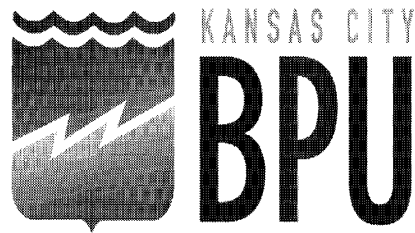


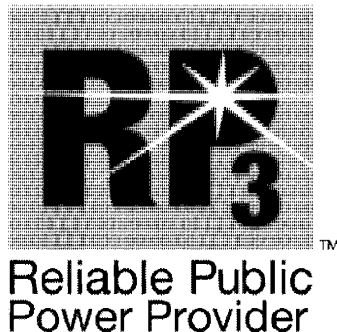
# **BOARD INFORMATION PACKET**



**Board of Public Utilities  
Kansas City, Kansas**

**Regular Meeting of**

**July 15, 2020**



**Gold Award  
for  
Competitiveness  
Achievement**



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## **July 15, 2020**

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**Agenda Item #III**  
Approval of Agenda



Board of Public Utilities  
Kansas City, Kansas

**BOARD AGENDA**

Regular Session  
July 15, 2020 – 6:00 P.M.

- I. Call to Order
- II. Roll Call
  - \_\_\_\_ Ryan Eidson, At Large, Position 2
  - \_\_\_\_ Tom Groneman, District 2
  - \_\_\_\_ Robert L. Milan, Sr., District 1
  - \_\_\_\_ Jeff Bryant, District 3
  - \_\_\_\_ Mary L. Gonzales, At Large, Position 1
  - \_\_\_\_ Rose Mulvany Henry, At Large, Position 3
- III. Approval of Agenda
- IV. Approval of the Minutes of the Regular Session of July 1, 2020
- V. Visitors
- VI. General Manager's Reports
  - i. COVID-19 Update / CARES Act
  - ii. Bond Sale Recap
  - iii. Legislation Update
  - iv. Miscellaneous Comments
- VII. Board Comments
- VIII. Adjourn

**Agenda Item #IV**  
Approval of Minutes  
Regular Session 7-1-20

**STATE OF KANSAS               )**  
**CITY OF KANSAS CITY) SS**

Also on teleconference: William Johnson, General Manager; Angela Lawson, Deputy Chief Counsel; Lori Austin, Chief Financial Officer/Chief Administrative Officer; Jim Epp, Executive Director Water Operations; Johnnetta Hinson, Executive Director Customer Service; Jerry Ohmes, Executive Director Electric Supply; Jeremy Ash, Executive Director Electric Operations; Dong Quach, Executive Director Electric Production; David Mehlhaff, Chief Communications Officer; Dennis Dumovich, Director of Human Resources; Randy Otting, Director of Accounting and Brian Laverack, Director Network Operations.

Mr. Eidson called the Board Meeting to order at 6:00 P.M. He welcomed all that were listening or viewing the meeting. He stated the COVID 19 Pandemic has resulted in a State of Emergency disaster declared by the Governor which has made it necessary to conduct this meeting using technology instead of in person. Those wishing to offer comments during the Visitors Comments section can click on the raised hand feature at the bottom of the application or window or press Star 9 and be connected by phone only. Please bear with us as this is our second attempt to incorporate the Visitors Section into this technology. As always, the public may email or call the BPU with any concerns. The Agenda and the presentation may be found on the BPU website. If you are using Zoom, it will appear on your screen. Mr. Eidson introduced himself and the other Board Members along with the GM, and Legal Counsel.

Motion was made to approve the Agenda by Mr. Bryant, seconded by Mr. Groneman, and carried.

Motion was made to approve the Minutes of the Regular Session of June 17, 2020 by Ms. Gonzales, seconded by Ms. Mulvany Henry, and carried.

Mr. Eidson turned the meeting over to Mr. Johnson.

Mr. Laverack said there were no visitors wishing to address the Board.

**REGULAR SESSION –WEDNESDAY JULY 1, 2020**

STATE OF KANSAS       )  
  ) SS  
CITY OF KANSAS CITY )

Mr. Johnson gave the Board a brief update on COVID. He has not received any reports of anybody else testing positive.

Mr. Dumovich said that was correct. We currently have a total of three that have tested positive, one currently on leave so no new ones since June 5, 2020.

The Board may have seen in the global email that was sent out requesting that all employees wear masks while in the workplace. This is following directions handed down by the UG and our Health Department for all public places in and around our city.

Mr. Johnson also wanted to let the Board know that we are looking at the application for the CARES Act and if you have heard or not, the UG is receiving funds and we are working on an application. He will follow up with the Board as soon as we finish meeting internally and before they get the application submitted.

Mr. Johnson asked Ms. Austin to present the March 2020 Financials. (attached)

Ms. Austin said she also had Gilmore & Bell on the line as well as Dave McGillivray, our financial advisor with Baker Tilly Virchow Krause, LLP, Principal.

Mr. Bryant asked about the bond presentation meeting on Monday if she and Mr. Johnson would be in the Finance Committee Meeting. She said yes, and she would get in touch with Ms. VonAchen, CFO of the UG.

Motion was made by Mr. Bryant to approve the March 2020 Financials, seconded by Ms. Gonzales and carried.

Ms. Lawson said let the record reflect that Mr. Milan was in the meeting now.

Mr. Johnson said the next item was the Water Quality Report. He turned the meeting over to Mr. Epp and Mr. Nirschl.

Mr. Nirschl and Ms. Daggett gave the Water Quality Report. (attached)

Mr. Johnson said the next item was the UG Proposed Budget. Since our last Board Meeting we had a quarterly meeting with two elected officials from BPU and two from the UG, the Mayor and BPU and UG staff was present. Mr. Johnson had asked Mr. Bach to add the proposed UG budget to the agenda. His understanding was there was not going to be a proposed PILOT increase.

**REGULAR SESSION –WEDNESDAY JULY 1, 2020**

**STATE OF KANSAS        )  
                                      ) SS  
CITY OF KANSAS CITY)**

Mr. Eidson said he was on that call. They talked about the changing of the bill layout and it seemed like they were pretty perceptive to it. He asked if Mr. Johnson agreed.

Mr. Johnson said yes, and they had prior to that meeting, it was just that we are going through our internal discussions to see what changes we'd like to see different on the bill and having conversations with the UG on what they would like to see. We talked about having the charges separated on two pages. There will be a space to allow for definitions and other information that we want to get on there. We don't have a final design to present yet.

