



North Olmsted Utility Committee Meeting

Sewer Rate Study Updates August 27, 2019

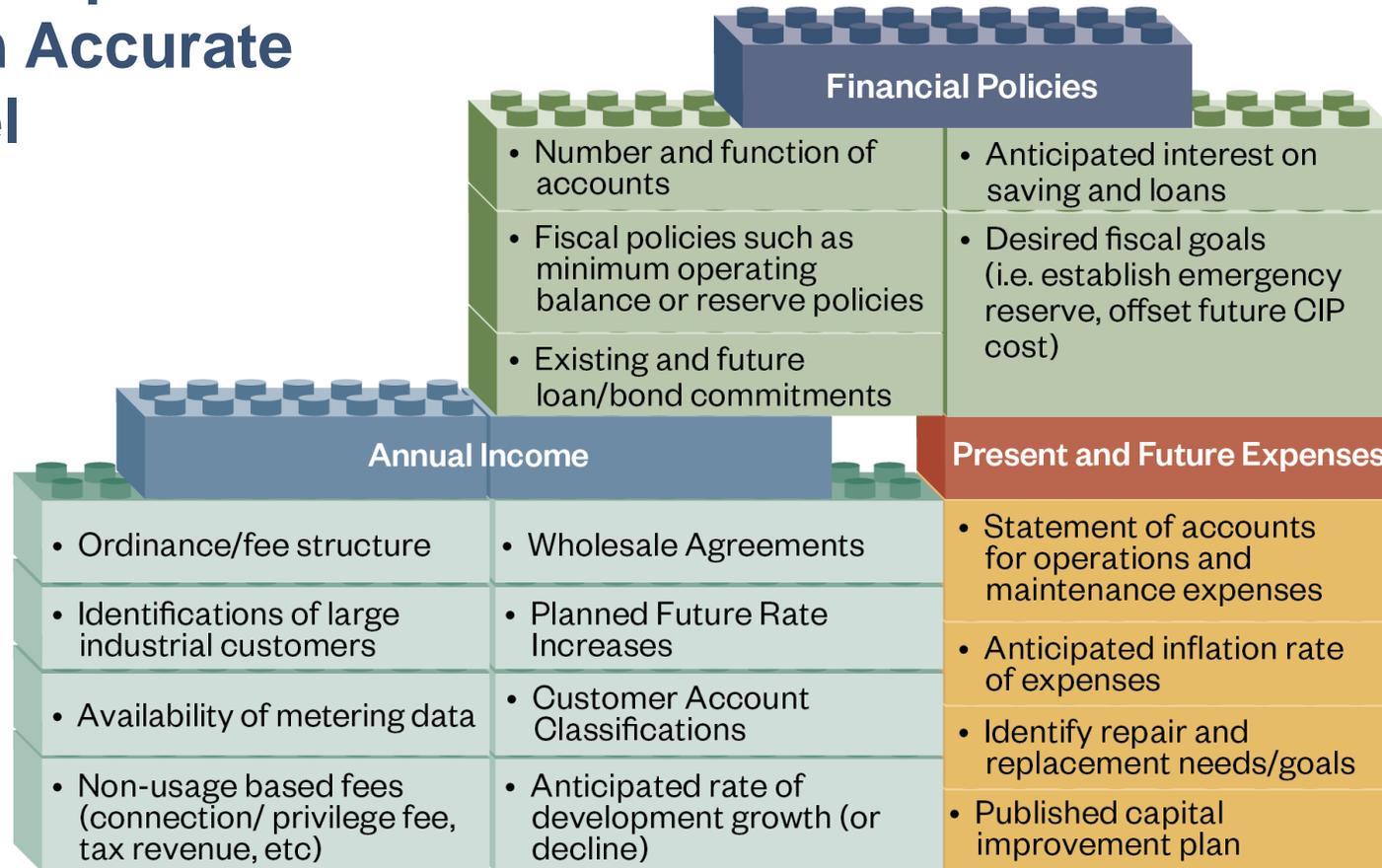
Agenda

- Introductions
- Model Structure
- Proposed Rate Structure Changes
- Comparisons to Nearby Communities
- Financial and Affordability Projections
- Questions

