



City Council Public Input Session

Water / Sewer Rate Study

March 19, 2014

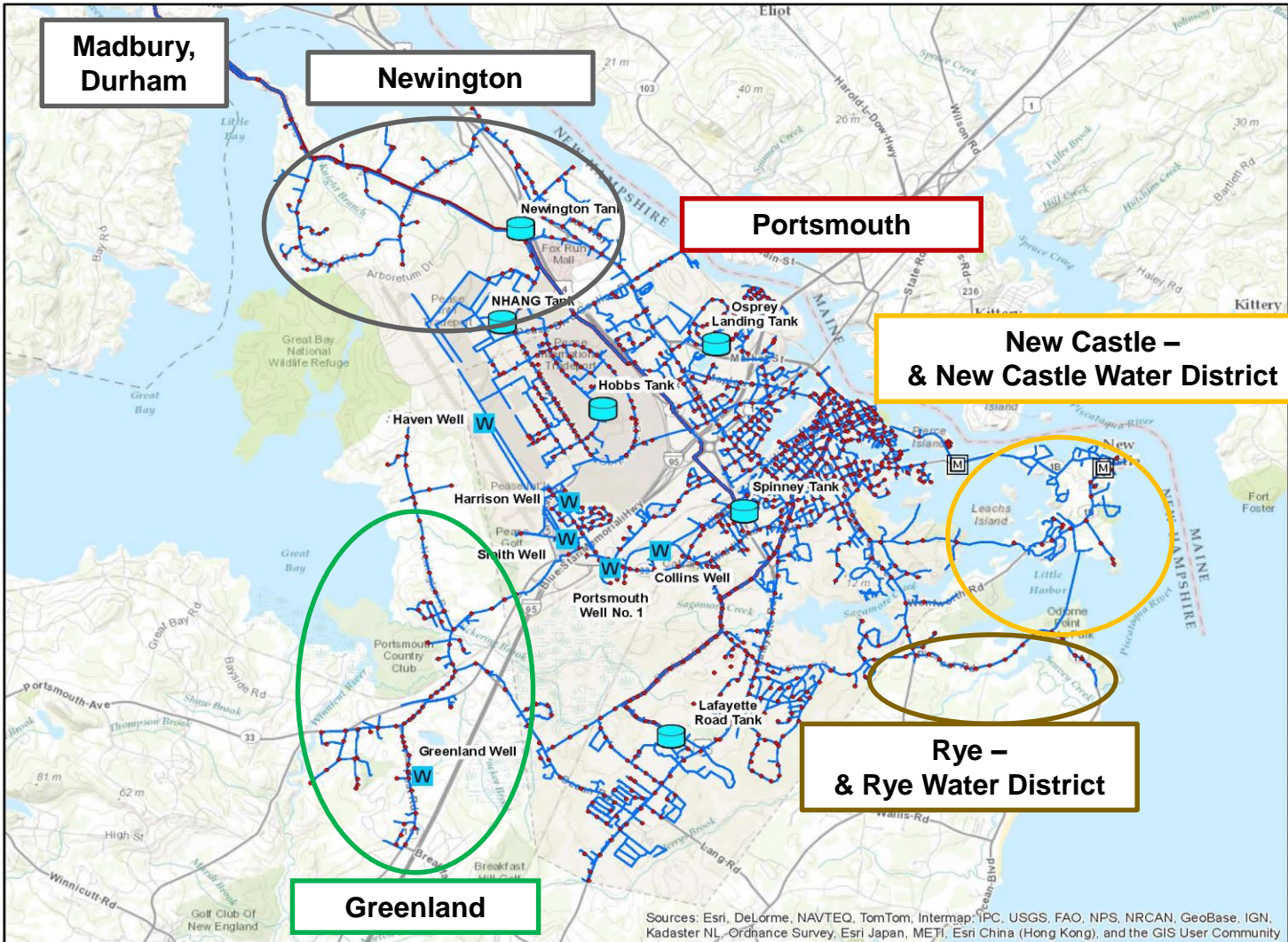


Overview of Meeting



- **Introduction of the Study**
- **Overview of Water and Sewer Systems**
- **FY14 Rate Study Work Accomplished and Presentations**
- **Water Use Demographics**
- **Enterprise Fund Accounting**
- **Rate and Fee Policy Factors**
- **Next Steps**