Mr. Eidson asked when he thought they would have the final design.

Mr. Johnson said they are starting to work on an RFP right now and we really just got started. They've had several meetings with the UG starting a month ago and they've given their input. We are looking at it from a cost perspective as to where we can shave off costs. He asked the UG to pay for part of that project.

Ms. Gonzales asked if he felt like they would want to share the cost of billing.

Mr. Johnson said he had a feeling they would but we weren't ready to present the costs to them yet.

Ms. Mulvany Henry asked if we had issued an RFP for this.

Mr. Johnson said no, not yet. They were looking at it right now.

Ms. Mulvany Henry asked if we proposed something like this to the UG last year and if that was rejected. Did we not have anything to build on from that?

Mr. Johnson replied he hasn't gone back past December of 2019 but it was a topic then and the Mayor, Mr. Bach and everybody seemed to be interested in it. The Mayor led that conversation and they were in support of it. The meeting in March was about COVID so they didn't get an opportunity to discuss it.

Ms. Mulvany Henry said maybe she misunderstood but she thought we had a mockup of it last year. She asked if we were overcomplicating this. She asked if the vendor that produces the current bill not do this. She said it was currently a one page bill and we were talking about two pages. Obviously we were trying to conserve as much resources as possible but was a one pager not possible.



**REGULAR SESSION –WEDNESDAY JULY 1, 2020**

**STATE OF KANSAS        )  
  ) SS  
CITY OF KANSAS CITY)**

Mr. Johnson said yes it was but we would have to go back to the company that provides our UMS billing service. They would help with the redesign. They are including them but they are also moving away from them so we wouldn't be solely dependent on them.

Ms. Austin said they had a call with our billing provider the other day and talked about the bill a little bit and it is a source of business that they are looking to get out of.

Mr. Johnson said that will only help us moving forward because Cayenta wants to get out of that business. Going forward we won't have to rely on them to assist us.

Ms. Austin said they still had to provide us the data.

Ms. Mulvany Henry asked did he not think it could be done by the end of the year.

Mr. Johnson said his hope is that it can. He would have to come back and give an update as they continue to move forward.

Mr. Johnson asked Mr. Ash to speak about filling our Lineman Apprentice class. We have six people that are being selected. It gives us the opportunity to tap into some talent that wasn't there for us in the past.

Mr. Ash said this year we kicked off our Apprentice Program. We worked through our internal candidates and went through the screening. They screen those down to every person that met the minimum qualification and were brought into the Service Center and given an Aptitude test that we had partnered with Mr. Dumovich's HR team that developed it. We had an electronic tool and put our internal bidders through it the first go round. We came out with 25 people that passed. They were all a part of a two day boot camp we held last weekend. Saturday all 25 were brought in and put through various obstacles relative to line work, team work and physical work. At the end of the day the Apprentice Committee, which consists of six people, got together.

Mr. Johnson said he and Mr. Ash had discussions in the past about when we run out of internal candidates, at some point this day will come when we will have to look externally and if there is an opportunity to pick up a Wyandotte County resident that would be a good thing too.

Mr. Ash said that was our hope. We really got good feedback.

Ms. Gonzales asked how many Linemen were ready for retirement.

**REGULAR SESSION –WEDNESDAY JULY 1, 2020**

STATE OF KANSAS        )  
  ) SS  
CITY OF KANSAS CITY)

Mr. Ash said there will a couple of them talking about the end of the year. He did have one Foreman of the Crews position mentioned that he was going to leave in February. We had a number of folks that were retirement eligible that were trying to decide what they wanted to do. With this COVID issue you don't really want to walk away from your insurance right now so that has a couple of them stymied with their decision. There are five or six that are eligible.

Ms. Gonzales said that was good they had a pool when they needed some people again.

Mr. Ash said this was our first go round with the boot camp approach and he knows that Ms. Culp made some inroads with a couple of the community colleges that had line tech programs.

Ms. Gonzales said it was a great way to get the perfect candidate.

Mr. Johnson thanked staff for working hard on the expense side, slowing down our spending especially when we are trying to work through this COVID Pandemic and going through the whole time when we were not disconnecting service watching our revenue come in slower than normal. Everybody has been very, very receptive to doing their part and making sure we can work our way through this. He said he couldn't thank staff enough for helping and getting us here this far.

**Board Comments**

Mr. Eidson thanked everyone for the great updates and wished them a happy and safe 4<sup>th</sup> of July. He asked Mr. Ash to give an update on the guys that were hurt.

Mr. Ash said he continues to speak to them every couple of days. They are progressing well. One may be coming back to work in a limited capacity as early as Monday. That would give us two of the five back. The other three, while they are making progress, they are unable to be released to come back to work at this time. The good news is we have been able to offer them a couple of additional treatment opportunities and they are taking advantage of that. They speak well about it. For HIPPA reasons he can't expand. He asked if Mr. Dumovich had anything to add. He said at this point they had no negative feedback from the case managers that he was aware of.

Mr. Dumovich said he didn't have anything else to add. He was exactly right, they are progressing. He has talked to them as well and they are in really good spirits and moving in the right direction. As Mr. Ash mentioned there are a couple of additional programs that they were able to offer and they seemed very grateful for so they appreciate that.

**REGULAR SESSION –WEDNESDAY JULY 1, 2020**

**STATE OF KANSAS        )  
  ) SS  
CITY OF KANSAS CITY)**

Mr. Groneman wished everybody a happy and safe 4th of July.

Mr. Milan had comments but could not hear due to tape noise. He did say for everyone to have a safe holiday weekend.

Mr. Bryant said tonight again he was reminded how diligent the workers and all of the staff is at the BPU. The amazing number of tests they do on the water side to how everyone is chipping in and keeping an eye out on their expenditures during this unusual time period and to the unique ways that we are finding to keep our labor pool full. It always impresses him how well everybody works together. He thanked everyone for doing this day in and day out. He hoped everyone had a safe and happy holiday weekend and get some rest and enjoy it.

Ms. Gonzales thanked Mr. Johnson for keeping our employees and others safe by following the suggested guidelines that we have concerning masks and social distancing. Thanks for steering us in the right direction in keeping us on an even keel during this time. She thanked Ms. Austin and Mr. Nirschl for their reports. She doesn't buy bottled water, she only drinks tap water so she appreciates that our water department keeps it safe. She wished everyone a happy 4<sup>th</sup> of July.

