Legislation Details (With Text)

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Title:	Actions pertaining to installation of an energy-passive groundwater recharge product at the City of Fresno's Leaky Acres Groundwater Recharge Facility (Council District 4): 1. Adopt a finding of Categorical Exemption pursuant to California Environmental Quality Act Guidelines Section 15304(f) 2. RESOLUTION - Approving an exception to formal bidding procedures to award an agreement to The Water Group, LLC (Requires 5 affirmative votes) 3. Approve construction agreement with The Water Group, LLC., for $212,387				
Sponsors:	Department of Public Utilities				
Indexes:					
Code sections:					
Attachments:	1. Sole Source Service Resolution .pdf, 2. Water Group Agreement.pdf				

Date	Ver.	Action By	Action	Result
12/7/2017	1	City Council	approved	Pass

REPORT TO THE CITY COUNCIL

December 7, 2017

FROM: THOMAS C. ESQUEDA, Director
Department of Public Utilities

THROUGH: MICHAEL CARBAJAL, Planning Manager
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SUBJECT

Actions pertaining to installation of an energy-passive groundwater recharge product at the City of Fresno's Leaky Acres Groundwater Recharge Facility (Council District 4):

1. Adopt a finding of Categorical Exemption pursuant to California Environmental Quality Act Guidelines Section 15304(f)
2. RESOLUTION - Approving an exception to formal bidding procedures to award an agreement to The Water Group, LLC (Requires 5 affirmative votes)
3. Approve construction agreement with The Water Group, LLC., for $212,387

RECOMMENDATION

Staff recommends that Council adopt a Sole Source Resolution and approve a construction agreement with The Water Group, LLC., for the installation of an Energy Passive Groundwater Recharge Product at the City of Fresno's Leaky Acres Groundwater Recharge Facility to increase facility groundwater recharge infiltration rates.

EXECUTIVE SUMMARY

In accordance with City of Fresno's (City's) Metropolitan and Urban Water Management Plans, the City has implemented goals to recover depleted groundwater levels and re-balance the City's water resources profile by 2025. To aid in meeting those goals, advancements in technologies are now available to accelerate groundwater recharge up to four time's current infiltration rates.

The Water Group, LLC, (The Water Group) proposes to install its patented Energy-Passive Groundwater Recharge Product (EPGRP) around one designated recharge basin at Leaky Acres at no initial cost to the City. Reimbursement of installation costs to The Water Group shall be deferred and dependent upon meeting specific project milestones. If the installed system does not meet established milestones, The Water Group shall remove the system at no cost to the City. Successful project results will provide a cost effective avenue to implement additional installations to accelerate recovery of the City's overdrafted aquifer in meeting long term water resource planning goals.

BACKGROUND

Due to extensive pumping, groundwater aquifer levels throughout the City have declined approximately 100 feet over the last 80 years. In recognition of this condition, the City's Metropolitan and Urban Water Management Plans have established goals for the recovery of groundwater levels by 2025 through conjunctive water use and expansion of its groundwater recharge program.

Currently, groundwater recovery within the City's metropolitan area is dependent upon infiltration of surface waters delivered through the Fresno Irrigation District's (FID's) conveyance system to the City of Fresno's Leaky Acres Groundwater Recharge Facility, and utilization of approximately 80 storm drain basins throughout the metropolitan area during the summer months ('off-storm' season), through an existing agreement with the Fresno Metropolitan Flood Control District (FMFCD).

Decline of groundwater levels of 100 feet within the City's metropolitan area (+/-115 square miles) over the last 80 years represents a loss of over 7,360,000 acre feet of water. An average California household uses between one-half and one acre-foot of water per year for indoor and outdoor use.

Presently, the majority of efforts to re-establish original groundwater levels include delivery of surface waters to City owned groundwater recharge facilities and utilization of FMFCD storm water basins throughout the metropolitan area. Since 2003, average annual aquifer recharge quantities have been approximately 10,000 acre feet from the City's Leaky Acres, and approximately 38,000 acre feet per year utilizing FMFCD storm drain basins (including seasonal storm waters).

