

Wastewater Utility Rate Study City of Appleton, WI

Presented to the Utilities Committee

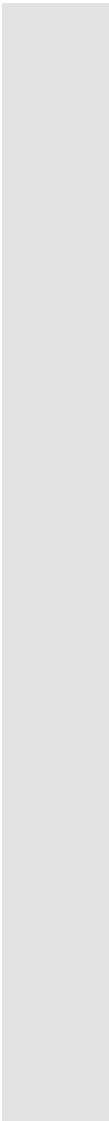
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By Trilogy Consulting, LLC

Christine DeMaster and Erik Granum



Study Objectives

- Update sewer rates for the first time in 10 years
 - Last rate increase was a 5% increase in 2011
 - Ensure the Utility is collecting enough revenues
 - Recover costs equitably from different types of customers
 - Establish rates for customers with wastewater that has high concentrations of phosphorus and ammonia
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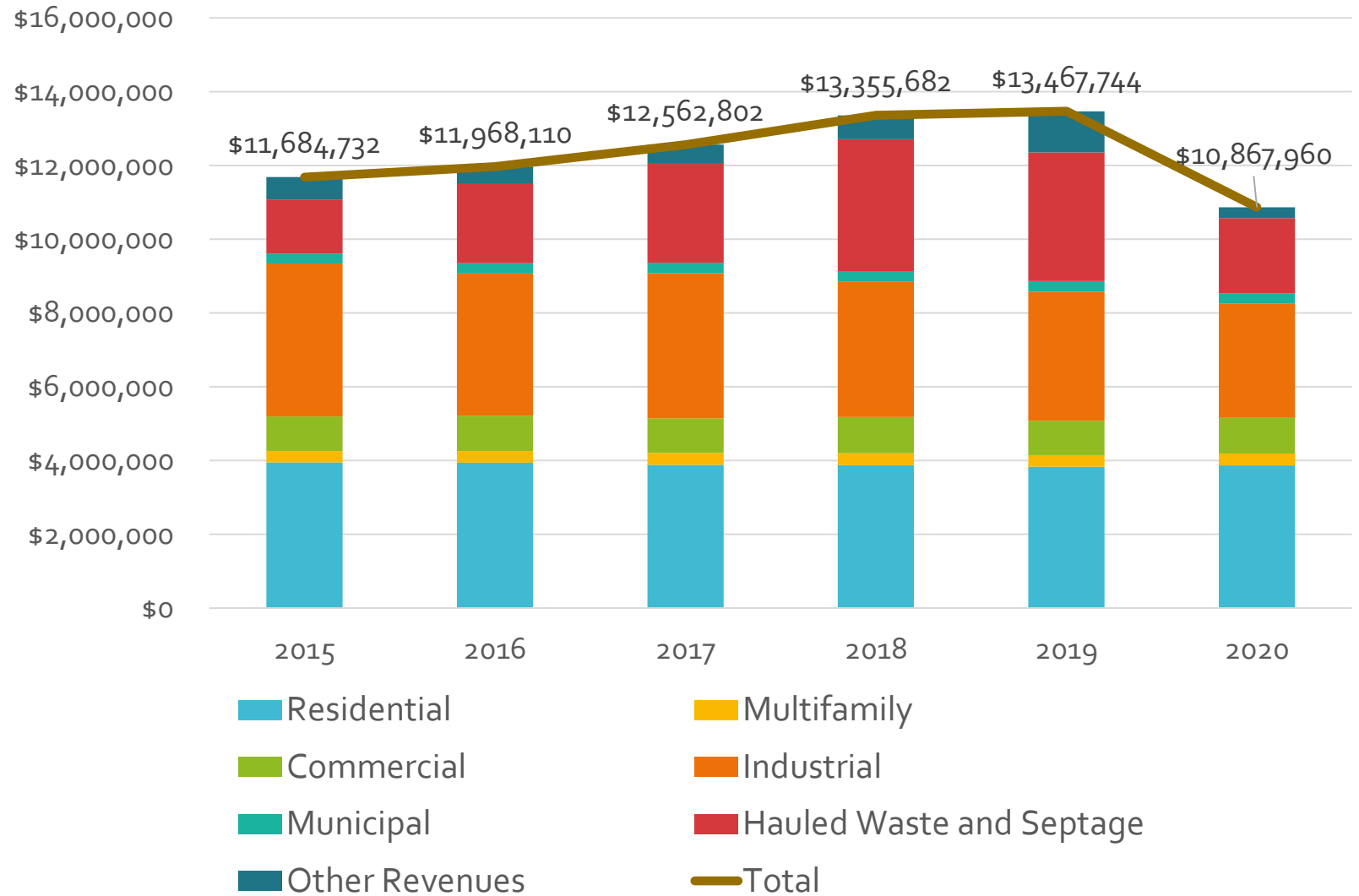
What Services Does the Wastewater Utility Provide?

