CONSIDERATIONS IN CAPITAL PLANNING
FWRC 2017

April 24, 2017
Agenda

1. State of the Industry
2. Funding Sources
3. Financial Policies for Capital Reinvestment
4. The Value of Water
## AWWA State of the Water Industry Report

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# AWWA State of the Water Industry Report

## Issues Facing the Water Industry in 2016

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### How large is the issue we’re facing?

**Buried No Longer: Confronting America’s Water Infrastructure Challenge**

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<th>Region</th>
<th>2010 $M</th>
<th>Replacement</th>
<th>Growth</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Northeast</td>
<td>$92,218</td>
<td>$16,525</td>
<td>$108,743</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>$146,997</td>
<td>$25,222</td>
<td>$172,219</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>$204,357</td>
<td>$302,782</td>
<td>$507,139</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>$82,866</td>
<td>$153,756</td>
<td>$236,622</td>
<td></td>
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<td><strong>Total</strong></td>
<td>$526,438</td>
<td>$498,285</td>
<td><strong>$1,024,723</strong></td>
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How large is the issue we’re facing?
EPA Drinking Water Infrastructure Needs Survey

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<th>Total 20-Year Need by Project Type ($ billions)</th>
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<td>Transmission and Distribution</td>
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<td>Total National Need ($ billions)</td>
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## How large is the issue we’re facing?

**Clean Watersheds Needs Survey**

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<th>Category Name</th>
<th>National Needs ($ Billion)</th>
<th>Treatment (Percent)</th>
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<tr>
<td>Secondary Wastewater Treatment</td>
<td>$52.4</td>
<td>19.3%</td>
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<tr>
<td>Advanced Water Treatment</td>
<td>$49.6</td>
<td>18.3%</td>
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<tr>
<td>Conveyance System Repair</td>
<td>$51.2</td>
<td>18.9%</td>
</tr>
<tr>
<td>New Conveyance Systems</td>
<td>$44.5</td>
<td>16.4%</td>
</tr>
<tr>
<td>Combined Sewer Overflow Correction</td>
<td>$48.0</td>
<td>17.7%</td>
</tr>
<tr>
<td>Stormwater Management Program</td>
<td>$19.2</td>
<td>7.1%</td>
</tr>
<tr>
<td>Recycled Water Distribution</td>
<td>$6.1</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$271.0</strong></td>
<td><strong>100.0%</strong></td>
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The Cost of Future Water and Wastewater Infrastructure

AWWA Report “Buried No Longer”
$1 Trillion for potable water pipe networks

USEPA Drinking Water Infrastructure Needs Survey
$137 Billion for water treatment, storage, and source

USEPA Clean Watersheds Needs Survey
$271 Billion for wastewater and stormwater

TOTAL... $1,408,000,000,000
Funding Sources

- Municipal bonds
- Improved metering
- Regular increases in user charges
- State revolving funds
- Grants
- Regional Cooperation
- Water loss mitigation
- Resource recovery
- Energy performance or service contracts
- Public-private-partnerships
- WIFIA funds
- Sales tax funding

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Municipal Debt

Advantages:
- Most common source of funding
- Readily available
- Low interest rate environment
- Quick issuance time-frame

Dis-advantages:
- Issuance costs
- Reporting requirements
- Required financial metrics:
  - Debt service coverage
  - Reserve requirements
- Access can be challenging for smaller systems
State Revolving Funds

**Advantages:**
- Common source of funding
- Lower interest rates and,
- Lower issuance costs than traditional municipal debt
- Priority for smaller systems

**Dis-advantages:**
- Administrative & reporting requirements
- Limitations based on project type
- In some states:
  - 20-year term limit (compared to 30-years for traditional debt)
  - Debt coverage requirement
Water Infrastructure and Innovation Authority (WIFIA)

- Proposed in 2012 by U.S. representative Bob Gibbs, Chair of the House Subcommittee on Water Resource and Environment
- Funds from U.S. Treasury at Treasury Rates
- Intended to fund large (> $20 million) water, wastewater, and stormwater projects

Proposal Comparison (May 2011):
- Treasury rate – 4.04%
- Municipal Market – 5.4 % plus underwriting fees
- Anticipated 16% debt service savings on 30-year loan
WIFIA - Update

