

Water, Sewer, & Stormwater  
FY20 Budget Work Session  
City Council Presentation  
May 13, 2019



# Overview of Tonight's Meeting

- Introduction
  - Brian Goetz – Deputy Public Works Director
  - Terry Desmarais – City Engineer
  - Peter Rice – Public Works Director
  - David Hyder – Rate Consultant, STANTEC
- Highlights of FY19 – Additional Details included in City Council Packet
- Proposed FY20 Water Budget
- Proposed FY20 Sewer Budget
- Proposed FY20 Stormwater Budget
- Proposed FY20 Water and Sewer Rates
- Discussion



Water Division

BELLAMY RESERVOIR IN THE AUTUMN

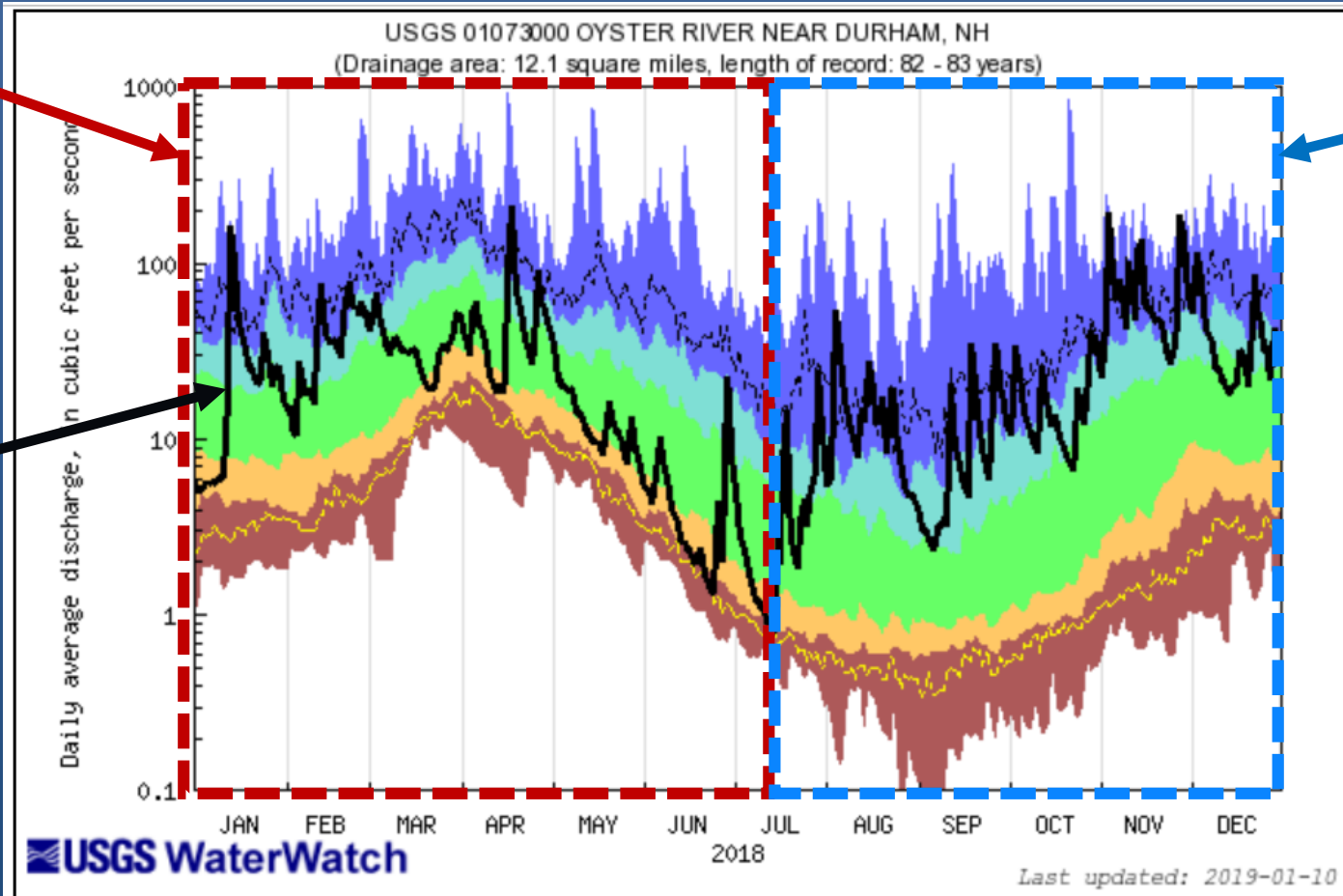


# A Dry Year... Then, A Wet Year

**19.5 Inches**  
**January to June**  
**19% Below Average**

**30.5 Inches**  
**July to December**  
**10% Above Average**

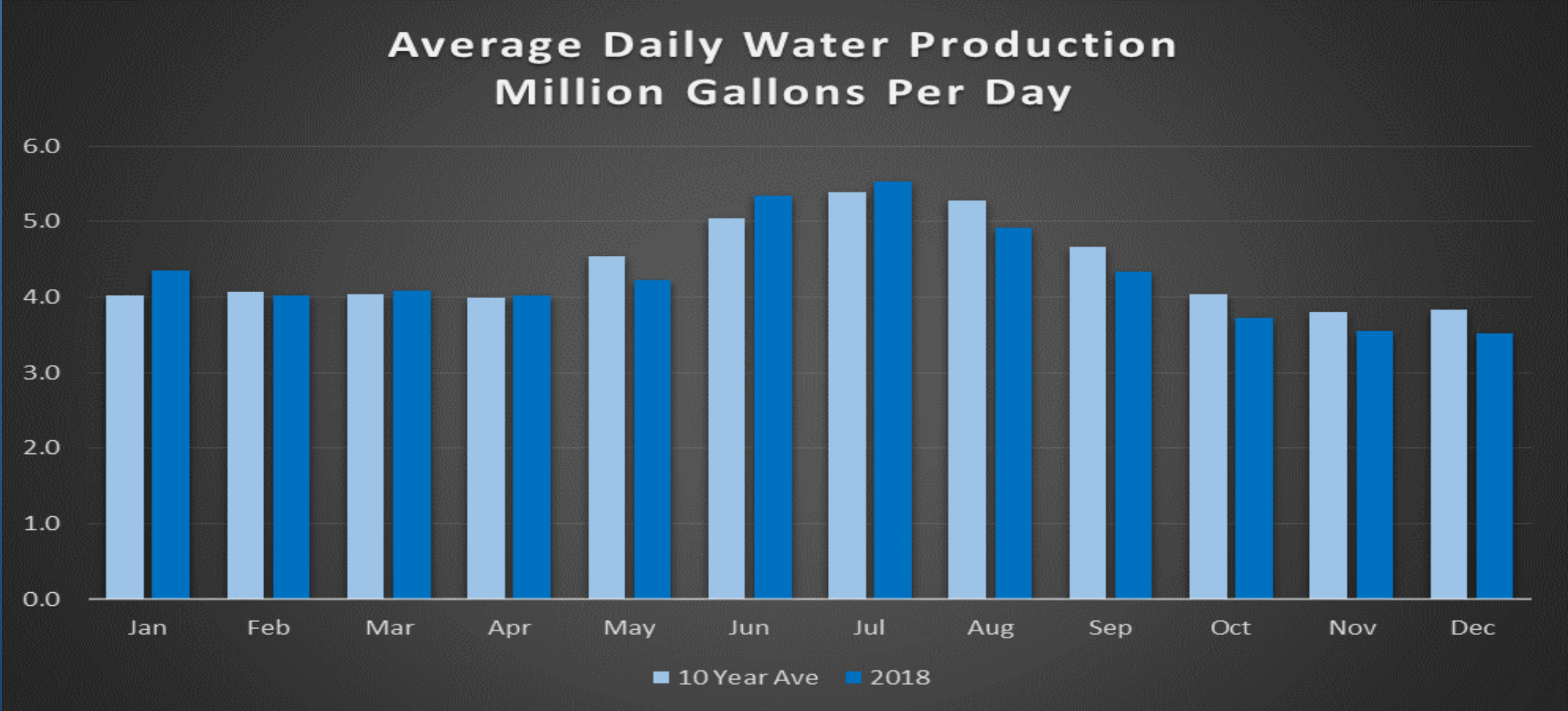
**Oyster River Streamgauge**



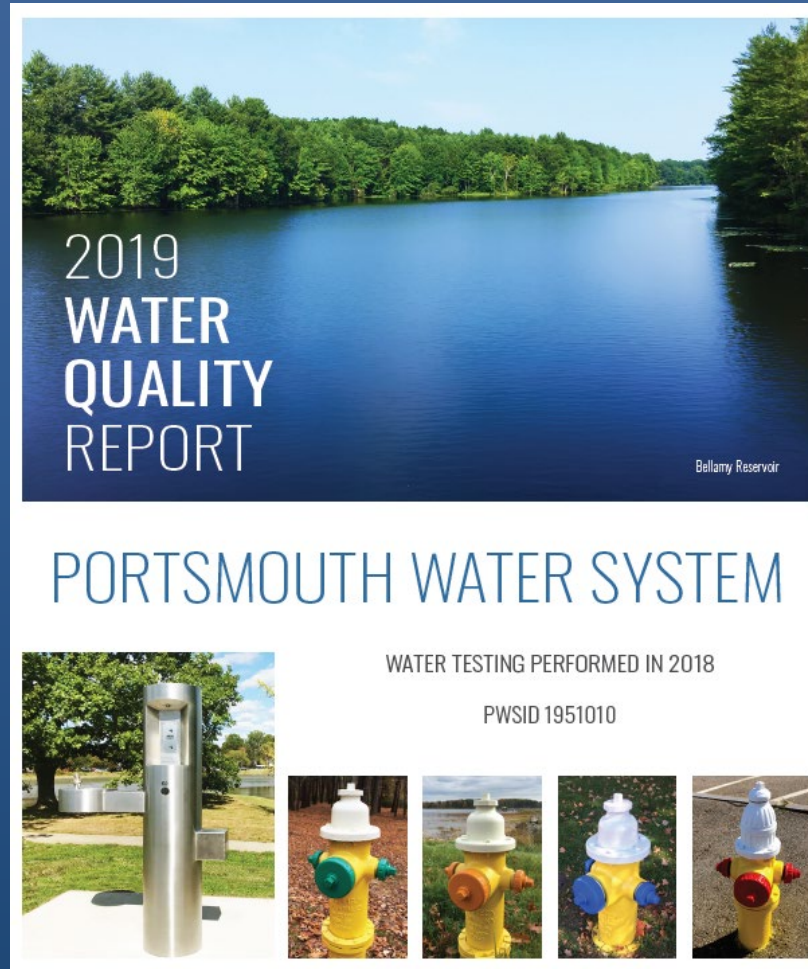
Explanation - Percentile classes

							Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest	
Much below Normal	Below normal	Normal	Above normal	Much above normal			

