



Duckett Creek Sanitary District Scenarios

January 19, 2023





Agenda

Evaluate District Needs and Recommended Rates

- This the 2nd year that the District has hired Stantec to develop a rate model to address current and future District obligations
- Review financial plan scenarios and rate models to achieve a reasonable approach to implementing a rate increase. This included evaluating timing of rate increases and whether a single or multiple year approach is preferable. Parity between residential vs commercial rates was also addressed.
- Provide recommendation to District on implementation of rates for residential and commercial customers.
- Graphical representation of how commercial customers will be affected by the rate increase.
- Rate History Graphs
- Questions?



Rate Model- Stantec

Model Inputs and Projections

- Develop a 30-year capital improvement schedule including existing and future infrastructure and plants (including Hopewell)
- The Hopewell Plant project includes a bond issuance of approximately \$46M in borrowing which represents a \$9M increase from FY 2021 as a result of inflation
 - The bond issuance also includes higher debt issuance costs and a debt service reserve of \$1.5M
- Prepare financial plan required to meet current and future operation, maintenance, and capital costs including future staffing and cash vs debt funding of CIP projects.
 - This includes evaluating the impact of recent trend of increased inflation
- Compile two scenarios based upon varying levels of parity between residential and commercial customers.
 - Commercial customers pay same monthly rate as residential for usage through 6,000 gal.
- In both scenarios, Riverdale and Wyndgate customers stay at current rate until surcharges sunset in FY 2026



Scenario 1: Residential 1-year increase, Commercial parity at 85% by FY24



DUCKETT CREEK SANITARY DISTRICT



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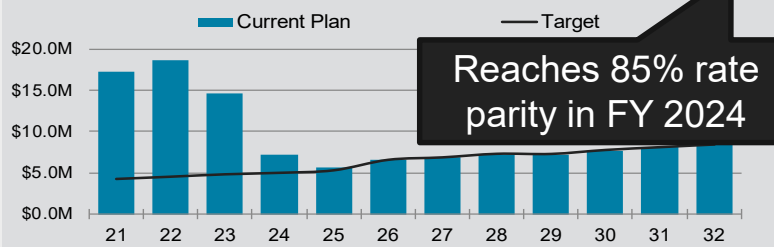
1 year Rate increase

| | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 | FY 2031 | FY 2032 | FY 2025 | FY 2031 |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Residential Fixed Rate Plan | 0.00% | 24.12% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.74% | 3.32% | 24.14% | 33.06% |
| Commercial Usage Rate Plan | 0.00% | 29.35% | 4.56% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.74% | 3.32% | 35.29% | 45.00% |
| Senior-Lien DSC | 2.04 | 1.29 | 1.33 | 1.25 | 1.87 | 1.79 | 1.64 | 1.67 | 1.46 | 1.47 | 1.54 | | |
| All-In DSC | 1.58 | 1.14 | 1.18 | 1.10 | 1.48 | 1.66 | 1.46 | 1.45 | 1.19 | 1.15 | 1.14 | | |
| Single Family Residential Bill | \$21.75 | \$27.00 | \$27.00 | \$27.00 | \$27.00 | \$27.00 | \$27.00 | \$27.00 | \$27.00 | \$28.01 | \$28.94 | | |
| \$ Chg in Res. Bill | | \$5.25 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$1.01 | \$0.93 | | |
| Residential/ Commercial Parity | 78% | 81% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | 85% | | |
| Commercial Rate | \$3.40 | \$4.40 | \$4.60 | \$4.60 | \$4.60 | \$4.60 | \$4.60 | \$4.60 | \$4.60 | \$4.77 | \$4.93 | | |
| \$ Chg in Non-Res. Rate | | \$1.00 | \$0.20 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.17 | \$0.16 | | |