December 2016 - $20 million for WIFIA

• $3 million for administration
• $17 million for loans
• Leveraging: $1 billion for projects

Important Program Features:

• $20 million: Minimum project size for large communities.
• $5 million: Minimum project size for small communities (population of 25,000 or less).
• 49%: Maximum portion of eligible project costs that WIFIA can fund.
• Total federal assistance may not exceed 80% of a project’s eligible costs.
• 35 years: Maximum final maturity date from substantial completion.
• 5 years: Maximum time that repayment may be deferred after substantial completion of the project.
• Interest rate will be equal to or greater than the U.S. Treasury rate of a similar maturity at the date of closing.
• Projects must be creditworthy and have a dedicated source of revenue.

https://www.epa.gov/wifia
Private Sector Involvement

Varying forms of Private Sector Involvement (PPP)

Considerations:
• PPP does not mean privatization.
• Does PPP fit the specific utility and/or city needs?

Advantages:
• Increase experience base – the private sector works with, and gains experience, from multiple systems
• Risk management – depending on the arrangement, outsourcing operations can also mitigate risk the municipality may not wish to bear
• Staff augmentation – increases capital spending will increase the need for personnel to manage programs and projects
Internal Funding

- Municipal bonds
- Improved metering
- Regular increases in user charges
- State revolving funds
- Grants
- Regional Cooperation
- Water loss mitigation
- Resource recovery
- Energy performance or service contracts
- Public-private-partnerships
- WIFIA funds
- Sales tax funding
Financial Policies for Capital Investment

Key Investment Policies:

1. Identify the level of needed reinvestment  
   (How much should we be spending?)
2. Identify where the funds should be spent
3. Identify what funds will be used  
   (Cash, Debt, Contributed funds)
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

1. Identify the level of needed reinvestment (How much should we be spending?)
   - Asset management plans
   - Annual system depreciation
   - Asset age, useful life, and replacement value

Factors influencing:
   - Age of the system
   - Condition of assets
   - Historic maintenance levels
   - Local conditions
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

2. Identify where the funds should be spent
   - Criticality of individual assets – Asset Management Plans
     (risk of failure vs. impact of failure)
   - Consideration of age and useful life
   - System inspections
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

2. Identify where the funds should be spent
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

3. Identify what funds will be used
   (Cash, Debt, Contributed funds)

Cash vs. Debt Funding
• Interest and issuance costs
• Administrative effort and financial reporting requirements
• Impact on rates
• Asset life and term of funding
• Intergenerational equity
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

3. Identify what funds will be used
   (Cash, Debt, Contributed funds)

Cash Policies for Capital Investment:
• Existing Reserves
• Establish an R&R/Capital Reserve
• Include R&R/Capital Funding in the annual budget
• Establish an R&R/Capital Funding rate
• Use of Debt Service Coverage margin
Financial Policies for Capital Investment

Key Considerations of Investment Policies:

3. Identify what funds will be used
   (Cash, Debt, Contributed funds)

Contributed funds – impact fees
- Can help reduce the level of required rate revenue
- Equitable for of recovery; growth pays for growth
  However,
- Inconsistent levels and time of receipt
- Contributed funds are generally restricted and limited to capacity related projects
# The Value of Water

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The Value of Water

Responses from utility personnel regarding their opinions of whether the utilities they work for can cover the full cost of providing service, including infrastructure renewal/replacement and expansion needs, through customer rate and fees currently and in the future.
The Value of Water

“WATER USED TO BE FREE, AND NOW IT’S CHEAP, AND EVERYBODY’S MAD ABOUT IT”
The Value of Water

What is 1,000 gallons of water?

- 8,345 pounds (the average car weighs 4,079 pounds)
- 50 - ten minute showers
- 700 toilet flushes
- An average family of four; 10,000 gallons per month
- Typical Water Cost - $4.00 per 1,000 gallons
- Bottled water, $1.22 per gallon
The Value of Water

What rate would you select?

- $10.00 per 1,000 gallons
- $7.48 per CCF (that’s 100 cubic feet)
- One cent per gallon