# 2018 versus 10-year Average



# Drinking Water Quality



- Lead and Copper Sampling for Greenland Well Replacement
  - 123 samples in 2018
  - 107 were Non-Detect
  - Only one site over the Action Level of 15 parts per billion
  - City is in compliance with NHDES Lead and Copper regulations
- PFAS Sampling
  - Monthly for Pease Sources
  - Every Six months for Portsmouth Sources
  - Results posted on City website

# Pease Water Treatment Facility - Construction In Progress:

Demolition of Existing Building

Site Work – May 2019



# Fire Hydrant Painting Project – 535 painted in 2017 378 painted in 2018



COLOR	CLASS	AVAILABLE FLOW @ 20 psi residual
BLUE	AA	1500 GPM or more
GREEN	A	1000-1499 GPM
ORANGE	B	500-999 GPM
RED	C	Below 500 GPM



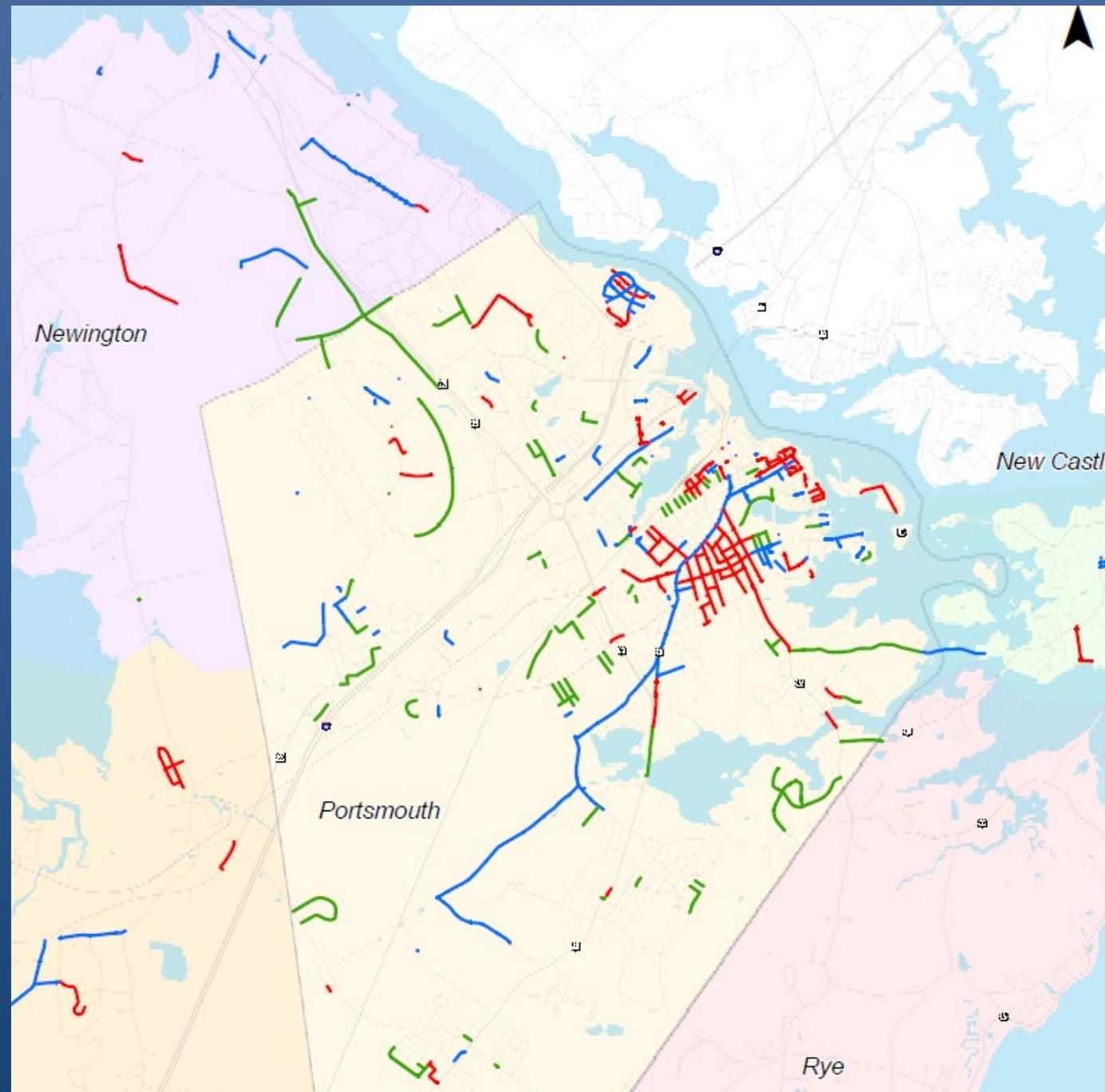
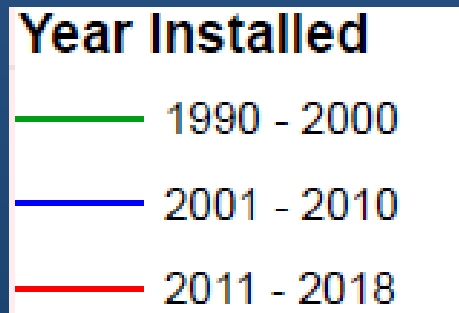
# Water Pipe Improvements – Since 1990

- **43 Miles of Pipe**

1990-2000 – 14.11 miles

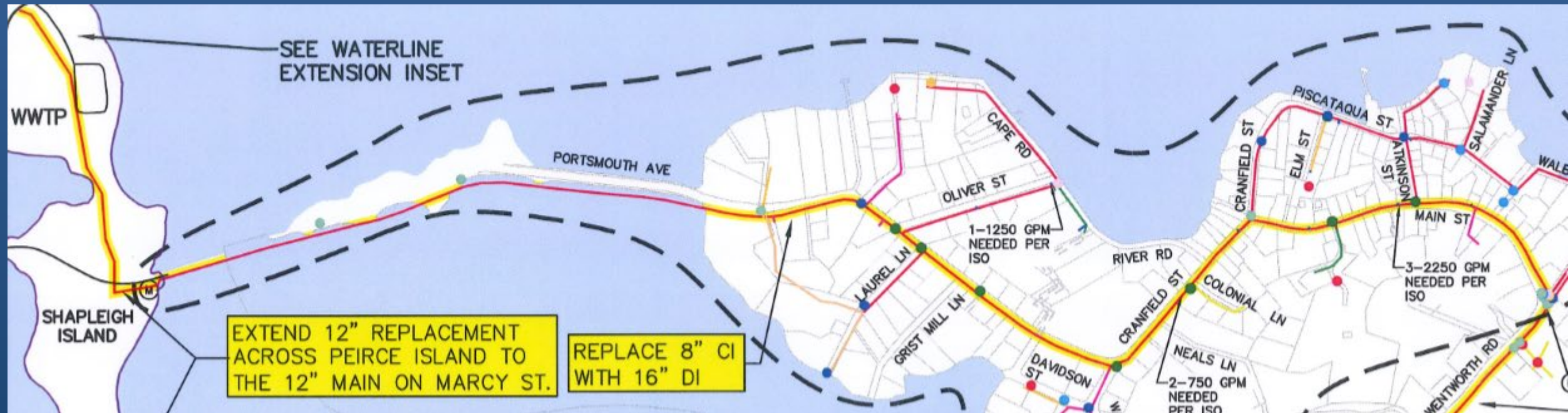
2001-2010 – 14.44 miles

2011-2018 – 14.68 miles



# Town of New Castle Water Main Work


- Anticipate Town starting construction of the water main upgrades in late 2019
- Two year project
- Will involve upgrade of water line from Peirce Island to New Castle Town Border



# Assistance Program

- Assistance Program FY19
  - Ongoing Assistance - 25% Discount on Water/Sewer
    - 27 customers currently assisted
    - \$4,293.38
  - Temporary Assistance - \$300 one-time credit
    - 8 customers assisted
    - \$2,169.20

## City of Portsmouth NH Water and Sewer Assistance Programs



Program Effective Date: 01/01/15

If you are a current customer of the City of Portsmouth's Water and Sewer Division you may be eligible for one of the following assistance programs:

**(1) Receive On-going Assistance of 25% off your water and sewer bills with the Water & Sewer Annual Assistance Program.**



**Water & Sewer Annual Assistance Program**  
25% discount on water and sewer for income-eligible homeowners or tenants serviced by the City of Portsmouth's Division of Water and Sewer.

