

# Water and Sewer FY 2016 Budget Work-Session

May 6, 2015



# Overview of Tonight's Meeting

## ➤ Introduction

Brian Goetz – Deputy Public Works Director

Judie Belanger – Finance Director

David Hyder – Municipal & Financial Services Group

## ➤ Highlights of FY 15

## ➤ Proposed FY 16 Water Budget

## ➤ Proposed FY 16 Sewer Budget

## ➤ Proposed FY16 Water and Sewer Rates

## ➤ Questions

# Enterprise Funds - Water

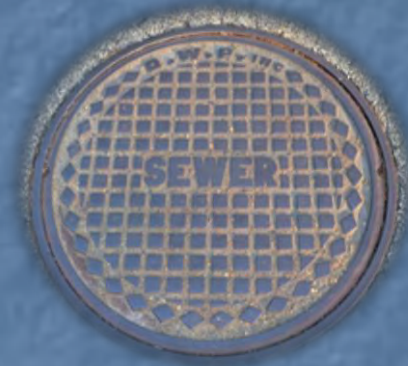


- Bellamy Reservoir
- Madbury Water Treatment Facility
- 8 Wells
- 5 Storage Tanks
- Two Pressure Zones
- 3.5 to 6.5 Million Gallons a Day
- 189 miles of pipe
- 972 Public Fire Hydrants
- 2,840 Valves
- 8,203 Meters/Customers
- Serve 5 Communities and portions of 3 others



# Enterprise Funds - Sewer

- 115 Miles of piping
- 20 pumping Stations
- 1,650 Manholes
- Two Wastewater Treatment Facilities
- 6,342 Customers



# REVIEW OF FY15

- **Shutdown of Haven Well Due to PFCs**
- **Madbury Well Upgrades**
- **Greenland Well Upgrade**
- **Hobbs Hill Storage Tank Replacement**
- **Bellamy Reservoir Source Water Protection Outreach**
- **Water Efficiency Rebate Program**
- **Water/Sewer Bill Assistance Program**
- **Continued Study and Design to Address Regulatory Requirements for Wastewater**
- **Sewer Separation Projects**
- **Lafayette Road Sewer Pump Station Upgrade Design**

# Water Projects



**Madbury Well #4  
Replacement**



**Hobbs Hill Tank  
Replacement**

# Water Projects



**Greenland Well Replacement**

# Water Main Replacements



Lincoln Area Sewer Separation Project



# Source Water Projection Outreach

The City of Portsmouth's Water Division either owns or has easements around the entire Bellamy Reservoir. This provides a protective water quality buffer for the surface water that is piped to and treated at the Madbury Water Treatment Facility. The map on the opposite page of this flyer shows the approximate boundaries of both the land ownership and easements. These protective buffers have been in place since October 11, 1962 when the United States Air Force deeded the reservoir and facilities to the City of Portsmouth.

In addition to these buffers, the Portsmouth Water Division, in cooperation with the Town of Madbury and the New Hampshire Department of Environmental Services, has historically restricted activities on the reservoir and in these buffers. The following activities are not permitted:



No Swimming



NO  
MOTOR  
BOATS



NO  
CAMPFIRES

Portsmouth Water Division staff performed a shoreline survey this summer and observed some of these activities taking place.

Kayaks, canoes and other non-motorized boats are permitted on the reservoir. Access to the water is limited to the boat launch on Route 9. No boats are allowed inside the drinking water intake area (shown on map). Fishing is permitted with a valid State of New Hampshire fishing license. Snowmobiling is allowed in designated areas.

The Portsmouth Water Division is the Regional provider of public drinking water to the communities of Portsmouth, Newington, New Castle, Greenland, and portions of Madbury, Durham, Dover and Rye. Our sources of supply are derived from the Bellamy Reservoir and eight wells. The Reservoir's surface water is piped to the Madbury Water Treatment Facility. This LEED certified facility was built in 2011 to replace the original treatment facility constructed in 1957. It treats the surface water utilizing high-rate dissolved air floatation and filtration. This facility is state-of-the-art, however, it is still very dependent on the source water quality derived from the reservoir. Therefore, our water system operators are diligent in identifying potential sources of contamination that might impact water quality.

This flyer is being sent to residents in Madbury as an outreach effort to clarify the water system's protection requirements and jurisdiction for enforcement. Targeted information will be provided to areas of concern in the near future. Those with questions can direct them to our source of supply department in Madbury at: 516-8360

The Portsmouth Water Division would like to thank the Madbury Board of Selectmen for their assistance with this mailer.

Portsmouth Water Division  
City of Portsmouth Department of Public Works



Bellamy Reservoir Dam  
on Mill Hill Road

## Bellamy Reservoir Drinking Water Source Protection

Portsmouth Water Division  
City of Portsmouth



Madbury Water Treatment Facility  
on Freshet Road

# Wastewater Treatment Upgrades

- Ongoing design of Peirce Island Wastewater Treatment Facility Upgrades
- Assessment of Pease Wastewater Treatment Facility Treatment option for all City Wastewater

**City of Portsmouth Wastewater**

preserve our community | protect our environment | manage our resources | explore innovative solutions

- Home
- Monthly Updates
- Sustainability
- Projects
- Regional
- Resources
- Contact
- WaterSense

Notice an odor? Tell us!  
**UDDR RESPONSE**

Sign up to receive email updates and notices.  
**SUBSCRIBE NOW**

## City Council Work Session 04/27/15 Presentation (Pease Wastewater Option Evaluation Results)

The DPW's wastewater system includes approximately 120 miles of sewers, 20 pump stations, 3 combined sewer overflows and the Peirce Island and Pease **wastewater treatment facilities (WWTFs)**. The WWTFs are designed to protect the environment by removing pollutants. Because they discharge treated wastewater from a pipe into a waterbody (the Piscataqua River), the plants are permitted by the EPA under its National Pollutant Discharge Elimination System (NPDES). Unlike most states in the country, New Hampshire is one of only four states where EPA issues the permits rather than the local regulatory agency, the New Hampshire Department of Environmental Services (NH DES). [Read more](#)