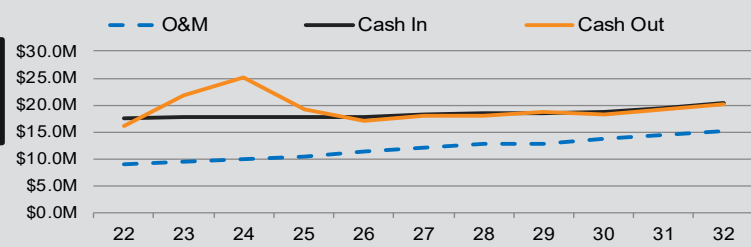
Scenario Manager

Maintains 1.10x minimum debt service coverage

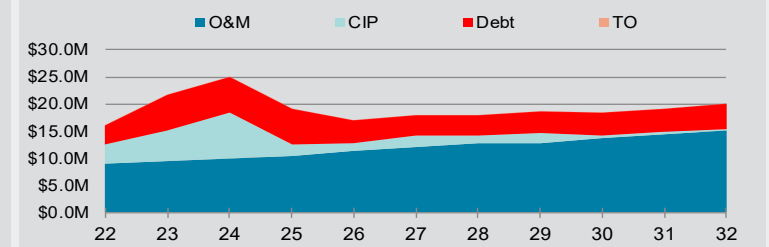
Operating Fund



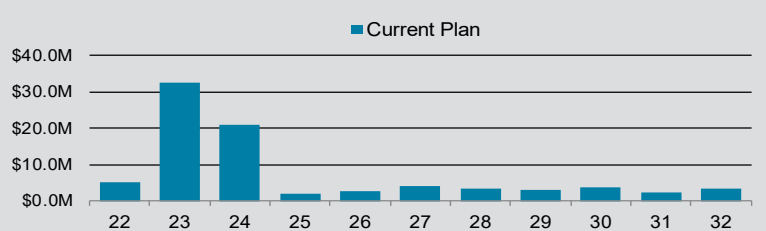
Revenues vs. Expenses



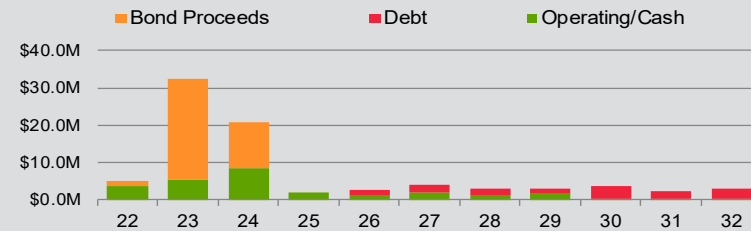
Expenses by Type



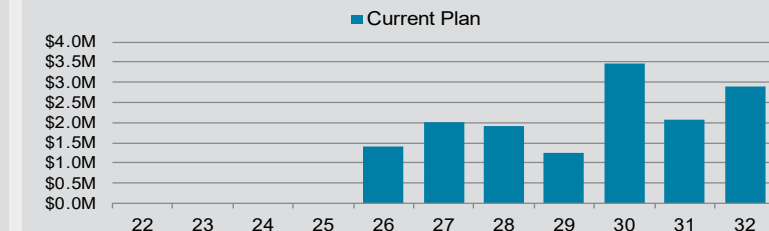
CIP Spending



CIP Funding



Subordinate Borrowing





Scenario 2: Residential 1-year increase, Commercial parity at 100% by FY24



DUCKETT CREEK SANITARY DISTRICT



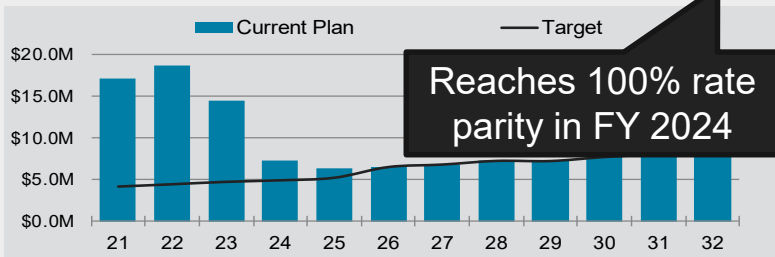
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1 year Rate increase

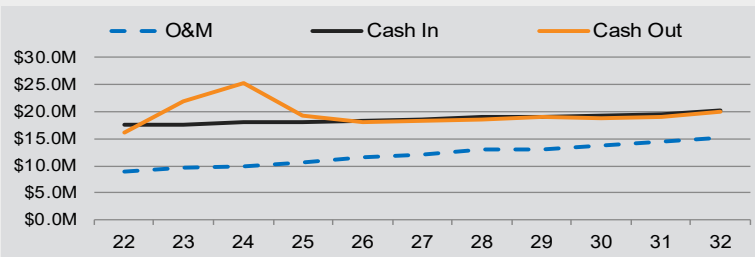
| | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 | FY 2031 | FY 2032 | FY 2027 | FY 2032 |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Residential Fixed Rate Plan | 0.00% | 22.97% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.54% | 22.99% | 27.36% |
| Commercial Usage Rate Plan | 0.00% | 29.35% | 21.64% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 3.54% | 57.35% | 62.94% |
| Senior-Lien DSC | 2.04 | 1.27 | 1.39 | 1.32 | 1.98 | 1.90 | 1.75 | 1.78 | 1.57 | 1.41 | 1.46 | | |
| All-In DSC | 1.58 | 1.12 | 1.22 | 1.16 | 1.60 | 1.82 | 1.63 | 1.63 | 1.36 | 1.18 | 1.15 | | |
| Single Family Residential Bill | \$21.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$26.75 | \$27.70 | | |
| \$ Chg in Res. Bill | | \$5.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.95 | | |
| Residential/ Commercial Parity | 78% | 82% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | | |
| Commercial Rate | \$3.40 | \$4.40 | \$5.35 | \$5.35 | \$5.35 | \$5.35 | \$5.35 | \$5.35 | \$5.35 | \$5.35 | \$5.54 | | |
| \$ Chg in Non-Res. Rate | | \$1.00 | \$0.95 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.19 | | |

