



**MWRA Fiscal Year 2021
Proposed
Current Expense Budget**

Presented to WAC & WSCAC

April 21, 2020 via WebEx



Today's presenters:

Thomas Durkin, Finance Director

Matthew Horan, Deputy Finance Director, Treasurer

Michael Cole, Budget Director





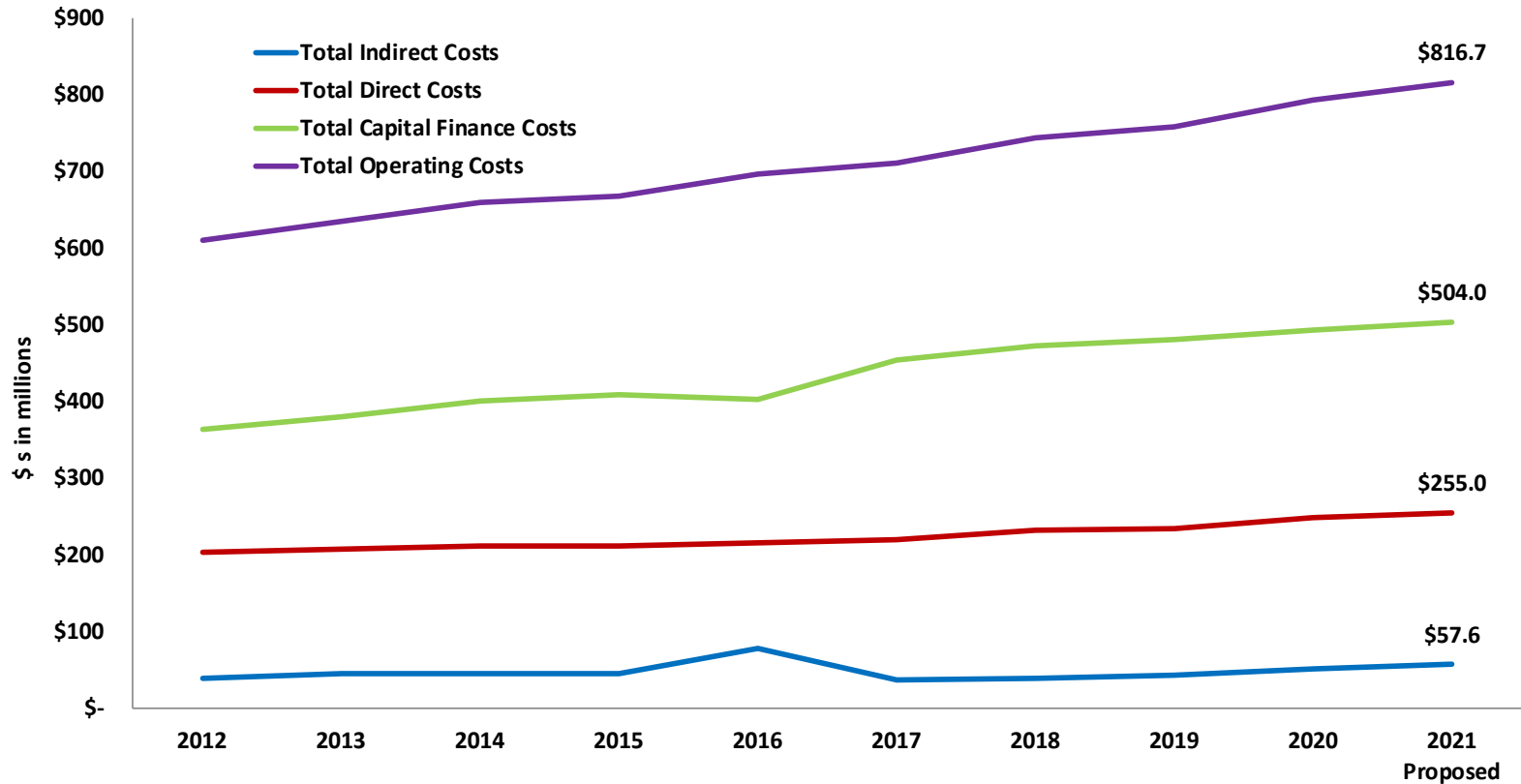
COVID-19 Crisis - The financial stress on MWRA cities, towns and districts will likely require an accommodative assessment for FY21 and possibly beyond



Objective: Sustainable and predictable assessments by applying a multi-year rates management strategy.



Historical Budgeted Spending





Budget Drivers For Multi-Year Planning

- Capital Finance Expenses
- Existing Expenses and Revenue – Inflation, Changes
- Long-Term Liabilities



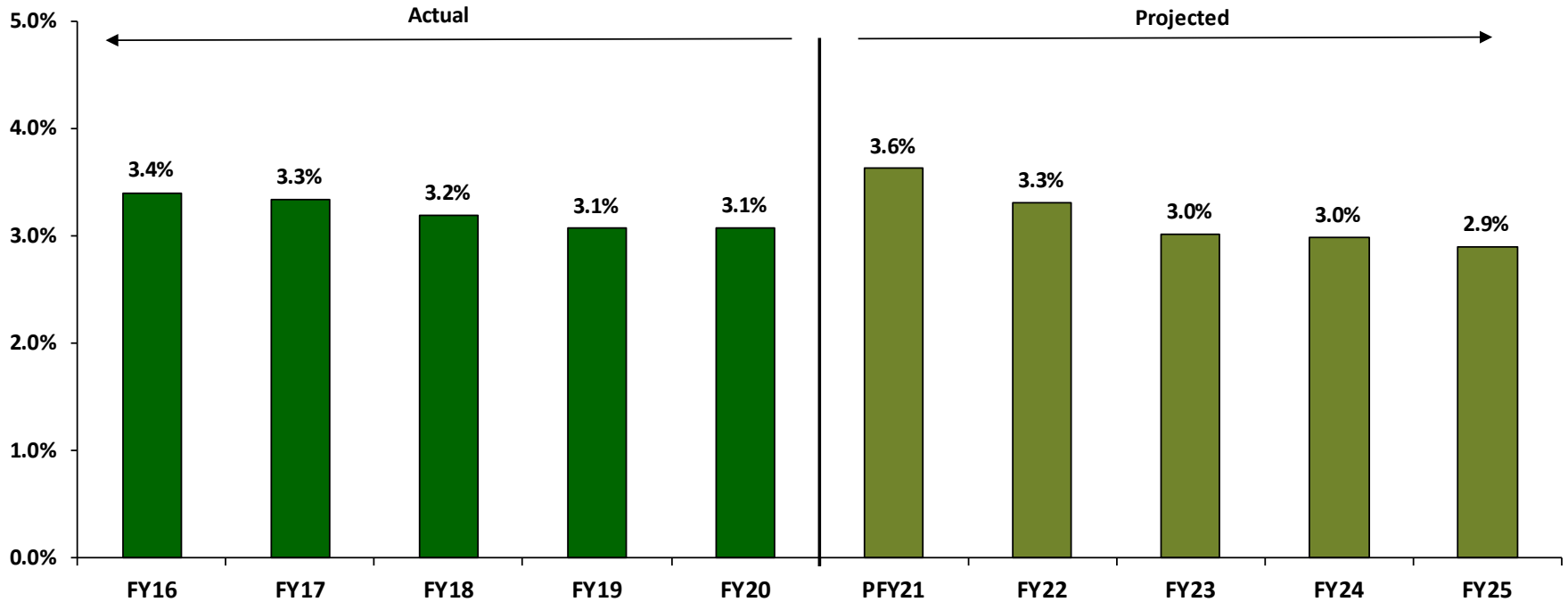
Ways to address the Debt Service challenge

- Defeasance
- Refundings
- Use of Reserves
 - Rate Stabilization Fund
 - Bond Redemption Fund
- Tactical Issuance – Repayment Structure
- Control Capital Spending
- Strategic Use of Current Revenue/Capital Funding



Actual and Forecasted Rate Revenue Changes

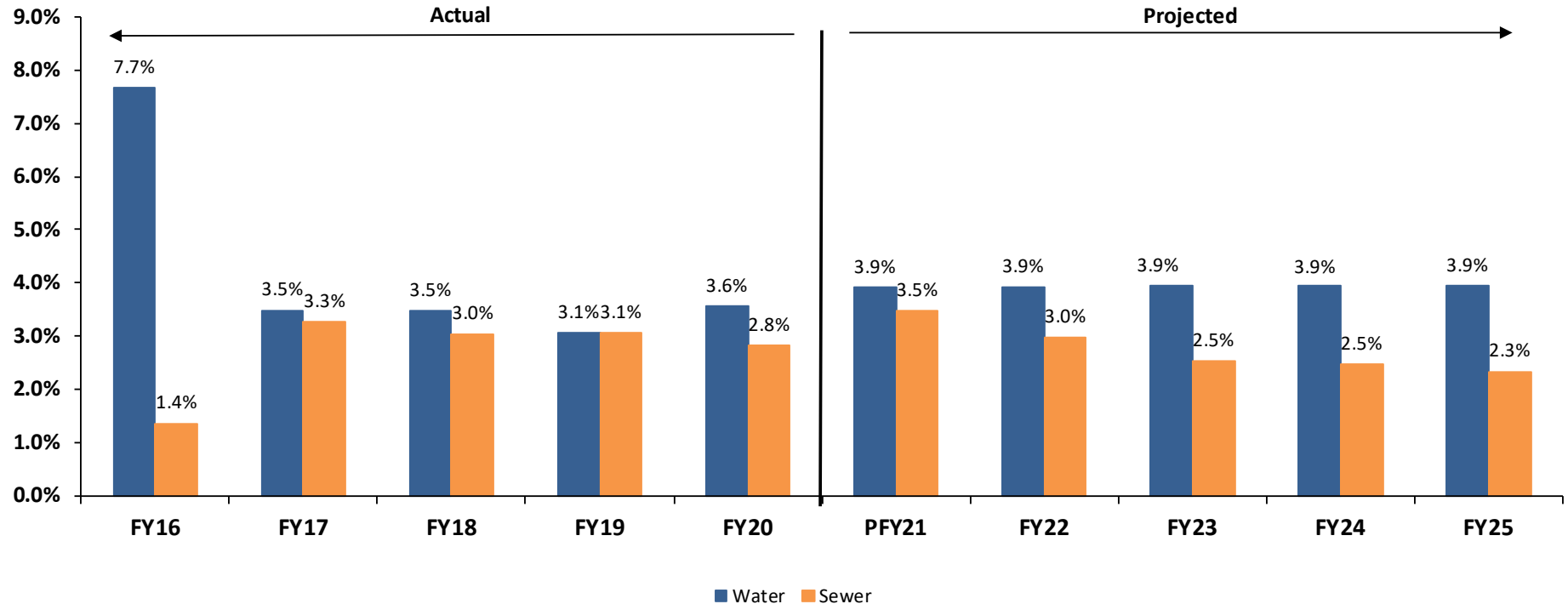
**MWRA Combined Utilities
Historical and Projected Rate Revenue Changes**





Actual and Forecasted Rate Revenue Changes by Utility

MWRA Water & Sewer Utilities Historical and Projected Rate Revenue Changes





CEB Budget Structure

- Direct Expenses
- Indirect Expenses
- Capital Finance Expenses
- Non-Rate Revenue
- Rate Revenue

