

**2024**

**Capital Improvements Plan**

DRAFT July 13, 2023

# Acceptance of the Draft 2024 Capital Improvements Plan

**July 27, 2023**

Madison Metropolitan Sewerage District



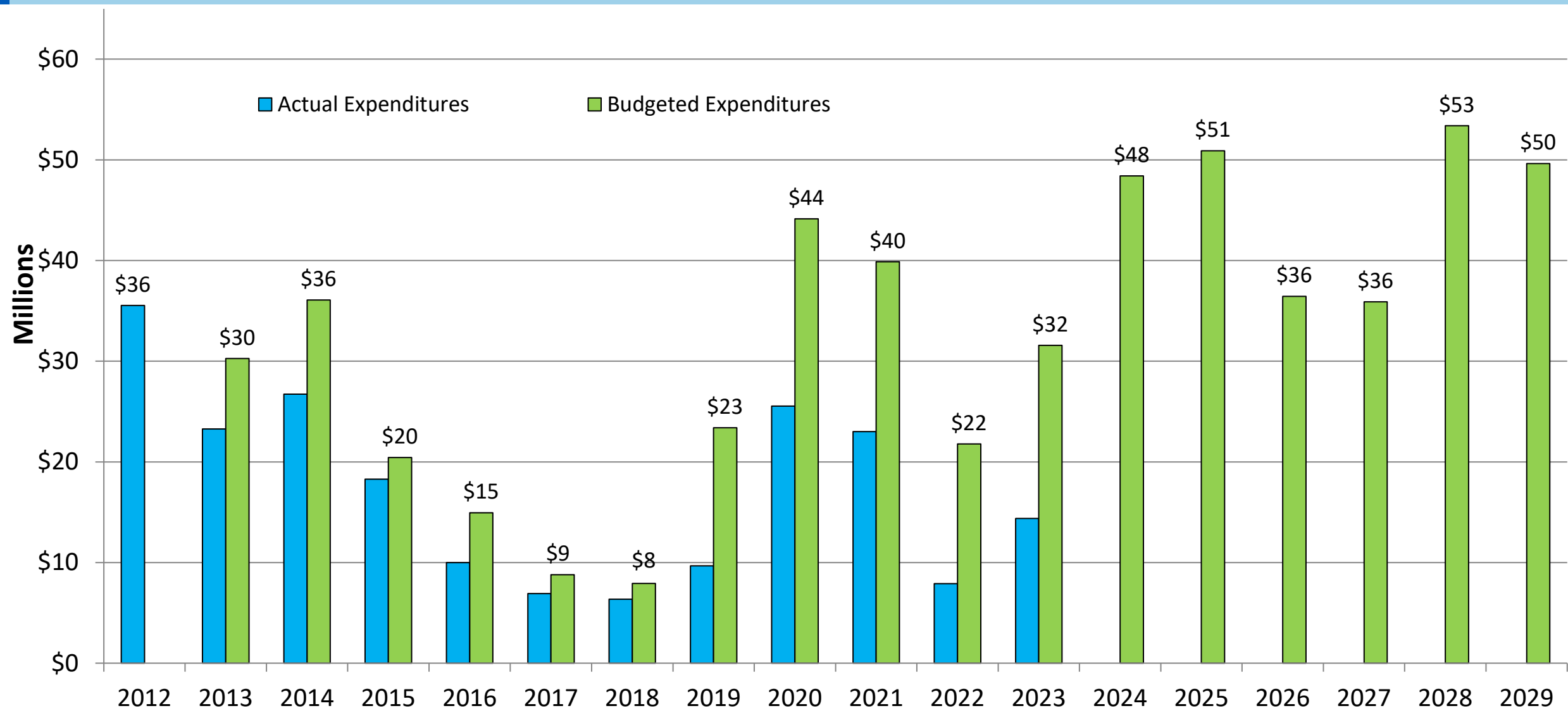
# Topics

1. Respond to Commission questions/feedback
2. Review financing plan highlights
3. Additional questions/feedback
4. Request acceptance of draft plan