Above 1.10x minimum debt service coverage

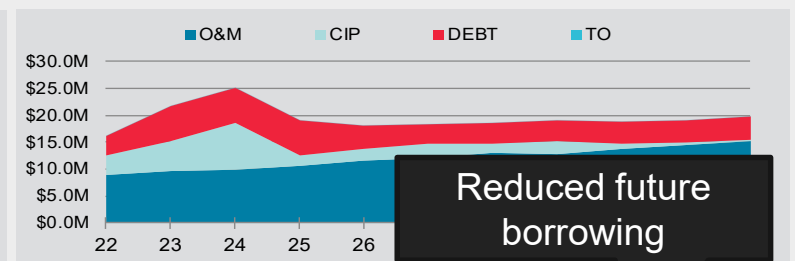
Operating Fund



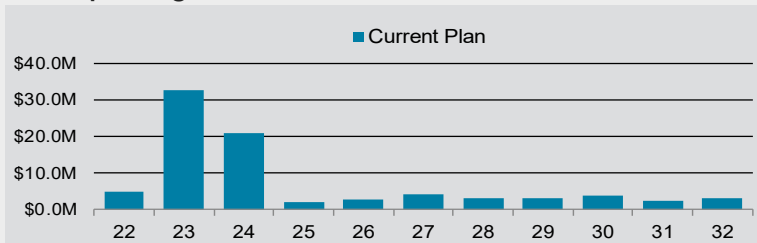
Revenues vs. Expenses



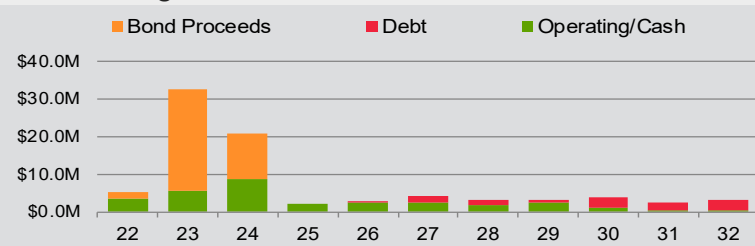
Expenses by Type



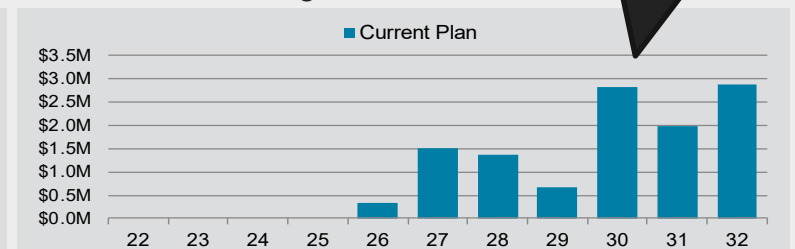
CIP Spending



CIP Funding

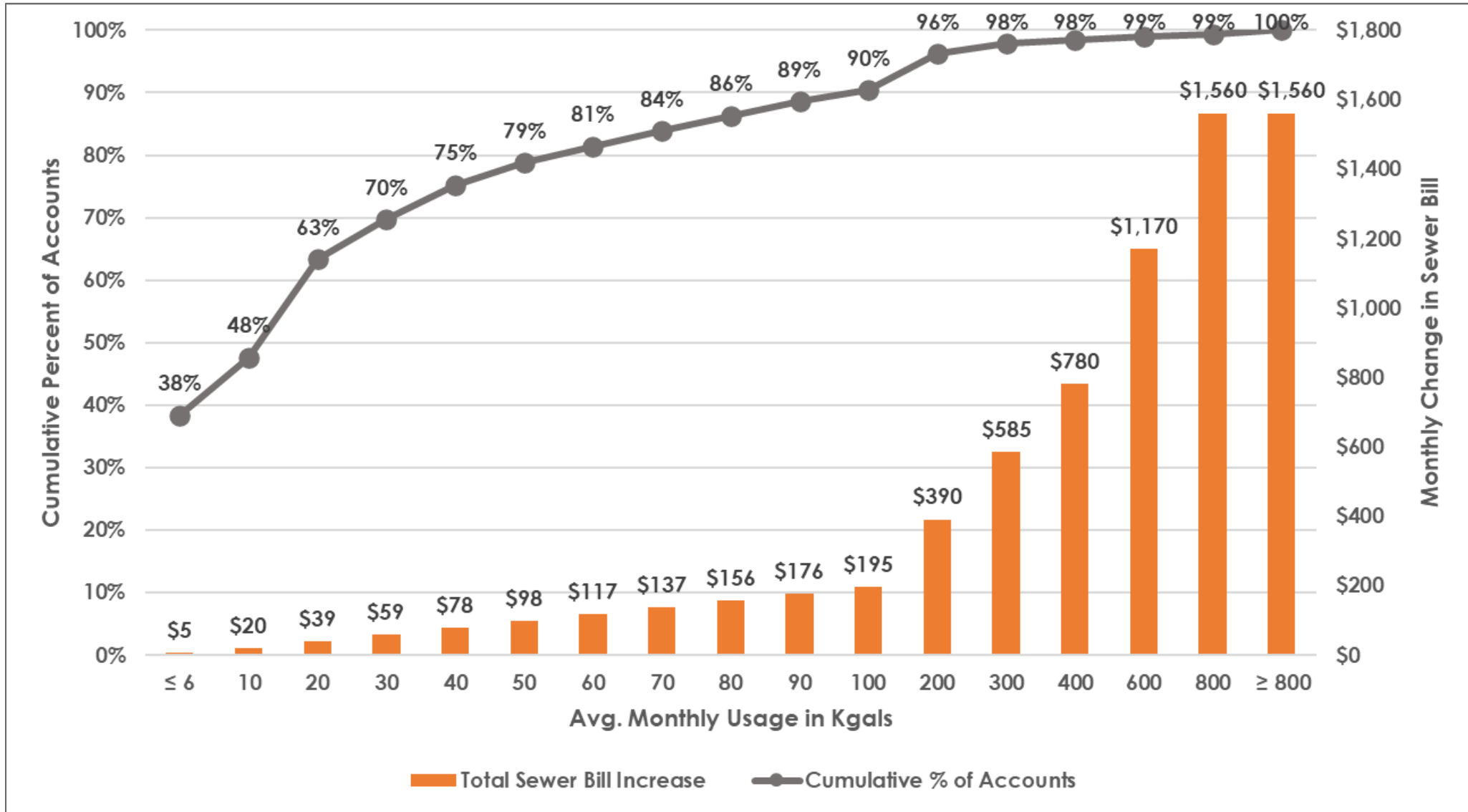


Subordinate Borrowing





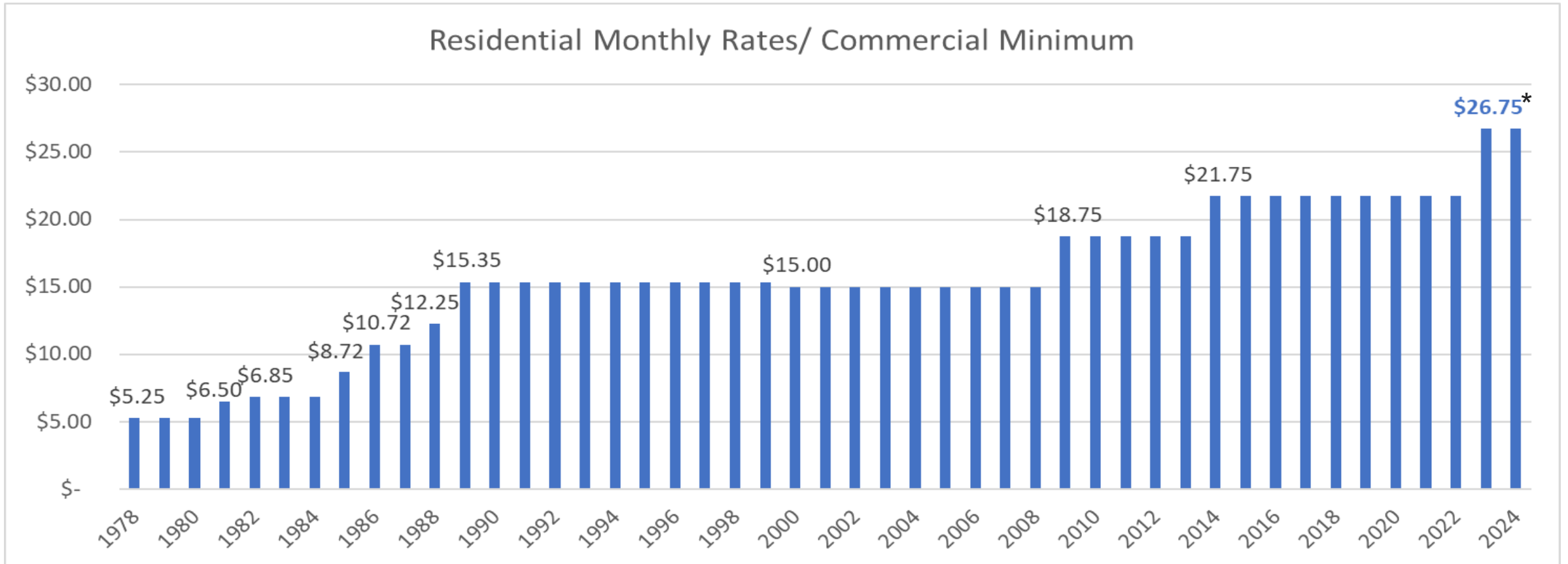
Scenario 2: Commercial Bill Comparison





Duckett Creek Rate History

Including Rate Study Recommendations

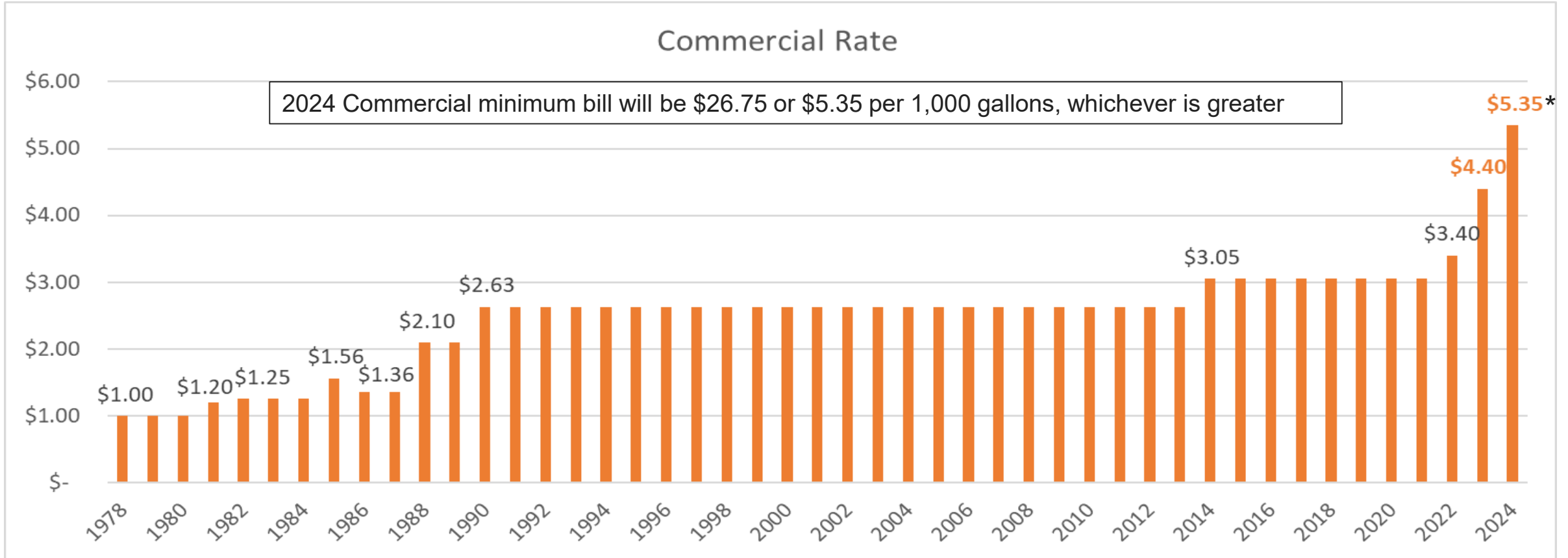


*2024 rates are projected to be maintained until 2032



Duckett Creek Rate History

