



LAURENS COUNTY WATER & SEWER COMMISSION

FINAL WATER AND WASTEWATER CAPACITY FEE REPORT

Executive Summary

December 14, 2021



EXECUTIVE SUMMARY

In August 2021, the Laurens County Water and Sewer Commission (LCWSC) engaged Confluence Consulting, LLC (Confluence) to conduct a Capacity Fee Study (Study) to determine cost justified water and wastewater capacity fees in accordance with South Carolina's 1999 Development Impact Fee Act. As part of the Study, LCWSC management developed a 20-year water and wastewater capital improvements plan (CIP) that includes a variety of capital projects required to provide additional capacity to meet increased demands for water and wastewater services associated with anticipated customer growth. LCWSC approved the CIP at the November 23, 2021, Commission Meeting. The water and wastewater capacity fees associated with this CIP were presented at the same November 23, 2021, meeting and the recommended Capacity Fees were adopted at the December 14, 2021, Commission meeting, effective January 1, 2022.

In general, capacity fees are defined as one-time capital recovery charges assessed against new development as a way to recover a proportional share of the cost of capital facilities constructed to provide service capacity for new customers. Numerous approaches to determining capacity fees have been adopted by water and wastewater utilities across the country. The major goal in selecting a capacity fee methodology is to select an approach which provides equity to existing and future customers and is legally defensible.

1. Capital Improvements Plan

Although not expressly subject to the State's impact fee legislation, LCWSC has determined to have a revised CIP in place before updating their capacity fees. The CIP is a multi-year schedule that lays out a series of water and wastewater capital projects and costs over a twenty-year capital planning period (FY 2023 through FY 2042). The CIP provides a specific plan for how LCWSC expects to expand or construct its facilities and services to meet the demands of existing and/or new population and businesses.

A. Water CIP

In order to secure a long-term treated water supply source and provide water service to new and growing areas over the next 20 years and beyond, LCWSC has constructed the 6.0 MGD Lake Greenwood Water Treatment Plant (WTP) and a variety of water line, booster pump, and storage capacity that will begin operations sometime in mid FY 2022. The estimated cost of the treatment facility on Lake Greenwood is \$35.3 million and required distribution improvements at an estimated cost of \$21.0 million to transport water to LCWSC's existing distribution network. Table ES-1 provides a detailed breakdown of the estimated final costs and funding sources of the approximately \$53.3 million Lake Greenwood WTP project.

Table ES-1: Summary of FY 2022 Greenwood Water Treatment and Distribution Project

Water System Facilities	USDA Loans (2020A-F)	Grants	LCWSC	Total
Treatment, Intake & Raw Water Line	\$27,117,657.03	\$4,562,515.94	\$3,600,338.44	\$35,280,511.41
Distribution Lines & Tank	<u>\$15,490,272.97</u>	<u>\$3,968,432.07</u>	<u>\$1,554,706.50</u>	<u>\$21,013,411.53</u>
Total Water System Facilities	\$42,607,930.00	\$8,530,948.00	\$5,155,044.94	\$56,293,922.94

The LCWSC continues to plan for water line projects that will extend water services to new service areas and developments. The total costs of the water distribution system improvements included in the CIP is approximately \$27.9 million with approximately \$10.3 million anticipated to be funded through debt with the remaining \$14.6 million to be contributed.

B. Wastewater CIP

LCWSC currently owns and operates the 2.75 MGD Clinton-Joanna wastewater treatment plant (Clinton-Joanna WWTP) and wastewater collection transportation systems for retail wastewater customers located in Laurens County. Given the very high cost of installing a wastewater collection system and the rural nature of Laurens County, wastewater service connected to the Clinton-Joanna WWTP is currently only provided in the areas in and around the City of Clinton, the community of Joanna, and the Laurens County Hospital.

To provide service to new or growing areas within the wastewater service area, the LCWSC has scheduled improvements and upgrades to the Clinton-Joanna WWTP related to sludge handling capabilities. In addition, LCWSC has planned improvements and upgrades to various wastewater lift stations, gravity collection lines that will support the existing 4.60 MGD of capacity and provide an additional 3.30 MGD of collection system capacity.

