BCRSD
Boone County Regional Sewer District
Clean water for your future

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DATE: April 14th 2022

TO: Board of Trustees

FROM: Lara Florea

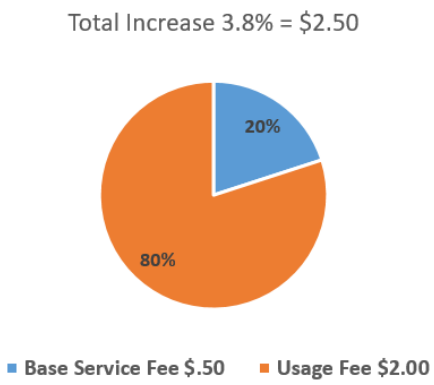
SUBJECT: Connection Fee Study Questions

The 2021 Connection Fee Analysis prepared by Stephen Connelly, was included in the Manager's Report at the March 2022 Board of Trustees Meeting. After review, staff was asked to provide additional information based on the following questions:

1. Did the process to determine the connection fee change from the Analysis in 2015/2016 to the most recent Analysis in 2021?
    - After reviewing both reports, staff does not see a difference in the process. The same Background, Definitions, and Analysis was used. Clarification is pending from Stephen Connelly.

2. Does the Base Service Fee and Usage Fee ever increase at different rates? What does Stephen Connelly use to determine that?
    - Yes, the 2019 URS (User Rate Study) shows the recommended increase for 2022 was 3.8% or $2.50 total. The Usage Fee had a higher percentage of increase than the Base Service Fee:

      Base Service Fee: 20% of Total Increase - $26.65 increased 1.8% ($.50) to $27.15
      Usage Fee: 80% of Total Increase - $39.25 increased 5.1% ($2.00) to $41.25



    - The 2019 URS includes assumptions about how rates were determined, but clarification from Stephen Connelly is needed in order to specifically answer the second part of this question.

3. Compare the revenue in 2021 with the proposed increase. Will that increase have any financial bearing on the BCRSD?

2021 Added Connections	**Current Fee: $1600**	**Using Proposed $2300**	**Using Proposed $2500**
47	$75,200	$108,100	$117,500
Annual Difference		**$32,900**	$42,300

- Using the approximate number of connections in 2021, the increase per year will not have a financial bearing on the total amount of debt.

- However, the increase could make a difference to the Debt Service Coverage ratio. When **$32,900** was added to the 2021 system revenue, the Debt Service Coverage would have increased by **.02%**.

4. Are there Connection Fee metrics in the City of Columbia Sanitary Sewer Utility Rates Study?
   - Yes. Section 6 of the study completed by Stantec in 2021 pertains to Connection Fees and how they are determined for the City. The full section is included below:

   - The methodology used for the City of Columbia, in the Stantec report states that the approach used is: *"to determine the replacement cost of major functional components as the cost basis for the connection fee calculation. This approach is most appropriate for a system with considerable excess capacity such that most new connections to the system will be served by that existing excess capacity."* Also noted: *"there are no significant expansion-related capital projects in the near-term CIP."*

   - The current Connection Fee charge for the City of Columbia is $2,400.00. The proposed Connection Fee charge is $2,797.00.

6. CONNECTION FEES

As part of the Study, Stantec updated the City's sewer connection fees based on the cost of the historical investments made to provide the current infrastructure and capacity. This section of the report presents the results of the update, including background information, an explanation of the calculation methodology employed, results of the analysis, and a comparative connection fee survey for local communities.

6.1 BACKGROUND

The City currently assesses connection fees that are designed to recover the cost of capacity from new connections to the Utility. Connection fees are assessed against new development to cover the cost of providing capital infrastructure needed to serve new developments. Such charges are the mechanism by which new growth can "pay its own way" and minimize the extent to which existing customers of the Utility must bear the cost of new or expanded facilities that are necessitated by new connections. The City assesses wastewater connection fees based on water meter size. This Study provides the basis for updated connection fees as described herein based on the most current local data available.

6.2 METHODOLOGY

There are three primary approaches to the calculation of connection fees. One approach is to determine the replacement cost of major functional components as the cost basis for the connection fee calculation. This approach is most appropriate for a system with considerable excess capacity such that most new connections to the system will be served by that existing excess capacity.

