

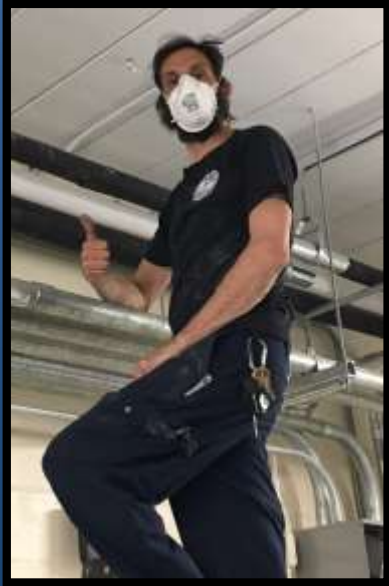
Water, Sewer, & Stormwater
FY22 Budget
City Council Presentation
May 19, 2021



Overview of Tonight's Meeting

- Introductions
 - Peter Rice – Public Works Director (Stormwater)
 - Brian Goetz – Deputy Public Works Director (Water)
 - Terry Desmarais – City Engineer (Sewer)
 - David Hyder – STANTEC (Rates)
- System Overviews and Highlights
- Rate Increase Adjustments
- Proposed FY22 Budgets
- Discussion

Staff Safely Working Through Covid 19 Pandemic



Completion of Two Major Projects

Water – Pease Water Treatment



Sewer – Peirce Island Wastewater Treatment



Proposed FY22 Stormwater Special Revenue Fund Budget



Stormwater System Infrastructure

- 63 Miles of piping
- 2747 Catch Basins
- 722 Manholes
- 74 Stormwater Treatment Units



January 2021

* Not including Pease International Tradeport

Stormwater Program – FY21 Focus

- Continued work and planning to meet new EPA MS4 Stormwater Permit (Currently on Year 3 of 5 year permit)
- Stormwater system GIS map updates
- Updated outfall inventory and initial site ranking
- Dry weather outfall screening and sampling
 - Identified and inspected 202 sites
 - Identified 23 sites for dry weather sampling

Stormwater Treatment Tracking

2020

UNH CAPSTONE ENGINEERING STUDENTS
ASSESSING NEW TOOLS TO MEASURE COMPLIANCE



JOE
DEGREGORIO

BRANDON
BELMONTE

JESSICA
NEKOWITSCH

ANDREW
GODFREY

- Inventory of Stormwater Treatment Devices in City
- Evaluation of Effectiveness of Treatment
- Inputting Data into UNH Pollution Tracking Database
- Will Help with Great Bay Total Nitrogen Permit Compliance

Public Outreach

- Water/Sewer Billing Insert
 - Stormwater Overview
- Household Hazardous Waste Day Collections (spring, fall)
- Dog License Flyer
 - “Scoop the Poop”
- Mailer to Residents
 - Handling Leaves and Yard Waste
 - Lawn Care Efficiency
- Website Update
 - “Think Blue”



Think Blue



Stormwater Maintenance FY21

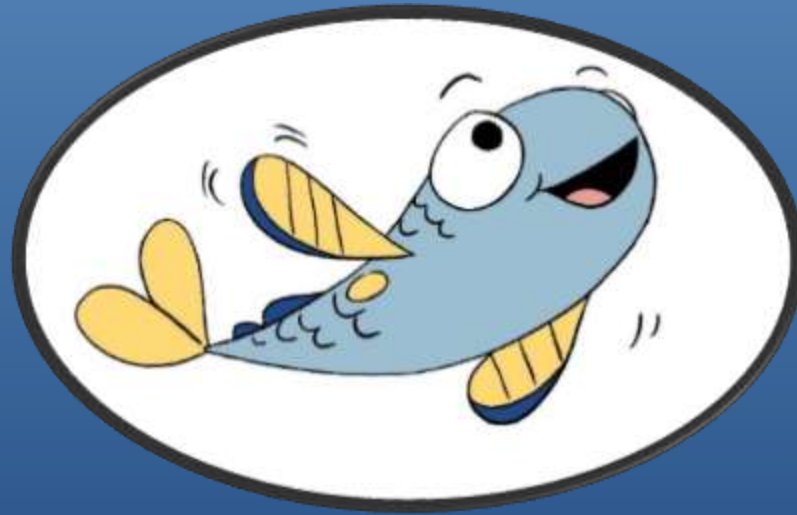
Item	Amount
Catch Basins Cleaned	1,224
Catch Basin Cleaning	257 Tons
Drain Lines Cleaned and Inspected	10,000 Feet
Street Sweeping Material Collected	350 Tons
Leaf Collection	2,616 Tons
Brush Collection	1,405 Tons



Future Plans

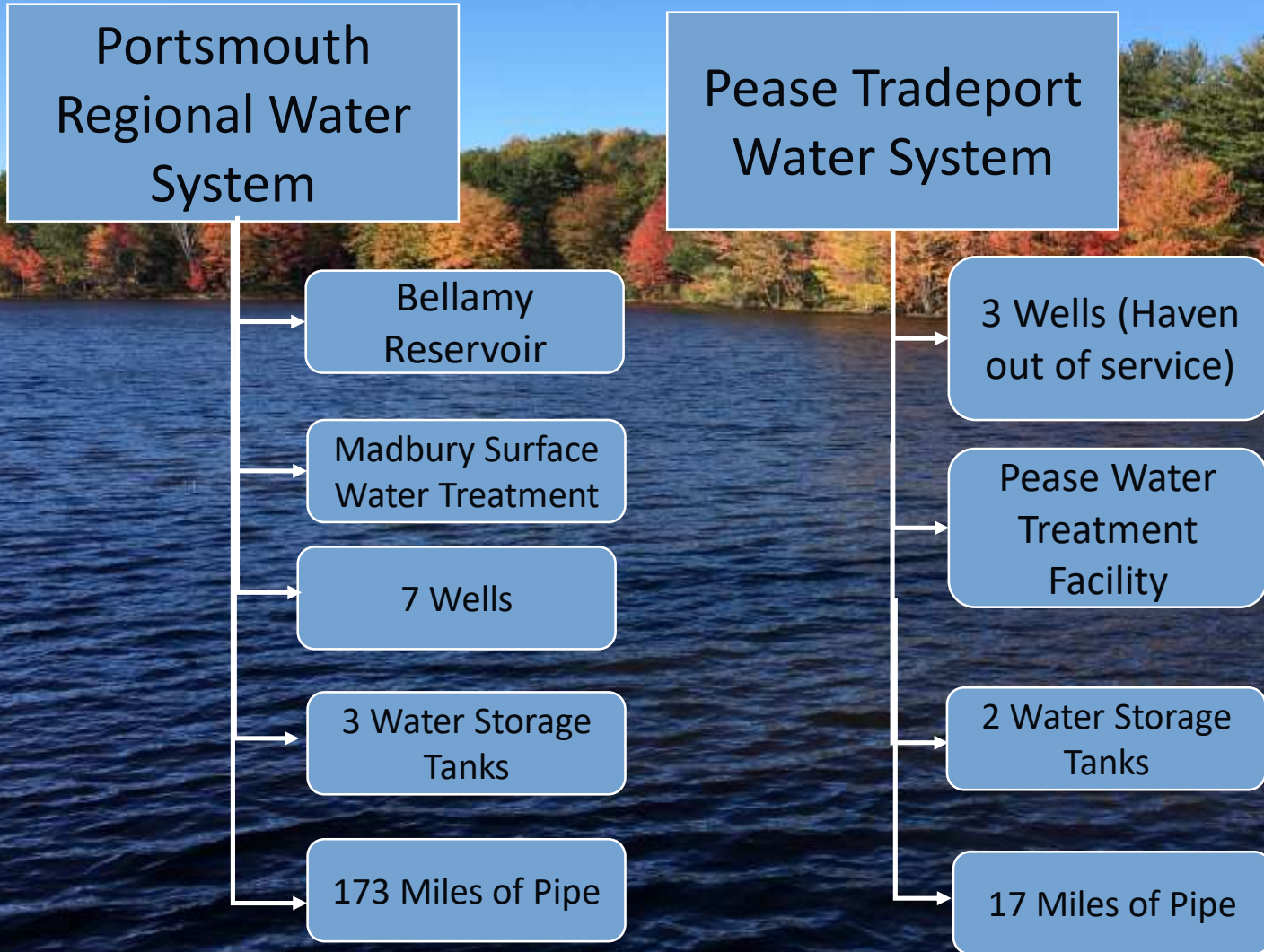
- Currently performing an Update to the City's Stormwater Master Plan
 - Identifying future costs for compliance
- Anticipate proposing Stormwater Enterprise Fund with fees for FY24 budget

Stormwater – Questions



Think Blue

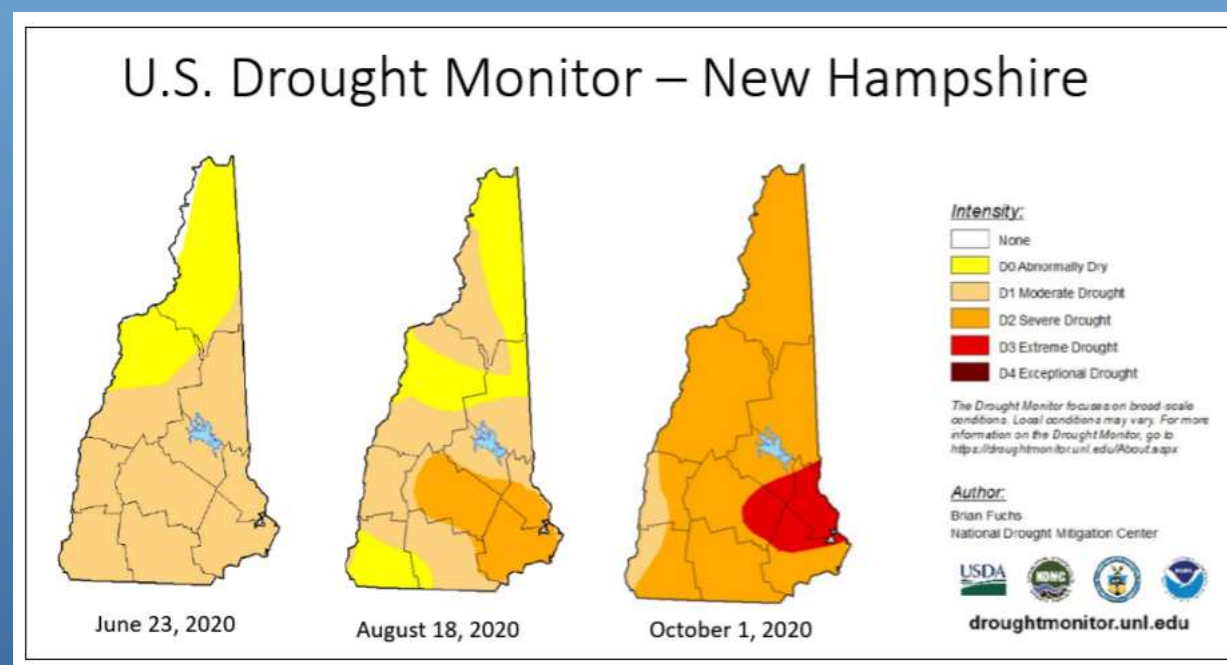
Water Division



Water System Highlights

- Made it through another very dry year
- The Portsmouth and Pease drinking water systems are in compliance with all drinking water regulatory requirements
- Continue to respond and treat Pease Tradeport PFAS contamination
 - 7 years since Haven Well taken off-line
 - Pease Water Treatment Facility Construction Complete