2. Calculation of Capacity Fees

The most common and accepted methodologies for calculating water and wastewater capacity fees are 1) the system buy-in approach focusing on the cost of buying into the net equity of the existing system, and 2) the marginal incremental cost methodology focusing on the cost of adding additional facilities to serve new customers. The system buy-in approach is appropriate for utility systems with existing capacity already in place to serve new customers, while the marginal incremental cost methodology is appropriate for utilities that must provide additional capacity to serve new customers. However, many utilities often

determine capacity fees based on a hybrid approach that recognizes the average cost of the net equity of the existing system and cost of adding additional facilities to serve new customers.

A. Water Capacity Fees

Since the existing system has available capacity to serve new customers, and LCWSC has planned capital projects to extend service into new areas, the water capacity fee is calculated based on a hybrid of the system buy-in approach and the marginal incremental-cost approach. The treatment component of the water capacity fee includes the cost of recently constructed Lake Greenwood WTP and the purchases of capacity from GW. The distribution system component includes the (\$26.9 million) replacement cost new less depreciation (RCNLD) of existing distribution facilities with capacity available to serve new customers and approximately \$13.3 million (non-contributed portion) in new infrastructure to expand water service to new service areas.

To ensure new customers are not double charged for the costs of capacity through the capacity fees and rates and charges, a credit is provided for the net present value (NPV) of the principal payments on outstanding and/or planned debt used to fund the facilities recovered through the capacity fees. The net costs of existing and planned facilities are divided by the capacity that those facilities are capable of providing to customers of the LCWSC water system to determine a cost per gallon per day (gpd) of water system capacity. This cost per gpd is applied to new customers based on the average daily demand that each new customer is anticipated to need based on meter size.

The updated cost justified water capacity fees per meter size determined as part of this study are presented in Table ES-2.

Table ES-2 Updated Cost Justified Capacity Fee Per Meter Size

Meter Size	Average Use	ERU Factor	Distribution	Treatment	Combined
3/4-inch	300	1.00	\$1,045	\$607	\$1,652
1-inch	900	3.00	\$3,135	\$1,821	\$4,956
1.5-inch	1,500	5.00	\$5,225	\$3,035	\$8,260
2-inch	4,200	14.00	\$14,630	\$8,498	\$23,128
3-inch	8,000	26.67	\$27,867	\$16,187	\$44,053
4-inch	31,600	105.33	\$110,073	\$63,937	\$174,011

Since the water distribution is a consolidated system, all new water customers will benefit from and pay for both the distribution and treatment components of the water capacity fee.

NOTE: *On December 14, 2021, the LCWSC Board of Commissioners adopted a water capacity fee for new ¾-inch meter customers below the \$1,652 full cost justified water capacity fee (\$1,045 distribution component and \$607 treatment component) determined as part of this analysis. While the Rational Nexus requires that the amount of the capacity fee not exceed the cost to provide capacity to accommodate growth, policy makers may elect to adopt capacity fees that are below the full cost fees. To maintain*

affordable housing and competitiveness with other local utilities, the LCWSC adopted a water capacity fee of **\$1,400** for new ¾-inch meter customers (\$800 distribution component and \$600 treatment component).

For new customers with meters larger than ¾-inch meters, the LCWSC also adopted capacity fees slightly (rounded to the nearest \$10) below the full cost justified fees determined as part of this analysis. Table ES-3 presents the water capacity fees adopted by the LCWSC.