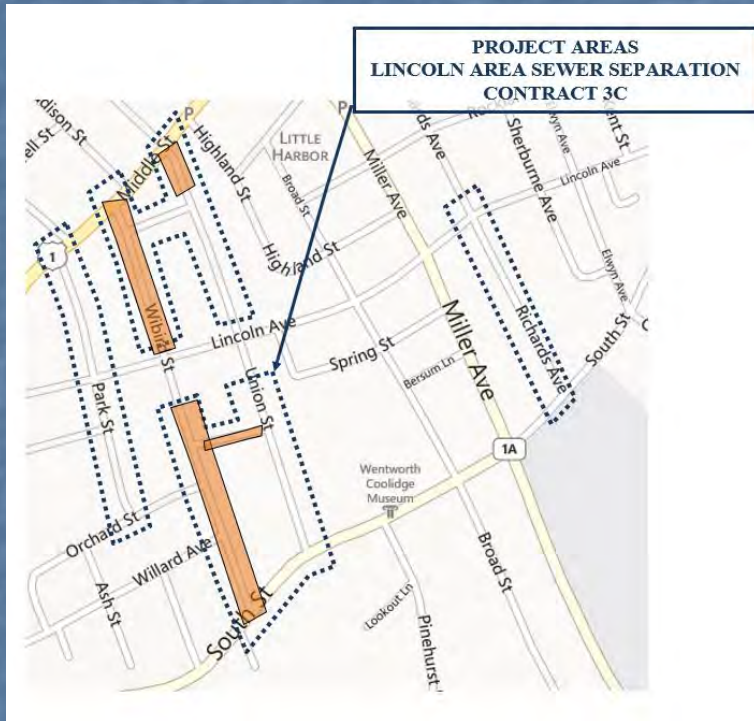
### Joint Report of Peer Review Panel

Feb. 21, 2014

Four leading experts have just completed an independent, scientific peer review of the document entitled "Numeric Nutrient Criteria of the Great Bay Estuary" dated June, 2009 prepared by the NH Department of Environmental Services. The "Joint Report of Peer Review Panel" can be found by [clicking here](#). For more information on the origins of this report see Recent Collaborative Efforts under the [Regional page](#) of this website.

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# Sewer Separation Projects



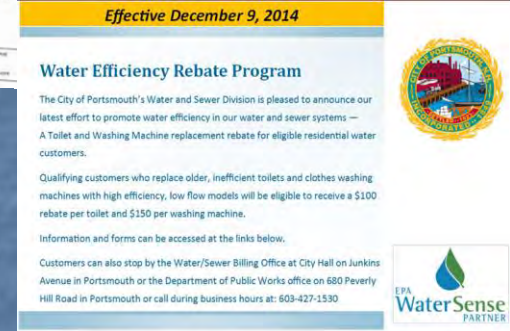
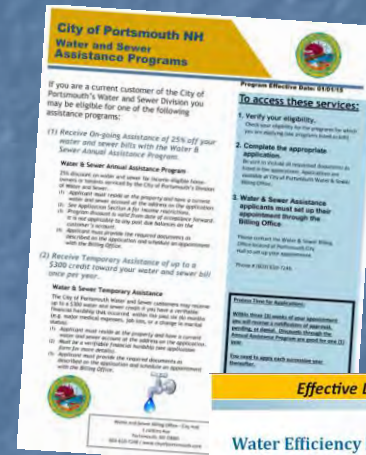
# Programs Designed for Residential Customers

## ■ Assistance Program

- Ongoing Assistance
- Temporary Assistance

## ■ Water Efficiency Program

- \$100 for qualifying low-flow toilet
- \$150 for qualifying high-efficiency washing machine



# Water and Sewer FY16 Proposed Budget

# Water/Sewer Fund Challenges

- **Aging Infrastructure**
- **Regulatory Compliance**
- **Evolving technologies and level of system complexities, especially with treatment facilities - both water and sewer**
- **Major Capital Projects**

# Water Capital Outlay

<u>Project Name</u>	<u>Amount</u>
Annual Water Line Replacement	\$500,000
Well Stations Improvements	\$150,000
Water Efficiency Measures	\$50,000
Rolling Stock Vehicle and Equipment	\$201,500
TOTAL	\$901,500

# FY 16 Water Bonded Projects

<u>Project Name</u>	<u>Amount</u>	<u>Funding Source</u>
Stage II Disinfection Byproduct Project (Newington Booster Station) *	\$2,400,000	Bond
New Castle Water Line Improvement	\$3,000,000	Bond
Water System Pressure & Storage Improvements	\$500,000	Bond
Total	\$5,900,000	

\* Project total estimate is \$3,600,000. Will be requesting Air Force to pay for Pease portion of Booster Upgrades: \$1,200,000



# Sewer Capital Outlay

<u>Project Name</u>	<u>Amount</u>
Long Term Control Plan Related Projects	\$400,000
Water Efficiency Measures	\$50,000
Annual Sewer line Replacement	\$500,000
Rolling Stock Vehicle and Equipment	\$502,000
TOTAL	\$1,452,000

# FY 16 Sewer Bonded Projects

<u>Project Name</u>	<u>Amount</u>	<u>Funding Source</u>
Wastewater Treatment Facility Upgrades	\$70,000,000	Bond
Lafayette Rd Pumping Station Upgrades	\$3,000,000	Bond
Total	\$73,000,000	

Note: The Peirce Island Wastewater Treatment Facility Upgrade is anticipated to be a three year project, therefore, bonding is anticipated to occur in phases.

