Legislation Text

File #: 2019-222, **Version:** 1

Contract No. 1803685

Aluminum Sulfate, Liquid Alum

Agenda of:	June 26, 2019	
Item No.:	**2019-222**	
Amount:	Three (3) Year Contract	$ 9,953,250.00
	First Year Renewal Option	3,317,750.00
	Second Year Renewal Option	3,317,750.00
	Total	$16,588,750.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: June 4, 2019

RE: **Contract No. 1803685**
Aluminum Sulfate, Liquid Alum

Vendor: Chemtrade Chemicals US, LLC

MOTION

Upon recommendation of Cheryl Porter, Chief Operating Officer - Water and Field Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) **to enter into Contract No. 1803685 "Aluminum Sulfate, Liquid Alum" with Chemtrade Chemicals US, LLC, in the amount of $9,953,250.00 for three (3) years, with two (2) one (1) year renewal options at a cost of $3,317,750.00 for each renewal year for a total contract amount of $16,588,750.00;** and also authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

Aluminum Sulfate (Alum), when added to raw water, reacts with the alkalinity present in water causing suspended particles to form larger particles for removal. These large particles of suspended matter in raw water can be removed by allowing them to settle to the bottom of a sedimentation basin. However, there are smaller particles in surface water that do not settle out within a reasonable time without help to accelerate the process. These smaller particles, normally referred to as non-settleable solids, usually consist of a combination of biological organisms, bacteria, viruses, protozoan, color, organic matter and inorganic solids. The term turbidity is applied to all suspended solids in water.

To effectively remove the suspended solids (turbidity), the size of the smaller particles needs to be increased. The challenge is that the particles to be removed are usually negatively charged. To bring these particles together, their charge is neutralized by adding chemicals with positively charged ions. The positive charges neutralize the negative charges and allow the particles to come together, forming larger particles that have better settling characteristics. This process of bringing the particles together is called coagulation, and the chemical added is called a coagulant. Alum is used as a coagulant at GLWA water treatment plants.

Contract No. 1803685 is for “Aluminum Sulfate, Liquid Alum” to be delivered to GLWA’s five (5) water treatment plants upon request.

JUSTIFICATION

Aluminum Sulfate, commonly called Liquid Alum, is used by the five water treatment plants as a coagulant, which binds together very fine suspended particles into larger particles that can be removed by settling and filtration. In this way, objectionable color and turbidity (cloudiness) as well as the aluminum itself, are removed from the drinking water. Coagulation is an essential treatment process for all five water treatment plants.

FINANCIAL PLAN IMPACT

Summary: The proposed contract with Chemtrade Chemicals US, LLC encompasses Operations & Maintenance expense only. The FY 2020 budget and five-year financial plan was based on the analysis of prior usage from past fiscal years. The value of the contract exceeds the current financial plan in total. Potential positive variances of other chemicals as well as the use of this chemical may vary by year. The financial plan will be adjusted accordingly during the FY 2021 budget preparation to accommodate the proposed contract amount. Sufficient funds will be provided in the Operations & Maintenance (O&M) financial plan for this contract related to operating supplies-chemicals.

Funding Source: Operations & Maintenance (O&M) Budget

Cost Center(s):

Water Works Park	Water Operations cost center 882131
Springwells WTP	Water Operations cost center 882141
Northeast WTP	Water Operations cost center 882151
Southwest WTP	Water Operations cost center 882161
Lake Huron WTP	Water Operations cost center 882171

Expense Type: Operating Supplies - Chemicals (621600)

Estimated Cost by Year and Related Forecasted Variance: See table below.

Fiscal Year	Amount

FY 2020 Budget	$2,470,400
FY 2021 Financial Plan	2,495,800
FY 2022 Financial Plan	2,521,200
FY 2023 Financial Plan	2,546,600
FY 2024 Financial Plan	2,546,600
Financial Plan Forecast	$12,580,600
Proposed Contract Amount	$16,588,750
Variance (positive/ (negative))	($4,008,150)

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

The award of this contract provides a variance of $4,008,150 ($12,580,600 financial plan forecast less $16,588,750 proposed contract amount). The actual usage of all chemicals fluctuates with changes in production, treatment volume, consumption, pumping and customer growth. The result of the fluctuation may be more or less than estimated quantities forecasted with the use of each chemical and current market pricing, thus decreasing the variance.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on June 12, 2019. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.