- Services provided
 - Collection of wastewater from buildings and conveyance to the WWTP
 - Wastewater treatment to remove BOD, suspended solids, phosphorus and ammonia
- Types of customers / wastewater
 - Domestic strength wastewater (residential, multi-family, commercial, industrial, municipal)
 - Industrial high strength wastewater
 - Hauled waste (cheese brine, whey, washwater, etc.)
 - Septic tank waste
 - Landfill leachate

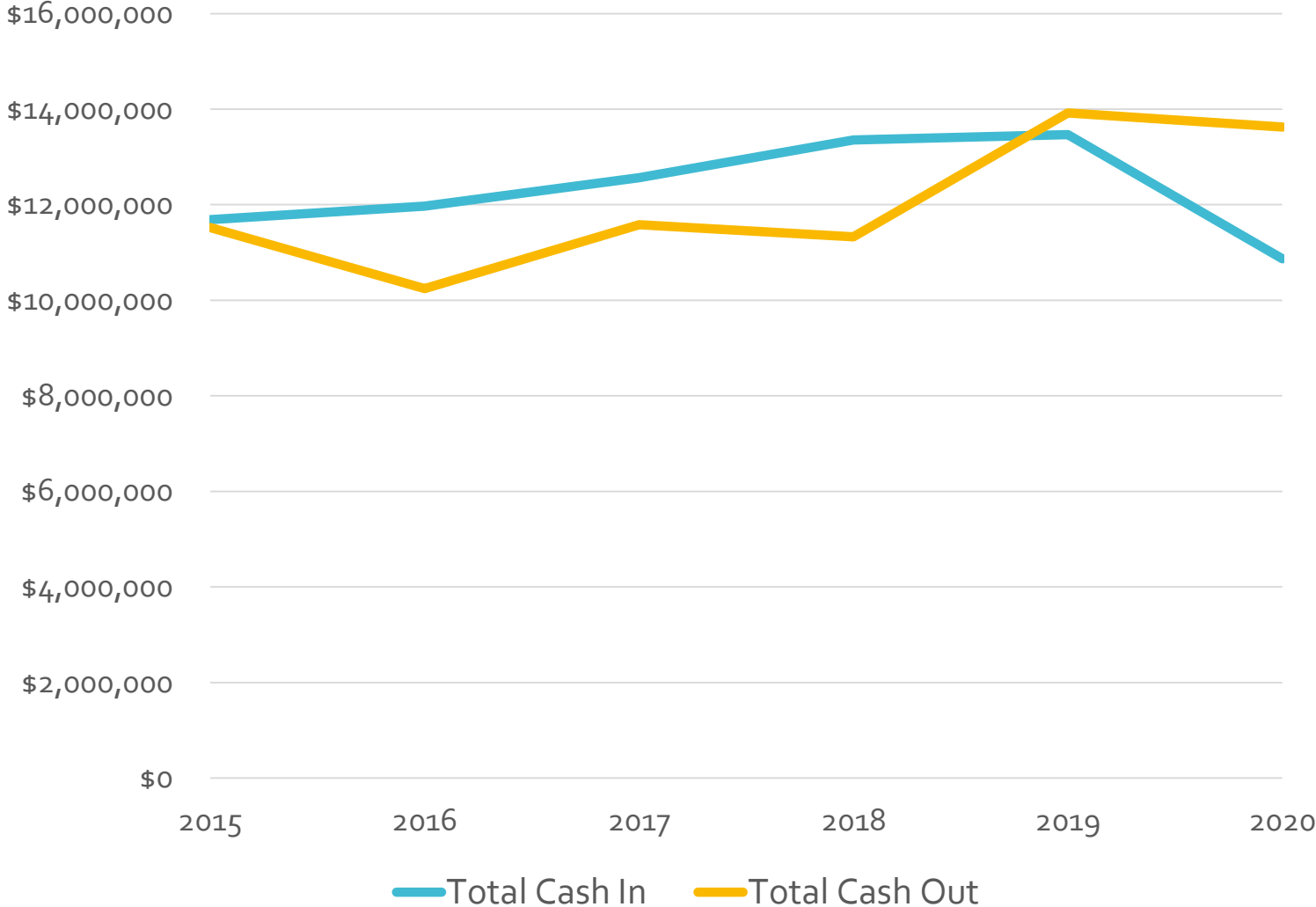
Key Issues for the Appleton Wastewater Utility

