



Legislation Text

File #: 23-0873, Version: 1

Resolution to Approve Bulk Chemical Purchases for the Water and Wastewater Treatment Plants of Sodium Hypochlorite (JCI Jones Chemical - Approximately \$350,000.00/year), Hydrofluorosilicic Acid (Alexander Chemical- Approximately \$39,576.00/year), Pebble Quicklime (Graymont - Approximately \$860,000.00/year) and Ferric Chloride (PVS Technologies - Approximately \$140,300.00/year) (estimated \$1,389,876.00/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 2023, bids were obtained through the Mid-Michigan Water Chemical Consortium 2023-2024 Request for Proposal. 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 Lansing, City of Jackson, City of Ann Arbor, East Lansing Meridian Water & Sewer Authority, City of East Lansing, 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 FY24 is \$350,000.00/year for approximately 150,000 gallons with quarterly price changes. Sodium Hypochlorite bids were as follows:

1. JCI Jones Chemical, \$2.05 per gallon, price is subject to change quarterly
2. Alexander Chemical, \$2.29 per gallon, price is firm for calendar quarterly only
3. Haviland Products Company, \$2.80 price is good until 12/31/23

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 FY24 is \$39,576.00/year for approximately 68 tons. The lowest responsible bidder that was able to meet the City's terms and conditions was Alexander Chemical.

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

1. Alexander Chemical, \$582.00 per ton
2. Univar Solutions USA Inc., \$523.00 per ton with exceptions to terms and conditions
3. Pencco, Inc., \$738.00 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 or to condition the sludge to minimize phosphorus release during dewatering. The estimated cost for this chemical in FY24 is \$739,600.00 for the WTP (approximately 4,300 tons) and \$120,400.00 for the WWTP (approximately 700 tons), which totals \$860,000.00/year for approximately 5,000 tons.

Pebble Quicklime bids were as follows:

1. Carmeuse, \$148.00 per ton
2. Graymont Western, \$172.00 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 (25%)
2. Product Quality (25%)
3. Delivery Requirements (25%)
4. Administrative Requirements (25%)

Ferric Chloride

The WWTP uses ferric chloride in liquid form 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 FY24 is \$140,300.00/year for approximately 122 dry tons.

Ferric Chloride bids were as follows:

1. PVS Technologies for \$1,150.00 per dry ton
2. Alexander Chemical Corporation for \$1,445.70 per dry ton
3. Haviland Products Company for \$1,258.00 per dry ton, 6 months firm - max 5% increase

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 FY24.

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 be allowable to supply the plants from the next lowest bidder.

If the selected bidders are unable to furnish the chemical or the required insurance, it is requested

that the WTSU Manager be authorized to accept the next lowest responsible bid for the purchase.

Budget/Fiscal Impact: Funds are specifically budgeted and are available for these purchases in the approved FY24 Operation and Maintenance Budget for the Water Supply System Fund and Sewage Disposal System.

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

Reviewed by: Brian Steglitz, 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 or to condition the sludge to minimize phosphorus release during dewatering 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 Mid-Michigan Water Chemical Consortium 2023-2024 Request for Proposal;

Whereas, Funding for the purchase of these chemicals is available in the approved FY24 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 \$2.05 per gallon for sodium hypochlorite, Alexander Chemical for \$582.00 per ton for hydrofluorosilicic acid, Graymont for \$172.00 per ton for pebble quicklime, and PVS Technologies for \$1,150.00 per dry ton for ferric chloride, for the WTP and WTWP in accordance with the terms of the Mid-Michigan Water Chemical Consortium 2023-2024 Request for Proposal;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$350,000.00 with JCI Jones Chemical for sodium hypochlorite for a one-year term ending on June 30, 2024;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$39,576.00 with Alexander Chemical for hydrofluorosilicic acid for a one-year term ending on June 30, 2024;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in accordance with this resolution at a projected cost of \$860,000.00 with Graymont Western for pebble quicklime for a one-year term ending on June 30, 2024;

RESOLVED, That the City Administrator be directed to enter into a purchasing agreement in

accordance with this resolution at a projected cost of \$140,300.00 with PVS Technologies for ferric chloride for a one-year term ending on June 30, 2024;

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 in the event any of the vendors is unable or unwilling to furnish adequate supplies during the term of the purchase agreement, the City Administrator is authorized to accept the bid of the next lowest responsible vendor or to negotiate the purchase of necessary supplies on the open market subject to the availability of funding; and

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