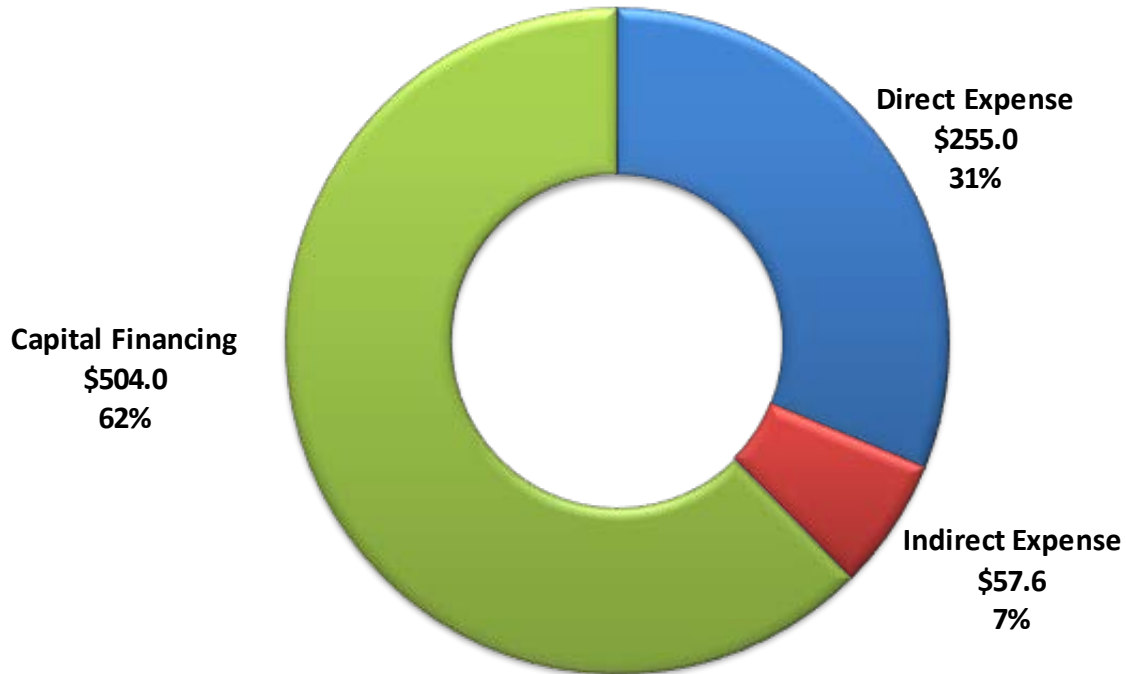
ATTACHMENT A
FY21 Proposed Budget vs. FY20 Approved Budget

TOTAL MWRA	FY19 Actuals	FY20 Approved Budget	FY21 Proposed Budget	Change FY21 Proposed Budget vs FY20 Approved Budget	
				\$	%
EXPENSES					
WAGES AND SALARIES	\$ 102,331,904	\$ 109,953,483	\$ 113,673,999	\$ 3,720,516	3.4%
OVERTIME	5,208,556	4,898,965	5,079,296	180,331	3.7%
FRINGE BENEFITS	19,982,221	21,717,533	22,492,274	774,741	3.6%
WORKERS' COMPENSATION	2,717,568	2,354,256	2,476,655	122,399	5.2%
CHEMICALS	10,891,948	11,811,222	12,182,677	371,455	3.1%
ENERGY AND UTILITIES	24,446,278	24,454,796	25,541,081	1,086,285	4.4%
MAINTENANCE	30,650,570	32,726,954	32,618,569	(108,385)	-0.3%
TRAINING AND MEETINGS	499,836	504,394	505,264	870	0.2%
PROFESSIONAL SERVICES	6,194,705	8,295,515	8,377,283	81,968	1.0%
OTHER MATERIALS	6,987,854	6,867,259	7,091,071	223,812	3.3%
OTHER SERVICES	23,769,399	24,683,370	24,975,119	291,749	1.2%
TOTAL DIRECT EXPENSES	\$ 233,680,737	\$ 248,267,527	\$ 255,013,288	\$ 6,745,760	2.7%
INSURANCE	\$ 2,748,893	\$ 2,611,222	\$ 3,059,218	\$ 447,996	17.2%
WATERSHED PILOT/DEBT	23,411,908	26,833,600	26,331,209	(502,391)	-1.9%
HEEC PAYMENT	1,191,990	4,429,316	7,215,200	2,785,884	62.9%
MITIGATION	1,614,263	1,654,618	1,692,344	37,726	2.3%
ADDITIONS TO RESERVES	1,881,797	2,094,284	2,283,728	189,444	9.0%
RETIREMENT FUND	7,000,000	7,315,000	11,000,000	3,685,000	50.4%
POSTEMPLOYMENT BENEFITS	5,574,152	5,962,457	6,065,490	103,033	1.7%
TOTAL INDIRECT EXPENSES	\$ 43,423,093	\$ 50,900,497	\$ 57,647,189	\$ 6,746,692	13.3%
STATE REVOLVING FUND	\$ 84,227,800	\$ 92,797,295	\$ 97,811,162	\$ 5,013,867	5.4%
SENIOR DEBT	287,497,793	202,299,609	273,795,833	71,496,224	35.3%
SUBORDINATE DEBT	84,788,872	169,609,844	96,339,599	(73,270,245)	-43.2%
LOCAL WATER PIPELINE CP	2,540,172	3,846,827	5,686,864	(159,963)	-2.7%
CURRENT REVENUE/CAPITAL	14,200,000	15,200,000	16,200,000	1,000,000	6.6%
CAPITAL LEASE	3,217,060	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	7,100,000	5,000,000	10,961,000	5,961,000	119.2%
DEBT SERVICE ASSISTANCE	(1,834,965)	(890,239)	-	890,239	-100.0%
TOTAL DEBT SERVICE	\$ 481,736,731	\$ 493,080,395	\$ 504,011,517	\$ 10,931,122	2.2%
TOTAL EXPENSES	\$ 788,840,561	\$ 792,248,420	\$ 816,671,994	\$ 24,423,574	3.1%
REVENUE & INCOME					
RATE REVENUE	\$ 739,042,200	\$ 761,767,000	\$ 789,386,000	\$ 27,619,000	3.6%
OTHER USER CHARGES	9,346,469	9,216,425	9,188,728	(27,697)	-0.3%
OTHER REVENUE	6,947,076	5,761,022	5,935,482	174,460	3.0%
RATE STABILIZATION	-	-	-	-	0.0%
INVESTMENT INCOME	16,985,523	15,503,973	12,161,784	(3,342,189)	-21.6%
TOTAL REVENUE & INCOME	\$ 772,321,268	\$ 792,248,420	\$ 816,671,994	\$ 24,423,574	3.1%
Rate Revenue Increase over FY20				3.63%	



FY21 Proposed Current Expense Budget (CEB)

FY21 Proposed Current Expense Budget

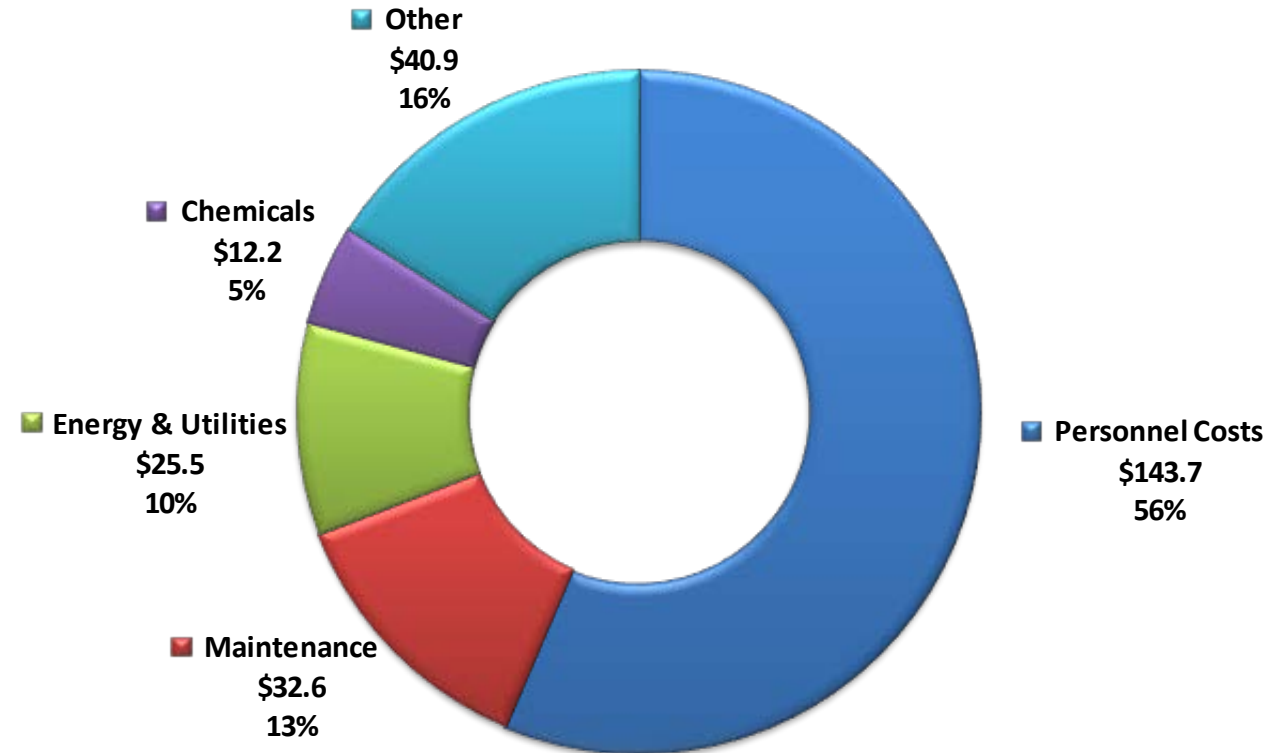




CEB Budget Highlights – Direct Expenses

Direct Category

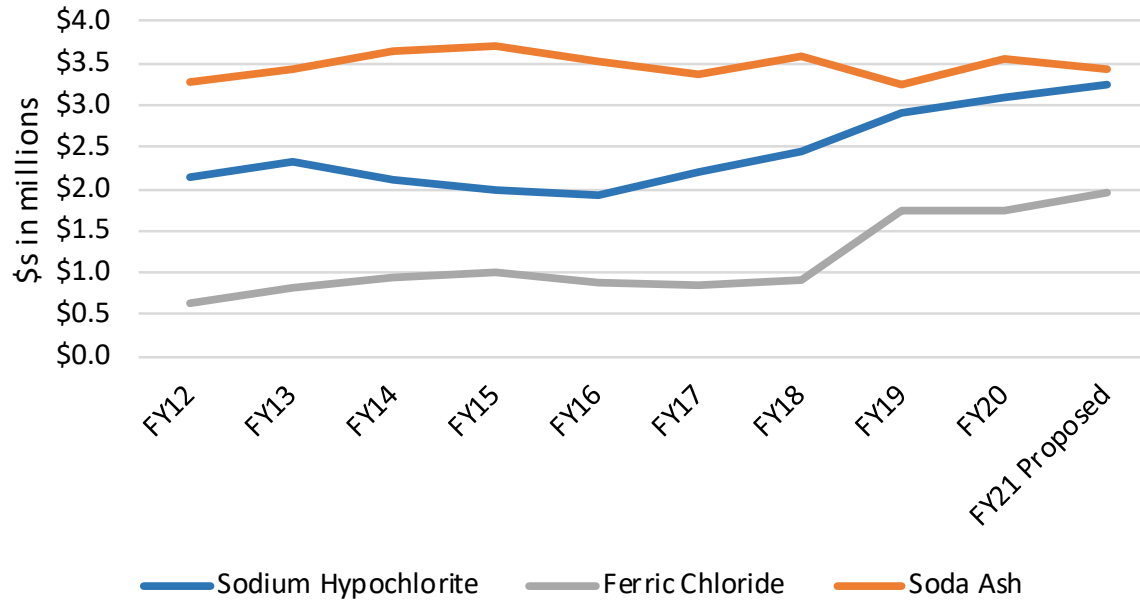
(\$s in millions)



- Personnel Costs: Increase of \$4.8 million or 3.5% over FY20. FY21 includes 5 additional positions for the Tunnel Redundancy Program and a 6% increase to Health Insurance premiums.
- Maintenance: Decrease of \$0.1 million or 0.3% from FY20. Operations maintenance is essentially level-funded in FY21 (increase of 0.4% over FY20).
- Utilities: Increase of \$1.1 million or 4.4% over FY20, driven by increases to Electricity and Diesel Fuel.
- Chemicals: Increase of \$0.4 million or 3.1% over FY20 driven by increases to Ferric Chloride and Sodium Hypochlorite, partially offset by a decrease to Soda Ash.