- 10 years since the last rate increase
- Recent reduction in flows from a large hauled waste customer and a large industrial customer
- \$50.6 million in capital improvements for 2021-2026
- The Utility currently has substantial reserves and relatively little debt
- Changing wastewater characteristics
 - Increasing waste strength of domestic wastewater
 - Existing and potential high-strength customers with phosphorus and ammonia
- Sewer bills for residential customers are among the lowest for peer communities
 - Typical customer currently pays \$38/quarter
 - Average for peer communities is \$69/quarter

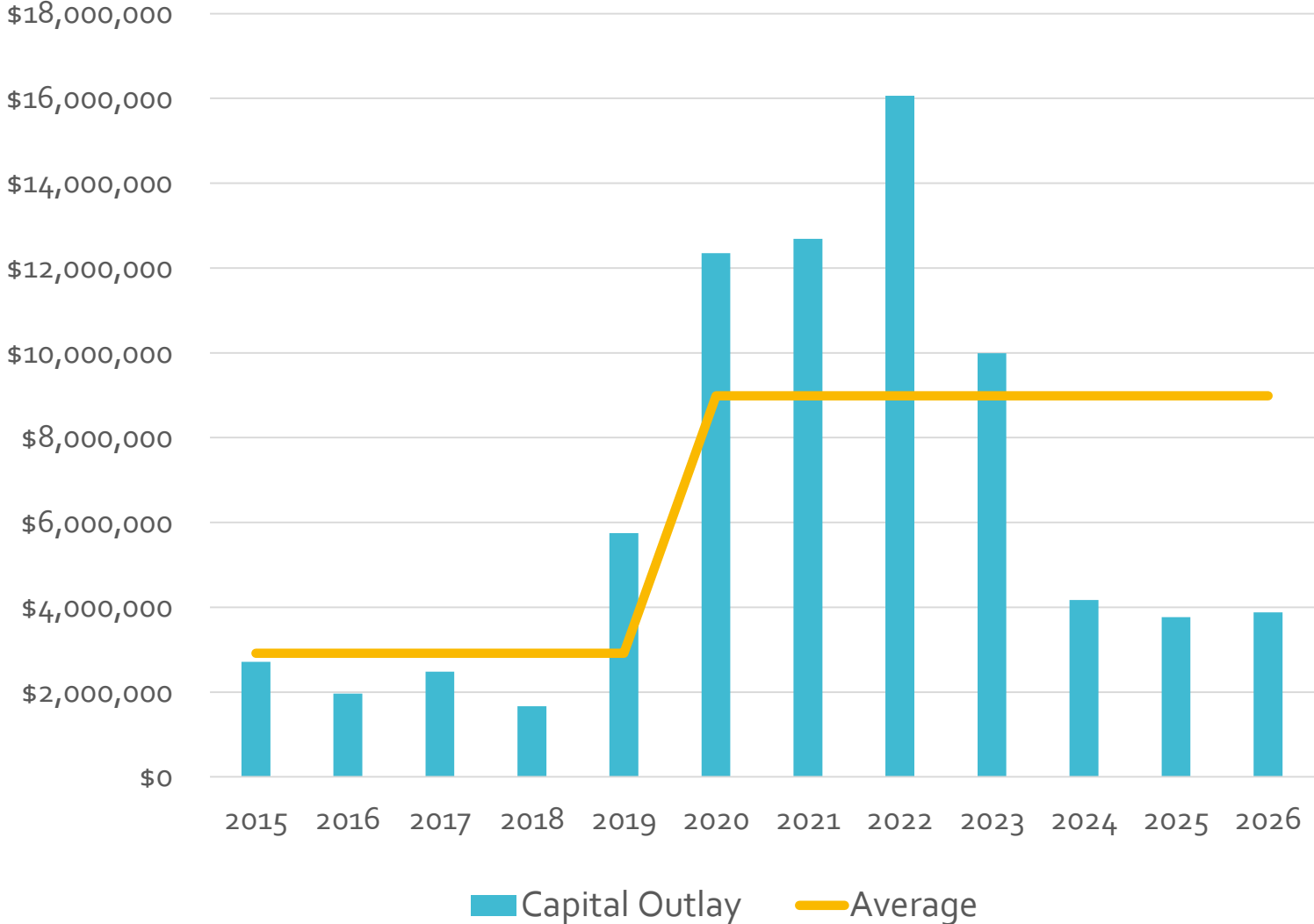
Revenues: 2015-2020



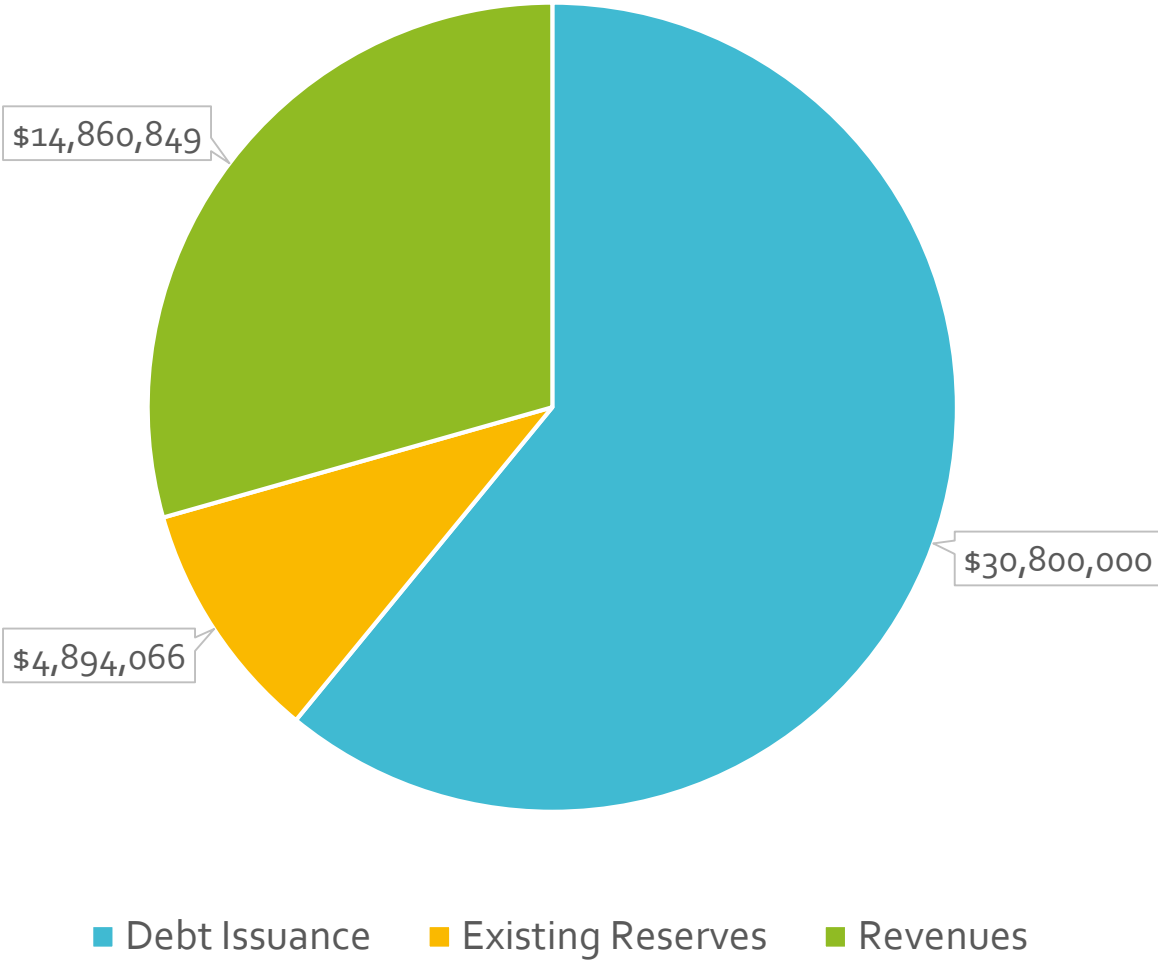
Cash Flow: 2015-2020



Capital Outlay: 2015-2026



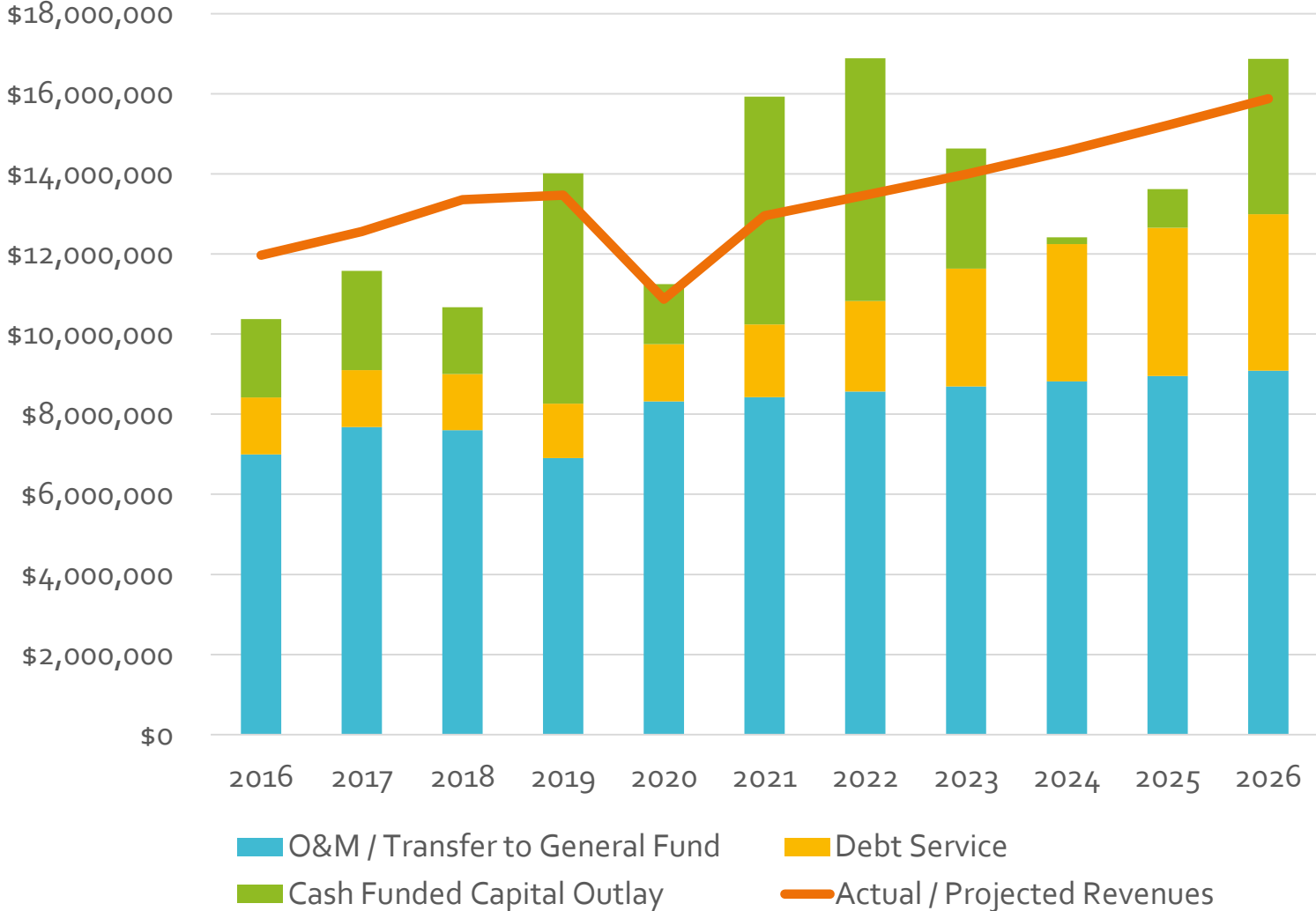
Planned Funding for Capital Improvements: 2021-2026



