



Loudoun Water

Water & Sewer Rate Study

October 10, 2024



Agenda

1. User Rates

- Existing Structure
- Recommended Rate Adjustments
- Fixed Charges
- Comparisons

2. Reclaimed Water Rates

- Customer Demand
- Recommended Rate Adjustments
- Drivers/Assumptions

3. Availability Charges

- Existing Structure and Methodology
- Recommended Charges and Methodology Adjustments
- Comparisons

4. Other Fees and Charges

5. Schedule for Implementation



User Rates

Existing Rate Structure

Residential Rates

- Water - Fixed quarterly charge plus three usage tiers
 - Tier 1 - 0 to 25,000 gallons per quarter
 - Tier 2 - 25,000 to 50,000 gallons per quarter
 - Tier 3 - Over 50,000 gallons per quarter
- Sewer - Fixed quarterly charge plus usage rate
 - Usage rate capped at winter water consumption plus 3,000 gallons

Commercial Rates

- Water - Fixed quarterly charge based on meter size plus two-tiered usage rate
 - Tier 1 - Based on reserved capacity
 - Tier 2 - Consumption over reserved capacity
- Sewer - Fixed quarterly charge plus usage rate
 - Based on 100% of metered water

Design of Current Water Rate Structure

- Fixed charges should generate 25% to 30% of revenues
- Residential Tiers 1 and 2 plus Commercial Tier 1
 - Revenue should fully fund O&M and debt service
- Residential Tier 3 and Commercial Tier 2
 - “Excess Use - Rented Capacity”
 - Funds 100% of replacement reserve contribution
 - Funds accelerated replacement of water and sewer assets

* Proposed User Rate Adjustments

	2025	2026	2027	2028	2029
Water Rate Increase	7.0%	7.0%	7.0%	4.0%	4.0%
Sewer Rate Increase	7.0%	7.0%	7.0%	4.0%	4.0%
<i>Change in Quarterly Bill*</i>	\$16.83	\$17.94	\$19.29	\$11.64	\$12.17

**Bill change for residential customer using 21,000 gallons per quarter (sewer capped at 17,000 gallons)*

Non-Residential Customer Bill Impacts

	ERCs	Current	2025	2026	2027
School	7.94	\$4,804	\$5,136	\$5,495	\$5,880
<i>Change in Quarterly Bill</i>		-	\$331	\$360	\$385
Restaurant	5.64	\$3,013	\$3,222	\$3,447	\$3,688
<i>Change in Quarterly Bill</i>		-	\$209	\$226	\$241
Data Center	346.97	\$13,190	\$14,105	\$15,093	\$16,149
<i>Change in Quarterly Bill</i>		-	\$915	\$987	\$1,056

Note: There is wide variation in usage and resulting bills for non-residential customers and therefore difficult to demonstrate “typical” non-residential customer.

Proposed Water Fixed Charges

User Rates

Meter Size	Fixed Charges			
	Current	2025	2026	2027
Residential	\$40.15	\$42.96	\$45.97	\$49.19
5/8"	\$40.15	\$42.96	\$45.97	\$49.19
3/4"	\$60.23	\$64.45	\$68.96	\$73.79
1"	\$120.45	\$128.88	\$137.90	\$147.55
1.5"	\$260.98	\$279.25	\$298.80	\$319.72
2"	\$481.80	\$515.53	\$551.62	\$590.23
3"	\$1,063.98	\$1,138.46	\$1,218.15	\$1,303.42
4"	\$1,947.28	\$2,083.58	\$2,229.43	\$2,385.49
6"	\$2,730.20	\$2,921.31	\$3,125.80	\$3,344.61

Proposed Sewer Fixed Charges

User Rates

Meter Size	Fixed Charges			
	Current	2025	2026	2027
Residential	\$40.11	\$42.92	\$45.92	\$49.13
5/8"	\$40.11	\$42.92	\$45.92	\$49.13
3/4"	\$60.17	\$64.38	\$68.89	\$73.71
1"	\$120.33	\$128.75	\$137.76	\$147.40
1.5"	\$260.72	\$278.97	\$298.50	\$319.40
2"	\$481.32	\$515.01	\$551.06	\$589.63
3"	\$1,062.92	\$1,137.32	\$1,216.93	\$1,302.12
4"	\$1,945.34	\$2,081.51	\$2,227.22	\$2,383.13
6"	\$2,727.48	\$2,918.40	\$3,122.69	\$3,341.28