# Water and Sewer Position Summary Schedule

WATER	SEWER
ENTERPRISE FUND REVENUES	ENTERPRISE FUND REVENUES
25.8 EMPLOYEES	28.8 EMPLOYEES

No new positions. The net increase of 4.3 FTE is the result of the reallocation of Equipment Maintenance staff and a Truck Driver from the General Fund

Many Shared Positions between Water, Sewer, Highway and Parking/Transportation

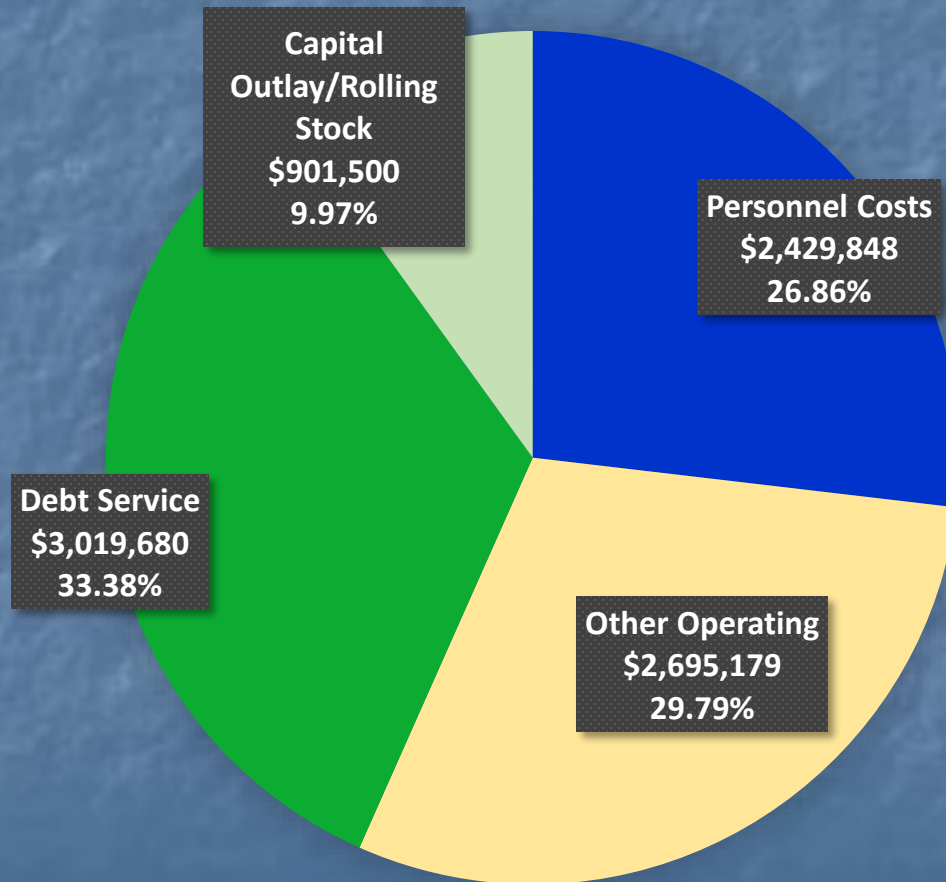
# System Funding: Enterprise Funds

- 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. Depreciation and Debt Service)
- Note: Property Taxes do not Subsidize the Water and Sewer Funds

Proposed FY 16  
Water  
Fund Budget

# Cash Requirements:

## FY 16 Water Fund \$9,046,207



# FY 16 Water Fund Budget

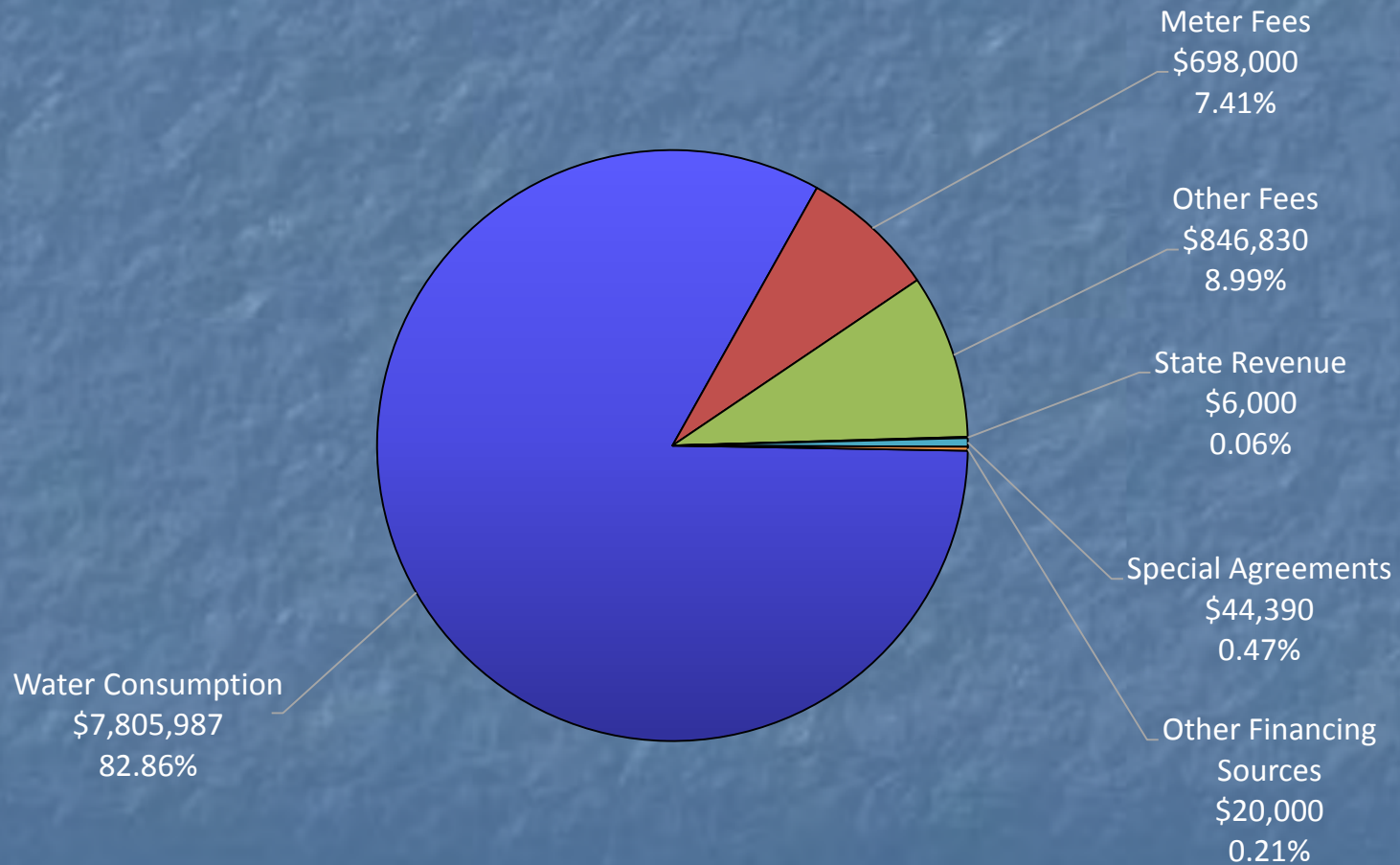
	Proposed Budget	% of Total Budget
Personnel Costs	\$2,429,848	26.9%
Chemicals	\$451,000	5.0%
Repairs	\$165,470	1.8%
Utilities	\$500,164	5.5%
Administrative Overhead	\$552,326	6.1%
Sludge/Grit Removal	\$200,000	2.2%
Prof Contracted Services	\$114,862	1.3%
Property Taxes	\$118,000	1.3%
Equipment	\$47,750	0.5%
Stock Materials	\$227,400	2.5%
Assistance Program	\$25,000	.30%
Other Operating	\$293,207	3.3%
Interest on Debt	\$1,082,152	12.0%
Principal on Debt	\$1,937,528	21.4%
Capital Projects	\$700,000	7.7%
Rolling Stock	\$201,500	2.2%
<b><i>Total Budget</i></b>	<b>\$9,046,207</b>	<b>100.0%</b>