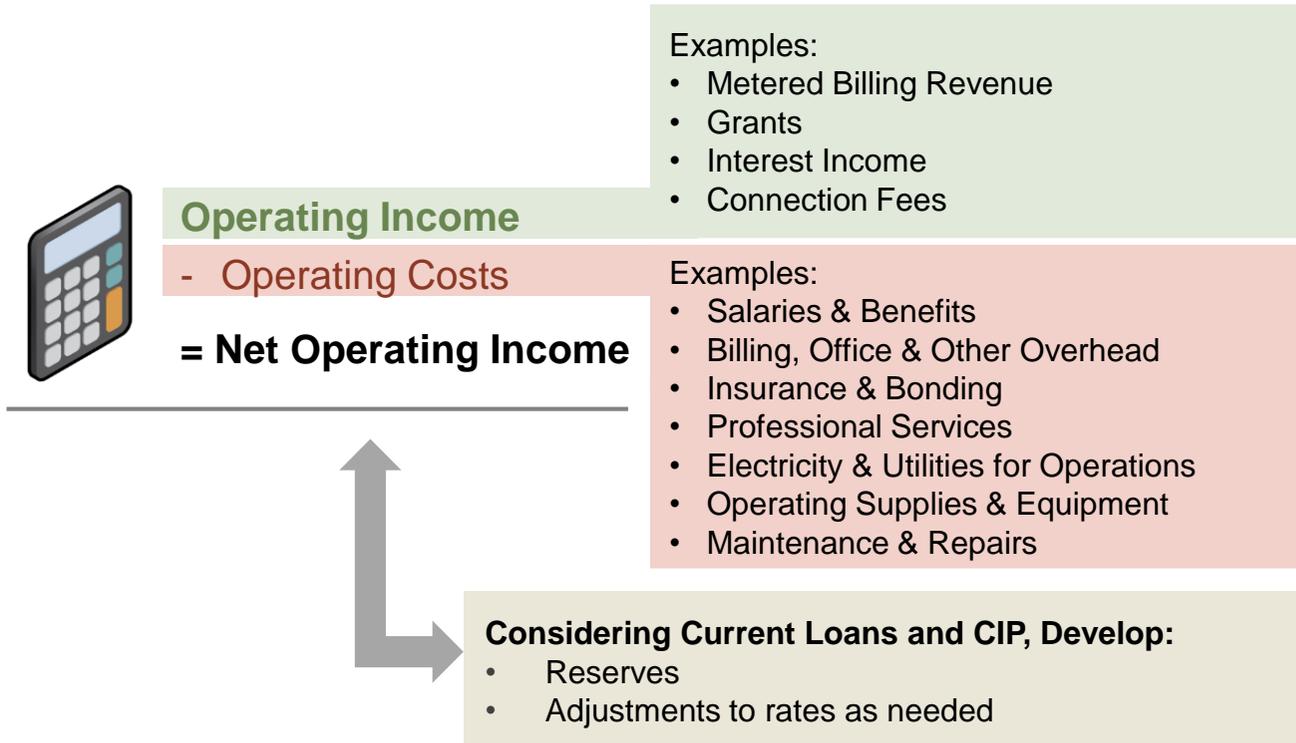
Objective of Dynamic Rate Model Analysis

- Evaluate current rate structure's ability to generate necessary revenue to:
 - Maintain operation of sewer treatment system(s) and current debt retirement
 - Fund any necessary future improvements and CIP
- Provide recommendations for rate structure to support goals in a fair and equitable manor among all rate payers
- Assist in determining affordability and any future regulatory schedules

Elements Required to Build an Accurate Rate Model



Model Structure



Proposed Rate Structure Changes

- City of Cleveland Water Department (CWD) implemented monthly billing and worked with North Olmsted to calculate monthly bills, similarly, using North Olmsted's quarterly rates.
- Conversion is unnecessarily complex, and North Olmsted would like to simplify overall structure while minimizing impact to customers:

Quarterly	Proposed Monthly
$< 1 \text{ MCF} = \$30.38 + \$55.68 / \text{MCF}$	Minimum = \$10.51
$1 \text{ MCF or more} = \$30.38/\text{MCF} + \$55.68/\text{MCF}$	Usage = \$86.06/MCF

North Olmsted Proposed 2020 Rate Scenario

Monthly Bill Calculation for Average User

Proposed Minimum Charge		\$10.51
Proposed Unit Charge	\$86.06 MCF	
for	0.84 MCF	
Total Proposed Unit Charges		\$72.39
Total Proposed Bill		\$72.39

Bill Formula:

If $\text{MCF} * \$86.06 \leq \10.51 , then bill is \$10.51
If $\text{MCF} * \$86.06 > \10.51 , then bill is $\text{MCF} * \$86.06$