Proposed Consumption Rates (per 1,000 gallons)

Water Consumption Rates	Current	2025	2026	2027
Residential Tier 1 (0 - 25,000 gallons)	\$2.94	\$3.15	\$3.37	\$3.61
Residential Tier 2 (25,001 - 50,000 gallons)	\$8.16	\$8.73	\$9.34	\$9.99
Residential Tier 3 (Over 50,000 gallons)	\$10.93	\$11.70	\$12.52	\$13.40
Commercial Tier 1	\$3.86	\$4.13	\$4.42	\$4.73
Commercial Tier 2	\$6.63	\$7.09	\$7.59	\$8.12
Sewer Consumption Rates	Current	2025	2026	2027
Uniform Rate	\$5.76	\$6.16	\$6.59	\$7.05

* Alternative User Rate Adjustments

	2025	2026	2027	2028	2029
Water Rate Increase	9.0%	7.0%	5.0%	4.0%	4.0%
Sewer Rate Increase	9.0%	7.0%	5.0%	4.0%	4.0%
<i>Change in Quarterly Bill*</i>	<i>\$21.59</i>	<i>\$18.31</i>	<i>\$14.16</i>	<i>\$11.64</i>	<i>\$12.17</i>

**Bill change for residential customer using 21,000 gallons per quarter (sewer capped at 17,000 gallons)*



Non-Residential Customer Bill Impacts Alternative Rate Adjustments

	ERCs	Current	2025	2026	2027
School	7.94	\$4,804	\$5,237	\$5,603	\$5,880
<i>Change in Quarterly Bill</i>		-	\$432	\$367	\$277
Restaurant	5.64	\$3,013	\$3,284	\$3,514	\$3,688
<i>Change in Quarterly Bill</i>		-	\$271	\$230	\$174
Data Center	346.97	\$13,190	\$14,378	\$15,384	\$16,149
<i>Change in Quarterly Bill</i>		-	\$1,187	\$1,006	\$765

Note: There is wide variation in usage and resulting bills for non-residential customers and therefore difficult to demonstrate “typical” non-residential customer.

Background

Key drivers for the study include:

- Significant capital program (system replacement and expansion)
 - *10-year capital plan of \$1.5 billion*
- Actual cost escalation considerably higher than prior forecasting
 - *Power costs increased 50% (2021 to 2024)*
 - *Chemical costs increased 40% (2022 to 2023)*
- Continued increases in bulk purchase costs from FCWA and DC Water
 - *FCWA purchased water rate increased 42% (2021 to 2024)*
 - *DC Water increase treatment costs increased 36% (2021 to 2024)*
- Funding the repair and replacement reserve