Table ES-3: Approved Water Capacity Fees Per Meter Size

Meter Size	Distribution	Treatment	Combined
¾-inch	\$800	\$600	\$1,400
1-inch	\$3,130	\$1,820	\$4,950
1.5-inch	\$5,220	\$3,030	\$8,250
2-inch	\$14,630	\$8,490	\$23,120
3-inch	\$27,860	\$16,180	\$44,040
4-inch	\$110,070	\$63,930	\$174,000

B. Wastewater Capacity Fees

The wastewater capacity fee is also calculated based on a hybrid of the system buy-in approach and the marginal incremental cost approach. As with water, the two components for the wastewater capacity fee consist of the collection system and treatment plant. The treatment component of the wastewater capacity fee includes the \$15.3 million RCNLD of the Clinton-Joanna Wastewater Treatment Plant (WWTP) and a planned upgrade to the facilities sludge handling capabilities. The collection system component includes the \$1.0 million RCNLD of existing collection facilities with capacity available to serve new customers and approximately \$24.5 million (non-contributed portion) in new infrastructure to extend sewer service to new service areas. Those new customers connecting to a segment of the LCWSC wastewater collection system not served by the Clinton-Joanna WWTP will only be assessed the collection component of the wastewater capacity fee.

A credit is provided for the NPV of the principal payments on outstanding debt used to fund the facilities recovered through the capacity fees. The net costs of existing facilities are divided by the capacity that those facilities are capable of providing to customers of the LCWSC wastewater system to determine a cost per gallon per day (gpd) of wastewater system capacity. This cost per gpd is applied to new customers based on the average daily demand that each new customer is anticipated to need based on meter size.

The updated cost justified water capacity fees per meter size determined as part of this study are presented in Table ES-4.

Table ES-4: Updated Cost Justified Wastewater Capacity Fee Per Meter Size

Meter Size	Average Use	ERU Factor	Collection	Treatment	Combined
3/4-inch	300	1.00	\$659	\$1,425	\$2,084
1-inch	900	3.00	\$1,977	\$4,275	\$6,252
1.5-inch	1,500	5.00	\$3,295	\$7,125	\$10,420
2-inch	4,200	14.00	\$9,226	\$19,950	\$29,176
3-inch	8,000	26.67	\$17,573	\$38,000	\$55,573
4-inch	31,600	105.33	\$69,415	\$150,100	\$219,515

Since the collection system consist of four segregated systems with customers receiving treatment from other utilities, some new customers will only benefit from the LCWSC collection system and will only be charged the collection component of the LCWSC wastewater capacity fee. These new customers will be charged for treatment capacity from those utilities providing treatment services if applicable.

NOTE: On December 14, 2021, the LCWSC Board of Commissioners adopted a wastewater capacity fee for new ¾-inch meter customers below the \$2,084 full cost justified wastewater capacity fee (\$659 collection component and \$1,425 treatment component) determined as part of this analysis. While the Rational Nexis requires that the amount of the capacity fee not exceed the cost to provide capacity to accommodate growth, policy makers may elect to adopt capacity fees that are below the full cost fees. To maintain affordable housing and competitiveness with other local utilities, the LCWSC adopted a wastewater capacity fee of **\$1,500** for new ¾-inch meter customers (\$500 collection component and \$1,000 treatment component).

For new customers with meters larger than ¾-inch meters, the LCWSC also adopted capacity fees slightly (rounded to the nearest \$10) below the full cost justified fees determined as part of this analysis. Table ES-5 presents the wastewater capacity fees adopted by the LCWSC.

Table ES-5: Wastewater Capacity Fees Per Meter Size Approved

Meter Size	Collection	Treatment	Combined
3/4-inch	\$500	\$1,000	\$1,500
1-inch	\$1,970	\$4,270	\$6,240
1.5-inch	\$3,290	\$7,120	\$10,410
2-inch	\$9,220	\$19,950	\$29,170
3-inch	\$17,570	\$38,000	\$55,570
4-inch	\$69,410	\$150,100	\$219,510

A. Comparison of Updated Capacity Fees with Current Capacity Fees

The current water and wastewater capacity fees were adopted November 27, 2012. As such, a primary objective of this Study is to determine updated cost justified water and wastewater capacity fees that reflect its current cost to provide utility capacity. Since the LCWSC adopted water and wastewater capacity fees that are less than the cost justified fees determined as part of this analysis, Table ES-6 compares the

current components of the water and wastewater capacity fees with the components of the approved capacity fees per ERU.

