

# FY2020 Utility Rate Recommendation

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Rate Setting Hearing  
July 9, 2019

# How to Build Utility Rates

*Rates are a function of costs and the consumption of services*

- Component 1: The budgeted cost to operate the water and sewer system is set annually, recommended by the Mayor and approved by the City Council.
  - Increase in cost may raise rates
  - Decrease in cost may reduce rates
- Component 2: the number of units of consumption (usage) is projected based on analysis of actual billing data.
  - Rising consumption can reduce rates
  - Declining consumption can increase rates

# How to Build Utility Rates (example)

- Total Cost of Operations/Total Usage in Units

	Higher Usage	Lower Usage
Total Cost of Operation	\$28,000,000	\$28,000,000
Total Units of Consumption (usage)	2,713,000	2,413,000
Cost per Unit (rate)	10.32	11.60

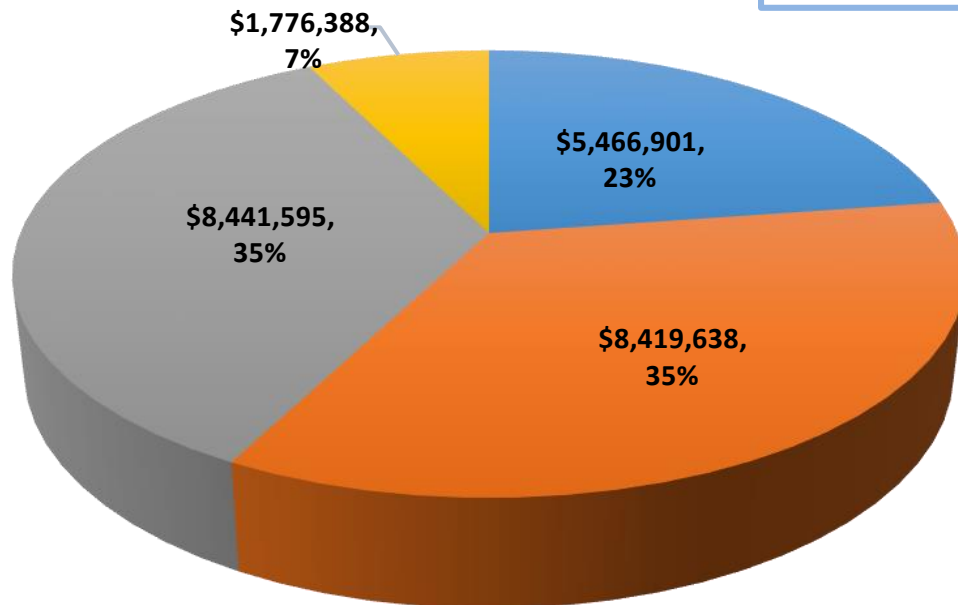
- Usage is affected by domestic conservation measures and weather.
  - FY20 usage generally follows FY19 usage

# FY20 Water System Costs

FY20 Voted  
Budget  
\$24,104,522

Total Increase: \$1,148,713 (5%)

- MWRA assessment: \$154,730 (1.9%)
- Indirect charge to GF: +\$51,740 (3%)
- Debt Service: + \$946,247 (12.6%)
- City Operations costs: -4,054 (-.1%)



Appropriation of  
Retained Earnings:  
\$650,000 to limit  
increase in rates to  
2.5%.