Ms. Mulvany Henry thanked Mr. Johnson for the updates on everything he had given that evening. She thanked Mr. Nirschl, Ms. Daggett and Mr. Ash for their updates they provided as well. It was very humbling to look at some of the detail in those water reports. She understood how little staff they had and what they were able to do with that. She thanked them for showcasing it, it did not go unappreciated. She wished everybody a good holiday weekend.

Motion was made to adjourn the meeting at 7:06 P.M. by Mr. Bryant, seconded by Ms. Mulvany Henry and carried.

ATTEST:

APPROVED:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
President

**Agenda Item #VI**  
General Manager's  
Reports

# **May 2020 Financial Results**

## **July 1, 2020**

## Financial Results

### 2020 Billed kWh (YTD Jan – May)

Electric	(CY) 2020 YTD	(PY) 2019 YTD	
Residential	207,695,364	219,434,525	
Commercial	352,499,929	369,345,169	
Industrial	202,328,406	237,725,142	
	762,523,699	826,504,836	-7.7%

Lower usage in 2020 compared to 2019 due to weather (more Residential) and also the COVID-19 shutdown of businesses.

Residential – down 5.3%

Commercial – down 4.5%

Industrial – down 15%

# Financial Results

## 2020 Billed CCF's (YTD Jan – May)

	(CY) 2020 YTD	(PY) 2019 YTD	
Water			
Residential	1,352,072	1,328,521	
Commercial	903,660	930,642	
Industrial	774,760	816,313	
	3,030,492	3,075,476	-1.5%

Lower usage compared to 2019 due to milder weather through the first 5 months

Residential – Up 2%      Commercial – Down 3%      Industrial - Down 5%

# Financial Results

## Revenues – May 2020

	(CY) 2020 May	(PY) 2019 May		Budget 2020 May	(CY) 2020 May	
Electric	\$ 20.316	\$ 19.979		\$ 21.552	\$ 20.316	
Water	4.027	4.423		4.419	4.027	
Combined	\$ 24.343	\$ 24.402	-0.2%	\$ 25.971	\$ 24.343	-6.3%

\*\*Dollars in millions

### *Actual Compared to 2020 Budget*

Electric down 6%

Water down 9%



# Financial Results

## Revenues – 2020 YTD

	(CY) 2020 YTD	(PY) 2019 YTD		Budget 2020 YTD	(CY) 2020 YTD	
Electric	\$ 109.075	\$ 113.434		\$ 113.820	\$ 109.075	
Water	20.005	20.322		20.335	20.005	
Combined	\$ 129.080	\$ 133.756	-3.5%	\$ 134.155	\$ 129.080	-3.8%

\*\*Dollars in millions

Variance – YTD comparing Budget to Actual for 2020

**Electric: - Down 4%**  
 Residential **(\$2.8M)**  
 Commercial **(\$2.3M)**  
 Industrial **(\$1.4M)**

**Water: Down 2%**  
 Residential **(\$364K)**  
 Commercial **(\$226K)**  
 Industrial **\$514K**

Through first 5 months we have recognized \$4.6 million of the \$5.6 million deferred revenue from the 2019 ERC

# Financial Results

## Operating Expenses – May 2020

	(CY) 2020 May	(PY) 2019 May		Budget 2020 May	(CY) 2020 May	
Electric	\$ 13.825	\$ 15.984		\$ 18.867	\$ 13.825	
Water	2.553	3.199		3.117	2.553	
Combined	\$ 16.378	\$ 19.183	-14.6%	\$ 21.984	\$ 16.378	-25.5%

\*\*Dollars in millions

### Variance – MTD comparing Budget to Actual for 2020

#### Electric

Production	- 8% down
Purchased Power	- 15% down
Fuel	- 65% down
T&D	- 24% down
G &A	- 35% down

#### Water

Production	- 25% down
T&D	- 21% down
G &A	- 35% down

# Financial Results

## Operating Expenses – 2020 YTD (Total)

	(CY) 2020 YTD	(PY) 2019 YTD		Budget 2020 YTD	(CY) 2020 YTD	
Electric	\$ 75.662	\$ 82.158		\$ 89.951	\$ 75.662	
Water	14.190	15.017		15.824	14.190	
Combined	\$ 89.852	\$ 97.175	-7.5%	\$ 105.775	\$ 89.852	-15.1%

\*\*Dollars in millions

### *Actual Compared to 2020 Budget*

Electric down 16%

Water down 10%

# Financial Results

## Operating Expenses – 2020 YTD less Depreciation

	(CY) 2020 YTD	(PY) 2019 YTD		Budget 2020 YTD	(CY) 2020 YTD	
Electric	\$ 64.912	\$ 70.406		\$ 77.964	\$ 64.912	
Water	10.956	11.762		12.582	10.956	
Combined	\$ 75.868	\$ 82.168	-7.7%	\$ 90.546	\$ 75.868	-16.2%

\*\*Dollars in millions

Variance – YTD comparing Budget to Actual 2020

### Electric:

Purchased Power (\$5.3M)  
 Fuel (\$485K)  
 Production (\$2.6M)  
 T&D (\$2.2M)  
 G&A (\$2.2M)

### Water:

Production (\$407K)  
 T&D (\$765K)  
 G&A (\$455K)

# Financial Results

## Change in Net Position – May 2020

	(CY) 2020 May	(PY) 2019 May		Budget 2020 May	(CY) 2020 May	
Electric	\$ 2.727	\$ (0.180)		\$ (1.502)	\$ 2.727	
Water	0.917	0.710		0.649	0.917	
Combined	\$ 3.644	\$ 0.530		\$ (0.853)	\$ 3.644	