Revenue Requirement Assumptions

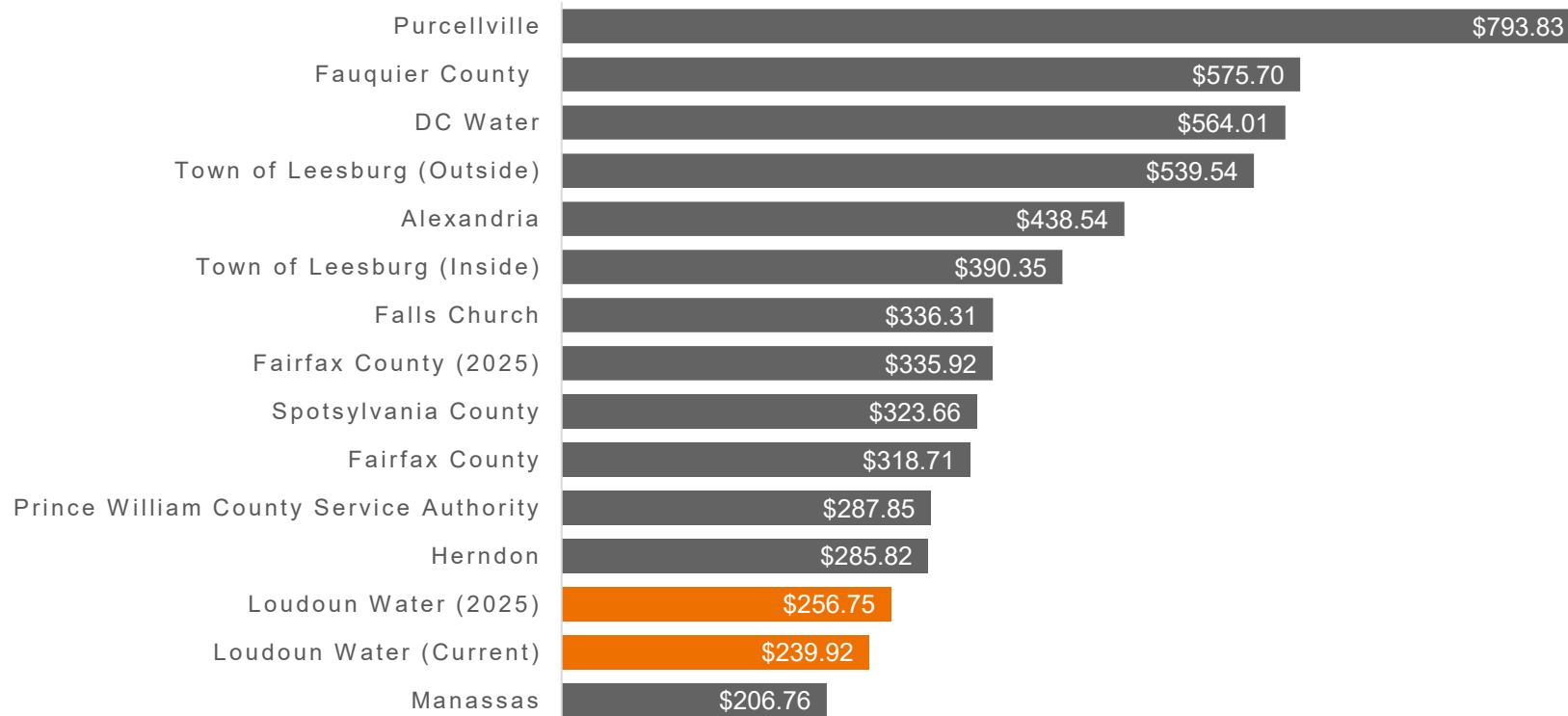
- **Cost Escalation Factors:**
 - Personnel Service - 5.0%
 - Employee Benefits - 5.0%
 - Electric - 5.0%
 - General Operating - 3.0%
- **ERC growth over planning period based on County's projections reduced by 20%**
- **~22% of CIP funded by user rates through 2029**
- **Increased borrowing forecasted during projection period**
 - Estimated ~\$162 million 2025 to 2029

Funding of Repair and Replacement

\$ million	2025	2026	2027	2028	2029
Cash Funding R&R Projects	\$28.21	\$35.82	\$36.15	\$39.97	\$43.89
Contributions to R&R Fund	\$7.11	\$3.23	\$10.39	\$10.03	\$9.54
Total	\$35.32	\$39.05	\$46.54	\$50.00	53.43
% of Annual Depreciation	63.5%	64.3%	70.2%	70.7%	71.1%

Total Quarterly Residential Bill Comparison (21,000 gallons)

