

Summary of the 2019 Rate Study

(Rate Study prepared by Jacobs with the Assistance
of Davenport & Company LLC)

Review of Capacity Charges

(Prepared by Jacobs)



April 1, 2019



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1. Summary of the 2019 Rate Study

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Goals & Objectives of the 2019 Rate Study



The 2019 Rate Study was performed by Jacobs (formerly CH2M) with the assistance of Davenport & Company LLC, as Financial Advisor to the City

1. Incorporate the most recent data and information related to improved operations (i.e. billings, collections) and enable the City assess performance of the Utility System.
2. Provide City Council and Management with the most recent data and analytics on which to base rate setting and operating decisions in order to continue to strengthen and maintain the Utility System as a self supporting entity.

Goals & Objectives of the 2019 Rate Study (cont)



3. Refine the appropriate rate structure so that future rate increases and charges are set at a minimum level to maintain long-term financial sustainability and ability to provide an essential service to the citizens of the City.
4. Enable the City to structure the operations so that the users of the Utility system pay for the services provided.
5. Provide the basis for funding mechanism and strategy to finance vital pent up capital needs of the Utility System.
 - Based on the Utility System’s current CIP and assumptions for the next five years, it is anticipated that the City will need to undertake a G.O./Revenue Bond financing for Utility Capital Needs in the second half of calendar year 2019.

Operating Pro Forma – Key Expense Assumptions



- Incorporates:
 - Projected 2.5% Growth in City Utility System expenses; and
 - Projected expense increases (i.e. Debt Service Pass Through) related to \$3.9 Million ARWA and \$44 Million SCWA capital investments.

- Incorporates all projected debt service related to the City's \$43.2 Million capital needs.

- Minimum debt service Coverage of 1.25x of all debt.

