CITY OF COFFEYVILLE
BOARD OF COMMISSIONERS AGENDA ITEM

MEETING DATE	12/08/2015	
RESOLUTION OR ORDINANCE NUMBER	R-15-157	
AGENDA TITLE	**Designation of preferred vendors for chemicals to be used at the Water Treatment Plant in 2016.**	
REQUESTING DEPARTMENT	Water Utility	
PRESENTER	Chuck Shively, Director of Public Works	
FISCAL INFORMATION	Cost as recommended:	N/A
	Budget Line Item:	090-5-036-525
	Balance Available	N/A
	New Appropriation Required:	[ ] Yes [X] No
PURPOSE	Designate preferred vendors to provide Water Treatment Plant chemicals at specified prices throughout calendar year 2016.	
BACKGROUND	On December 01, 2015 bids were opened for chemicals to be used at the Water Treatment Plant for the year 2016. I have attached a tabulation of the bids received, listing both the unit prices bid and the annual cost based on estimated annual quantity to be used. Staff's recommended preferred vendor for each chemical is shaded. For informational purposes, I have also included a table comparing unit costs for chemicals over the past fifteen years. To simplify the comparison, the table is based on the same average usage each year, not the actual quantity used, which varies from year to year.	

SPECIAL NOTES	Of special note, the two ACH Blend chemicals are new to the chemical list, and we no longer bid Aluminum Sulfate, Lime, or Polymer, as we have in previous years. Late last year we began working with our primary chemical supplier, testing their ACH Blends at our plant to determine if they could improve our treatment process and save money. We were consistently meeting the new EPA turbidity regulations, but with no room for error. The new chemicals have improved the turbidity removal considerably, improving the finished water quality and giving us some breathing room to react and stay in compliance if something such as raw water quality changes at the plant. KDHE approved the chemical change, and Water Plant personnel have now installed the equipment and lines necessary for the permanent change of chemical feed. Replacing the Alum and Lime with polymers also decreased the overall cost of chemicals to be used at the plant. We did not bid the ACH Blend Polymer chemicals this year. These Polymers are unique blends which are impossible to bid because each manufacturer's blend is different. To thoroughly test a polymer you have to use it at the plant for a period of time to determine if it can meet our requirements, and if so, what quantity is necessary to meet those requirements. The lowest cost per gallon may not be the lowest overall cost if it takes more to get the same result. More importantly, if the blend does not work as well it could cause a violation of drinking water standards, or even compromise the quality of our drinking water. The blends we have now are working well, so we locked in a negotiated price with the vendor for 2016 which is lower than the price we paid for the same chemicals in 2015. That price is included in the Resolution and the tables. In addition, this year Water Treatment Plant staff purchased and installed a 1,000 gallon bulk storage tank for the WC2099 polymer at a cost of less than $3,500, which enabled us to purchase the polymer at a significantly reduced bulk cost. This change also allows us to keep a 1 month supply of the polymer, which is critical to the treatment of our drinking water, on hand at all times.

SPECIAL NOTES (CONTINUED)	Beginning in mid-2015 we switched from powdered fluoride to liquid fluoride. This change enabled us to replace a $40,000 machine, which was budgeted for replacement this year, with a $2,500 metering pump. We already had the metering pump, so the cost of the change was minimal, but the savings are significant, now and in the future. At the recommendation of Pat McCool from the Kansas Rural Water Association, we plan to switch from liquid Ammonia to Ammonium Sulfate on approximately January 1st. This change was suggested for several reasons, including elimination of harmful vapors, eliminating the need to continuously air condition the ammonia, and eliminating handling and storing of drums, all of which will improve the safety of our employees. We conservatively estimate that the chemical feed changes described above will save $150,000 in chemical costs alone in 2016 year compared to the 2014 chemical costs. In addition, the equipment required to feed the liquid ACH Blends is much less expensive to maintain, repair, and eventually replace, than the aluminum sulfate and lime feed equipment that has been eliminated by the changes.
ANALYSIS	Chemical bid prices for all other chemicals remained approximately the same as last year. In fact, all went down slightly except the Chlorine, which went up slightly. This year staff is recommending that the <u>low bidder</u> be designated as the preferred vendor for each chemical, except the Potassium Permanganate ($KMNO^4$). The low bid submitted for that chemical does not meet our specification for “Cairox only, U.S. manufacturer”. We have tried the chemical that they bid in the past and it was poor quality and ended up costing more due to waste, etc. The designation as preferred vendor documents our intent to purchase the chemicals to be used at the Water Treatment Plant during 2016 from the specified vendors, but if at any time a designated preferred vendor fails to meet our requirements, we would then move to the next lowest vendor until we find one that meets our expectations.