# Key FY16 Water Budget Changes

Cash Requirements	FY15	FY16	\$ Change	% Change
Operations and Maintenance	4,700,091	4,992,597	292,506	6.2%
Equipment & Minor Capital needs	79,750	47,750	(32,000)	(40.1%)
Interest on Debt	953,193	1,082,152	128,959	13.5%
Principal Debt	1,731,049	1,937,528	206,479	11.9%
Capital Projects	1,459,000	901,500	(557,500)	(38.2%)



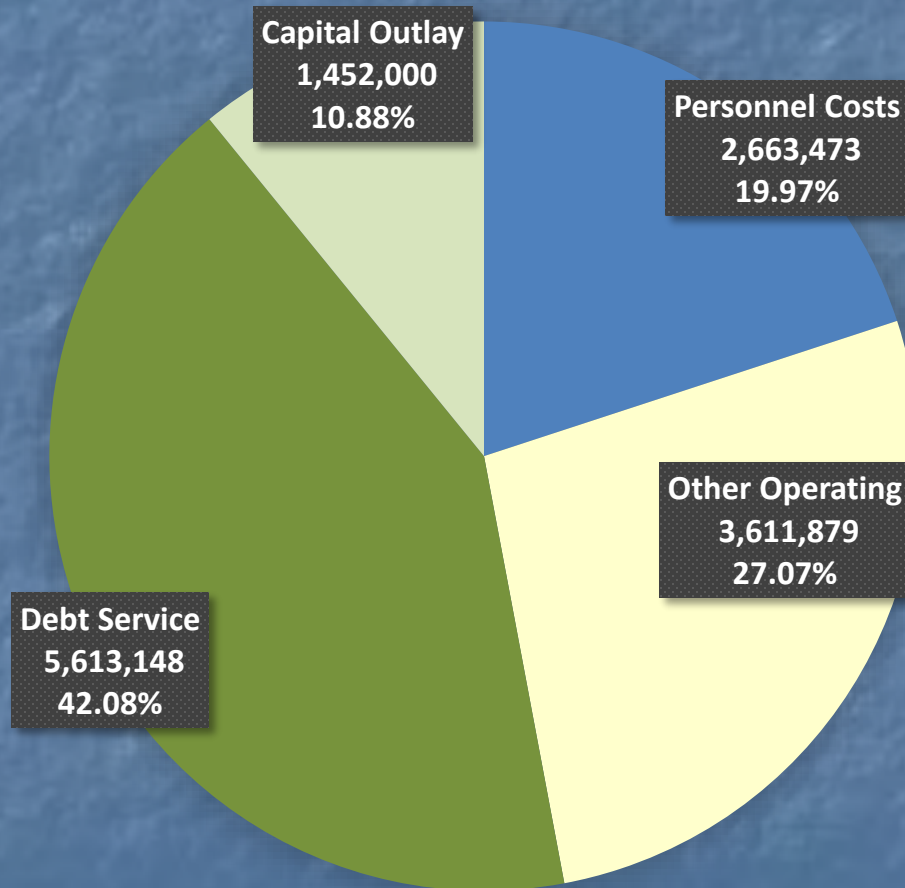
# Total FY 16 Water Revenues



Proposed FY 16  
Sewer  
Fund Budget

# Cash Requirements:

## FY 16 Sewer Fund - \$13,340,500



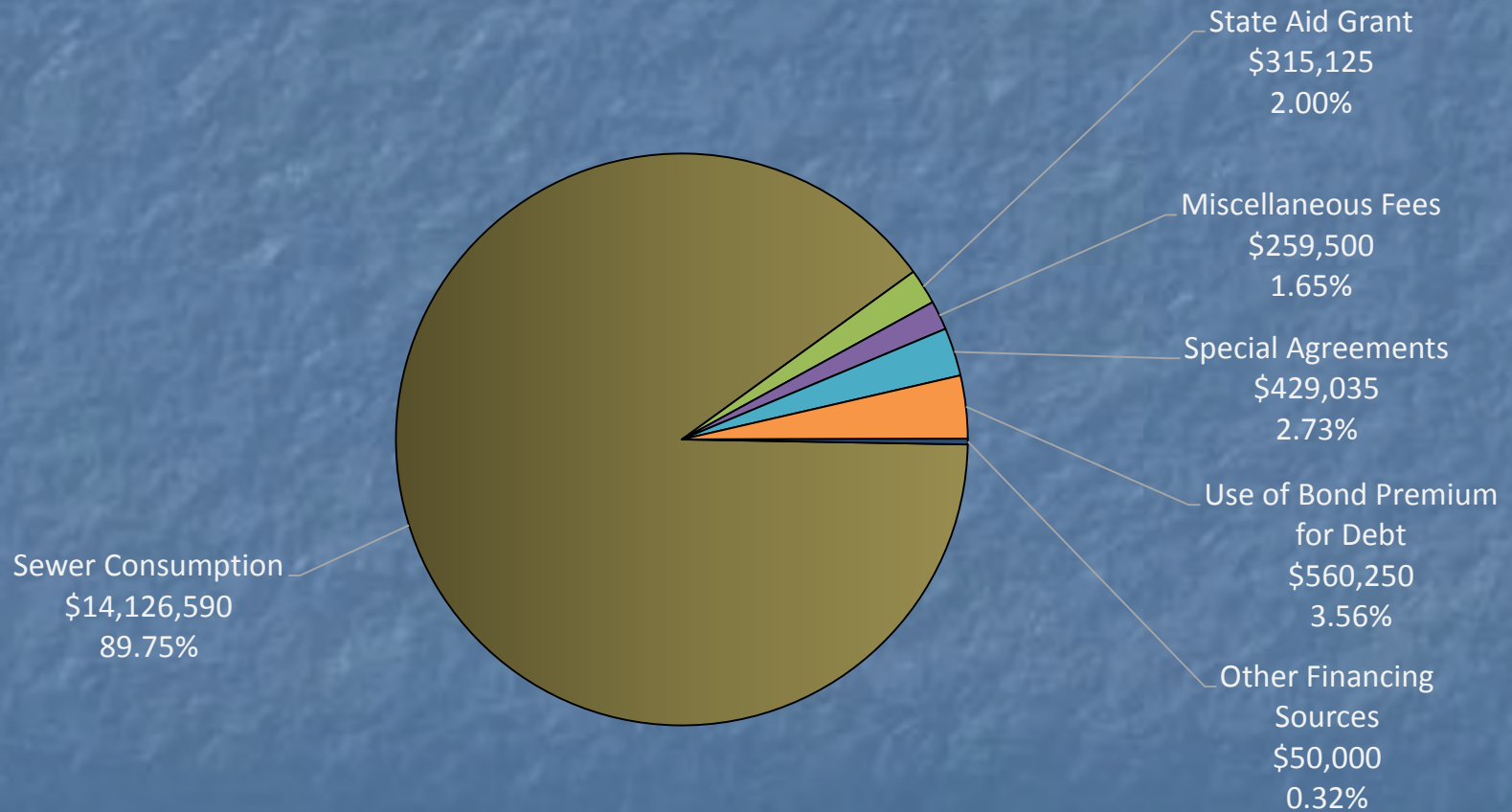
# FY 16 Sewer Fund Budget

	Proposed Budget	% of Total Budget
Personnel Costs	\$2,663,473	20%
Chemicals	\$970,028	7.3%
Repairs & Maintenance	\$282,075	2.1%
Utilities	\$718,753	5.4%
Administrative Overhead	\$552,326	4.2%
Sludge/Grit Removal	\$327,000	2.5%
Prof Contracted Services	\$145,759	1.1%
Permits Expenses/Legal Fees	\$205,000	1.5%
Equipment	\$174,500	1.3%
Stock Material	\$70,500	.5%
Assistance Program	\$50,000	.4%
Other Operating	\$565,308	4.2%
Interest on Debt	\$1,568,185	11.8%
Principal on Debt	\$3,595,593	27%
Capital Projects	\$950,000	7%
Rolling Stock	\$502,000	3.7%
<b><i>Total Budget</i></b>	<b>\$13,340,500</b>	<b>100.0%</b>

# Key FY16 Sewer Budget Changes

Cash Requirements	FY15	FY16	\$ Change	% Change
Operations and Maintenance	6,577,211	6,572,013	(5,198)	(0.1%)
Interest on Debt	1,670,997	1,568,185	(102,812)	(6.1%)
Principal Debt	3,565,799	3,595,593	29,794	.8%
Capital Projects	1,200,000	950,000	(250,000)	(20.8%)