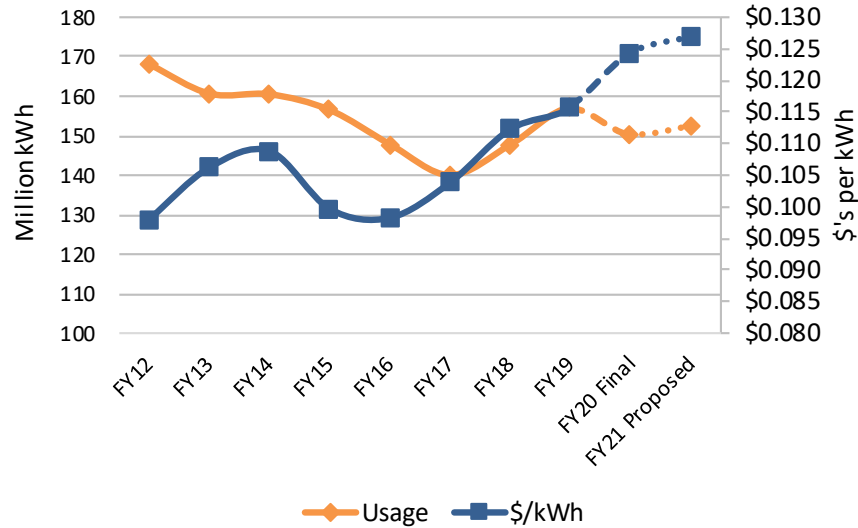
Historical & Projected Chemical Cost



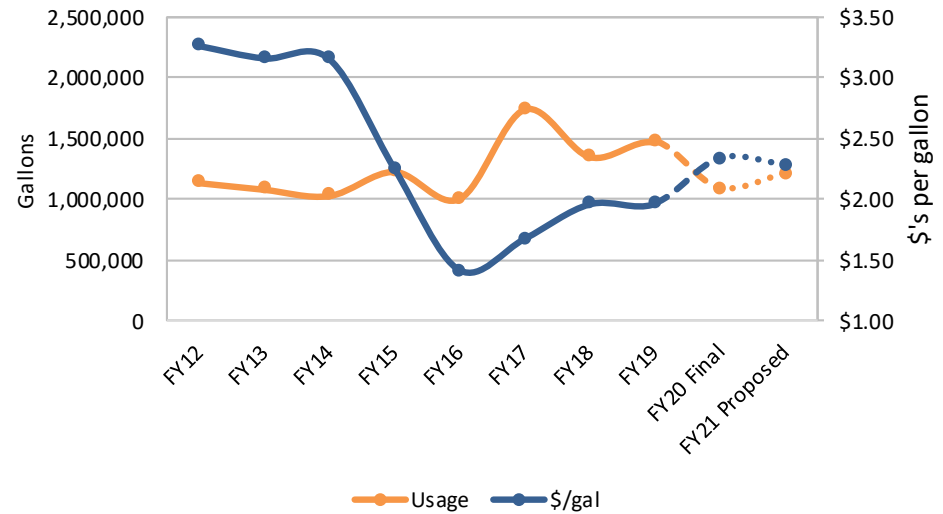


Utilities

Electricity



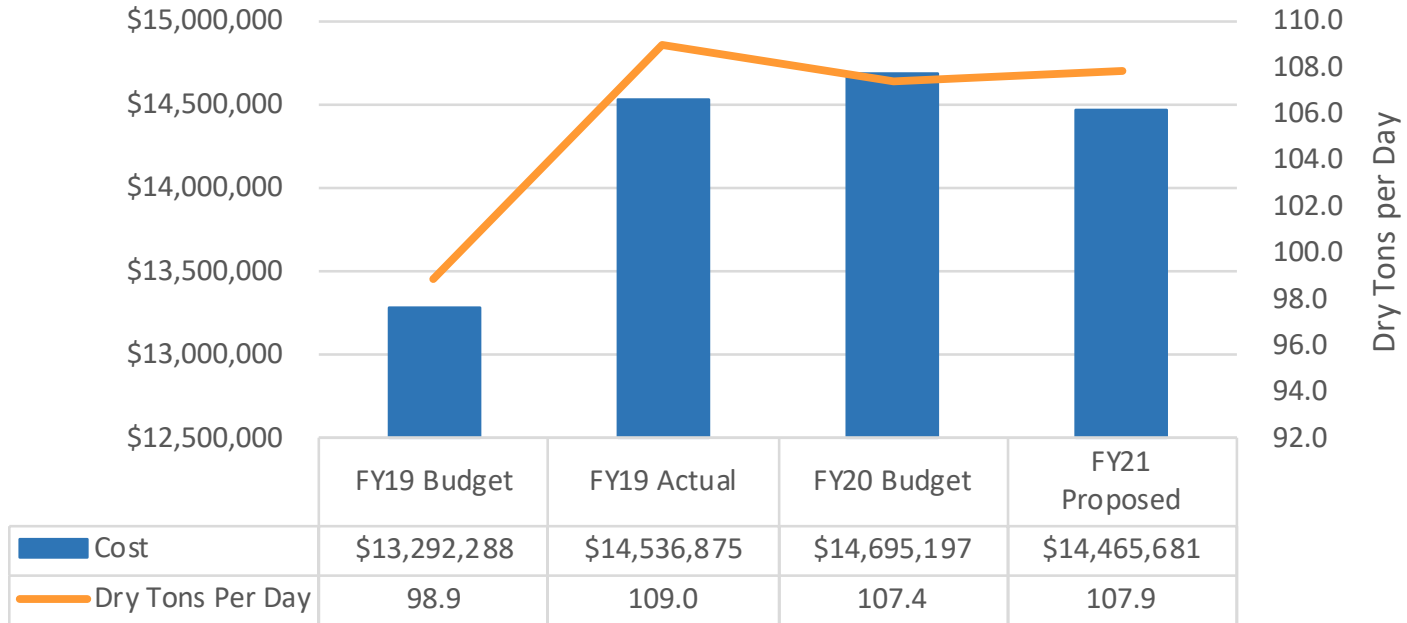
Diesel Fuel





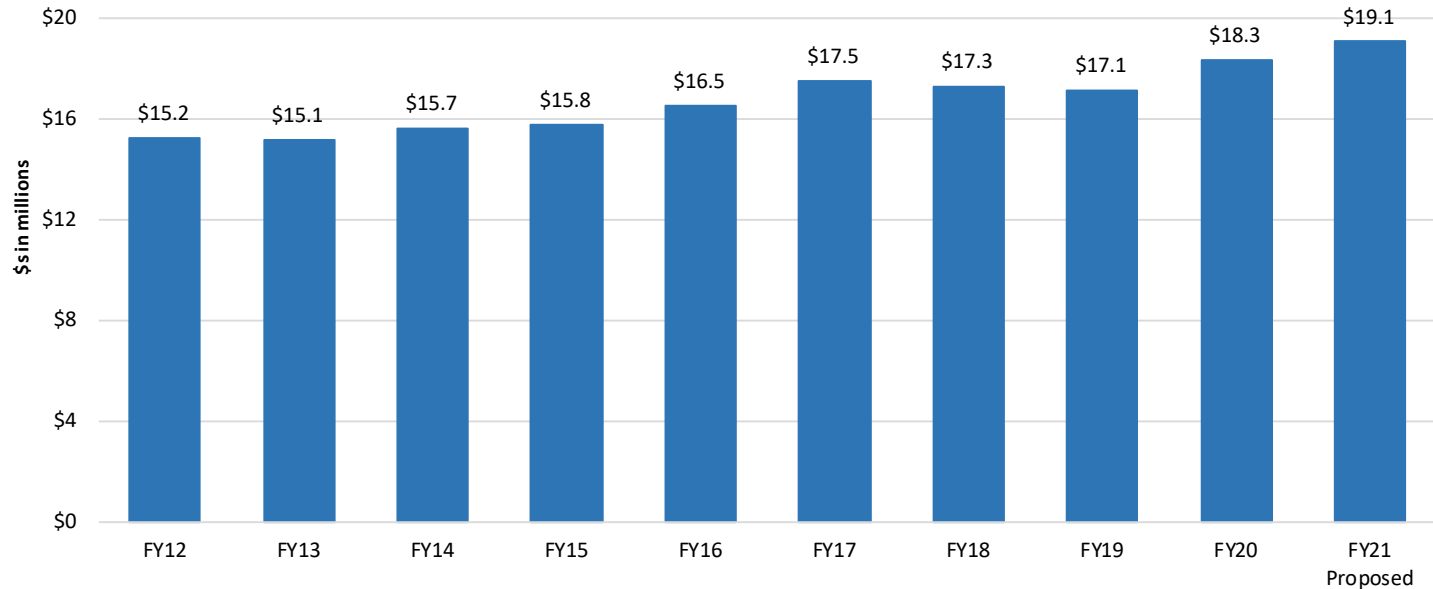
Sludge Pelletization

Sludge Pelletization





Historical Health Insurance Budget

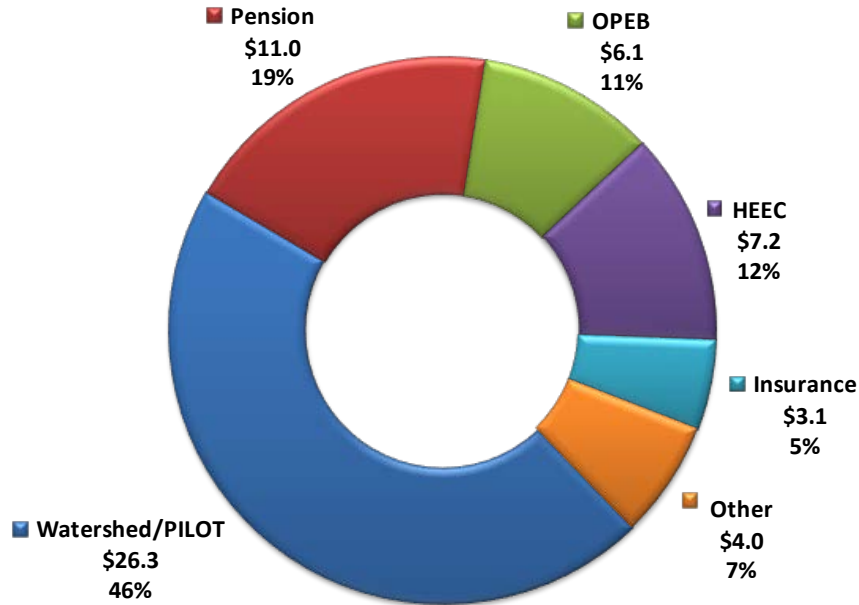




CEB Budget Structure – Indirect Expenses

Indirect Expenses by Category

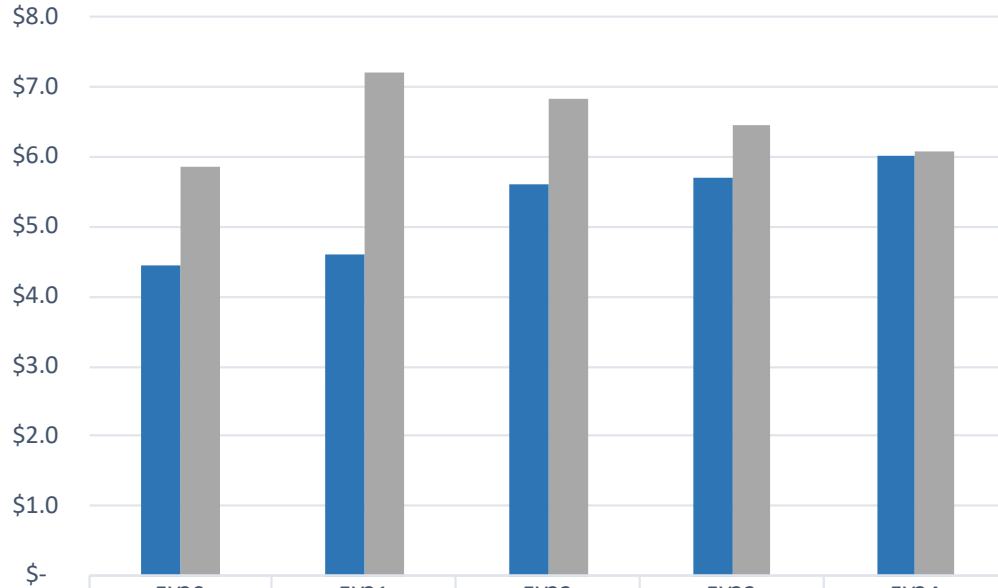
(\$s in millions)



- Watershed/PILOT: Decrease of \$0.5 million or 1.9% from FY20. Assumes 7 FTE vacancy adjustment in FY21.
- Pension: Increase of \$3.7 million or 50.4% over FY20. Per January 2018 actuarial valuation.
- HEEC: Increase of \$2.8 million or 62.9% over FY20. Final costs to be determined by the DPU.
- OPEB: Increase of \$0.1 million or 1.7% over FY20. Per January 2017 actuarial valuation.
- Insurance: Increase of \$0.5 million or 17.2% over FY20. Premium increase of 20% based on market conditions. Claims based on 3 year average.