COMBINED BILL SURVEY AT 21,000 GALLONS PER QUARTER

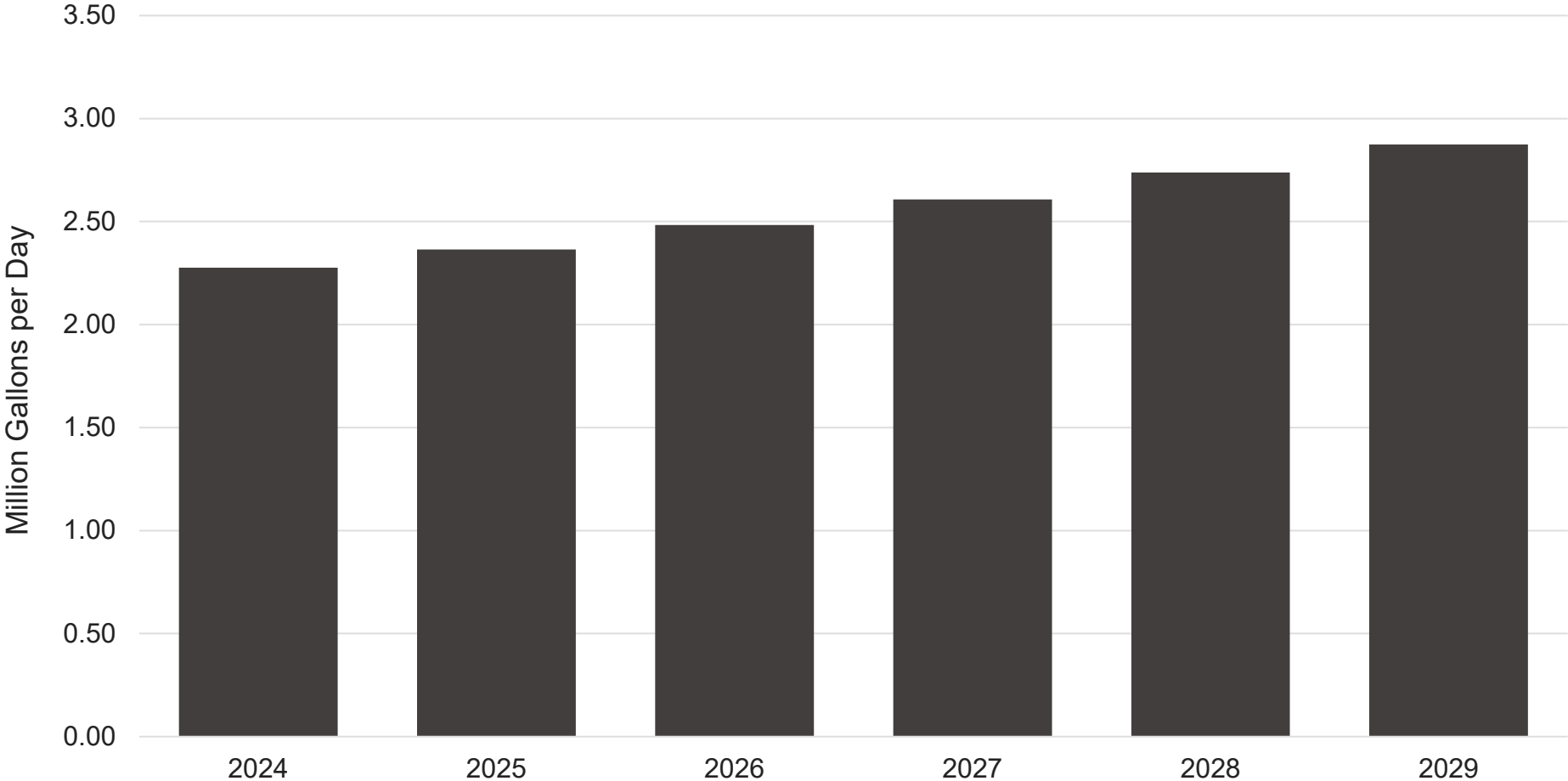




Reclaimed Water

Reclaimed Water Demand Forecast

Reclaimed
Water



* Proposed Reclaimed Rate Adjustments

	2025	2026	2027	2028	2029
Reclaimed Water Rate Increase*	7.0%	7.0%	7.0%	4.0%	4.0%

**Reclaimed cost of service linked to cost at Broad Run WRF - Annual increase corresponds to increase in user rates*

Proposed Reclaimed Water Rates

	Current	2025	2026	2027
Usage Rates per 1,000 gallons	\$1.80	\$1.93	\$2.07	\$2.21

Reclaimed Water Revenue Requirement Drivers and Assumptions

- **Rate increases reflect inflationary increases**
- **Reclaimed Operations:**
 - Two full time employees
 - Chemicals and electricity based on system demands
- **Goal of funding at least 50% of annual depreciation on system assets for the repair and replacement reserve**
 - Rate adjustments allow for funding of 70% of annual depreciation