Table ES-6: Comparison of Current and Updated Water and Wastewater Capacity Fees per ERU

	Current	Updated	Change
Water Capacity Fee			
Distribution Component	\$ 400.00	\$ 800.00	\$ 400.00
Treatment Component	\$ 800.00	\$ 600.00	(\$ 200.00)
Total Capacity Fee	\$ 1,200.00	\$ 1,400.00	\$ 200.00
Wastewater Capacity Fee			
Collection Component	\$ 25.00	\$ 500.00	\$ 475.00
Treatment Component	\$ 975.00	\$ 1,000.00	\$ 25.00
Total Capacity Fee	\$ 1,000.00	\$ 1,500.00	\$ 500.00
Combined Capacity Fees	\$ 2,200.00	\$ 2,900.00	\$ 700.00

3. Comparison with Local Communities

One of the LCWSC’s objectives is the development of capacity fees that do not burden economic development. Therefore, a comparison of the LCWSC’s full cost justified and approved water and wastewater capacity fees to similar capacity fees assessed to new customers in local communities provides a benchmark when considering the impact of the capacity fees. Table ES-7 provides a comparison between the LCWSC and eleven other communities in South Carolina of the applicable water and wastewater impact fees for a typical residential customer.

Table ES-7: Comparison of Water and Sewer Capacity Fees with Local Communities

Utility/Community	Utility Capacity Fees (1)		
	Water	Sewer	Total
Mount Pleasant Waterworks	\$ 2,880	\$ 5,140	\$ 8,020
Charleston Water System (CPW)	\$ 3,401	\$ 3,870	\$ 7,271
Greenville Water / ReWa (2)	\$ 2,320	\$ 2,500	\$ 4,820
LCWSC (Full Cost Justified Collection Only)	\$ 1,652	\$ 3,159	\$ 4,811
Powdersville / ReWa (3)	\$ 1,200	\$ 3,400	\$ 4,600
LCWSC (Approved Collection Only)	\$ 1,400	\$ 3,000	\$ 4,400
LCWSC (Full Cost Justified)	\$ 1,652	\$ 2,084	\$ 3,736
LCWSC (Current Collection Only)	\$ 1,200	\$ 2,525	\$ 3,725
Greenwood Public Works	\$ 750	\$ 2,400	\$ 3,150
LCWSC (Approved)	\$ 1,400	\$ 1,500	\$ 2,900
LCWSC (Current)	\$ 1,200	\$ 1,000	\$ 2,200
Greer Public Works	\$ 800	\$ 1,200	\$ 2,000
Grand Strand	\$ 610	\$ 1,350	\$ 1,960
Newberry County Water & Sewer Authority	\$ 780	\$ 803	\$ 1,583
Spartanburg	\$ 675	\$ 850	\$ 1,525
Laurens Public Works	\$ 500	\$ 750	\$ 1,250
Average (Excluding LCWSC)	\$ 1,392	\$ 2,226	\$ 3,618

- (1) Compilation of capacity fees per for residential equivalent customers with 3/4" meter.
- (2) New customers locating in the City of Greenville must pay a water capacity fee to Greenville Water and a new account fee (NAF) of \$2,500 for treatment capacity to ReWa.
- (3) New customers locating in the Powdersville District must pay a water capacity fee to the City, a NAF of \$2,500 for treatment capacity and \$900 for retail collection capacity to ReWa.

Comparing the capacity fees with other representative communities can provide insights regarding a utility’s expansion needs and the pricing policies related to recovering these capital requirements. However, care should be taken in drawing conclusions from such a comparison, as lower fees may not necessarily represent a community with less expansion related capital needs. Some communities may choose not to update their capacity fees often or may choose to adopt capacity fees below the true cost to provide an additional unit of capacity as a result of policy decisions. Other factors also affect the level of these capacity fees including, grant and other contributions, geographical location, anticipated demand, customer constituency, and the fee-setting methodology.