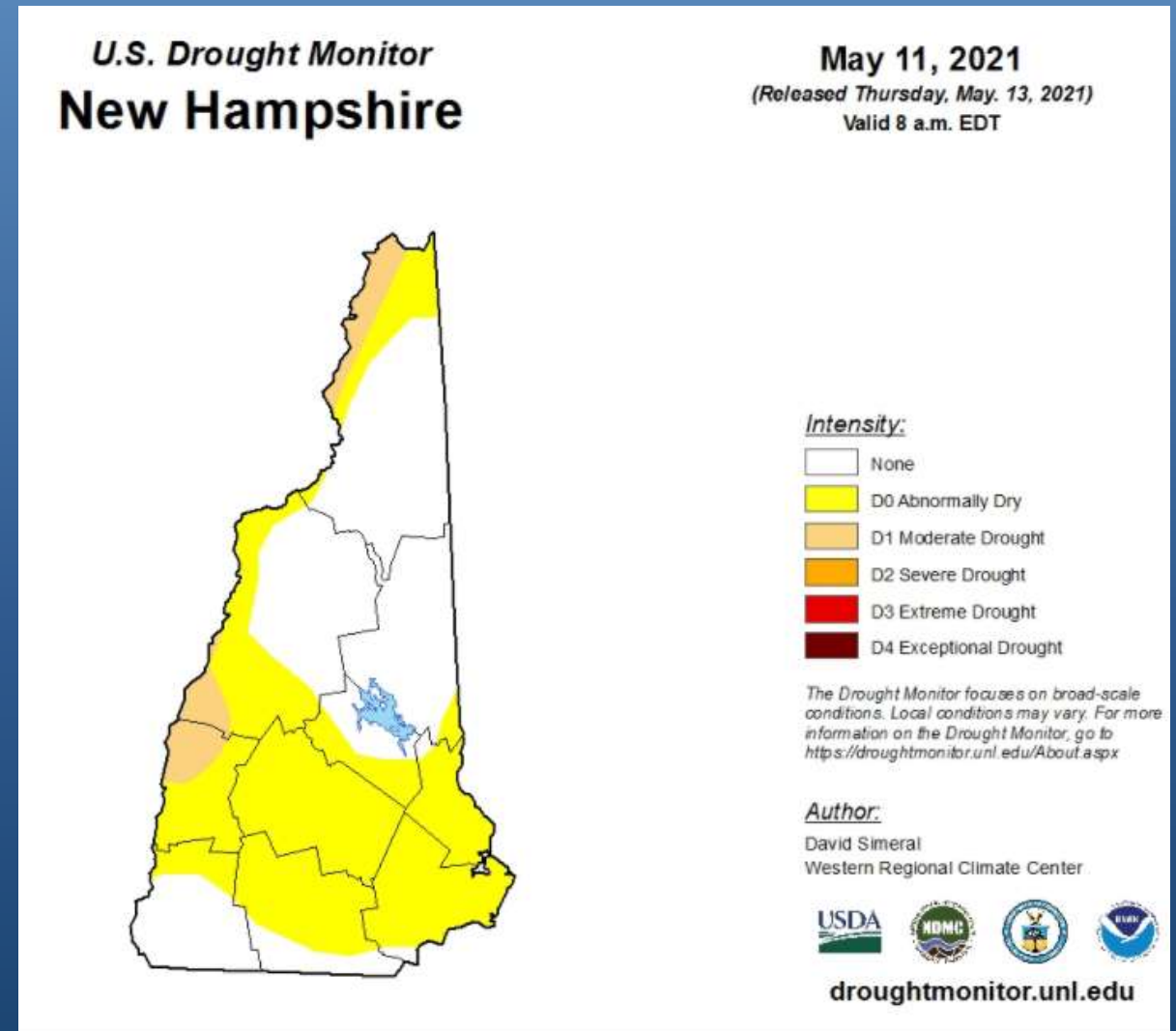
2020 Drought



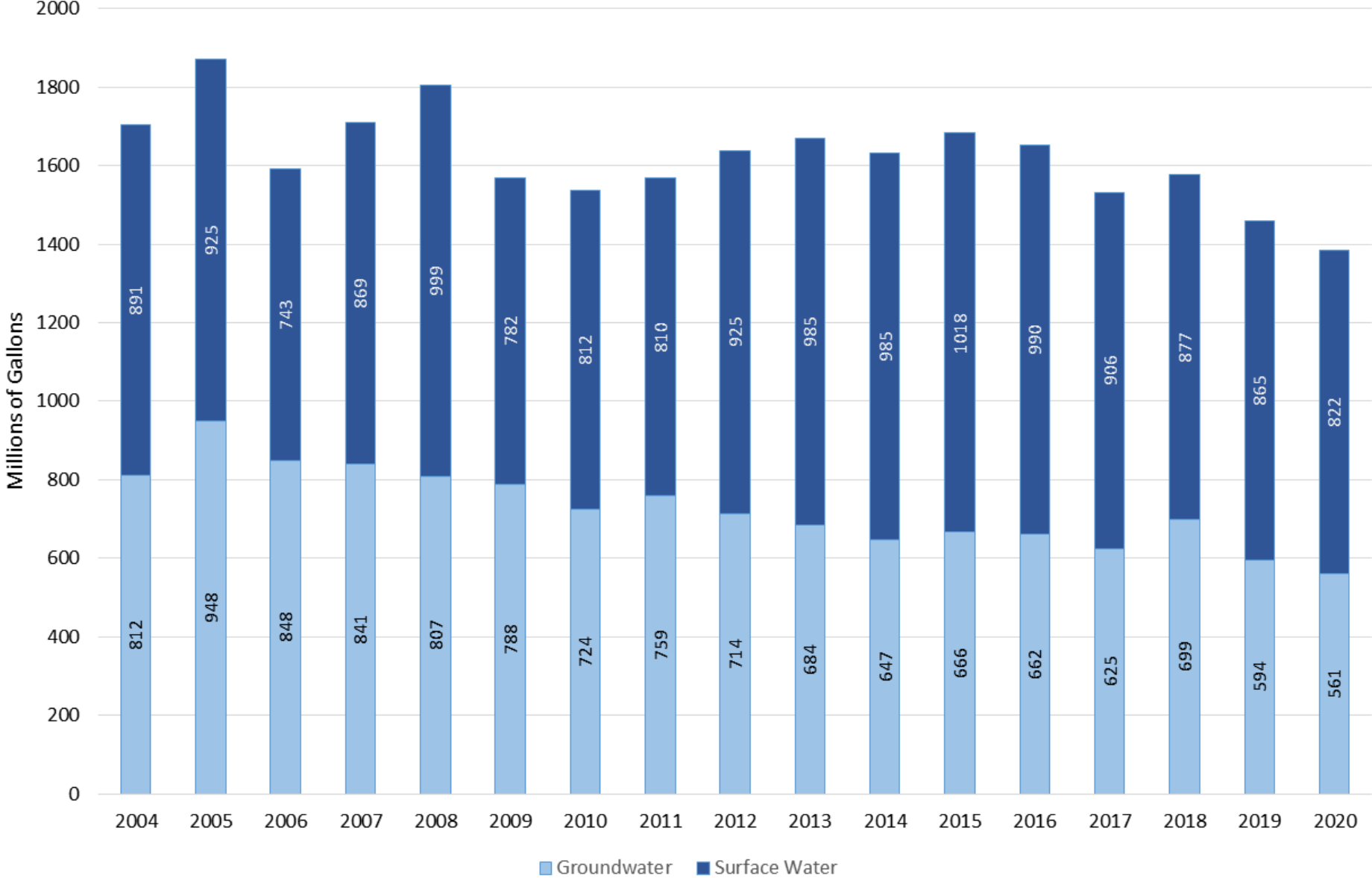
- June 22, 2020 – Moderate Drought declared
- August 18, 2020 – Severe Drought –
 - Voluntary Water Restrictions imposed
- September 10, 2020 – Extreme Drought conditions
 - Odd/Even Water Restrictions imposed
- Precipitation in late November and early December 2020 helped improve drought conditions

Current Drought Conditions – Abnormally Dry

- Late April – early May rainfall helpful
- Water demands picking up this week
- Haven well back on line this summer
- Will continue to provide updates as needed this summer