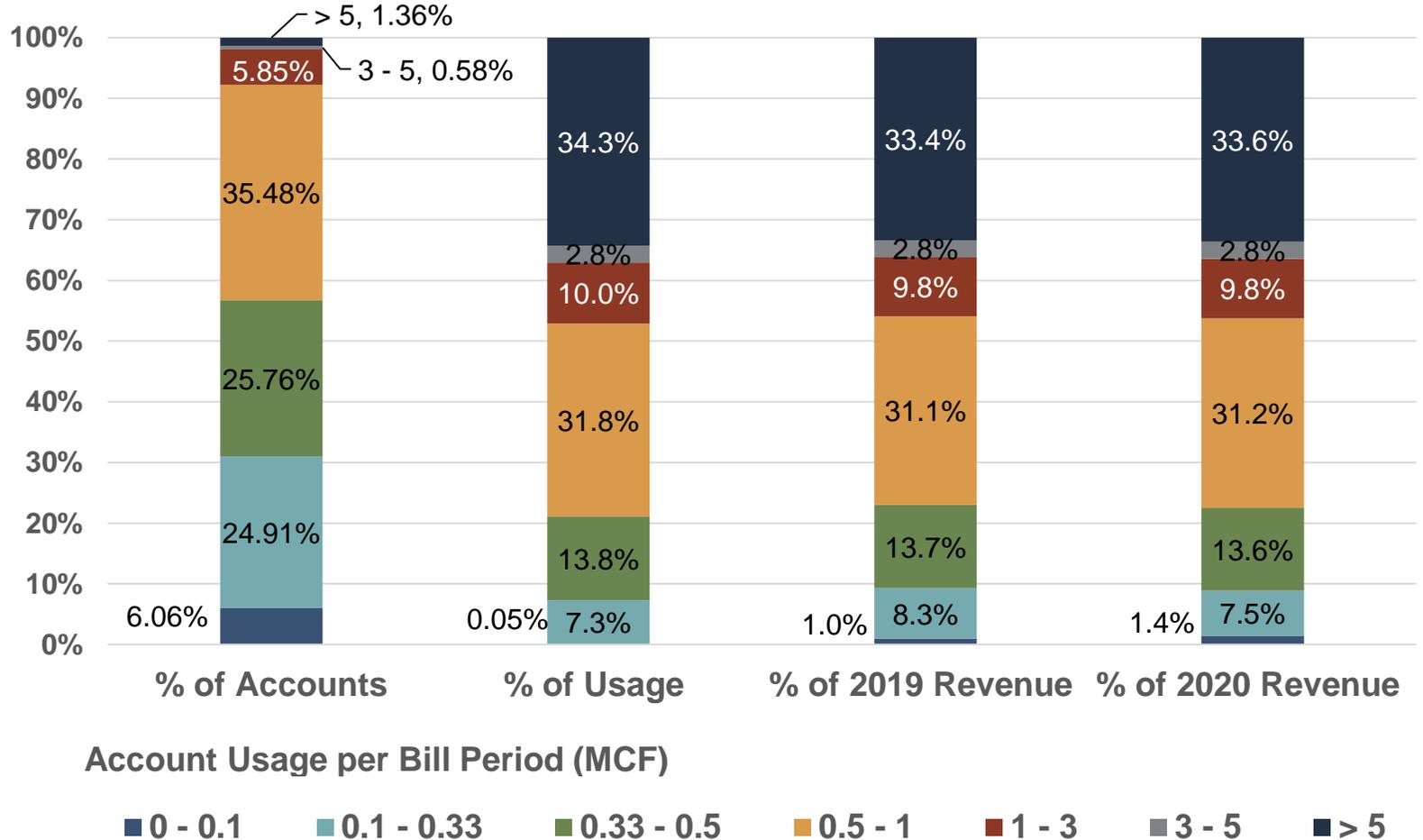
Impact to Residents

Customer Class (MCF/Monthly)	2019						2020					
	Average Usage (MCF/Monthly)	# of Accounts	% of Accounts	% of Usage	Total Revenue (Calculated)	% of 2019 Revenue	Monthly for Average Usage	Total Revenue (Calculated)	% of 2020 Revenue	Monthly Bill for Average Usage	Projected FY19 to FY20 Dollar Change in Monthly Bill	Projected FY19 to FY20 Percent Change in Monthly Bill
0 - 0.1	0.04	723	6.06%	0.05%	\$91,594	1.0%	\$12.27	\$136,008	1.4%	\$10.51	-\$1.76	-14.3%
0.1 - 0.33	0.23	2,970	24.91%	7.3%	\$793,318	8.3%	\$23.02	\$705,683	7.5%	\$19.94	-\$3.08	-13.4%
0.33 - 0.5	0.42	3,071	25.76%	13.8%	\$1,305,856	13.7%	\$35.85	\$1,290,318	13.6%	\$35.84	\$0.00	0.0%
0.5	0.50	n/a	n/a	n/a	n/a	n/a	\$43.03	n/a	n/a	\$43.03	\$0.00	0.0%
0.5 - 1	0.69	4,229	35.48%	31.8%	\$2,959,564	31.1%	\$59.06	\$2,957,165	31.2%	\$59.06	\$0.00	0.0%
1 - 3	1.34	697	5.85%	10.0%	\$929,481	9.8%	\$114.91	\$929,344	9.8%	\$114.91	\$0.00	0.0%
3 - 5	3.86	69	0.58%	2.8%	\$262,605	2.8%	\$331.85	\$262,545	2.8%	\$331.84	\$0.00	0.0%
> 5	19.95	162	1.36%	34.3%	\$3,184,895	33.4%	\$1,717.11	\$3,184,861	33.6%	\$1,717.11	\$0.00	0.0%
Total		11,921	100%	100%	\$9,527,314	100.0%		\$9,465,923	100%			