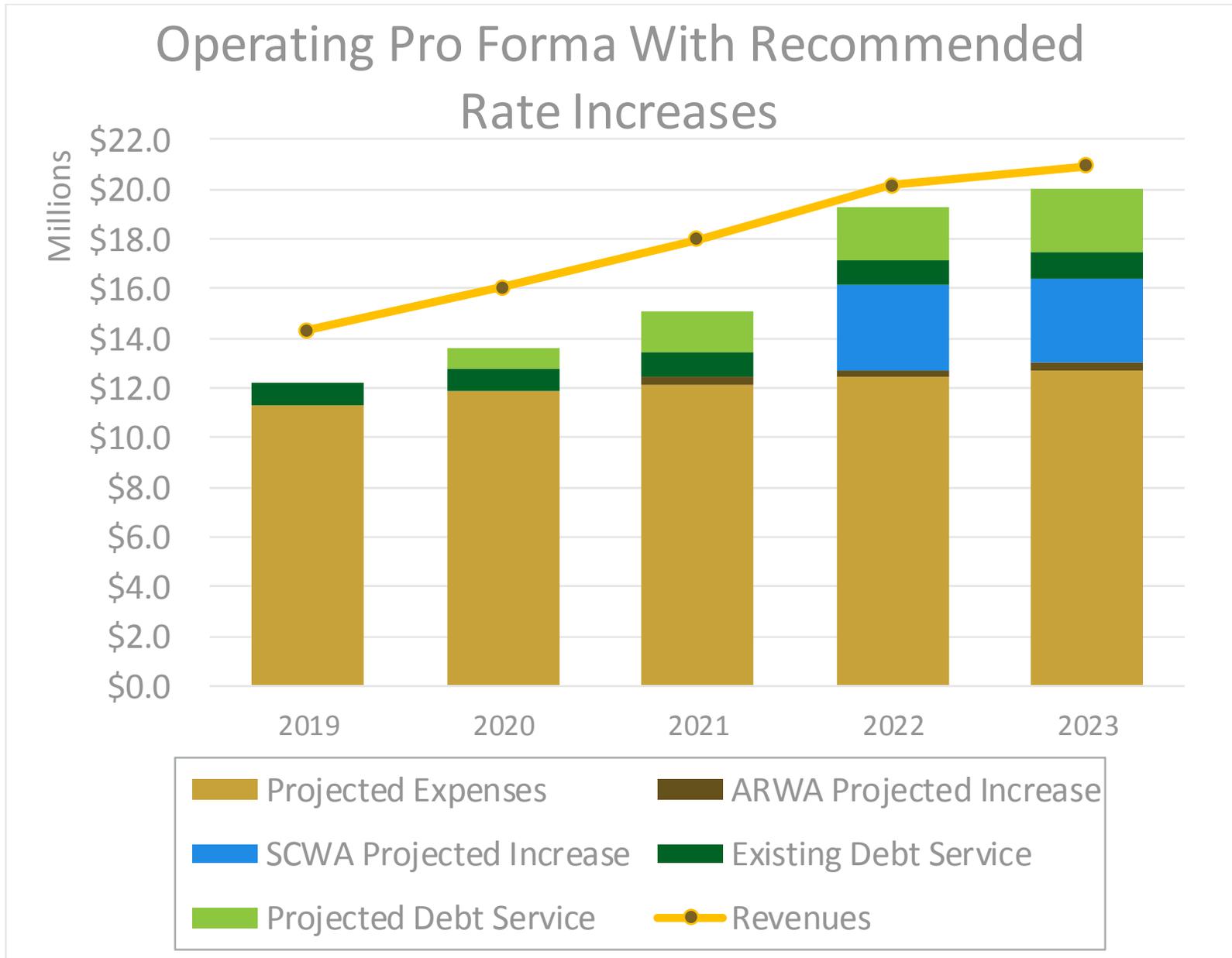


Recommended Rate Increases

- No increase adopted in FY 2019
- Approximately 12.2% from FY 2020 to FY2022 (or 36.6% Total)
- Lower than prior projection of 60% Total over the same time period.

Fiscal Year	2017 Rate Study	2019 Rate Study	
2019	15.00%	NA	
2020	15.00%	12.20%	
2021	15.00%	12.20%	
2022	15.00%	12.20%	
FY 2019-23	60.00%	36.60%	Total Through FY 2023
2023	NA	3.95%	New Projection Year

Operating Pro Forma with Recommended Rate Increases





- Over the next five years the City will have approximately \$91.1 Million of capital needs to be addressed:
 - \$47.9 Million will be financed by ARWA and SCWA and the City's allocable shares will be passed along as a part of the monthly expenses payments per separate agreements.
 - \$43.2 Million will need to be financed by the City and cause debt service payments to increase to a projected level of \$3.6 Million per year.

Conclusions (cont)



- The Previous 2017 Rate Study recommended rate increases of 15% per year over four years (FY2019 through FY 2022) totaling 60% over four years.

- Based on the 2019 Rate Study, over the same four years (FY2019 through FY 2022) recommended rate increases total 36.6%.
 - It is important to note that the City did not implement the 15% Rate increase for FY2019 as recommended in the 2017 Rate Study.

Conclusions (cont)