Availability Charges

Availability Charges

- New customers should pay their fair share of the additional facilities needed to serve their demand. (*growth pays for growth*)
- Recover the costs to provide additional treatment, transmission, distribution, storage, and collection facilities.
- **NOT** calculated to fully fund Capital Improvements Program

Calculation of Charge

- Utilizes a weighted average cost of capacity for all system components:

$$\text{Cost of Capacity per System Component} = \frac{\text{Historical Invest + CIP}}{\text{Existing + Future Capacity}}$$

- Defines the capacity based on number of ERC's at build-out for:
 - Supply and treatment
 - Distribution and collection
 - Pumping
 - Storage
 - Other system improvements
- Summates the costs per each component to arrive at the water and sewer availability charge per ERC

* Availability Charges - One Year Adjustment

Water	Current	2025	2026	2027	2028	2029
5/8"	\$7,846	\$8,451	\$8,705	\$8,966	\$9,235	\$9,512
3/4"	\$11,769	\$12,676	\$13,057	\$13,449	\$13,852	\$14,268
1"	\$23,538	\$25,352	\$26,114	\$26,897	\$27,704	\$28,535
1.5"	\$50,999	\$54,930	\$56,580	\$58,277	\$60,026	\$61,826
2"	\$94,152	\$101,410	\$104,455	\$107,589	\$110,817	\$114,141
<i>Change</i>		7.7%	3.0%	3.0%	3.0%	3.0%

Sewer	Current	2025	2026	2027	2028	2029
5/8"	\$9,519	\$11,575	\$11,923	\$12,280	\$12,649	\$13,028
3/4"	\$14,279	\$17,363	\$17,884	\$18,420	\$18,973	\$19,542
1"	\$28,557	\$34,726	\$35,768	\$36,841	\$37,946	\$39,084
1.5"	\$61,874	\$75,240	\$77,497	\$79,822	\$82,216	\$84,683
2"	\$114,228	\$138,904	\$143,071	\$147,363	\$151,784	\$156,338
<i>Change</i>		21.6%	3.0%	3.0%	3.0%	3.0%



Availability Charges - Recommended Three Year Phase In

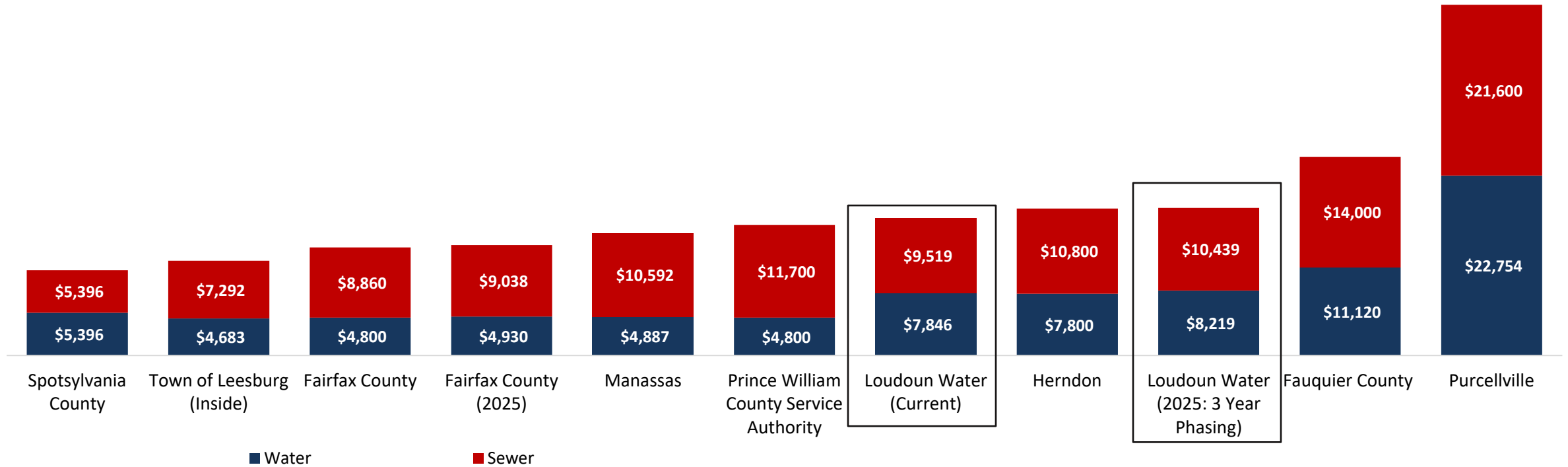
Water	Current	2025	2026	2027	2028	2029
5/8"	\$7,846	\$8,219	\$8,592	\$8,966	\$9,235	\$9,512
3/4"	\$11,769	\$12,329	\$12,888	\$13,449	\$13,852	\$14,268
1"	\$23,538	\$24,657	\$25,776	\$26,898	\$27,704	\$28,535
1.5"	\$50,999	\$53,424	\$55,848	\$58,279	\$60,026	\$61,826
2"	\$94,152	\$98,628	\$103,104	\$107,592	\$110,817	\$114,141
<i>Change</i>		4.8%	4.5%	4.4%	3.0%	3.0%