**this does not consider affordability or homestead discount rates.*

Rate Block Statistics

- Groups customer data by usage per account per month
- Compare baseline usage and revenue to evaluate how different groups are impacted by rate increases.



Local Rate Comparisons

	Current/2020 Rate	Homestead or Affordability Rate
North Olmsted	\$86.06/MCF	\$5.25 + \$43.03/MCF
NEORSD (Suburbs)*	\$100.75/MCF	\$60.50/MCF
Lakewood	\$75/MCF	\$56.30/MCF
CWD (First High Service; 5/8-inch)	\$9.20 + \$48.28/MCF (>0.2)	\$5.80 + \$18.46/MCF
Westlake (Single Family)	\$40 per quarter (~\$13.33/mo)	n/a
Lorain	\$15 + \$63.80/MCF	n/a
Summit County (Residential)	\$56.03+ \$66.70/MCF	n/a

*NEORSD (Suburbs) charges additional fee for stormwater.

Proposed Rate Increases

Fiscal Year	Proposed Increase	Minimum Fee	Usage Charge (per mcf)
2020	0.0%	\$10.51	\$86.06
2021	0.0%	\$10.51	\$86.06
2022	2.0%	\$10.72	\$87.78
2023	2.0%	\$10.93	\$89.54
2024	2.0%	\$11.15	\$91.33
2025	2.0%	\$11.38	\$93.15
2026	2.5%	\$11.66	\$95.48
2027	2.5%	\$11.95	\$97.87

Affordability and Homestead Rates

2020	North Olmsted Rate	Affordability & Homestead Rate	CWD Homestead Rate
Fixed Charge	N/A	N/A	\$5.80
Minimum Charge	\$10.51	\$5.25 (50% Discount)	N/A
Usage Charge (per MCF)	\$86.06	\$43.03 (50% Discount)	\$18.46

