

- DUNS# 0720436360000

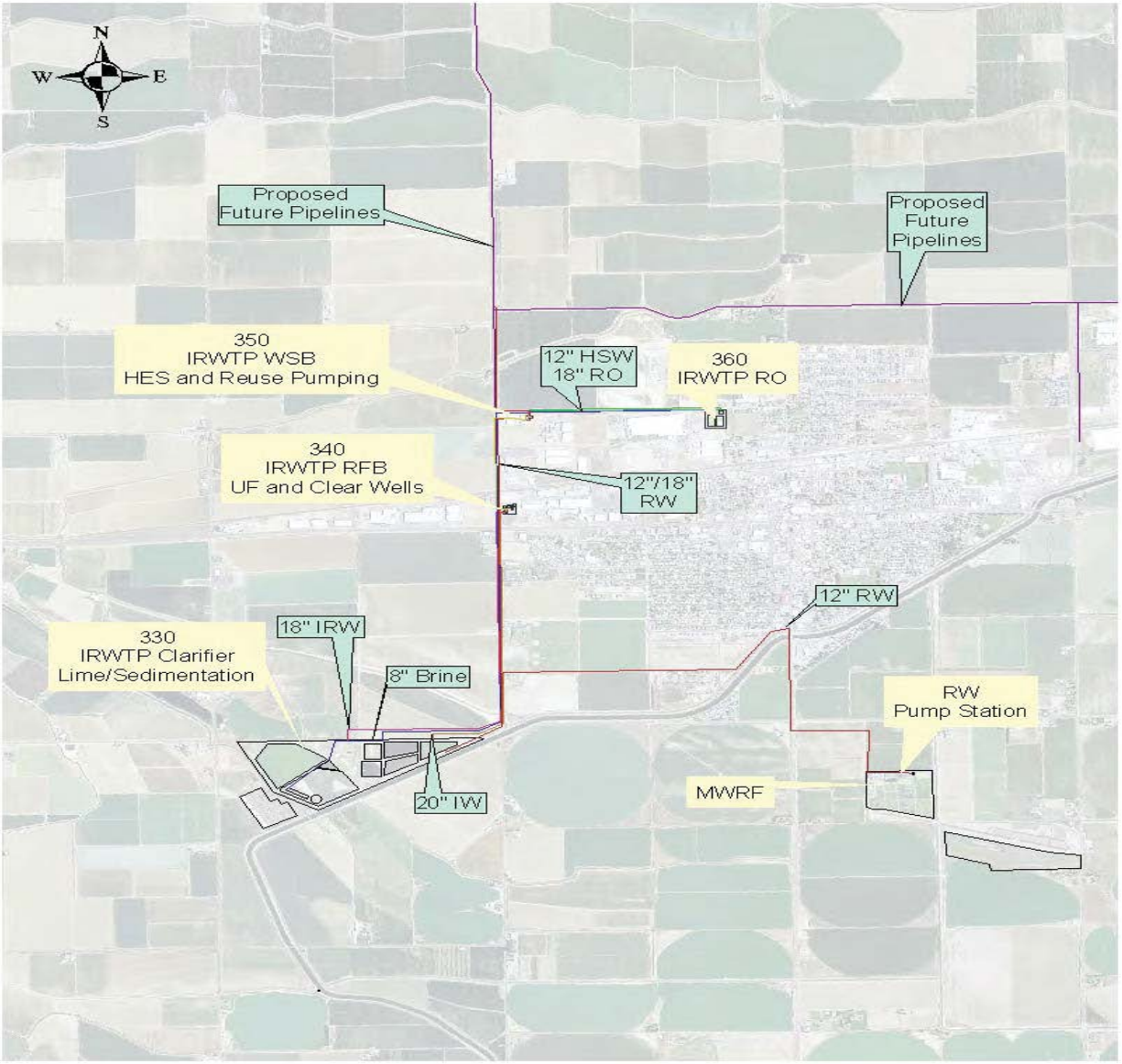


Figure 1. Project Area Map in Quincy

The reuse utility project affects the City of Quincy, Grant County and the Washington State Columbia Basin. The planned full reuse utility is shown on Figure 1. The proposed reuse utility starts southwest of the City where the Industrial Wastewater Treatment Plant (IWTP) is located. The first process of treatment is lime softening and sedimentation (Process 330) and it will be located there. The next step is membrane ultrafiltration (Process 340) and will be located in the Reuse Filter Building (RFB). The next two treatment remove hardness and TDS in a high efficiency softening (HES, Process 350) and reverse osmosis (RO, Process 360) system. From the HES and RO systems, reuse water will be pumped for distribution in reuse utility pipelines. This distribution system will serve effectively as an industrial water utility to reduce the current demand on the groundwater source. Excess water will for to the Municipal Water Reclamation Facility (MWRf) percolation ponds and two the future Aquifer Storage and Recover (ASR) system. As water demand increases over several years, water will be drawn from ASR to feed into the above-described reuse distribution system.

CITY OF QUINCY, WASHINGTON

RESOLUTION NO. 17-403

**A RESOLUTION MEETING THE REQUIREMENTS SET FORTH
IN THE APPLICATION FOR FINANCIAL ASSISTANCE FROM
THE BUREAU OF RECLAMATION'S 2017 WATERSMART
GRANT**

WHEREAS, the City of Quincy, Washington (City of Quincy) is authorized to apply to the U.S. Bureau of Reclamation (Reclamation) WaterSMART Title XVI Water Reclamation and Reuse Feasibility Grant Program: Funding Opportunity Announcement No. BOR-DO-17 for Fiscal Year 2017; and

WHEREAS, City of Quincy is capable of providing the amount of funding and/or in-kind contributions specified in the funding plan to complete the Feasibility Study; and

WHEREAS, City of Quincy will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement; and

NOW, THEREFORE, be it resolved that the City of Quincy is authorized to commit to the financial and legal obligations associated with receipt of a financial assistance award; and

The City of Quincy designates the Mayor as the authorized Chief Administrative Official and the authorized representative of the City of Quincy Council to act in all official matters in connection with this application and the City of Quincy's participation in the WaterSMART Title XVI Water Reclamation and Reuse Feasibility Grant Program.

