



CITY OF WHEATLAND

CITY COUNCIL MEETING STAFF REPORT

May 23, 2023

SUBJECT: Update on Comprehensive Water Project

PREPARED BY: Dane H. Schilling – City Engineer

Recommendation

No action is requested at this time. This item is for information only.

Background

With the support of the Yuba Water Agency (YWA), the City of Wheatland was awarded a combined \$1.36-million grant through the State's Integrated Regional Water Management (IRWM) grant program, and fifty percent (50%) matching funds provided by YWA, for the Comprehensive Drinking Water Project ("Project"). The Project will improve water system reliability; increase community awareness of water consumption; encourage sustainable water practices; and modernize the City's water supply system to accommodate growth. The grant envisioned the formulation of several projects in two phases to meet these objectives.

Discussion

The Project improvements are programmed into two phases. In general, Phase 1 deals with the delivery of water to customers and includes replacing all water meters, a new remote reading water metering system, new customer information portal, and new billing system. Phase 2 deals with the larger infrastructure including the elevated tank and delivering consistent water pressure.

Phase 1

The elements of Phase 1 are designed to accomplish system-wide water meter automation upgrades including state of the industry Advanced Metering Infrastructure (AMI); allowing remote, real-time meter reading through radio and cell signals; and automated billing. The AMI improvements allow for automated and remote meter reading, enable timely leak detection, provide consumers with data for consumption management, increase operational efficiencies and improve the City's billing capabilities.

Phase 1 efforts include the following activities:

1. Based on City input, craft a best-value selection process to identify the make, model and desired features of the City water meters and data collection system. **(Complete)**

2. Select the AMI company, meters and communication infrastructure to suit criteria developed in #1 above through an open and competitive process,. **(Complete)**
3. Prepare construction documents to bid, award and install 1,279 meters and deploy AMI communications. **(1,265 meters successfully installed, 14 meters transferred to Public Works for special handling)**
4. Select and deploy new billing software through an open and competitive process. **(Complete)**
5. Integrate new AMI meters and billing software. **(Complete)**
6. Migrate all customer accounts from old system to new system. **(Complete)**
7. Select and deploy a new web-based customer portal so customers can access their water usage remotely. **(Software has been selected, deployment is pending)**

Phase 2

Initially, Phase 2 was programmed to accomplish the following: make modifications to the water distribution infrastructure to remove the historic 100+ year old elevated water storage tower from service but maintain its status as a landmark; and upgrade the aging water control SCADA system which remotely controls the City's groundwater wells and pumps;

However, during the preliminary engineering of the Phase 2 project, Public Works, Fire and Engineering determined that water pressure deficiencies exist in the distribution system on the fringes of the community. These departments agree that this problem can be addressed by amending the original Phase 2 scope to abandon the current centralized distribution system which emanates from the elevated water tower and radiates outward, and instead provide flow and pressure from the individual well sites that are distributed throughout the community. This revised approach will optimize existing pumping capacities to better provide adequate water pressure throughout the system. In addition, with the removal of the water tower, the baseline operating pressure can be increased. This revised approach will also better accommodate minor system growth on the fringes while still maintaining Wheatland's self-reliance on existing ground water wells.

The existing 100-year-old elevated water storage tower will be still removed from service and repaired. Also, the currently deficient Supervisory Control and Data Acquisition (SCADA) systems at each of the six groundwater wells will be upgraded as needed.

Phase 2 activities include the following:

1. Assess and make a scope for system changes needed to replace the function of the water tower. **(Complete)**
2. Perform SCADA modification and pilot testing of two existing well sites to verify locally controlled pressurization scenario. **(New task. Complete)**
3. Procure a condition assessment report to quantify corrosion on the water tower structure to develop contract documents for the necessary repair work. Costs for rehabilitation and painting are dependent on the conditions assessment report. **(Not started – complete by August 2023)**
4. Develop a water system model to assess system needs and determine system requirements utilizing the existing water wells with pressure tanks and the ground level tank with booster pumps at each well site. The scope and costs for other improvements is

dependent on completion of the water model. **(New task. Not started. Complete by September 2023)**

5. Based on the results of the water modeling effort include modifications to SCADA operational parameters, and other improvements to deliver adequate pressure and flow throughout the City. **(New task. Not complete)**
6. Modify existing pumps, motors and SCADA as needed at remaining well sites. **(New task. Begins after completion of previous items. Complete by February 2024)**
7. Install large diameter meters at two locations. This was a carryover item from Phase 1. **(Not started. Complete by August 2023)**

Fiscal Impact

No actions are proposed with this item, therefore there are no fiscal impacts at this time. The following table shows the status of the IRWM-YWA grant funding.

IRWM-YWA Grant Status as of April 30, 2023

| Budget Category | Grant Amount | Total Billed to 4/30/23 | Grant Remaining | % Billed |
|------------------------------------|---------------------|--------------------------------|------------------------|-----------------|
| Project Management | \$ 40,000 | \$ 27,544 | \$ 12,456 | 69% |
| Planning/Design/Engineering/Enviro | \$ 95,000 | \$ 62,130 | \$ 32,870 | 65% |
| Construction/Implementation | \$ 1,229,694 | \$ 791,506 | \$ 369,953 | 64% |
| TOTAL | \$ 1,364,694 | \$ 881,180 | \$ 415,279 | 65% |

Initially, the Project was funded entirely through external grant funds totaling \$1.36-million. In May 2022 the City Council earmarked \$110,000 in ARPA funds to cover additional project costs associated with the protracted supply chain delays and additions to the scope of the Project.

It is anticipated the total project funding of \$1,474,694 is sufficient to cover the cost of all the work currently contemplated in the Project.

Attachments

<none>