PUBLIC INFORMATION PROCESS	N/A
BOARD OR COMMISSION RECOMMENDATION	N/A
STAFF RECOMMENDATION	Staff recommends approval of the attached Resolution, designating the preferred vendors for 2016 as listed in the body of the Resolution.
REFERENCE DOCUMENTS ATTACHED	"2016 Chemical Bid Tabulation" "15 Year Comparison of Estimated Annual Water Treatment Plant Chemical Expense 2002-2016 Resolution

RESOLUTION NO. R-15-157

A RESOLUTION RECOGNIZING AND IDENTIFYING SPECIFIC PREFERRED VENDORS FOR CHEMICALS TO BE USED AT THE WATER TREATMENT PLANT DURING FY 2016.

BE IT RESOLVED by the Board of Commissioners of the City of Coffeyville, Kansas that the specific vendors listed below be and are hereby recognized and identified as the preferred vendors for chemicals to be used at the Water Treatment Plant during FY 2016.

	Vendor	Chemical	Quantity	Unit Price
1	Brenntag Southwest, Inc.	Chlorine	+/- 40 tons	$575.00 / Ton
2	Brenntag Southwest, Inc.	Activated Carbon	+/- 3 tons	$1,090.00 / Ton
3	Harcros Chemicals	Sodium Silica Fluoride	+/- 15 drums (55 gal.)	$214.50 / Drum
4	Harcros Chemicals	Potassium Permanganate	+/- 6.5 tons	$6,920.00 / Ton
5	Brenntag Southwest, Inc.	Ammonium Sulfate	+/- 40 tons	$406.00 / Ton
6	Brenntag Southwest, Inc.	Polyphosphate	+/- 20 drums (55 gal.)	$319.30 / Drum
7	Brenntag Southwest, Inc.	WC2043 ACH Blend	+/- 12 tons	$750.30 / Ton
8	Brenntag Southwest, Inc.	WC2099 ACH Blend	+/- 150 tons	$808.00 / Ton

BE IT FURTHER RESOLVED that it be and is hereby the intent of the City of Coffeyville to purchase the chemicals to be used at the Water Treatment Plant during FY 2016 from the specific preferred vendors identified above unless said vendor loses its competitive advantage due to factors such as price, quality, availability, service, etc.

Adopted this 8th day of December 2015.

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Christopher V. Williams, Mayor

ATTEST:

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Cindy Price, City Clerk

APPROVED AS TO FORM AND LEGALITY:

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Paul Kritz, City Attorney

2016 Chemical Bid Tabulation

Vendor	Chemical	Chlorine	Carbon	Fluoride	Ammonium Sulfate	KMNO4	Polyphosphate
	Units (per Year)	Ton (40)	Ton (3)	55 g. drum (15)	Ton (40)	Ton (6.5)	55 gal Drum (20)
Brenntag Southwest **Nowata, OK**	**Per Unit** **Per Year**	$575.00 $23,000.00	$1,090.00 $3,270.00	$288.75 $4,331.25	$406.00 $16,240.00	$7,200.00 $46,800.00	$319.30 $6,386.00
Carus Corp. **Peru, IL**	**Per Unit** **Per Year**	no bid	no bid	no bid	no bid	no bid	$326.04 $6,520.80
D.P.C. Enterprise **Wichita, Ks.**	**Per Unit** **Per Year**	$693.00 $27,720.00	no bid	no bid	no bid	no bid	no bid
Shannon Chem. Corp. **Malvern, Pa.**	**Per Unit** **Per Year**	no bid	no bid	no bid	no bid	no bid	$727.27 $14,545.40
United Mineral & **Chemical Corp.** **Lyndhurst, NJ**	**Per Unit** **Per Year**	no bid	no bid	no bid	no bid	$5,440.00 $35,360.00 (Not Cairox)	no bid
Harcros Chem. **Tulsa Ok.**	**Per Unit** **Per Year**	no bid	no bid	$214.50 $3,217.50	no bid	$6,920.00 $44,980.00	no bid
Chemtrade Chem. Us LLC **StLouis, MO**	**Per Unit** **Per Year**	no bid	no bid	no bid	$580.00 $23,200.00	no bid	no bid
Scotwood Ind. **Overland Park, Ks.**	**Per Unit** **Per Year**	no bid	no bid	no bid	no bid	no bid	no bid
Univar USA **Kent, Wa.**	**Per Unit** **Per Year**	no bid	no bid	$361.61 $5,424.10	no bid	$7,880.00 $51,220.00	no bid
Hawkins Inc. **Garnett, Ks.**	**Per Unit** **Per Year**	$680.00 $27,200.00	$2,100.00 $6,300.00	$253.80 $3,807.00	$680.00 $27,200.00	$7,000.00 $45,500.00	$348.00 $6,960.00

