

CITY OF SANTA ROSA  
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES  
FROM: MARK KASRAIE, PE, SUPERVISING ENGINEER  
CAPITAL PROJECTS ENGINEERING  
SUBJECT: APPROVAL OF AMENDED AND RESTATED MEMORANDUM OF  
UNDERSTANDING AND PROFESSIONAL SERVICES  
AGREEMENT - ULTRAVIOLET LIGHT DISINFECTION  
EQUIPMENT SYSTEM PRE-SELECTION

AGENDA ACTION: RESOLUTION

---

RECOMMENDATION

It is recommended by the Transportation and Public Works Department, the Water Department, and the Contract Review Subcommittee that the Board of Public Utilities, by resolution:

1. approve an Amended and Restated Memorandum of Understanding with Calgon Carbon, of Coraopolis, PA (Supplier), guaranteeing an equipment purchase price of \$5,634,700.00 for a period of 22 months;
  2. approve a Professional Services Agreement with the Supplier for design support services in the amount not to exceed \$86,000.00; and
  3. authorize the Santa Rosa Water Director to negotiate and execute an amendment to the MOU that will allow an extension to the price guarantee beyond the established 22 months, as feasible.
- 

EXECUTIVE SUMMARY

This resolution will approve a Memorandum of Understanding (MOU) with Calgon Carbon of Coraopolis, PA (Supplier) and guarantee a purchase price of \$5,634,700 for acquisition of the Ultraviolet Light (UV) disinfection equipment should the City award a contract for replacement of the existing UV disinfection system at the Laguna Treatment Plant. The intent of the MOU is to formally commit the Supplier to guarantee their equipment price for 22 months from the date of this Board of Public Utilities approval and offer that pricing to the installation contractor when there is an Invitation for Bids for construction of the overall project. Additionally, this motion will approve a Professional Services Agreement with the Supplier for design support services in the amount not to exceed \$86,000.

## BACKGROUND

Ultraviolet Light (UV) is the primary disinfection process for the Laguna Treatment Plant (LTP). In 2012, the Division of Drinking Water (DDW) re-evaluated and subsequently de-rated the disinfection system capacity, resulting in deficiency under certain wet weather flow and/or low UV transmittance conditions. Additionally, the existing UV equipment was commissioned in 1998 and is at the end of its useful life. These conditions triggered the need to evaluate disinfection equipment options to ensure that LTP has adequate disinfection capacity up to 67 million gallons per day. Through various analyses, the City determined that replacing the existing UV system with a new UV system is the most feasible approach to address the capacity and reliability deficiencies.

In January 2016, the City initiated design for replacing the existing UV system. There are several UV equipment manufacturers, each with different configurations and layouts. This makes it impractical to design the new UV system without first knowing which supplier's equipment will be used in the layout. Therefore, the most efficient approach was to undergo a formal Request for Proposal (RFP) process to pre-select the UV equipment and then use the selected supplier's equipment parameters to complete the design.

In September 2016, the City publicly issued a formal RFP that established the pre-selection process. A selection committee comprised of City staff reviewed all qualified proposals and identified the most qualified supplier: Calgon Carbon of Coraopolis, PA. City staff subsequently executed an MOU to establish the duties of the Supplier, terms and conditions, and pricing of the UV equipment. This MOU also established that a \$70,000 Professional Services Agreement (PSA) would be executed for the Supplier to provide support services and shop drawings during design. The MOU established an equipment price of \$4,656,500 and guaranteed that price for 18 months.

In 2017 the project went on hold to perform a value engineering (VE) study. The purpose of the VE study was to provide an independent assessment of disinfection project alternatives to the current project. The assessment included a review of the project purpose, design criteria, UV system capacity, capabilities, limitations, and opportunities. There was a total of six (6) disinfection system alternatives including treatment by ultraviolet light, sodium hypochlorite, chloramines, or a combination thereof. The final VE study was issued October 2017.

Staff reviewed the VE study and performed a subsequent disinfection treatment study - a bench-scale chlorine contact time study, which was completed April 2018. After these careful analyses, in October 2018, City staff decided to continue the design for a new UV treatment system. The VE study and subsequent analyses confirmed that the City's preferred alternative of replacing the UV system addressed the LTP's disinfection capacity and reliability issues in the most technically and economically feasible manner.

The City elected not to extend the MOU with Calgon Carbon while these studies were being performed because it was unknown what disinfection process would be recommended by the VE study. As a result, the MOU's pricing terms subsequently expired, and the project scope changed based on the VE study, thereby requiring a new MOU and PSA be established to document the new equipment pricing and complete the design work.

#### PRIOR BOARD OF PUBLIC UTILITIES REVIEW

On January 7, 2016, the Board approved a Project Work Order under the Master Professional Services Agreement with Carollo Engineers, Inc., to provide Professional Engineering Services for the LTP Disinfection Improvements project.

On November 17, 2016, the Board approved the original Memorandum of Understanding with Calgon Carbon, guaranteeing an equipment purchase price of \$4,656,500.00 for a period of 18 months.

On August 16, 2018, staff conducted a staff briefing with the Board to provide an update on the Laguna Treatment Plant Disinfection Improvements project. The staff briefing covered the status of the project, associated activities, and anticipated schedules.

