



CITY OF WASHINGTON, ILLINOIS

City Council Agenda Communication

Meeting Date: 6/15/20

Prepared By: Brian Rittenhouse-Utilities Superintendent
Kevin Schone-Public Works Director

Agenda Item: Water Treatment Plant #1 Filter and Softener Rehabilitation.

Explanation: Council may recall a time and materials contract with River City Construction in October of 2018 for the rehabilitation of one filter and one softener. At that same time the City also contracted with Evoqua for additional evaluation services. Evoqua is the parent company of Permutit, who manufactured and supplied the filters and softeners tanks when WTP #1 was built in 1960. Last year Water Treatment Plant #1 started the rehab process of its Iron Filters and Water Softeners, getting one of each done. There are 4 Iron Filters and 3 Water Softeners that still need to be done. The efficiency of the filter and softener operations at WTP#1 have steadily dropped from 95.2% in 2013 to 85.9% in 2018. This represents 18 million gallons of additional process water used in filtration during 2018 alone (or \$83k in retail loss) so it is important to complete this project.

Fiscal Impact: Evoqua has quoted the project at \$258,064.26 for the cleaning and disposal of old media, purchase and delivery of media and resin, checking metal integrity, and installation of media and resin for 4 filters and 3 softeners. The City has a Planned Expenditure of \$350,000 (Acct# 500-00-800-3000) for this work.

Recommendation/

Committee Discussion Summary: Staff would like to start the process of getting these filters and softeners completed this FY and make sure we can get Evoqua scheduled for this fall to finish the rehabilitation. River City Construction pricing was used for budgeting to continue the filter and softener rehab however Evoqua is able to do this work and River City Construction has declined entering the tanks for the distribution arm installation making Evoqua the sole source for this type of technical work. With the additional work for Evoqua they are able to complete this work more efficiently and offer a reduced cost when compared to RCC.

Action Requested: Approval for Evoqua to complete the filter and softener rehab project in the amount of \$258,064.26.

	28-May
Tanker	\$6,492.75
Filter	\$14,400.40
Softener	\$25,354.29
Labor	<u>\$123,295.46</u>
Total	\$169,542.90

Removal	\$28,800.00
Filter & Softener	<u>\$23,900.00</u>
1 Set Total	\$52,700.00

3 Filters 3 Softeners	\$158,100.00
1 Filter	<u>\$28,800.00</u>
Total	\$186,900.00
4 Filters 3 Softeners	

Evoqua	\$6,492.75
Evoqua	\$14,400.40
Evoqua	\$25,354.29
Evoqua	\$123,295.46
Evoqua	<u>\$88,521.36</u>
	\$258,064.26

EVOQUA	\$169,542.90
RCC	<u>\$186,900.00</u>
Total Left	\$356,442.90



Quote Number: 2020-371106 Rev: 1
Account ID: 0002121196

Proposal For: CITY OF WASHINGTON WATER DEPT
Brian Rittenhouse
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1. SOFTENER RESIN DELIVERY 1

Item	Part No Description	Qty	Net Price	Ext. Price
1	W3T184389 COI TANKERING - LABOR LOADING RESIN INTO TANKER <ul style="list-style-type: none">133 CUFT C-211 resin loading	133 FT3	\$7.25	\$964.25
2	ESTIMATED TRANSPORTATION COST -- BILLED AT COST <ul style="list-style-type: none">Rockford IL to City of Washington, Washington ILIncluding roundtrip travel and tanker unloading.1 tanker will be used for this delivery.Estimated transportation cost provided, this does not include any applicable fuel surcharge or demurrage.Demurrage time is \$150.00/hour after 2 hours	1 tanker	\$1,200.00	\$1,200.00
			Subtotal:	\$2,164.25



Quote Number: 2020-371106 Rev: 1
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2. SOFTENER RESIN DELIVERY 2

Item	Part No Description	Qty	Net Price	Ext. Price
3	W3T184389	133 FT3	\$7.25	\$964.25
	COI TANKERING - LABOR LOADING RESIN INTO TANKER			
	<ul style="list-style-type: none">133 CUFT C-211 resin loading			
5	ESTIMATED TRANSPORTATION COST -- BILLED AT COST	1 tanker	\$1,200.00	\$1,200.00
	<ul style="list-style-type: none">Rockford IL to City of Washington, Washington ILIncluding roundtrip travel and tanker unloading.1 tanker will be used for this delivery.Estimated transportation cost provided, this does not include any applicable fuel surcharge or demurrage.Demurrage time is \$150.00/hour after 2 hours			
Subtotal:				\$2,164.25

