

Testimony of Stephen E. Green

Question:

What is your name?

Answer:

My name is Stephen E Green.

Question:

What is your position at the BPU?

Answer:

I am the Executive Director of Water Operations. I have been with BPU for 34 years.

Question:

Please summarize your professional qualifications and experience.

Answer:

My educational achievements include having a Bachelor's of Science in Business Management. I also have an Applied Science Degree in Environmental Water Technology. I have been working for KCBPU for the last 34 years.

Question:

What are your responsibilities as the Executive Director of Water Operations?

Answer:

The mission in the Water Division is to have available upon demand to all of our customers, good quality water and to provide that water in the most efficient manner possible. I work to accomplish this mission of the Water Division through planning, coordinating, communicating, and directing water supply, production, transmission, distribution, storage, engineering, maintenance, budgeting, and all other areas related to supplying a consistent, reliable, and safe drinking water supply.

Question:

What are your responsibilities relating to the current water rate hearing?

Answer:

It is my responsibility to assure that financial requirements of the Water Division are accurately presented and that costs associated with serving each customer class are accurately quantified. BPU is a non-profit utility and provides service at cost. Once costs are identified for capital and operating expenses, rates are established to assure the utility meets all financial obligations and distribute these rates as equitably as possible across all customer rate classes. BPU water has not had a rate increase for 10 years.

Question:

What information did the Water Operations Division provide in connection with cost of service study?

Answer:

The Water Operations Staff provided the following:

Customer growth, water sales and other income projections
Operation and maintenance expenditure projections
Capital improvement expenditure projections

Question:

What is the major reason for the proposed increase in water rates?

Answer:

The majority of the rate increase is needed to ensure cash reserves will meet BPU financial guidelines and that the water utility will have sufficient revenues to finance its capital projects and operation and maintenance costs, while maintaining the required debt service coverage ratio and cash reserves.

The importance of maintaining a strong and stable bond rating translates to reduced cost of debt financed borrowings. A lower rating would increase BPU's cost to issue debt. Please see testimony of Lori Austin and Anna M. White for more discussion of financial guidelines.

Question:

Can you describe the major operations and maintenance expenses?

Answer:

The majority of the Water Division operation and maintenance expenses is for the labor cost to maintain our water system. We have 107 positions which makes up 66 percent of Kansas City BPU 2023 Water Operations and maintenance budget. Our operating expenses have risen over 23 percent since 2017. That is an average of 3.9 percent increase every year.

Question:

Can you describe the major capital improvements included in the cost of service study?

Answer:

7 Million Gallon Reservoir at Argentine Pump Station - \$14.5 Million SRF Funding

This project is under construction and is necessary to provide adequate storage during short term interruptions at our Nearman Water Treatment Plant. The additional storage is needed to avoid interruption of water supply to our Direct and Argentine pressure

zones. This benefits our inner and southern portions of the City including KU Hospital and Fairfax Industrial Customers.

Water Pump Station Controls and Storage Improvements - \$2.4 Million - SRF Funding for Electrical

Improvements to the Variable Frequency Drives and Electrical Switchgear at the Parallel Pump Station that is no longer supported by the manufacturer and reached useful life. An inspection in 2019 revealed the painting of I-435 elevated storage tank is required due to coating degradation. The tank has not been painted since the time of initial service.

Water Main Leaks Replacement Program - \$10 Million SRF Funding and \$10 million EPA Community Development Grant

BPU's water distribution system has over 1000 miles of pipe. The older piping is deteriorating and is part of an aging infrastructure that needs replacement. The first phase of the Main Replacement Program was completed from 2014 – 2019 and funded 10 million dollars of piping improvements. The program has been very successful in providing a reduction of water main breaks and the corresponding expenses to repair breaks. The first phase of the program reduced breaks by an average of 70 breaks per year. The funding level of \$20 million will allow replacement of approximately 30 miles of pipe over a four-year period. The timeframe to initiate the design and construction is 2023 - 2026.

BPU experiences approximately 475 main leaks per year with majority of leaks from 4" and smaller mains. BPU spends an estimated \$1 million in labor and material per year to repair main leaks.

Replacement of the pipe will enhance the following objectives:

- Ensure water is safe to drink and maintain compliance with the Safe Drinking Water regulations. Replacement will mitigate the potential for contamination.
- Improved flow characteristics with new and larger diameter pipelines will reduce microbiological build up in the piping and ensure the water is safe to drink. Additionally, the ability to fight fires and protect the community will enhance the objective to provide sustainable resources for the community
- Older leaking pipes are a source of inefficient water use. This increases the cost to rate payers through lost water and repair costs associated with the break. Improving the system will reduce electricity by reducing the amount of water pumped in the system and reduce unaccounted for water.
- In addition to securing a safe water supply, the replacement projects will improve sustainability and land preservation and restoration by eliminating unnecessary waste of water from water main breaks.

- Replace aging pipes that have numerous main breaks and end of useful life.

The majority of the replacements will be in the Direct and Argentine pressure zones which includes the inner and southern areas of the City where the oldest pipe is located.