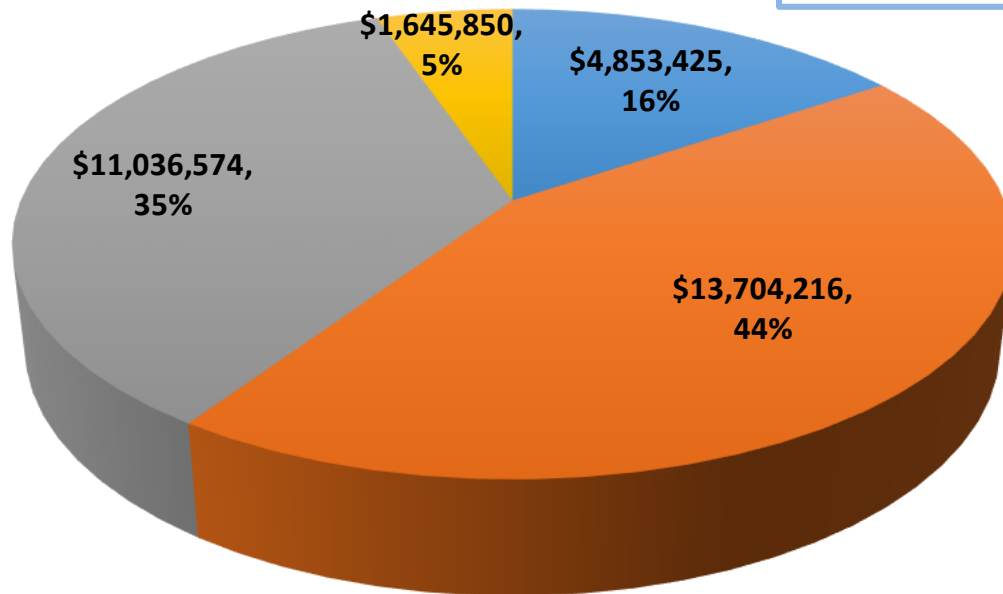
■ Total City Operations ■ MWRA Assessments ■ Debt Service ■ Indirect Overhead Charges

# FY20 Sewer System Costs

FY20 Budget Voted  
6/18/19  
\$31,240,065

Total Increase: \$694,229 (2.5%)

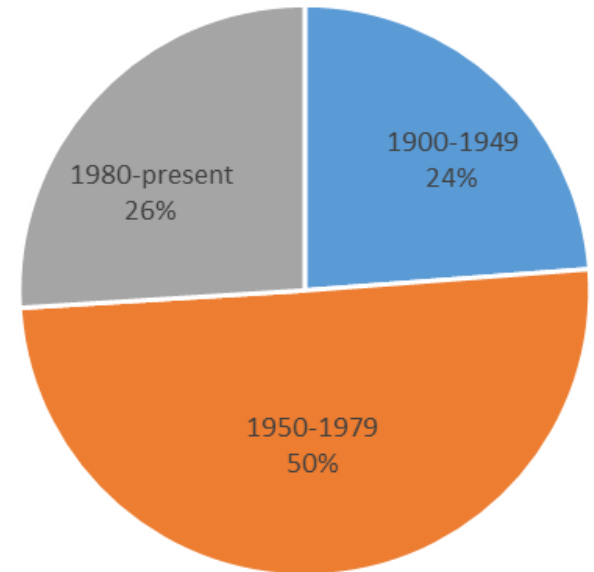
- MWRA assessment: +\$156,472 (1.2%)
- Indirect charge to GF: +\$47,937 (3%)
- Debt Service: + \$458,039 (4.3%)
- Operations costs: +31,781 (.7%)



■ Total City Operations ■ MWRA Assessments ■ Debt Service ■ Indirect Overhead Charges

# Framingham's Wastewater System

- The system consists of:
  - 226 miles of gravity mains
  - 18 miles of force (pressure) mains
  - 43 pump stations
  - 6,600 manholes
  - 40 miles of cross country sewer line easements
- The average daily collection of wastewater was 7.19mgd in 2018



% Wastewater Main by Age



# Wastewater System Replacement Cost



Asset	Replacement Cost
231 Wastewater Main Miles <sup>1</sup>	\$1.2 Billion
43 Wastewater Pump Stations	\$110 Million
Wastewater Personnel Office Facilities <sup>2</sup>	\$5 Million
Wastewater Vehicles & Equipment	\$3 Million

**Total Replacement Cost = \$1.3 Billion**

\$1.3B / 100 Years = \$13 Million / Year

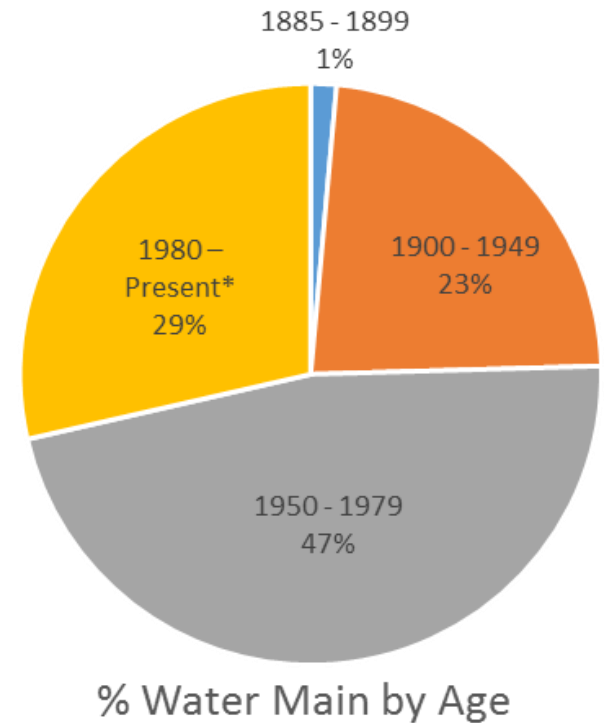
\$1.3B / 75 Years = \$18 Million / Year

Notes:

1. Replacement costs in appurtenances, permitting, design, and construction.
2. Includes portions of the Western Avenue DPW facility and City Hall.

# Framingham's Water System

- The system consists of:
  - 265 miles of water mains
  - 18,000 service connections
  - 7 storage tanks store 8.8 million gallons
  - 4 pump stations and 3 booster stations for pressure (fire suppression)
  - 2,180 hydrants
  - 6,117 valves
  - 2,667 backflow preventers
  - 20,617 meters
  
- The average daily water consumption was 5.76 mg in 2018







# Water System Replacement Cost

Asset	Replacement Cost
265 Water Main Miles <sup>1</sup>	\$910 Million
7 Water Pumping/Booster Stations	\$18 Million
7 Water Storage Tanks	\$18 Million
Water Personnel Office Facilities <sup>2</sup>	\$5 Million
Water Vehicles & Equipment	\$5 Million

**Total Replacement Cost = \$1.0 Billion**

$\$1.0\text{B} / 100 \text{ Years} = \$10 \text{ Million} / \text{Year}$

$\$1.0\text{B} / 75 \text{ Years} = \$13 \text{ Million} / \text{Year}$

Notes:

1. Replacement costs in appurtenances, permitting, design, and construction.
2. Includes portions of the Western Avenue DPW facility and City Hall.

# State Administrative Consent Order (ACO)

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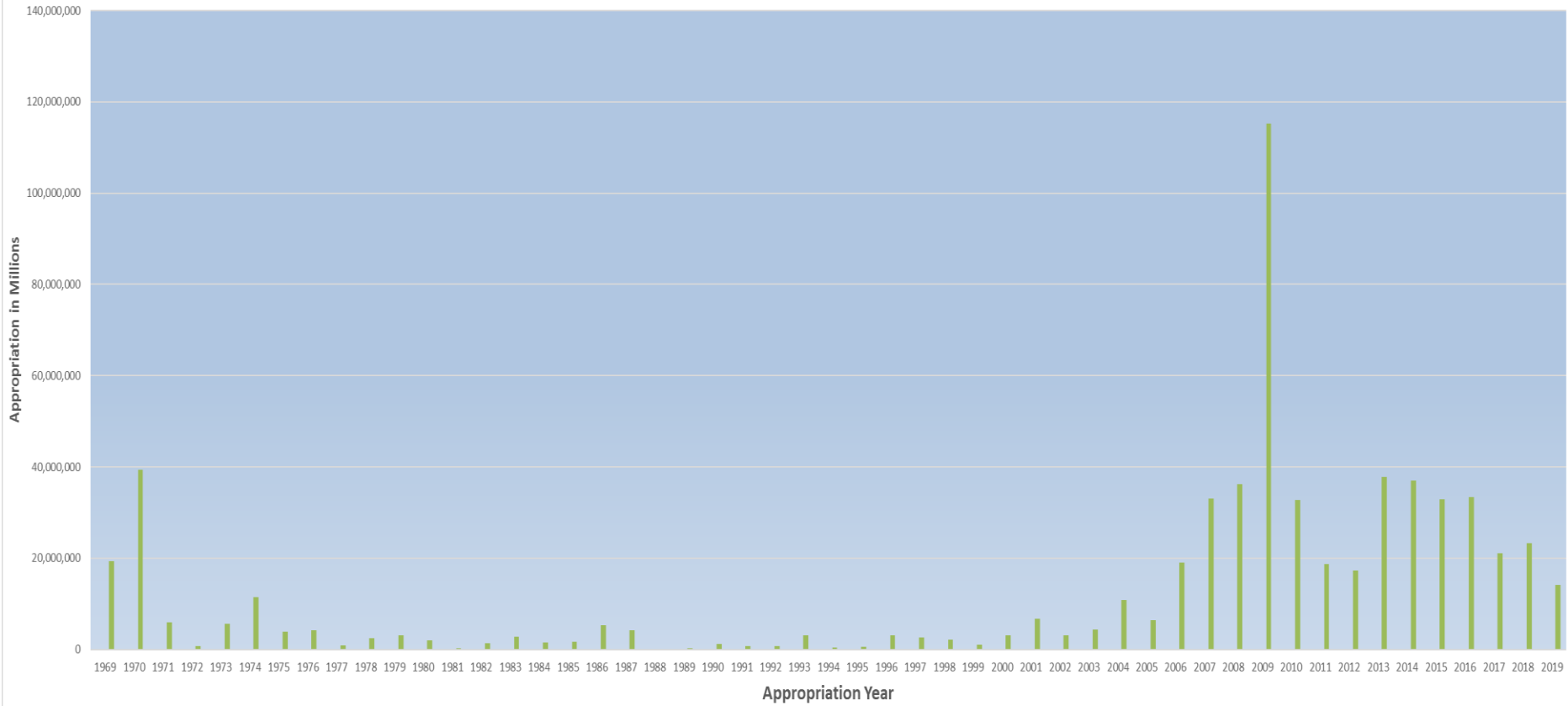
- Issued by DEP in 2007 required Framingham to undertake major sewer construction and rehabilitation projects with the primary focus of addressing system capacity deficiencies and alleviating reoccurring sanitary sewer overflows.
- The last specifically identified project from the ACO was completed on schedule before the end of 2013.
- While the City's response addressed key deficiencies, more work remains. Improvements over the last 10 years have replaced/rehabilitated only 15.4% of the system.