Portsmouth Regional Water System

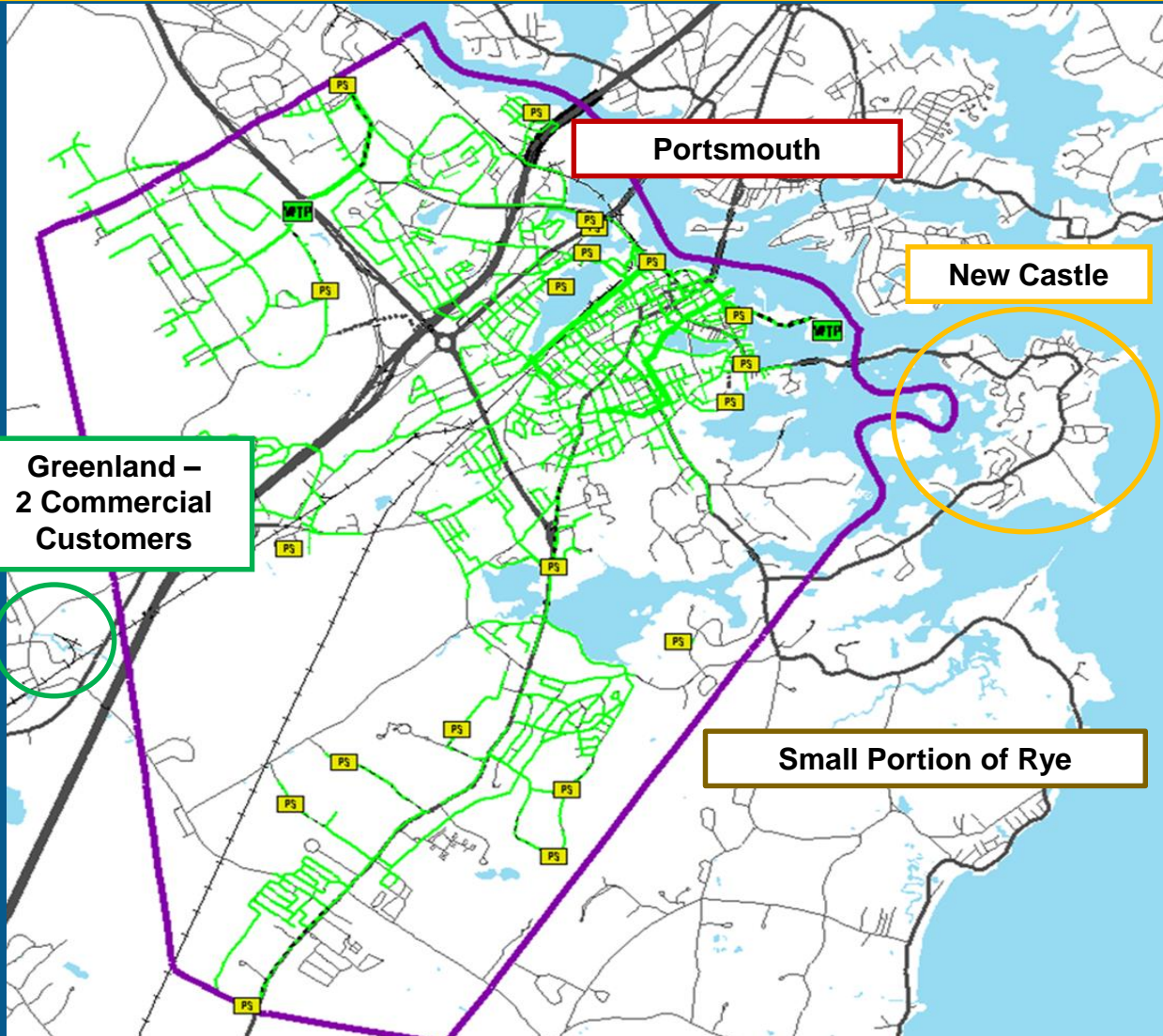


Water System

- Bellamy Reservoir
- Madbury Water Treatment Facility
- 9 Wells
- 5 Storage Tanks
- 189 miles of pipe
- 972 Fire Hydrants
- 2,840 Valves
- 7,940 Customers



Portsmouth Wastewater System



Sewer System

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



Reasons for Rate Study

- **Comprehensive study performed in 2006**
- **Since 2006:**
 - **Reduction in water consumption**
 - **Changing customer base**
 - **Policy questions:**
 - **Additional tiers, Irrigation meters, multi-family customers**

Reasons for Rate Study

- **Significant capital expenses incurred or anticipated to rehabilitate aging infrastructure and address regulatory compliance requirements:**
 - **Madbury Water Treatment Facility - \$23M bonds**
 - **Lincoln area sewer separation projects - \$27.4M bonds**
 - **Wastewater Facility upgrades – Pease and Peirce Island**
- **Good financial practice to update Rate model to assure predictable and stable rates**

City of Portsmouth Water and Sewer Rate Study



- **November 2012 – Rate Study kickoff**
- **November 2012 through January 2013**
 - Develop Rate Model
- **City Council Work Session - February 11, 2013**
 - Present Rate Model and Discuss Policy Alternatives
- **City Council Public Input Session Regarding Water/Sewer Budget and Rate Study - March 13, 2013**
 - Present Recommendations for FY14 Budget
- **City Council Work Session - April 16, 2013**
 - Rate Model Overview and Policy Discussion
- **April 2013 to Present**
 - Continued updates to Rate Model

Rate Design: Current Rates – Water

Meter Size	Monthly Meter Charge
5/8" and 3/4"	\$4.95
1"	\$8.27
1 1/2"	\$14.25
2"	\$22.91
3"	\$36.26
4"	\$68.74
6"	\$120.27
8"	\$168.01
10"	\$252.02

Monthly Usage Rates – Variable Portion	
All User Classes	
Tier 1: 0 – 10 Units	\$4.15 per Unit
Tier 2: Over 10 Units	\$5.00 per Unit
Irrigation	
All Usage	\$5.00 per Unit

*CF = cubic feet,
 1 CF = 7.48 gallons
 CCF = 100 cubic feet
 1 Unit = 100 cubic feet
 100 cubic feet = 748 gallons*

Rate Design: Current Rates – Sewer

Meter Size	Monthly Meter Charge
5/8" and 3/4"	\$ -
1"	\$ -
1 1/2"	\$ -
2"	\$ -
3"	\$ -
4"	\$ -
6"	\$ -
8"	\$ -
10"	\$ -

Monthly Usage Rates – Variable Portion	
All User Classes	
Tier 1: 0 – 10 Units	\$10.68 per Unit
Tier 2: Over 10 Units	\$11.75 per Unit

Sewer is billed based on metered water usage

Water System Customer Demographics

Adapted from Water and Sewer Rate Study Update, Municipal & Financial Services Group/Tighe & Bond, 2012/2013

User Categories	Accounts	Average Units per Month
Residential – Single Family	5,932	5
Residential – Multi Family	738	22
Irrigation	231	12*
Commercial	879	53
Industrial	80	387
Municipal	78	22
New Castle Water District	1	2,068
Rye Water District	1	3,105
Total	7,940	

