



Folsom City Council Staff Report

MEETING DATE:	5/27/2025
AGENDA SECTION:	Consent Calendar
SUBJECT:	Resolution No. 11384 - A Resolution Authorizing the City Manager to Execute an Agreement with HDR Engineering, Inc. for Pre-Design Services for \$166,233 from the Water Operating Fund (Fund 520) and the Sewer Operating Fund (Fund 530) for the Water and Wastewater Communication Hardware Upgrade Project and Appropriation of Funds
FROM:	Environmental and Water Resources Department

RECOMMENDATION / CITY COUNCIL ACTION

The Environmental and Water Resources Department recommends the City Council pass and adopt Resolution No. 11384 - A Resolution Authorizing the City Manager to Execute an Agreement with HDR Engineering, Inc. for Pre-Design Services for \$166,233 from the Water Operating Fund (Fund 520) and the Sewer Operating Fund (Fund 530) for the Water and Wastewater Communication Hardware Upgrade Project and Appropriation of Funds.

BACKGROUND / ISSUE

The Environmental and Water Resources (EWR) Department identifies infrastructure rehabilitation and replacement projects through water and wastewater master plans, ongoing condition assessment programs, and regulatory changes. EWR staff completed an analysis of the electrical and communication components within the City's water treatment plant (WTP), water distribution system and the wastewater collection system and found that Programmable Logic Controllers (PLCs) and communication hardware are at the end of their serviceable life and need replacement.

The City depends solely on surface water from the Folsom Reservoir for its water supply. Raw water from the Folsom Reservoir is treated at the City owned and operated conventional water treatment plant (WTP) with a firm capacity of 50 mgd. The City utilizes pump stations, storage

reservoirs, pressure-reducing valves, and a network of pipelines to deliver water within the distribution system.

The City's wastewater collection system consists of approximately 308 miles of gravity sewer mains, approximately 4.5 miles of sewer force mains, and approximately 117 miles of lower sewer laterals. Gravity pipes range in size from 2 to 33 inches in diameter and sewer is pumped throughout the system by 18 sewer lift stations. The City has 4 major sewer sheds, multiple sewer sub-basins currently monitored by 20 metering sites that all discharge to a 54-inch main interceptor in Folsom Boulevard that is owned, operated, and maintained by Sac Sewer and is treated at the EchoWater Resource Recovery Facility.

PLCs and communication hardware for the water and wastewater systems help manage, control and automate various processes such as flow monitoring, chemical dosing, tank levels and pump control within the water and wastewater systems. PLCs and communication hardware are the primary control systems that process data from sensors and controlling equipment like pumps, valves and motors to ensure safe operation of the water and wastewater systems.

In February 2025, the City issued a request for proposals for Water and Wastewater Communications Hardware pre-design services that will be used for a future design effort of the development of plans and specifications with the goal of replacing outdated and unsupported PLCs and communication hardware across water treatment, distribution and the wastewater collections systems. The pre-design approach is divided into three phases:

- Phase 1: Review of Existing Utility Documents and Site Reconnaissance
 - Document Review:
 - PLC/RTU panel layout
 - Control element and instrumentation loop drawings
 - Network architecture
 - Communication riser drawings
 - Point mapping spreadsheets
 - Site Reconnaissance
 - Condition Assessment of equipment, instrumentation, power supply and communication backbone
 - Identify potential constraints and design alternatives
 - Interview operations staff
- Phase 2: Preliminary Design Alternatives Analysis and Workshop
 - Analyze feasibility of project alternatives
 - Identify physical constraints and operational constraints
 - Confirm design criteria necessary to select the preferred design approach
- Phase 3: Pre-Design Report
 - Summarize the current state and condition of hardware, data structure and communications
 - Summarize the preferred project alternative

- Define the design criteria so that plans and specifications can be developed during design

This resolution will authorize the City Manager to execute an agreement with HDR Engineering, Inc. for the Pre-Design Services for the Water and Wastewater Communication Hardware Upgrade Project.

POLICY / RULE

In accordance with Chapter 2.36 of the Folsom Municipal Code, supplies, equipment, services, and construction with a value of \$75,049 or greater shall be awarded by City Council.

ANALYSIS

On February 14, 2025 the City issued a request for proposals for the Pre-Design Services for the Water and Wastewater Communication Hardware Upgrade Project. On April 4, 2025, EWR received proposals from HDR Engineering, Inc., Black and Veatch, HydroScience, and Kennedy Jenks.

The four proposals were evaluated by four EWR staff members for technical evaluation prior to reviewing project costs. The proposals were reviewed and scored for project understanding, qualifications, deliverables, and project team staffing. The technical evaluations were scored and are shown in Table 1.

Consultant	EWR 1	EWR 2	EWR 3	EWR 4	Average
HydroScience	53	53	49	49	51
HDR Engineering, Inc.	66	57	55	71	62.3
Black and Veatch	64	68	64	71	66.8
Kennedy Jenks	62	70	65	71	67

Table 1: Consultant Technical Scores without Costs

After reviewing each proposal for project understanding, qualifications, deliverables, and project team staffing, the proposals were reviewed for project costs. The fee schedules for the scope of work outlined in the request for proposals from each consultant are shown in Table 2.

Consultant	Fee Amount
HydroScience (378 Hours)	\$125,102
HDR Engineering, Inc. (786 Hours)	\$166,233
Black and Veatch (1,009 Hours)	\$273,161
Kennedy Jenks (877 Hours)	\$226,852

Table 2: Consultant Project Costs and Project Hours

HDR Engineering, Inc. was determined to provide the best value to the City based on the scope of work provided in their proposal, the project team, their expertise for these types of projects, the total fee amount and overall cost based on the assumed number of hours proposed to complete the

work. HDR Engineering, Inc. included a detailed and thorough project understanding. Table 3 shows the overall total scores including project costs based on a maximum score of 100.

Consultant	Technical Score (Avg.)	Cost Score	Total Score
HydroScience	51	20.5	71.5
HDR Engineering, Inc.	62.3	21.9	84.2
Black and Veatch	66.8	15.5	82.3
Kennedy Jenks	67	17.1	84.1

Table 3: Consultant Overall Scoring Including Project Costs and cost per hour

This resolution will authorize the City Manager to execute an agreement with HDR Engineering, Inc. for Pre-Design Services for the Water and Wastewater Communication Hardware Upgrade Project for a not to exceed amount of \$166,233 and appropriation of funds.

FINANCIAL IMPACT

The Water System Communications Hardware Upgrade Project (Project # WA2502) is included in the Fiscal Year 2024-25 Capital Improvement Plan with a project budget of \$1,200,000 in the Water Operating Fund (Fund 520). Sufficient funds are budgeted and available in the project budget to cover the Water System Communications Hardware Upgrade Project's portion of the agreement, \$97,849.

The Wastewater System Communications Hardware Upgrade Project is not included in the Fiscal Year 2024-25 Capital Improvement Plan and will require an appropriation in the amount of \$68,384. Sufficient funds are budgeted and available in the Sewer Operating Fund (Fund 530) to cover the Wastewater System Communication Hardware Upgrade Project's portion of the agreement, \$68,384.

ATTACHMENT

Resolution No. 11384 - A Resolution Authorizing the City Manager to Execute an Agreement with HDR Engineering, Inc. for Pre-Design Services for \$166,233 from the Water Operating Fund (Fund 520) and the Sewer Operating Fund (Fund 530) for the Water and Wastewater Communication Hardware Upgrade Project and Appropriation of Funds.

Submitted,

Marcus Yasutake, Director

ENVIRONMENTAL AND WATER RESOURCES DEPARTMENT