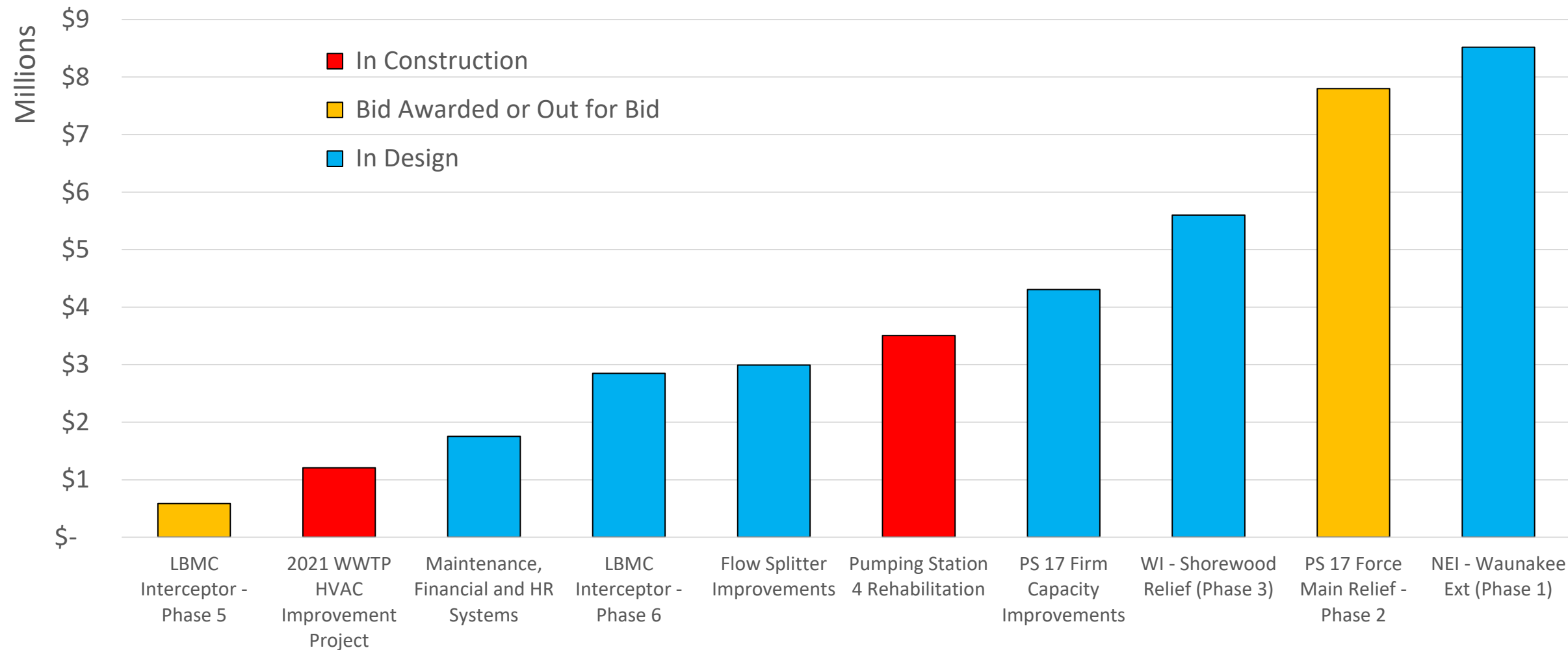
# Commission Questions

1. Is the 2024 budget realistic?
2. How much will energy costs be reduced by implementing low dissolved oxygen process? What if it doesn't work?
3. When do you expect connection charge revenue to stop based on collection area?
4. What percent of service charges are allocated to each portion of budget?
5. How do we invest our cash and what are the rate of returns?

# Annual Expenditures



# Construction Projects in 2024



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# Liquid Processing Improvements – Phase 2

Project	Total Project Cost	Construction
East Primary Air Piping	\$1.5 million	2025-26
Low DO (Partial Plant)	\$4.0 million	2025
Low DO (Full Plant)	\$23.3 million	2028-29
West Blowers Replacement	\$11.2 million	2025-26
East Blowers Replacement	\$11.4 million	2026-27



# Alternative Considerations

Alternative		Cold-weather applications	Ability to meet lower effluent limits	Impact on plant operations	Resiliency to wastewater changes	Operating Cost
0	Existing – Modified UCT					
1	A/O or A/SND	RFP: Perform alternative analysis for Low DO BNR processes				
2	A2O or UCT					
3	5 Stage BNR or UCT					
4	Step-feed BNR					
5	MABR	In general, Alternative 1-7, 9, 15/16 can operate at low DO (average DO of 0.3 mg/L) and “conventional” DO levels of 1.5 mg/L (average)				
6	MBR					
7	BioMag					
8	IFAS					
9	AquaNereda	For low DO alternatives, aeration system to consider both low and conventional DO levels				
10	Deleted					
11	Nuvoda MOB					
12	Densified Sludge					
13	Fermentation process					
14	Sidestream TN Reduction					
15	PdNA filters					
16	PdNA IFAS					