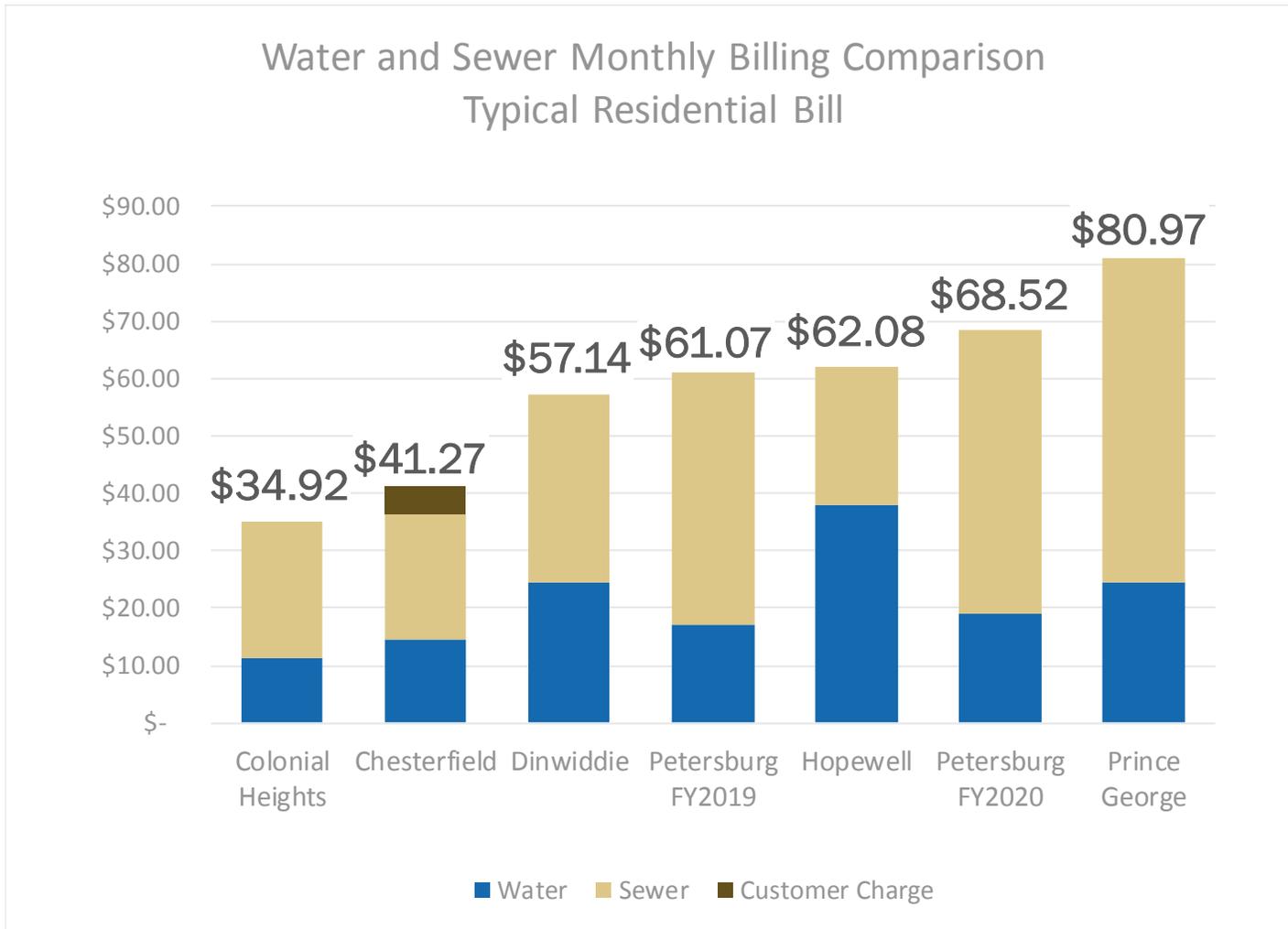
- The recommended rate increases are lower over the same time period due to a combination of factors including:
 - Improved financial performance (billings and collection),
 - Budget discipline, and
 - Reduced debt service coverage assumptions due to the use of “double-barreled” G.O./Utility Revenue Bonds.

- Note: the 2019 Rate Study includes one additional projection year – FY2023 with a recommended 3.95% rate increase.



Rate Comparison – Surrounding Jurisdictions

- Assumes typical residential bill for a 5/8 inch meter and 5,000 gallons usage per month for Petersburg based on the City’s FY2019 rates and recommended FY2020 rates as compared to surrounding jurisdictions.





Rate Comparison – Surrounding Jurisdictions (cont)

- Assumes typical residential bill for a 5/8 inch meter and 5,000 gallons usage per month for Petersburg based on the City's FY2019 rates and recommended FY2020 rates as compared to surrounding jurisdictions.

	Colonial Heights	Chesterfield	Dinwiddie	Petersburg FY2019	Hopewell	Petersburg FY2020	Prince George
Water	\$ 11.17	\$ 14.56	\$ 24.32	\$ 17.01	\$ 38.02	\$ 19.09	\$ 24.41
Sewer	\$ 23.76	\$ 21.64	\$ 32.82	\$ 44.06	\$ 24.06	\$ 49.43	\$ 56.56
Customer Charge	\$ -	\$ 5.08	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 34.92	\$ 41.27	\$ 57.14	\$ 61.07	\$ 62.08	\$ 68.52	\$ 80.97



EPA Affordability Threshold – FY 2018

- Assumes typical residential bill for a 5/8 meter and 5,000 gallons usage per month in comparison to the EPA Affordability Threshold in terms of a percentage of Median Household Income (MHI)

FY 2018 Rates

	A	B = (Ax12)	C	D = B/C	
	Monthly	Annual	Median	Annual	EPA
	Bill	Bill	Household	Bill as a %	Affordability
			Income (MHI) ⁽¹⁾	of MHI	Threshold ⁽²⁾
Water Service	\$17.01	\$204.12	\$31,798.00	0.64%	2.50%
Sewer Service	\$44.06	\$528.72	\$31,798.00	1.66%	2.00%
Total	\$61.07	\$732.84	\$31,798.00	2.30%	4.50%

1) U.S. Bureau of Census. 21901 Income in the past 12 Months (in 2015 inflation adjusted dollars).