\*\*Dollars in millions



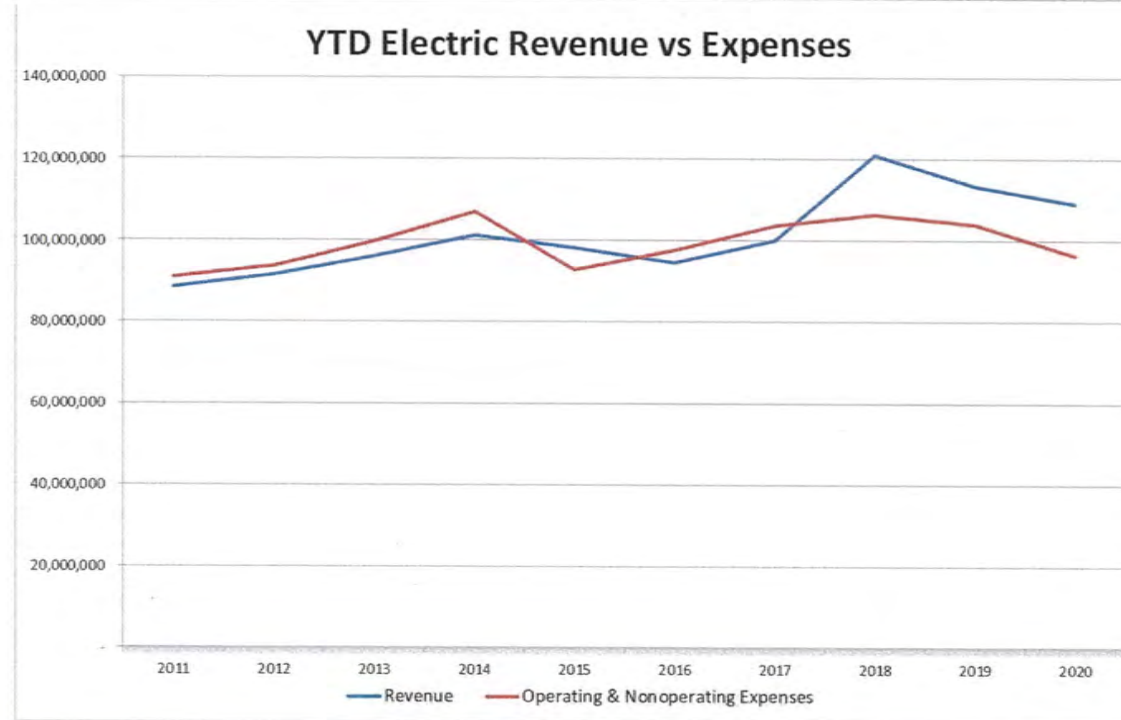
# Financial Results

## Change in Net Position – 2020 YTD

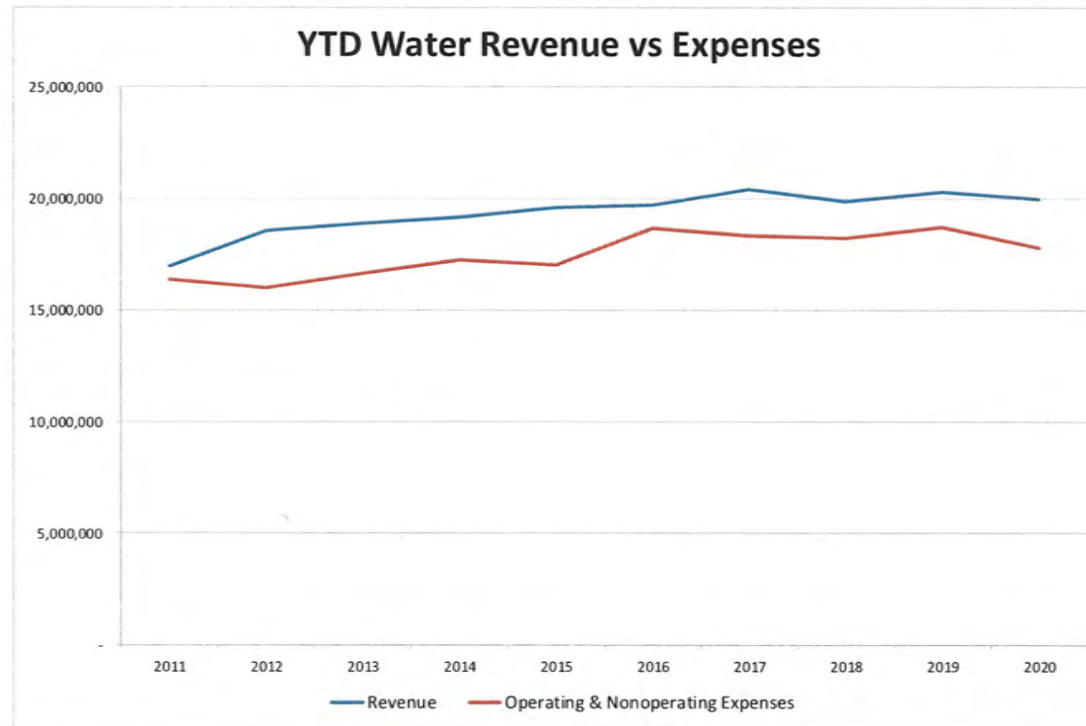
	(CY) 2020 YTD	(PY) 2019 YTD		Budget 2020 YTD	(CY) 2020 YTD	
Electric	\$ 12.535	\$ 9.353		\$ 2.131	\$ 12.535	
Water	2.305	1.728		1.057	2.305	
Combined	\$ 14.840	\$ 11.081		\$ 3.188	\$ 14.840	

\*\*Dollars in millions

## Financial Results – 10 Year Trend



## Financial Results – 10 Year Trend





# Financial Results

## Cash Position

	(CY) 2020 May	(PY) 2019 May	2020 April
Combined (E&W)	\$ 46.11	\$ 43.77	\$ 50.89
Days Cash-on-Hand	78	74	85

1 Day = Approximately \$550K-\$600K

\*\*Dollars in millions

# Financial Results

## Balance Sheet: Notables

	(CY) 2020 May	(PY) 2019 May
Fuel Inventory	\$ 4.622	\$ 7.039
Bond Dollars 2016A (AQC)	\$ -	\$ 2.409
Bond Dollars 2016C (Elec T&D)	\$ 2.595	\$ 28.263

In May, 2020, we recognized a Regulatory Asset for Quindaro Units 1 and 2 in the amount of \$73.6 million. The annual amortization will be around \$3.6 million for 20 years and we began recognizing it in May, 2020.

