



## Folsom City Council Staff Report

<b>MEETING DATE:</b>	7/11/2023
<b>AGENDA SECTION:</b>	Consent Calendar
<b>SUBJECT:</b>	Resolution No. 11064 - A Resolution Authorizing the City Manager to Execute an Agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project
<b>FROM:</b>	Environmental and Water Resources Department

### **RECOMMENDATION / CITY COUNCIL ACTION**

The Environmental and Water Resources Department recommends the City Council pass and adopt Resolution No. 11064 - A Resolution Authorizing the City Manager to Execute an Agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project.

### **BACKGROUND / ISSUE**

The Environmental and Water Resources (EWR) Department identifies projects that are critical to ensuring the delivery of adequate and high-quality water supply to all water customers through water master plans, ongoing condition assessment programs, and regulatory changes. Through these efforts, City staff identified the Water Treatment Plant Caustic Soda System Project as a priority project.

In October 2021 through Resolution No. 10713, City Council authorized an agreement with Black & Veatch Corporation to perform a water quality evaluation of the City's current treatment process related to finished water quality targets and possible treatment alternatives based on the consultant's specialty experience in water treatment processes and familiarity with the City's Water Treatment Plant (WTP). Black & Veatch finished the water quality analysis for possible treatment alternatives in February of 2023, and recommended the City to switch from the existing lime system to caustic soda.

This resolution will authorize the City Manager to execute an agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project for the City for a not-to-exceed amount of \$233,915.

### **POLICY / RULE**

In accordance with Chapter 2.36 of the Folsom Municipal Code, supplies, equipment, services, and construction with a value of \$70,952 or greater shall be awarded by City Council.

### **ANALYSIS**

In August of 2020, the City hired Black & Veatch to provide an evaluation of the City's corrosion control methods and it was recommended by Black & Veatch to add orthophosphate to the City's water treatment process. A follow up evaluation that began in October 2021 was recommended to determine if the selected dosage of orthophosphate was able to be optimized or if any modifications to the target finished water pH could further improve the corrosion control treatment (CCT).

This evaluation compared the City's current CCT using orthophosphate with alternative CCTs that included changes in chemical treatments from lime to sodium hydroxide, changes in finished water pH, and changes in orthophosphate residual. Water quality modeling was used to identify optimal chemical dosages for alternative CCTs. Bench-scale corrosion testing was used to verify the modeling results and the effectiveness of alternative CCTs towards lead and copper leaching from materials known to be present in the City's system.

The recommendation from the finished water quality analysis and alternative bench-scale tests was for the City to switch from the existing lime system to sodium hydroxide (also known as caustic soda) which would allow WTP operators to achieve a specific finished water pH even with seasonal changes in the raw water quality with greater reliability and reduced chemical costs. Overall, the optimal condition identified from bench-scale testing involves maintaining the current orthophosphate dosage (0.9 mg/L as PO<sub>4</sub>) and using sodium hydroxide to target a finished water pH of 8.5.

Black & Veatch Corporation was determined to provide the best value to the City based on the past municipal project experience involving work of similar scope and complexity including technical knowledge and specialty expertise in water treatment processes, as well as intimate knowledge of the City's water treatment processes and WTP operations. Their scope of work will include the following:

- Overall project management
- Basis of design report to document design criteria, project implementation, and alternative site designs
- 90% and 100% design plans and specification
- Opinion of Probable Construction Costs
- Issuance of any required bid addenda

- Bid review
- Conformed to Bid Drawings

This resolution will authorize the City Manager to execute an agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project for the City for a not-to-exceed amount of \$233,915.

### **FISCAL IMPACT**

The Water Treatment Plant Caustic Soda System Project is included in the Fiscal Year 2023-24 Capital Improvement Plan with a total project budget of \$3,222,500. Sufficient funds are available in the Water Operating Fund (Fund 520) and the EWR Department recommends that the contract be awarded to Black & Veatch Corporation for \$233,915.

### **ENVIRONMENTAL REVIEW**

This project is replacement and/or improvement of existing infrastructure with negligible or no expansion of use and therefore is categorically exempt from environmental review under the California Environmental Quality Act as noted in Title 14 – California Code of Regulations, Chapter 3 – Guidelines for Implementation of the California Environmental Quality Act, Article 19 – Categorical Exemptions, Sections 15301 (Existing Facilities), 15302 (Replacement or Reconstruction), and/or 15304 (Minor Alterations to Land).

### **ATTACHMENT**

Resolution No. 11064 - A Resolution Authorizing the City Manager to Execute an Agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project for a not-to-exceed amount of \$233,915

Submitted,

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Marcus Yasutake, Director

ENVIRONMENTAL AND WATER RESOURCES DEPARTMENT

**RESOLUTION NO. 11064**

**A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH BLACK & VEATCH CORPORATION FOR THE DESIGN OF THE WATER TREATMENT PLANT CAUSTIC SODA SYSTEM PROJECT**

**WHEREAS**, the City identified that the project is critical to ensuring the treatment of high quality water supply to be delivered to all residents; and

**WHEREAS**, the City of Folsom has identified this project as a priority to maintain the integrity and operation of the water treatment system; and

**WHEREAS**, Black & Veatch Corporation, by reason of their past experience and abilities for performing these types of services, are qualified to perform the required consulting and design services for the project; and

**WHEREAS**, sufficient funds are available in the Water Operating Fund (Fund 520) in the amount of \$233,915; and

**WHEREAS**, the agreement will be in a form acceptable to the City Attorney:

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Folsom authorizes the City Manager to execute an agreement with Black & Veatch Corporation for the Design of the Water Treatment Plant Caustic Soda System Project for the City for an amount not-to-exceed \$233,915.

**PASSED AND ADOPTED** this 11<sup>th</sup> day of July 2023, by the following roll-call vote:

**AYES:** Councilmember(s):  
**NOES:** Councilmember(s):  
**ABSENT:** Councilmember(s):  
**ABSTAIN:** Councilmember(s):

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Rosario Rodriguez, MAYOR

ATTEST:

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Christa Freemantle, CITY CLERK