The second approach is to use the portion of the multi-year CIP associated with the provision of additional system capacity by functional system component as the cost basis for the connection fee calculation. This approach is most appropriate where the existing system has virtually no excess capacity to accommodate growth and the CIP has a significant number of projects that provide additional system capacity for each functional system component to be representative of the cost of capacity for an entire system.

The third approach is to use a combination of the two approaches described above. This approach is most appropriate when there is excess capacity in the current system that will accommodate some growth and the CIP includes some projects that will provide additional system capacity but does not necessarily have a sufficient number of projects in each functional area to be reflective of a total system. Using the combined approach effectively provides connection fees that reflect a weighting of the cost of current excess capacity and the cost of future capacity to be provided in the CIP, both of which will be required to accommodate new connections to the system.

For calculating the City's sewer connection fee, the first approach was used as there is currently capacity to serve new connections and there are no significant expansion-related capital projects in the near-term CIP.

6.3 CALCULATION

Cost Basis

The first step in calculating sewer connection fees was to determine the capacity cost for each major system function: conveyance/pumping and treatment/disposal. The cost basis for this analysis includes the replacement cost new less depreciation (RCNLD) of the City's existing assets, including any major work in progress not already reflected in the City's fixed asset registry.

The RCNLD value for each of the City's existing major sewer components was based upon the City's fixed assets in service as of June 30, 2020, escalated to FY 2020 replacement cost, based upon the change in the Engineering News-Record Construction Cost Index (ENR-CCI) from acquisition date, less any excluded assets[2]. Schedule 1 of Appendix E presents the calculated FY 2020 RCNLD for each of the City's existing assets, or portion thereof, determined as eligible for inclusion in the cost basis of the fees. Fixed assets were allocated by functional component based upon asset description as well as input from City staff.

Once eligible costs were identified for each functional component, an adjustment was made to deduct the outstanding principal associated with the portion of eligible costs that have been and will be funded with debt. This adjustment is applied as a credit to the cost basis of the plant in service value. Upon connecting to the sewer system, new connections will begin to use sewer services and will pay the rates associated with those services. The rates for those services recover the principal and interest payments (debt service) associated with the debt incurred to fund the capital costs of the sewer system. Therefore, because debt service is recovered in rates and in order to avoid a double recovery of those capital costs in both connection fees and rates, a credit was calculated based upon the remaining principal portion of outstanding debt service as of June 30, 2020.

In addition, the cost basis includes construction work in progress as of June 30, 2020, per the City's financial statements as of June 30, 2020. Construction work in progress represents costs of assets not yet reflected in the asset listing used for the analysis. These costs were allocated indirectly to system function indirectly based on the existing assets.

System Capacities

The capacities in million gallons per day (MGD) provided by functional component were identified and discussed with City staff. System capacities for conveyance/pumping and treatment/disposal are shown in Schedule 2 of Appendix E.

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[2] Excluded assets are assets that are repair or replacement in nature, assets that were contributed by developers, or minor equipment.

Capacity per Equivalent Residential Unit (ERU)

The capacity costs for each functional component were then divided by the level of service capacity identified for each functional component, reflected in terms of ERUs, to determine the capacity cost per ERU by functional component. The level of service for a sewer ERU was determined based on staff estimates, which reflect the typical FY 2020 average monthly flow. Sewer capacity per ERU is shown in Schedule 2 of Appendix E and in Table 6-1 at 300 gallons per day of flow.

6.4 RESULTS

The calculated capacity cost per ERU was escalated by 5.00% to reflect inflation to FY 2022 costs. The resulting sewer connection fee calculation is shown in the following Table 6-1.

Table 6-1: Calculation of Sewer Connection Fee per ERU

	Conveyance / Pumping	Treatment / Disposal	Total
Gross Plant in Service Value	$297,754,847	$102,857,503	$400,612,350
Construction Work in Progress	$6,139,843	$2,120,969	$8,260,812
Gross System Value	**$303,894,689**	**$104,978,473**	**$408,873,162**
Less: Principal Credit	($65,891,057)	($22,761,643)	($88,652,700)
Less: Asset Contributions/Exclusions	($95,066,918)	($1,191,805)	($96,258,724)
Net System Value	**$142,936,714**	**$81,025,024**	**$223,961,738**
Capacity (MGD)	25.22	25.22	
Level of Service (gpd)	300	300	
ERUs	84,067	84,067	
Initial Capacity Cost per ERU	$1,700	$964	$2,664
Escalation Factor to Effective Year			5.00%
Calculated Fee per ERU			**$2,797**
Current Fee per ERU			$2,400
Difference			$397

The current FY 2021 and calculated sewer connection fees for all meter sizes are shown in Table 5-2.