- (1) Applicant must reside at the property and have a current water and sewer account at the address on the application.
- (2) See Application Section A for income restrictions.
- (3) Program discount is valid from date of acceptance forward. It is not applicable to any past due balances on the customer's account.
- (4) Applicant must provide the required documents as described on the application and schedule an appointment with the Billing Office.

**(2) Receive Temporary Assistance of up to a \$300 credit toward your water and sewer bill once per year.**

**Water & Sewer Temporary Assistance**  
The City of Portsmouth Water and Sewer customers may receive up to a \$300 water and sewer credit if you have a verifiable financial hardship that occurred within the past six (6) months (e.g. major medical expenses, job loss, or a change in marital status).

- (1) Applicant must reside at the property and have a current water and sewer account at the address on the application.
- (2) Must be a verifiable financial hardship (see application form for more details).
- (3) Applicant must provide the required documents as described on the application and schedule an appointment with the Billing Office.



Water and Sewer Billing Office - City Hall  
1 Junkins Ave  
Portsmouth, NH 03801  
603-610-7248 / www.cityofportsmouth.com

**To access these services:**

- 1. Verify your eligibility.**  
Check your eligibility for the programs for which you are applying (see programs listed to left).
- 2. Complete the appropriate application.**  
Be sure to include all requested documents as listed in the applications. Applications are available at City of Portsmouth Water & Sewer Billing Office.
- 3. Water & Sewer Assistance applicants must set up their appointment through the Billing Office.**

Please contact the Water & Sewer Billing Office located at Portsmouth City Hall to set up your appointment.  
Phone # (603) 610-7248

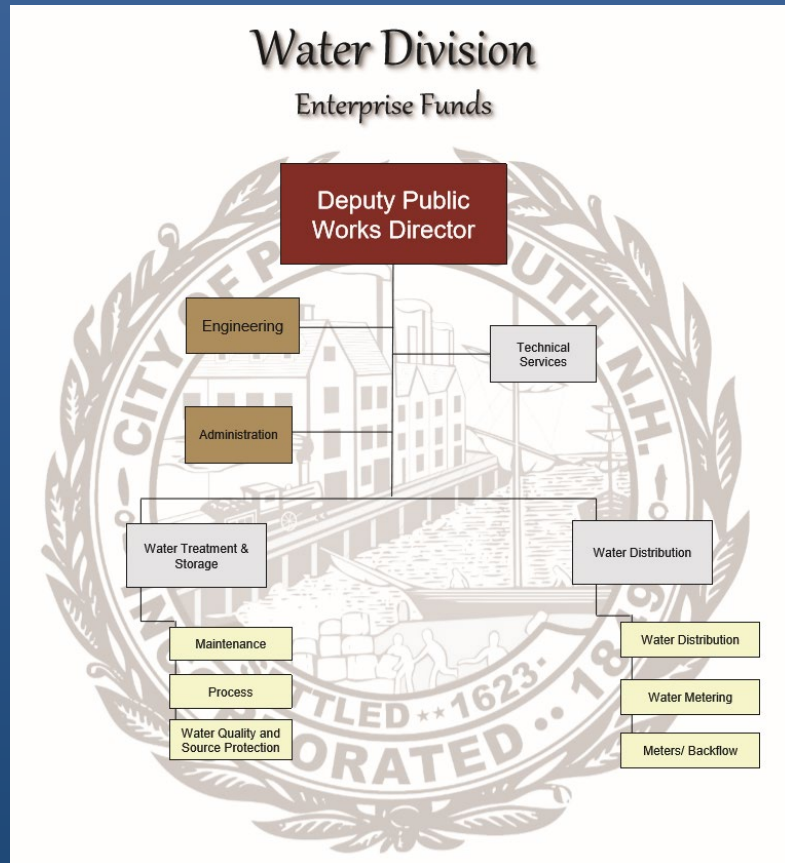
**Process Time for Applications:**  
Within three (3) weeks of your appointment you will receive a notification of approval, pending, or denial. Discounts through the Annual Assistance Program are good for one (1) year.  
You need to apply each successive year thereafter.

# New Billing System

- Currently working with vendor to complete transition to new billing system
- Roll out will occur this summer

# Proposed FY20 Water Budget

# Personnel Recommendations:

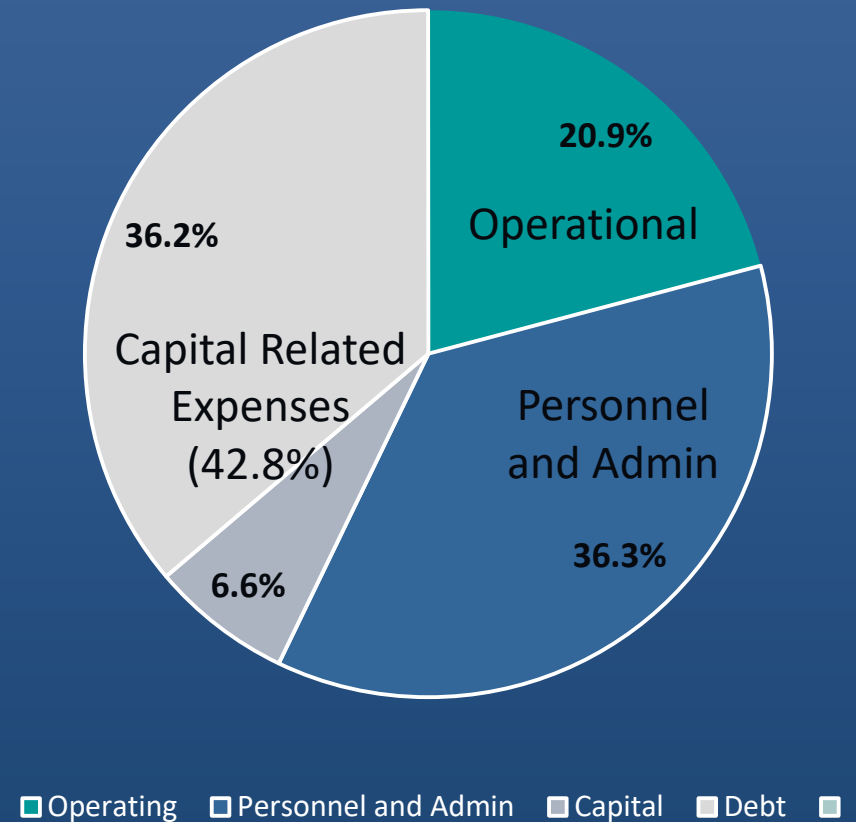


- 0.25 FTE – Administrative Assistant (shared with Sewer, Highway and Parking)
- 0.5 FTE – Process Instrumentation Tech (shared with Sewer)
- 1 FTE – Treatment Operations Foreman for Pease Water Treatment (Air Force Reimbursement)

# FY 20 Water Fund Budget

	Proposed Budget	% of Total Budget
Personnel Costs	\$ 3,017,144.00	30%
Chemicals	\$ 340,000.00	3%
Repairs	\$ 231,900.00	2%
Utilities	\$ 396,412.00	4%
Administrative Overhead	\$ 650,676.00	6%
Sludge/Grit Removal	\$ 145,000.00	1%
Prof Contracted Services	\$ 238,280.00	2%
Property Taxes	\$ 125,500.00	1%
Equipment	\$ 114,750.00	1%
Stock Materials	\$ 263,700.00	3%
Assistance Program	\$ 5,000.00	0%
Other Operating	\$ 251,359.00	2%
Interest on Debt	\$ 1,108,345.00	11%
Principal on Debt	\$ 2,552,528.00	25%
Capital Projects	\$ 200,000.00	2%
Rolling Stock	\$ 470,000.00	5%
<b>Total Budget</b>	<b>\$ 10,110,594.00</b>	<b>100%</b>