3. SOFTENER RESIN DELIVERY 3

Item	Part No Description	Qty	Net Price	Ext. Price
4	W3T184389 COI TANKERING - LABOR LOADING RESIN INTO TANKER <ul style="list-style-type: none"> 133 CUFT C-211 resin loading 	133 FT3	\$7.25	\$964.25
6	ESTIMATED TRANSPORTATION COST -- BILLED AT COST <ul style="list-style-type: none"> Rockford IL to City of Washington, Washington IL Including roundtrip travel and tanker unloading. 1 tanker will be used for this delivery. Estimated transportation cost provided, this does not include any applicable fuel surcharge or demurrage. Demurrage time is \$150.00/hour after 2 hours 	1 tanker	\$1,200.00	\$1,200.00

Subtotal: \$2,164.25

Total Net Price: \$6,492.75

*RESIN DELIVERY
FOR SOFTENERS
3 SOFTENERS*



eVOQUA

WATER TECHNOLOGIES

Quote Number: 2020-371093 Rev: 1
Account ID: 0002121196

Proposal For: CITY OF WASHINGTON WATER DEPT
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FILTER - 10' X 5' ASME VESSEL

5 total vessels on site – MMF #1 – completed

4 remaining vessels due for re-bedding

Permutit J-10018

1. MMF #2 VESSEL

Item	Part No Description	Qty	Net Price	Ext. Price
1	W2T139351 FILTER MEDIA, ANTHRACITE SIZE 1 · Packaged in 50# bags · Total cuft required per vessel 118	118 FT3	\$11.62	\$1,371.16
2	W2T128683 FILTER MEDIA, ANTHRACITE #2 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
3	W2T128685 FILTER MEDIA, ANTHRACITE # 4 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
4	W2T128687 FILTER MEDIA, ANTHRACITE # 6 · Packaged in 50# bags · Total cuft required per vessel 65	65 FT3	\$12.18	\$791.70
			Subtotal:	\$3,600.10



Quote Number: 2020-371093 Rev: 1
Account ID: 0002121196

2. MMF #3 VESSEL

Item	Part No Description	Qty	Net Price	Ext. Price
5	W2T139351 FILTER MEDIA,ANTHRACITE SIZE 1 · Packaged in 50# bags · Total cuft required per vessel 118	118 FT3	\$11.62	\$1,371.16
6	W2T128683 FILTER MEDIA,ANTHRACITE #2 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
7	W2T128685 FILTER MEDIA,ANTHRACITE # 4 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
8	W2T128687 FILTER MEDIA,ANTHRACITE # 6 · Packaged in 50# bags · Total cuft required per vessel 65	65 FT3	\$12.18	\$791.70
			Subtotal:	\$3,600.10



Quote Number: 2020-371093 Rev: 1
Account ID: 0002121196

3. MMF #4 VESSEL

Item	Part No Description	Qty	Net Price	Ext. Price
9	W2T139351 FILTER MEDIA,ANTHRACITE SIZE 1 · Packaged in 50# bags · Total cuft required per vessel 118	118 FT3	\$11.62	\$1,371.16
10	W2T128683 FILTER MEDIA,ANTHRACITE #2 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
11	W2T128685 FILTER MEDIA,ANTHRACITE # 4 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
12	W2T128687 FILTER MEDIA,ANTHRACITE # 6 · Packaged in 50# bags · Total cuft required per vessel 65	65 FT3	\$12.18	\$791.70
			Subtotal:	\$3,600.10



Quote Number: 2020-371093 Rev: 1
Account ID: 0002121196

4. MMF # 5 VESSEL

Item	Part No Description	Qty	Net Price	Ext. Price
13	W2T139351 FILTER MEDIA,ANTHRACITE SIZE 1 · Packaged in 50# bags · Total cuft required per vessel 118	118 FT3	\$11.62	\$1,371.16
14	W2T128683 FILTER MEDIA,ANTHRACITE #2 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
15	W2T128685 FILTER MEDIA,ANTHRACITE # 4 · Packaged in 50# bags · Total cuft required per vessel 59	59 FT3	\$12.18	\$718.62
16	W2T128687 FILTER MEDIA,ANTHRACITE # 6 · Packaged in 50# bags · Total cuft required per vessel 65	65 FT3	\$12.18	\$791.70
Subtotal:				\$3,600.10
Total Net Price:				\$14,400.40

*4 FILTERS
FILTER MEDIA
PURCHASE*



eVOQUA

WATER TECHNOLOGIES

Quote Number: 2020-371076 Rev: 1
Account ID: 0002121196

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SOFTENER - 78" x 8' ASME VESSELS

4 total vessels on site – Softeners #1 – completed.

