



Legislation Text

File #: 22-0950, Version: 2

Resolution to Approve Bulk Chemical Purchases for the Water and Wastewater Treatment Plants of Sodium Hypochlorite (JCI Jones Chemical - Approximately \$238,500.00/year), Hydrofluorosilicic Acid (Alexander Chemical- approximately \$31,892.00/year), Pebble Quicklime (Graymont - Approximately \$747,500.00/year) and Ferric Chloride (PVS Technologies - Approximately \$66,130.00/year) (estimated \$1,084,022.00/year)

Your approval is requested to authorize the purchase of bulk chemicals (sodium hypochlorite, hydrofluorosilicic acid, pebble quicklime, ferric chloride), which are used in treatment processes at the City's Water and Wastewater Treatment Plants (WTP and WWTP).

In 2022, bids were obtained through the Mid-Michigan Drinking Water Consortium Bulk Chemicals Bid. The Consortium was formed in 2014 by mid-Michigan area utilities that soften drinking water with quicklime, to address chemical supply quality, competitive pricing, and residual disposal.

Consortium members include: Lansing Board of Water and Light; City of Jackson; City of Ann Arbor; East Lansing Meridian Water & Sewer Authority; City of Adrian; and City of Owosso.

Sodium Hypochlorite

The WTP uses sodium hypochlorite to maintain disinfection of drinking water in the distribution system. The estimated cost of this chemical for FY23 is \$325,000.00/year for approximately 150,000 gallons with quarterly price changes.

Sodium Hypochlorite bids were as follows:

1. JCI Jones Chemical, \$1.59 per gallon, price is subject to change quarterly
2. Alexander Chemical, \$2.19 per gallon, price is firm for calendar quarterly only

Hydrofluosilicic Acid

The Center for Disease Control (CDC) has established that 0.7 milligrams per liter (mg/L) of fluoride in drinking water is safe, healthy, and effective for preventing tooth decay. The City's source water contains approximately 0.3 mg/L of fluoride. The City uses hydrofluorosilicic acid to adjust the fluoride level to meet CDC's recommendation. The estimated cost of this chemical for FY23 is \$31,892.00/year for approximately 68 tons.

Hydrofluosilicic Acid bids were as follows for 40,000 lbs. shipped:

1. Alexander Chemical, \$469.00 per ton
2. Univar Solutions USA Inc., \$600.00 per ton
3. Pencco, Inc., \$673.00 per ton

Pebble Quicklime

The WTP uses quicklime for softening drinking water. The WWTP uses quicklime for biosolids conditioning to meet regulatory requirements for land application. The estimated cost for this chemical in FY23 is \$617,050.00 for the WTP (approximately 4,300 tons) and \$100,450.00 for the WWTP (approximately 700 tons), which totals \$747,500.00/year for approximately 5,000 tons.

Pebble Quicklime bids were as follows:

1. Carmeuse, \$128.00 per ton
2. Graymont Western, \$149.50 per ton

The lowest priced bidder was not chosen because they received the lower score from all participating utilities based on the evaluation criteria of:

1. Price competitiveness (30%)
2. Experience (30%)
3. Delivery Requirements (30%)
4. Content of Proposal (10%) Ferric Chloride

The WWTP uses ferric chloride for the removal of phosphorus to levels specified in its National Pollutant Discharge Elimination System (NPDES) permit. Especially during summer months, phosphorus removal becomes critical and the addition of ferric chloride improves the plant's ability to remove phosphorus from the wastewater. Violation of NPDES permit requirements could result in significant fines of up to \$25,000.00 per day per occurrence being imposed on the City by the Michigan Department of Environment, Great Lakes and Energy. The estimated cost for this chemical in FY23 is \$66,130.00/year for approximately 85 dry tons.

Ferric Chloride bids were as follows:

1. PVS Technologies for \$778.00 per dry ton

It is recommended that purchase orders be awarded to JCI Jones Chemical, Alexander Chemical, Graymont, and PVS Technologies as the lowest responsible bidders, respectively, for sodium hypochlorite, hydrofluorosilicic acid, pebble quicklime, and ferric chloride for FY23.

It is also recommended that the purchasing agreement may be renewed for three (3) additional (1) year periods, provided both parties agree to the extension, subject to the availability of funding, and limited to the price escalation tied to the PPI for basic chemical manufacturing (code 3251).

It is also recommended that should chemicals required for operations not be available from the primary vendor, that a purchase order may be issued to the next highest bidder to ensure the necessary chemical supply for the plants.

Budget/Fiscal Impact: Funds are specifically budgeted and are available for these purchases in the approved FY23 Operation and Maintenance Budget for the Water Supply System Fund and Sewage Disposal System Fund. Purchases in future fiscal years are subject to the availability of funds.

Prepared by: Rebecca Lahr, Drinking Water Quality Manager, Water Treatment Plant

Reviewed by: Brian Steglitz, Interim Public Services Area Administrator

Approved by: Milton Dohoney, Jr., City Administrator

Whereas, The City's Water Treatment Plant (WTP) uses sodium hypochlorite as a disinfectant in the treatment of drinking water, hydrofluorosilicic acid to adjust the fluoride level in drinking water to meet the Center for Disease Control's recommendation for the prevention of tooth decay, and pebble quicklime to soften the drinking water to meet water quality objectives;

Whereas, The City's Wastewater Treatment Plant (WWTP) uses pebble quicklime to condition biosolids to meet regulatory requirements for land application and ferric chloride to remove

phosphorus in treated wastewater to regulated levels;

Whereas, Contracts for supplying estimated requirements are the most stable and cost-effective way of meeting water treatment needs;

Whereas, JCI Jones Chemical, Alexander Chemical, Graymont, and PVS Technologies were the lowest responsible bidders in the 2021 Mid-Michigan Drinking Water Consortium Bulk Chemicals invitation to bid;

Whereas, Funding for the purchase of these chemicals is available in the approved FY23 Operation and Maintenance Budget for the Water Supply System Fund and Sewage Disposal Systems; and

Whereas, JCI Jones Chemical, Alexander Chemical, Graymont, and PVS Technologies comply with the requirements of the Conflict of Interest and Non-Discrimination Ordinances;

RESOLVED, That Council accepts the bid of JCI Jones for \$1.59 per gallon for sodium hypochlorite, Alexander Chemical for \$469.00 per ton for hydrofluorosilicic acid, Graymont for \$149.50 per ton for pebble quicklime, and PVS Technologies for \$778.00 per dry ton for ferric chloride, for the WTP and WTPW in accordance with the terms of the 2022 Mid-Michigan Drinking Water Consortium Bulk Chemicals Bid;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$325,000.00 with JCI Jones Chemical for sodium hypochlorite for a one-year term ending on June 30, 2023;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$31,892.00 with Alexander Chemical for hydrofluorosilicic acid for a one-year term ending on June 30, 2023;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$747,500.00 with Graymont for pebble quicklime for a one-year term ending on June 30, 2023;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$66,130.00 with PVS Technologies for ferric chloride for a one-year term ending on June 30, 2023;

RESOLVED, That the City Administrator be authorized to renew each of the purchasing agreements for up to three one-year periods, provided both parties agree to the extension, subject to the availability of funding, and limited to the price escalation tied to the PPI for basic chemical manufacturing (code 3251);

RESOLVED, That the Water Treatment Services Unit Manager is authorized to accept the next lowest responsible bid if any of the vendors are unable to furnish adequate supplies during the life of their contract; and

RESOLVED, That the City Administrator be authorized to take all necessary actions to implement this resolution.