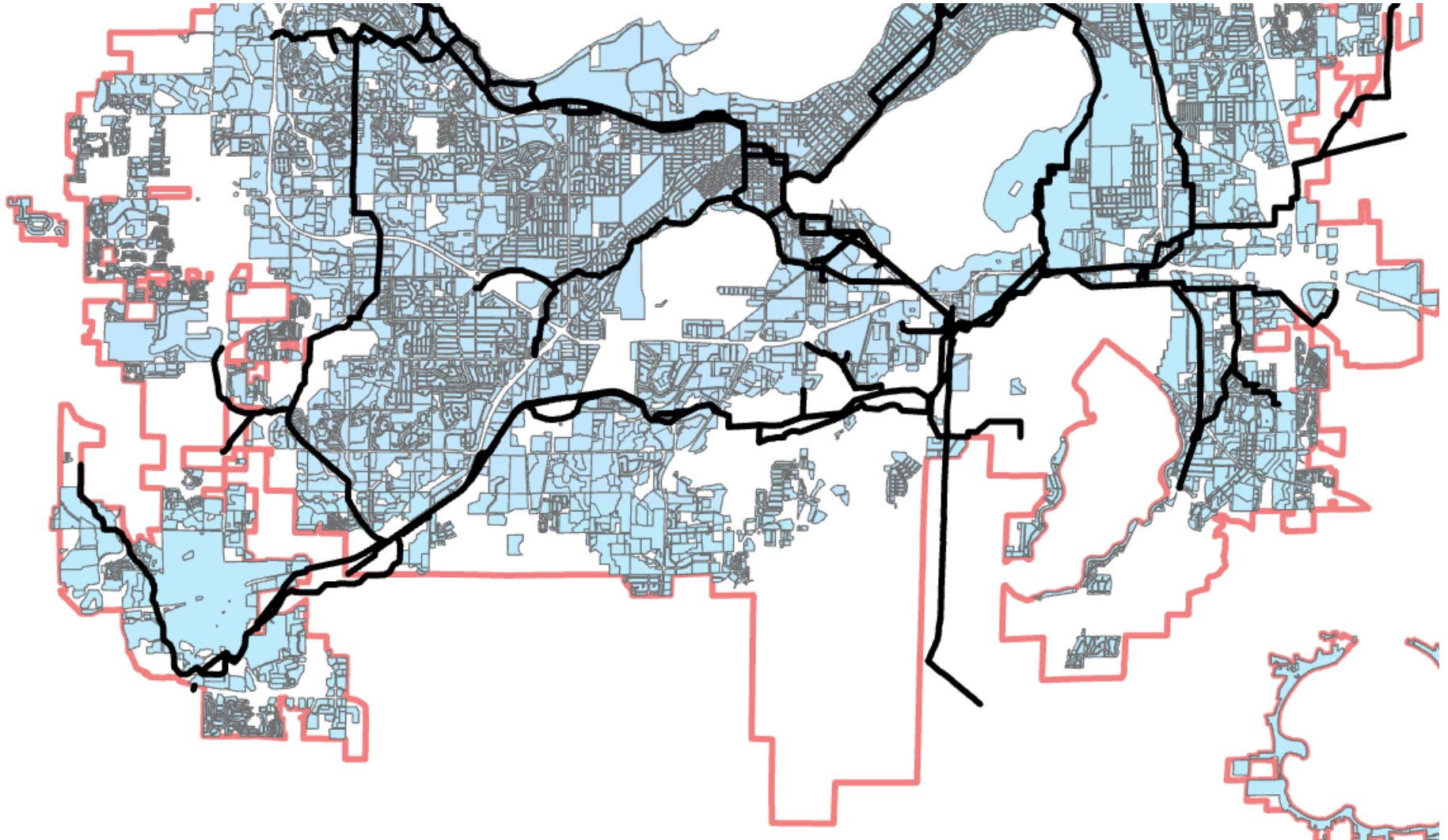
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# Connection Charge Revenue

1. Treatment plant connection charges – connection charge for use of treatment plant facilities
2. Conveyance facility connection charges – cost recovery for conveyance facilities constructed to extend service to owner communities