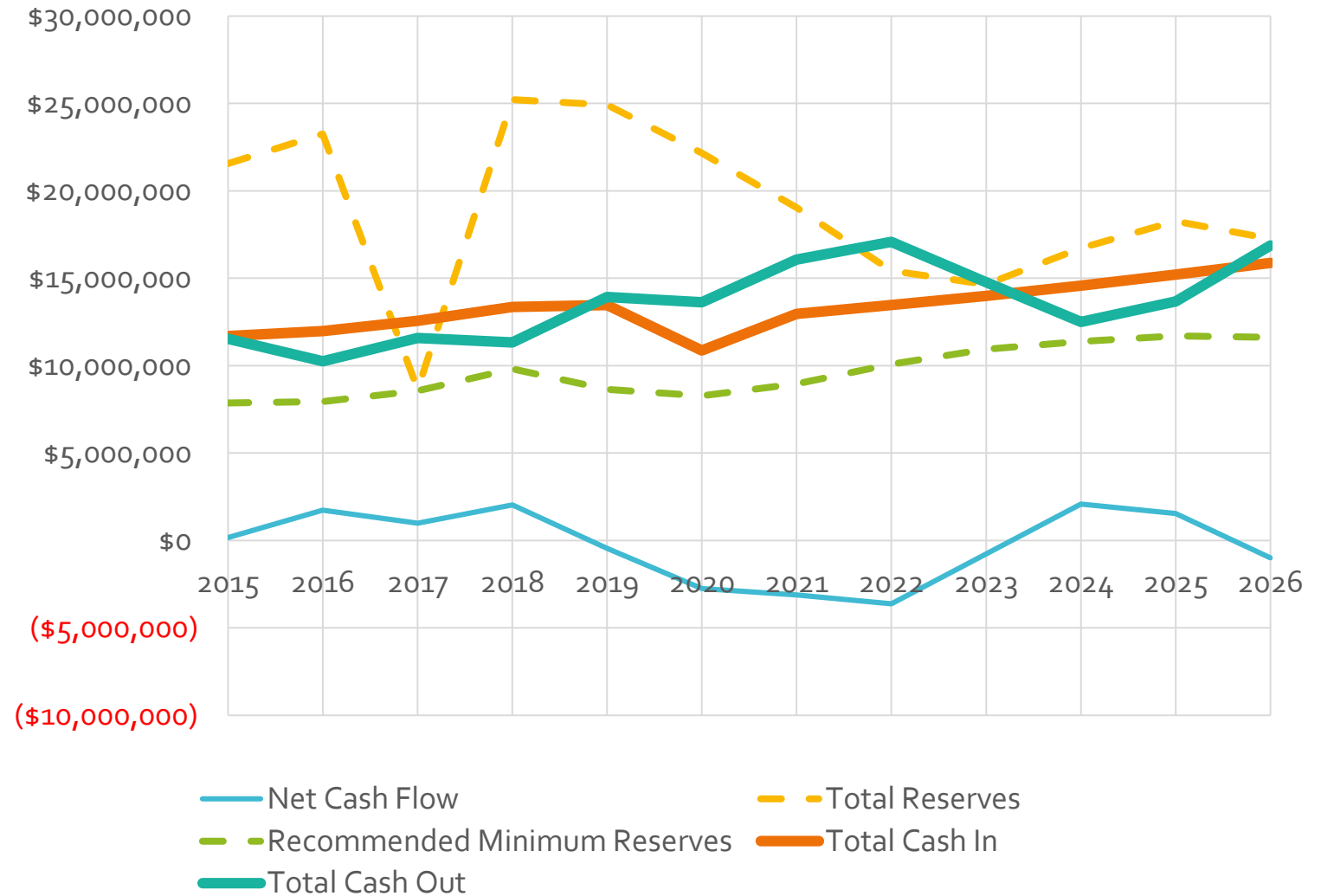
Recommended Plan

- Increase annual user charge revenues by \$5.0 million by 2026
 - \$3.0 million for loss of revenues and inflationary increases in O&M
 - \$2.0 million per year for debt service and cash funded capital outlay
- Increase of 20% for 2021 to bring revenues back up to about \$12.9 million (2017/2018 average)
- Increases of 4% per year for 2022-2026 to cover debt service, capital outlay and inflationary increases in O&M
- Draw down reserves by about \$4.9 million to cash fund part of capital improvements

Past and Projected Cash Needs: 2016-2026



Actual and Forecast Cash Flows: 2015-2026



Revenue Requirements

- Total amount that needs to be generated from user charges

Cost of Service Study

- Allocate costs to utility functions – collection system, wastewater volume, costs to treat each pollutant, metering and billing, etc.
- Allocate costs for each function between customer classes

Rate Design

- Calculate rates per unit to recover approximately the allocated amount from each customer class
- Determine amounts to recover from fixed minimum charges versus volumetric rates
- Percentage increases in different types of rates may vary from the overall increase