Water Distribution System Improvements - \$9.6 Million

The projects needed for water distribution improvements include:

- Main replacements that enhance our ability to serve our customers, such as looping dead end water mains to reduce stagnant water, improve fire protection in areas that are currently under served; increase the distribution capacity with new water mains; and inspection of transmission mains. (\$3,000,000)
- Main relocation projects required for Storm Water and Sanitary Sewer Improvements; sidewalk, curb and gutter replacements; (\$840,000)
- Valve, and fire hydrant inspection program to inspect and operate every hydrant and valve in the system in order to ensure service to our customers (\$900,000)
- Installation of Anodes to protect the pipe from external corrosion and consequently will extend the service life and mitigate costly main breaks. (\$500,000)
- 12 inch and larger main improvements to provide for adequate flow and pressure to existing and future customers (\$4,400,000)

Unified Government Street Improvement Projects - \$3.6 Million

These project costs are required by the Unified Government (UG). BPU is required to relocate water mains whenever a UG street improvement projects causes a realignment of the street that is in conflict with the water main.

Project examples: Leavenworth Road, from Hutton road to I435; UG Mill and Overlay; Levee Raise Project; 98th Street Improvement; 47th Street, Rainbow to Mission;

24" Transmission Main from Providence Hospital at 90th and Parallel to I435 & France Family Drive - \$4 Million SRF Funding

This project is necessary to provide redundancy to an existing Transmission main which is over 50 years old to avoid interruption of service to our western service area, including the Legends and Wholesale customers. The main will provide an additional main that supplies water to the elevated tower at I-435 and Parallel. This is needed for redundancy to serve the area west of I-435 to ensure system reliability and redundancy. The timeframe to initiate the design and construction is 2023 - 2025.

Replace 24-inch Main at 12th Street & Kansas River - \$6.5 Million SRF Funding

This existing 24-inch transmission main is a restrained joint cast iron pipe installed in 1940 under the Kansas River Channel. This transmission main is one of three major water main crossings of the Kansas River that supplies drinking water to the entire service area south of the Kansas River. It also supplies a major storage reservoir that

provides gravity flow to the entire Direct system that is north of the river and bounded on the west by 55th Street and east by State Line.

As part of the Levee project, BPU was notified by the Corp of Engineer representative that the Kansas River in this reach of 12th street has degraded significantly since 1940 and therefore, the transmission main at 12th street may be exposed in the channel. The Corps of Engineer sent BPU a previous bathymetric survey providing the elevations of the river channel. To confirm the data, BPU hired Burns and McDonnell to assist in engineering services and retain a company involved in underwater surveys to complete a bathymetric survey, concentrating in the vicinity of the 24-inch pipeline. The survey used multibeam and side scan sonar to determine if the pipeline was exposed. The report came back confirming the channel has eroded significantly since the original installation and a large portion of the main is exposed. As a follow up to the initial investigation, BPU retained an underwater contractor / diving team with expertise inspecting, repairing and rehabilitating underwater facilities. The dive was completed in mid-January 2021 and the investigation determined the pipe was exposed and in some cases the water main was undermined with 1 ft. to 2 ft. of separation from the river bed. The transmission main will need to be replaced as soon as possible. The timeframe to initiate the design and construction is 2021 – 2025.

Distribution Regulatory Projects - \$2.75 Million SRF Funding

Project required to meet the new regulations for Lead and Copper Rule.

Nearman Water Treatment Plant Generator - \$5 Million Grant/SRF Funding

Funds will be used to construct a backup electric generator at BPU's Nearman Water Treatment Plant (NWTP), ensuring long term continuity of critical water service in the event of electrical service disruption. This project enhances critical infrastructure resiliency and security, building redundancy and ensuring uninterrupted water for the 169,000 residents, 4200 industrial/commercial customers that employ thousands of residents, first responders, and the largest medical facility in the state (KU Med). Funding includes a FEMA Grant of 3.7 million and the remaining funds from Kansas SRF program.

KDOT 18th Street Bridge Replacement - \$4 Million

BPU has an existing 24-inch water main on the 18th street bridge crossing the Kansas River. KDOT will replace this bridge beginning in 2025. BPU is currently working with KDOT and their Engineer to begin design for a new 24-inch pipeline on the new bridge. The main is required to provide water transmission to the southern portion of the service territory.

Water Work Equipment, Automobiles and Tools 2.7 Million

Water equipment cost is to replace aging work equipment. This equipment includes our crew trucks, excavators, automobiles, and work tools that are needed to maintain our water system.

Fire Hydrants and Valves \$4 Million

BPU maintains 6,877 fire hydrants and 17,776 valves in the water system. Hydrant and valve replacement are an ongoing cost to provide fire protection and safe reliable service to our customers. The cost of service includes approximately \$2.3 million for valve replacement and \$1.7 million for fire hydrant replacement over the next 3-years which reflects a normal level of replacement.

Water Services \$2.3 Million

BPU maintains approximately 52,000 services. Residential services make up approximately 50,000 of those services. Many of these services are aging 3/4" galvanized services in need of replacement.

Water Meters \$2.3 Million

Periodic replacement of water meters is necessary to assure the water is accurately metered. As an analogy, meters are essentially the Utilities cash register. This reflects a normal level of replacement rate.

Water Facility and Equipment Improvements \$2.1 Million

Required cost to maintain our Treatment Plant, Distribution and Engineering facilities.

Non-Revenue Water Leak Detection \$1.4 Million

Building out our district metering areas (DMA's) to help reduce non-revenue water usage. Our pumping zones will be divided into smaller districts to help capture water loss. This will reduce time to locate non-surfacing leaks. A decrease in non-revenue water helps reduce our costs to pump and treat the water.

Question: Does this conclude your written testimony?

Answer: Yes, it does.