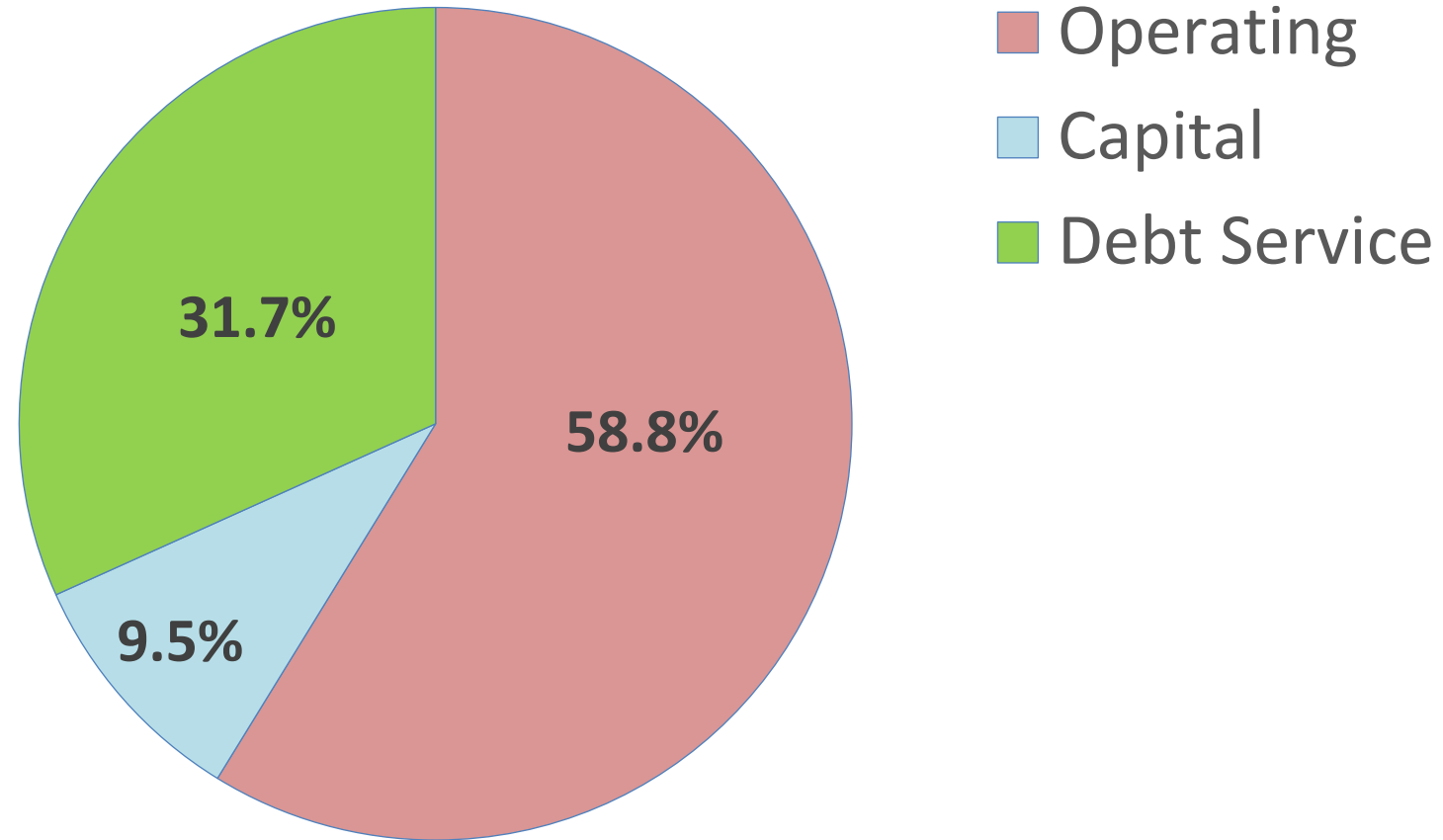
# Connection Charge Revenue



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