

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

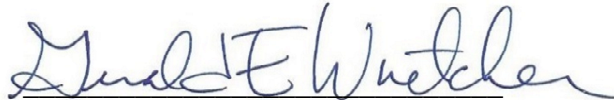
**ELECTRONIC APPLICATION OF KNOX)
COUNTY UTILITY COMMISSION FOR)
AUTHORIZATION TO EXECUTE AN)
ASSISTANCE AGREEMENT WITH THE)
KENTUCKY INFRASTRUCTURE) **CASE NO. 2023-00003**
AUTHORITY AND FOR A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY)
TO CONSTRUCT THE BARBOURVILLE)
CONNECTION-KY 225 PROJECT)**

**KNOX COUNTY UTILITY COMMISSION'S SUPPLEMENTAL RESPONSE TO
COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION**

Knox County Utility Commission submits its Supplemental Response to Commission Staff's First Request for Information.

Dated: March 15, 2023

Respectfully submitted,



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Counsel for Knox County Utility Commission

CERTIFICATE OF SERVICE

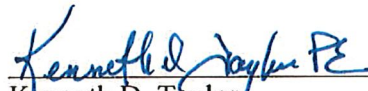
In accordance with 807 KAR 5:001, Section 8, and the Public Service Commission's Order of July 22, 2021 in Case No. 2020-00085, I certify that this document was transmitted to the Public Service Commission on March 15, 2023 and that there is currently no party that the Public Service Commission has excused from participation by electronic means in this proceeding.


Counsel for Knox County Utility Commission

VERIFICATION

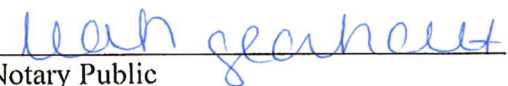
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF FRANKLIN)

The undersigned, Kenneth D. Taylor, P.E., being duly sworn, deposes and states he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and that the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Kenneth D. Taylor

Subscribed and sworn to before me, a Notary Public in and before said County and State,
this 15th day of March 2023.

 (SEAL)

Notary Public

My Commission Expires: 11-7-23

Notary ID: 634996

KNOX COUNTY UTILITY COMMISSION

**Supplemental Response to Commission Staff's First Request for Information
Case No. 2023-00003**

Question No. 4

Responding Witness: Kenneth D. Taylor

Q-4. Refer to Application, page 4, paragraph 10.

- a. State the expected output (in gallons per year) of Knox County Commission's water treatment plant under the reduced usage plan.**
- b. Provide an itemized breakdown of the calculation of \$35,704 in savings resulting from reducing water treatment plant to one shift per day.**
- c. State the age, remaining useful life, accumulated depreciation, and remaining depreciation for the water treatment plant.**
- d. Identify all service disruptions caused by Cumberland River flooding since 2013, including dates their durations.**
- e. State whether Knox County Commission was able to obtain sufficient water via its water purchase agreements to prevent or shorten service disruptions identified in your response to 4(d) above.**
- f. Describe any "staffing problems" resulting from operator retirements, including efforts to hire operators and salary and benefits offered.**
- g. State your water treatment annual payroll expense:**
 - (1) Prior to operator retirements;**
 - (2) At present;**
 - (3) Estimated under proposed project;**
 - (4) Estimated if the plant were running at maximum capacity.**

Original Response:

- A-4. a. 26,000,000 gallons of water per year.
- b. See Exhibit 4 to this Response.
- c. KCUC's Water Treatment Plant was constructed in 1964 and is 59 years old. Its estimated remaining useful life with normal maintenance is 10 years.

- d. February 6-9, 2020; April 13-14, 2020.
- e. KCUC was able to obtain sufficient water from its suppliers to avoid any service disruptions but service was provided at lower pressures and without full water storage tanks.
- f. With the retirement of one operator and the death of another, KCUC presently has only two licensed operators plus its superintendent and two unlicensed employees to operate the plant under an alternative staffing plan that the Kentucky Division of Water has approved. Advertisements in the local newspaper have failed to yield any licensed applicants. The two unlicensed employees are planning to obtain their licenses but have not yet met the requirements to take the required examination.
- g. See below.

Water Treatment Plant Payroll	
Current	\$139,686.00
Completion of Proposed Project	\$38,584.00
WTP at Maximum Capacity	\$154,357.00

Supplemental Response:

- A-4. a. KCUC’s current intention is to purchase 26,000,000 gallons of water per year. Under the terms of its Water Purchase Agreement with Barbourville Utilities Commission (“BUC”), KCUC may purchase up to 90,000,000 gallons of water annually. BUC has indicated a willingness to negotiate the sale of additional water volumes. Thus, KCUC may eventually replace all of its current water treatment capacity with purchases from BUC. The decision to purchase additional volumes and to produce a lower volume or to cease any production will depend upon the water treatment plant’s condition. The water treatment plant has been in service for approximately 53 years. According to the National Association of Regulatory Utility Commissioner’s *Depreciation Practices for Small Water Utilities* (Aug. 15, 1979), the publication that the Public Service Commission uses to establish the useful service life of water utility assets, the service life of a water treatment plant is forty years. Based upon the Public Service Commission’s guidelines, KCUC’s water treatment plant is thirteen years beyond its useful service life. The plant has never had any significant upgrades or refurbishing. Continued operation is likely to result in increasing mechanical and operational problems, less reliable service and degraded water quality. The plant will within a few years require significant improvements or replacement if it continues to operate at high volume levels. At a minimum, increased operation and maintenance costs are anticipated. If these events occur, KCUC will likely move to place the plant in reserve status.
- c. KCUC’s Water Treatment Plant was placed into service in 1970 and has been in continuous service since then. Based upon the Public Service Commission’s own guidelines, KCUC’s water treatment plant is thirteen years beyond its useful service

life. The plant is continuing to operate but in light of its age it is expected to experience increasing mechanical and operational problems and to require additional repairs.

The original response indicated that the water treatment plant had an estimated remaining useful life with normal maintenance of 10 years. This estimate assumed that the water treatment plant would be expected to produce only one-third of its current production level and that at some point the plant would be placed in reserved status to be used only in the event of an emergency. It did not assume that the water treatment plant would continue to operate at 81 percent of its capacity as it is currently operating. If the water treatment plant continues to operate at its current level for an extended period, more frequent reliability issues are likely.

KNOX COUNTY UTILITY COMMISSION

**Supplemental Response to Commission Staff's First Request for Information
Case No. 2023-00003**

Question No. 5

Responding Witness: Kenneth D. Taylor

Q-5. Refer to Application, page 5, paragraph 11.

- a. State improvements necessary to continue operating the water treatment plant, their estimated cost, and their estimated date.**
- b. State whether Knox County Commission plans to retire the water treatment plant and obtain all water via water purchase agreements instead of making necessary improvements to the water treatment plant.**
- c. If Knox County Commission plans to retire the water treatment plant, state the expected retirement date and all estimated costs and savings associated with retirement.**
- d. State the maximum water production capacity of the water treatment plant.**
- e. State the current daily output of the water treatment plant.**
- f. Provide annual total water usage from 2013 to present.**

Original Response:

- A-5.
- a. Only normal maintenance is anticipated in be necessary in the near future to keep the plant operational.
 - b. KCUC does not intend to decommission the water treatment plant in the near future.
 - c. See response to Question 5b.
 - d. 256 gallons per minute or 368,640 gallons per day.
 - e. Approximately 300,000 gallons.
 - f. See table on next page.

Year	Water Usage
2013	183,411,000
2014	190,434,000
2015	201,065,000
2016	193,516,000
2017	186,441,000
2018	197,011,000
2019	188,707,000
2020	203,635,000
2021	219,173,000
2022	213,246,000

Supplemental Response:

A-5. a. The water treatment plant has been in service for approximately 53 years. According to the National Association of Regulatory Utility Commissioner's *Depreciation Practices for Small Water Utilities* (Aug. 15, 1979), the publication that the Public Service Commission uses to establish the useful service life of water utility assets, the service life of a water treatment plant is forty years. Based upon the Public Service Commission's guidelines, KCUC's water treatment plant is thirteen years beyond its useful service life. The plant has never had any significant upgrades or refurbishing. Continued operation is likely to result in increasing mechanical and operational problems, less reliable service and degraded water quality. The plant will within a few years require significant improvements or replacement if it continues to operate at high volume levels. Major repairs to a water treatment plant that is thirteen years beyond its useful service life would not be considered a reasonable or cost-effective alternative. If KCUC was to continue operating its own water treatment plant in the long term, it likely must construct a replacement plant.

KCUC has not commissioned a formal study to determine the cost of constructing a new water treatment plant. Given KCUC's present and expected water needs, a replacement water treatment plant would likely have a production capacity of 500,000 gallons per day and an estimated cost of \$5 million. Given the cost and the limited production capacity of the replacement plant, KCUC would likely have difficulty in obtaining funding for such plant. Most financing agencies no longer favor the construction of small water treatment plants as cost-effective and prefer smaller water utilities to seek regional solutions through long term water purchase contracts with water suppliers that have available capacity to serve the water utility's needs.

b. KCUC does not intend to decommission the water treatment plant in the near future. However, it intends to reduce the plant's use and is considering placing the plant into reserve status, which will enable the plant to continue to be available in the

event of emergencies. As the water treatment plant and KCUC's offices are located in the same building, KCUC will be actively maintaining the plant facilities.

- c. KCUC has not established a retirement date for its water treatment plant. However, given that the plant is thirteen years beyond its useful service life, KCUC recognizes that the plant's condition may require its retirement at some point. It has not conducted a formal assessment of the potential retirement costs.