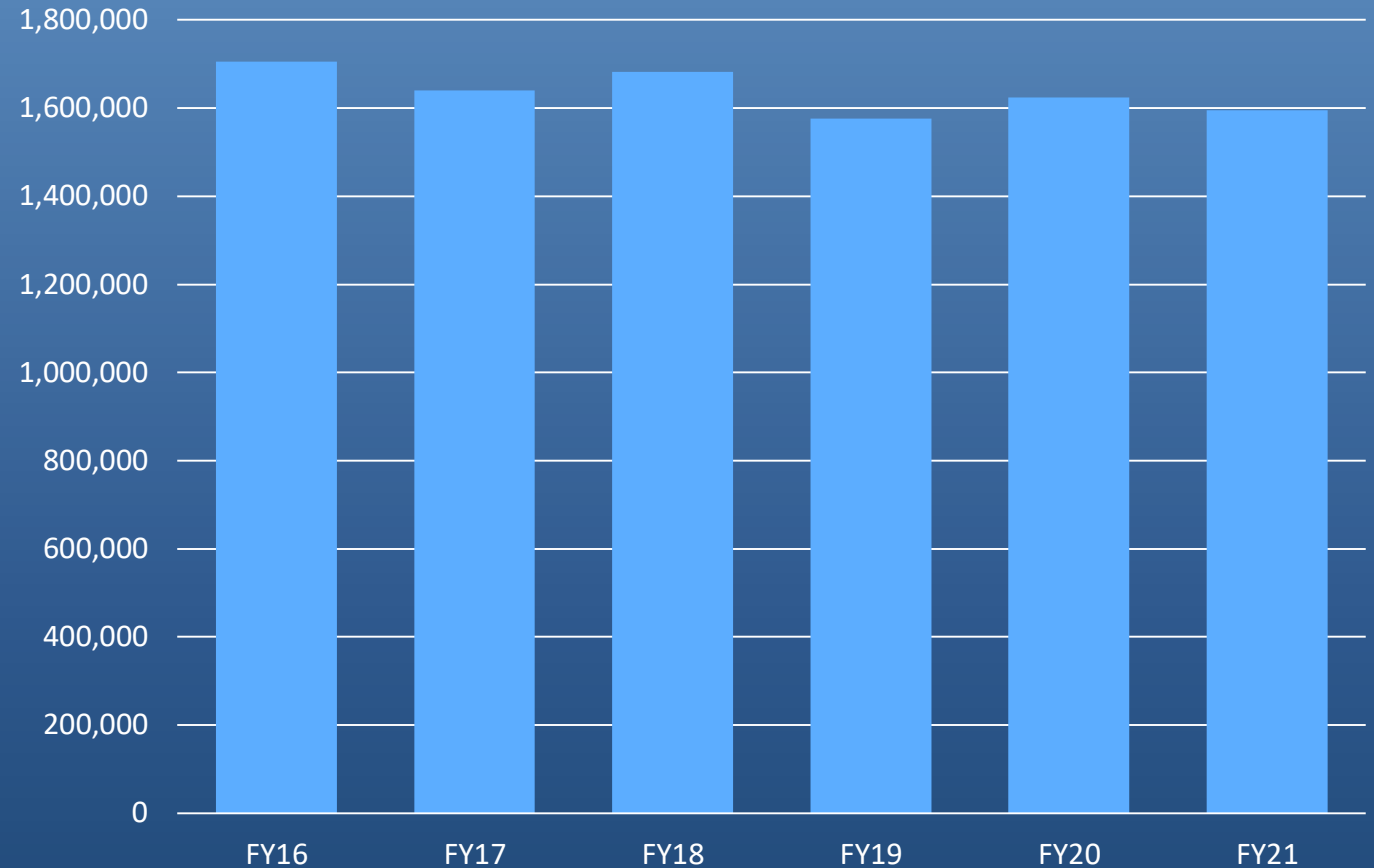


Portsmouth Water Supply Annual Total Water Supplied



Water FY Sales Trend (Total Units)

	Water Units Billed
FY16	1,706,083
FY17	1,640,856
FY18	1,682,823
FY19	1,576,453
FY20	1,624,340
FY21 (projected)	1,595,469



5 year ave. (16 to 20) = 1,646,000

FY22 Budget = 1,624,340

Finding and Fixing Leaks (Million Gallons/Year)



Some Performance Measures

- 60 Miles of Pipe Inspected for Leaks
 - 5 Leaks Detected and Repaired
- 2,996 DigSafe Location Requests
- 4,671 Meter Staff Work Orders
- 959 Water Meters Replaced
- 170 Water Efficiency Rebates Issued

Recent Water Pipe Projects

■ Completed and Ongoing

- Green St
- Islington St Phase 1A/1B
- Maplewood Ave & Sidestreets
- McDonough St Area
- Pleasant St Area
- Airport Road, Newington
- Peirce Island to New Castle

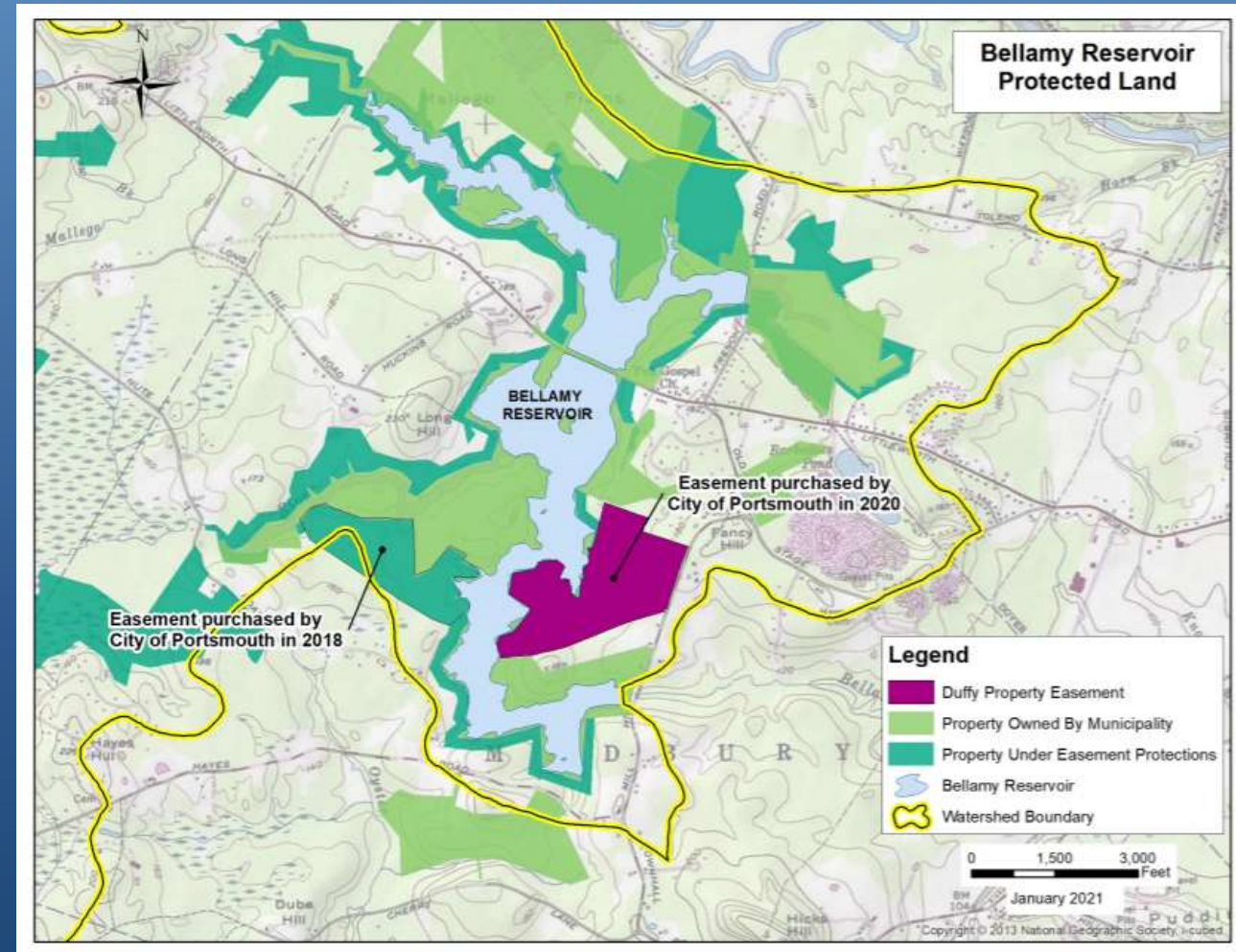
■ Upcoming

- Islington Phase 2
- Fleet Street Area
- Union Street and Willard Ave
- Sagamore Ave Area



Source Water Protection

- Acquisition of Conservation Easement on 107 Acres Adjacent to Reservoir
- Partnered with Southeast Land Trust
- \$287,000 Grant from State Drinking Water Trust
- \$11,500 Grant for Great Bay Resource Protection Partnership



Pease Water Treatment Facility Construction Project

■ Before – April 2018

■ After – April 2020



Pease Water Treatment System Filters

Activated Carbon Filters



Resin Filters



May 4, 2021 Dedication



Air Force Agreements for Pease Water Treatment

- No Cost to Water Users
- Air Force Reimbursement
 - \$17 Million for Capital
 - \$281,827 for O&M