HEEC Projected Expense (In Millions)



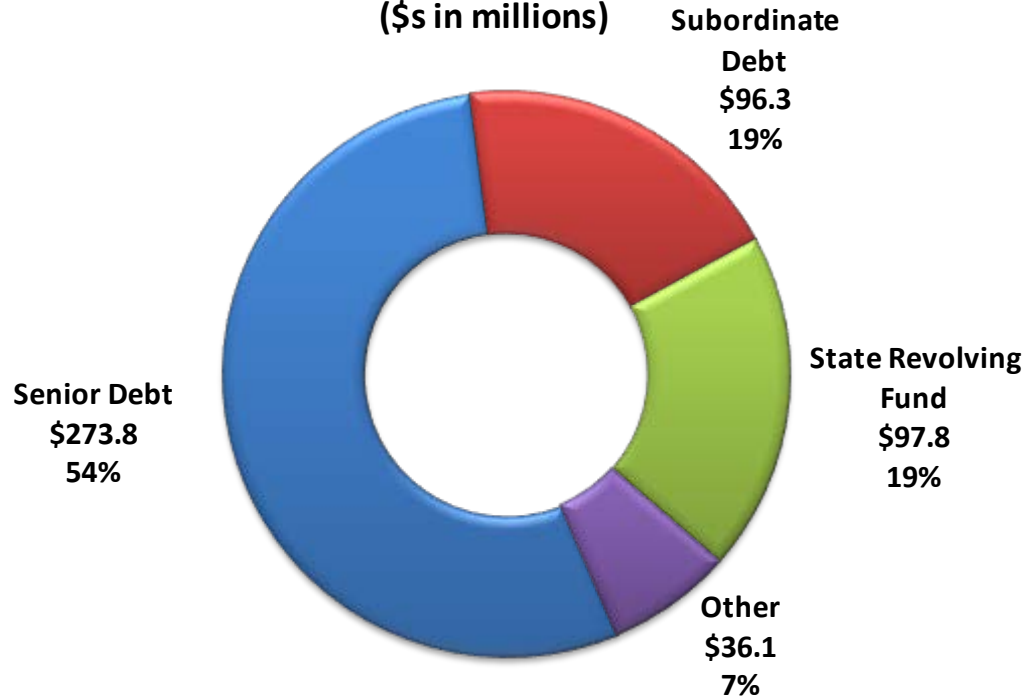
FY20 Projection	\$4.4	\$4.6	\$5.6	\$5.7	\$6.0
FY21 Projection	\$5.9	\$7.2	\$6.8	\$6.4	\$6.1

- FY20 Projection includes use of \$6.5 million reserve between FY21-25.
- FY21 Projection does not include any use of the \$6.5 million reserve between FY21-25.



CEB Budget Structure – Capital Finance Expenses

Capital Financing (\$s in millions)



Variable Rate Debt Assumption
3.50%

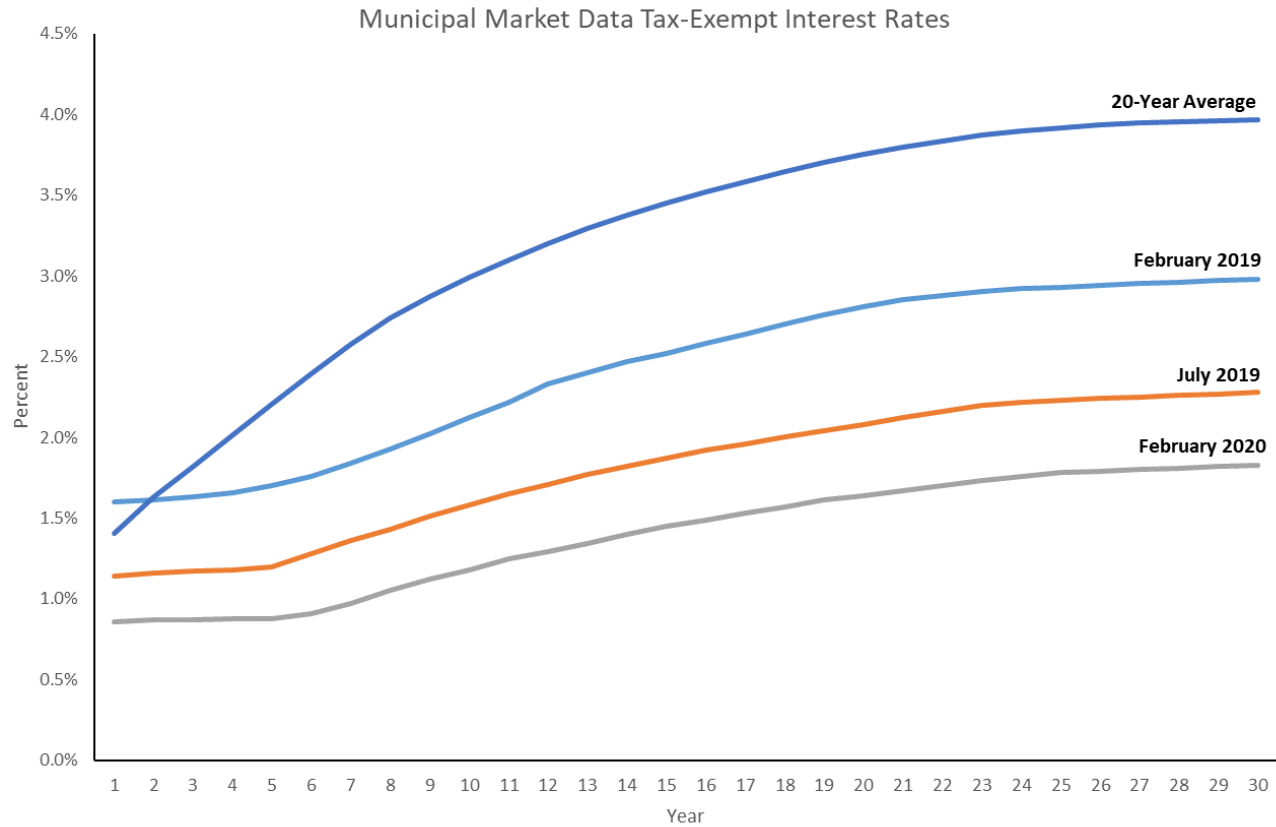
Assumes \$15.0 defeasance in
FY20 with target savings FY21-
FY26

\$11.0 prepayment of debt
\$16.2M to Current Revenue for
Capital

No Debt Service Assistance



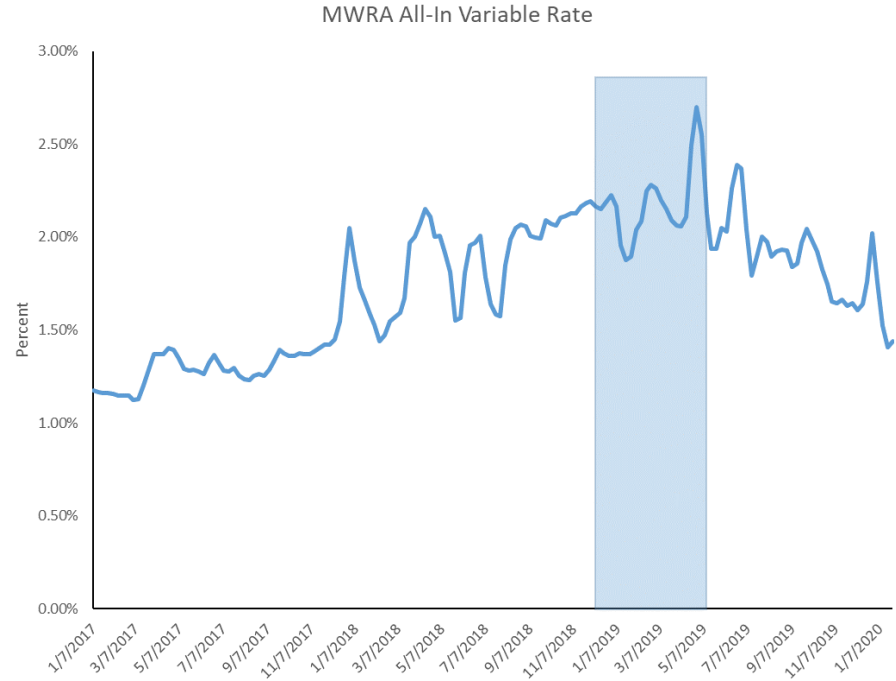
Long-Term Tax-Exempt Interest Rates





Short-Term Tax-Exempt Interest Rates

- Rates have experienced volatility with an overall downward trend.
- FY21 CEB assumes an all-in variable rate cost of 3.5%
- A 25 basis point change in variable rate debt is equal to \$828,732 in FY21.