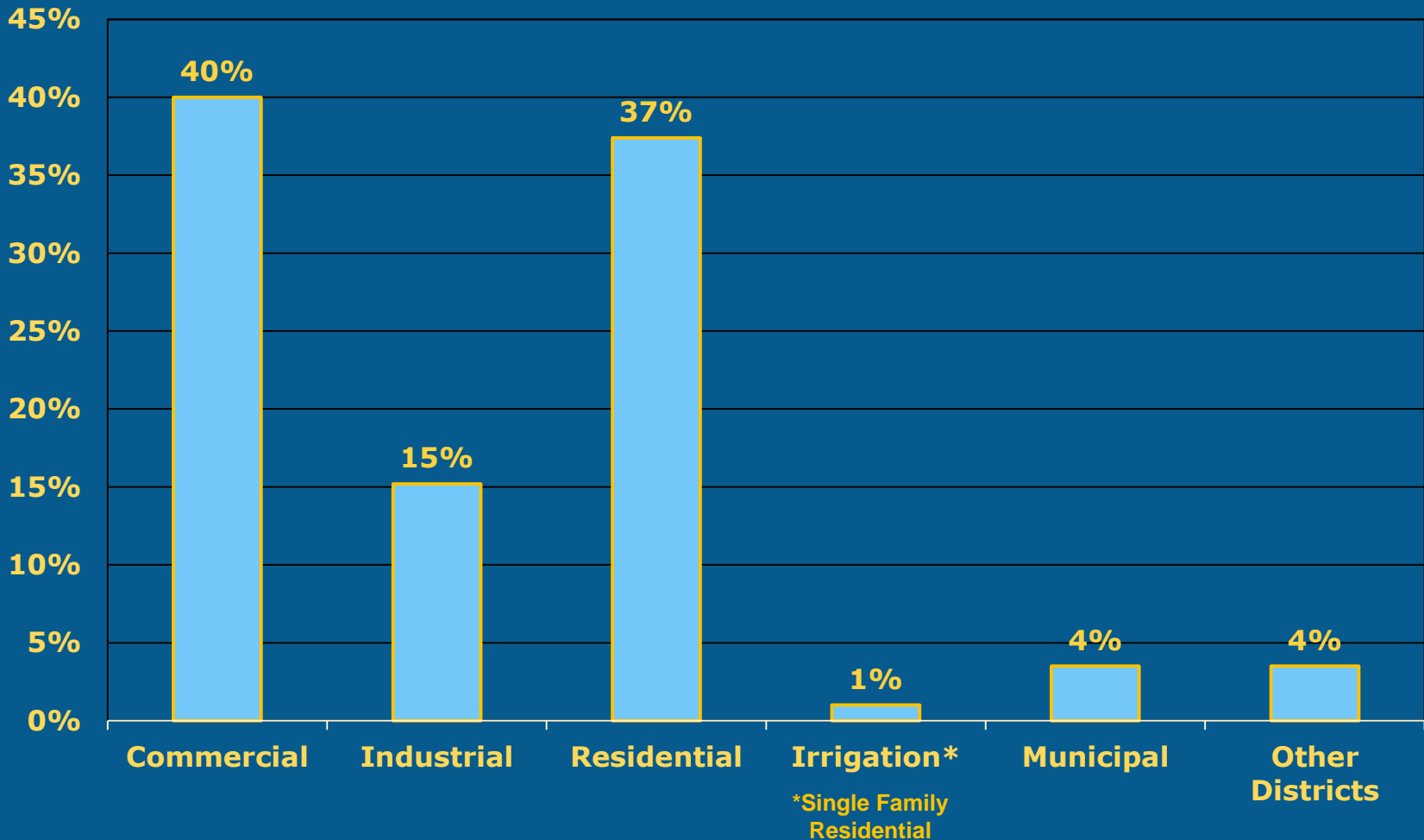
1 Unit = 748 Gallons

* Irrigation average using 6 months of consumption

Water Usage Demographics

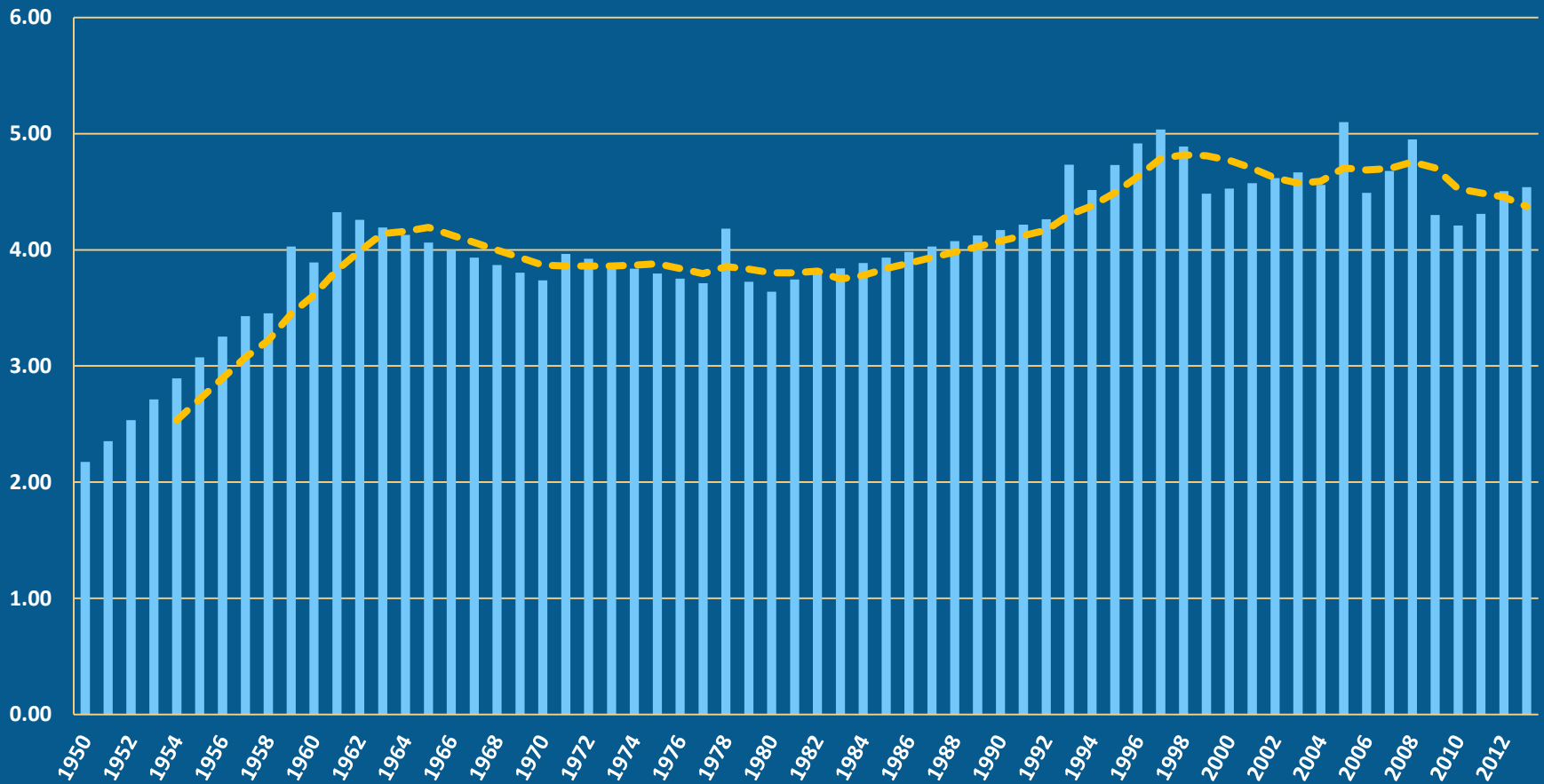
Adapted from Table 1-12, Portsmouth Water System Master Plan Report, May 2013