FY20 Proposed Water Fund Budget





# Sewer Division





# Peirce Island Wastewater Treatment Facility Upgrade

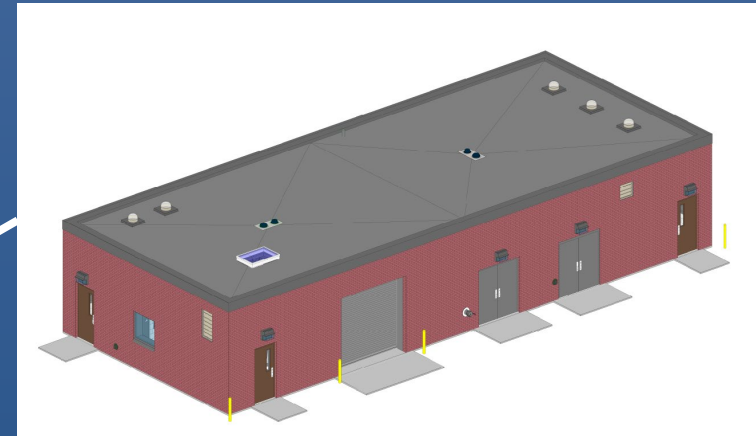
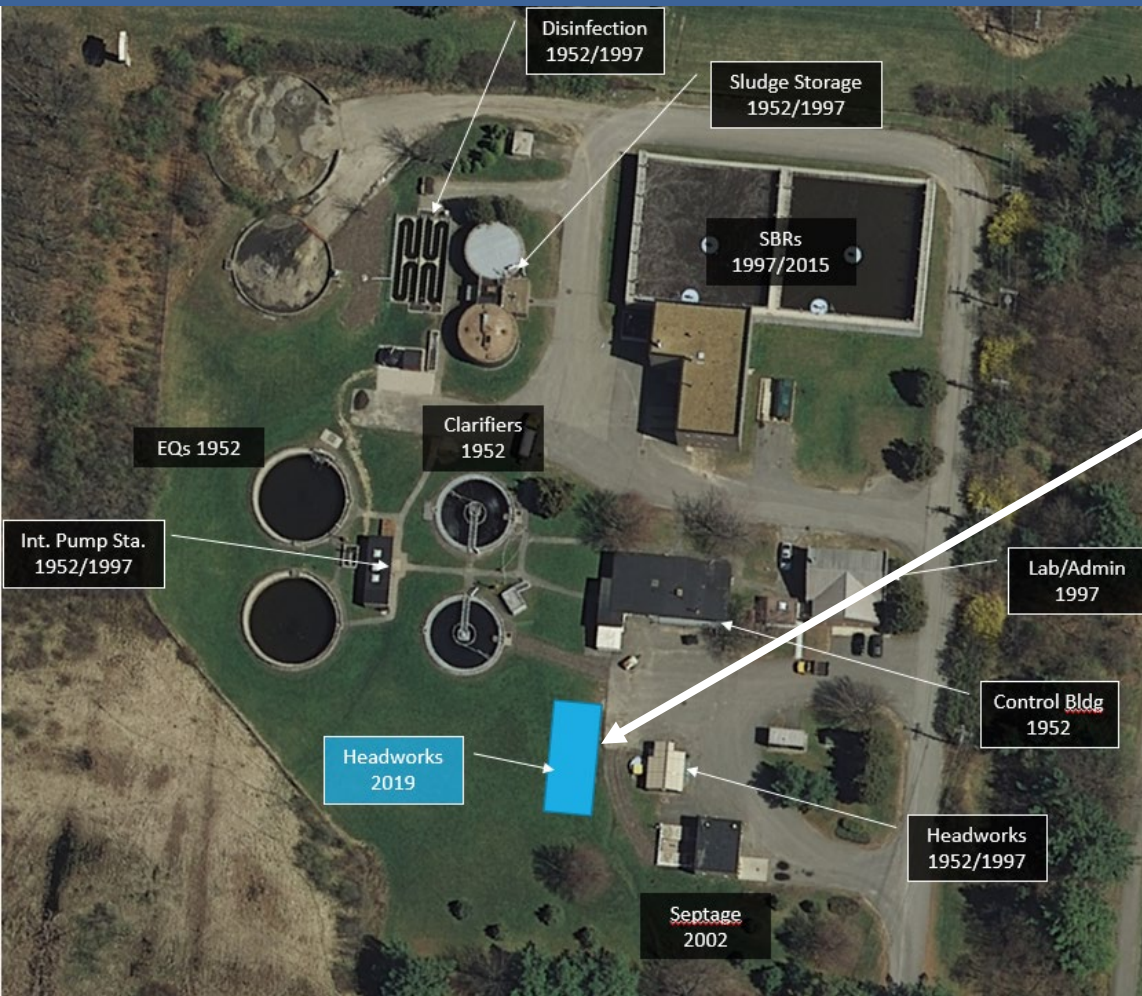


- August 2016 – Awarded to Methuen Construction, of Salem, NH
- September 2016 - Construction Began
- December 2019 -Secondary Treatment Completion
- August 2020 - Project Completion

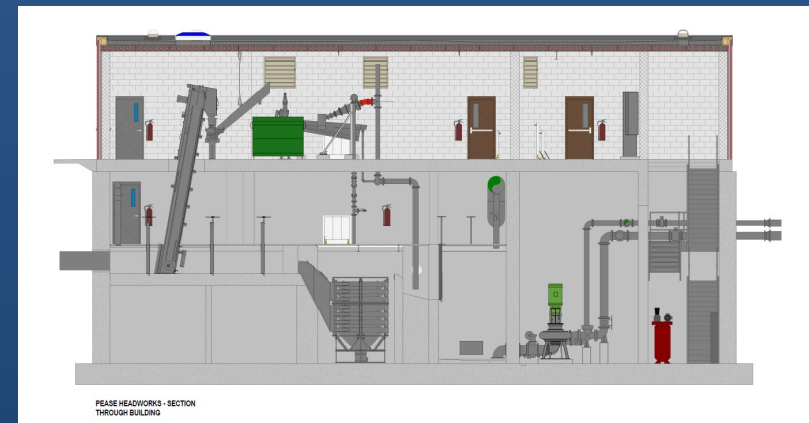
# Current Focus of Work



# Pease Wastewater Treatment Facility Upgrades



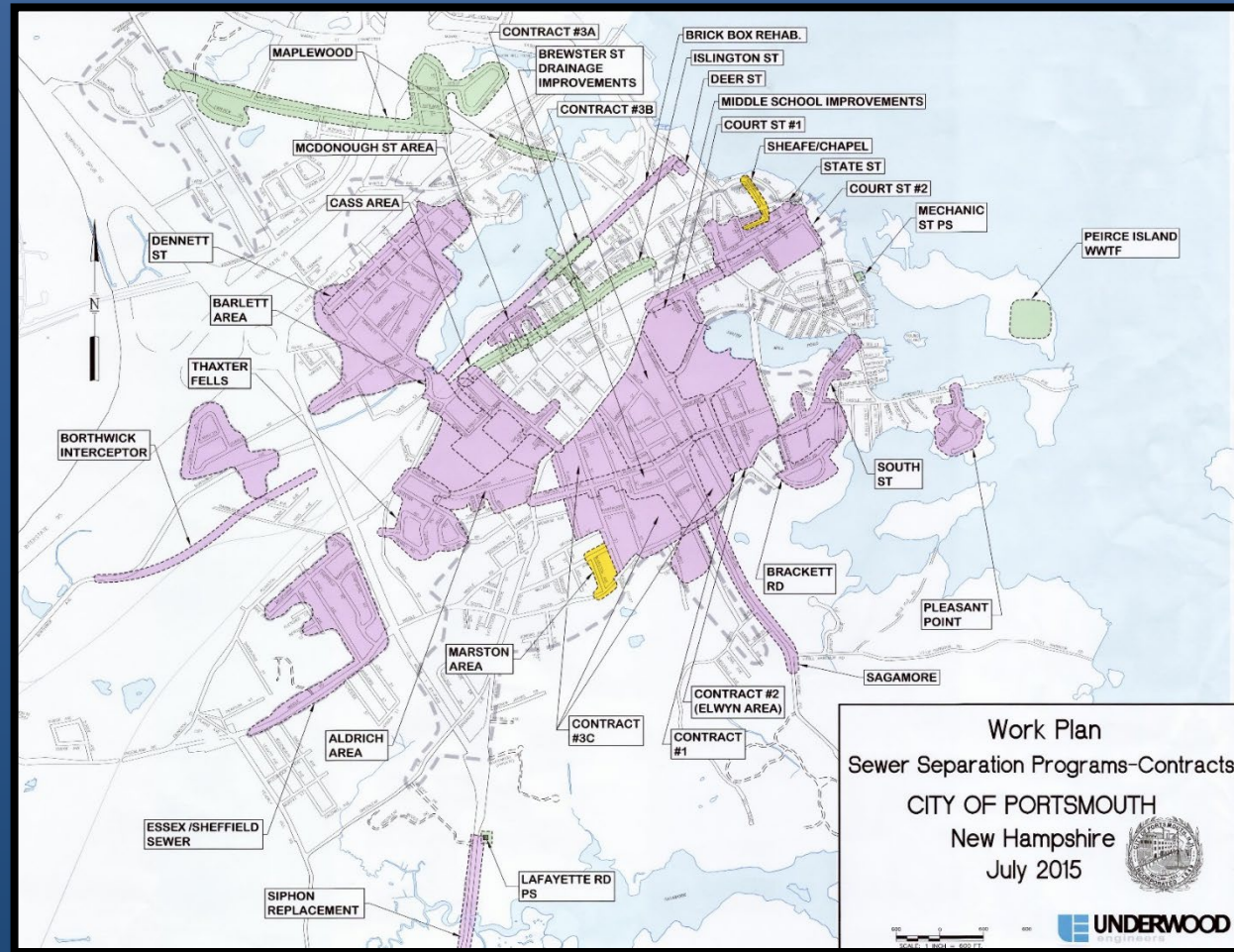
New Headworks Building



# Long-Term Combined Sewer Overflow Control Plan

## Supplemental Compliance Plan Projects (by Oct 2023)

1. Maplewood at Fairview Dr (Underway)
2. Pleasant at Court St (Complete)
3. Islington St Phase 1 (Underway)
4. McDonough St 3B (Complete)
5. Union St from State to Middle (pre RFP)
6. Fleet St (pre RFP)
7. Contract 1 – Sewer Rehabilitation (Design Underway)