Including Rate Study Recommendations



*2024 rates are projected to be maintained until 2032



Connection Fees for Hopewell

| Meter size | Meter Equivalent Ratio* | Connection Fees |
|------------|-------------------------|-----------------|
| 3/4" | 1.0 | \$2,000 |
| 1" | 1.67 | \$3,340 |
| 1.5" | 3.33 | \$6,660 |
| 2" | 5.33 | \$10,660 |
| 3" | 11.67 | \$23,340 |
| 4" | 20.00 | \$40,000 |
| 6" | 45.00 | \$90,000 |

* Per AWWA Manual M22 3rd edition, Table 6-1



Questions?

**Residential/ Commercial parity (equal gallons per minimum rate)**

| Year | 2021 | 2022 | 2023 | 2024 |
|--|---------|---------|---------|---------|
| Minimum Bill | \$21.75 | \$21.75 | \$26.75 | \$26.75 |
| Rate per thousand gallons | \$3.05 | \$3.40 | \$4.40 | \$4.40 |
| Commercial minimum gallons | 7131 | 6397 | 6080 | 5000 |
| Residential minimum gallons | 5000 | 5000 | 5000 | 5000 |
| Extra gallons given to commercial each month | 2131 | 1397 | 1080 | 0 |



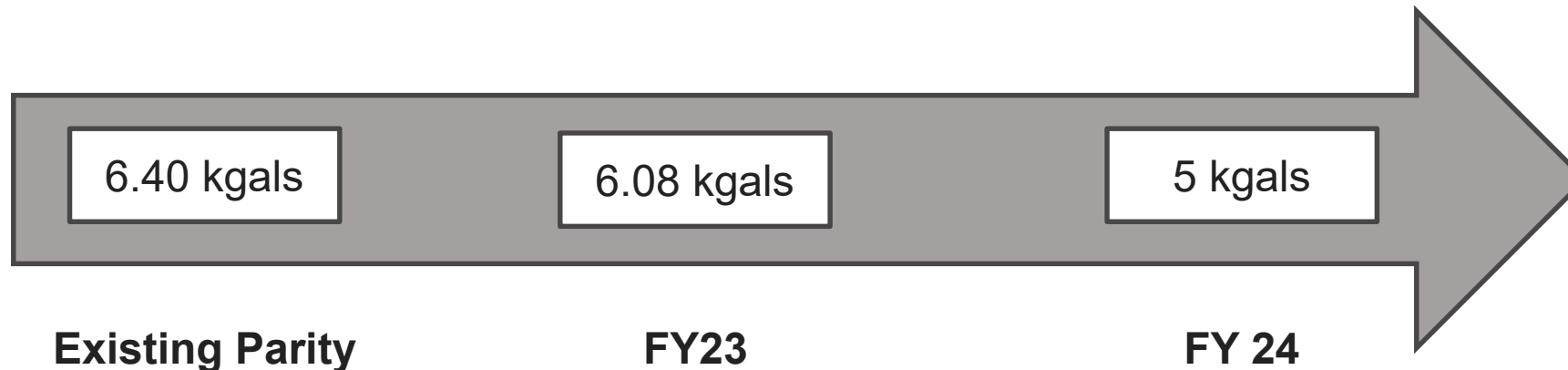
What is our customer parity target?

Current Rate Structure

| Customer Class | Rate Schedule | Existing Parity per kgal |
|----------------|---------------------|---|
| Residential | \$21.75 per account | $\frac{\$21.75}{\$3.40} = 6.40$ kgals per month |
| Commercial | \$3.40 per kgal | |