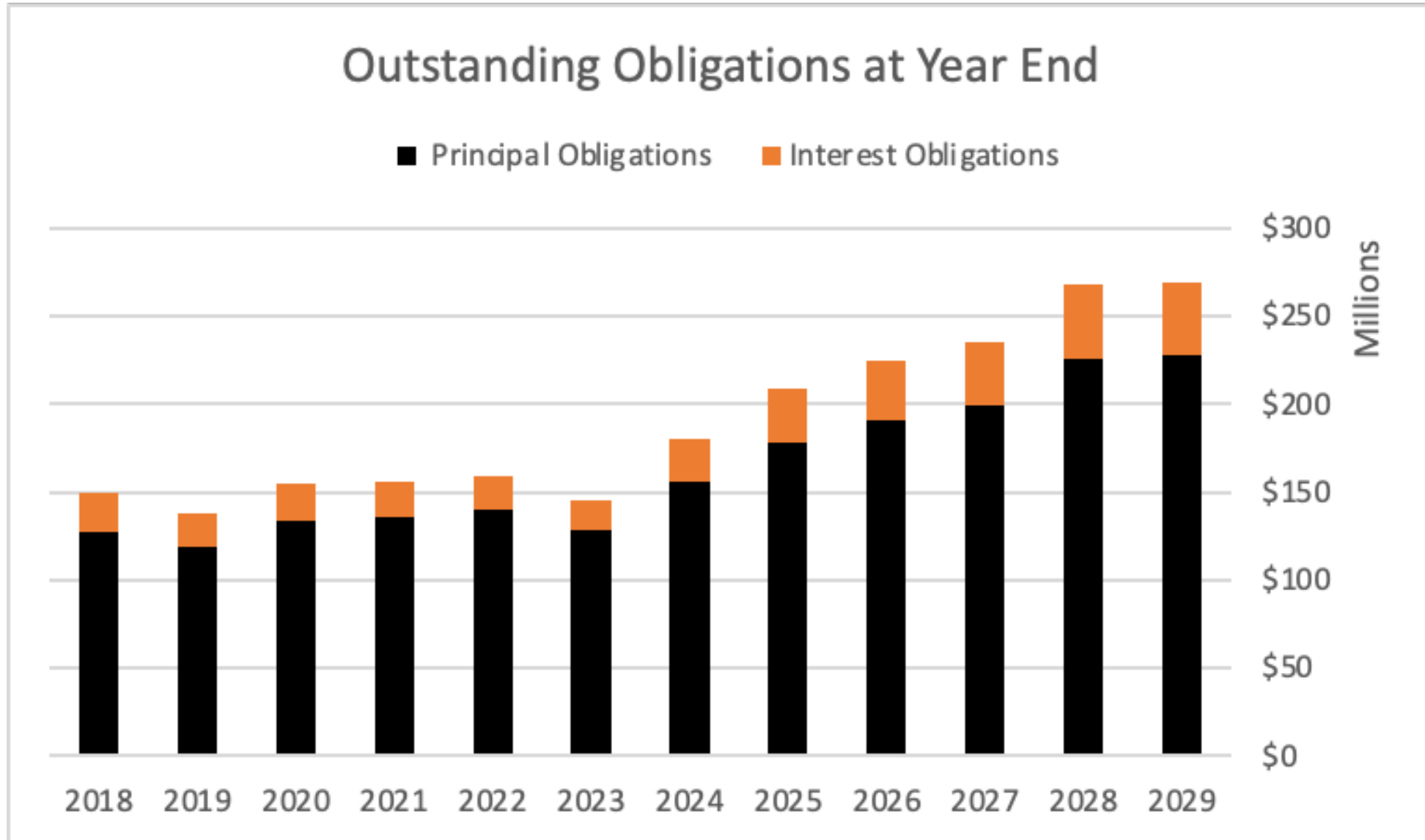
# Allocation of Service Charge Revenue