Sewer	Current	2025	2026	2027	2028	2029
5/8"	\$9,519	\$10,439	\$11,360	\$12,280	\$12,649	\$13,028
3/4"	\$14,279	\$15,659	\$17,040	\$18,420	\$18,973	\$19,542
1"	\$28,557	\$31,317	\$34,080	\$36,840	\$37,946	\$39,084
1.5"	\$61,874	\$67,854	\$73,840	\$79,820	\$82,216	\$84,683
2"	\$114,228	\$125,268	\$136,320	\$147,360	\$151,784	\$156,338
<i>Change</i>		9.7%	8.8%	8.1%	3.0%	3.0%

Combined average increase of 7% per year (2025 to 2027)

Availability Charge Comparison

Benchmarking





Other Fees and Charges

Other Fees and Charges

- As part of the rate study, the ancillary fees have been evaluated
 - Fees are based on materials and labor both of which are increasing due to inflation
- Recommend ancillary fee structure be updated for several fees
 - Inspection fee minimum replaced with a base charge plus linear feet
 - Update percentage applied for plan review and inspections fees for nonlinear projects
 - Update connection charge to a meter charge (cover cost of meter handling, labor and materials) + cost of the meter
- Recommend fees be updated based on costs for 2025 and then increased by 3% in 2026 and 2027 to reflect inflation

Other Fees and Charges

Other Fees and Charges

Plan Review	Current		1/1/2025		1/1/2026		1/1/2027	
	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot
Water	\$560	\$0.44	\$610	\$0.51	\$630	\$0.53	\$650	\$0.54
Sewer	\$560	\$0.56	\$610	\$0.65	\$630	\$0.67	\$650	\$0.69
Reclaimed Water	\$560	\$0.44	\$610	\$0.51	\$630	\$0.53	\$650	\$0.54

Inspection	Current		1/1/2025		1/1/2026		1/1/2027	
	Minimum	Per Linear Foot*	Base Charge	Per Linear Foot**	Base Charge	Per Linear Foot**	Base Charge	Per Linear Foot**
Water	\$360	\$3.57	\$350	\$3.63	\$360	\$3.74	\$370	\$3.85
Sewer	\$390	\$3.92	\$350	\$3.99	\$360	\$4.11	\$370	\$4.23
Reclaimed Water	\$360	\$3.57	\$350	\$3.63	\$360	\$3.74	\$370	\$3.85

*For each linear foot over the minimum (100 linear feet)