# Total FY 16 Sewer Revenues



# Continued Use of Water and Sewer Rate Model



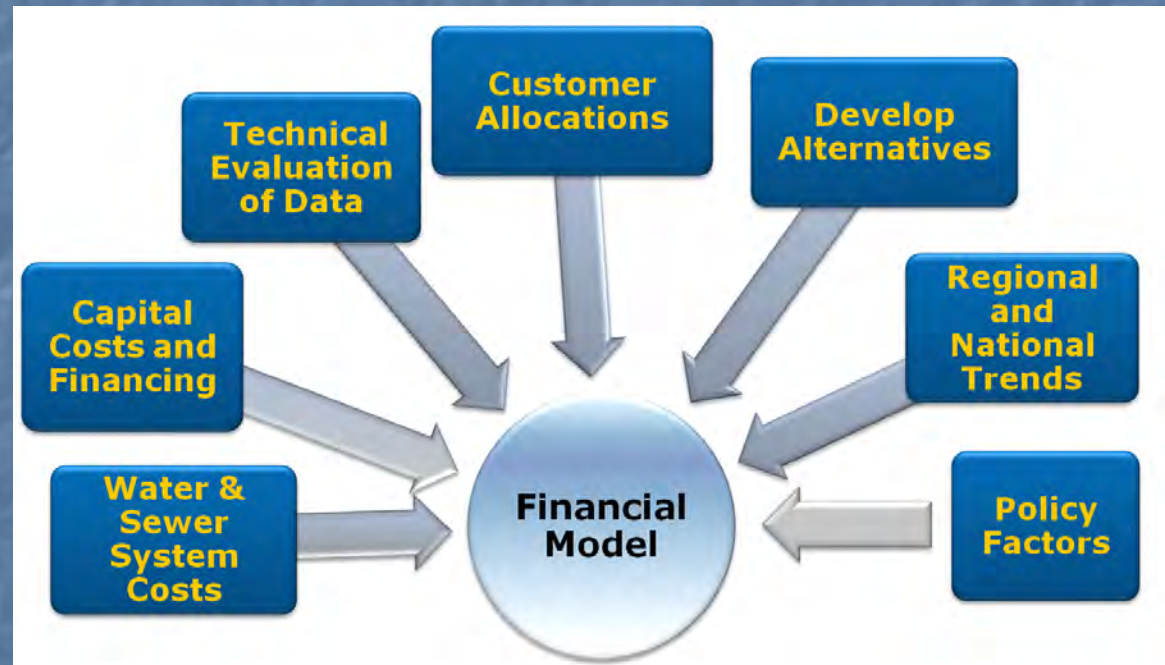
MUNICIPAL & FINANCIAL SERVICES GROUP

— 911-A Commerce Road, Annapolis, MD 21401 P: 410.266.9101 F: 410.266.5545 —

# Rate Model Components

The rate model serves as the key tool to assist in long-term planning, allowing:

- Prudent financial planning which results in predictable rate increases
- Funding of significant capital projects
- Proactive management of the systems which results in lowest rates over time

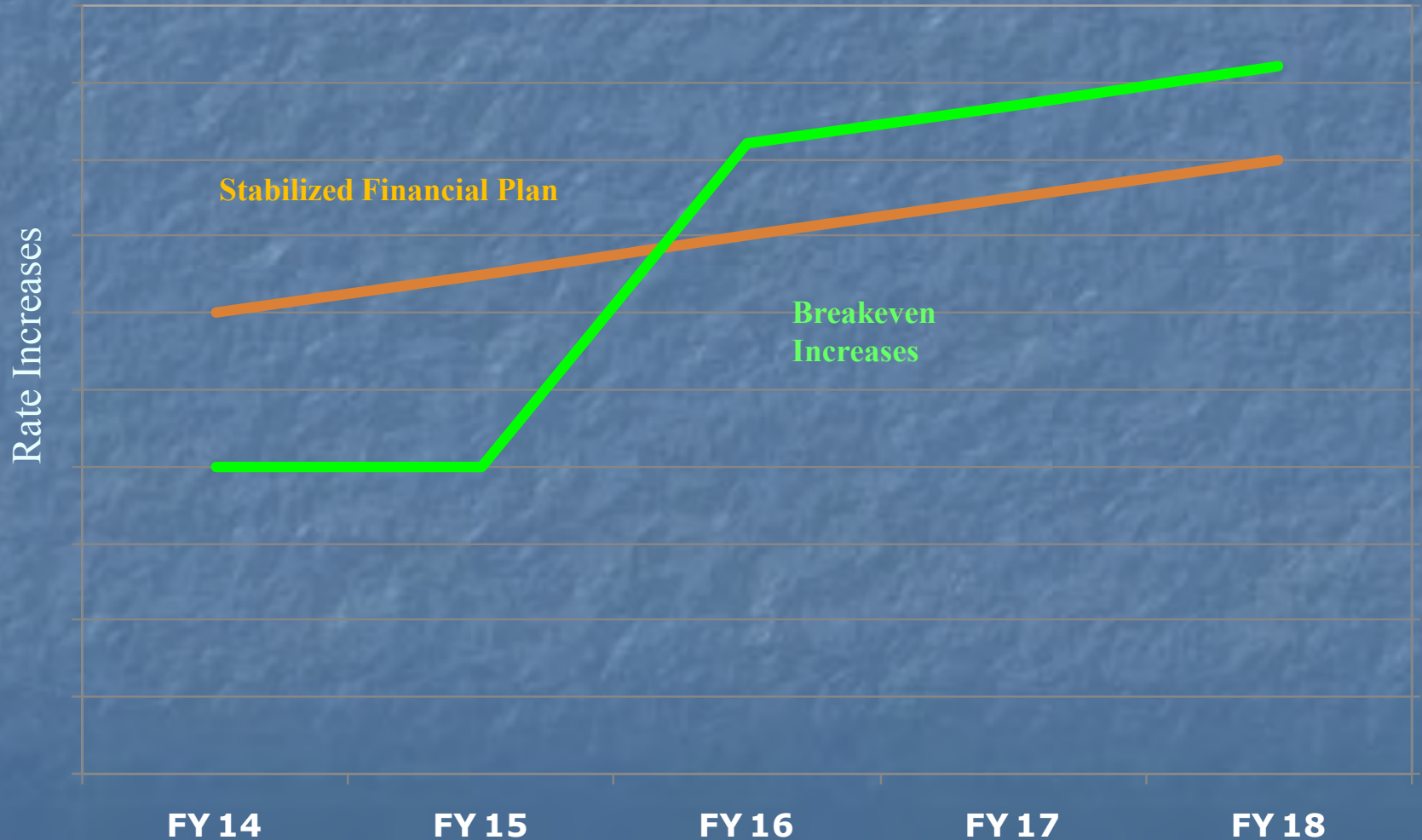




# Rate Study Highlights

- November 2012 - Rate Study Kickoff
- February 2013 - City Council Work Session
- March 2013 - Public Input Session Rate Study
- April 2013 - City Council Work Session Water and Sewer Budget
- March 2014 - Public Input Session Rate Study
- May 14, 2014 – City Council Work Session Water and Sewer Budget
- Implementation of Rate Study Recommendations