\*\*Dollars in millions

# Financial Results

## Capital Spending

	(CY) 2020 YTD	(PY) 2019 YTD	2020 Budget	
Electric	\$ 17.85	\$ 14.30	\$ 41.27	
Water	3.24	1.98	12.73	
Common	0.94	0.10	4.60	
<b>Total YTD Capital</b>	<b>\$ 22.03</b>	<b>\$ 16.37</b>	<b>\$ 58.60</b>	<b>Remaining 62%</b>

\*\*Dollars in millions

Major projects in 2020:

Rosedale Project - \$7.5M  
 N1 Bottom Ash Handling System- \$2.3M  
 Nearman 316B Project - \$156K  
 Mill Liners - \$555K  
 Water Leak, Valve, System Imp. - \$757K  
 UG/CMIP Water Distribution - \$1.3M

# Financial Results

## Debt Coverage

### Debt Coverage with PILOT

	(CY) 2020 May	(PY) 2019 May
Electric	2.03	2.30
Water	1.75	2.07
Combined	2.01	2.29

### Debt Coverage w/o PILOT

	(CY) 2020 May	(PY) 2019 YTD
Electric	1.45	1.67
Water	1.32	1.62
Combined	1.44	1.69

Financial Guideline Target 1.6 to 2.1 times with PILOT



# CONSUMER CONFIDENCE REPORT

July 1, 2020





# CONSUMER CONFIDENCE REPORT

## Overview of the Rule

Title*	Consumer Confidence Report (CCR) Rule, 63 FR 44511, August 19, 1998, Vol. 63, No. 160
Purpose	Improve public health protection by providing educational material to allow consumers to make educated decisions regarding any potential health risks pertaining to the quality, treatment, and management of their drinking water supply.
General Description	The CCR Rule requires all community water systems to prepare and distribute a brief annual water quality report summarizing information regarding source water, detected contaminants, compliance, and educational information.
Utilities Covered	Community water systems (CWSs), all size categories.

\*This document provides a summary of federal drinking water requirements; to ensure full compliance, please consult the federal regulations at 40 CFR 141 and any approved state requirements.

## Public Health Related Benefits

Implementation of the CCR Rule will result in . . .	<ul style="list-style-type: none"> <li>► Increased consumer knowledge of drinking water sources, quality, susceptibility to contamination, treatment, and drinking water supply management.</li> <li>► Increased awareness of consumers to potential health risks so they may make informed decisions to reduce those risks, including taking steps toward protecting their water supply.</li> <li>► Increased dialogue between drinking water utilities and consumers to increase understanding of the value of drinking water and water supply services and to facilitate consumer participation in decisions that affect public health.</li> </ul>
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## Annual Requirements

CWSs must prepare and distribute a CCR to all billing units or service connections.	<ul style="list-style-type: none"> <li>► <i>April 1</i> - Deadline for CWS that sells water to another CWS to deliver the information necessary for the buyer CWS to prepare their CCR (requirement outlined in 40 CFR 141.152).</li> <li>► <i>July 1</i> - Deadline for annual distribution of CCR to customers and state or local primary agency for report covering January 1 - December 31 of previous calendar year.</li> <li>► <i>October 1</i> - (or 90 days after distribution of CCR to customers, whichever is first) Deadline for annual submission of proof of distribution to state or local primary agency.</li> <li>► A CWS serving 100,000 or more persons must also post its current year's report on a publicly accessible site on the Internet. Many systems choose to post their reports at the following EPA Web site <a href="http://cfpub.epa.gov/safewater/ccr/index.cfm?action=ccrupdate">http://cfpub.epa.gov/safewater/ccr/index.cfm?action=ccrupdate</a>.</li> <li>► All CWSs must make copies of the report available on request.</li> </ul>
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# CONSUMER CONFIDENCE REPORT



## Breakdown of Report

- Starts with narrative about BPU's history and facts about the water treatment plant and distribution system.
- Acknowledges some of BPU's present and past awards.
- Water Quality Data Tables.
- Laboratory Certification Information.
- Definitions.
- Water Regulatory Agencies and contact information.
- Value of water
  - Public Health
  - Fire Protection
  - Economic Support
  - Quality of Life