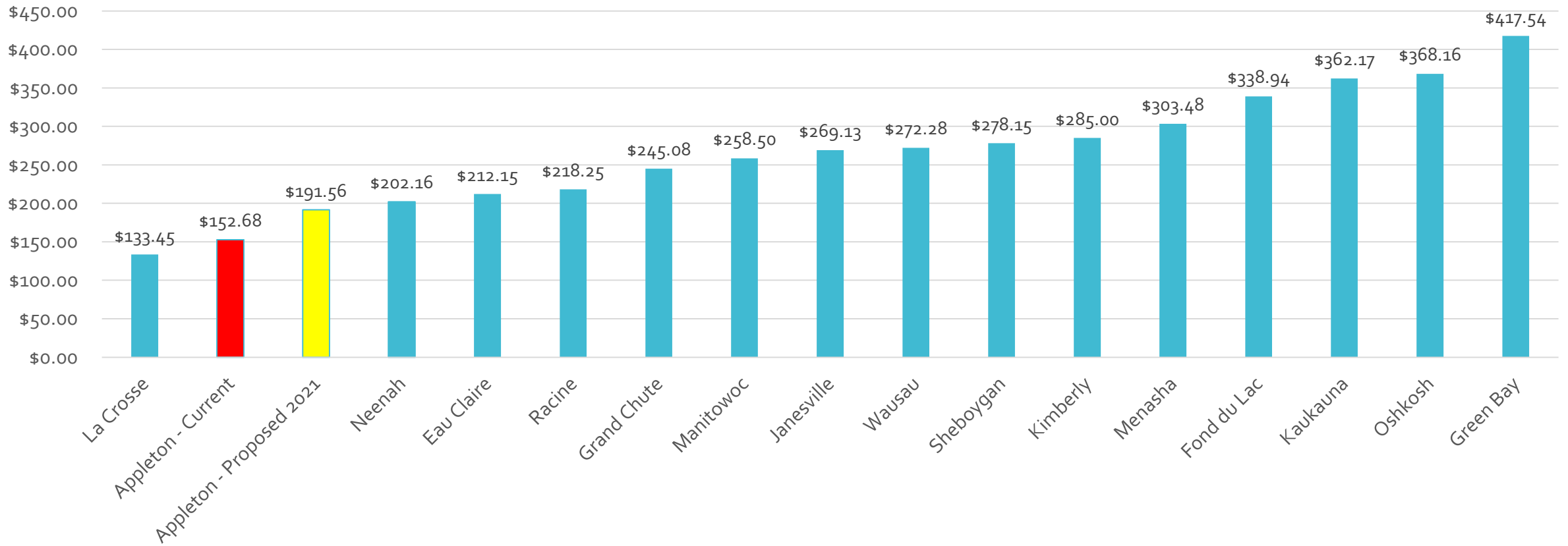
Determining User Charge Rates

Proposed Rates – Fixed Quarterly Minimum Charge

Connection Size	Current Rate	Proposed Rates - 2021	Projected Rates - 2022	Projected Rates - 2023	Projected Rates - 2024	Projected Rates - 2025	Projected Rates - 2026
5/8	\$13.60	\$15.40	\$16.00	\$16.60	\$17.30	\$18.00	\$18.70
3/4	\$13.60	\$15.40	\$16.00	\$16.60	\$17.30	\$18.00	\$18.70
1	\$25.00	\$27.70	\$28.80	\$30.00	\$31.20	\$32.40	\$33.70
1 1/4	\$34.00	\$38.20	\$39.70	\$41.30	\$43.00	\$44.70	\$46.50
1 1/2	\$44.00	\$49.00	\$51.00	\$53.00	\$55.10	\$57.30	\$59.60
2	\$68.00	\$75.30	\$78.30	\$81.40	\$84.70	\$88.10	\$91.60
2 1/2	\$0.00	\$106.60	\$110.90	\$115.30	\$119.90	\$124.70	\$129.70
3	\$121.00	\$130.60	\$135.80	\$141.20	\$146.80	\$152.70	\$158.80
4	\$199.00	\$207.70	\$216.00	\$224.60	\$233.60	\$242.90	\$252.60
6	\$391.00	\$393.40	\$409.10	\$425.50	\$442.50	\$460.20	\$478.60
8	\$622.00	\$622.00	\$646.90	\$672.80	\$699.70	\$727.70	\$756.80