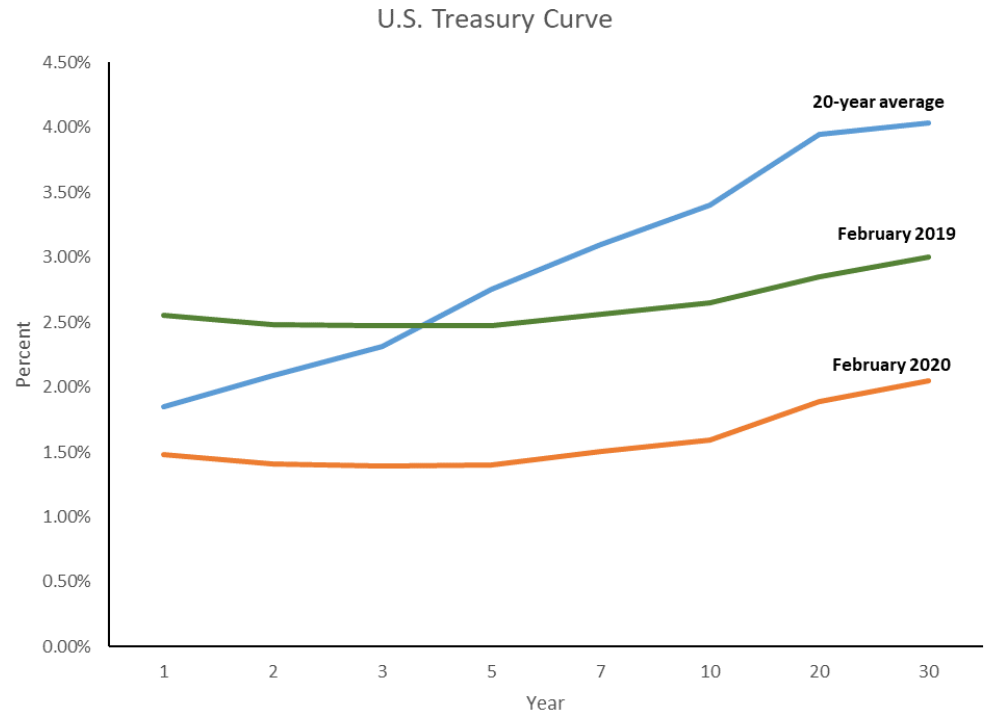
Long-Term Taxable Interest Rates

Benefit

- Low taxable rates allowed for 2019 Series F refunding (\$4.7M savings in FY21).
- Low rates may allow for future taxable refundings for interest rate savings.

Risk

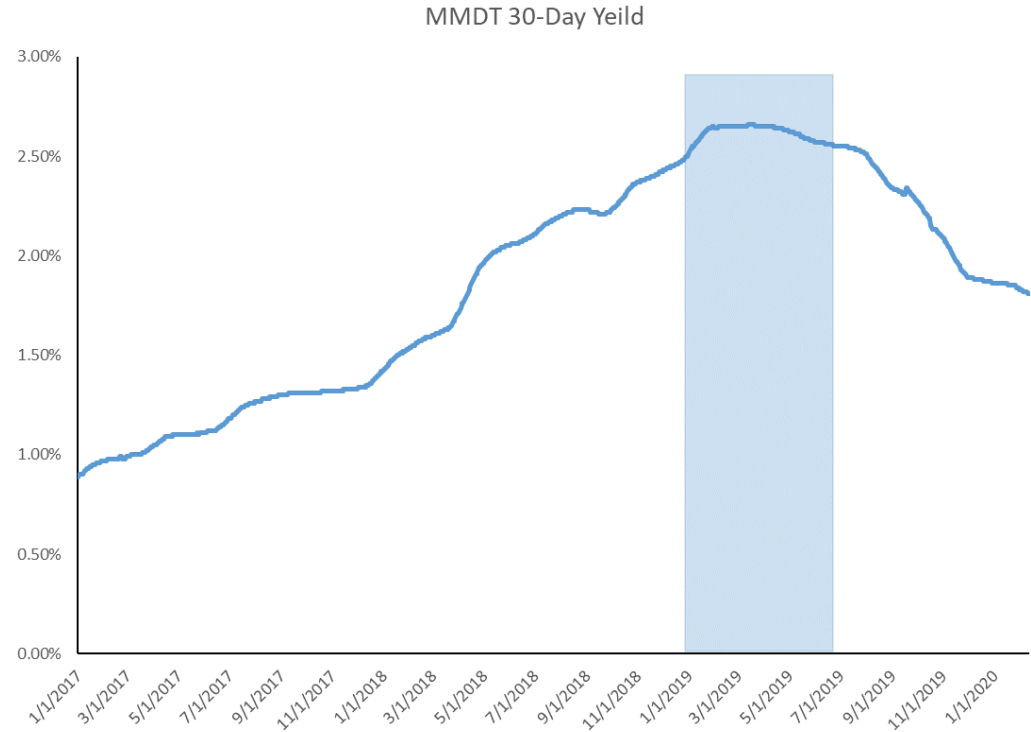
- MWRA had \$88.1 million in long-term investments call during FY20 to date.
- Lower Reinvestment rates resulted in a \$816,530 reduction to the FY21 projected investment income





Short-Term Taxable Interest Rates

- Short-term interest rates decreased significantly during FY20.
- FY21 short-term interest income assumption is 1.50%.
- A 25 basis-points change has a \$1,046,134 impact for FY21.





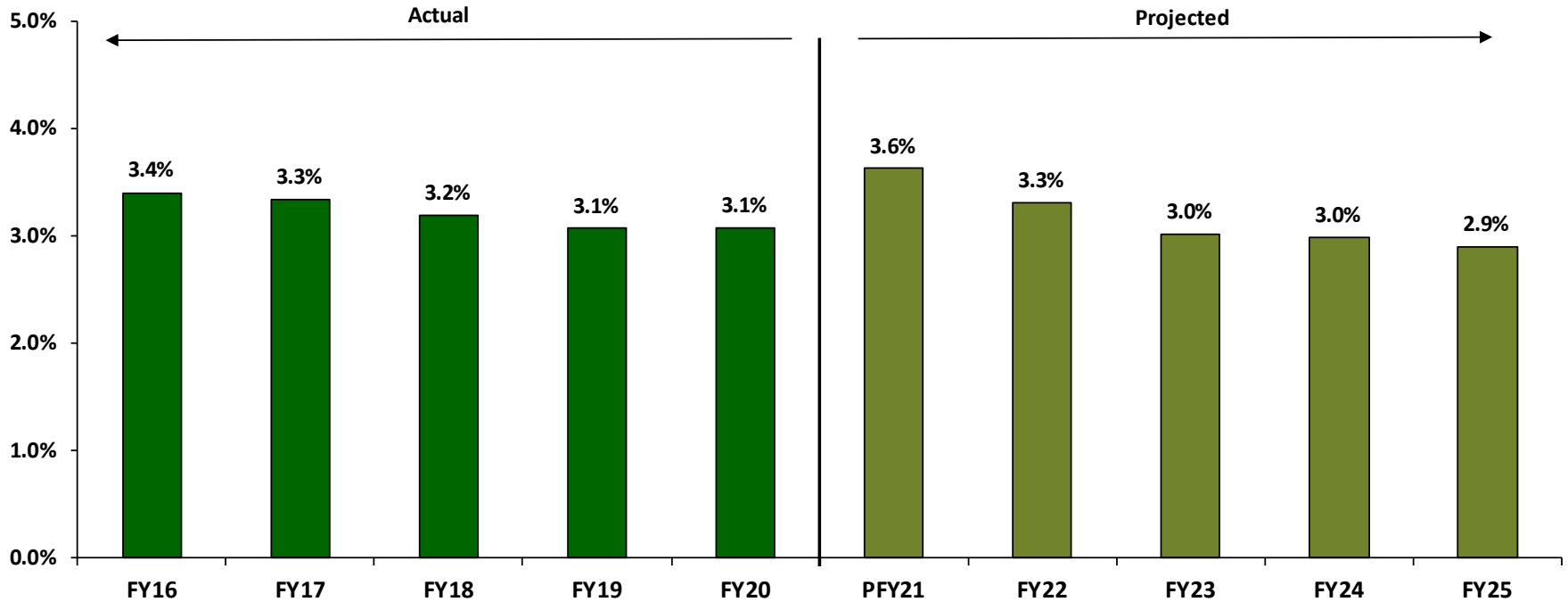
Rate Revenue Requirement \$s in Millions

Category	FY21 Proposed
Direct Expenses	\$ 255.0
Indirect Expenses	\$ 57.6
Capital Financing	\$ 504.0
Total Expenditures	\$ 816.7
Non-Rate Revenue	\$ 27.3
Rate Revenue Requirement	\$ 789.4
Total Revenue	\$ 816.7
Rate Revenue Requirement	3.63%



Actual and Forecasted Rate Revenue Changes

**MWRA Combined Utilities
Historical and Projected Rate Revenue Changes**





FY21 Current Expense Budget Next Steps

- Transmit Proposed Budget to Advisory Board for 60 day review on February 19
- Public Hearing on April 14 **(Rescheduled to April 30)**
- MWRA Board Hearing on May 27
- Staff will present Draft Final Budget on May 27
- Staff anticipate Budget adoption on June 24