Percentage of Annual Water Use

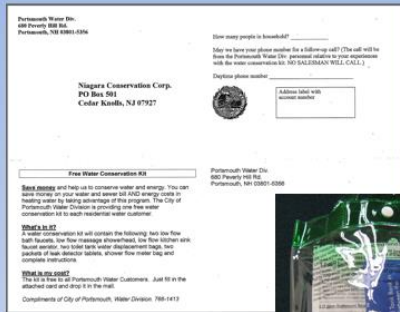


Portsmouth Water Demand Trends

Portsmouth Average Daily Water Pumpage - Million Gallons per Day
with Five Year Rolling Average Trend



Water Efficiency Efforts



1,775
Water Conservation
Kits Distributed
Free to Portsmouth
Customers



Water Conservation Kits



Rain Barrel Program



The City of Portsmouth's staff will be presenting more information about our WaterSense Program at the Portsmouth Farmers' Market on Saturday, July 27, 2013. For more info, please visit our wastewater website: <http://www.portsmouthwastewater.com>



EPA WaterSense Partnership

How Regulatory Agencies Measure “Average Use” has Evolved for Single-Family Residential Customers:

- **New Hampshire Department of Environmental Services (NHDES) Drinking Water Bureau:**
 - **Pre 2012 – Average = 275 gallons/day**
 - **2012 – Average = 185 gallons/day**
- **NHDES Wastewater Bureau:**
 - **Current uses 240 gallons/day**
- **Portsmouth Single-Family Residential Customer:**
 - **123 gallons/day** per detailed analysis performed as part of the 2012 Water Supply Master Plan Update and Ongoing Water/Sewer Rate Study