10	\$0.00	\$909.70	\$946.10	\$983.90	\$1,023.30	\$1,064.20	\$1,106.80
12	\$0.00	\$1,204.00	\$1,252.20	\$1,302.30	\$1,354.40	\$1,408.60	\$1,464.90

	Units	Current Rates	2021	2022	2023	2024	2025	2026
Volume Charge	\$/1,000 gallons	\$2.73	\$3.61	\$3.75	\$3.90	\$4.06	\$4.22	\$4.39
Industrial Q/Q Rates								
Volume	\$/1,000 gallons	\$1.73	\$2.34	\$2.43	\$2.53	\$2.63	\$2.74	\$2.85
BOD	\$/100 lbs	\$35.48	\$33.80	\$35.15	\$36.56	\$38.02	\$39.54	\$41.12
TSS	\$/100 lbs	\$11.26	\$11.40	\$11.86	\$12.33	\$12.82	\$13.33	\$13.86
Phosphorus	\$/100 lbs	NA	\$370.75	\$385.58	\$401.00	\$417.04	\$433.72	\$451.07
Ammonia	\$/100 lbs	NA	\$131.14	\$136.39	\$141.85	\$147.52	\$153.42	\$159.56

Proposed Rates – Volumetric & Industrial Q/Q



Comparison of Annual Residential Wastewater Bills with Peer Communities

Next Steps

- Adopt proposed rate increase effective 1/1/2021
- Monitor revenues, expenses, capital outlay, debt service and reserves on an annual basis
- 2022-2026 proposed 4% increases may need to be adjusted based on actual conditions