Target Customer Parity

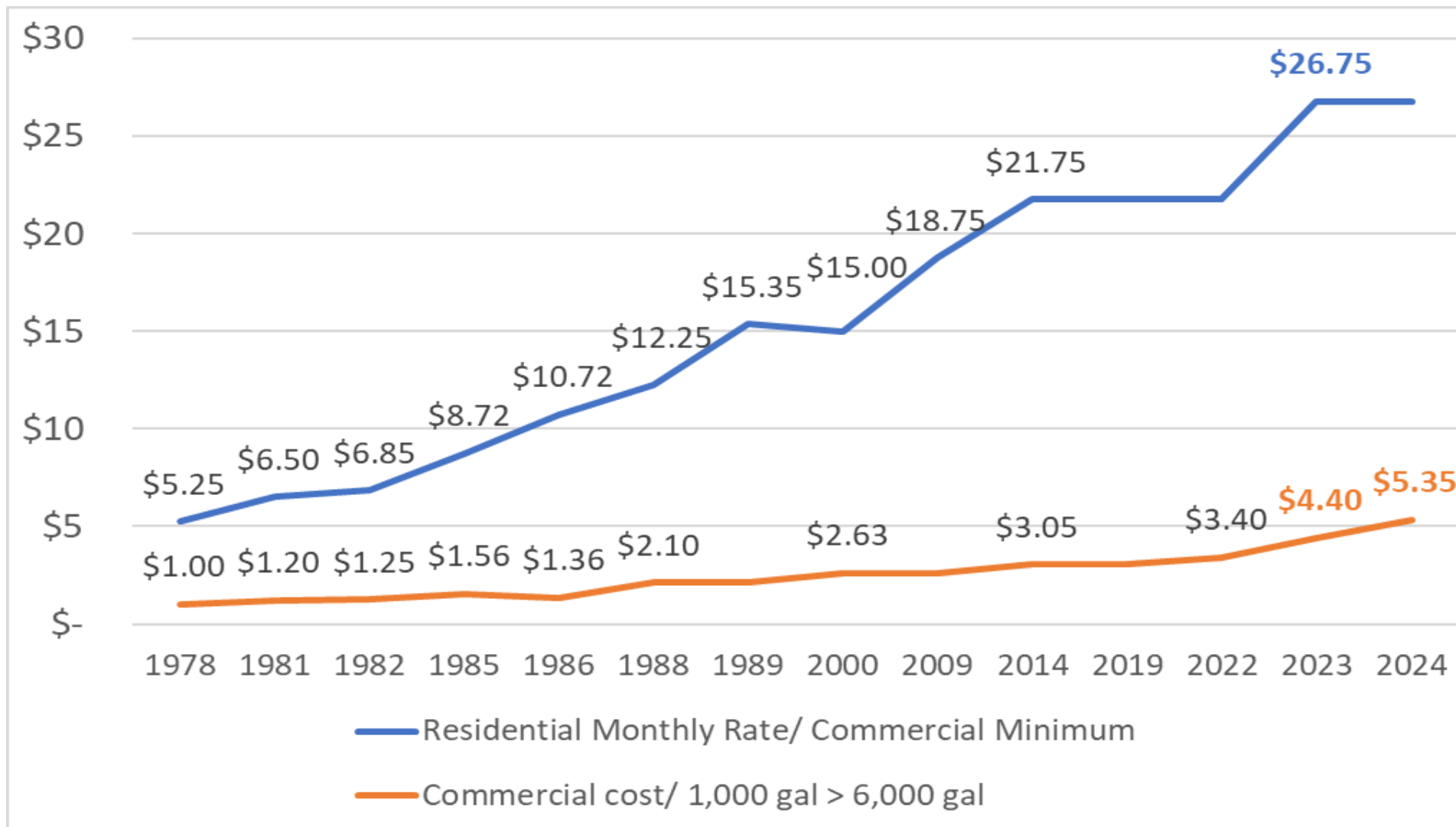
- District's goal is to move closer to desired parity of 5 kgals without significant customer impacts
- Since 5 kgals represents 100% parity, 6 kgals would equal 83.3% parity