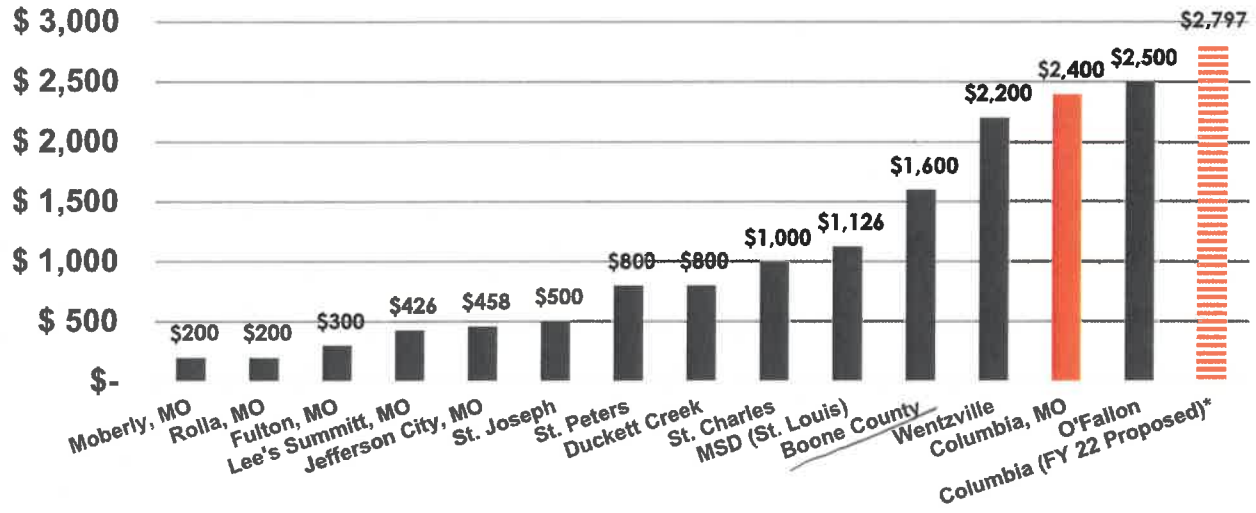
Table 6-2: Current and Calculated Connection Fees

Meter Size	Current Fee	Calculated Fee	Difference
5/8"	$2,400	$2,797	$397
3/4"	$3,600	$4,196	$596
1"	$6,000	$6,993	$993
1.5"	$12,000	$13,986	$1,986
2"	$19,200	$22,378	$3,178
3"	$38,400	$44,755	$6,355
4"	$60,000	$69,930	$9,930
6"	$120,000	$139,860	$19,860
8"	$192,000	$223,776	$31,776
10"	$276,000	$321,678	$45,678
12"	$516,000.00	$601,398	$85,398

6.5 CONNECTION FEE COMPARISON

As part of the Study, Stantec prepared a FY 2021 connection fee survey that compares the current and calculated connection fees for a 5/8" connection to that of neighboring communities, shown in Figure 5-1. As can be seen, the City is at the high end of the surveyed utilities, although significant differences between utilities do exist.

Figure 6-1: Sewer Connection Fee Comparison (5/8" Meter)



It is important to note that connection fee calculations may vary significantly across utilities and no in depth analysis has been performed to identify the methods used in the development of the sewer connection fees imposed by the other public utilities in the survey, nor has any analysis been performed to determine whether 100% of the cost of new facilities is recovered from such fees (or if some percentage of the costs are recovered through user fees). Additionally, no analysis was conducted as to the types of capital facilities currently in service or planned for the utilities surveyed. For example, the cost of sewer effluent disposal utilizing a deep injection well system generally has a higher capital cost per unit of capacity than use of a surface water discharge. Some reasons why impact fees differ among utilities include the following:

- Type and complexity of treatment
- Effluent disposal method
- Density of service area
- Availability of grant funding to finance CIP
- Age of system
- Utility life cycle (e.g., growth-oriented vs. mature)
- Level of service standards
- Administrative policies