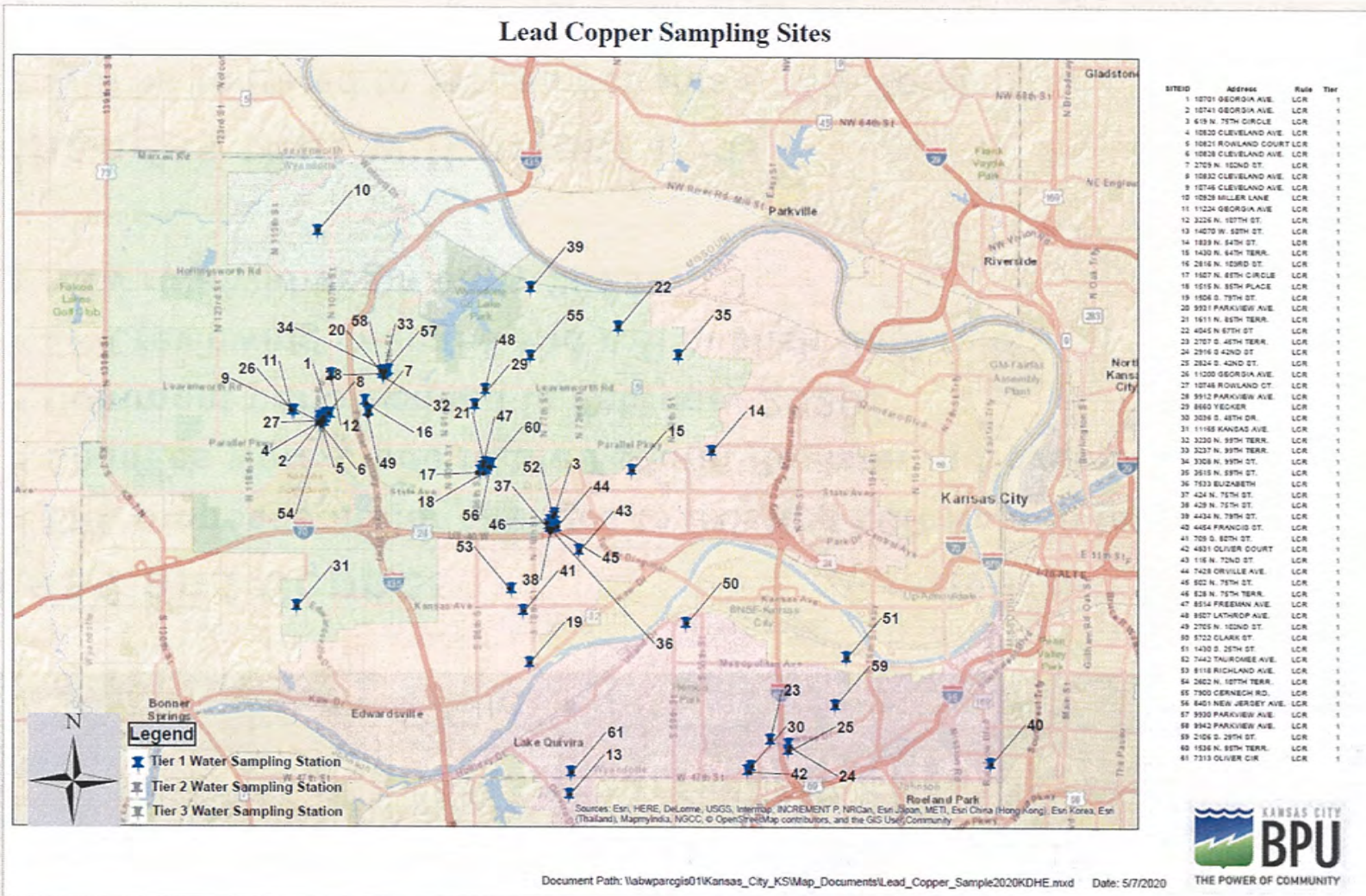
# MONITORED AT THE CUSTOMERS TAP

- Lead and Copper
- Sampling frequency every 3 years (reduced monitoring schedule)
- 50 Samples are required. 50 percent of samples have to come from Tier 1 sites. (Tier 1 Sites Copper Plumbing with Lead Solder 1982 - 1989)

Monitored at Customer's Tap								Monitored June - Sept. 2017 <sup>1)</sup>
BPU Surpassed Standards	Substance	Units	MCL	MCLG	90th Percentile	Range Detected	Sites Over AL	Likely Source
	Copper <sup>1)</sup>	ppm	AL=1.3	1.3	0.390	0.056-0.570	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	Lead <sup>1)</sup>	ppm	AL=0.015	0	0.0072	<0.0005-0.041	1	Corrosion of household plumbing systems, erosion of natural deposits



# LEAD COPPER SAMPLE SITES





# FUTURE REGULATIONS

## ■ Lead and Copper

- EPA proposed major changes to existing LCR Rule in late 2019.
- Changes were made to the Federal Register in November 2019.
- Comment period ended in February 2020.
- EPA reviewing changes and will publish final rule.
- New rule will begin early 2021.

## ■ Changes that will affect BPU

- Will be required to test all Schools – (59) Total
- Will be required to test all Licensed Child Care Facilities – (175)
- Required to test 20% over 5 year period
- Additional (47) samples beginning probably next year.



# MONITORED IN THE DISTRIBUTION SYSTEM

- These parameters focus on disinfection levels in the distribution system and byproducts produced from disinfection.
- Total Coliform (RTCR Rule) Required 120 samples per month.

Monitored in the Distribution System								Monitored Jan. - Dec. 2019
BPU Surpassed Standards	Substance	Units	MCL	MCLG	Average Detected	Highest RAA	Range Detected	Likely Source
✓	Chloramines	ppm	4.0	4.0	2.40 <sup>2)</sup>	2.81	1.0-3.9	Water additive used to control microbes
✓	Chlorite	ppm	1.0	0.8	0.37 <sup>2)</sup>	0.48	0.03-0.48	By-product of drinking water disinfection
✓	Total Coliform	%	Presence <5% of Samples	0	1.01	N/A	0 - 5.0	Naturally present in the environment
✓	HAA5 (Haloacetic Acids)	ppb	60	N/A	21 <sup>3)</sup>	24	<2-33	By-product of drinking water disinfection
✓	TTHM (Total Trihalomethanes)	ppb	80	N/A	40 <sup>3)</sup>	42	25-58	By-product of drinking water chlorination



# TOTAL COLIFORM

- TCR: Total Coliform Rule
- RTCR: April 2016
- The Revised Total Coliform Rule, is the revised version of the Total Coliform Rule, which was a precursor to enhanced requirements established under the Interim Enhanced Surface Water Treatment Rule, the Stage 1 Disinfectants and Disinfection Byproducts Rule, and the Groundwater Rule. The RTCR establishes health goals and legal limits for total coliform levels in drinking water (as indicator organisms), requires the conduct of routine sanitary surveys of systems, and specifies the type and frequency of testing in which systems must perform.



# REQUIREMENTS FOR TCR SAMPLING

**§28-15a-21. Coliform sampling.** Each person who operates a public water supply system shall comply with the monitoring and analytical requirements for coliforms contained in 40 CFR 141.21, as in effect on July 1, 2003 and hereby adopted by reference except for §141.21(a)(2) and (a)(3), which are replaced with the following text:

"(a)(2) The sampling period for microbiological compliance shall be one calendar month for all public water supply systems.

"(a)(3) Number of required samples.

"(i) Each public water supply system that uses surface water as its source of supply and serves a population of 4,100 or less shall take a minimum of four water samples each sampling period.

"(ii) Each public water system that uses surface water as its source of supply and serves a population greater than 4,100 shall take water samples according to the schedule prescribed in subsection (a)(3)(iv).

"(iii) Each public water supply system that uses groundwater as its source of supply and each public water supply system that purchases water from another public water supply system shall take water samples according to the schedule specified in paragraph (a)(3)(iv).

"(iv) Each public water supply system shall assure that routine samples are collected at regular time intervals and analyzed for total coliform bacteria as specified in the following table.

Population Served	Minimum number of samples per sampling period
25 to 2,500.....	2
2,501 to 3,300.....	3
3,301 to 4,100.....	4
4,101 to 4,900.....	5
4,901 to 5,800.....	6
5,801 to 6,700.....	7
6,701 to 7,600.....	8
7,601 to 8,500.....	9
8,501 to 12,900.....	10
12,901 to 17,200.....	15
17,201 to 21,500.....	20
21,501 to 25,000.....	25
25,001 to 33,000.....	30
33,001 to 41,000.....	40
41,001 to 50,000.....	50
50,001 to 59,000.....	60
59,001 to 70,000.....	70
70,001 to 83,000.....	80
83,001 to 96,000.....	90
96,001 to 130,000.....	100
130,001 to 220,000.....	120
220,001 to 320,000.....	150
320,001 to 450,000.....	180

For each additional 150,000 in population, an additional 30 water samples shall be analyzed per sampling period.  
(Authorized by and implementing K.S.A. 65-171m; effective Oct. 1, 2004.)