Balance Projection

Revenue and Expense Inputs and Assumptions

Current Loans

Asset Renewal

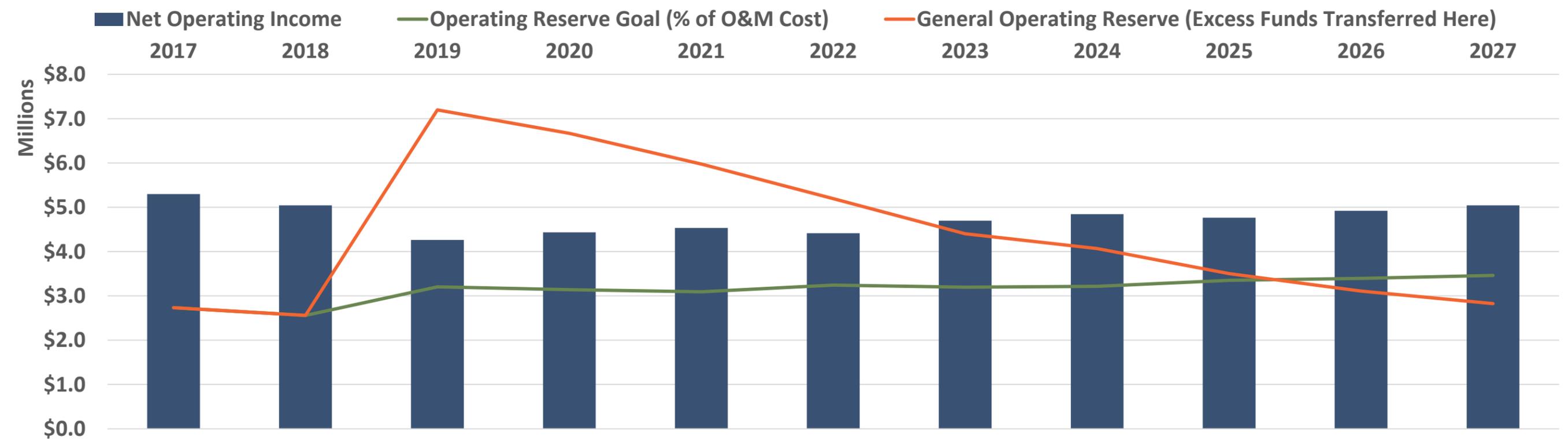
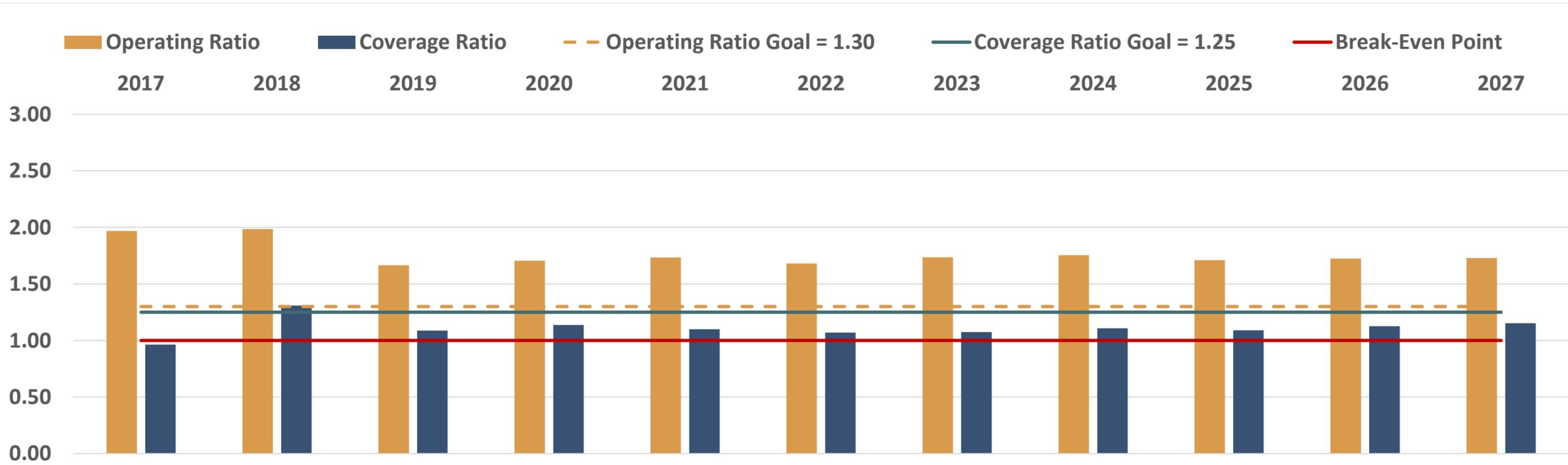
Notes: Costs related to repair and replacement of assets totalling less than or equal to \$500,000. Information from "5 yr Cap Plan Worksheet 2020-2024"