2) ESCM, AWWA, & WEF. 2013 "Affordability Assessment Tool for Federal Water Mandates"

Both Water and Sewer Bills are below their respective EPA Affordability Thresholds.

On a combined basis at 2.30%, the Water and Sewer Bills are below the combined 4.50% Threshold.



EPA Affordability Threshold – FY 2023 Projected

- Assumes typical residential bill for a 5/8 meter and 5,000 gallons usage per month in comparison to the EPA Affordability Threshold in terms of a percentage of Median Household Income (MHI)

FY 2023 Rates

	A	B = (Ax12)	C	D = B/C	
	Monthly	Annual	Median	Annual	EPA
	Bill	Bill	Household	Bill as a %	Affordability
			Income (MHI) ⁽¹⁾	of MHI	Threshold ⁽²⁾
Water Service	\$24.98	\$299.76	\$31,798.00	0.94%	2.50%
Sewer Service	\$64.70	\$776.40	\$31,798.00	2.44%	2.00%
Total	\$89.68	\$1,076.16	\$31,798.00	3.38%	4.50%

1) U.S. Bureau of Census. 21901 Income in the past 12 Months (in 2015 inflation adjusted dollars).

2) ESCM, AWWA, & WEF. 2013 "Affordability Assessment Tool for Federal Water Mandates"

The Water Bill remains below the EPA Affordability Threshold for Water, but the Sewer Bill exceeds its Threshold.

However, on a combined basis at 3.39%, the Water and Sewer Bills are below the combined 4.50% Threshold.



2. Review of Capacity Charges

(Prepared by Jacobs)

Capacity Charge Review and Analysis



Review of Capacity Charges as performed by Jacobs (formerly CH2M).

- Purpose: To review the City's current Water Capacity Charges for residences based on the size of the meter (i.e. 5/8 inch or 1 inch) and develop potential alternative Capacity Charge structures that would be revenue neutral (resulting in no revenue increase or decrease to the City).

- Based on Jacobs Review, the following Options have been identified:
 - Option 1: Same Capacity Charge of All Meter Sizes and Types
 - Option 2: Capacity Charges Based on Meter Capacity assuming a 5/8 Inch Base Meter
 - Option 3: Hybrid Approach assuming 5/8, 3/4 and 1 Inch Meters Pay the Same.

Summary of Options



Water Capacity Charges by Meter Size – Options assumes revenue neutral adjustment and generate approximately \$2.2 Million (included in City’s Budget)

Meter Size	Petersburg Monthly Capacity Charge*	Option 1	Option 2	Option 3
5/8 inch	\$8.84	\$15.60	\$8.83	\$12.48
3/4 inch	\$8.84	\$15.60	\$13.25	\$12.48
1 inch	\$22.12	\$15.60	\$22.08	\$12.48
1-1/2 inch	\$38.67	\$15.60	\$44.15	\$37.44
2 inch	\$70.68	\$15.60	\$70.64	\$59.91
3 inch	\$141.34	\$15.60	\$132.45	\$112.32
4 inch	\$220.86	\$15.60	\$220.76	\$187.21
6 inch	\$441.76	\$15.60	\$441.51	\$374.41
8 inch	\$883.52	\$15.60	\$706.42	\$599.06
10 inch	\$1,369.44	\$15.60	\$1,015.48	\$861.15

* based on Rates and Fees as of July 1, 2017

Advantages and Disadvantages



Option	Advantages	Disadvantages
1. Capacity Charge is the same for all meter sizes and customer types	Avoids different charges for residential properties with different meter sizes	Does not address cost of installation, readiness to serve, and capacity demand based on meter size. Shifts costs to smaller meter sizes.
2. Capacity Charges based on meter capacity factors assuming on 5/8 inch meter	Realigns the capacity charge based on meter capacity.	Does not address different charges for residential properties with different meter sizes, unless City verifies and/or replaces meter greater than 5/8 inches.
3. Hybrid approach assuming 5/8, 3/4, and 1 Inch Meters Pay the Same	Avoids different charges for most of the properties.	Does not address different charges for residential properties with different meter sizes

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