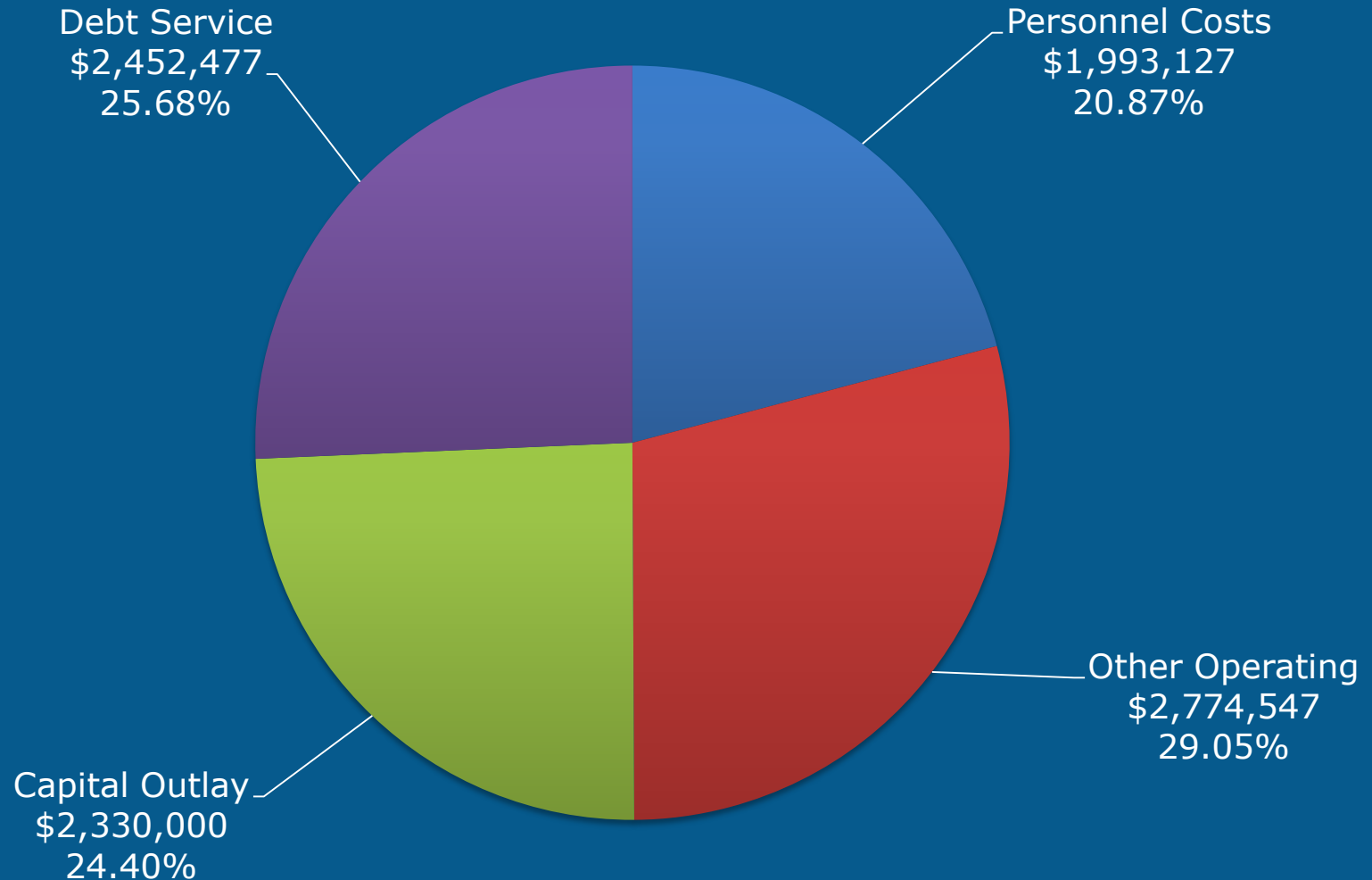


Enterprise Fund Accounting

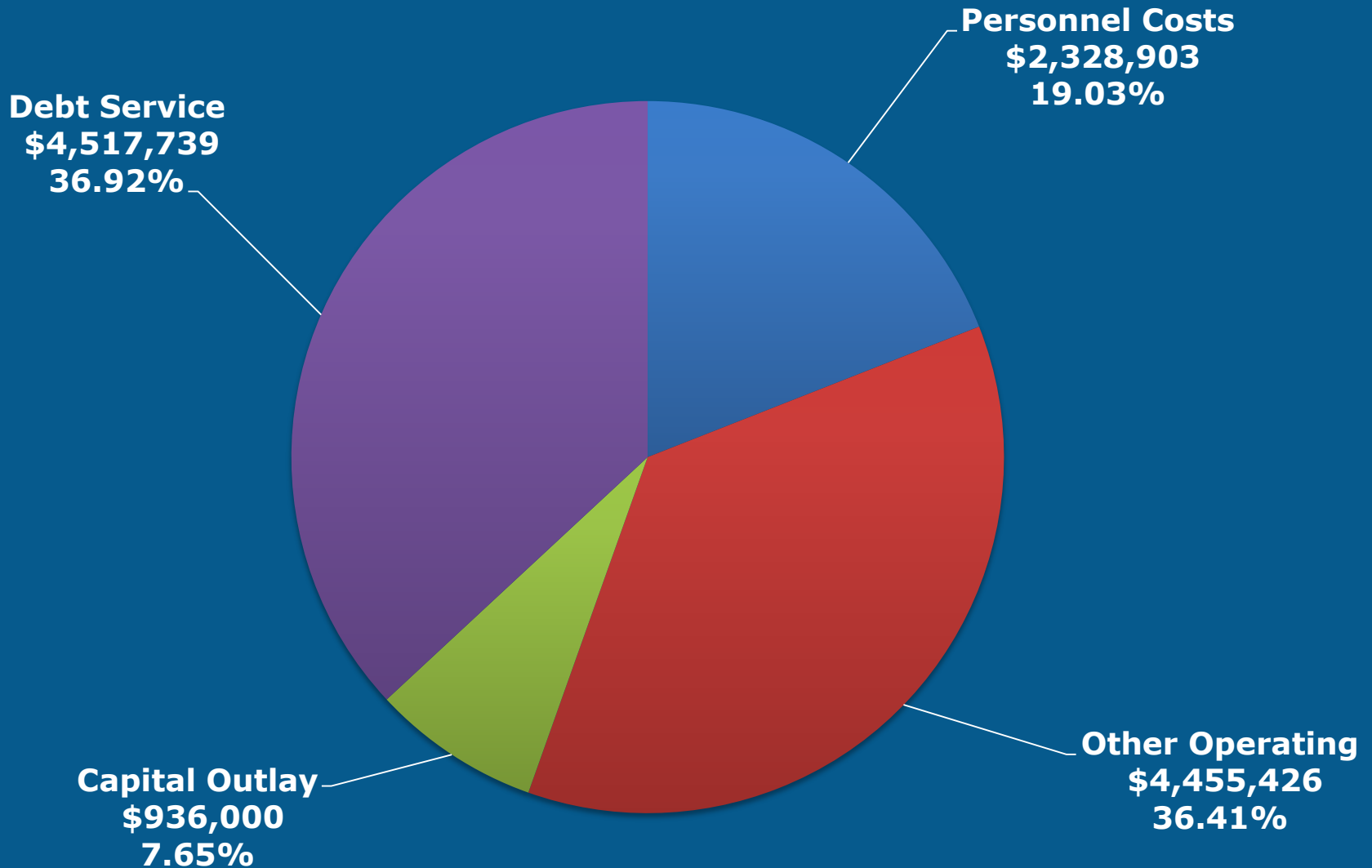
System Funding: Enterprise Funds