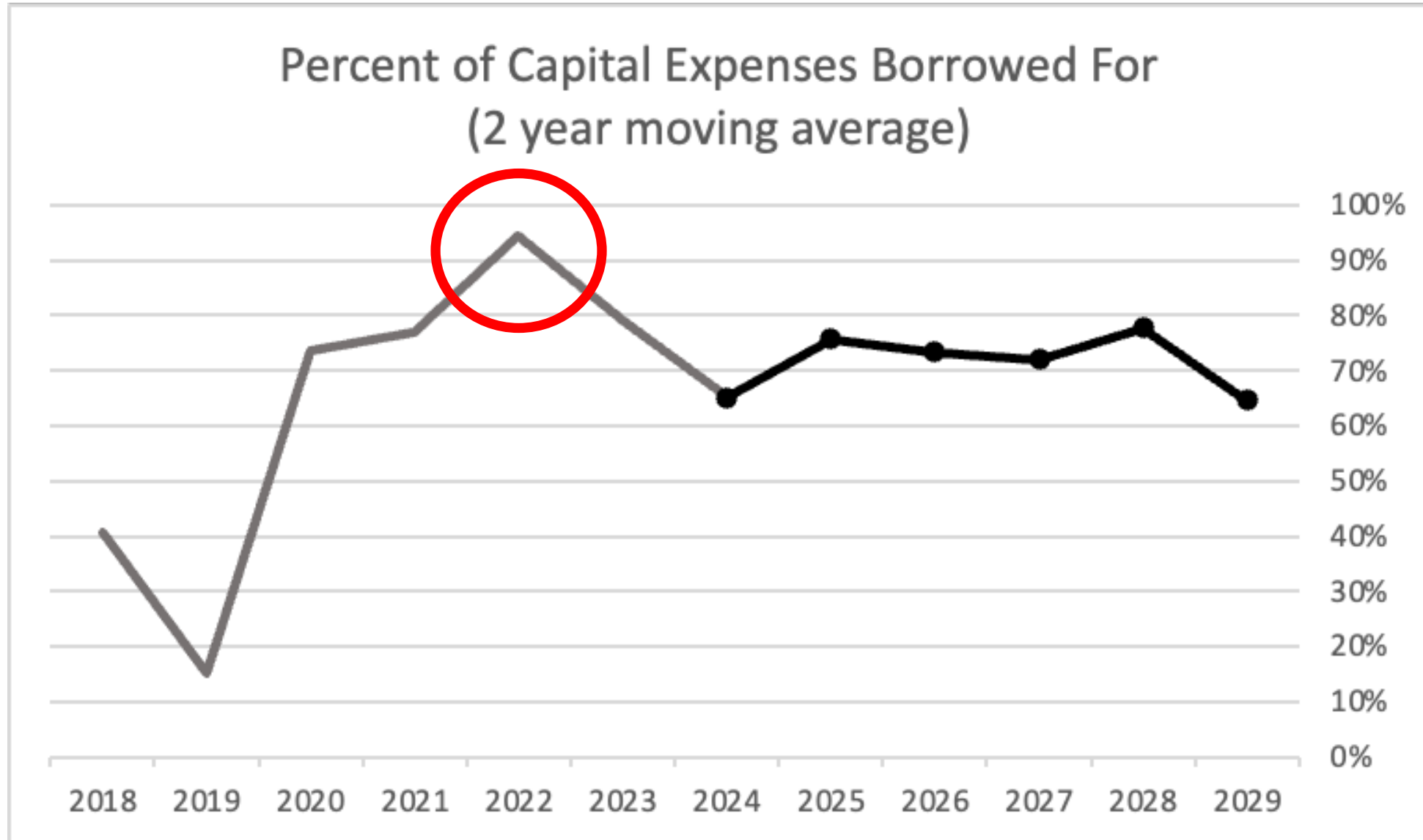
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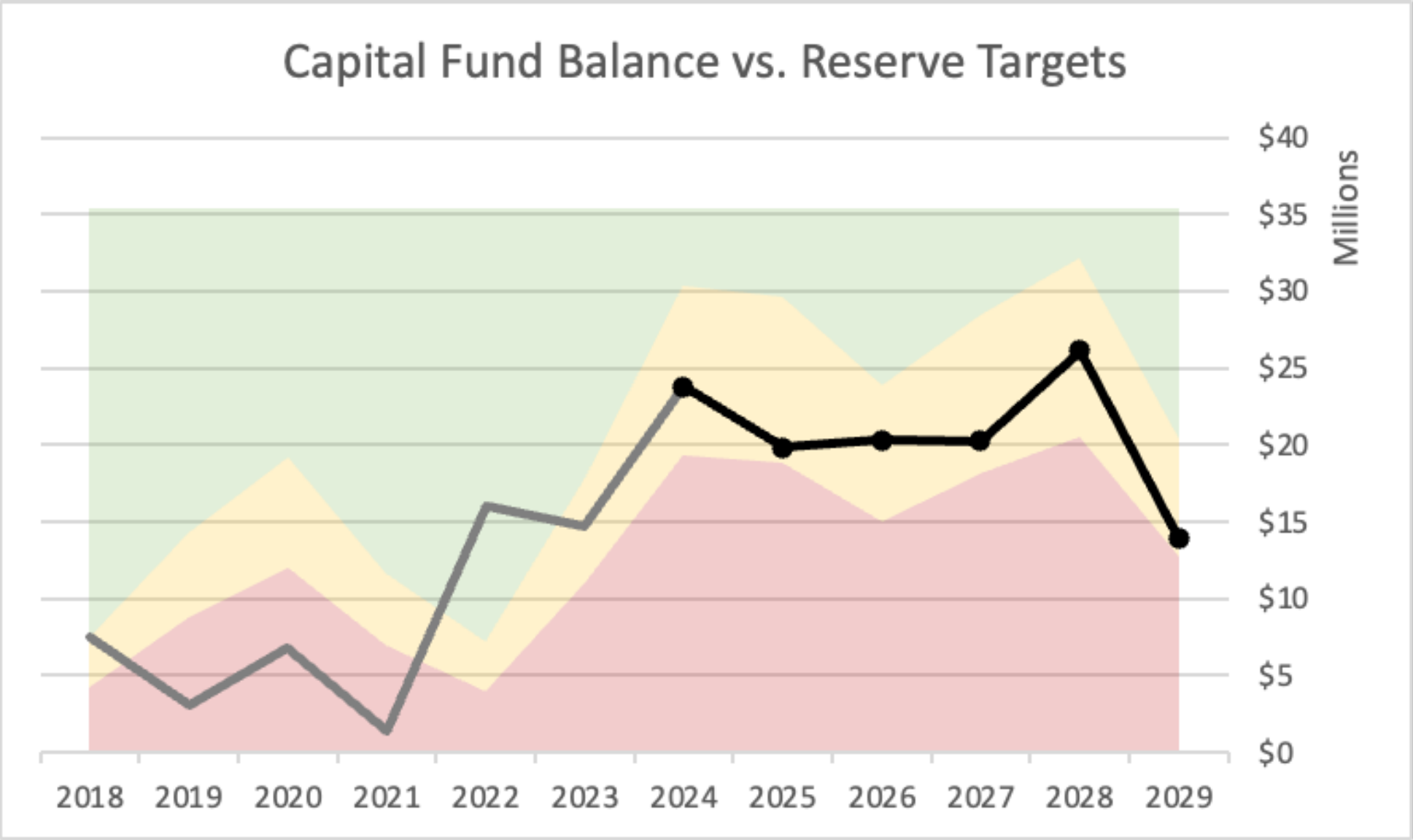
# Debt — Obligations