***FY21 Proposed
Capital Improvement Program***

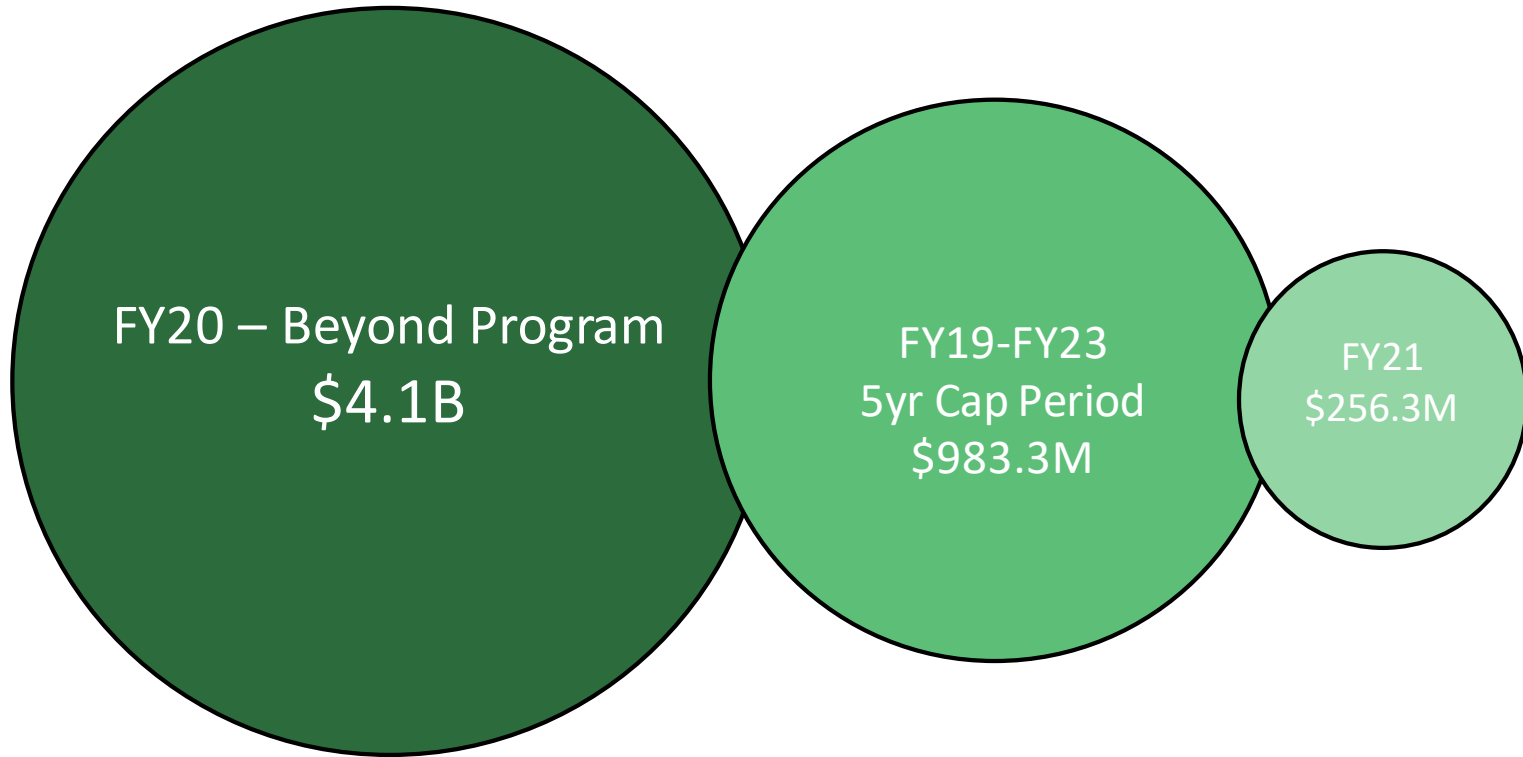


FY21 Proposed CIP

- FY21 Proposed CIP complies with the Cap requirements
- Focus on Asset Protection and Long-Term Redundancy
- Metropolitan Tunnel Redundancy



FY21 Proposed CIP





FY21 Proposed CIP - FY19-23 vs. Base-Line Cap

FY19-23 Base-Line Cap		FY19	FY20	FY21	FY22	FY23	Total FY19-23
	Projected Expenditures	\$179.2	\$276.1	\$251.3	\$194.9	\$150.4	\$1,051.8
	I/I Program	(19.2)	(25.7)	(24.3)	(27.9)	(26.1)	(123.2)
	Water Loan Program	(8.3)	(8.4)	(7.2)	(5.6)	(2.8)	(32.4)
	MWRA Spending	151.7	241.9	219.7	161.4	121.4	\$896.2
	Contingency	9.9	15.9	14.5	11.0	8.2	59.4
	Inflation on Unawarded Construction	0.7	5.0	7.8	7.2	8.5	29.3
	Chicopee Valley Aqueduct Projects	(0.0)	0.0	0.0	0.0	0.0	(0.0)
FY19 Final FY19-23 Spending	\$162.3	\$262.8	\$242.0	\$179.6	\$138.1	\$984.8	



FY21 Proposed		FY19	FY20	FY21	FY22	FY23	Total FY19-23
	Projected Expenditures	\$142.9	\$173.3	\$256.3	\$255.1	\$261.2	\$1,088.9
	I/I Program	(39.6)	(24.9)	(25.7)	(28.3)	(23.6)	(142.1)
	Water Loan Program	(13.8)	(8.0)	(6.0)	(10.6)	3.0	(35.5)
	MWRA Spending	89.4	140.4	224.6	216.3	240.6	\$911.3
	Contingency	0.0	9.0	13.8	14.4	16.4	53.7
	Inflation on Unawarded Construction	0.0	0.0	2.0	5.8	10.6	18.4
	Chicopee Valley Aqueduct Projects	(0.0)	0.0	0.0	0.0	0.0	(0.0)
FY21 Proposed FY19-23 Spending	\$89.4	\$149.5	\$240.5	\$236.5	\$267.5	\$983.3	





FY21 Proposed CIP – Top Projects Excluding Loans FY19-23 Cap Period Spending

Project	Subphase	FY19-23 Spending (\$000)	% of Total
DI Treatment Plant Asset Protection	Clarifier Rehab Phase 2 - Construction	\$111,900	10.3%
I&P Facility Asset Protection	Chelsea Creek Upgrades - Construction	\$51,381	4.7%
Corrosion & Odor Control	NI Odor Control HVAC Improvement Construction	\$49,563	4.6%
I&P Facility Asset Protection	Prison Point Rehabilitation - Construction	\$36,143	3.3%
NIH Redundancy & Storage	Section 89 & 29 Replacement - Construction	\$21,300	2.0%
NIH Redundancy & Storage	Section 89 & 29 Redundancy Construction Phase 2	\$19,776	1.8%
SEH Redundancy & Storage	Redundancy Pipeline Sect 111 - Construction 3	\$19,325	1.8%
DI Treatment Plant Asset Protection	Gravity Thickener Rehabilitation	\$19,275	1.8%
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	\$15,857	1.5%
New Connect Mains-Shaft 7	CP3-Sect 23,24,47, Rehabilitation	\$14,700	1.4%
Metro Tunnel Redundancy	Preliminary Design & MEPA Review	\$14,166	1.3%
SEH Redundancy & Storage	Redundancy Pipeline Sect 111 - Construction 2	\$14,120	1.3%
Top FY19-23 Spending Suplicates		\$387,506	35.6%
Other Changes		\$701,371	64.4%
Total FY19-23 Spending		\$1,088,877	100.0%



FY21 Proposed CIP – Top Projects Excluding Loans FY21 Spending

Project	Subphase	FY21 (\$000)	% of Total
DI Treatment Plant Asset Protection	Clarifier Rehabilitation Phase 2 - Construction	\$34,475	13.4%
I&P Facility Asset Protection	Chelsea Creek Upgrades - Construction	\$16,091	6.3%
I&P Facility Asset Protection	Prison Point Rehabilitation - Construction	\$15,490	6.0%
Corrosion & Odor Control	NI Odor Control HVAC Improvement Construction Phase 2	\$14,854	5.8%
NIH Redundancy & Storage	Section 89 & 29 Repl - Construction	\$9,150	3.6%
DI Treatment Plant Asset Protection	Gravity Thickener Rehabilitation	\$6,444	2.5%
Central Monitoring System	CWTP SCADA Upgrade Construction	\$5,000	2.0%
Top FY21 Spending Subphases		\$101,504	39.6%
Other Changes		\$154,824	60.4%
Total FY21 Spending		\$256,328	100.0%



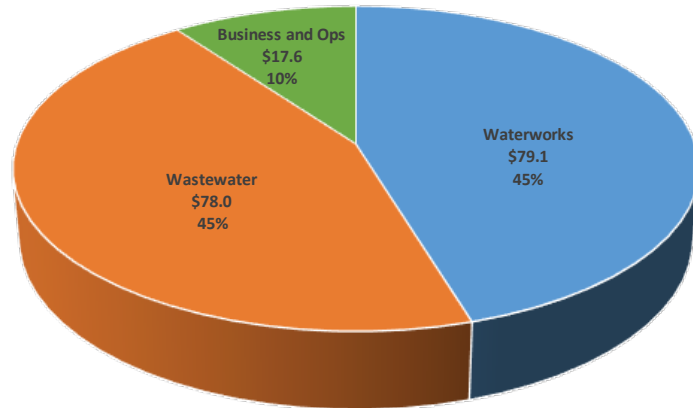
FY21 Proposed CIP FY21 Spending

Spending Composition	
Ongoing Awarded Contracts	\$140.9M
Proposed Contract Awards	\$82.5M
Budgeted Loan Programs	<u>\$32.9M</u>
Total Proposed Expenditures	\$256.3M

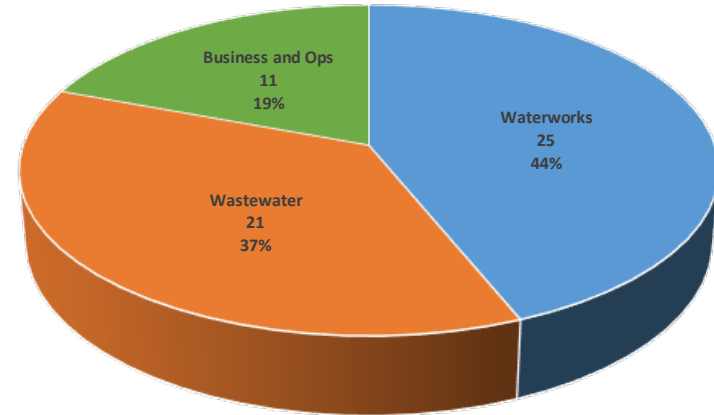


FY21 Proposed CIP – Proposed FY21 Contract Awards

Contract Value



Contract Awards

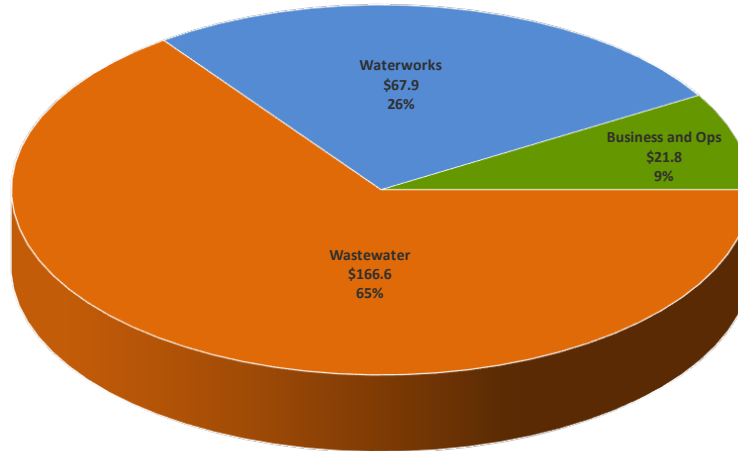


\$s in millions



FY21 Proposed CIP – Proposed FY21 Expenditures

Total Proposed FY21 Expenditures: \$256.3 million



\$s in millions



FY21 Proposed CIP – New Projects

14 New Projects Added in FY21: \$57.0 million

- Waterworks: \$50.3 million
- Wastewater: \$6.7 million



FY21 Proposed CIP – New Projects > \$1.0 Million

- Water Tank Painting Bellevue 1 & 2, Park Circle, Walnut Hill, DI - \$27.9 million
- Cosgrove Tunnel Rehab. Design - \$10.0 million
- Beacon Street Line Rehabilitation - \$9.3 million
- Deer Island Roof Replacement: \$2.0 million
- CSO Study/Prel. Design Alewife Brook and Lower Charles River Basin: \$1.5 million
- Clinton Landfill Cell #1 Closure: \$1.0 million



FY21 Proposed CIP – Asset Protection and Water Redundancy

Project Category	FY14-18	FY19-23	FY24-28
Asset Protection	\$222.8	\$607.7	\$1,209.3
Water Redundancy	\$174.6	\$232.8	\$376.9
CSO	\$64.7	\$10.6	\$0.1
Other	\$123.5	\$237.7	\$235.4
Total	\$585.6	\$1,088.9	\$1,821.6
Asset Protection	38.0%	55.8%	66.4%
Water Redundancy	29.8%	21.4%	20.7%
CSO	11.0%	1.0%	0.0%
Other	21.1%	21.8%	12.9%
Total	100.0%	100.0%	100.0%

- Asset Protection and Water Redundancy including Deer Island and water tunnel redundancy projects are the principal drivers of future capital expenditures.