15 YEAR COMPARISON OF ESTIMATED ANNUAL WATER TREATMENT PLANT
CHEMICAL EXPENSE 2002-2016

Fiscal Year	Chemical	Chlorine	Carbon	Fluoride	Alum	Lime	KMNO4	Ammonia	Polyphosphate	Polymer	ANNUAL EXPENSE BASED ON ESTIMATED QUANTITIES
	Units (per Year)	Ton (40)	Ton (3)	Ton (8)	Ton (400)	Ton (250)	Ton (6.5)	Ton (30)	55 gal Drum (20)	275 gal Tote (10)	
2002	Per Unit	$385.00	$900.00	$620.00	$199.94	$75.96	$2,760.00	$227.80	$235.60	$2,902.50	
	Per Year	$15,400.00	$2,700.00	$4,960.00	$59,982.00	$18,990.00	$17,940.00	$6,834.00	$4,712.00	$29,025.00	$160,543.00
2003	Per Unit	$394.00	$880.00	$640.00	$201.94	$75.96	$2,990.00	$230.00	$213.12	$2,452.50	
	Per Year	$15,760.00	$2,640.00	$5,120.00	$60,582.00	$18,990.00	$19,435.00	$6,900.00	$4,262.40	$24,525.00	$158,214.40
2004	Per Unit	$405.00	$858.00	$664.00	$220.40	$72.99	$2,920.00	$230.00	$190.10	$2,452.50	
	Per Year	$16,200.00	$2,574.00	$5,312.00	$66,120.00	$18,247.50	$18,980.00	$6,900.00	$3,802.00	$24,525.00	$162,660.50
2005	Per Unit	$468.00	$850.00	$700.00	$245.00	$82.34	$2,930.00	$300.00	$189.75	$1,029.38	
	Per Year	$18,720.00	$2,550.00	$5,600.00	$73,500.00	$20,585.00	$19,045.00	$9,000.00	$3,795.00	$10,293.75	$163,088.75
2006	Per Unit	$560.00	$900.00	$720.00	300ton $290.00	$108.75	$3,160.00	$336.00	$210.80	$1,116.00	
	Per Year	$22,400.00	$2,700.00	$5,760.00	$87,000.00	$27,187.50	$20,540.00	$10,080.00	$4,216.00	$11,160.00	$191,043.50
2007	Per Unit	$540.00	$900.00	$760.00	$322.00	$120.00	$4,100.00	$347.00	$210.80	$1,181.25	
	Per Year	$21,600.00	$2,700.00	$6,080.00	$128,800.00	$30,000.00	$26,650.00	$10,410.00	$4,216.00	$11,812.50	$242,268.50
2008	Per Unit	$565.00	$1,150.00	$836.00	$351.00	$145.00	$4,200.00	$393.00	$223.20	$1,311.00	
	Per Year	$22,600.00	$3,450.00	$6,688.00	$140,400.00	$36,250.00	$27,300.00	$11,790.00	$4,464.00	$13,110.00	$266,052.00
2009	Per Unit	$590.00	$1,300.00	$840.00	$550.50	$165.00	$5,300.00	$500.00	$376.75	$1,472.00	
	Per Year	$23,600.00	$3,900.00	$6,720.00	$220,200.00	$41,250.00	$34,450.00	$15,000.00	$7,535.00	$14,720.00	$367,375.00
2010	Per Unit	$660.00	$1,340.00	$960.00	$529.71	$178.80	$5,900.00	$500.00	$338.61	$1,472.00	
	Per Year	$26,400.00	$4,020.00	$7,680.00	$211,884.00	$44,700.00	$38,350.00	$15,000.00	$6,772.25	$14,720.00	$369,526.25
2011	Per Unit	$610.00	$1,200.00	$960.00	$571.00	$179.82	$6,180.00	$560.00	$321.88	$1,598.50	
	Per Year	$24,400.00	$3,600.00	$7,680.00	$228,400.00	$17,982.00	$40,170.00	$16,800.00	$6,437.60	$15,985.00	$361,454.60
2012	Per Unit	$589.00	$1,200.00	$1,130.00	$571.00	$195.86	$6,170.00	$560.00	$320.33	$1,563.75	
	Per Year	$23,560.00	$3,600.00	$9,040.00	$228,400.00	$19,586.00	$40,105.00	$16,800.00	$6,406.60	$15,637.50	$363,135.10
2013	Per Unit	$550.00	$1,194.00	$1,040.00	$620.00	$203.77	$6,120.00	$615.00	$335.00	$1,530.00	
	Per Year	$22,000.00	$3,582.00	$8,320.00	$248,000.00	$20,377.00	$39,780.00	$18,450.00	$6,700.00	$15,300.00	$382,509.00
2014	Per Unit	$568.00	$1,184.00	$1,025.00	$642.40	$211.95	$6,095.00	$625.00	$332.31	$1,485.00	
	Per Year	$22,720.00	$3,552.00	$8,200.00	$256,960.00	$21,195.00	$39,617.50	$18,750.00	$6,646.20	$14,850.00	$392,490.70
	Chemicals (updated)	Chlorine Tons (40)	Carbon Tons (3)	Fluoride (liquid) Drums (15)	Polymer* 2043 Ton (12)	Polymer* 2099 Tons (150)	KMNO4 Tons (6.5)	Ammoniun** Sulfate Tons (40)	Polyphosphate *** 55 gal. drum (20)	Polymer Anionic 7562 55 lb bags (40)	
2015	Per Unit	$546.00	$1,180.00	$995.00	$1,220.00	$1,020.00	$6,980.00	$620.00	$332.18	$225.50	
	Per Year	$21,840.00	$3,540.00	$7,960.00	$14,640.00	$153,000.00	$45,370.00	$18,600.00	$6,643.60	$9,020.00	$280,613.60
Proposed 2016	Per Unit	$575.00	$1,090.00	$214.50	$1,220.00	$800.00	$6,920.00	$406.00	$319.30	$225.50	
	Per Year	$23,000.00	$3,270.00	$3,217.50	$14,640.00	$120,000.00	$44,980.00	$16,240.00	$6,386.00	$9,020.00	$240,753.50

