



STAFF REPORT TO THE CITY COUNCIL

DATE: Regular Meeting of August 14, 2018

TO: Honorable Mayor and Members of the City Council

SUBMITTED BY: Scott Buenting, Project Manager *SB*

APPROVED BY: Jon Blank, Public Works Director/City Engineer *JB*

SUBJECT: Application to the United States Bureau of Reclamation to Obtain a WaterSMART Desalination Construction Project Grant for the Brackish Water Desalination Project (P.W. 694)

RECOMMENDED ACTION

It is recommended that the City Council adopt the attached resolution and authorize the City Manager to submit a grant application, execute an agreement and certify funding to the United States Bureau of Reclamation for grant funding up to \$15,750,000 from the WaterSMART Desalination Construction Projects under the WIIN Act for the Brackish Water Desalination Project.

STRATEGIC PURPOSE

This item supports Strategy K-1 in the Strategic Plan by ensuring well maintained public facilities and Strategy K-2 by delivering high quality water to our customers. By investigating and pursuing alternative potable water sources, especially in times of severe drought and to improve treated water reliability, this project is an important part of maintaining a highly functioning and reliable water system.

FISCAL IMPACT

This action will authorize the City to apply for \$15,750,000 in grant funding from the United States Bureau of Reclamation's WaterSMART Desalination Construction Projects under the Water Infrastructure Improvements for the Nation (WIIN) Act funding opportunity. The cost of preparing this grant application is included in an existing contract with Carollo Engineers. This grant program requires the recipient to provide a funding match of at least a 75% of the total cost of the project. The total cost of environmental certification, design and construction of this project is estimated to be \$63,000,000. The City's funding match may be satisfied through various sources including local funds, grants, loans or bonds. Staff is also exploring regional and private partnerships to contribute to the financing of this project.

DISCUSSION

As the purveyor of the Antioch water system, the City treats and distributes raw water obtained from two sources; the San Joaquin River and the Contra Costa Canal. The City's ability to divert water from the San Joaquin River is dependent upon the concentration of chlorides in the water. During dry years, the chloride levels in the river

exceed that which is currently treatable at the Water Treatment Plant and therefore prohibit the City from obtaining water from the river. At these times, the City relies solely upon the Contra Costa Water District through the Contra Costa Canal for our raw water.

With pre-1914 adjudicated water rights to divert water for the needs of Antioch from the San Joaquin River, the City is in a unique and fortunate position of being able to pursue alternative means for treating water with high chloride levels. This process is often referred to as desalination, and involves removing chlorides from the water through membranes and disposing of the highly concentrated waste called "brine." The term desalination is actually more accurately used for ocean water that has very high chloride content. The chloride levels in the San Joaquin River are up to 100 times lower than that of ocean water; therefore, the water is considered brackish. Chloride removal from brackish water involves a similar process, but at a greatly reduced level of effort and cost.

The City has utilized \$1,000,000 from State Water Resources Control Board (SWRCB) Drinking Water State Revolving Fund (DWSRF) Loan program to identify grant opportunities and perform initial planning, engineering, and environmental certification of a brackish water treatment facility. A proposed location and layout of a brackish water desalination facility has been established within the footprint of the City's existing Water Treatment Plant (WTP). An area on the southern end of the plant appears suitable for the construction of a 6 million gallons per day (MGD), reverse osmosis, brackish water desalination facility with available area to expand the facility to 16 MGD if regional partnerships are developed. This setting would allow the brackish water desalination facility to utilize portions of the existing WTP for pretreatment. The installation of a new pipeline segment that would connect the City's River Pump pipeline on Lone Tree Way to the WTP provides a cost effective means of conveying raw water to the new facility. A brine disposal pipeline within existing City rights of way is contemplated from the WTP to Delta Diablo located off of the Antioch/Pittsburg Highway. The brine could be discharged through the existing Delta Diablo outfall.

On June 26, 2018, the City Council authorized the City Manager to submit a loan application to the State Water Resources Control Board for a Drinking Water State Revolving Fund Loan up to \$55,000,000 to be used on an as-needed basis to fund the design and construction of a brackish water treatment facility. This application is currently being reviewed by the State.

On July 25, 2017, the City Council authorized the City Manager to submit an application to the California Department of Water Resources for grant funding up to \$10,000,000 for the design and construction of the Brackish Water Desalination project from the Proposition 1 Water Desalination Grant Program. In March 2018, the City was conditionally awarded this grant in the amount of \$10,000,000.

The United States Bureau of Reclamation (USBR) has recently issued a proposal solicitation package for the WaterSMART Desalination Construction Projects under the WIIN Act funding opportunity. This program has allocated \$18,000,000 of grant funding to support ocean and brackish water desalination projects. Funding from this grant is limited to 25% of the total design and construction cost of a single project. The City has not reviewed the Environmental Impact Report and selected a project, however Staff is

recommending an application be made to USBR to obtain WaterSMART Desalination Construction Projects under the WIIN Act funding in the amount of up to \$15,750,000 for the design and construction of the Brackish Water Desalination project. A resolution authorizing the grant application, execution of an agreement and certify funding for this grant opportunity must be submitted by August 26, 2018, which allows the City to continue to explore this funding opportunity

ATTACHMENTS

A: Authorizing Resolution

ATTACHMENT "A"

RESOLUTION NO. 2018/**

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ANTIOCH
AUTHORIZING THE FILING OF A FINANCIAL ASSISTANCE APPLICATION WITH THE
UNITED STATES BUREAU OF RECLAMATION FOR A GRANT UP TO \$15,750,000
FROM THE WATERSMART DESALINATION CONSTRUCTION PROJECTS
UNDER THE WIIN ACT FOR THE BRACKISH WATER DESALINATION PROJECT
(P.W. 694)

WHEREAS, the United States Bureau of Reclamation is sponsoring funding for the WaterSMART Desalination Construction Projects under the Water Infrastructure Improvements for the Nation Act; and

WHEREAS, the City Council of the City of Antioch intends to apply for funding up to \$15,750,000 from the United States Bureau of Reclamation from the WaterSMART Desalination Construction Projects under the Water Infrastructure Improvements for the Nation Act for the Brackish Water Desalination Project (Project); and

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Antioch that the City Manager or his/her designee is hereby authorized and directed to sign and file, for and on behalf of the City of Antioch, an application for funding from the United States Bureau of Reclamation for an amount not to exceed \$15,750,000, for the project Brackish Water Desalination project, under the terms and provisions of the WaterSMART Desalination Construction Projects under the Water Infrastructure Improvements for the Nation Act; and

BE IT RESOLVED that the City of Antioch hereby provides the aforementioned representative or his/her designee the legal authority to enter into an agreement; and

BE IT RESOLVED that the City Council of the City of Antioch reviewed and supports the application submitted; and

BE IT RESOLVED that the City of Antioch has the capability to provide the amount of funding and/or in-kind contributions specified in the funding plan; and

BE IT RESOLVED that the City of Antioch will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

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RESOLUTION NO. 2018/**

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I DO HEREBY CERTIFY that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted by the City Council of the City of Antioch at a regular meeting thereof held on the 14th day of August, 2018 by the following vote:

AYES:

NOES:

ABSENT:

ARNE SIMONSEN, CMC
CITY CLERK OF THE CITY OF ANTIOCH

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