Steering Innovation in Water Utility Finance and Management

A Water Research Foundation Leadership Forum
## Co-authors / Participating utilities

| Charlotte-Mecklenburg Utilities Department | Massachusetts Water Resources Authority |
| City of Houston Public Works and Engineering Department | Metropolitan Water District of Southern California |
| Cobb County-Marietta Water Authority | Trinity River Authority of Texas |
| Contra Costa Water District | Middlesex Water Company |
| DC Water | Nashville Metropolitan Water Services |
| City of Raleigh (NC) Public Utilities Department | New York City Department of Environmental Protection |
| Golden State Water Company | Orlando Utilities Commission |
| Greenville (SC) Water | City of Dallas Water Utilities |
| Las Vegas Valley Water District | Tampa Bay Water |
| Los Angeles Department of Water and Power | Miami-Dade (FL) Water and Sewer Department |
| Louisville Water Company | Tulsa Metropolitan Utility Authority |
Webinar Outline and Project Team

• Forum Overview
• Past: Setting the stage for current priorities  Mary Tiger
• Present: Interconnected trends and strategies  Jeff Hughes
• Future: Murky adaptation  Scott Haskins
• Discussion  You
Web Participant Poll

What region do you represent?
— New England
— South Atlantic
— North Central
— South Central
— Mountain
— Pacific
— Canada
— Mexico
Forum Overview

• Objectives
  — Provide a productive and interactive exchange for the attendees
  — Elicit a quick capture on trends and innovation in the industry
  — Solicit ideas to inform future finance and business practices-oriented research
Forum Overview

- Pre-forum survey on “key trends”
- Audience polling
- Panel discussion
- Small group discussion
- Strategy feedback exchange
Utility roles of participating utility representatives

Percent of attendees

- Chief Executive Officer/Director: 30%
- Chief Operating Officer/Deputy Director: 15%
- Chief Financial Officer: 20%
- Department/Division Director: 15%
- Other: 5%
Past: Setting the stage for current priorities

- Checking in on past projections
- Has the glass been half full or half empty?
Past: Setting the context for current priorities

1. Uncertain economy, financial instability
2. Decreased availability/adequacy of water resources
3. Aging water infrastructure/capital needs
4. Shifting water demands (per capita reduction)
5. Changing workforce, dynamic talent life-cycle
6. Expanding technology application
7. Mass/social media explosion
8. Increasing/expanding regulations
9. Efficiency drivers, resource optimization
10. Climate uncertainty
Past: Half Full?

Primary Trends in Past Five Years

Expanding Technology Application  Mass/Social Media Explosion  Efficiency Drivers, Resource Optimization  Changing Workforce, Dynamic Talent Lifecycle
...but it’s not all good

- Expanding technology → “Data deluge”
- Mass media explosion → Public perceptions formed by mass/social media outside of utility influence or control
- Changing workforce → Reduced compensation packages challenged utilities to attract new workers
Past: Half Empty?

Primary Trends in Past Five Years

- Decreased Availability/Adequacy of Water Resources
- Increasing/Expanding Regulations
- Climate Uncertainty
- Uncertain Economy/Financial Instability
- Aging Water Infrastructure/Capital Needs
- Shifting Water Demands (Per Capita Reduction)

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...but it’s not all bad either

- Aging infrastructure → Utility managed for sustainability of water infrastructure
- Uncertain economy → Utility faced public and political pressure to improve efficiency and cut costs
- Shifting water demands → Increasing water conservation attitudes and water efficient appliances
Web Participant Poll

What trend has had the most **positive** impact on your utility (or the industry) over the past five years?

1. Uncertain economy, financial instability
2. Decreased availability/adequacy of water resources
3. Aging water infrastructure/capital needs
4. Shifting water demands (per capita reduction)
5. Changing workforce, dynamic talent life-cycle
6. Expanding technology application
7. Mass/social media explosion
8. Increasing/expanding regulations
9. Efficiency drivers, resource optimization
10. Climate uncertainty
Web Participant Poll

What trend has had the most **negative** impact on your utility (or the industry) over the past five years?