Additionally, the City's 30-million gallon per day (30 MGD) Northeast Surface Water Treatment Facility (NESWTF) and its 4 MGD Package Surface Water Treatment Facility (T-3 Facility) together, provide an average annual production of 21,000 acre feet of water that does not have to be pumped from the aquifer. Through the City's Recharge Fresno program, future completion and full utilization

of the City's 80 MGD Southeast Surface Water Treatment Facility (SESWTF) will provide for an equal volume of savings to our aquifer of approximately 90,000 acre feet per year.

Although the combination of these efforts will result in a total average annual recovery of approximately 159,000 acre feet per year, the City will continue to be dependent on a reduced amount of groundwater pumping to meet customer demands until a balanced condition can be met.

Assuming the total groundwater recharge from these sources (Leaky Acres, FMFCD storm drain basins, NESWTF, SESWTF, and T-3 Facility) remain consistent (159,000 acre feet per year), it will take approximately 46 years for full recovery of groundwater levels.

In order to expedite recovery of historic groundwater levels to meet the City's defined water resource management plan goals, a new groundwater recharge technology has shown to have had successful results in increasing recharge infiltration rates. The Water Group will utilize its EGRP system which will act as an artificial macropore, connecting micro-layers within the soil to enhance infiltration. The product requires no external energy source, is maintenance free, and is self- cleaning.

The Water Group anticipates up to a four-fold increase of current baseline infiltration rates, and to demonstrate system potential, proposes to install this system around one of the recharge basins at the City's Leaky Acres Groundwater Recharge Facility.

To demonstrate and verify system performance, The Water Group proposes to install this product at no cost to the City. All installation and project costs by The Water Group will be deferred and subject to specific project milestones and timelines as described in the Agreement Scope of Services.

Baseline infiltration rates will be verified at the proposed basin prior to system installation. When it is demonstrated that baseline infiltration rates have been doubled, City will, within six months, provide The Water Group a one-third reimbursement of the total cost noted above. Upon verification that at the baseline infiltration rate has tripled, another one-third payment shall be made. A final one-third payment will be made upon verification that a four-fold increase of infiltration rates has been achieved.

If the system fails to achieve double the baseline infiltration rate within the defined project operations timeline, the system will be removed without cost to City. Additionally, for the first five years of the 25-Year Manufacturer's Guarantee, a personal guarantee by the majority owners that average infiltration rates during this period will maintain a minimum of three times the original baseline infiltration rate. If it does not meet this requirement, the system will be removed and the City reimbursed the full amount paid.

In considering potential future installations at other recharge basins, the Water Group and City may enter into a subsequent agreement whereby The Water Group will lease drilling rigs, sell EGRP to the City at a fixed rate, and provide training thus reducing future installation costs.

To meet the defined timelines for a balanced water resources portfolio as noted in the City's Water Resource Management Plans, proactive measures and acceleration of the City's Groundwater Recharge Program will need to be implemented.

With Council's affirmative action, and use of new infiltration technologies, the City will ensure that a balanced and sustainable water resources portfolio can be achieved in accordance with established

water resource planning timelines.

ENVIRONMENTAL FINDINGS

Staff has performed a preliminary environmental assessment of this project and has determined that it falls within the Class 1 Categorical Exemption set forth in CEQA Guidelines, Section 15304(f), as this contract is for the installation of an EGRP at Leaky Acres. Furthermore, none of the exceptions to the Categorical Exemptions set forth in the CEQA Guidelines, Section 15300.2 apply to this project.

LOCAL PREFERENCE

Local Preference is not applicable as the City is utilizing a sole source provider.

FISCAL IMPACT

The General Fund will not be impacted. No payments to the contractor are anticipated for FY 2018. Appropriations to fund the potential full cost of the agreement in the amount of $212,387 will be requested for inclusion in the Water Division's Fiscal Year 2019 Capital Improvement Project Budget when the payments are anticipated to be made.

Attachments:
Sole Source Service Resolution
Contractor Agreement