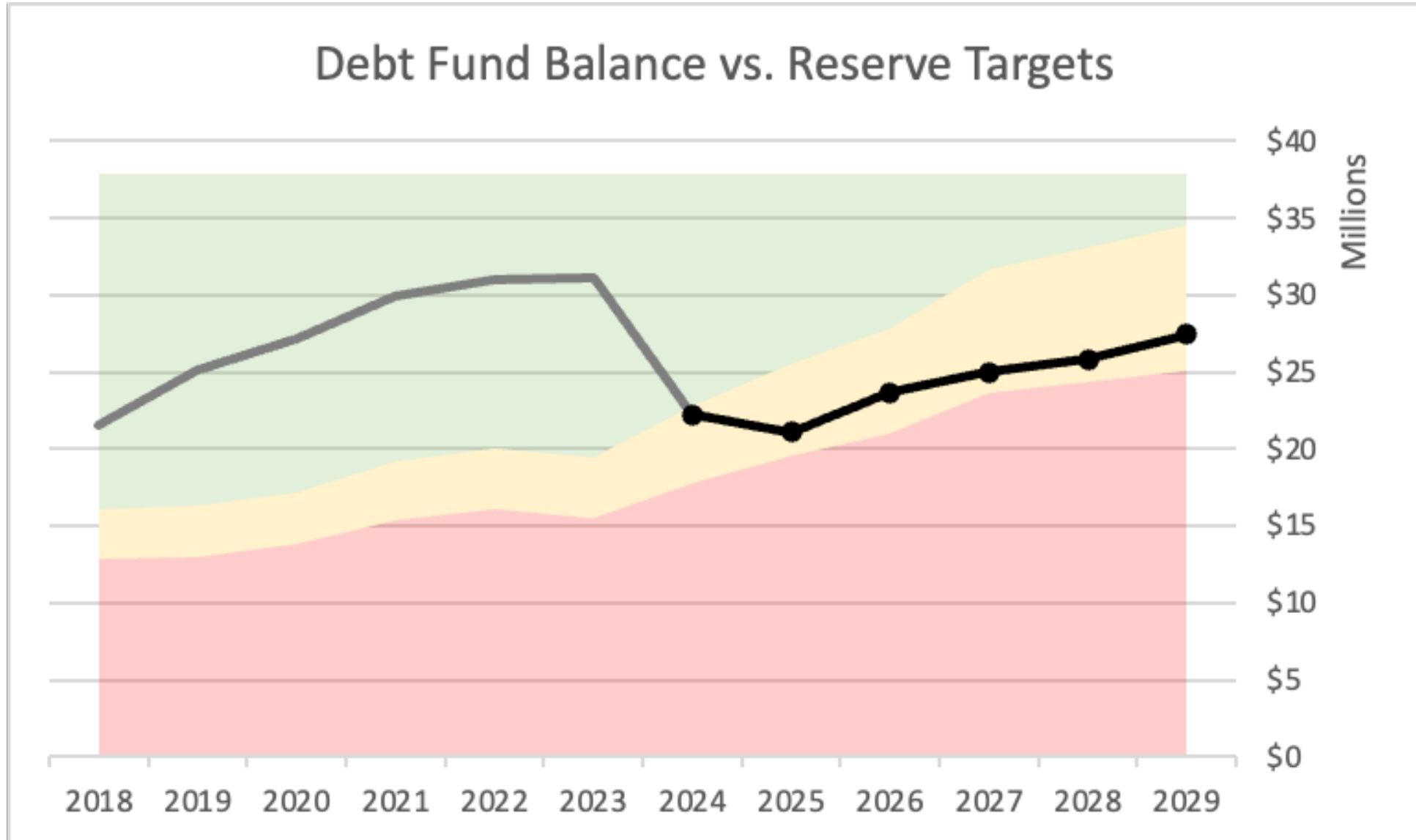
# Debt — Percent Borrowed For



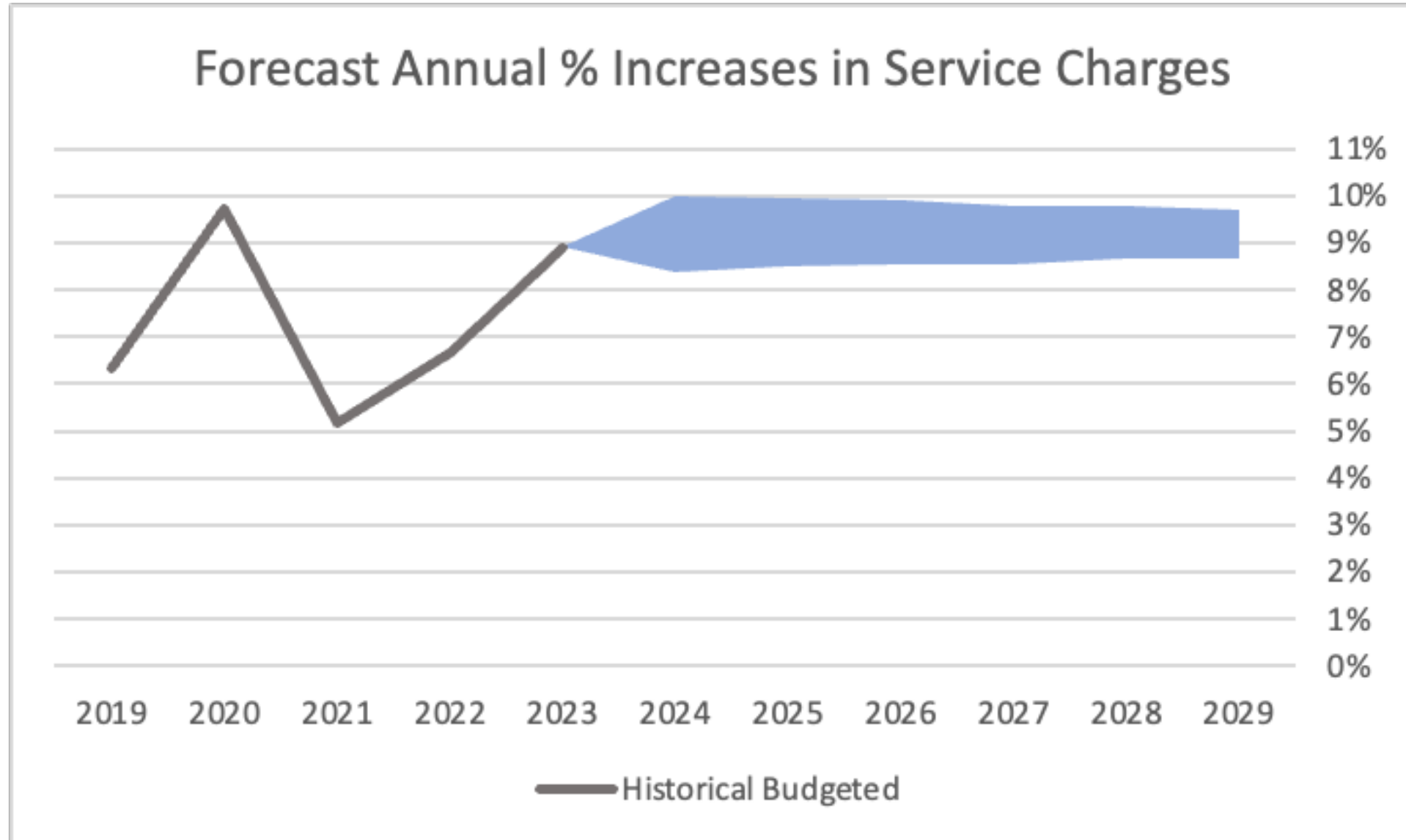
# Capital Fund Reserves



# Debt Fund Reserves



# Service Charges



# Requested Action

*The Commission is requested to adopt Resolution 2023-07-27-R7 accepting the Draft 2024 Capital Improvements Plan for planning purposes.*



# Questions?

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Visitor