Clarifier Rehabilitation Phase 2 Construction

FY 21 Budget: \$34.5M

Total Contract: \$148.9M

NTP: May 2020

SC: May 2024





FY21 Proposed CIP – FY21 Top Spenders – Asset Protection

Chelsea Creek Headworks Upgrade Construction

FY21 Budget: \$16.1M

Total Contract: \$82.9M

NTP: November 2016

SC: November 2020





Prison Point Rehabilitation Construction



FY 21 Budget:

Total Contract:

NTP: June 2020

SC: June 2022



FY21 CIP – FY21 Top Spenders - Asset Protection

Nut Island Odor Control & HVAC Improvements Construction

FY 21 Budget : \$14.9M

Total Contract: \$57.6M

NTP: January 2020

SC: November 2022





FY21 CIP – FY21 Top Spenders - Redundancy

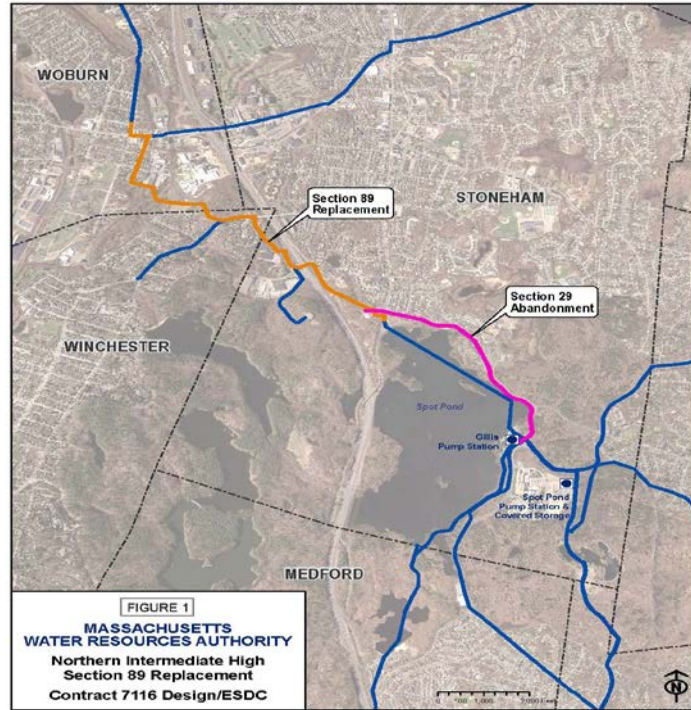
Northern Intermediate High Redundancy Section 89 and 29 Replacement Constr.