1. Uncertain economy, financial instability
2. Decreased availability/adequacy of water resources
3. Aging water infrastructure/capital needs
4. Shifting water demands (per capita reduction)
5. Changing workforce, dynamic talent life-cycle
6. Expanding technology application
7. Mass/social media explosion
8. Increasing/expanding regulations
9. Efficiency drivers, resource optimization
10. Climate uncertainty
Web Participant Poll

Do you expect this trend to:

• Get worse
• Stay the same
• Get better
• I have no idea
Present: Interconnected Trends and Strategies

- Aging water infrastructure/capital needs
- Climate uncertainty
- Decreased availability/adequacy of water resources
- Shifting water demand
- Uncertain economy/financial instability
- Decreased availability/adequacy of water resources
- Uncertain economy/financial instability
- Shifting water demand
- Aging water infrastructure/capital needs
- Climate uncertainty
Interconnected Trends and Strategies

• Pricing and political will
  “Don’t waste a crisis”

• Importance of long-term capital and finance plans
  “[We’ve] taken advantage of strong cash position to build infrastructure projects.”

• Ramifications of delayed investment in capital
Interconnected Trends and Strategies

• Mitigating pricing vulnerabilities

“[We] developed new rate-setting methodology with larger fixed-revenue component.”

“[We] changed rate-setting methodology to generate more fixed revenue.”

“[We] design rates that recover core costs regardless of consumption.”

“[We’ve] increased non-water sales revenue.”
Interconnected Trends and Strategies

• Conservation and demand-side management strategies
  – Anticipation in financial, capital, and resource planning is critical
  – Challenge is in accurate prediction
  – Hand-in-hand with supply-side strategies
Interconnected Trends and Strategies

• Partnership, Evaluation, and Redundancy
  – Water utilities
  – Electric utilities
  – State agencies
  – Federal agencies
  – Insurance companies
  – Scientists

[Diagram showing decreased availability/adequacy of water resources and climate uncertainty]

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Interconnected Trends and Strategies

- Planning, planning, and planning
  “All at risk infrastructure had been identified prior to Sandy. Emergency operation procedures in place. Water quality maintained during the event”
  “[We practice] long-term capital planning with appropriate rate structure to fund construction and depreciation”

Need for planning to be coordinated and scenario-based
Future: Murky waters?

- The “New Normal” includes uncertainty as major risk
  - Water demand, quality, environmental regulations
  - Impacts of climate change
  - Public and political will
  - Workforce
  - Economy and financial capacity
- Threats to fiscal performance
  - Visibility and transparency
  - Rates, costs, service levels, risks
- Industry commonalities vs. regional differences
- Mitigation responses to uncertainties, risks, costs, and innovative opportunities will help shape public perception
“Riskiest” projected trend (out of the six) for utilities participating in Forum

- Aging infrastructure, 40%
- Financial instability, 15%
- Water resource scarcity, 15%
- Increasing/expanding regulations, 15%
- Shifts in water demand, 5%
- Climate uncertainty, 10%
Web Participant Poll

Out of the following trends, which one is the most risky for your utility?

1. Uncertain economy, financial instability
2. Decreased availability/adequacy of water resources
3. Aging water infrastructure/capital needs
4. Shifting water demands (per capita reduction)
5. Changing workforce, dynamic talent life-cycle
6. Expanding technology application
7. Mass/social media explosion
8. Increasing/expanding regulations
9. Efficiency drivers, resource optimization
10. Climate uncertainty
Take away message for participating utilities

- Feel inspired: 0%
- Was surprised how different the situation was at other utilities: 10%
- Feel comforted how similar my challenges are with other utilities: 50%
- Realize how easy we have it at my utility: 10%
- Wouldn't mind trading places with some of my colleagues: 0%
Future: Adaptation Strategies

• Adaptive management
  – Just-in-time approaches
  – Parallel and scenario planning

• Projections
  – Water use
  – Weather

• Public and political will
  – Improved and open dialogue; education
  – Decision choices
Desired Future and Headlines

- Road opens ahead of schedule
- Best utility in the nation!
- Great water quality and ongoing cost control
- Utility tackles aging infrastructure
- Utility employees doing great work
- Utility takes proactive steps towards sustainable workforce
- Utility sets a record for water conservation
- Water and Sewer Department strives to improve efficiencies
- Great service at low rates
- Best tasting water!
- Infrastructure improvements serve us now and for decades
- No rate increases next year….2nd year without rate increases
Discussion? Questions?

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