CITY COUNCIL AGENDA
FEBRUARY 17, 2026

STAFF REPORT
CONSENT
ITEM NUMBER: 4.

TITLE

Water Treatment Plant SCADA Upgrade Budget Increase

RECOMMENDATION

Adopt a Resolution increasing the Water Treatment Plant SCADA Upgrade (WA26-0200) project budget $150,000, from $250,000 to $400,000, and authorizing the City Manager to amend Agreement No. 2025-A161 with Telstar Instruments in an amount not to exceed the project budget.

CONTACT

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Jemelyn Cruz, Finance Director

BACKGROUND & ANALYSIS

Background

Commissioned in 1974, the Water Treatment Plant (WTP) at 250 Kirkland Ranch Road consists of a Membrane Plant and a Conventional Plant, which typically operate simultaneously. The Conventional Plant is especially effective at treating high-turbidity water during storm events or when raw water quality fluctuates.

The WTP's Supervisory Control and Data Acquisition (SCADA) system oversees operations for both facilities. The Membrane Plant is controlled through a Zenon Control Panel located in the Control Room, which includes a ControlLogix PLC communicating with a remote I/O rack via ControlNet coaxial cable. An Operator Interface Terminal (OIT) provides real-time monitoring and control and serves as the dividing point between the Membrane and Conventional Plants.

In contrast, the Conventional Plant relies on outdated and aging infrastructure. Operations depend on a relay-based sequencing panel known as the Neptune panel, which is no longer functioning reliably, and a hardwired control panel equipped with loop controllers, switches, and relays. This legacy system lacks automation, integration with the broader SCADA system, and remote monitoring capabilities, resulting in higher maintenance demands, reduced visibility, and increased risk of operational failures.

As the City of American Canyon continues to grow, the WTP faces increasing challenges, including

aging infrastructure, rising flow volumes and treatment complexity, more stringent regulatory compliance requirements, and evolving cybersecurity threats to critical infrastructure. These limitations hinder staff's ability to optimize performance across both treatment systems, respond quickly to operational changes, collect and report accurate data, maintain system reliability, and safeguard against cyber risks.

A comprehensive SCADA upgrade is necessary to address these issues and prepare the facility for long-term demands. The proposed upgrade will replace obsolete infrastructure with secure, scalable systems, enhance operational efficiency through improved automation and control logic, enable real-time monitoring and remote alarm management, improve data integrity for regulatory reporting, streamline staffing and response to system events, support more effective staff training, and strengthen cybersecurity in line with current best practices. These improvements will ensure the WTP can continue operating reliably and efficiently as the city grows.

Update

As the project has progressed, there have been additional needs identified at the existing water treatment plant. In addition to the plant upgrade, it also made sense to include the two ancillary pump stations (Via Bellagio and Oat Hill) and the Oat Hill Tank to the project scope. The pumps and tank currently operate in automatic mode, and in the event of an issue, an alarm is transmitted via phone line to on-call operations staff. Operators must then physically respond to the site to assess conditions and make manual adjustments.

Connecting the ancillary sites to the main water system server will allow for continuous remote monitoring, improved alarm visibility, and enhanced operational control of the entire water system. This integration will support preventative maintenance by providing real-time system data, trend analysis, and faster response to abnormal conditions. Remote connectivity will also allow operations staff to remain on standby while maintaining situational awareness, reducing response time, operational risk, and potential service disruptions to the different pressure zones around the City. New pump stations, such as the Oat Hill Pump Station underway and the planned Zone 5 Water Pump Station, will essentially be plug and play to the upgraded system.

COUNCIL PRIORITY PROGRAMS AND PROJECTS

Organizational Effectiveness: "Deliver exemplary government services."

FISCAL IMPACT

The upgrade is funded through the adopted FY2025/26 Capital Improvement Project WA26-0200 SCADA – WTP in the amount of $250,000 from Water Operations, Fund 510. The additional hardware installation, system configuration, and integration with existing infrastructure changes are anticipated to cost an additional $125,000. In addition, approximately $25,000 in project-related expenditures were incurred during early implementation activities and were not fully reflected in the current fiscal year budget at the time the project scope was finalized. As a result, a total budget

increase of $150,000 is requested to fully fund the project and ensure successful completion of all required improvements.

Staff is recommending the following budget adjustments:

Fund	Adopted FY 2025/26	Increase	Total
510, Water Operations	$250,000	$100,000	$350,000
520, Water Capacity Fee	$0	$50,000	$50,000
Total	$250,000	$150,000	$400,000

The use of water capacity fees is recommended for the portion of SCADA improvements needed to provide real-time system awareness and ensure reliable service for the new development on Oat Hill.

ENVIRONMENTAL REVIEW

The project has been determined to be categorically exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to Section 15301 Class 1 subsections (b), relating to existing utility facilities, and (f), concerning the addition of safety or health protection devices to existing structures or facilities.

COMMUNICATION

Level 1 â€“ Minimal Communication
Project information will be included in future water quality reports.

ATTACHMENTS:

1. Resolution - WTP SCADA