3 remaining softeners due for re-bedding

Permutit J-10018*

1. SOFTENER #2

Item	Part No Description	Qty	Net Price	Ext. Price
1	W2T820151 FILTER MEDIA, QTZ #7 50LB BG • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 930 • (19 bags per vessel needed)	19 BAG	\$5.31	\$100.89
2	W2T389247 FILTER MEDIA, GRAVEL 0.25" X .125" PKGD Reference #: W2T389247 • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 870 • (18 bags per vessel needed)	18 BAG	\$5.18	\$93.24
3	W2T389249 FILTER MEDIA, GRAVEL .500 X .250 50LB BG Reference #: W2T389249 • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 1740 • (35 bags per vessel needed)	35 BAG	\$5.18	\$181.30
4	W3T467698 RESIN C-211 (Na) CATION Reference #: 10900C211 • Ship in 5/cuft drums. • 133 cuft required per vessel • Or tankering slurry service available, separate quote provided.	133 FT3	\$60.67	\$8,069.11

Subtotal: \$8,451.43

2. SOFTENER #3



Quote Number: 2020-371076 Rev: 1
Account ID: 0002121196

Item	Part No Description	Qty	Net Price	Ext. Price
5	W2T820151 FILTER MEDIA, QTZ #7 50LB BG	19 BAG	\$5.31	\$100.89
	<ul style="list-style-type: none"> • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 930 • (19 bags per vessel needed) 			
6	W2T389247 FILTER MEDIA, GRAVEL 0.25" X .125" PKGD Reference #: W2T389247	18 BAG	\$5.18	\$93.24
	<ul style="list-style-type: none"> • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 870 • (18 bags per vessel needed) 			
7	W2T389249 FILTER MEDIA, GRAVEL .500 X .250 50LB BG Reference #: W2T389249	35 BAG	\$5.18	\$181.30
	<ul style="list-style-type: none"> • Ships in 50# - 1/2 cf bags • Total lbs required per vessel: 1740 • (35 bags per vessel needed) 			
8	W3T467698 RESIN C-211 (Na) CATION Reference #: 10900C211	133 FT3	\$60.67	\$8,069.11
	<ul style="list-style-type: none"> • Ship in 5/cuft drums. • 133 cuft required per vessel • Or tankering slurry service available, separate quote provided. 			
Subtotal:				\$8,451.43



Quote Number: 2020-371076 Rev: 1
Account ID: 0002121196

3. SOFTENER #4

Item	Part No Description	Qty	Net Price	Ext. Price
9	W2T820151 FILTER MEDIA, QTZ #7 50LB BG <ul style="list-style-type: none"> Ships in 50# - 1/2 cf bags Total lbs required per vessel: 930 (19 bags per vessel needed) 	19 BAG	\$5.31	\$100.89
10	W2T389247 FILTER MEDIA, GRAVEL 0.25" X .125" PKGD Reference #: W2T389247 <ul style="list-style-type: none"> Ships in 50# - 1/2 cf bags Total lbs required per vessel: 870 (18 bags per vessel needed) 	18 BAG	\$5.18	\$93.24
11	W2T389249 FILTER MEDIA, GRAVEL .500 X .250 50LB BG Reference #: W2T389249 <ul style="list-style-type: none"> Ships in 50# - 1/2 cf bags Total lbs required per vessel: 1740 (35 bags per vessel needed) 	35 BAG	\$5.18	\$181.30
12	W3T467698 RESIN C-211 (Na) CATION Reference #: 10900C211 <ul style="list-style-type: none"> Ship in 5/cuft drums. 133 cuft required per vessel Or tankering slurry service available, separate quote provided. 	133 FT3	\$60.67	\$8,069.11

Subtotal: \$8,451.43

Total Net Price: \$25,354.29

*SOFTENER MEDIA & RESIN
PURCHASE
3 SOFTENERS*



Quote Number: 2020-371120 Rev: 1
Account ID: 0002121196

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1. TRIP 1 – SOFTENER & FILTER

Item	Part No Description	Qty	Net Price	Ext. Price
1	Trip 1 – (1) SOFTENER / (1) FILTER	1	\$35,056.82	\$35,056.82

Scrape/wash. Distribution removal & Installation / metal testing / media installation supervision for city of Washington IL

Scope:

- Provide and Set up all scaffolding
- Removal of old distribution in Softener
- Scrape inside of each vessel, follow with high pressure wash.
- Metal integrity testing, ND metal integrity testing, no report. Proving recorded numbers as to be used as reference point only.
- Reinstallation of new brine/inlet softener distribution (COW to have on site ready for installation)
- Reloading of media in filter and softener.

Includes: Five (5) Technicians, six (6) to Seven (7) days

Technicians are confined space certified and will include rescue team for vessel entry.