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



# FY16 Proposed Water Rate

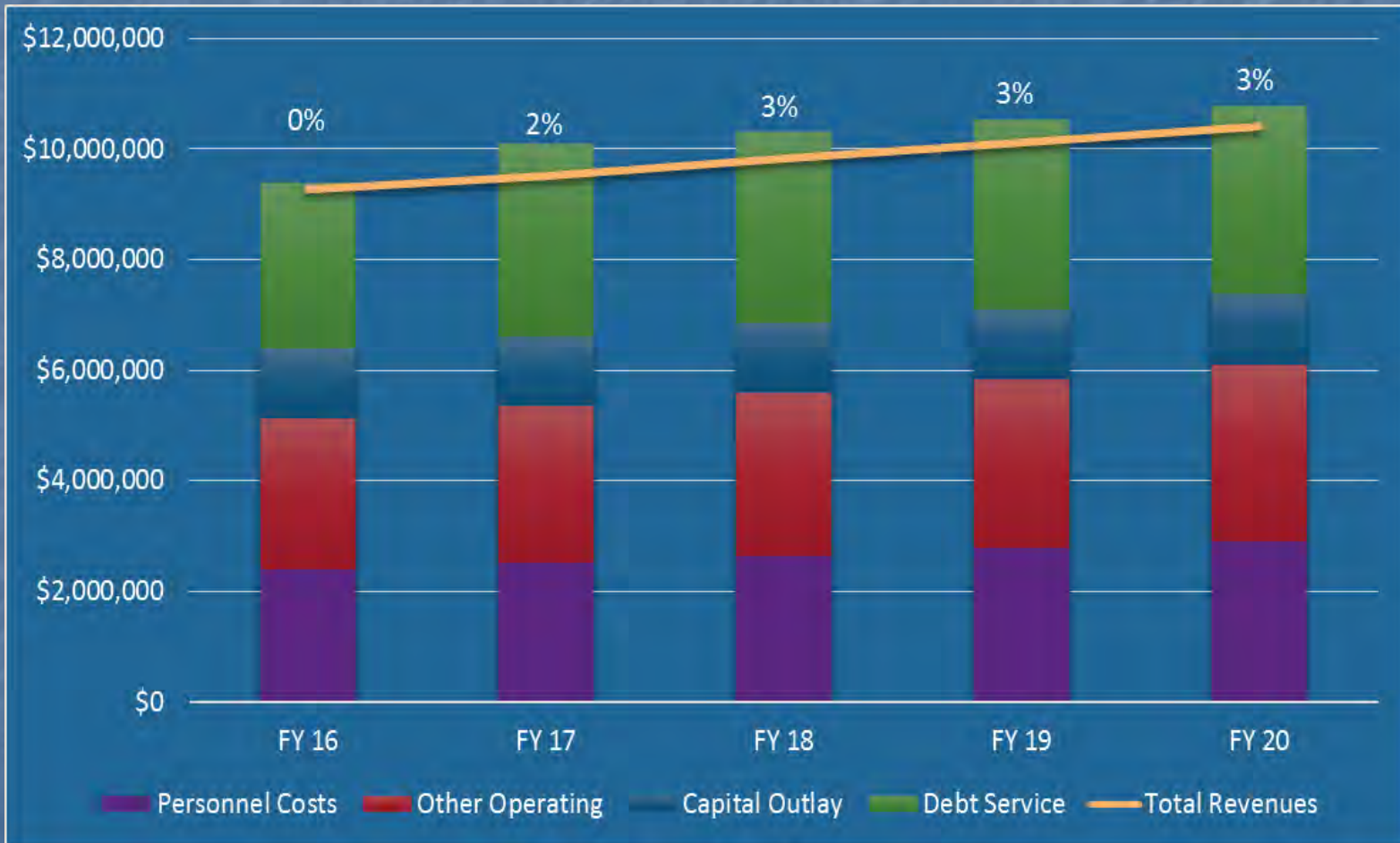
**0% Rate Change from FY 15 (no change since FY11)**

	FY 16 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$2.39
First 10 units billed per month	\$1.76
<b>Total First Tier Rate</b>	<b>\$4.15</b>
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$2.39
Over 10 units billed per month	\$2.61
<b>Total Second Tier Rate</b>	<b>\$5.00</b>
Irrigation Meter Rate (all units billed)	
Capital Related rate, per unit billed	\$2.39
All units billed per month	\$2.61
<b>Total Irrigation Meter Rate</b>	<b>\$5.00</b>

*1 unit = 748 gallons of water*

# Water Rate Projections

## Model for Rate Stabilization Approach



# FY16 Proposed Water Rate

## Average Residential Customer Bill

### **FY16 Water Rate**

Average Residential Customer Bill

Monthly Consumption in units

(1unit = 100 cf = 748 gallons)

	Rate	Billed Units	Month Charge
Capital Related Rate, per unit	\$2.39	5	\$11.95
1st Tier water service rates	\$1.76	5	\$8.80
Minimum Charge (5/8" meter)	\$4.95	n/a	\$4.95
<b>Total Monthly Charge</b>			<b>\$25.70</b>
<b>Total Annual Charge</b>			<b>\$308.40</b>

# FY16 Proposed Sewer Rate

**5% Rate Change from FY 15**

	FY 16 Proposed (per unit)
First Tier Rate (10 units or less per month)	
Capital Related rate, per unit billed	\$5.89
First 10 units billed per month	\$5.88
<b>Total First Tier Rate</b>	<b>\$11.77</b>
Second Tier Rate (over 10 units per month)	
Capital Related rate, per unit billed	\$5.89
Over 10 units billed per month	\$7.06
<b>Total Second Tier Rate</b>	<b>\$12.95</b>