- ▶ 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

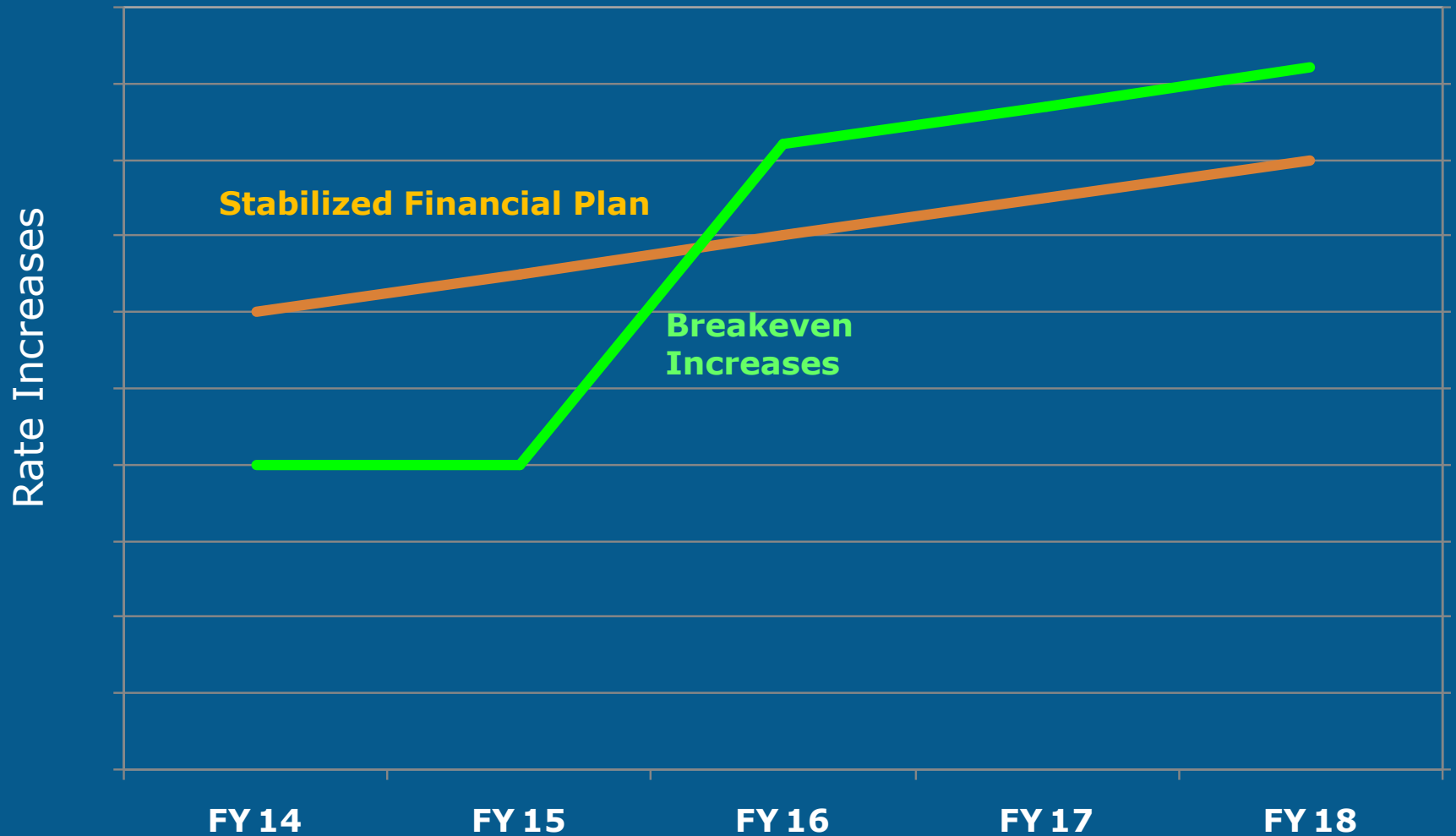
Cash Basis Revenue Requirements: FY 14 Water Fund - \$9,550,151