This Resolution shall take effect upon passage of this resolution.

ADOPTED by the City Council of the City of Quincy, Washington, this 3rd day of January, 2017.



Jim Hemberry, MAYOR

ATTEST:

Nancy Schanze, CITY CLERK

Approved as to form:

OFFICE OF THE CITY ATTORNEY

Allan Galbraith

FILED WITH THE CITY CLERK:	December 30, 2016
PASSED BY THE CITY COUNCIL:	January 3, 2017
EFFECTIVE DATE:	January 3, 2017
RESOLUTION NO.:	17 - 403

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VICE-CHAIR
NUCLEAR CLEANUP CAUCUS



Congress of the United States House of Representatives

HOUSE NATURAL
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SUBCOMMITTEE ON FEDERAL LANDS

SUBCOMMITTEE ON
WATER, POWER, AND OCEANS

HOUSE SCIENCE, SPACE, AND
TECHNOLOGY COMMITTEE

SUBCOMMITTEE ON ENERGY
(VICE-CHAIRMAN)

SUBCOMMITTEE ON ENVIRONMENT

HOUSE AGRICULTURE COMMITTEE

SUBCOMMITTEE ON BIOTECHNOLOGY,
HORTICULTURE, AND RESEARCH

SUBCOMMITTEE ON
LIVESTOCK AND FOREIGN AGRICULTURE

January 4, 2017

Mr. Estevan Lopez, Commissioner
U.S. Department of Interior
Bureau of Reclamation
1849 C Street, NW
Washington, DC 20240

RE: City of Quincy, Feasibility Study request; Quincy 1 Water Utility

Commissioner Lopez:

The City of Quincy is located in a high plains desert in Central Washington and encircled by fields irrigated through the US Bureau of Reclamation Columbia Basin Irrigation Project. There are several food processing plants in Quincy, which greatly contribute to the economic strength of the community.

Currently, these facilities discharge into the Bureau of Reclamation's irrigation canal. As you know, there are legal requirements which would prevent these companies from utilizing the canals for discharge in the future.

The City of Quincy will use these grant funds to complete a study of the development of the "Quincy 1 Water Utility", or the Q1W. The Q1W would study alternative discharge processing options, which would satisfy all the legal requirements of the Bureau of Reclamation, while maintaining business operations within the City. However, this is much more than just a legal solution. The Q1W would eventually create a virtual zero discharge system and supplement groundwater recharge for reuse. This would be the first project of this kind in the state. This groundbreaking study could revolutionize the way industries utilize water in the future.

