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**Title:** Actions pertaining to Water Distribution System Hydraulic Modeling On-call Services Contract (Citywide)

1. Approve a Consultant Services Agreement with Akel Engineering Group, Inc., for on-call water distribution system hydraulic modeling services for a period of three years in the amount not to exceed \$450,000
2. Authorize the Director of Public Utilities, or designee, to sign all documents on behalf of the City of Fresno

**Sponsors:** Department of Public Utilities

**Indexes:**

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**Attachments:** 1. Attachment 1 - Consultant Service Agreement.pdf

Date	Ver.	Action By	Action	Result
1/30/2020	1	City Council	approved	

**REPORT TO THE CITY COUNCIL**

**January 30, 2020**

**FROM:** MICHAEL CARBAJAL, Director  
Department of Public Utilities

**THROUGH:** BROCK D. BUCHE, PE, PLS, Assistant Director - UP&E  
Department of Public Utilities - Utilities Planning & Engineering

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Department of Public Utilities - Utilities Planning & Engineering

**SUBJECT**

Actions pertaining to Water Distribution System Hydraulic Modeling On-call Services Contract (Citywide)

1. Approve a Consultant Services Agreement with Akel Engineering Group, Inc., for on-call water distribution system hydraulic modeling services for a period of three years in the amount not to exceed \$450,000
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## RECOMMENDATIONS

Staff recommends that City Council approve a Consultant Services Agreement with Akel Engineering Group, Inc. (Akel), in the amount not to exceed \$450,000, to provide on-call professional water distribution system hydraulic modeling services that will support decision-making for capital improvement projects, developer project related improvements, and operational and maintenance activities; and authorize the Director of Public Utilities, or designee, to sign all documents on behalf of the City of Fresno (City).

## EXECUTIVE SUMMARY

The City of Fresno water production and distribution system is comprised of 237 active water wells, three (3) surface water treatment facilities, dedicated water storage and booster station facilities, approximately 1,800 miles of distribution pipeline, and approximately 24 miles of large diameter transmission pipelines. Previous modeling efforts have established the baseline framework to identify the ever-expanding operational and water system distribution needs of the City. Continued development throughout the City will require ongoing hydraulic analyses and evaluations of various scenarios to meet and define current and future water system demand, flexibilities, operations, and interactions with new infrastructure. Subsequent to development of this framework, continued on-call services by Akel will enable the planning, implementation, and optimization of cost effective water utility services.

## BACKGROUND

The City has a drinking water service area that covers nearly 114 square miles and serves approximately 527,000 residential customers and 35,000 commercial and industrial accounts through a network of approximately 1,800 miles of distribution system pipelines. The City's water demands are approximately 120,000 acre-feet annually.

Prior to 2004, 100 percent of the City's potable water was supplied by groundwater pumping. Between 2004 and 2018, water demand by groundwater pumping was reduced to 86 percent with the remaining 14 percent supplied through utilization of its 30-million gallon per day (mgd) Northeast Surface Water Treatment Facility (Northeast Facility) and 4 mgd package surface water treatment facility (T-3 Facility).

In 2018, in accordance with the key recommendations of the Metropolitan Water Resource Management Plan (Metro Plan), the City completed construction of its 80 mgd surface water treatment facility in southeast Fresno (Southeast Facility), and various Regional Water Transmission Mains to distribute treated surface water throughout the City. As a result of these planned efforts, annual water demands are currently being met by 64 percent groundwater and 36 percent treated surface water. The design and completion of these projects was aided by the use of a GIS-based water system hydraulic model to assess and identify distribution system and operational impacts associated with these infrastructure changes. This hydraulic model has established the baseline framework that provides an avenue for the City to continue in identifying various system hydraulic reaction scenarios related to proposed system enhancements, new developments, and system operations.

In accordance with Fresno Municipal Code Chapter 4, Article 1, and Administrative Order 6-19, the Department of Public Utilities conducted a competitive process to select a consultant to provide on-

call hydraulic model services to meet current needs and future planning. On September 4, 2019, a Request for Qualifications (RFQ) was advertised in the Fresno Business Journal and on the City's online PlanetBids. The RFQ requested that consultants provide a Statement of Qualifications (SOQ) by October 4, 2019. In response to the City's solicitation, the City received one response from Akel Engineering Group, Inc., a local company headquartered in Fresno, CA.

The services required by this agreement will be completed in approximately 1,095 consecutive calendar days from the authorization to proceed. The contract is for an amount not to exceed \$450,000, paid on a time and materials basis. Services will be authorized in \$150,000 increments each fiscal year.

A standardized consultant service agreement has been used in accordance with Administrative Order 4-4, and the consultant's Certificates of Insurance have been approved by the City's Risk Management Division. Upon approval by the City Council, the agreement will be executed by the Director of Public Utilities.

## **ENVIRONMENTAL FINDINGS**

The approval of the Agreement is not a "project" for the purposes of the California Environmental Quality Act (CEQA), pursuant to CEQA guidelines Section 15378.

## **LOCAL PREFERENCE**

Local Preference was not implemented as Akel Engineering Group, is a local business pursuant to Fresno Municipal Code Section 4-109(b).

## **FISCAL IMPACT**

There is no impact to the General Fund. This project is identified in the Water Division's Fiscal Year 2020 Capital Improvement Program Enterprise Fund 40101. No additional appropriations are necessary.

Attachment:  
Attachment 1 - Consultant Services Agreement