Duckett Creek Rate History

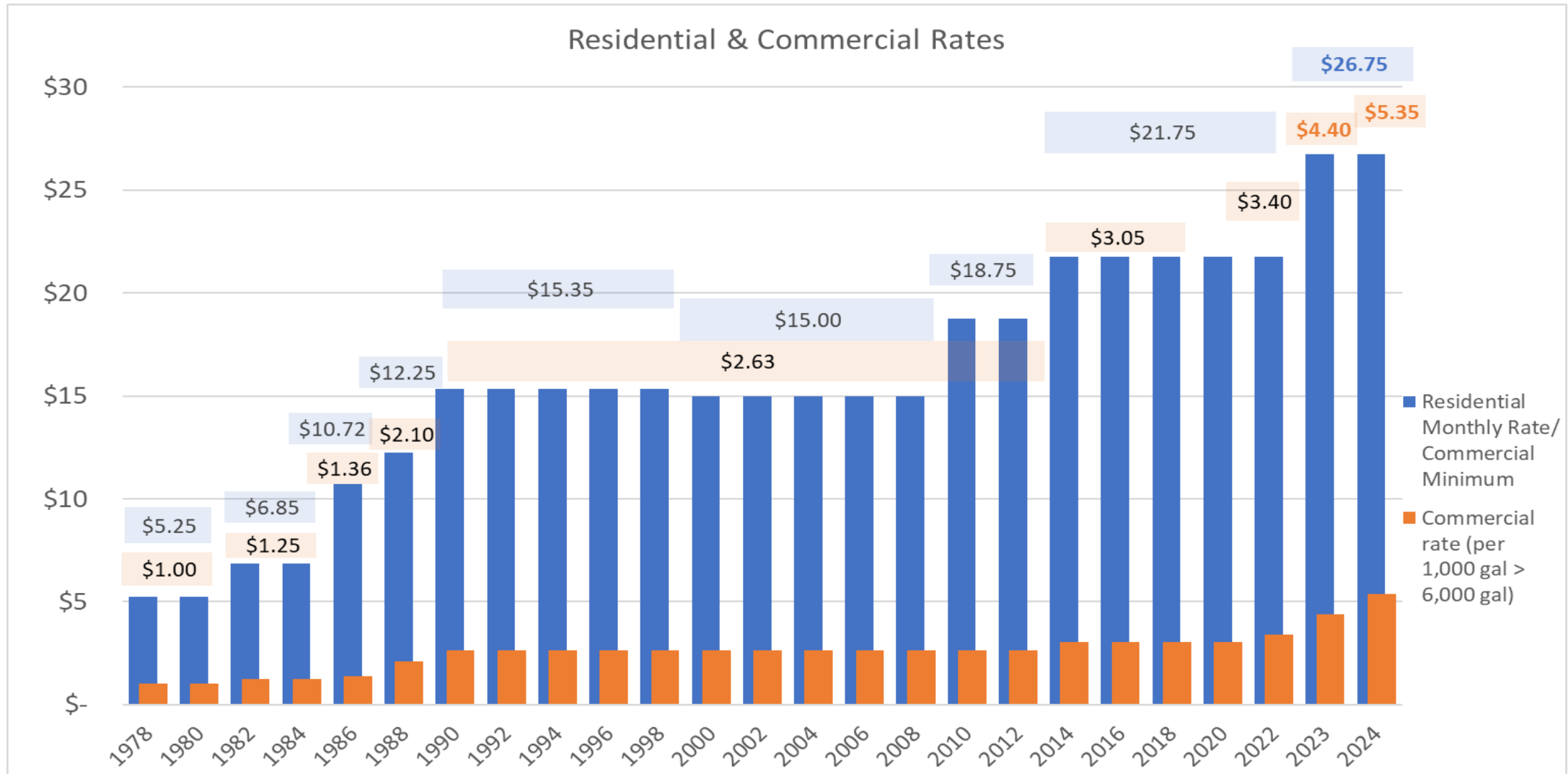
Including Rate Study Recommendations





Duckett Creek Rate History

Including Rate Study Recommendations





CPI-U STL-IL

CPI-W STL-IL

CPI-U

CPI-W

| Year | Annual | | 2000 | 2009 | 2014 | Annual | 2000 | 2009 | 2014 | Annual | 2000 | 2009 | 2014 | Annual | 2000 | 2009 | 2014 | | | |
|------|--------|-------|----------|----------|----------|--------|-------|----------|----------|----------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | | | | | | | | | | | | | | | |
| 1999 | 2.0 | 2.0% | | | | 2.2 | 2.2% | | | 2.2 | 2.2% | | | 2.2 | 2.2% | | | | | |
| 2000 | 3.5 | 3.5% | \$ 15.00 | | | 3.7 | 3.7% | \$ 15.00 | | 3.4 | 3.4% | \$ 15.00 | | 3.5 | 3.5% | \$ 15.00 | | | | |
| 2001 | 2.6 | 2.6% | \$ 15.53 | | | 2.6 | 2.6% | \$ 15.56 | | 2.8 | 2.8% | \$ 15.51 | | 2.7 | 2.7% | \$ 15.53 | | | | |
| 2002 | 1.1 | 1.1% | \$ 15.93 | | | 0.7 | 0.7% | \$ 15.96 | | 1.6 | 1.6% | \$ 15.94 | | 1.4 | 1.4% | \$ 15.94 | | | | |
| 2003 | 2.5 | 2.5% | \$ 16.10 | | | 2.6 | 2.6% | \$ 16.07 | | 2.3 | 2.3% | \$ 16.20 | | 2.2 | 2.2% | \$ 16.17 | | | | |
| 2004 | 4.0 | 4.0% | \$ 16.51 | | | 4.0 | 4.0% | \$ 16.49 | | 2.7 | 2.7% | \$ 16.57 | | 2.6 | 2.6% | \$ 16.52 | | | | |
| 2005 | 3.3 | 3.3% | \$ 17.17 | | | 3.5 | 3.5% | \$ 17.15 | | 3.4 | 3.4% | \$ 17.02 | | 3.5 | 3.5% | \$ 16.95 | | | | |
| 2006 | 1.8 | 1.8% | \$ 17.73 | | | 1.9 | 1.9% | \$ 17.75 | | 3.2 | 3.2% | \$ 17.60 | | 3.2 | 3.2% | \$ 17.55 | | | | |
| 2007 | 2.0 | 2.0% | \$ 18.05 | | | 1.9 | 1.9% | \$ 18.09 | | 2.8 | 2.8% | \$ 18.16 | | 2.9 | 2.9% | \$ 18.11 | | | | |
| 2008 | 2.8 | 2.8% | \$ 18.41 | | | 3.1 | 3.1% | \$ 18.43 | | 3.8 | 3.8% | \$ 18.67 | | 4.1 | 4.1% | \$ 18.63 | | | | |
| 2009 | -0.1 | -0.1% | \$ 18.93 | \$ 18.75 | | -0.4 | -0.4% | \$ 19.00 | \$ 18.75 | -0.4 | -0.4% | \$ 19.38 | \$ 18.75 | -0.7 | -0.7% | \$ 19.40 | \$ 18.75 | | | |
| 2010 | 2.4 | 2.4% | \$ 18.91 | \$ 18.73 | | 2.7 | 2.7% | \$ 18.92 | \$ 18.68 | 1.6 | 1.6% | \$ 19.30 | \$ 18.68 | 2.1 | 2.1% | \$ 19.26 | \$ 18.62 | | | |
| 2011 | 3.2 | 3.2% | \$ 19.36 | \$ 19.18 | | 3.7 | 3.7% | \$ 19.44 | \$ 19.18 | 3.2 | 3.2% | \$ 19.61 | \$ 18.97 | 3.6 | 3.6% | \$ 19.67 | \$ 19.01 | | | |