**For each linear foot

Record Drawing	Current		1/1/2025		1/1/2026		1/1/2027	
	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot
Water	\$560	\$1.38	\$610	\$2.19	\$630	\$2.26	\$650	\$2.32
Sewer	\$560	\$1.65	\$610	\$1.88	\$630	\$1.94	\$650	\$1.99
Reclaimed Water	\$560	\$1.38	\$610	\$2.19	\$630	\$2.26	\$650	\$2.32

CCTV Fee	Current		1/1/2025		1/1/2026		1/1/2027	
	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot	Base Charge	Per Linear Foot
All Services	\$660	\$1.51	\$700	\$1.65	\$720	\$1.70	\$740	\$1.75

Plan Review and Inspection Fees - Nonlinear Projects*	Current	1/1/2025
Up - \$5M	2.5%	2.5%
Over \$5M - \$10M	2.5%	2.0%
Over \$10M - \$15M	2.5%	1.5%
Over \$15M	2.5%	1.0%

*Percentage of total project cost

Other Fees and Charges

Other Fees and Charges

Fee Description	Current	1/1/2025	1/1/2026	1/1/2027
Hydrant Flow Test	\$350	\$500	\$520	\$540
Meter Charge (Residential) ⁽¹⁾	\$87	\$260	\$270	\$280
Meter Charge (Commercial) ⁽¹⁾	\$132	\$410	\$420	\$430
Grinder Fees	\$7,500	\$9,500	\$9,790	\$10,080
3-inch hydrant meter deposit	\$1,720	\$2,030	\$2,090	\$2,150
Hydrant Meter Calibration	\$250	\$275	\$280	\$290
Advanced Payment Fee	\$200	\$200	\$200	\$200
Meter Keys	\$75	\$150	\$155	\$159
Hydrant Wrench	\$35	\$70	\$72	\$74
Meter Test	\$50	\$60	\$60	\$60
Leak Check	\$45	\$55	\$55	\$55
Failed Meter Install	\$45	\$55	\$55	\$55
Failed Builder Transfer	\$45	\$55	\$55	\$55
Collection Charge	\$45	\$55	\$55	\$55
After Hours Reconnect	\$45	\$55	\$55	\$55
Pressure Check	\$45	\$55	\$55	\$55
Move In/Hydrant Permit Fee	\$30	\$45	\$45	\$45
Minimum hydrant use charge	\$10	\$15	\$15	\$15
Hydrant Meter Truck Inspection	\$5	\$10	\$10	\$10
Hydrant Meter Missed Reading Fee	\$100	\$125	\$129	\$133
On-Site Truck Inspection Fee (hydrant meter program)	\$30	\$55	\$55	\$55

(1) Currently connection charge

Sample Developments

Other Fees and Charges

	Residential	Commercial	Data Center	Data Center*
ERCs	1.0	6.5	74.3	21.5

Current Development Charges				
Design and Construction Fees	\$1,389	\$20,283	\$38,790	\$49,259
Meter Charges	\$424	\$2,064	\$14,596	\$21,028
Availability Charge	\$17,364	\$50,999	\$1,290,966	\$373,016
Total	\$19,177	\$73,346	\$1,344,352	\$443,303

Proposed 2025 Development Charges				
Design and Construction Fees	\$1,672	\$23,020	\$44,672	\$56,686
Meter Charges	\$905	\$2,575	\$18,255	\$26,170
Availability Charge	\$18,658	\$53,424	\$1,438,143	\$432,831
Total	\$21,235	\$79,019	\$1,501,070	\$515,687

*Data center with reclaimed water

Schedule for Implementation

To facilitate a January 1, 2025 effective date:

- October 2024 - adopt Resolution of Intent
 - ✓ assume advertising 10/18 and 10/25
- November 2024 - Public Hearing
- NLT December 2024 - adopt final Rate Resolution
- Rates effective January 2025

Recommended Motion

I move the Board adopt the Resolution of Intent to revise user rates, reclaimed water rates, availability charges and other fees and charges; set a public hearing date of November 14, 2024 at 6 p.m. to present proposed rates to all interested parties; advertise the proposed revisions as is required; and implement the customer communication plan.



Questions?