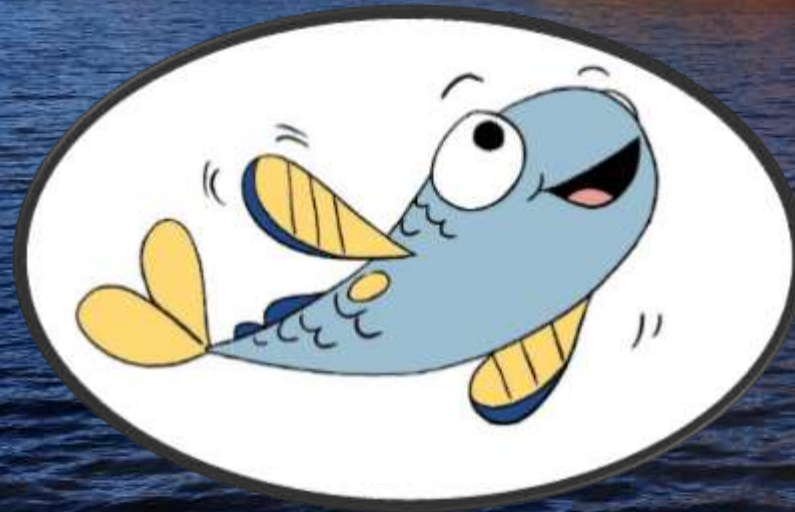
		FY20	FY20	FY21	FY22
		BUDGET	ACTUAL	BUDGET	CITY MANAGER
					RECOMMENDED
AIR FORCE REIMBURSEMENT					
50-998-650-54-580-492					
011001	REGULAR SALARIES	-	25,767	-	72,979
011060	ON CALL MONITORING	-	995	-	3,360
014041	OVERTIME	-	1,890	-	8,000
021001	INSURANCE-HEALTH	-	9,009	-	24,485
021101	INSURANCE-DENTAL	-	615	-	1,913
021501	INSURANCE-LIFE	-	-	-	10
021601	INSURANCE-DISABILITY	-	-	-	23
022001	SOCIAL SECURITY	-	1,705	-	5,229
022501	MEDICARE	-	399	-	1,223
023001	RETIREMENT	-	3,200	-	11,858
031002	PROF SERVICES-ENGINEERING	-	-	-	5,000
031011	PROF SERVICE-FILTER MEDIA	-	-	-	50,000
039010	PROF/SERVICES-LAB TESTS	-	-	-	50,000
041002	ELECTRICITY	-	7,160	-	28,000
041101	NATURAL GAS	-	-	-	5,000
043024	REPAIRS-VEHICLE	-	-	-	250
043028	MAINTENANCE	-	-	-	2,000
044002	RENTAL OTHER EQUIPMENT	-	-	-	9,297
062011	OPERATING SUPPLIES	-	-	-	1,000
063501	GASOLINE	-	-	-	1,200
074000	MACHINERY AND EQUIPMENT	-	-	-	1,000
		-	50,741	-	281,827

Community Involvement

- Safe Water Advisory Group (SWAG)
 - Mayor's panel formed in 2021
 - Meets every 6 weeks
- Seacoast Drinking Water Commission
 - Meets Monthly
- Pease Restoration Advisory Board (RAB)
 - Meets Quarterly
- Pease Study
 - Ongoing
- Pease REACH Study (Silent Spring/Testing for Pease)
 - Meets Quarterly
- New Hampshire Drought Management Task Force
 - Meets as Needed



Water – Questions



Think Blue

Sewer Division

Sewer Collections and Pumping Stations

- ~115 Miles Sewer Main
- 20 Wastewater Pumping Stations
- Meter/Backflow
- Dig Safe

Wastewater Treatment

- Peirce Island WWTF (6.13 MGD)
- Pease WWTF (1.2 MGD)



Core Functions and Services

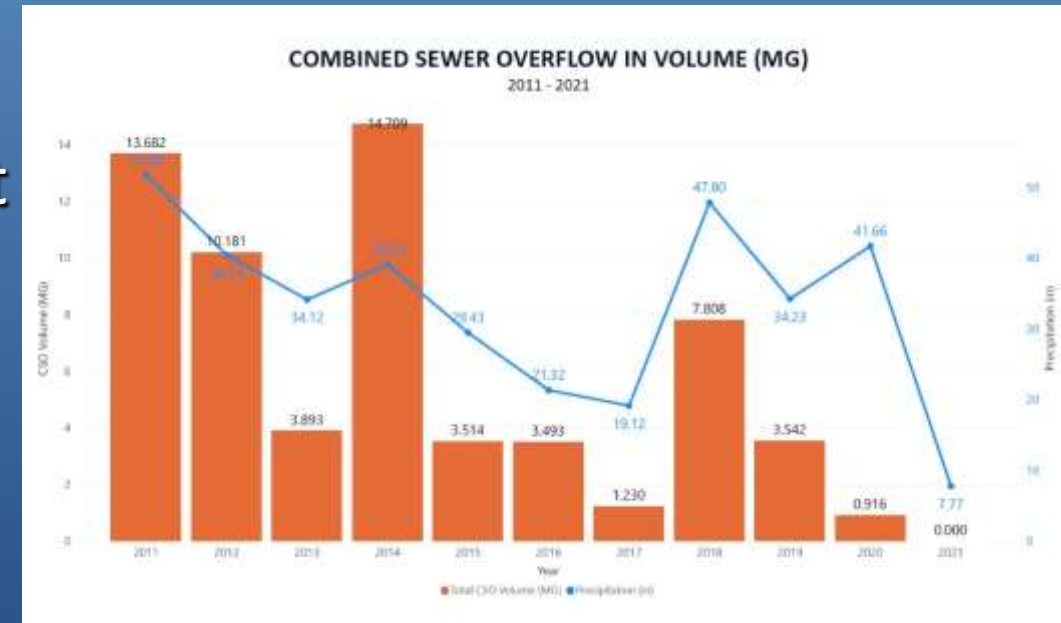
- EPA Permit Compliance
- 24 Hour Operation and Oversight
- Preventative Maintenance
- Corrective Maintenance
- Facility Improvements
- Programs
 - Industrial Pretreatment Program
 - Fats, Oil and Grease
 - Long Term Control Plan
- Closed Circuit TV Inspection

Buildings, grounds, piping and valves, treatment equipment, continuous monitors, HVAC, electrical equipment



Regulatory Impacts on Budget

- NPDES Permits
 - Lower limits require upgrades
 - Industrial Pretreatment Program
 - Great Bay Total Nitrogen General Permit
 - Tracking biosolids disposal trends
- Long Term Control Plan (LTCP) To Minimize Combined Sewer Overflow
 - Sewer separation
 - Infiltration and inflow reduction
- Maintenance And Equipment Replacement



Major Projects – Wastewater Treatment Upgrades

- Peirce Island



- Pease Headworks And Clarifiers



Pease WWTF Upgrades

- Increase Flow 1.2 MGD to 1.8 MGD
- Add Ultraviolet Disinfection
- Expand Biological Treatment System
- Plan for Nitrogen Removal
- Biosolids Processing



Pump Station and Force Main Projects

- Completed and Ongoing
 - Mechanic Street Force Mains on Peirce Island
- Upcoming
 - Mechanic Street Pump Station Project
 - Marjorie Street Pump Station Construction

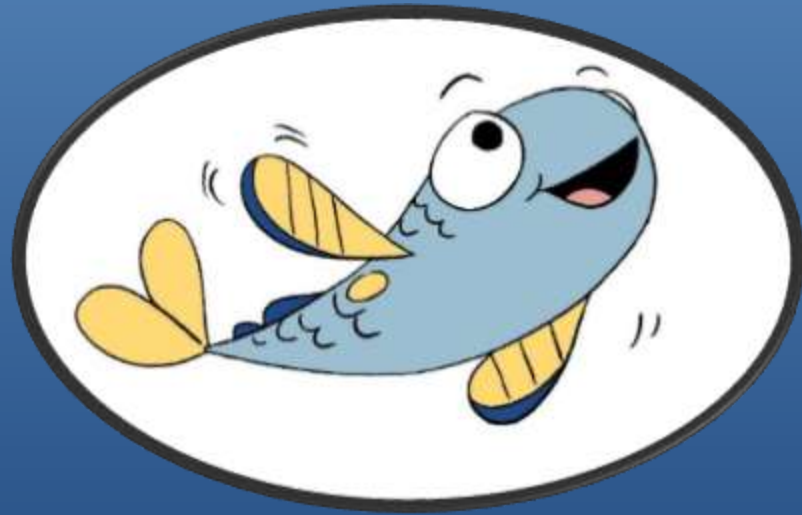


Sewer Pipe Projects

- Completed and Ongoing
 - Congress St Repairs
 - Green St
 - Islington St Phase 1A/1B
 - Maplewood Ave & Sidestreets
 - McDonough St Area
 - Pleasant St Area
- Upcoming
 - Islington Phase 2
 - Fleet Street Area
 - Union Street and Willard Ave
 - Sagamore Ave Area



Sewer – Questions



Think Blue



Water and Sewer
Operating Budgets
Rate Model Approach and
Recommendations

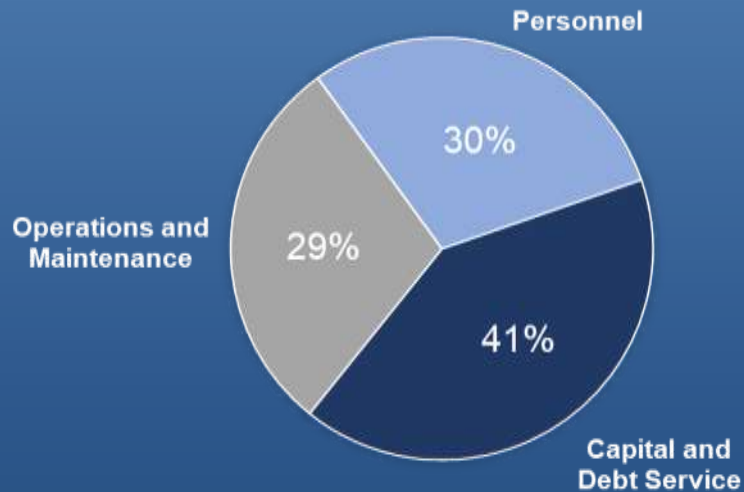
Water and Sewer System Funding: Enterprise Funds

- Enterprise Funds Account for Operations That are Financed and Operated in a Manner Similar to Private Business
- Must have Fees and or Charges Sufficient Enough to Cover the Cost of Providing Goods and Services, Including Capital costs (i.e. System Reinvestment and Debt Service)
- Note: Property Taxes do not Subsidize the Water and Sewer Funds

Water and Sewer Budgets – Cash Funding Components

Water

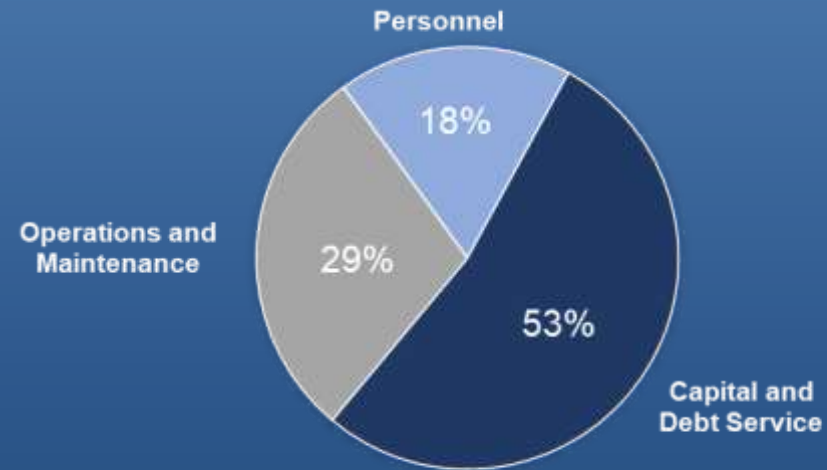
\$10,377,764



- 30% - Personnel salaries and benefits
- 29% - Operations and maintenance
- 41% - Capital funding and debt service

