SESSION TOPICS

• Rates 101 Overview – Tony Hairston (1:30 – 1:55)
• Capital Funding – Robert Ryall (2:00 – 2:40)

Break (2:40 – 2:55)

• Understanding Billing Data – Joe Williams (3:00 – 3:30)
• Rate Structures – Thierry Boveri (3:30 – 4:10)
• Final Words - Round Table
VALUE OF WATER

- Water infrastructure is fundamental to our nation’s economic health. By keeping water infrastructure in a state of good repair, we strengthen our economy.

- Over the long term, all sectors stand to benefit from improvements to the reliability and efficiency of water...the US economy stands to gain a total of $2,220 billion in additional economic activity over the next 10 years.
## VALUE OF WATER

### Annual Federal Investment Per Capita

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Per Capita Federal Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Infrastructure (Federal Departments)</td>
<td>$251</td>
</tr>
<tr>
<td>Research &amp; Development—Defense</td>
<td>$245</td>
</tr>
<tr>
<td>Research &amp; Development—Civilan</td>
<td>$208</td>
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<tr>
<td>Higher Education Grants</td>
<td>$143</td>
</tr>
<tr>
<td>Highways</td>
<td>$136</td>
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<tr>
<td>Other Transportation Infrastructure</td>
<td>$55</td>
</tr>
<tr>
<td>Energy Infrastructure</td>
<td>$46</td>
</tr>
<tr>
<td>Water Infrastructure</td>
<td>$11</td>
</tr>
</tbody>
</table>


Source: Value of Water Campaign
RECENT RATE TRENDS

A non-exhaustive list...

• Declining per capita use
• Drought rates

• Rate structures/tiered water rates
• Transfers
• Impact fees
• Other...

2017 FWRC - Rates 101 Workshop | 5
RESIDENTIAL WATER & SEWER BILLS
4,000 Gallon Survey

- Source: 2016 Florida Water & Wastewater Rate Survey, Raftelis Financial Consultants;
- 176 Water and Wastewater Utilities surveyed in Florida.
RESIDENTIAL WATER & SEWER BILLS

8,000 Gallon Survey

- Source: 2016 Florida Water & Wastewater Rate Survey, Raftelis Financial Consultants;
- 176 Water and Wastewater Utilities surveyed in Florida.
TRENDS IN WATER & SEWER BILLS

Water Bills

- **4,000 Gallon Average**
  - 2014: $20.74
  - 2016: $21.81
  - Annual Increase of 2.5%

- **8,000 Gallon Average**
  - 2014: $32.92
  - 2016: $34.69
  - Annual Increase of 2.6%

Sewer Bills

- **4,000 Gallon Average**
  - 2014: $34.60
  - 2016: $36.36
  - Annual Increase of 2.5%

- **8,000 Gallon Average**
  - 2014: $52.60
  - 2016: $55.12
  - Annual Increase of 2.4%

*Source: 2016 Florida Water & Wastewater Rate Survey, Raftelis Financial Consultants*
AWWA 2016 Water and Wastewater Rate Survey (U.S.)

- U.S. Public Utility Rate Survey
- 264 Water
- 182 Wastewater
- 42 States
- www.awwa.org/store
RATE SETTING PROCESS
OBJECTIVES OF A RATE ANALYSIS

Main Objective:
- Recovery of the revenue requirement in a fair and equitable manner

Other Underlying Objectives:
- Effectiveness in yielding full cost recovery
- Stability and predictability of rates to deal with unexpected and adverse changes
- Defensibility and compliance with legal regulations
- Fairness in the apportionment of total cost of service amongst different ratepayers
- Avoidance of undue discrimination (subsidies) within the rates
- Simple and easy to understand and administer
- Promote of efficient water use
RATE SETTING PROCESS

STEP 5: ASSESS EFFECTIVENESS IN ADDRESSING PRICING OBJECTIVES

STEP 4: DESIGN RATE STRUCTURE

STEP 3: ALLOCATE COSTS

STEP 2: IDENTIFY REVENUE REQUIREMENTS & DEMAND PROJECTIONS

STEP 1: IDENTIFY FINANCIAL & PRICING OBJECTIVES
STEP 1: IDENTIFY PRICING OBJECTIVES

- Affordability
- Conservation/Demand Management
- Cost of Service Based Allocations
- Ease of Implementation
- Economic Development
- Equitable Contributions from New Customers
- Minimization of Customer Impacts
- Simple to Understand and Update
- Revenue Stability
- Others
COMPETING OBJECTIVES

Revenue Stability VS. Conservation/Demand Management

Revenue Stability VS. Affordability

Cost of Service Based Allocations VS. Minimize Rate Impacts
STEP 2: IDENTIFY REVENUE REQUIREMENTS

- O&M Expenses
- Debt Service
- Reserve Requirements
- “Pay-Go” Capital Costs
- Revenue Requirement Adjustments: Other Operating Revenues and Non-Operating Revenues
FINANCIAL PLAN MODEL OVERVIEW

INPUTS
- Current Rates
- Acct & Usage Info
- Key Assumptions
- Operating Budget
- Master CIP Asset R&R
- Current Debt Service

MODEL ENGINE
- Revenues from Current Rates
- Other Revenues
- O&M Expenses
- CIP Asset R&R
- Debt Current Debt Service

KEY VARIABLES ON DASHBOARD
- Revenue Adjustments
- Demand Factors
- CIP Scenarios
- New Debt
- Financial Policies

CASH FLOWS

OUTPUTS
- GRAPHICAL RESULTS ON DASHBOARD
- NUMERICAL RESULTS IN PRO-FORMA
WHAT IS COST OF SERVICE?

Cost of service is the total annual revenue requirement to be recovered from each customer class based on the cost of providing them service.
COST OF SERVICE ALLOCATION PROCESS
AWWA MANUAL M1

Revenue Requirement

Functionalize

Functionalized Revenue Requirement
Supply, Treatment, Distribution, Storage

Allocate

Cost of Service by Customer Class

Distribute to Customer Classes

Cost Components
Base, Extra Capacity, Customer, Conservation, Fire
Both water systems have average daily demand of approximately 5.0 MGD.

Which water system requires larger facilities/infrastructure?
STEP 4: RATE DESIGN

Some Considerations in Evaluating Rate Structures

- Pricing objectives
- Fixed charges versus consumption charges
- Existing rate structure
- Revenue risks
- Availability of resources and data
- Level of implementation effort
- Benchmarking with other utilities
Do the rates meet the essential objectives identified in Step 1?

Do the objectives need to be revisited?
LAST STEPS OF A RATE STUDY

Report Development
• Document the support / justifications for the rates
• Convey the “story” behind the rates to customers in layman’s terms
• Connects the budget with the rates and shows the math on how the rates are developed

Public Outreach
• Proactive outreach and messaging to educate key stakeholders about the new rates

Implementation
• Develop phase-in implementation strategy
• Test billing system
• Train customer support staff about new rates
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