On November 15, 2018, staff conducted a staff briefing with the Board to provide an update on the LTP Disinfection Improvements Project. The staff briefing covered the status of the project, associated activities, and anticipated schedules.

On July 18, 2019, the Board conducted a study session for an update to the LTP Disinfection Improvements project. Staff reviewed the history of the project, the current status of the project, and the anticipated future activities and schedules.

On August 15, 2019, the Board approved Project Work Order Amendment No. 1 under the Master Professional Services Agreement with Carollo Engineers, Inc., to provide professional engineering services for the LTP Disinfection Improvements project.

#### ANALYSIS

As part of the UV equipment selection process, LTP staff and the design consultant, Carollo Engineers, researched and performed site visits to several UV installations to understand the latest technologies and evaluate the most appropriate systems for the LTP. A formal Request for Proposals was issued and facilitated by the Purchasing Agent. Four suppliers submitted proposals that were deemed responsive. Of the four, two met the criteria determined by the selection committee. The other two failed to meet one of the requirements: the ability to remove the equipment (including support frames) from the channel without disassembly. Based on this analysis, the highest-rated suppliers that met all required criteria moved on to a critical analysis of proposals by the selection committee.

The Purchasing Agent performed reference checks and supplied results to the selection committee. The selection committee evaluated the proposals and scored each supplier on their ability to demonstrate the following:

1. The supplier and its parent firm are an established, financially stable, ongoing business.
2. The equipment model proposed by the supplier complies with the technical specifications of the RFP.
3. If any exceptions are proposed by the supplier, they will not affect the quality, performance, durability, or longevity of the equipment.
4. The supplier's proposed system has a verifiable track record of both performance and service at facilities similar to the LTP.
5. The system proposed requires an acceptable level of preventive maintenance.
6. The supplier must have an active service organization currently available in the vicinity of the City and parts and equipment can be obtained and/or repaired in the United States or Canada.

The suppliers were evaluated based on the following criteria, in order of importance:

1. Life cycle cost, including initial construction.
2. Service support, service location, and parts availability.
3. Access and maintenance ease.
4. Overall responsiveness to RFP.
5. Status of Division of Drinking Water approval.
6. Reference checks.
7. Operational ease.
8. Equipment features.
9. Equipment cost.
10. Equipment footprint.

Based on the above criteria, Calgon Carbon of Coraopolis, PA was selected. In 2016, after the selection was made, the City executed an MOU with Calgon Carbon and subsequently executed a PSA for design support services.

The initial term for purchase to avoid price escalation of the original MOU expired May 2018. As a result, City staff issued an updated price request to Calgon Carbon on December 24, 2019. The City received a revised proposal on March 23, 2020. The revised proposal escalated the original equipment price by \$978,200 to a new price of \$5,634,700. Half of this increase in pricing is attributed to change in scope, while the other half is directly attributed to an increase in labor charges and sub-supplier costs. Additionally, a new PSA is required to provide the Supplier with funding for design support services and shop drawings.

This Board action will approve an Amended and Rested MOU that establishes a new equipment price of \$5,634,700 and guarantees that price for 22 months. The new PSA fee is \$86,000, which allows the Supplier to provide support services during the remainder of the design.

This item does not include the actual purchase of the selected equipment. City staff will specify Calgon Carbon's equipment in a forthcoming construction Contract, which will require the contractor to both purchase and install this equipment at the price set forth in the MOU.

### FISCAL IMPACT

Funds for the purchase of the equipment are not required at this time.

Approximately \$47 Million will be required for the construction project, which includes the UV equipment costs and installation. Future funding will be established through a combination of budget transfers from existing appropriated budgets, new budget appropriations from the 1631 Subregional Wastewater Facilities Fund, and a planned bond issuance.

### ENVIRONMENTAL IMPACT

For the UV equipment pre-selection process and approval of the MOU or PSA, no action is required under the California Environmental Quality Act (CEQA), because it is not a project which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, pursuant to CEQA Guideline Section 15378. An environmental analysis for the UV Disinfection Project pursuant to CEQA is currently underway and will be completed prior to construction contract award.

### BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

On July 29, 2019, the Contract Review Subcommittee reviewed and recommended approval of the proposed Project Work Order Amendment No. 1 with Carollo Engineers, Inc., to provide professional engineering services for the LTP Disinfection Improvements project.

On February 13, 2020, staff provided an update to the Subregional Technical Advisory Committee on the LTP Disinfection Improvements project. Staff reviewed the history of the project, the current status of the project, and the anticipated schedule.

On July 28, 2020, the Contract Review Subcommittee reviewed and recommended approval of the Amended MOU and second PSA with Calgon Carbon, and requested that City staff also explore options that would allow for an extension of the pricing terms in the Amended and Restated MOU beyond the 22-month price guarantee.

### ATTACHMENTS

- Attachment 1 – Amended and Restated MOU
- Attachment 2 – Professional Services Agreement

## CONTACT

Mark Kasraie, PE, Supervising Engineer

Email: [mkasraie@srcity.org](mailto:mkasraie@srcity.org)

Phone: (707) 543-3857