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Sam Brownback, Governor

## Directions for Collection of Drinking Water Samples

1. Use only sterile bottles furnished or approved by your laboratory. Keep bottles sealed until used.
2. Collect samples from rigid faucets and try to avoid swing faucets or single handle faucets, leaking faucets, and outside hydrants whenever possible. Do not collect from water softeners, charcoal filters, fire hydrants, frost-free hydrants, hot water faucets, or sill cocks.
3. Do not collect all samples from the same tap unless there is only one service connection on your public water supply system.
4. Remove any aerator, filters, or point of use units from the faucet before collecting the sample.
5. Wash hands before beginning sampling procedures. Run the water at a steady rate (so it doesn't splash out of the bottle) for 3 to 5 minutes before sampling. Do not adjust flow.
6. Remove the bottle lid just before filling. Holding the lid in your free hand, fill the bottle to between the 100 mL line and the 120 mL line, without letting the water splash out or overflow the bottle. Then replace the lid and tighten securely. Dry the outside of the bottle before packing.
7. FILL IN THE INFORMATION ON YOUR SAMPLE SUBMISSION FORM OR DATA CARD:

Please print all information.

- a. Collection date
- b. Collector's last name and first initial
- c. Time of collection (use 24 hour military time or add a.m. or p.m.)
- d. Collection location (brief name, address, or site zone and number)
- e. Chlorine residual at the collection tap (circle free or total chlorine as applicable)
- f. Comments that you feel would be helpful to the laboratory analyst

Failure to provide collection date and time of collection will invalidate the sample and will result in having to resample the site. EPA requires calculation of holding time from this information.

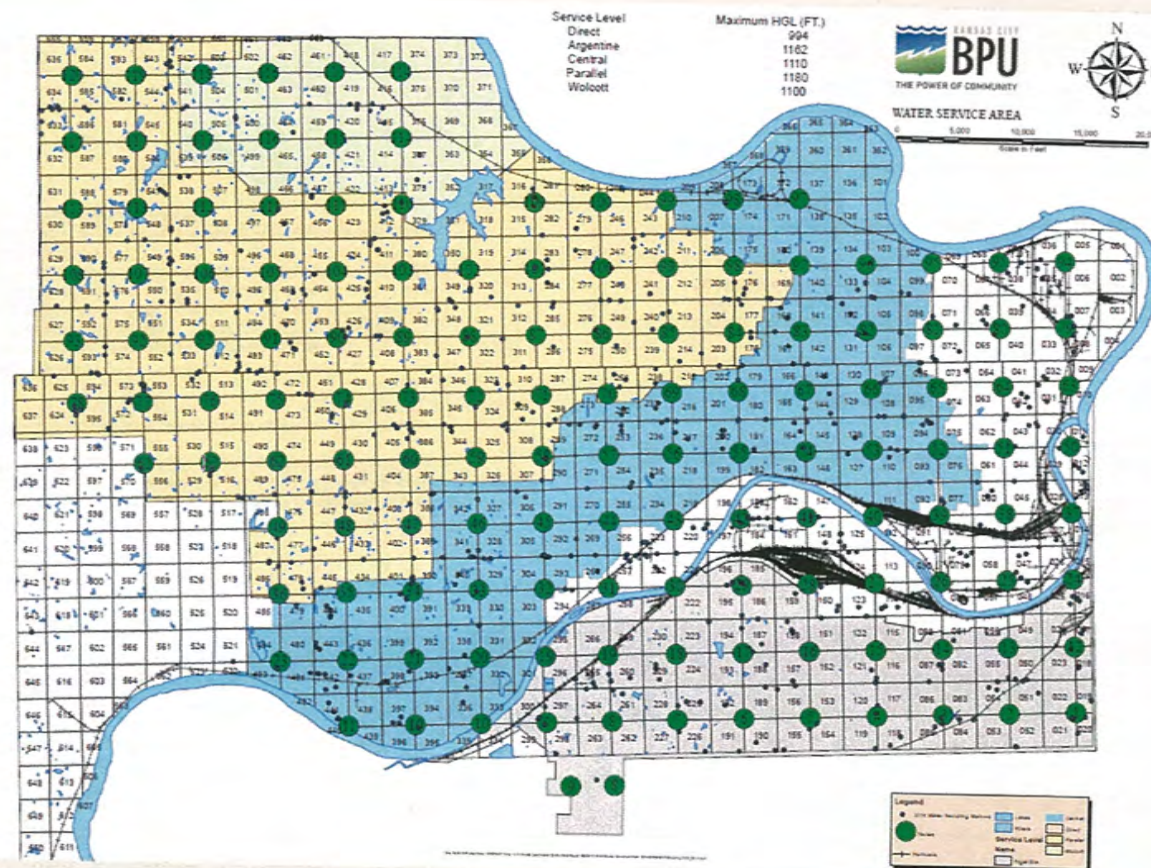
8. Collection of the sample just before shipping may help reduce the transit time. Collect and ship the sample on the same day. The sample must reach the laboratory within 30 hours. Ship samples on Monday, Tuesday, or Wednesday unless there is a holiday in the week. Avoid sampling on weekends or holidays.

Collection of Drinking Water Samples Any Micro Lab 03/09/2017



# TCR MAP WITH REQUIRED ZONES

- 120 Zones with 10 addresses within each zone, 1200 Total Sites.





# PRIMARY DRINKING WATER STANDARDS

## ■ Inorganic Compounds (IOC's)

- Fluoride-natural occurring element.

## ■ Organic compounds

- Synthetic (SOC's)
  - Man-made compounds such as pesticides
- Volatile (VOC's)
  - Man-made and naturally occurring such as gasses.