Cash Basis Revenue Requirements: FY 14 Sewer Fund - \$12,238,068



Approaches to Adjusting Rates



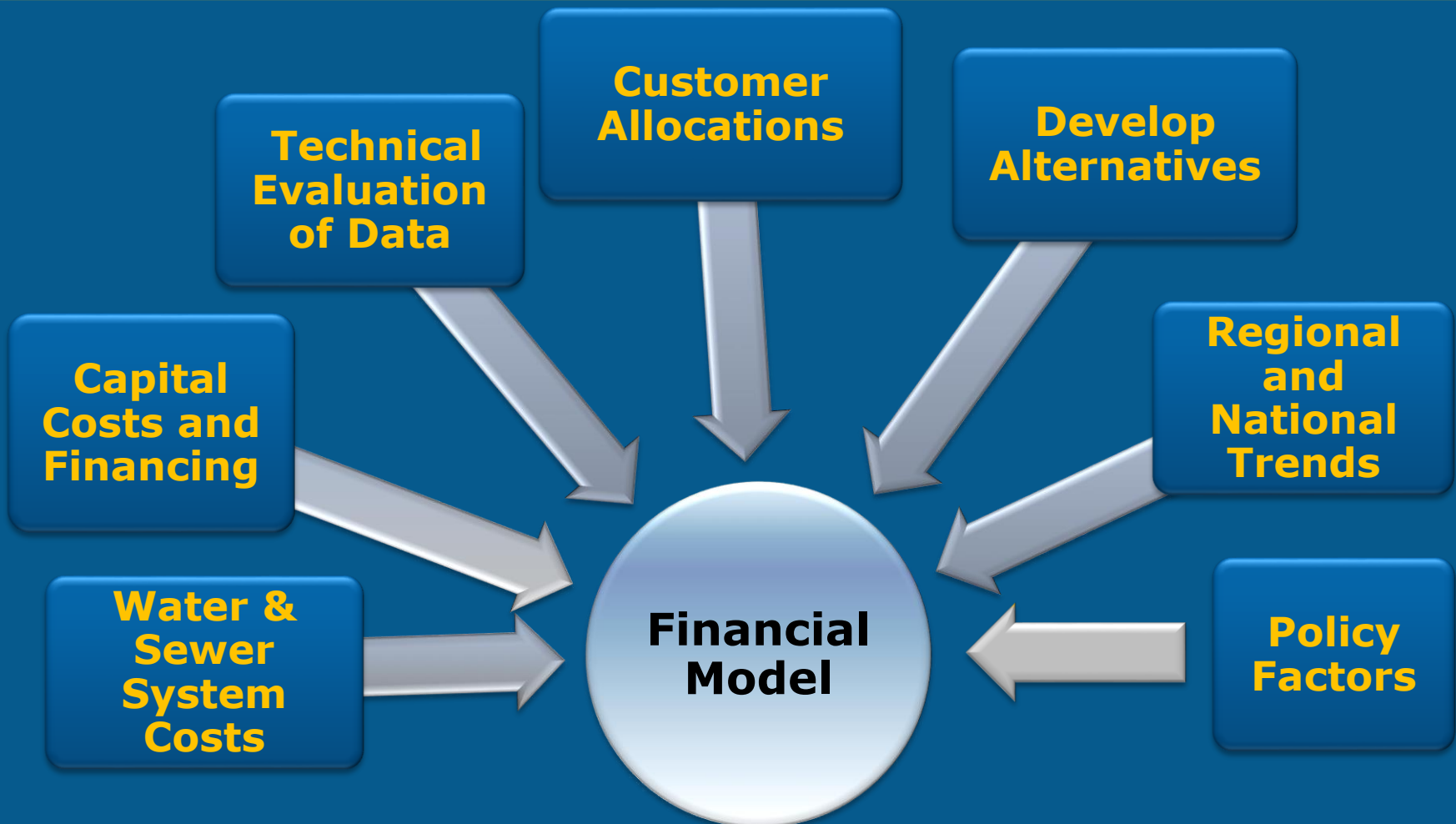
Stabilization Approach

- **As part of the rate study the Council endorsed the use of a rate stabilization approach which:**
 - **Takes a longer term view of water and sewer system expenses to allow for predictable and stable rate adjustments.**
 - **Provides adequate rate stability throughout the planning period of the rate model.**



Rate and Fee Policy Factors

Rate Study Components



New Rate Model Developed in 2013 – A tool to use annually to project and recommend rates during budget process

2013 Work Session Question:

- **What is the actual breakdown of usage per tier?**

Monthly Units* Consumed	Number Of Customers	% of Customers
1	567	7.4%
2	864	11.4%
3	1,043	13.7%
4	1,028	13.5%
5	867	11.4%
6	645	8.5%
7	477	6.3%
8	350	4.6%
9	246	3.2%
10	197	2.6%
11	137	1.8%
12	108	1.4%
13	85	1.1%
14	69	0.9%
15	59	0.8%
Over 15	867	11.4%

1 *Unit = 100 cubic feet = 748 gallons

2013 Work Session Question:

- **Past Examples of Water User Rate Projections have used 10 units/month** (per NHDES Wastewater Engineering Bureau State Revolving Loan Fund guideline of 240 gallons per day of usage):
 - **Residential using 10 units/month**
 - **\$41.50 – Water (\$498/year)**
 - **\$106.80 – Sewer (\$1,282/year)**

2013 Work Session Question:

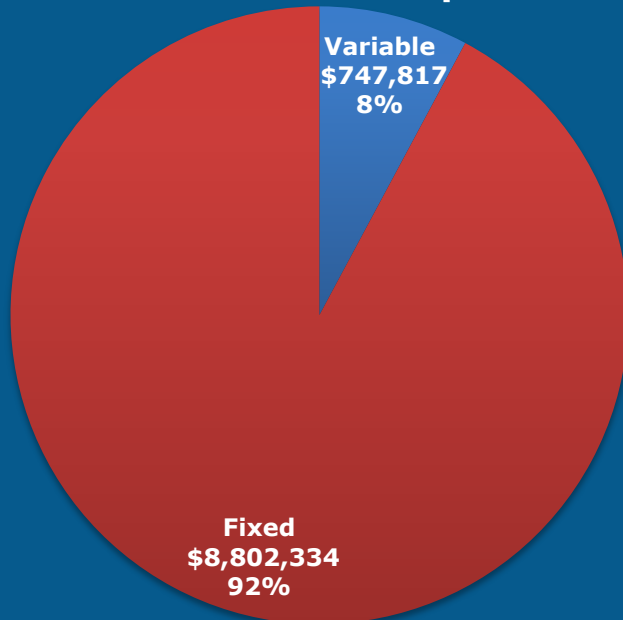
- **Portsmouth – Average Single-Family Residential Customer using 5 units/month**
 - **\$25.70 – Water (\$308/year)**
 - **\$53.42 – Sewer (\$641/year)**
- **Residential using 2 units/month**
 - **\$13.25 – Water (\$159/year)**
 - **\$21.37 – Sewer (\$256/year)**

2013 Work Session Question:

Customers are using less water, why aren't costs less?

- In the short-term reduced usage has limited impact on costs because majority of costs are fixed.

FY 14 Total Revenue Requirements



Water Division Annual Costs:

Fixed Costs

- Personnel
- Administrative Overhead
- Existing Debt Service
- Capital (Regulatory and Replacement)

Variable Costs

- Chemical
- Energy
- Electricity

2013 Work Session Question:

Customers are using less water, why aren't costs less?

- **In the long-term reduced usage has a significant impact on costs due to capital cost avoidance.**
 - **The City does not need to bring new sources of supply on line.**
 - **The City does not have to expand capacity of existing facilities.**

2013 Work Session Question:

Can we have a separate irrigation rate for non-profits?

- **Rates and fees are to be based on the cost of providing service.**
- **Unless it can be determined that it costs less to provide water to non-profit customers that irrigate, a separate rate would violate this principle.**



Rate Model Policy Considerations

Issue #1 – Additional Tiers

Should additional tiers be added to the current water and sewer rate structure?