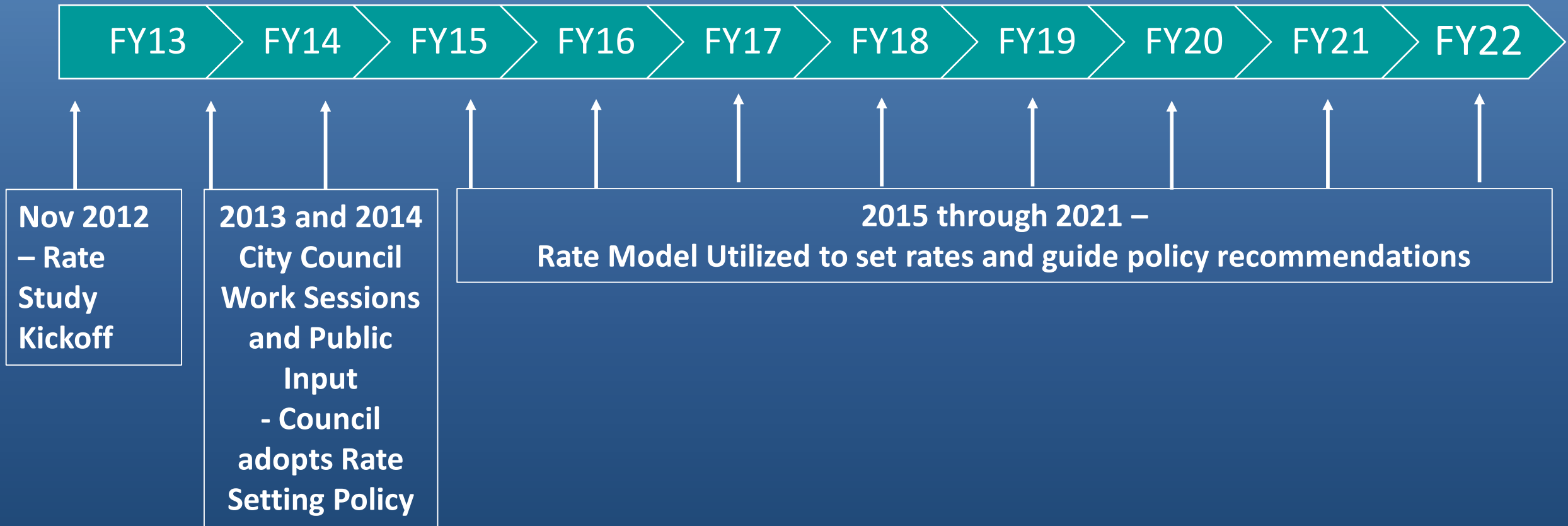
Sewer

\$21,919,035

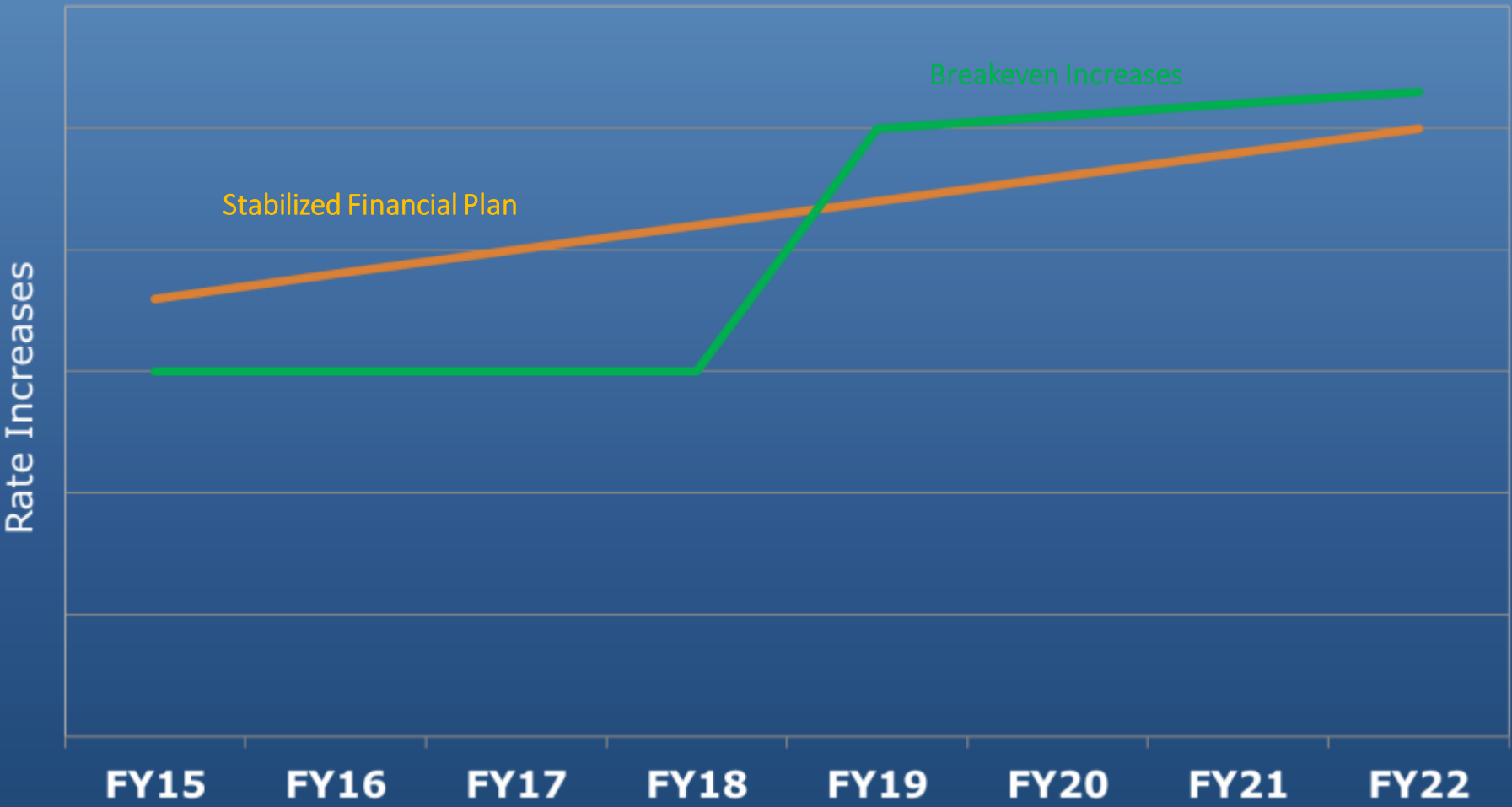


- 18% - Personnel salaries and benefits
- 29% - Operations and maintenance
- 53% - Capital funding and debt service

Rate Setting Policy FY13 to FY21

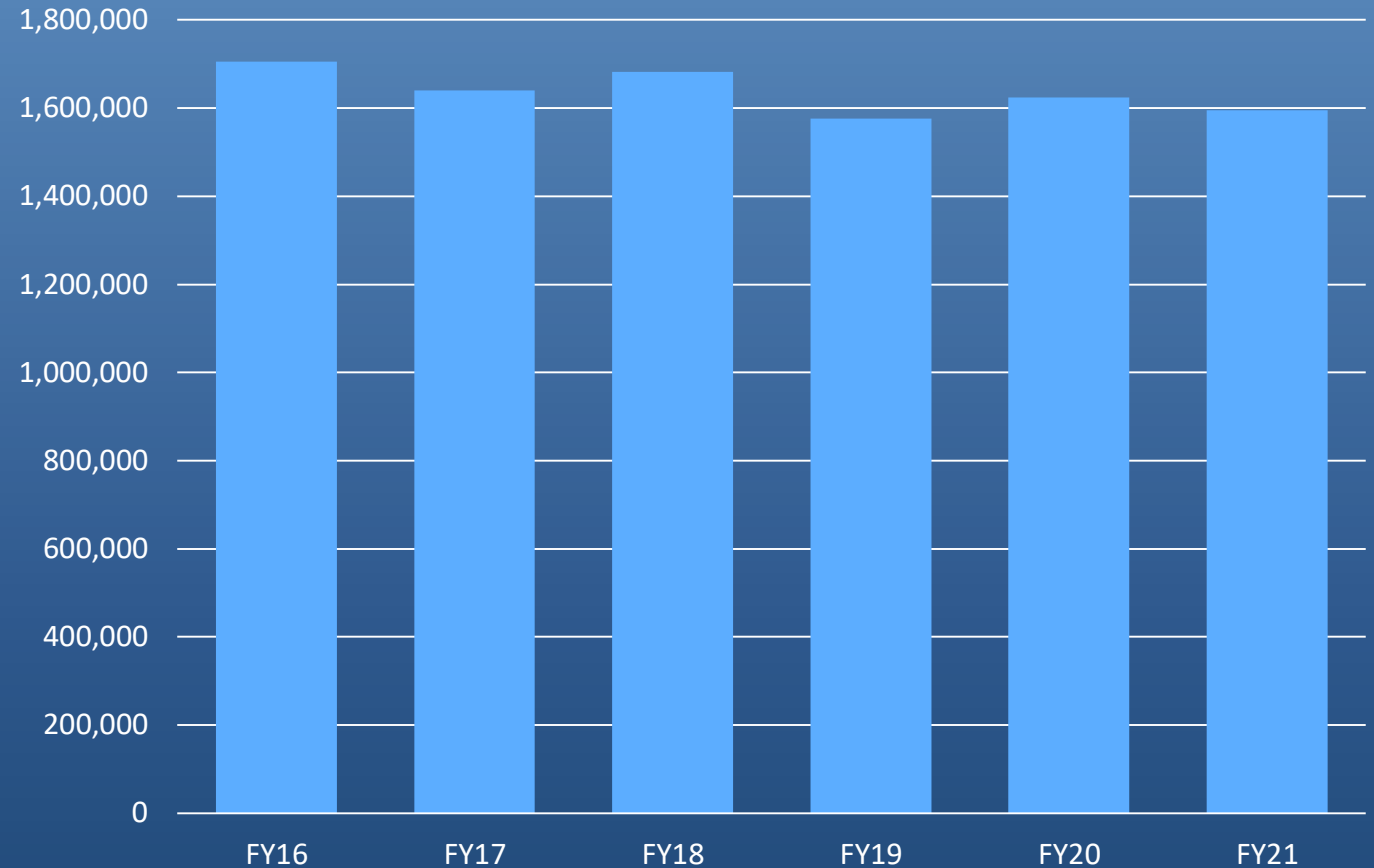


FY15 to FY22: Use of “Glidepath” Approach to Raising Rates in Anticipation of Major Capital Projects