		Yearly Total R&R Cost										Inflated average of past five years				
		\$0	\$0	\$1,190,000	\$957,000	\$752,000	\$947,000	\$742,000	\$672,000			2%	2%	2%	2%	2%
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
Replacement Item Description	Cost per Item in Current Dollars	Useful Life (yrs)	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	
South Interceptor Improvements (Engineering)						\$200,000		\$225,000								
Sewer Lining Program						\$250,000	\$250,000	\$250,000	\$250,000	\$250,000						
Trade in a replace Vac Truck 450-500K (trade in value 75-90K)	450-500k	10			\$480,000											
Modifications to HVAC Dover, Lebern 35K	35k	20			\$35,000											
Grinder Rebuild	25k	5			\$25,000			\$25,000								
Rebuilding/coating manholes	45k	50					\$45,000	\$45,000								
Re condition removed bowl from centrifuge (50K)	50k	5			\$50,000											
L.E.D. Lighting Upgrade (7K)	7k	10			\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000						
Brick work North side of Zimpro (50K) Discuss with Bowen	50k	50			\$50,000											
Seal Parking and Drive Areas (10K)	10k	5			\$10,000											
E.Q. Drain Pump Spare Parts (10K) [Not Capital, 53]	10k	5														
Concrete work Tersh, (50K)	50k	50			\$50,000											
Electrical Service 13,200 Voltage, Aluminum wiring connections & Transformers (25K) (includes 3 units)	25k	20			\$25,000	\$55,000										
Purchase 1 Sludge hopper or screening hopper (10K)	10k	5			\$10,000											
Sandblast / Paint 1 Sludge Hopper (7K) [Not Capital, 54]	7k	5														
Kruger Drum Rebuild Parts BEARINGS (50K) [Capital this year 53 going forward]		5			\$50,000											
Asbestos abatement (10K)	10k				\$10,000	\$10,000										
Refresh roof (seal coat) (admin 2nd floor, tersh, SO2) (30K)	30k	10			\$30,000											
Update servers and Software, PLC replacement (75K) (create line item in 54 or 53) (talk to Keith)		10			\$75,000											
New Roll of truck with hook system (200K)	200k	10			\$200,000											
Reagent Refrigerator/ 3K	3k	10			\$3,000			\$80,000								
Lab Remodel ½ of lab (80K)	80k	50			\$80,000											
Replace van #47 35k	35k	7				\$30,000										
Replace Dump Truck #49 40K	40k	7				\$40,000										
Generator replacement Bradley 30K	30k	20				\$30,000										
Dover LS Spare Pump						\$20,000										
Andritz Perf Plate Chain both units (50K)	50k	5				\$50,000										
Sand Blast & Paint Rag & Grit Hoppers (15K)	15k	5				\$15,000										
R.A.S. Pump Rebuild 1 pump (25K)	25k	10				\$25,000	\$25,000	\$25,000								
Kubota replacement w/ trade-in						\$25,000										
T.W.A.S Tanks Demo (50K)	50k	50				\$50,000										
New/replace maintenance vehicle with multi-use (all purpose) mobile service vehicle (125K)	125k	10				\$125,000										
Autosampler/ 10K	10k	15				\$10,000										
Glassware washer/ 15K	15k	10				\$15,000										
Replace CCTV truck (assumes trade in/ reuse of CCTV eq)		7					\$150,000									
Grinder Moen (if needed) 45k	45k	10					\$45,000									
Grinder Rebuild Broxbourne/Dover		5					\$25,000		\$25,000	\$25,000						
Replace standby pump at Dover (inc VFD)							\$50,000									
Replace Vault at top of hill							\$70,000									
Grit Pump Rebuild, 1 Pump (25K)	25k	10					\$25,000	\$25,000								
Replace front gate and controls		50					\$20,000									
Replace forklift (30K)	30k	15					\$30,000									
Replace truck 35K	35k	7						\$35,000	\$35,000	\$35,000						
Andritz Perf Plate Chain, flights and steps		10						\$25,000								
Andritz Perf Plate Chain, discharge chutes		10						\$20,000								
GIS software and system modeling								\$80,000		\$80,000						
Roof SO 2 Building (75k)	75k	20						\$75,000								
Rebuild Sludge Decant Pumps 2 (30K)	30k	10						\$30,000								
Replace generator and building at Lebern									\$100,000							
Andritz Perf Plate Chain, one unit									\$25,000	\$25,000						
Seal parking lot (inc Dover LS)		5							\$15,000							
2 R.A.S. Pump Rebuild pump (50K)	50k	10							\$50,000							
Replace centrifuge bowl (125K)	125k	10							\$125,000							
Plant drain pump replacement (50K)	50k	10							\$50,000	\$50,000						
Replace Current Flat-bed Maintenance Crane Truck (60K)	60k	10							\$60,000							
Replace backhoe (assumes transfer to fleet)		50								\$100,000						
Dump pit for hydro excavation										\$35,000						
Broom attachment for Skid Stear		5								\$15,000						
Screw Air compressor (centrifuge supply)		10								\$50,000						