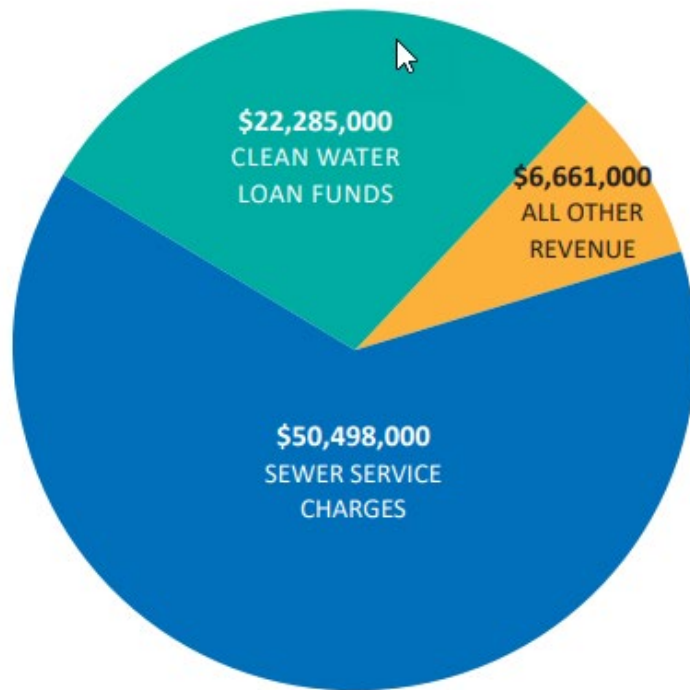
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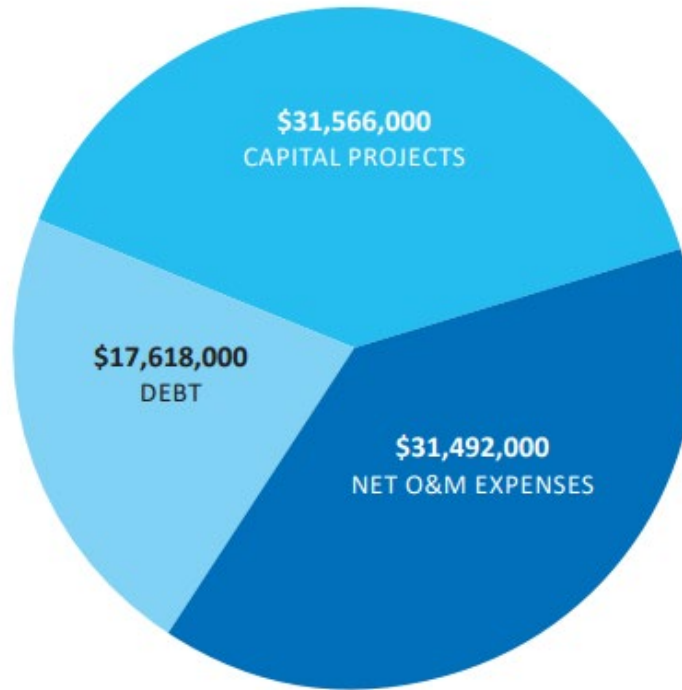
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# Combined Revenues & Expenditures (2021-2023)

## COMBINED REVENUES: \$79,444,000



## COMBINED EXPENDITURES: \$80,676,000





# Thank you

Madison Metropolitan Sewerage District