# Investment in the System & Impact on Rates

- FY06 through FY15 included heavy investment in improvement projects ordered by the state as part of the Administrative consent order (ACO)
- The water and sewer systems are highly regulated and require capital maintenance, repair and improvements to comply with state regulations.
- We developed a financial plan that details the level of investment that is sustainable within a 2-3% annual increase in rates.

Fiscal Year	Framingham Water/Sewer Rate
FY2010	8-9% increase
FY2011	9% increase
FY2012	10.6-12.6% increase
FY2013	2.7% increase
FY2014	16% increase
FY2015	10% increase
FY2016	6% increase
FY2017	6% increase
FY2018	2% increase
FY2019	2% increase
FY2020	2.5% increase

# Public Works Capital Appropriations 1969-2019 Adjusted for Inflation



# Recommended FY20 Rates

<b><u>Comparison of Water Rates</u></b>					
	<u>FY19 Current</u>	<u>FY20 New</u>	<u>\$ Change</u>	<u>% Change</u>	
<b><u>Metered Rates</u></b>					
Tier 1	\$6.15	\$6.30	\$0.15	2.4%	
Tier 2	\$6.84	\$7.01	\$0.17	2.5%	
Tier 3	\$7.95	\$8.15	\$0.20	2.5%	
Tier 4	\$9.37	\$9.60	\$0.23	2.5%	
Tier 5	\$11.35	\$11.63	\$0.28	2.5%	
Irrigation	\$11.50	\$11.79	\$0.29	2.5%	
Discount	\$4.61	\$4.73	\$0.12	2.5%	

	<b>Usage per quarter</b>
<b>Tier 1</b>	<b>1-27 units</b>
<b>Tier 2</b>	<b>13-27 units</b>
<b>Tier 3</b>	<b>28-51 units</b>
<b>Tier 4</b>	<b>52-750 units</b>
<b>Tier 5</b>	<b>over 750 units</b>



# Recommended FY20 Sewer Rates

<b><u>Comparison of Sewer Rates</u></b>					
<u>Metered Rates</u>		<u>FY19 Current</u>	<u>FY20 New</u>	<u>\$ Change</u>	<u>% Change</u>
	Tier 1	\$7.98	\$8.18	\$0.20	2.5%
	Tier 2	\$8.23	\$8.43	\$0.20	2.4%
	Tier 3	\$11.05	\$11.33	\$0.28	2.5%
	Tier 4	\$15.81	\$16.21	\$0.40	2.5%
	Tier 5	\$22.96	\$23.54	\$0.58	2.5%
	Discount	\$5.99	\$6.13	\$0.15	2.4%