Future Loans

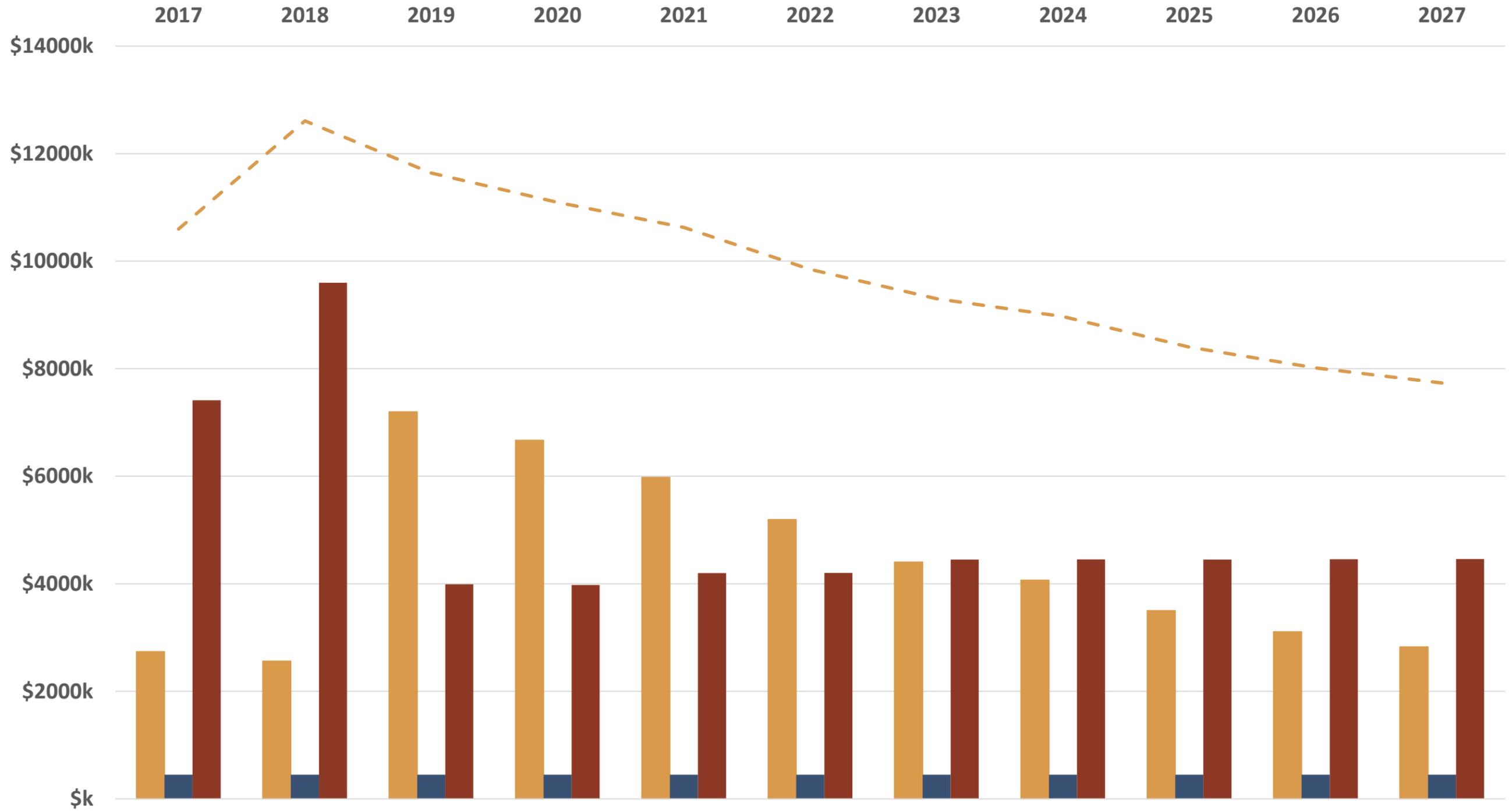
Goals

- **Operating Ratio = cash cushion for operating and maintenance (O&M) expenses.** Calculated by dividing total annual revenue by total annual O&M expense.
 - Typical goal would be 1-3 months of operating expenses (1.0-1.30)
 - Depends on size of community and fund balance policies
- **Coverage Ratio = cash cushion for debt service, after O&M expense.** Calculated by dividing net income by total annual debt service costs.
 - Where net income = total annual revenue – O&M expense
 - Typical goal would be 1.25