Pricing includes travel and per diem
City of Washington to supply:
Access to 110AMP
Access to 220 AMP for dust collection and blower
Media and Resin removed from Vessels

Subtotal: \$35,056.82

*FILTER & SOFTENER
INSTALLATION*



Quote Number: 2020-371120 Rev: 1
Account ID: 0002121196

2. TRIP 2 – SOFTENER & FILTER

Item	Part No Description	Qty	Net Price	Ext. Price
2	Trip 2 – (1) SOFTENER / (1) FILTER	1	\$35,056.82	\$35,056.82

Scrape/wash. Distribution removal & Installation / metal testing / media installation supervision for city of Washington IL

Scope:

- Provide and Set up all scaffolding
- Removal of old distribution in Softener
- Scrape inside of each vessel, follow with high pressure wash.
- Metal integrity testing, ND metal integrity testing, no report. Proving recorded numbers as to be used as reference point only.
- Reinstallation of new brine/inlet softener distribution (COW to have on site ready for installation)
- Reloading of media in filter and softener.

Includes: Five (5) Technicians, six (6) to Seven (7) days

Technicians are confined space certified and will include rescue team for vessel entry.

Pricing includes travel and per diem

City of Washington to supply:

Access to 110AMP

Access to 220 AMP for dust collection and blower

Subtotal: \$35,056.82

*FILTER & SOFTENER
INSTALLATION*



Quote Number: 2020-371120 Rev: 1
Account ID: 0002121196

3. TRIP 3 – SOFTENER & FILTER

Item	Part No Description	Qty	Net Price	Ext. Price
3	Trip 3 – (1) SOFTENER / (1) FILTER	1	\$35,056.82	\$35,056.82

Scrape/wash. Distribution removal & Installation / metal testing / media installation supervision for city of Washington IL

Scope:

- Provide and Set up all scaffolding
- Removal of old distribution in Softener
- Scrape inside of each vessel, follow with high pressure wash.
- Metal integrity testing, ND metal integrity testing, no report. Providing recorded numbers as to be used as reference point only.
- Reinstallation of new brine/inlet softener distribution (COW to have on site ready for installation)
- Reloading of media in filter and softener.

Includes: Five (5) Technicians, six (6) to Seven (7) days

Technicians are confined space certified and will include rescue team for vessel entry.

Pricing includes travel and per diem

City of Washington to supply:

Access to 110AMP

Access to 220 AMP for dust collection and blower

Subtotal: \$35,056.82

*FILTER & SOFTENER
INSTALLATION*



Quote Number: 2020-371120 Rev: 1
Account ID: 0002121196

4. TRIP 4 – FILTER

Item	Part No Description	Qty	Net Price	Ext. Price
4	Trip 4 – (1) SOFTENER / (1) FILTER	1	\$18,125.00	\$18,125.00

Scrape/wash. Distribution removal & Installation / metal testing / media installation supervision for city of Washington IL

Scope:

- Provide and Set up all scaffolding
- Scrape inside of vessel, follow with high pressure wash.
- Metal integrity testing, ND metal integrity testing, no report. Proving recorded numbers as to be used as reference point only.
- Reloading of media in filter

Includes: Five (5) Technicians, four (4) to five (5) days

Technicians are confined space certified and will include rescue team for vessel entry.

Pricing includes travel and per diem
City of Washington to supply:
Access to 110AMP
Access to 220 AMP for dust collection and blower

Subtotal:

\$18,125.00

Total Net Price:

\$123,295.46

*INSTALLATION
↑ FILTER ONLY*



Quote Number: 2020-391540 Rev: 1
Account ID: 0002121196

Proposal For: CITY OF WASHINGTON WATER DEPT
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Item Pricing Summary

Item	Part No Description	Qty	Net Price	Ext. Price
1	ADHOC-001 VAC SERVICES	1 LOT	\$88,521.36	\$88,521.36

Pricing provided is for all 7 vessels

Pricing includes all portal to portal of crew manpower / any required overtime, equipment, disposal, supplies & fuel surcharge all per diem, EIS

SCOPE:

- VAC OUT 7 VESSELS
- INCLUDES OFF SITE DISPOAL
- Vessels will be removed 2 at a time. Last trip will be for final MMF.

3 -- 6'6" x 8' SOFTENER

4 -- 10' 5' MMF

Softener Weigh/vessel:

Approx weight - media/resin has been running in system for 15+ years.

- Gravel -- 3540, Resin -- 7049 - Total: 10,589 lbs

Media Weight/vessel:

Approx weight -- media has been running in system for 15+ years.

- Anthracite -- 15,050 lbs

CITY OF WASHINGTON:

To have vessels drained and opened prior to service.

Total Net Price:

\$88,521.36

REMOVAL &
DISPOSAL OF
OLD MEDIA
4 FILTERS
3 SOFTENERS

05-29-2020