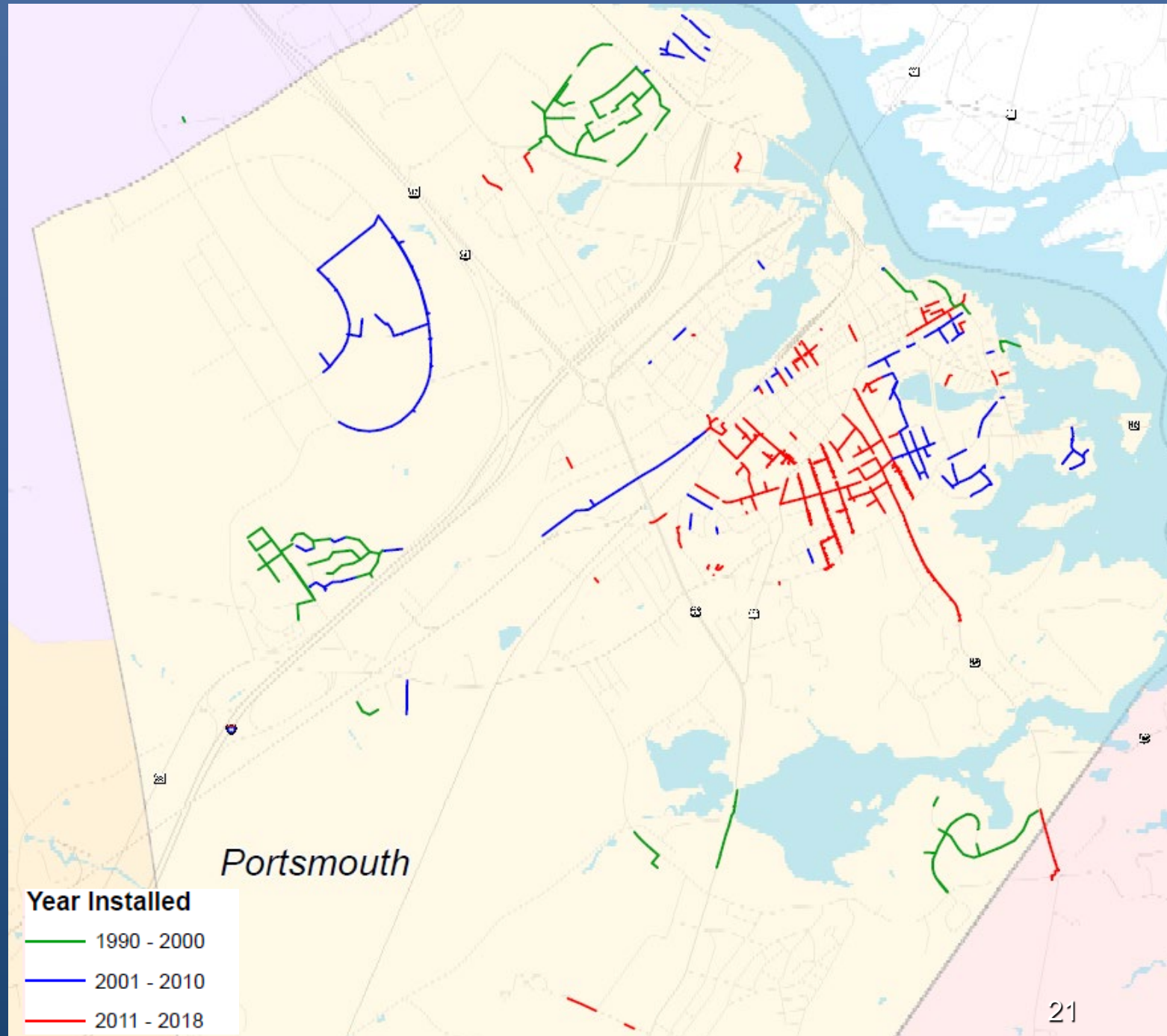


# Sewer Pipe Replacements

1990-2000 – 3.77 miles

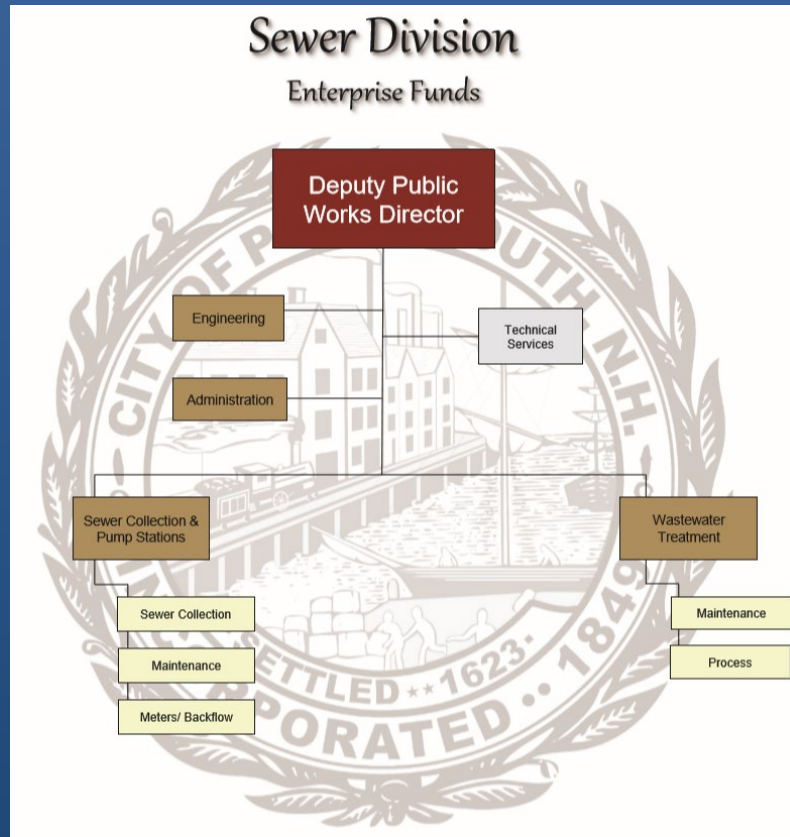
2001-2010 – 6.62 miles

2011-2018 – 11.45 miles



# Proposed FY20 Sewer Budget

# Personnel Recommendations:

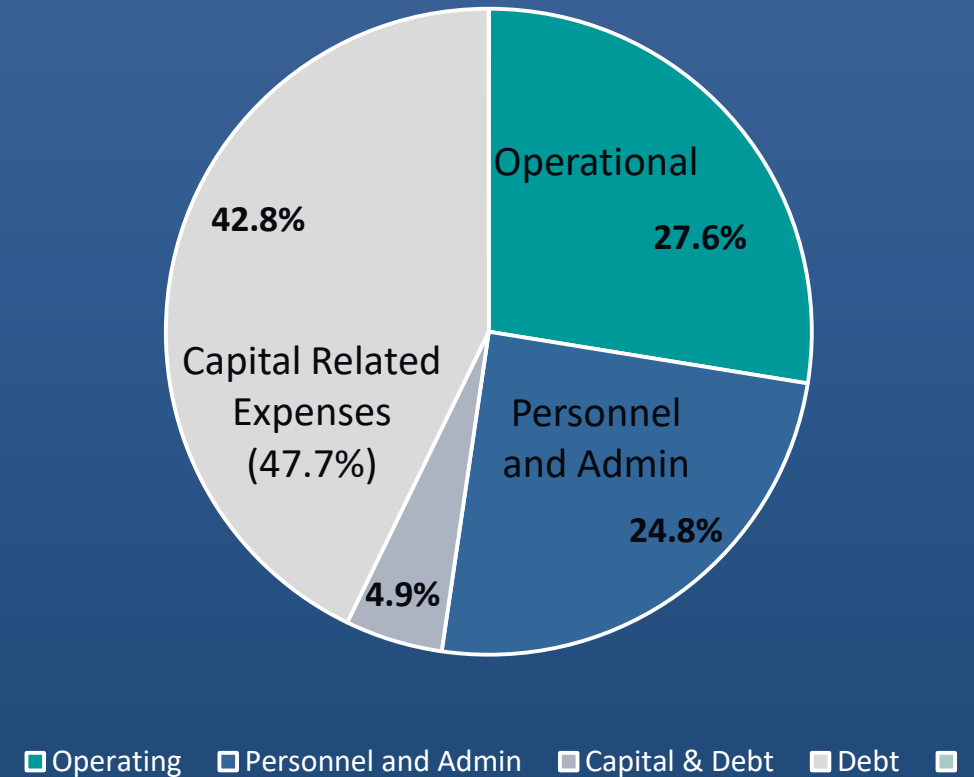


- 0.25 FTE – Administrative Assistant (shared with Water, Highway and Parking)
- 0.5 FTE – Process Instrumentation Tech (shared with Water)
- 1 FTE – Treatment Operator (Peirce Island Wastewater Treatment Facility)

# FY 20 Sewer Fund Budget

	Proposed Budget	% of Total Budget
Personnel Costs	3,680,064.00	21%
Chemicals	960,000.00	5%
Repairs & Maintenance	481,275.00	3%
Utilities	897,850.00	5%
Administrative Overhead	650,676.00	4%
Sludge/Grit Removal	672,000.00	4%
Prof Contracted Services	305,760.00	2%
Permits/Legal Fees	275,000.00	2%
Equipment	147,500.00	1%
Stock Material	137,500.00	1%
Assistance Program	20,000.00	0%
Other Operating	520,495.00	3%
Transfer to Stormwater	397,806.00	2%
Interest on Debt	2,574,229.00	15%
Principal on Debt	4,905,593.00	28%
Capital Projects	200,000.00	1%
Rolling Stock	652,000.00	4%
<b>Total Budget</b>	<b>17,477,748.00</b>	