Monitored at the Treatment Plant Primary Drinking Water Contaminants							Monitored Jan. - Dec. 2019
BPU Surpassed Standards	Substance	Units	MCL	MCLG	Average Detected	Range Detected	Likely Source
✓	Atrazine	ppb	3	3	0.108	<0.05-0.240	Runoff from herbicide used on row crops
✓	Barium	ppm	2	2	0.126	0.072-0.150	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
✓	Beta/alpha emitters	pCi/L	50 <sup>(1)</sup>	0	6.6	6.6	Decay of natural and man-made deposits
✓	Chlorine dioxide	ppb	800	800	80	<100-220	Water additive used to control microbes
✓	Chlorite	ppm	1.0	0.8	0.48 <sup>(2)</sup>	0.39-0.63	By-product of drinking water disinfection
✓	Cyanide	ppb	200	200	<5	<5	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
✓	Fluoride	ppm	4	4	0.74	0.69-0.77	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
✓	Gross Alpha emitters	pCi/L	15	0	<3.0	<3.0	Erosion of natural deposits
✓	Nitrate (as N)	ppm	10	10	0.96	0.96	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
✓	Radium 226	pCi/L	5	0	<1	<1	Erosion of natural deposits
✓	Radium 228	pCi/L	5	0	<1	<1	Erosion of natural deposits
✓	Selenium	ppb	50	50	<0.5	<0.5	Erosion of natural deposits
✓	Total Organic Carbon	ratio <sup>(3)</sup>	TT Removal ratio >1	N/A	2.15 <sup>(3)</sup>	1.83-2.56	Naturally present in the environment
✓	Turbidity	NTU	TT=1.0 max TT<0.3 95% of the time	N/A	0.07	0.03-0.22	Soil runoff causes water cloudiness by suspended matter
✓	Uranium	ppb	30	0	3.4	3.4	Erosion of natural deposits



# SECONDARY DRINKING WATER CONTAMINANTS

- Non-enforceable regulations
- Provide guidelines for producing good tasting and aesthetically pleasing water.

Monitored at the Treatment Plant Secondary Drinking Water Contaminants					
Monitored Jan. - Dec. 2019					
BPU Surpassed Standards	Substance	Units	SMCL	Average Detected	Range Detected
✓	Alkalinity as $\text{CaCO}_3$	ppm	NA	207	180-240
✓	Calcium	ppm	NA	80	64-100
✓	Chloride	ppm	250	25	25
✓	Specific Conductance	$\mu\text{mhos/cm}$	NA	781	640-840
✓	Total Hardness as $\text{CaCO}_3$	ppm	NA	300	300
✓	Total Hardness as $\text{CaCO}_3$	Grain/Gallon	NA	17.5	17.5
✓	Magnesium	ppm	NA	25	14-29
✓	Manganese	ppb	50	0.73	<2.0-4
✓	Iron	ppm	0.3	0.028	<0.02-0.03
✓	pH	S.U.	6.5-8.5	7.5	7.3-7.6
✓	O-Phosphate (as $\text{PO}_4$ )	ppm	NA	0.65	0.52-0.80
✓	Potassium	ppm	NA	6.2	4.1-8.7
✓	Silica	ppm	NA	15	12-16
✓	Sodium	ppm	NA	46	29-55
✓	Sulfate	ppm	250	130	130
✓	Total Dissolved Solids	ppm	500	450	450
✓	Metolachlor	ppb	NA	0.05	<0.05-0.09

Secondary contaminants are not regulated, but provide guidelines for producing good tasting and aesthetically pleasing water.



# UNREGULATED CONTAMINANTS

## Unregulated Contaminant Monitoring Rule

- UCMR Sampling helps EPA determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.
- Last Sample Period 2015 UCMR 3
- In 2015 many of the PFAS compounds were part of the UCMR 3 sampling. BPU levels for all samples related to PFAS were reported as ND for the 4 sample periods.
- UCMR 4 began in July 2019 end in September 2020.
- Sample Breakdown – (2) Metals, (8) Pesticides, (3) Alcohols, (3) Semi-volatile Compounds, (3) Haloacetic Acids

### \*Unregulated Contaminant Monitoring Rule Third Cycle (UCMR3)

Monitored Jan. - Dec. 2015

Substance	Units	MCL	Average Detected	Range Detected
Chlorate	ppb		164	130-210
Chromium Total	ppb	100	0.25	0.20-0.30
Hexavalent Chromium (Dissolved)	ppb		0.14	0.11-0.18
Molybdenum	ppb		3.3	2.5-4.2
Strontium	ppb		548	500-610

\*Unregulated contaminant monitoring helps EPA determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.



# NWTP LABORATORY MONITORING SCHEDULE



Kansas Department of Health and Environment  
Division of Environment  
Bureau of Water, Public Water Supply Section  
(785) 296-5514

November 27, 2019

Our Mission: To protect and improve the health and environment of all Kansans.

## KS2020906 - KANSAS CITY BOARD OF PUBLIC UTILITIES

### Monitoring Schedule for 2020

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
COLIFORM (TCR)	120	120	120	120	120	120	120	120	120	120	120	120	1440
CHLORITE	3	3	3	3	3	3	3	3	3	3	3	3	36
TOC PAIRED SAMPLE SET	1	1	1	1	1	1	1	1	1	1	1	1	12
* HAA5 & TTHM	8	0	0	0	0	0	8	0	0	8	0	0	24
ASBESTOS	NOT DUE THIS YEAR												
FLUORIDE	1	0	0	0	0	0	1	0	0	1	0	0	3
FULL PESTICIDE SCAN	0	0	0	0	1	0	0	0	0	0	0	0	1
FULL RADIOCHEMISTRY ANALYSIS	NOT DUE THIS YEAR												
INORGANICS	0	0	0	1	0	0	0	0	0	0	0	0	1
LEAD & COPPER	0	0	0	0	0	50	0	0	0	0	0	0	50
NITRATE	0	0	0	1	0	0	0	0	0	0	0	0	1
VOLATILE ORGANICS	1	0	0	0	0	0	0	0	0	0	0	0	1

\*Note: The HAA5 & TTHM Schedule is a dual set, therefore there are two sample bottles per scheduled event.  
Please Note: The above schedule is subject to change if circumstances at your water system change. The KDHE will make every effort to notify your system of changes; however, your system is responsible for compliance with monitoring requirements regardless of KDHE notification.



# NWTP LABORATORY FACTS

## Water Samples and reporting

- Approximately 8,700 samples are run each year.
- 19 different samples from the plant.
- 1,560 TCR samples, new mains, leaks and customer requests collected annually from the field.
- Approximately 41,800 tests completed annually.
- Tests collected daily, monthly, quarterly, and annually.
- Reports are submitted monthly and quarterly.
- Reports must be submitted by 10<sup>th</sup> day of following month.



# QUESTIONS

**Thank You**