



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Julia H. Cooper
Kerrie Romanow

SUBJECT: SEE BELOW

DATE: April 29, 2019

Approved

Date

5/9/19

**SUBJECT: AGREEMENTS WITH ABB INC., DBA ABB DE, INC., FOR A
DISTRIBUTED CONTROL UNIT (DCU) UPGRADE AND ONGOING
SUPPORT AND MAINTENANCE AT THE SAN JOSÉ/SANTA CLARA
REGIONAL WASTEWATER FACILITY**

RECOMMENDATION

Adopt a resolution authorizing the City Manager to:

- (a) Negotiate and execute an agreement with ABB Inc., dba ABB DE, Inc., (Wickliffe, OH) to upgrade distributed control units at the San José/Santa Clara Regional Wastewater Facility, including hardware, software, programming, configuration, and related professional services, beginning June 1, 2019 and ending December 31, 2022 for a maximum not-to-exceed compensation of \$6,377,000, subject to the appropriation of funds; and
- (b) Execute the Water Care Enhanced Agreement with ABB Inc., dba ABB DE, Inc. (Wickliffe, OH) and annual purchase orders pursuant to the terms of the Water Care Enhanced Agreement for ongoing support and maintenance (\$233,194 per year) and as-needed parts replacement and repair and rebuilding services (estimated at \$500,000-\$750,000 per year) for a five-year term beginning June 1, 2019 and ending May 31, 2024 and for a combined compensation not to exceed \$3,915,970, subject to the appropriation of funds; and
- (c) Negotiate and execute amendments and change orders to the agreements as required for unanticipated changes, subject to the appropriation of funds.

OUTCOME

To upgrade and provide ongoing maintenance and support to the San José/Santa Clara Regional Wastewater Facility's (RWF's) control systems to provide enhanced system functionality, increase capacity to support capital improvements planned for the facility, and ensure reliable operations of the wastewater facility.

BACKGROUND

The San José/Santa Clara RWF is an advanced wastewater treatment facility controlled by a complex Distributed Control System (DCS) that runs and monitors critical aspects of the facility's operations. The DCS includes 18 Distributed Control Units (DCUs) connected to operational equipment that control electrical, hydraulic, biological, and chemical processes throughout the facility. The DCUs are networked to send data to the DCS and receive commands from facility staff who monitor the system on a 24/7/365 basis.

The City originally purchased this equipment from Fisher-Porter who was awarded an agreement in FY 1993-94 as a result of a competitive solicitation. Fisher-Porter was later purchased by ABB. With upkeep and maintenance, the system worked reliably for over 20 years, but by 2012 certain critical components of the system were nearing the end of its useful life.

The City determined that an upgrade in 3 phases was necessary:

Phase 1: Distributed Control System (DCS) hardware and software upgrade

Phase 2: Infrastructure and configuration updates

Phase 3: Distributed Control Unit (DCU) upgrade

City staff issued a Request for Proposal (RFP) to secure the services of a qualified vendor to perform Phase 1 of the upgrade. ABB was the sole responder, and in June 2013,¹ Council approved an award of contract to ABB for the DCS upgrade which was completed in December 2015. Since that time, staff has been working on Phase 2, along with supplemental services provided by ABB, to update wiring, cabinetry, and input/output modules. Phase 2 is still in process and is expected to be completed by September 2020.

In December 2015,² Council also authorized staff to execute purchase orders with ABB for ongoing parts replacement and repair and rebuilding services. The agreement that governed these purchase orders, as well as ongoing software support and maintenance, expired September 30, 2018.

ABB products and services are not interoperable with other brands or systems, so for other brands to be considered, a complete upgrade and replacement of the entire system would be necessary. As a complete upgrade and replacement of the entire suite of ABB systems and services is estimated to be in excess of \$35,000,000, that approach has not been deemed practical and the City has opted to sustain operations of the DCS through maintenance and critical component upgrades. Through the years, the Chief Purchasing Officer has periodically reviewed and determined that these systems qualify as a brand name / sole source pursuant to San José Municipal Code Sections 4.12.230 and 4.12.240.B.2, 3, and 5. This determination is applicable to this project and is justified to ensure optimum operational performance of the RWF.

¹ 2013 Council Memo: <http://sanjoseca.gov/DocumentCenter/View/17980>

² 2015 Council Memo: https://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=1475&meta_id=544230

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ANALYSIS

In September 2017, the City contracted with ABB to upgrade one DCU to assess the impact of and develop a risk mitigation strategy for the Phase 3 upgrade. The pilot project was successfully completed in April 2018, and staff is now ready to move forward with the full Phase 3 upgrade of the remaining 17 DCUs.

The City must also execute a new agreement with ABB to provide ongoing maintenance and repair services for the Distributed Control System to ensure continued operational reliability. ABB calls this agreement the Water Care Enhanced Agreement.