FY20 Proposed Sewer Fund Budget

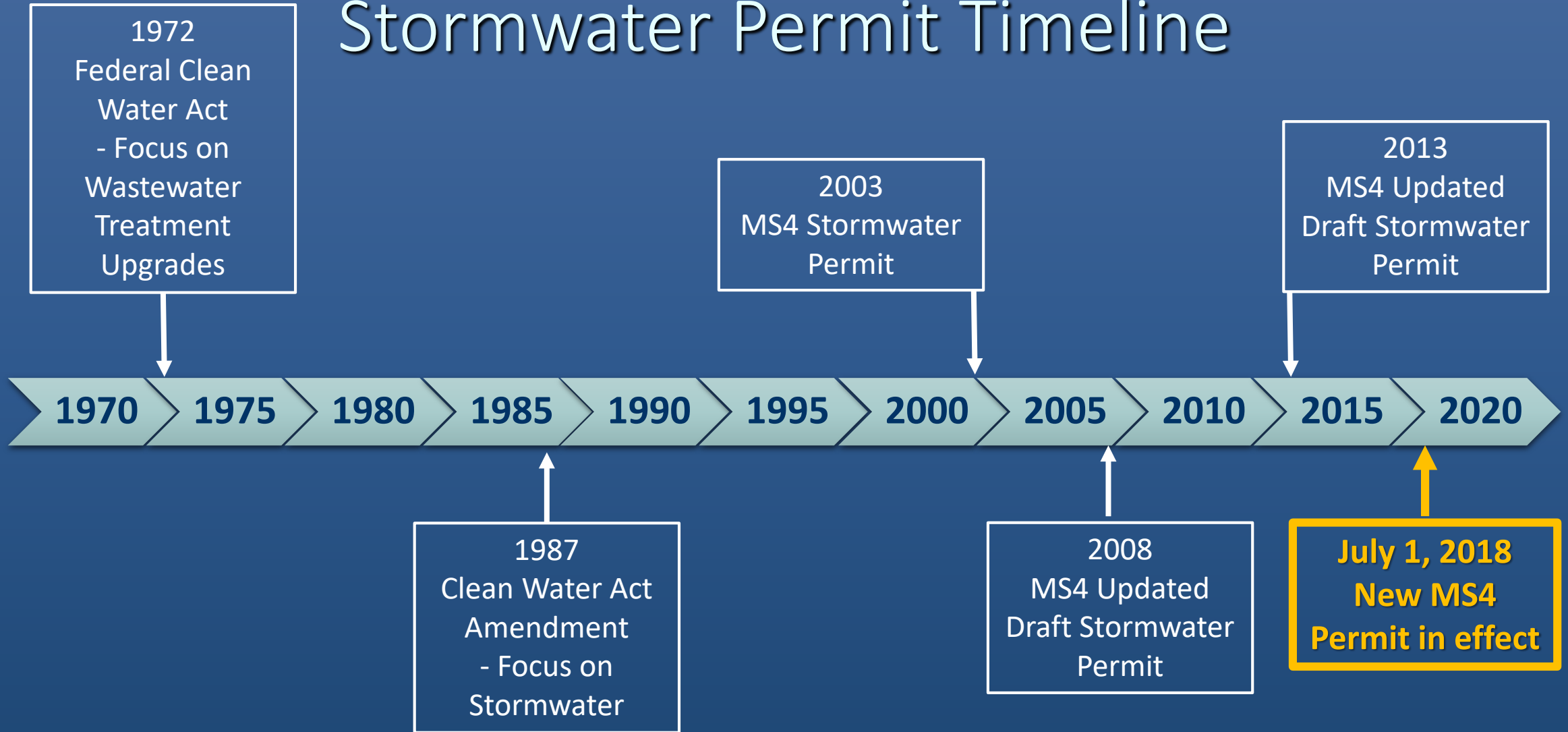




# Proposed FY20 Stormwater Budget



# Stormwater Permit Timeline



# Stormwater Operations

## 2018 Highlights



Street Sweeping  
- 300 Tons swept in 2018



Catch Basin Cleaning  
- 322 Tons cleaned in 2018



Pipe Inspections and Cleaning  
- 6,750 Feet Inspected and Cleaned


# Public Outreach

- Informational Flyer
- Pet Waste Management Messaging and Signs
- Organic Management Event (May 4<sup>th</sup>)
- Household Hazardous Waste Days (May and Oct)
- Catch Basin Stenciling and Markers




### Stormwater Management

This flyer has been developed to provide the Portsmouth Water Division's customers with information about how stormwater is managed and suggested steps that individuals can take to protect and improve water quality.



#### What is stormwater?

Stormwater is precipitation that runs over the land surface (runoff) and does not infiltrate the ground. In the process it may pick up pollutants and deposit them into surface waters (rivers, lakes and oceans), which may create water quality impacts and siltation that could potentially damage aquatic habitats.



#### Why should we care?

Stormwater pollution creates water quality impacts to swimming, boating and aquatic habitats that can be mitigated or prevented with awareness and new approaches to stormwater management. These pollutants tend to come from eroding soils, fertilizers and lawn chemicals, pet waste, and trash and debris. As a result of stormwater and the increase in volume of surface waters, flooding can also occur. With flooding comes property and infrastructure damages.

*In the past, stormwater has been managed with the goals of controlling erosion and flooding, but the conventional approach has not been successful in either protecting water quality or accommodating flood waters. Recent changes in state and federal programs – and to some extent in local programs – recognize the shortcomings of the conventional approach and lay a course for a more up-to-date approach that can preserve both water quality and pre-development hydrologic conditions. The new approach employs tools such as low impact development techniques and stormwater utilities. Using these tools, it is possible to maintain water quality, ecosystem health and groundwater resources.*

—New Hampshire Water Resources Primer (2008)


#### How can you help?

- Never pour hazardous materials into a storm drain
- Dispose of used motor oil, gasoline, antifreeze, cleaning agents, pesticides or fertilizers, paint and other hazardous agents in an appropriate manner - such as taking them to Household Hazardous Waste Days (held twice a year at Portsmouth's Department of Public Works)
- Do not sweep litter, sand, leaves or other materials into storm drains. Dispose of them in the trash or compost the material
- Never hose down a spill into a storm drain. Use absorbent towels or cat litter to clean up the spill and dispose of the material in the trash if it is not hazardous
- Detergents and chemical cleaners should not be used to wash sidewalks or driveways
- If you see a storm drain that is clogged please contact your respective Public Works Department and dispose of the material in the trash if it is not hazardous

## ALUMNI WENTWORTH FIELD

### FIELD DAY

SUNDAY MAY 5, 2019 • 11AM - 4PM



## Stonyfield ORGANIC


WE'RE WORKING WITH

# PORTSMOUTH

TO HELP TRANSITION ALUMNI-WENTWORTH FIELD TO ORGANIC MANAGEMENT! COME CELEBRATE THIS BIG CHANGE WITH A DAY OF GAMES, MUSIC, FREE ORGANIC YOGURT AND FUN!

#### EVENT TIPS:

- ✓ REMEMBER YOUR ORGANIC SUNSCREEN
- ✓ COME HUNGRY. FREE ORGANIC YOGURT!
- ✓ #PLAYFREE FROM HARMFUL PESTICIDES



BEYOND PESTICIDES FOR MORE INFORMATION, VISIT: [STONYFIELD.COM/PORTSMOUTH](http://STONYFIELD.COM/PORTSMOUTH)

Osborne Organics Stonyfield ORGANIC PLAYFREE



# FY20 Stormwater Budget

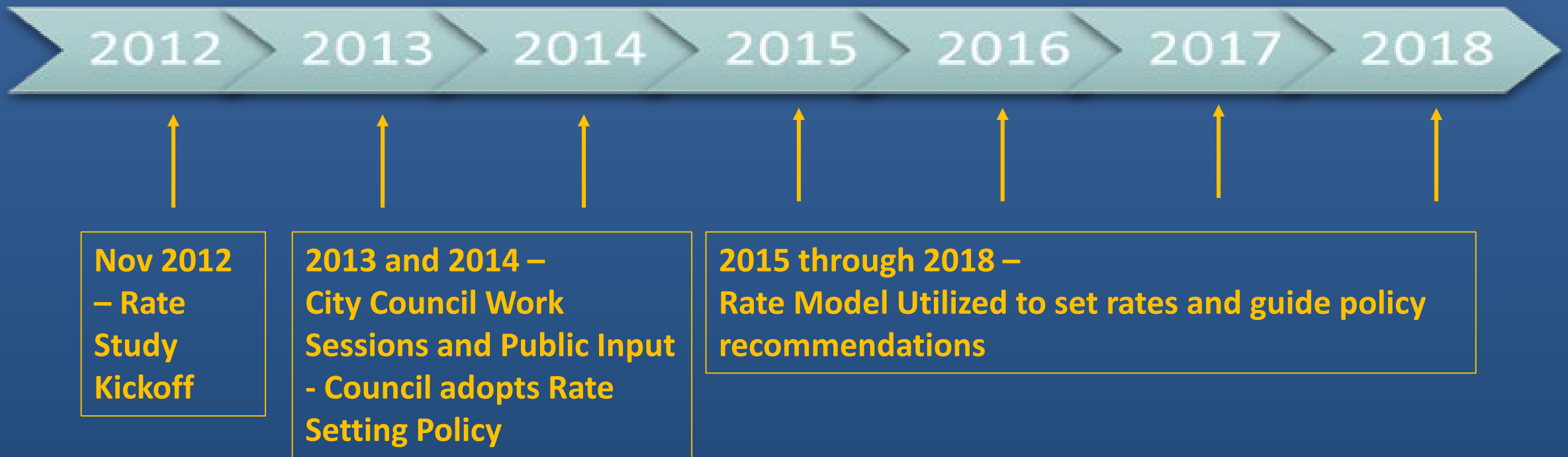
<b>EXPENSES</b>	<b>Proposed Budget</b>	<b>% of Total Budget</b>
Personnel Costs	\$ 415,613	84%
Professional Contracted Services	\$ 75,000	15%
Other Operating	\$ 5,000	1%
<i>Total Budget</i>	\$ 495,613	100%
<i>Rolling Stock</i>	\$ 300,000	
<b>FUNDING</b>		
<i>Sewer Fund Transfer</i>	\$ 397,806	50%
<i>General Fund Transfer : Public Works</i>	\$ 247,806	31%
<i>General Fund Transfer</i>	\$ 150,000	19%