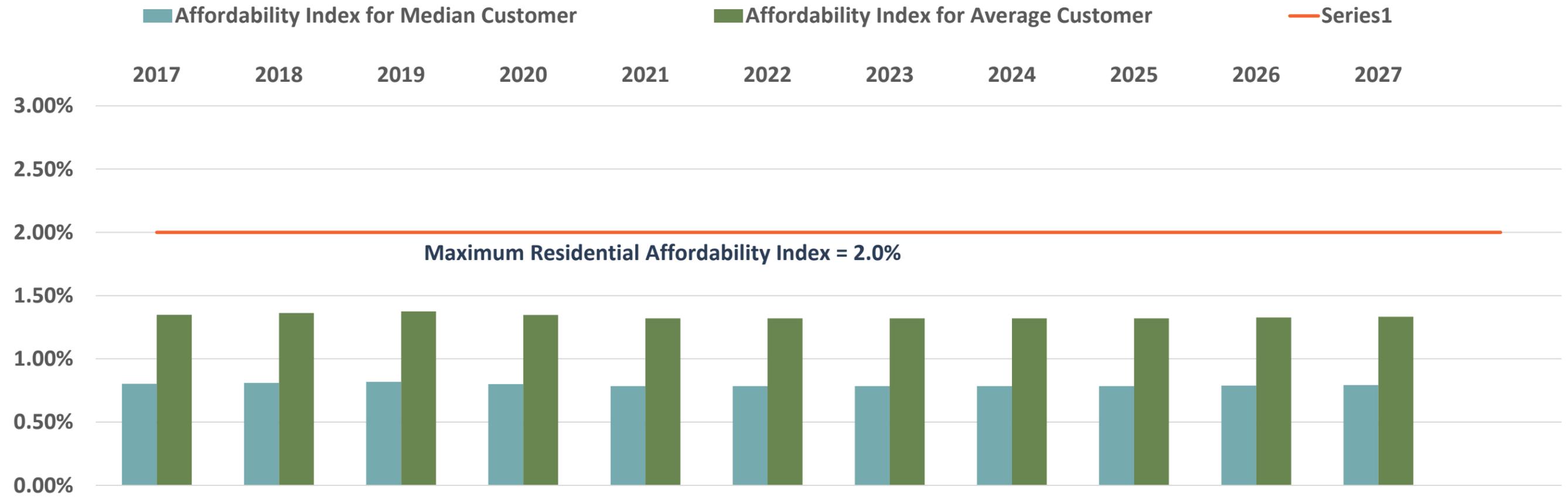
Balances

General Operating Reserve (Excess Funds Transferred Here) R&R Reserve Capital Reserve (Equal to Costs) Total Reserve Balance

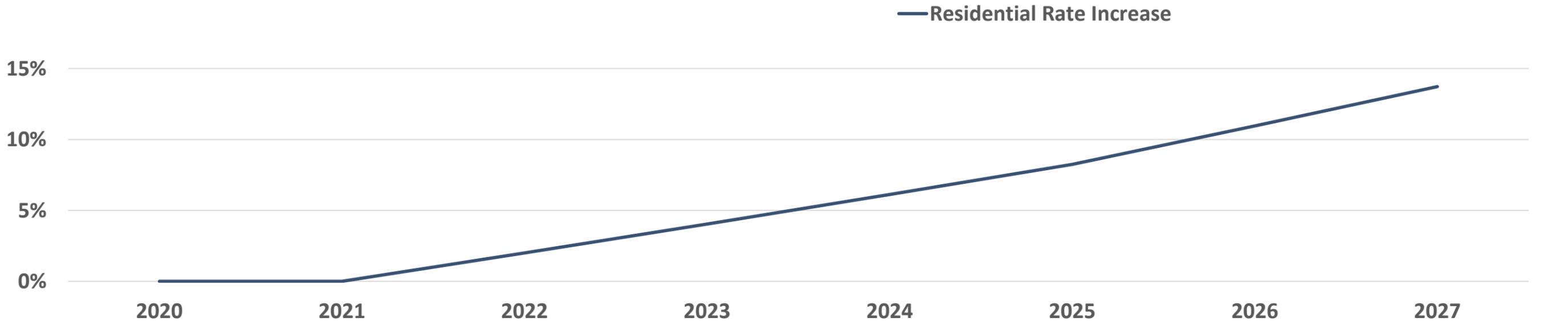


Affordability

Affordability Index



Cumulative Rate Increases



Questions

- Review of model structure and inputs
- Proposal to change from quarterly to monthly rates and simplify rate structure
- Financial impact
- Customer Impact