Current Rate Tiers	Water Rate Structure	Sewer Rate Structure
Tier 1: 0 – 10 Units*	\$4.15 per Unit	\$10.68 per Unit
Tier 2: Over 10 Units*	\$5.00 per Unit	\$11.75 per Unit
Irrigation: All Usage	\$5.00 per Unit	n/a

**1 unit equals 100 cubic feet or 748 gallons*

Note: Sewer Rate Structure incorrectly listed FY13 rates during Public Input Session. This has been updated to reflect FY14 rate

#1 Results – Additional Tiers

	Water Rate Structure		Sewer Rate Structure	
	Current 2-Tiered Rates	3-Tiered Rates	Current 2-Tiered Rates	3-Tiered Rates
Tier 1: 0 – 3 Units*	\$4.15 per Unit	\$3.83	\$9.54 per Unit	\$8.58
Tier 2: 3 – 10 Units		\$4.19		\$11.18
Tier 3: Over 10 Units	\$5.00 per Unit	\$5.04	\$10.49 per Unit	\$12.13
Irrigation: All Usage	\$5.00 per Unit	\$5.04	n/a	n/a

**3 units represents approximately 75 gallons per day*

#1 Impacts – Additional Tiers

Sample Monthly Water Bill Impact					
Customer Class	Monthly Usage (Units)	Current FY 14 (two tiers)	Issue #1 FY 14 (three tiers)	% Change	\$ Change
Single Family Residential	2	\$13.25	\$12.61	-4.9%	(\$0.64)
Single Family Residential	5	\$25.70	\$24.81	-3.5%	(\$0.89)
Single Family Residential	10	\$46.45	\$45.75	-1.5%	(\$0.70)
Single Family Residential	15	\$71.45	\$70.95	-0.7%	(\$0.50)
Single Family Residential	25	\$124.77	\$124.67	-0.1%	(\$0.10)
Non-Single Family Residential	30	\$146.45	\$146.54	0.1%	\$0.09
Non-Single Family Residential	400	\$2,027.76	\$2,042.42	0.7%	\$14.66
Irrigation Account	6	\$34.95	\$35.19	0.7%	\$0.24

#1 Impacts – Additional Tiers

Sample Monthly Sewer Bill Impact					
Customer Class	Monthly Usage (Units)	Current FY 14 (Two Tiers)	Issue #1 FY 14 (Three Tiers)	% Change	\$ Change
Single Family Residential	2	\$21.37	\$17.16	-19.7%	(\$4.21)
Single Family Residential	5	\$53.42	\$48.10	-10.0%	(\$5.32)
Single Family Residential	10	\$106.85	\$103.91	-2.8%	(\$2.94)
Single Family Residential	15	\$165.59	\$164.59	-0.6%	(\$1.00)
Single Family Residential	25	\$283.08	\$285.94	1.0%	\$2.86
Non-Single Family Residential	30	\$341.82	\$346.58	1.4%	\$4.76
Non-Single Family Residential	400	\$4,688.88	\$4,834.36	3.1%	\$145.48

#1 – Additional Tiers

Should additional tiers be added to the current water and sewer rate structure?

Basis for Recommendation:

- ▶ Of the largest customer class (SFR), 84% of water consumption and 90% of sewer usage falls within current Tier 1 (10 units/month)
- ▶ Adding a new tier at a lower rate would provide assistance to the smallest users of the system

Recommended Action:

Council budget decision

#2 – Irrigation Meter Availability

Should Irrigation meters be expanded to Multi-Family, Commercial and Non-Profit Customers?

Consideration:

- ▶ Currently there are 241 Irrigation Accounts
- ▶ Increased irrigation meter availability would result in a loss of approximately 8.7% of billed sewer usage. Lost billable usage would result in increased fees to make up the lost revenues
- ▶ Is this consistent with City's sustainable practice goals?
 - Water irrigation meters do not encourage efficient use of water

#2 – Irrigation Meter Availability

Should Irrigation meters be expanded to Multi-Family, Commercial and Non-Profit Customers?

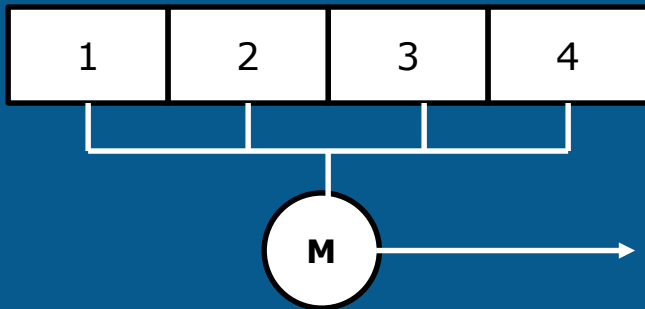
Recommendation Action:

Do not expand irrigation meter availability

#3 – Multi-Family Condo Billing

Should Multi-Family condo accounts be provided with a usage allowance per tier, based on the number of dwelling units?

Current Approach



Condo Account with 1 Master Meter and 4 Residential Dwellings			
	Monthly Water Bill	Monthly Sewer Bill	Monthly Combined Bill
1" Meter Charge	\$8.27	\$ -	\$8.27
Usage	20 Units	20 Units	20 Units
1 st Tier Charge	\$41.50	\$95.40	\$136.90
2 nd Tier Charge	\$50.00	\$104.90	\$154.90
Total Bill	\$99.77	\$200.30	\$300.07
Cost/Res. Dwelling	\$24.95	\$50.08	\$75.02

#3 – Multi-Family Condo Billing

Should Multi-Family condo accounts be provided with a usage allowance per tier based on the number of dwelling units?

Basis for Recommendation:

- ▶ Implementing average use per dwelling unit would greatly increase administrative costs. How does City confirm number of occupied dwellings?
- ▶ Implementation would shift usage to lower tiers charge, in turn decreasing overall revenues resulting in necessary higher rates
- ▶ True equity would require individual meters which is currently allowed

Recommended Action:

No implementation recommended – No action required

Policy Consideration Summary

Policy Consideration	RECOMMENDED ACTION
#1 – Third Tier	City Council decision during budget process
#2 - Irrigation Meter Availability and Tier	Do not expand irrigation availability
#3 - Multi-Family Condo Billing	Maintain existing policy, change building code – require individual metering

Next Steps



- **Finalize FY15 Water and Sewer Budget Recommendations**
- **Utilize Rate Model for FY15 Rate Setting**
- **Bring forward to Council during May 14, 2014 Council Work Session on Water and Sewer Budget**