Water FY Sales Trend (Total Units)

	Water Units Billed
FY16	1,706,083
FY17	1,640,856
FY18	1,682,823
FY19	1,576,453
FY20	1,624,340
FY21 (projected)	1,595,469

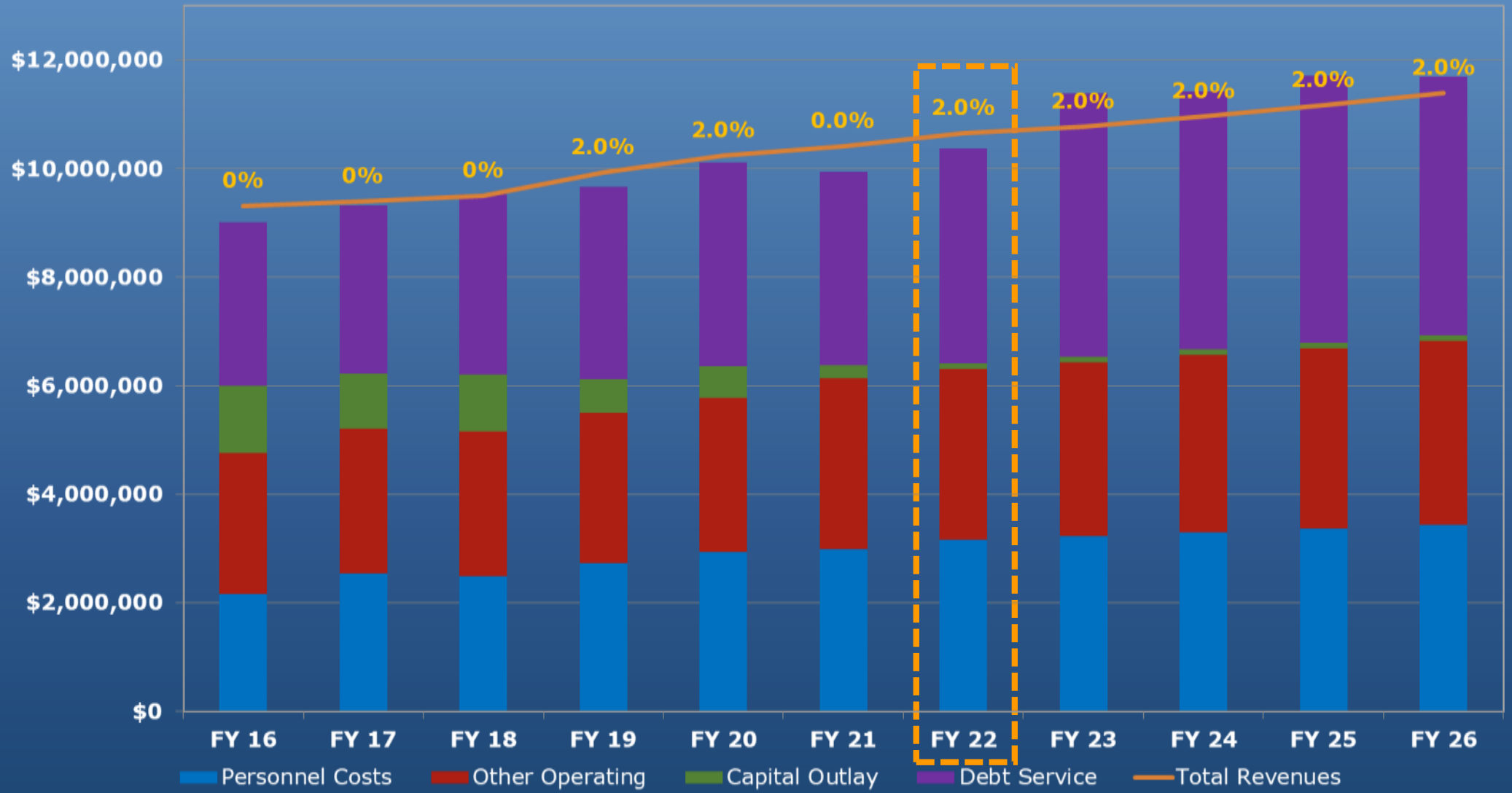


5 year ave. (16 to 20) = 1,646,000

FY22 Budget = 1,624,340

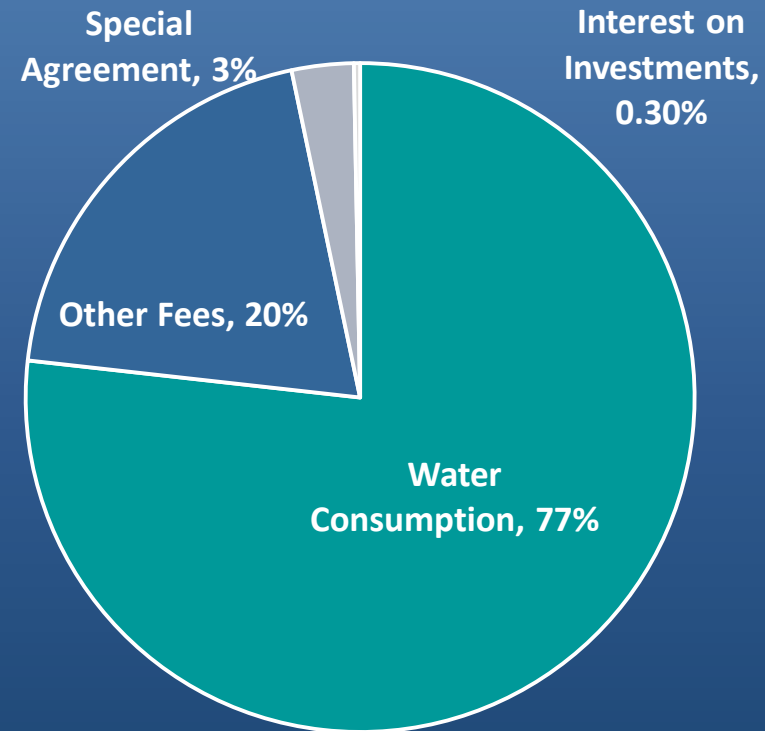
Water Rate History and Projections

Steady State Plan



FY22 Water Revenue Breakdown

Estimated Revenues
(Based on Cash Requirements)



\$8,332,074 - Water Consumption

2,168,596 - Other Fees

323,874 - Special Agreements

33,000 - Interest on Investment

\$10,857,544

FY22 Proposed Water Rate

2% Rate Change from FY 21

	FY 22 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$2.92
First 10 units billed per month	\$1.48
Total First Tier Rate	\$4.40
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$2.92
Over 10 units billed per month	\$2.38
Total Second Tier Rate	\$5.30

1 unit = 748 gallons of water

FY22 Proposed Irrigation Rates

2% Rate Change from FY 21

	FY 22 Proposed (per unit)
First Tier Rate (0 to 10 units per month)	
Capital Related rate, per unit billed	\$2.92
First 10 units billed per month	\$2.38
Total First Tier Rate	\$5.30
Second Tier Rate (11 to 20 units per month)	
Capital Related rate, per unit billed	\$2.92
11 to 20 units billed per month	\$7.08
Total Second Tier Rate	\$10.00
Third Tier Rate (all units over 20 per month)	
Capital Related rate, per unit billed	\$2.92
All units billed per month	\$9.42
Total Third Tier Rate	\$12.34

1 unit = 748 gallons of water

FY22 Proposed Water Rate

Average Residential Customer Bill

FY 22 Water Rate
Average Residential Customer Bill
Monthly Consumption in units
(1 unit = 100 cf = 748 gallons)

	Rate	Billed Units	Monthly Charge
Capital Related Rate, per unit	\$2.92	5	\$14.60
1 st Tier water service rates	\$1.48	5	\$7.40
Minimum Charge (5/8" meter)	\$4.95	n/a	\$4.95
Total Monthly Charge			\$26.95
Total Annual Charge			\$323.40