* Beginning in 2015 we began making changes to our chemical treatment processes. We replaced the use of Alluminum Sulfate and Lime with two specific polymer blends. These changes improved the quality of the water produced, reduced the maintenance required, and simplified and reduced the cost of the equipment necessary to feed the chemicals. These Polymers are unique blends which are impossible to bid because each manufacturer's blend is different. To thouroughly test a polymer you have to use it at the plant for a period of time to determine if it can meet our requirements, and if so, what quantity is needed to meet those requirements. In addition, in 2015 WTP staff purchased and installed a 1,000 gallon bulk storage tank for the 2099 polymer at a cost of less than $3,500 , which enabled us to purchase the polymer at a significantly reduced bulk cost. This change also allows us to keep a 1 month supply of the polymer, which is critical to the treatment of our drinking water, available at all times.

** We plan to switch from Ammonia to Ammonium Sulfate on approximately 1/1/16. This change was suggested by Pat McCool (KRWA) for several reasons, including elimination of harmful vapors, safety of staff, eliminate the need to continuously air condition the chemical, and eliminate handling and storing of drums.

*** Beginning in mid-2015 we switched from powdered fluoride to liquid fluoride. This change enabled us to replace a $40,000 machine, which was budgeted for replacement this year, with a $2,500 metering pump. We already had the metering pump, so the cost of the change was minimal, but the savings are significant, now and in the future.

COMBINED, THESE CHANGES ARE ESTIMATED TO PRODUCE A CHEMICAL COST SAVINGS NEXT YEAR OF OVER $150,000 COMPARED TO THE 2014 COSTS, WHILE IMPROVING THE WATER QUALITY AND EMPLOYEE SAFETY.