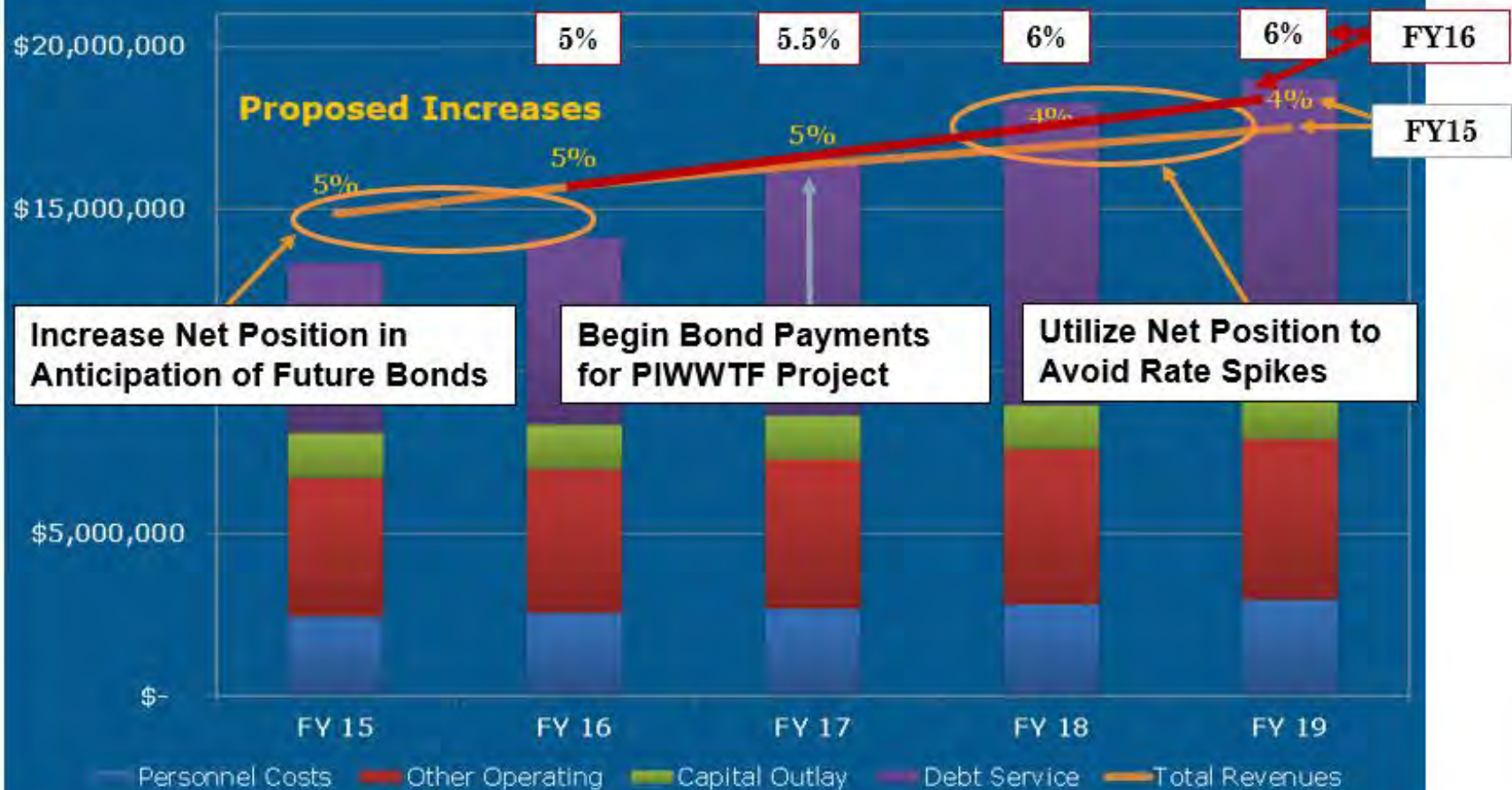
*1 unit = 748 gallons of water*

# FY16 Sewer Rate Projections

<b>Peirce Island WWTF Anticipated Bond</b>	<b>FY15 Rate Increase</b>	<b>FY16 Rate Increase</b>	<b>FY17 Rate Increase</b>	<b>FY18 Rate Increase</b>	<b>FY19 Rate Increase</b>
<b>\$52.5M (FY15)</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>
<b>\$70.0M (FY16)</b>	<b>N/A</b>	<b>5%</b>	<b>5.5%</b>	<b>6%</b>	<b>6%</b>

# Sewer Rate Projections – FY15 vs. FY16

## Sewer Fund Revenues vs. Expenses





# FY16 Proposed Sewer Rate

## Average Residential Customer Bill

### FY16 Sewer Rate

Average Residential Customer Bill

Monthly Consumption in units

(1unit = 100 cf = 748 gallons)

	Rate	Billed Units	Month Charge
Capital Related Rate, per unit	\$5.89	5	\$29.45
1st Tier sewer service rates	\$5.88	5	\$29.40
Minimum Charge (5/8" meter)	\$0.00	n/a	\$0.00
Total Monthly Charge			<b>\$58.85</b>
Total Annual Charge			<b>\$706.20</b>

This increase results in a monthly increase of \$2.80 per month or \$33.60 per year for the average residential customer.

# Assistance Program

**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 Jurkins Ave  
Portsmouth, NH 03801  
603-610-7248 / www.cityofportsmouth.com

- Began January 1, 2015
- 24 are receiving ongoing assistance (25% reduction off water/sewer consumption charges)
- Seven have received Temporary Assistance to date

# Water Efficiency Rebate Program

*Effective December 9, 2014*

## Water Efficiency Rebate Program

The City of Portsmouth's Water and Sewer Division is pleased to announce our latest effort to promote water efficiency in our water and sewer systems — A Toilet and Washing Machine replacement rebate for eligible residential water customers.

Qualifying customers who replace older, inefficient toilets and clothes washing machines with high efficiency, low flow models will be eligible to receive a \$100 rebate per toilet and \$150 per washing machine.

Information and forms can be accessed at the links below.

Customers can also stop by the Water/Sewer Billing Office at City Hall on Junkins Avenue in Portsmouth or the Department of Public Works office on 680 Peverly Hill Road in Portsmouth or call during business hours at: 603-427-1530



- \$100 for qualifying low-flow toilet
  - 57 rebates issued to date
- \$150 for qualifying high-efficiency washing machine
  - 31 rebates issued to date

# Discussion