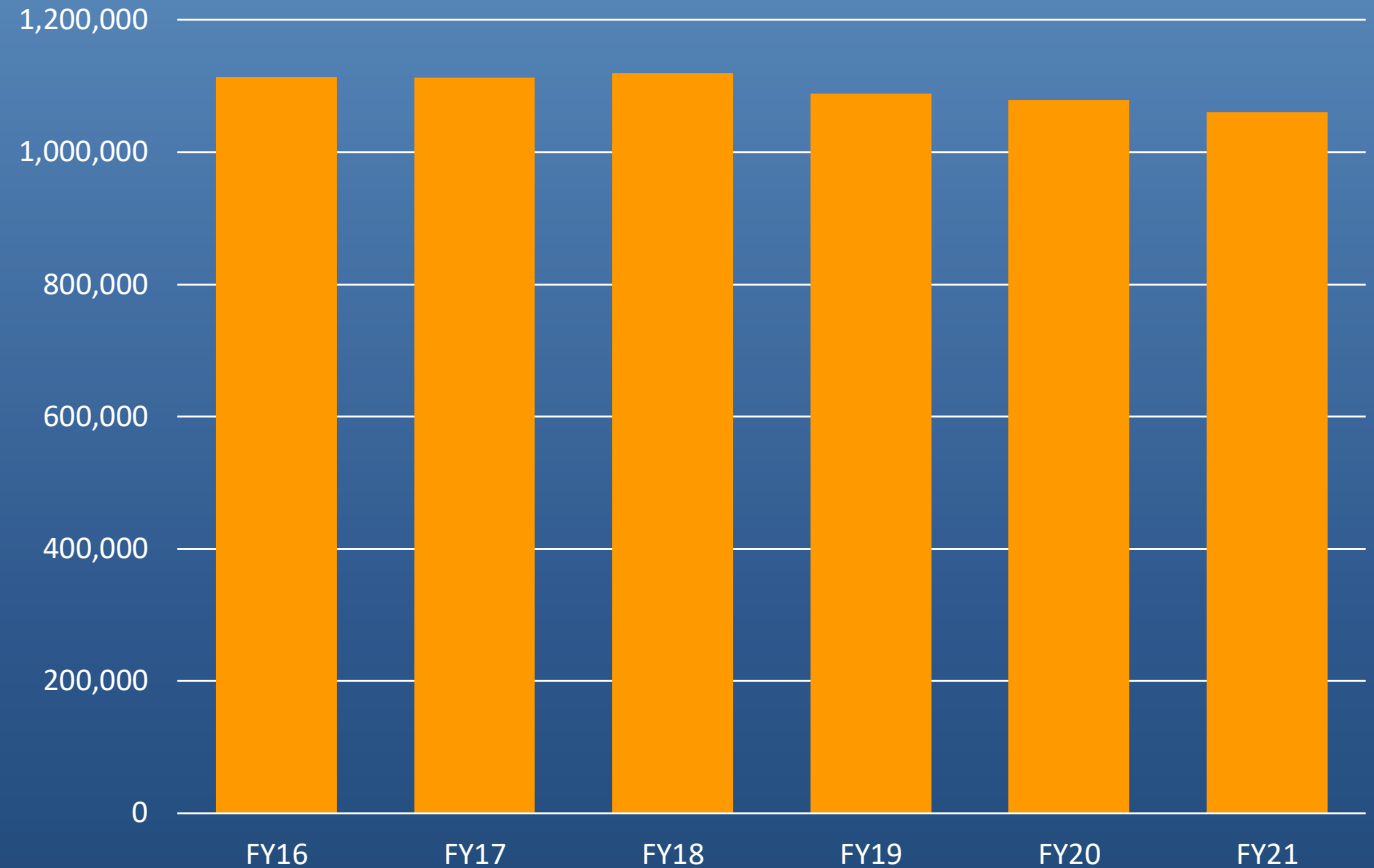
Total Annual Increase in Residential Water Bill = \$5.00

Pease Tradeport Water Treatment Air Force Agreements

- Agreements totaling over \$17 million in Reimbursable Expenses plus contributions toward operating costs
- City funding of these would have required a water rate increase of approximately 17%

Sewer FY Sales Trend (Total Units)

	Sewer Units Billed
FY16	1,114,191
FY17	1,112,872
FY18	1,119,985
FY19	1,088,346
FY20	1,079,390
FY21 (projected)	1,060,614