Water and Sewer  
Rate Recommendations,  
Stormwater Funding Proposal  
David Hyder –  
Stantec Consulting

# Water and Sewer System Funding: Enterprise Funds

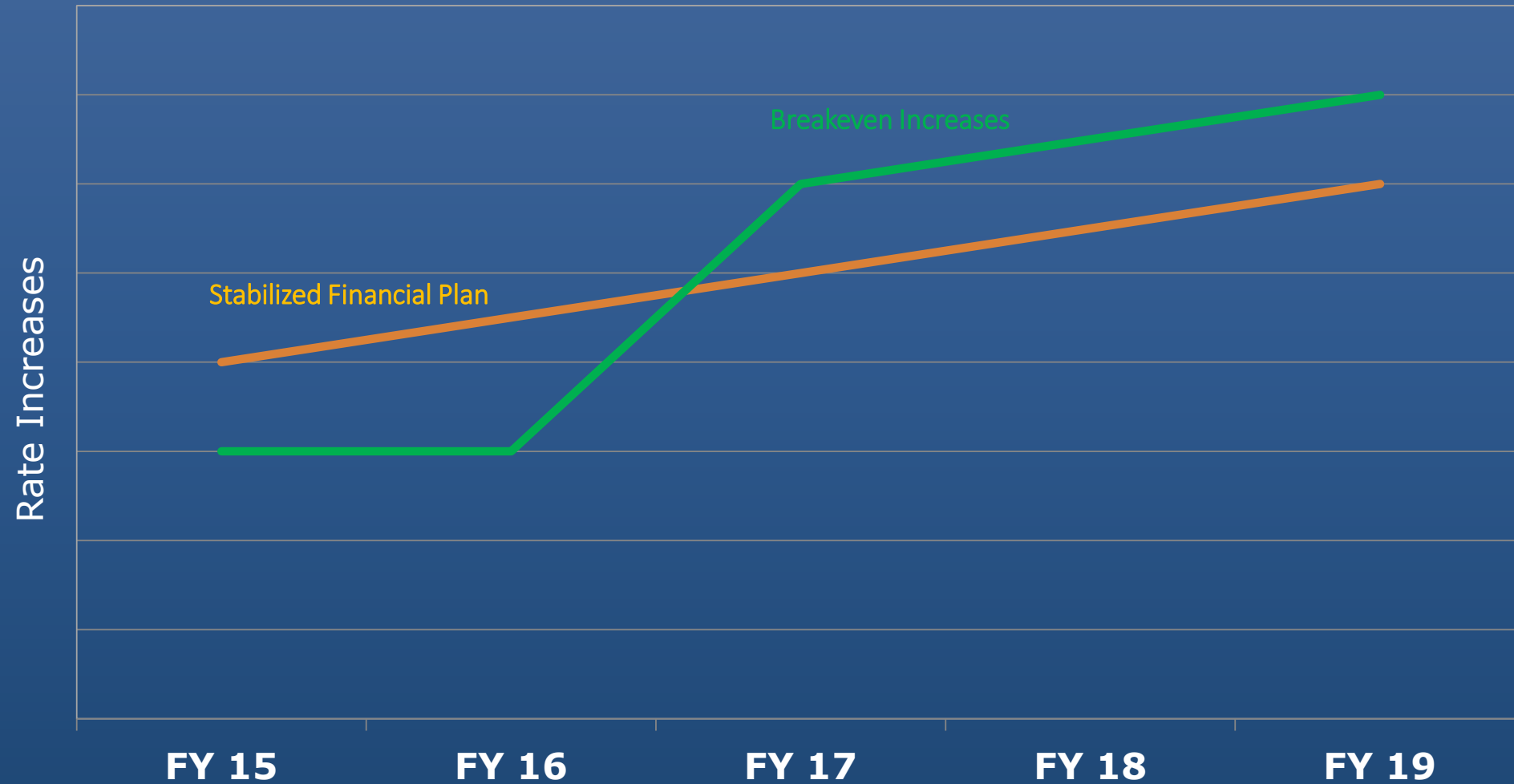
- Enterprise Funds Account for Operations That are Financed and Operated in a Manner Similar to Private Business
- Must have Fees and or Charges Sufficient Enough to Cover the Cost of Providing Goods and Services, Including Capital costs (i.e. System Reinvestment and Debt Service)
- Note: Property Taxes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

# Rate Setting Highlights





# Continued Use of “Glidepath” Approach to Raising Rates in Anticipation of Major Capital Projects



# FY20 Water Revenue Budget

The FY20 Water Division appropriations would be funded from the following sources to meet cash requirements:

- \$7,827,472 - Water Consumption (75%)
- \$1,937,339 - Other Fees (18%)
- \$ 395,199 - Rate Stabilization Reserve (4%)
- \$ 345,783 - Other Financing/ Special Agreements (3%)

# FY20 Proposed Water Rate

**2% Rate Change from FY 19**

	FY 20 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$2.87
First 10 units billed per month	\$1.45
<b>Total First Tier Rate</b>	<b>\$4.32</b>
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$2.87
Over 10 units billed per month	\$2.34
<b>Total Second Tier Rate</b>	<b>\$5.20</b>

*1 unit = 748 gallons of water*

# FY20 Proposed Irrigation Rates

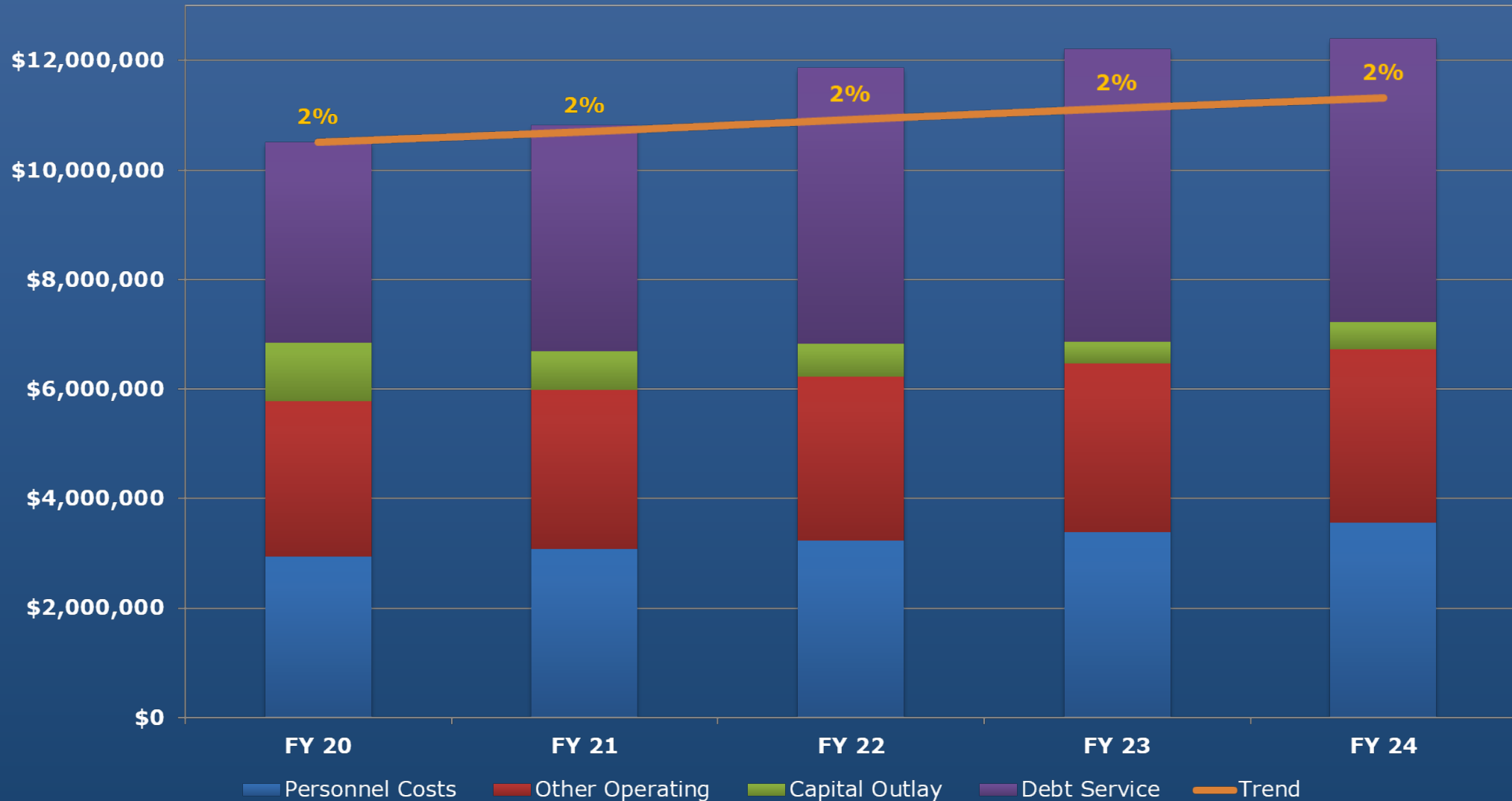
**2% Rate Change from FY 19**

	FY 20 Proposed (per unit)
First Tier Rate (0 to 10 units per month)	
Capital Related rate, per unit billed	\$2.87
First 10 units billed per month	\$2.34
<b>Total First Tier Rate</b>	<b>\$5.20</b>
Second Tier Rate (11 to 20 units per month)	
Capital Related rate, per unit billed	\$2.87
11 to 20 units billed per month	\$6.94
<b>Total Second Tier Rate</b>	<b>\$9.81</b>
Third Tier Rate (all units over 20 per month)	
Capital Related rate, per unit billed	\$2.87
All units billed per month	\$9.24
<b>Total Third Tier Rate</b>	<b>\$12.11</b>