I strongly encourage the Bureau of Reclamation to give full and fair consideration to the City of Quincy and the Q1W project. Please feel free to contact my office if you need any additional information.

Sincerely,

Dan Newhouse
Member of Congress

United States Senate

WASHINGTON, DC 20510-4705

January 4, 2017

Estevan López, Commissioner
Bureau of Reclamation
U.S. Department of Interior
1849 C Street NW
Washington DC 20240

Dear Commissioner López:

I write in strong support of the application submitted by the City of Quincy to the Bureau of Reclamation's Fiscal Year 2017 WaterSMART: Development of Feasibility Studies under the Title XVI Water Reclamation and Reuse Program to provide residents and local industry with a new source of clean water while promoting environmental stewardship.

Surrounded by irrigated fields served by the Bureau of Reclamation's (USBR) Columbia Basin Project, wastewater discharge options for the City of Quincy are severely limited by federal and state restrictions on regional surface water management. For the last 50 years, the City has utilized a USBR managed canal to discharge treated effluent from its industrial wastewater treatment plant (IWTP). As USBR moves to eliminate non-agricultural discharge into the Columbia Basin Project system, the City of Quincy must find a new method of disposal for this high quality effluent reuse water stream.

At the same time, steady growth of the region's food processing and cloud computing industries has placed increased pressure on available water supply. Groundwater in the Columbia Basin is limited and insufficient to address the growing gap between water supply and industrial and municipal demand. As a result, the city is expected to run out of potable water within five to six years if an alternative source is not developed.

The Quincy 1 Water (Q1W) Utility Project would integrate the City's four water utilities, creating a closed loop water reuse system that satisfies the community's wastewater needs. The Q1W utility would use innovative treatment technology to generate high quality IWTP effluent reuse water to be injected into the Wanapum Aquifer's Grande Ronde Formation for storage and recovery. This system would eliminate the City's use of the USBR canal for disposal, reduce pressure on limited potable water sources, and create a drought resistant alternative to groundwater.

Federal funding through the Bureau of Reclamation would enable the City of Quincy to finalize the planning of its innovative water reuse utility. I ask for full and fair consideration of the City's application to the Fiscal Year 2017 WaterSMART: Development of Feasibility Studies under the Title XVI Water Reclamation and Reuse Program.

Sincerely,



Maria Cantwell
United States Senator

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United States Senate

WASHINGTON, DC 20510-4704

COMMITTEES:
APPROPRIATIONS
BUDGET
HEALTH, EDUCATION, LABOR,
AND PENSIONS
RULES AND ADMINISTRATION
VETERANS' AFFAIRS

January 21, 2014

Mr. Michael L. Connor, Commissioner
U.S. Department of the Interior
Bureau of Reclamation
1849 C Street NW
Washington, DC 20240

Dear Mr. Connor,

I am writing in support of the City of Quincy, Washington's application to the Bureau of Reclamation's WaterSMART program. These funds would allow Quincy to continue work on its integrated multi-water utility improvement project, made necessary primarily by the upcoming expiration of the City's 50-year-old agreement with the Bureau of Reclamation for wastewater discharge into their local canal. Quincy's efforts to construct a new effluent discharge pipeline will allow it to continue to serve its community while conserving resources; this is an excellent opportunity for the Bureau to advance the mission of the WaterSMART program.

The City has secured \$11.7 million in federal, state, and local support since 2007. Mayor Jim Hemberry has led the City's delegation in numerous meetings with state legislators and agency executive management in Olympia, as well as with federal agency officials and congressional offices, including mine. Funding partners include the federal Economic Development Administration, the state's Community Economic Revitalization Board, the state legislature (via capital budget grants), Grant County, and local utility customers. The City has received positive feedback from regulatory agencies supporting the City's environmentally innovative water reuse project and water quality solution.

I am proud to support the City of Quincy's effort to sustainably manage water resources and their application to the WaterSMART program. Thank you for your consideration of their proposal; please contact Richard Lazaro in my office at (206) 724-6667 with any questions you may have.

Sincerely,



Patty Murray
United States Senate

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website: <http://murray.senate.gov>
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