FY 21 Budget: \$9.2M

Total Contract: \$21.3M

NTP: July 2020

SC: July 2022





Gravity Thickener Rehabilitation

FY 21 Budget: \$6.4M

Total Contract: \$19.7M

NTP: May 2018

SC: February 2021





FY21 CIP – FY21 Top Spenders - Asset Protection

Carroll Water Treatment Plant SCADA Upgrade Construction

FY 21 Budget: \$5.0M

Total Contract: \$9.9M

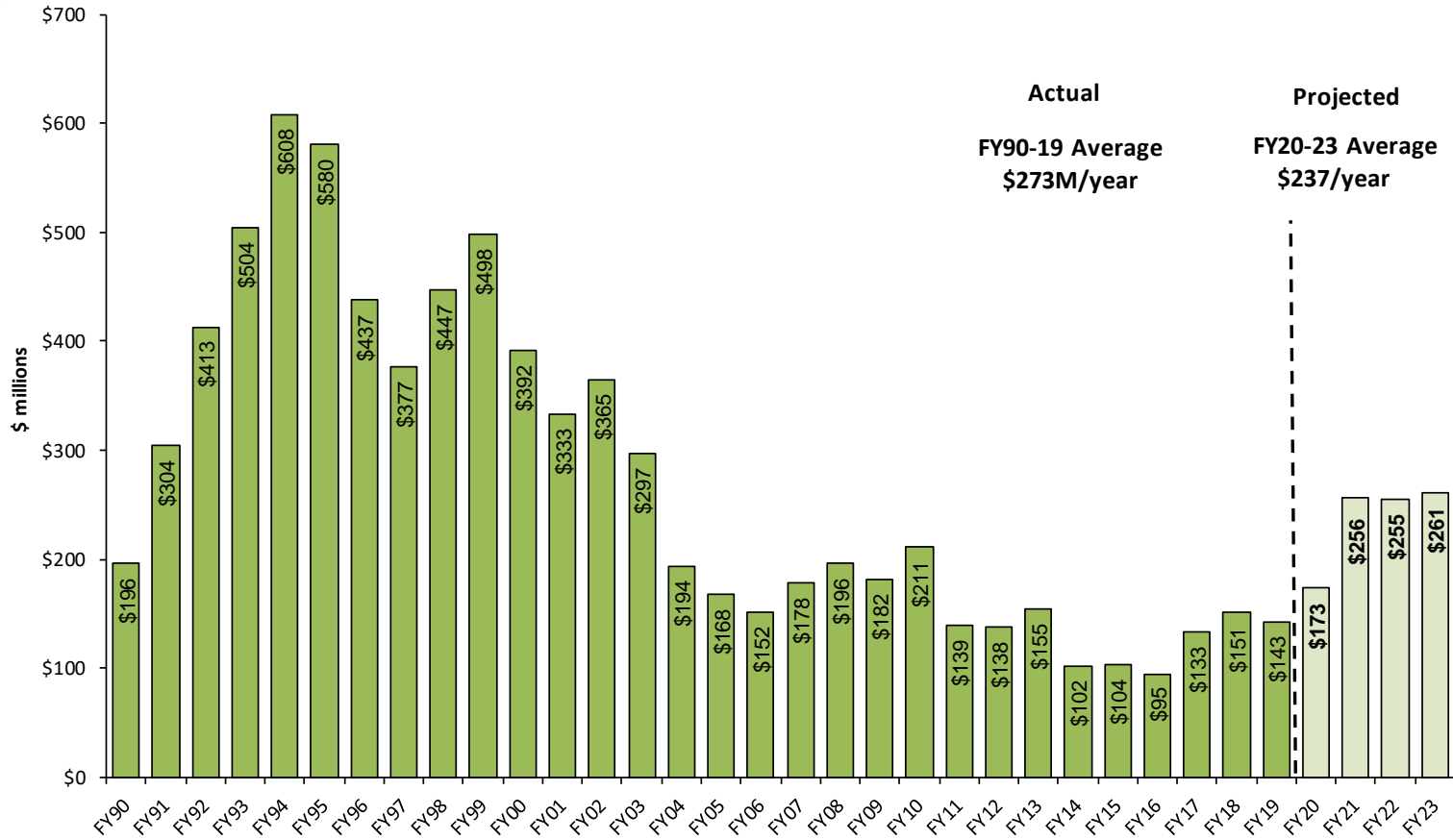
NTP: July 2020

SC: July 2022



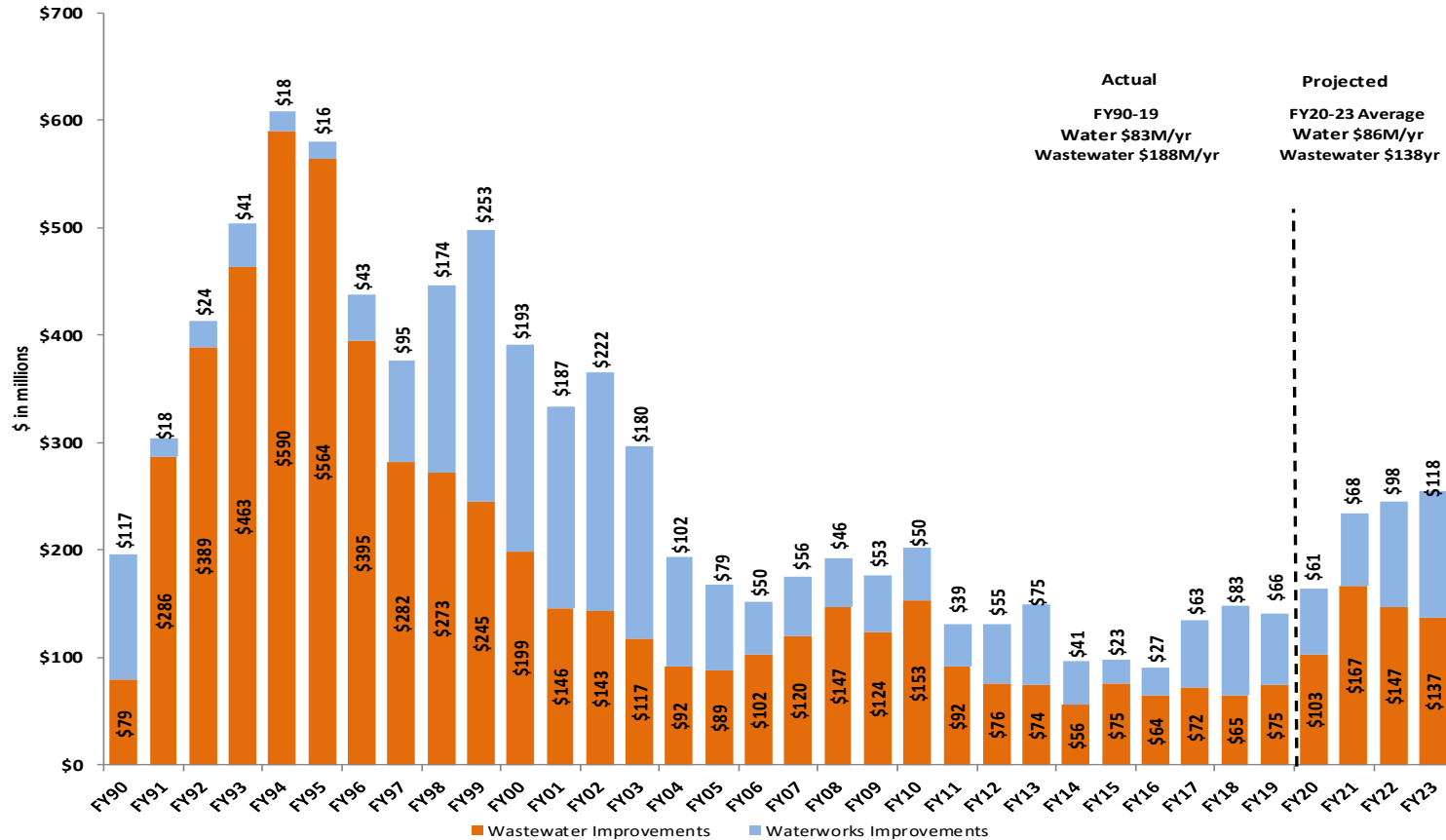


Historic and Projected Capital Improvement Spending





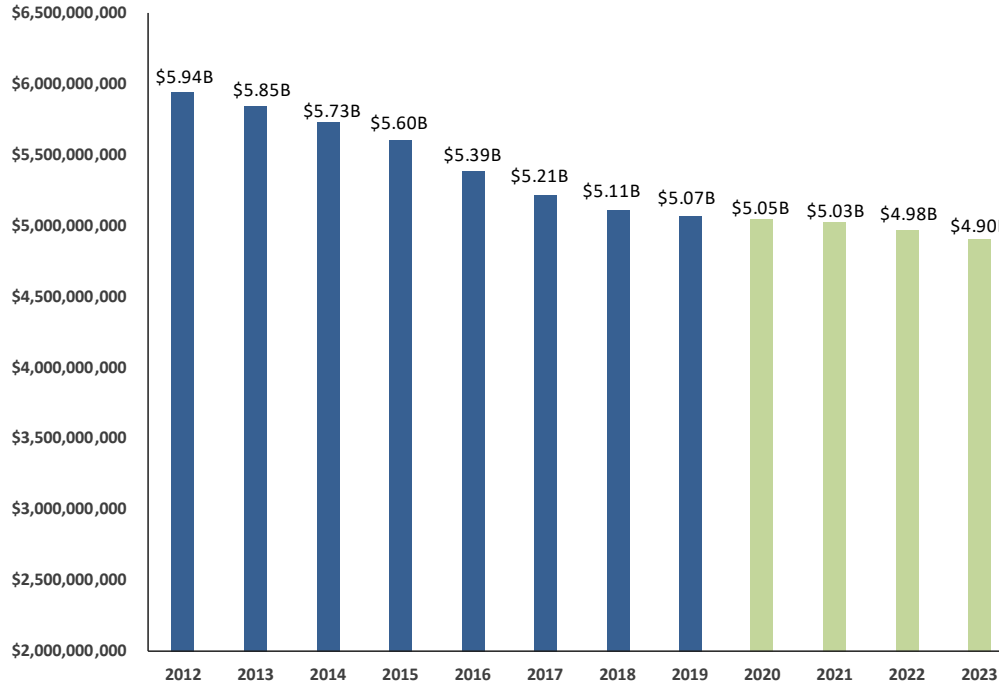
Historic and Projected Capital Improvement Spending by Utility





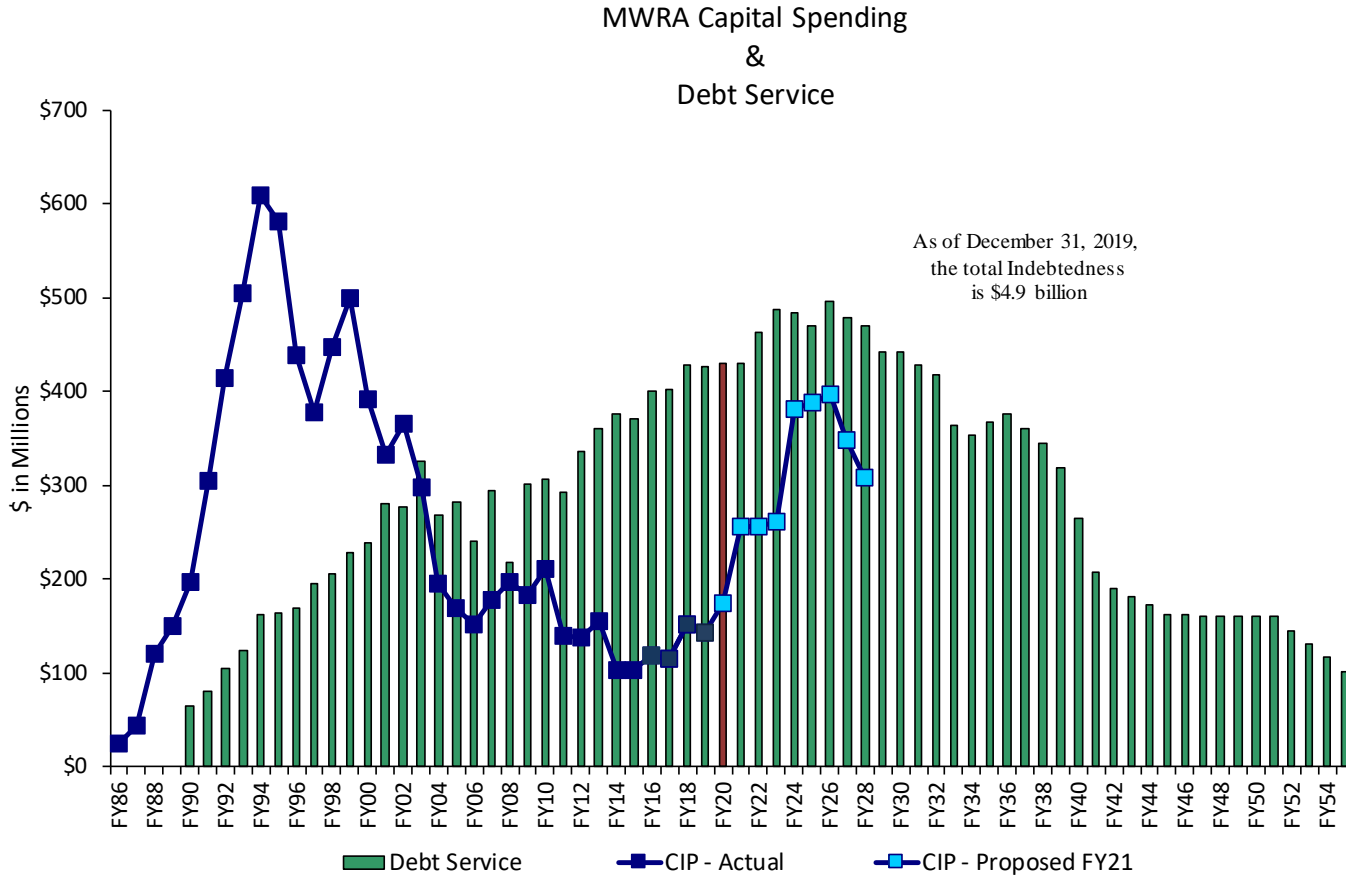
Level of MWRA Indebtedness

Outstanding Debt on June 30 by Fiscal Year
FY12-FY23





Capital Spending and Debt Service





Looking Ahead

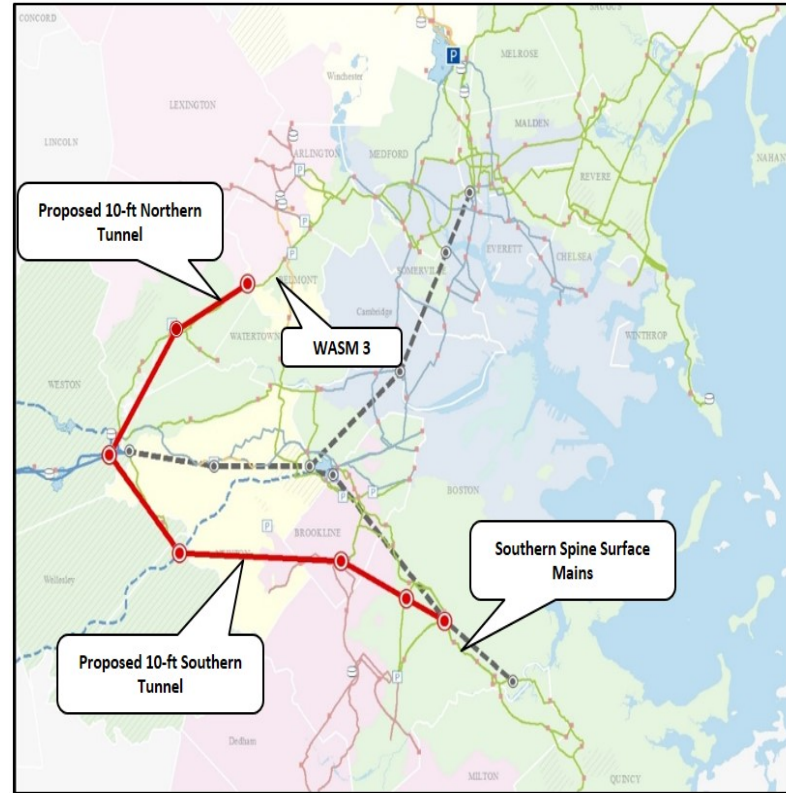
- Lessons learned from Chelsea Headworks Upgrades
- Continue Asset Protection
- Metropolitan Tunnel Redundancy



Metropolitan Tunnel Redundancy Program

FY19-23 Projected Expenditures

Contract Name	Start/ Duration (years)	Contract Budget (millions)	FY19-23 Spending (millions)
Program Support Services <i>Awarded</i>	FY19/9	\$17.5	\$8.3
Preliminary Design/MEPA Review <i>Anticipated award April 2020</i>	FY20/3.5	\$16.0	\$14.2
Technical Assistance <i>Anticipated Award January 2022</i>	FY22/6	\$4.1	\$1.2





Review of Tunnel Program CIP

- October 2016 Special Board Meeting on Metropolitan Tunnel Redundancy
 - Staff Presented Preferred Two-Tunnel Alternative
 - 14 miles (4.5 miles North, 9.5 miles South) of 10-ft diameter deep rock tunnel
- Estimated midpoint of construction cost: \$1.47 - \$1.70 billion
 - 17 to 23 year program with preliminary design beginning in 2017 and tunnel construction beginning in 2022
 - Duration depends on program phasing (Advisory Board recommended concurrent construction of north and south tunnels)
 - 30% contingency factor
 - 4% annual escalation
- Current schedule is to begin Preliminary Design in 2020
- Current estimate for tunnel construction start is 2027-ish



Review of Tunnel Program CIP (continued)

- Select key variables affecting Tunnel Program
 - Underground conditions (geology)
 - Selection of shaft sites and tunnel alignment/land acquisition
 - Future water demands (length of tunnel)
 - Schedule (time value of dollars)
- Many variables will be evaluated during preliminary design (2020-2023)
- Key findings will be presented to Board as preliminary design progresses



Next Steps

- Work with the Advisory Board
- Finalize FY21 CIP
- Submit FY21 Final CIP to Board of Directors for approval in June 2020



FY21 Proposed Current Expense Budget



Thank You – Stay Well