*1 unit = 748 gallons of water*

# Water Rate Projections

## Model for Rate Stabilization Approach



# FY20 Proposed Water Rate

## Average Residential Customer Bill

FY 20 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	\$2.87	5	\$14.35
1 <sup>st</sup> Tier water service rates	\$1.45	5	\$7.25
Minimum Charge (5/8" meter)	\$4.95	n/a	\$4.95
Total Monthly Charge			\$26.55
Total Annual Charge			\$318.60

Average Daily Cost for Single Family Residential Water Customer = \$0.88

# FY20 Sewer Revenue Budget

The FY20 Sewer Division appropriations would be funded from the following sources to meet cash requirements:

- \$16,880,687 - Sewer Consumption (91%)
- \$ 738,214 - State Aid Grant (4%)
- \$ 357,500 - Miscellaneous Fees (<2%)
- \$ 15,974 - Special Agreements (<1%)
- \$ 600,000 - Interest on Investment (<4%)

# FY20 Proposed Sewer Rate

4% Rate Change from FY 19

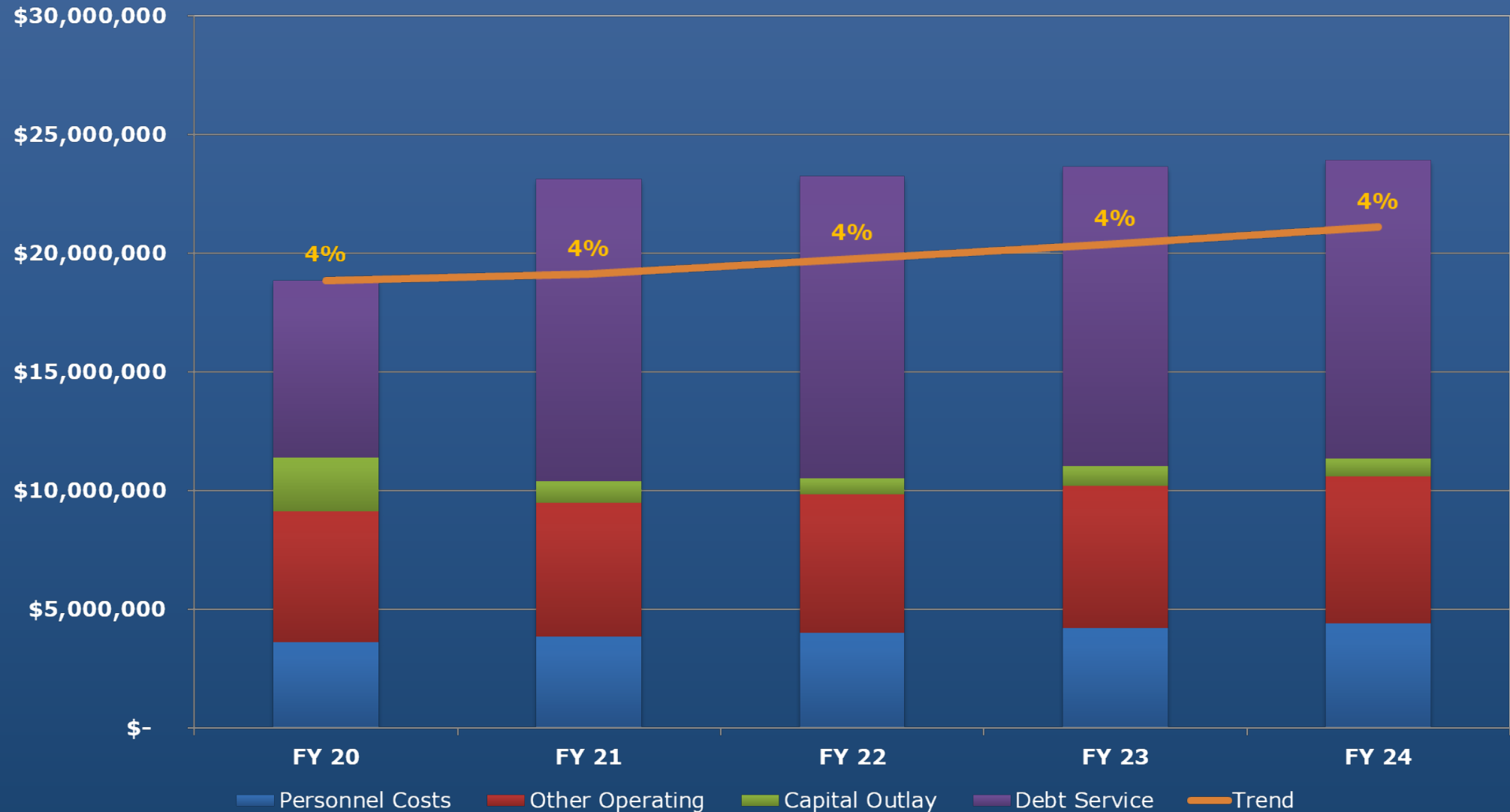
	FY 20 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$6.61
First 10 units billed per month	\$7.15
<b>Total First Tier Rate</b>	<b>\$13.77</b>
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$6.61
Over 10 units billed per month	\$8.53
<b>Total Second Tier Rate</b>	<b>\$15.14</b>

*1 unit = 748 gallons of water*



# Sewer Rate Projections

## Model for Rate Stabilization Approach



# FY20 Proposed Sewer Rate

## Average Residential Customer Bill

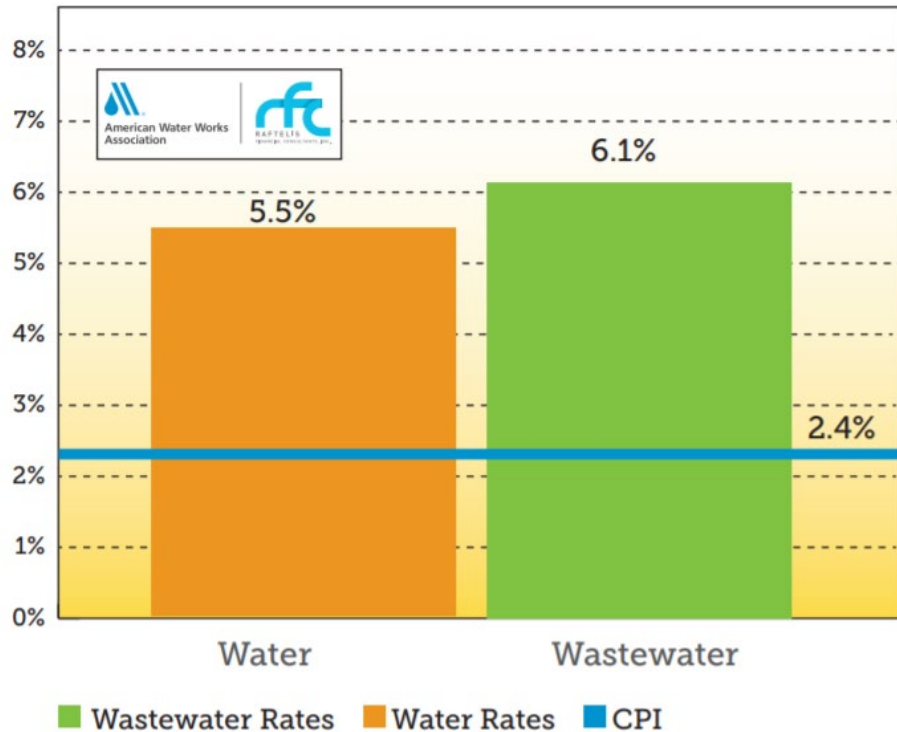
FY 20 Sewer Rate  
Average Residential Customer Bill  
Monthly Consumption in units  
(1 unit = 100 cf = 748 gallons)

	Rate	Billed Units	Monthly Charge
Capital Related Rate, per unit	\$6.61	5	\$33.05
1 <sup>st</sup> Tier water service rates	\$7.15	5	\$35.80
Minimum Charge (5/8" meter)	\$0.00	n/a	\$0.00
Total Monthly Charge			<b>\$68.85</b>
Total Annual Charge			<b>\$826.20</b>

Average Daily Cost for Single Family Residential Sewer Customer = \$2.29

# National – Water and Sewer Rate Trends

**Annualized Rate Increases  
from 2004 to 2014**



For more information, see the Water and Wastewater Rates webpage at [awwa.org](http://awwa.org)

## National Water and Sewer Utility Funding Needs



Source: ASCE Infrastructure Report

# NH Seacoast Community Sewer Rate Trends

- Somersworth – 33% projected increase in rates by 2020
- Dover – 57% increase (2011 to 2018)
- Durham – 56% increase (2013 to 2018)
- Newmarket – 7% to 10%/year increase for the next four years
- Exeter – 25%/year increase for the next four years

# Discussion