	<b>Usage per quarter</b>
<b>Tier 1</b>	<b>1-27 units</b>
<b>Tier 2</b>	<b>13-27 units</b>
<b>Tier 3</b>	<b>28-51 units</b>
<b>Tier 4</b>	<b>52-750 units</b>
<b>Tier 5</b>	<b>over 750 units</b>



# Annual Impact of Recommended Rates

<u>Annual Bill</u>					
<u>Annual Usage</u>	<u>FY19 Current</u>	<u>FY20 New</u>	<u>\$ Change</u>	<u>% Change</u>	
<i>5/8 inch meter</i>					
24	\$339.12	\$347.52	\$8.40	2.5%	
Discount 24	\$254.34	\$260.64	\$6.30	2.5%	
Avg Framingham household	48	\$678.24	\$695.04	\$16.80	2.5%
	105	\$1,537.23	\$1,575.12	\$37.89	2.5%
	120	\$1,810.44	\$1,855.20	\$44.76	2.5%
	156	\$2,494.44	\$2,556.48	\$62.04	2.5%
Irrigation 156	\$1,794.00	\$1,839.47	\$45.47	2.5%	
4 Unit Apt - 420	\$6,148.92	\$6,300.48	\$151.56	2.5%	
<i>2 inch meter</i>					
	250	\$4,564.72	\$4,678.78	\$114.06	2.5%
	500	\$10,859.72	\$11,131.28	\$271.56	2.5%
	1,000	\$23,449.72	\$24,036.28	\$586.56	2.5%
<i>4 inch meter</i>					
60 Unit Apt 2,136	\$52,054.20	\$53,356.44	\$1,302.24	2.5%	
<i>6 inch meter</i>					
	5,000	\$142,429.72	\$145,996.28	\$3,566.56	2.5%
	20,000	\$656,826.37	\$673,546.28	\$16,719.91	2.5%

60.7 units or \$870/year; increase would be \$22 for FY20

# MWRA Community Comparisons

Community	Water	Sewer	Combined
Belmont	\$660.26	\$1,197.80	\$1,858.05
Nahant	\$885.97	\$895.97	\$1,781.94
Milton	\$638.38	\$1,049.02	\$1,687.39
Ashland	\$280.29	\$936.94	\$1,217.23
Wellesley	\$371.57	\$844.26	\$1,215.83
Hingham	\$507.02	\$646.46	\$1,153.47
Newton	\$434.33	\$697.67	\$1,132.01
Needham	\$316.43	\$784.94	\$1,101.37
Dedham	\$331.13	\$748.99	\$1,080.11
Brookline	\$418.58	\$616.09	\$1,034.67
Chelsea	\$371.84	\$643.52	\$1,015.36
Melrose	\$388.54	\$602.92	\$991.46
Average	\$346.85	\$533.90	\$880.04
Framingham	\$382.25	\$487.78	\$870.03
Watertown	\$282.33	\$529.29	\$811.62
Medford	\$312.23	\$465.37	\$777.60
Lynn	\$257.81	\$473.47	\$731.28
Natick	\$171.41	\$531.71	\$703.13
Cambridge	\$138.26	\$502.68	\$640.94
Malden	\$286.61	\$351.35	\$637.96
Boston	\$232.53	\$328.35	\$560.87

60 communities in MWRA system; 35 communities have both water and sewer services

Framingham ranks 17<sup>th</sup> out of 35 in terms of annual cost for water and sewer services



# Additional Rate Types: Private Fire Service

Indexed to Water  
rate increase

<u>Fire Service (Annual)</u> <u>Size (in)</u>	<u>FY19</u>	<u>FY20</u>	<u>\$ Change</u>	<u>% Change</u>
up to 1 1/2	\$24.64	\$25.26	\$0.62	2.5%
2	\$52.52	\$53.82	\$1.30	2.5%
3	\$94.44	\$96.79	\$2.35	2.5%
3	\$152.55	\$156.35	\$3.80	2.5%
4	\$325.10	\$333.18	\$8.08	2.5%
6	\$944.35	\$967.82	\$23.47	2.5%
8	\$2,012.44	\$2,062.46	\$50.02	2.5%
10	\$3,619.06	\$3,709.01	\$89.95	2.5%
12	\$5,845.78	\$5,991.07	\$145.29	2.5%

# Additional Rate Types

## Flat Sewer Fee

FY19 \$208 per quarter

FY20 \$217.25 per quarter (2.5%)

- indexed to Sewer rate increase