Summary of Proposed Agreements: The DCU Upgrade Project Agreement with ABB includes fixed pricing for all DCU hardware, software, programming, configuration, and related professional services during the approximately 3-year implementation. The Agreement, based primarily on the City's standard contract terms and conditions, includes a detailed scope of services, a project implementation schedule, a compensation schedule with milestone payments tied to the successful completion of key project deliverables and a final acceptance process that triggers release of the retainage held on all deliverables. Warranties will become effective for a period of one year after Final System Acceptance of each stage (the "Warranty Period"). Following the Warranty Period, the Distributed Control System shall be maintained in accordance with the Water Care Enhanced Agreement. ABB required that the liability for consequential damages not exceed \$5 million, and aggregate liability shall not exceed \$10 million. Staff proposes implementing the project in stages to further mitigate and minimize the risk and impact to plant operations.

The Water Care Enhanced Agreement with ABB provides for ongoing services, including software support and maintenance, and parts and hardware replacement, and repair and rebuilding services for the Distributed Control System for the five-year term and replaces the agreement that expired September 30, 2018. City staff will issue purchase orders pursuant to the agreement on an annual basis to meet City needs for ongoing maintenance and support, including parts and services, to ensure optimal facility performance.

EVALUATION AND FOLLOW-UP

This memorandum will not require any follow-up from staff.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the May 21, 2019 City Council meeting.

COORDINATION

This memorandum has been coordinated with the City Manager's Budget Office and the City Attorney's Office.

COMMISSION RECOMMENDATION/INPUT

The Treatment Plant Advisory Committee (TPAC) will consider this item on May 16, 2019.

FISCAL/POLICY ALIGNMENT

This Council item is consistent with the City's 2019-2023 Adopted Capital Improvement Program³ which includes maintaining adequate operational capacity for wastewater treatment to accommodate the City's economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the plant in compliance with all applicable local, state and federal regulatory requirements.

COST SUMMARY/IMPLICATIONS

1. **AMOUNT OF RECOMMENDATION** **\$10,292,970**

2. **COST ELEMENTS:**

DCU Upgrade Project Agreement (~3.5 years)

- Project Management	\$350,000
- Administrative Meetings	521,034
- Engineering Workshops	521,034
- Project Engineering Services	521,032
- Server Hardware and Services	637,700
- Stages 1-3 – Hardware and Services	1,275,400
- Stages 4-6 – Hardware and Services	1,275,400
- Stages 7-9 – Hardware and Services	1,275,400

DCU Upgrade Project Subtotal **\$6,377,000**

³ 2019-2023 Adopted Capital Improvement Program: <http://www.sanjoseca.gov/DocumentCenter/View/79822>

Water Care Agreement (5 years)

Support and Maintenance:

- Year 1	\$233,194
- Year 2	233,194
- Year 3	233,194
- Year 4	233,194
- Year 5	233,194

Support and Maintenance Subtotal \$1,165,970

Estimated As-Needed Parts/Hardware Replacement/Repair/Rebuilding:

- Year 1	\$750,000
- Year 2	500,000
- Year 3	500,000
- Year 4	500,000
- Year 5	500,000

Estimated Parts Replacement/Repair/Rebuilding Subtotal \$2,750,000

GRAND TOTAL NOT TO EXCEED (BOTH CONTRACTS) \$10,292,970

3. **SOURCE OF FUNDING:** 512 – San José-Santa Clara Treatment Plant Capital Fund and 513 - San Jose-Santa Clara Treatment Plant Operating Fund
4. **FISCAL IMPACT:** There is no additional fiscal impact.
5. **PROJECT COST ALLOCATION:** In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memo (Carollo Engineers, March 2016), the capital funding (Fund 512) for this project is allocated between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

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BUDGET REFERENCE

The table below identifies the fund and appropriations proposed to fund the contracts recommended as part of this memo.

Fund #	Appn #	Appn. Name	Current Total Appn	Amt. for Contract *	2018-2019 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7394	Treatment Plant Distributed Control System	\$1,937,000	\$1,913,100	V-154	06/19/2018 Ord. No. 30124
513	0762	Non-Personal/ Equipment (ESD)	\$28,229,334	\$150,000	X-79	02/12/2019 Ord. No: 30223

* Future funding has been proposed within the 2020-2024 Proposed Capital Budget and is subject to Council approval. Includes \$6,377,000 for the DCU Upgrade Agreement and \$250,000 for the first year of purchase orders issued under the Water Care Enhanced Agreement. Future funding for the total \$3,515,970 is incorporated within the annual O&M budget as indicated in the five-year schedule above and is subject to Council approval on an annual basis.

CEQA

Statutorily Exempt, File No. PP18-104, CEQA Guidelines Section 15301(1), Existing Facilities.

/s/
JULIA H. COOPER
Director of Finance

/s/
KERRIE ROMANOW
Director of Environmental Services

For questions, please contact Jennifer Cheng, Deputy Director of Finance, at (408) 535-7059.