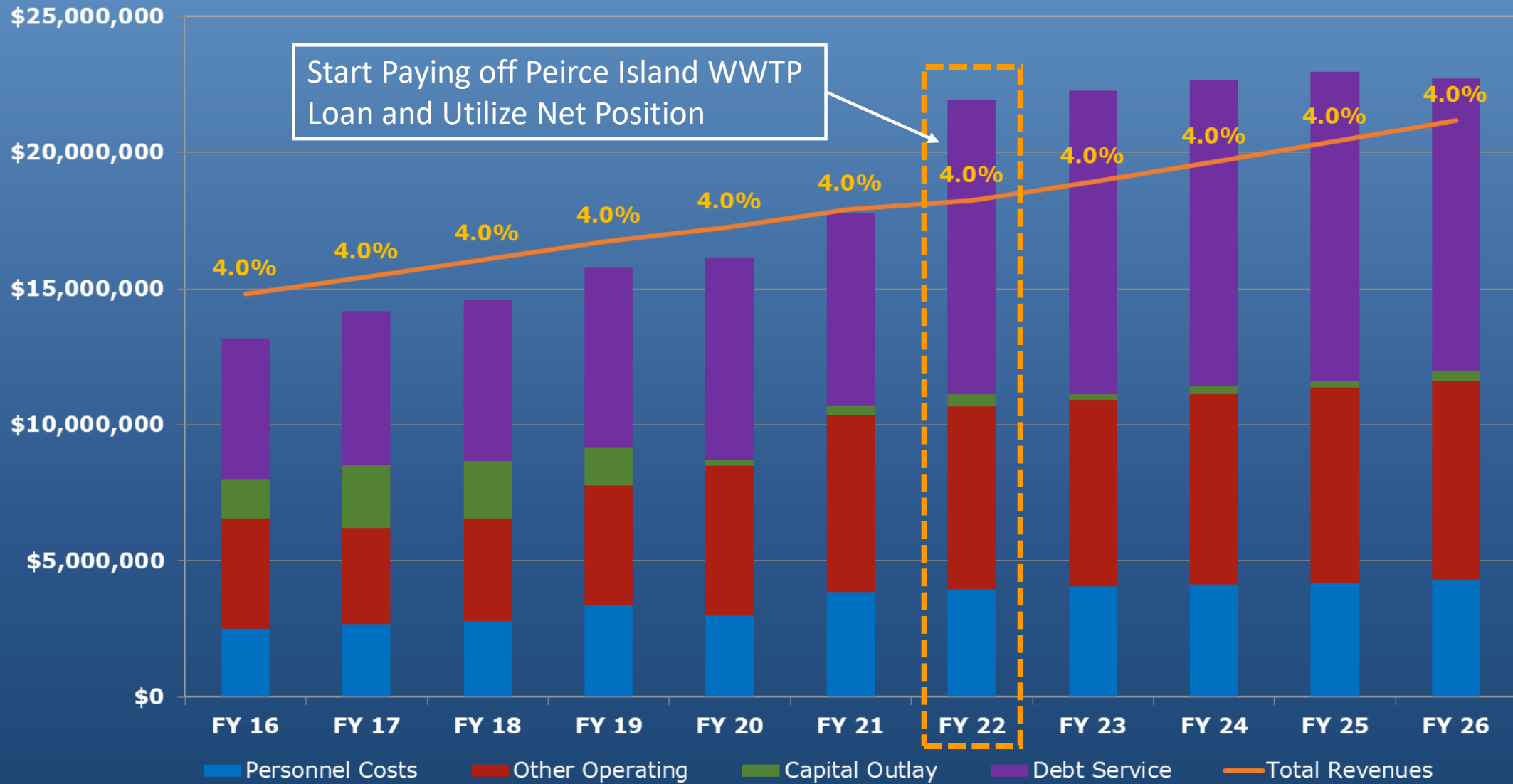


5 year ave. (16 to 20) = 1,103,000

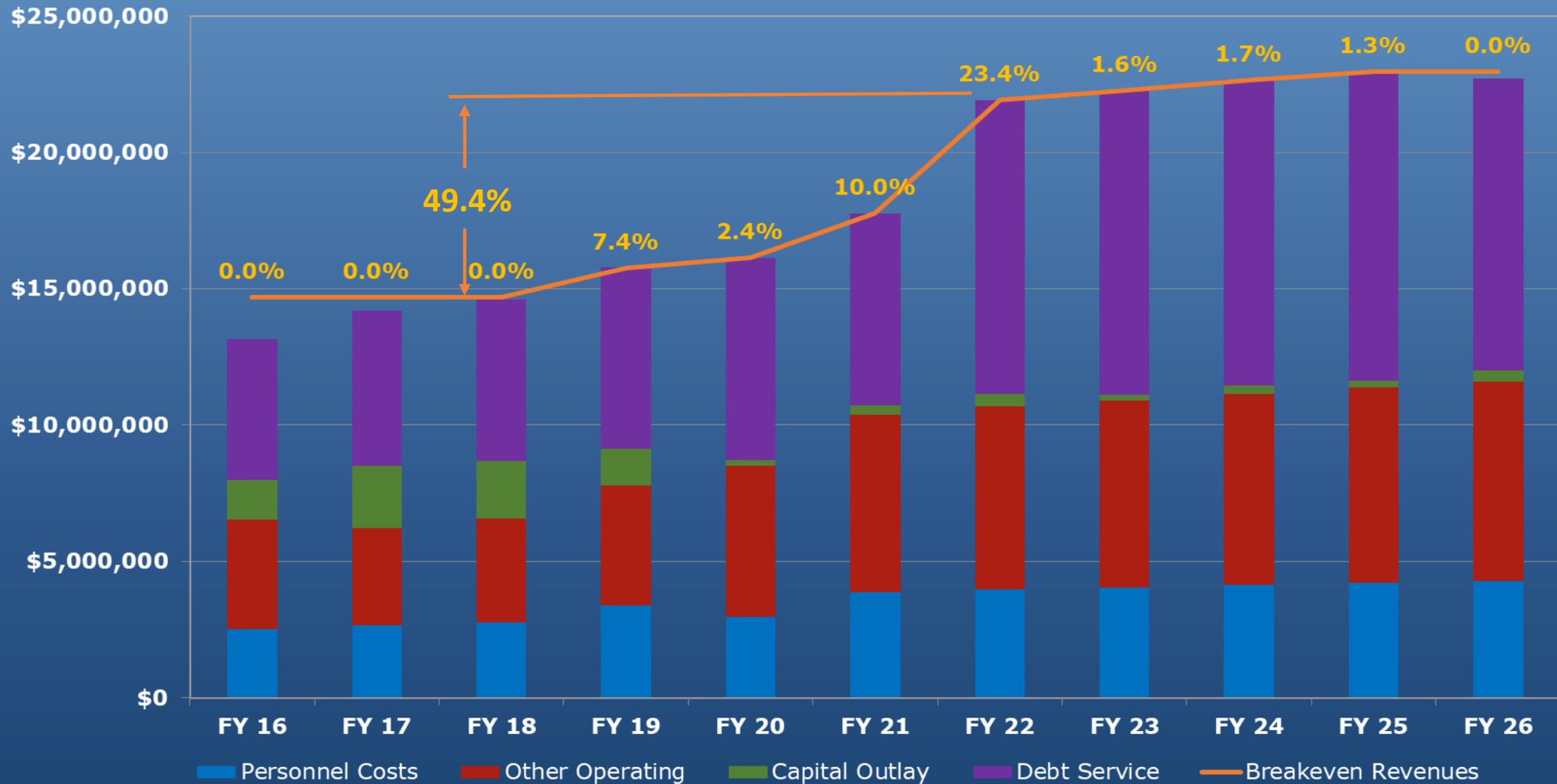
FY22 Budget = 1,079,390

Sewer Rate History and Projections

Steady State Plan Annual 4% Increases



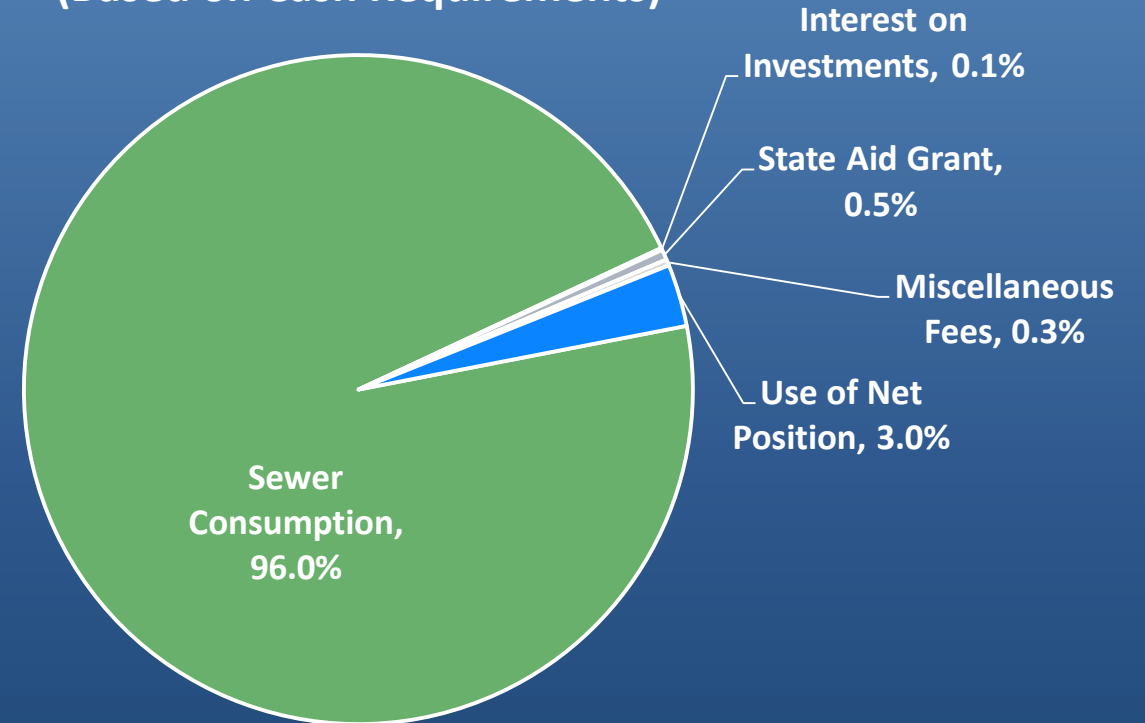
Sewer Rate Comparison Steady State vs. Breakeven



FY22 Sewer Revenue Breakdown

\$17,114,440 - Sewer Consumption
3,686,776 - Use of Net Position
615,161 - State Aid Grant
363,000 - Miscellaneous Fees
115,000 - Interest on Investments
<u>24,658 - Special Agreements</u>
\$21,919,035

Estimated Revenues
(Based on Cash Requirements)



FY22 Proposed Sewer Rate

4% Rate Change from FY 21

	FY 22 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$10.25
First 10 units billed per month	\$4.64
Total First Tier Rate	\$14.89
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$10.25
Over 10 units billed per month	\$6.13
Total Second Tier Rate	\$16.38

1 unit = 748 gallons of water

FY22 Proposed Sewer Rate

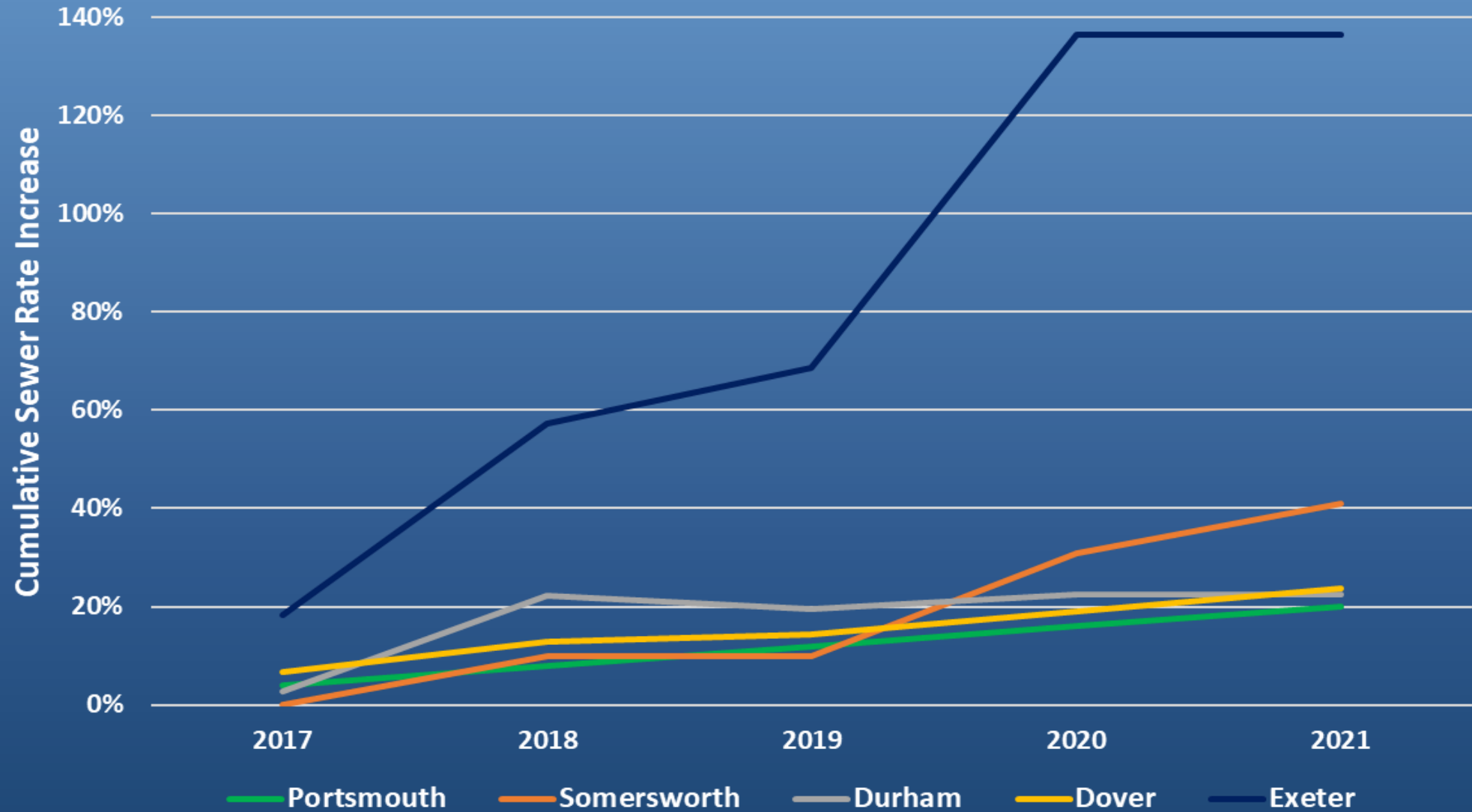
Average Residential Customer Bill

FY 22 Sewer Rate
 Average Residential Customer Bill
 Monthly Consumption in units
 (1 unit = 100 cf = 748 gallons)

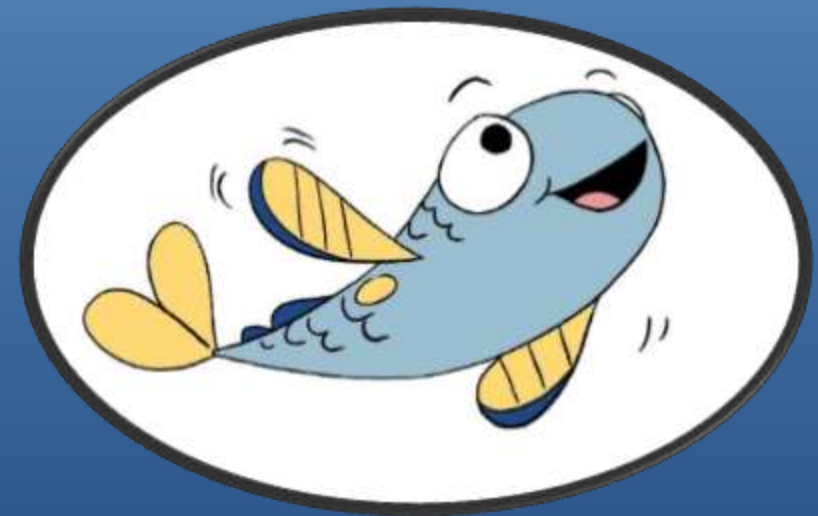
	Rate	Billed Units	Monthly Charge
Capital Related Rate, per unit	\$10.25	5	\$51.25
1 st Tier water service rates	\$4.64	5	\$23.20
Minimum Charge (5/8" meter)	\$0.00	n/a	\$0.00
Total Monthly Charge			\$74.45
Total Annual Charge			\$893.40

Total Annual Increase in Residential Sewer Bill = \$34.42

NH Seacoast Community Sewer Rate Trends



Discussion



Think Blue