| 2012 | 2.4 | 2.4% | \$ 19.98 | \$ 19.79 | | 2.4 | 2.4% | \$ 20.16 | \$ 19.89 | 2.1 | 2.1% | \$ 20.24 | \$ 19.58 | 2.1 | 2.1% | \$ 20.37 | \$ 19.69 | | | |
| 2013 | 1.5 | 1.5% | \$ 20.46 | \$ 20.27 | | 1.3 | 1.3% | \$ 20.64 | \$ 20.37 | 1.5 | 1.5% | \$ 20.66 | \$ 19.99 | 1.4 | 1.4% | \$ 20.80 | \$ 20.11 | | | |
| 2014 | 1.0 | 1.0% | \$ 20.77 | \$ 20.57 | \$ 21.75 | 0.7 | 0.7% | \$ 20.91 | \$ 20.63 | \$ 21.75 | 1.6 | 1.6% | \$ 20.97 | \$ 20.29 | \$ 21.75 | 1.5 | 1.5% | \$ 21.09 | \$ 20.39 | \$ 21.75 |
| 2015 | -0.4 | -0.4% | \$ 20.98 | \$ 20.78 | \$ 21.97 | -0.7 | -0.7% | \$ 21.05 | \$ 20.78 | \$ 21.90 | 0.1 | 0.1% | \$ 21.31 | \$ 20.62 | \$ 22.10 | -0.4 | -0.4% | \$ 21.41 | \$ 20.70 | \$ 22.08 |
| 2016 | 0.8 | 0.8% | \$ 20.89 | \$ 20.70 | \$ 21.88 | 0.3 | 0.3% | \$ 20.91 | \$ 20.63 | \$ 21.75 | 1.3 | 1.3% | \$ 21.33 | \$ 20.64 | \$ 22.12 | 1.0 | 1.0% | \$ 21.32 | \$ 20.61 | \$ 21.99 |
| 2017 | 1.7 | 1.7% | \$ 21.06 | \$ 20.86 | \$ 22.05 | 1.6 | 1.6% | \$ 20.97 | \$ 20.69 | \$ 21.81 | 2.1 | 2.1% | \$ 21.61 | \$ 20.91 | \$ 22.41 | 2.1 | 2.1% | \$ 21.54 | \$ 20.82 | \$ 22.21 |
| 2018 | 1.8 | 1.8% | \$ 21.42 | \$ 21.22 | \$ 22.43 | 2.1 | 2.1% | \$ 21.30 | \$ 21.02 | \$ 22.16 | 2.4 | 2.4% | \$ 22.06 | \$ 21.34 | \$ 22.88 | 2.5 | 2.5% | \$ 21.99 | \$ 21.26 | \$ 22.67 |
| 2019 | 1.0 | 1.0% | \$ 21.80 | \$ 21.60 | \$ 22.83 | 0.9 | 0.9% | \$ 21.75 | \$ 21.46 | \$ 22.63 | 1.8 | 1.8% | \$ 22.59 | \$ 21.86 | \$ 23.43 | 1.7 | 1.7% | \$ 22.54 | \$ 21.79 | \$ 23.24 |
| 2020 | 0.7 | 0.7% | \$ 22.02 | \$ 21.81 | \$ 23.06 | 0.9 | 0.9% | \$ 21.95 | \$ 21.66 | \$ 22.83 | 1.2 | 1.2% | \$ 23.00 | \$ 22.25 | \$ 23.85 | 1.2 | 1.2% | \$ 22.92 | \$ 22.16 | \$ 23.64 |
| 2021 | 5.5 | 5.5% | \$ 22.18 | \$ 21.97 | \$ 23.22 | 5.9 | 5.9% | \$ 22.14 | \$ 21.85 | \$ 23.04 | 4.7 | 4.7% | \$ 23.27 | \$ 22.52 | \$ 24.14 | 5.3 | 5.3% | \$ 23.20 | \$ 22.42 | \$ 23.92 |
| 2022 | 7.8 | 7.8% | \$ 23.40 | \$ 23.18 | \$ 24.50 | 8.1 | 8.1% | \$ 23.45 | \$ 23.14 | \$ 24.40 | 8.0 | 8.0% | \$ 24.37 | \$ 23.58 | \$ 25.27 | 8.5 | 8.5% | \$ 24.43 | \$ 23.61 | \$ 25.19 |
| | | | \$ 25.22 | \$ 24.98 | \$ 26.41 | | | \$ 25.35 | \$ 25.02 | \$ 26.37 | | | \$ 26.32 | \$ 25.46 | \$ 27.29 | | | \$ 26.50 | \$ 25.62 | \$ 27.33 |

