



# Folsom City Council Staff Report

<b>MEETING DATE:</b>	7/11/2023
<b>AGENDA SECTION:</b>	Consent Calendar
<b>SUBJECT:</b>	Resolution No. 11053 – A Resolution Authorizing the City Manager to Execute an Agreement with NTU Technologies, Inc. for the Purchase of Chemicals for the Water Treatment Plant
<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. 11053 – A Resolution Authorizing the City Manager to Execute an Agreement with NTU Technologies, Inc. for the Purchase of Chemicals for the Water Treatment Plant.

## **BACKGROUND / ISSUE**

The City of Folsom’s Water Treatment Plant (WTP) utilizes surface water from Folsom Lake for water supply. The WTP is designed to produce 50 million gallon per day (mgd) of potable water. The treatment processes include rapid mix, pretreatment with a conventional flocculation and sedimentation basin, and an Actiflo system for high rate clarification, a conventional sand/anthracite dual media filter, and solids handling facilities. In order to be consistent with State regulatory requirements and industry best management practices, the City uses a variety of chemicals to aid in the treatment process listed above. These chemicals are vital to these treatment processes.

Several of the chemicals used at the WTP have specific and proprietary properties that require the City to contract directly with companies. These chemicals include:

- Aluminum Chlorohydrate (ACH) Primary Coagulant
- Dry Anionic Polymer
- Dry Non-ionic Polymer
- Liquid Cationic Polymer
- Liquid Anionic Polymer

This resolution will authorize the City Manager to execute an agreement with NTU Technologies, Inc. for the purchase of chemicals for use at the Water Treatment Plant.

### **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**

When using coagulants, water properties have a large effect on the type of coagulant to use in the treatment process. These properties include alkalinity, water temperature, turbidity and filterability. These water quality properties are very different depending on the time of year, weather events such as storms and snow melt, and Folsom Lake turnover. Changes in the incoming water quality will affect settling rates in filters, sludge production, required chemical dosages, and pretreatment turbidity which can all impact the water quality of the treated water. In addition, City staff operates a conventional flocculation and sedimentation basin, a high rate Actiflo flocculation system, and a solids handling system that require specific chemical additions to properly treat the water. Using a polymer that can handle the whole range of these water properties entering the WTP is important to the treatment operators to maintain consistent water quality.

The current chemicals used by the City in the treatment process are very successful in providing high water quality for the City's water customers. In order to maintain current water quality standards, any new chemicals must also meet these standards. In order to ensure any new chemicals would be able to meet these standards, the City would have to perform various analytical tests to confirm the new polymer's ability to perform in a variety of conditions. The process for testing in all seasons of the year, after storm events, during snow melt, and high alkalinity water would be at least a year long process.

In addition to the analytical testing, the City operators would need to inform and follow the State Water Resources Control Board, Division of Drinking Water requirements to confirm that changing chemicals would not adversely affect the water quality produced. A year long trial period to confirm the polymer performance, as well as a contingency plan, would be required by the State.

Furthermore, the City uses specific proprietary chemicals from NTU Technologies at the WTP and receives quality product and good customer service. During calendar year 2018, operators optimized the treatment process, which led to reduced polymer usage throughout the system. Part of this reduction was due to service and testing provided by NTU Technologies. NTU has a location in Davis, CA which allows for very quick response to any City problems and requests.

EWR staff contacted five water providers in the area, including San Juan Water District, Placer County Water Agency, El Dorado Irrigation District, City of Roseville and City of West Sacramento to discuss chemical purchasing and usage. Through these discussions with other water providers in the area, it became clear that treatment process, water supply, quantity of chemicals purchased, chemical equipment, storage available, and chemical dose all affected which polymer was used at a specific plant. There was no correlation to directly compare polymer usage and pricing.

The table below shows costs for chemicals that Environmental and Water Resource staff estimate will be used during fiscal year 2023-24:

<b>Chemical</b>	<b>\$/lb</b>	<b>Est. cost for FY23-24</b>
ACH (Primary)	\$0.62	\$300,000
Dry Anionic Polymer	\$3.56	\$55,000
Dry Non-Ionic Polymer	\$4.30	\$5,000
Liquid Cationic Polymer	\$2.33	\$5,000
Liquid Anionic Polymer	\$2.13	\$22,000
<b>Total</b>		<b>\$ 387,000</b>

The Environmental & Water Resources Department recommends a waiver of bid and requests that the City Council authorize the City Manager to execute an agreement with NTU Technologies, Inc. for the purchase of chemicals for the Water Treatment Plant in the amount not to exceed \$387,000.

**FINANCIAL IMPACT**

Sufficient funds for the purchase of Water Treatment Plant chemicals have been included in the FY 2023-24 operations budget.

**ENVIRONMENTAL REVIEW**

This action is exempt from environmental review under the California Environmental Quality Act (CEQA).

**ATTACHMENT**

Resolution No. 11053 – A Resolution Authorizing the City Manager to Execute an Agreement with NTU Technologies, Inc. for the Purchase of Chemicals for the Water Treatment Plant

Submitted,

---

Marcus Yasutake, Director  
ENVIRONMENTAL AND WATER RESOURCES DEPARTMENT

**RESOLUTION NO. 11053**

**A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH NTU TECHNOLOGIES INC. FOR THE PURCHASE OF CHEMICALS FOR THE WATER TREATMENT PLANT**

**WHEREAS**, the City identifies that the purchase is critical to ensuring the treatment of high quality water to be delivered to all customers; and

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

**WHEREAS**, the chemicals have proven to provide high water quality with the City's unique treatment process and variety of incoming water properties; and

**WHEREAS**, NTU Technologies, Inc. chemicals are specific and proprietary with unique chemical blends optimal for the City's treatment process, which requires the City purchase these chemicals through a sole source procurement process; and

**WHEREAS**, sufficient funds have been budgeted and are available in the Water Operating Fund (Fund 520); 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 NTU Technologies, Inc. for the purchase of chemicals for the water treatment plant for an amount not-to-exceed \$387,000.

**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):

---

Rosario Rodriguez, MAYOR

ATTEST:

---

Christa Freemantle, CITY CLERK

*This page intentionally left blank  
to facilitate double-sided printing.*



CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE