



AMERICAN WATER

Policies to Incentivize Infrastructure Upgrades and Investments

William D. Rogers
Vice President and Treasurer

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Water Industry is Extremely Fragmented

Large number of systems, approximately

- 50,000 community water systems
- 25,000 wastewater systems
- 15,000 wastewater treatment plants

Most systems are separately owned and operated

Opportunities for consolidation and benefits of scale exist

- 93% of small water systems (<10,000 people) within 5 miles of another system
- 100% of systems within 20 miles of another system

As of December 31, 2011, American Water provides services to more than 15 million people in more than 1,600 communities in more than 30 states and parts of Canada.

- **Over 400 water and wastewater systems coast to coast**

- Ranging from 25 customers to over 350,000 customers
- Wide range of sources of supply, customer makeup, and demographics

- **Heritage dates back to 1886**

- **Publicly traded US-based company**



Fast Facts About American Water**

Own over \$13.5B in gross fixed assets / consistently accessing capital markets

Treat and deliver more than one billion gallons of water a day

15 million people served

Managing and maintaining over 400 water and wastewater systems in more than 30 states from coast to coast and parts of Canada

7,000 employees

1,600 communities

Dedicated Call Centers & Lab

49,000 miles of pipeline

Own and operate a variety of water treatment plants including surface water (rivers / reservoirs), groundwater (aquifers), and desalination

** As of December 31, 2011

Investment Decisions in Water Infra Structure Should Incorporate Opportunities to Reduce Energy Consumption

Significant Amounts of Electricity are Used to Pump Water

- **85-99% of a water utility's energy consumption is for pumping**
- **American Water pumps twenty tons (5,000 gallons) to our average residential customer every month**
- **Every 1,000 gallons of water requires 0.25 to 3.5 kw-hr to deliver to the customer**
- **Annually, the industry consumes 100 million mw-hrs of electricity**

Water System Opportunities to Reduce Electricity Demand

- **Pump less water**
 - Conservation – incorporate price signals to reduce demand
 - Reduce leaks in delivery system -- the average system loses 16% of water during delivery
 - Reuse – optimize use of grey water for non potable water requirements
- **Pump water with less energy – improve efficiencies**
 - Currently, 45% of the energy at the pump is wasted
 - Add variable speed drives, replace impellers, and install more efficient motors to reduce wasted energy to less than 20%
 - Maximize pumping during off peak electricity periods to make more efficient use of energy resources
 - Research hydrokinetic opportunities to take advantage of energy in water, e.g. turbines in the pipe
 - Improve pressure management of distribution systems.

Current State of Infrastructure Indicates...

American Society of Civil Engineers



EPA Gap Analysis Reports

Water (2004): \$204 - \$590 Billion

up to **\$1 Trillion**

Wastewater (2002): \$331 - \$450 Billion

Black & Veatch

“financial issues, and all issues that drive investment or costs, are front and center with water utility leaders.”

... CAPITAL AND EXPERTISE REQUIRED

Large Amounts of Capital are Needed

Projected Investment Needs

- **Water**
 - \$10-30 billion annually per latest EPA GAP analysis
 - Approximately 15% of population served by investor owned utilities
- **Wastewater**
 - \$16-22 billion annually per latest EPA GAP analysis
 - Less than 3% of population served by investor owned utilities

Funding Sources

- \$2 billion capital investment by 6 largest investor owned utilities in 2011**
- \$2.4 billion currently allocated by federal government to Clean Water and Drinking Water State Revolving Funds
- Past history of federal / state loan and grant programs
- Municipal actions (raise customer rates / borrow funds)

** Investment level is on par with percent of projected investment needs as a ratio of population served.

Ways to Expand Private Funding for Infrastructure

- **Remove economic inefficiencies related to tax exempt debt reclamation.**
- ✓ **Current process require municipalities to dedicate funds equal to as much as 120% of their existing debt balance when they choose to lease or sell their water systems to a private company. Improving this process will increase funds for other municipal needs.**

Removes barrier to municipalities utilizing private company resources; takes advantage of opportunities from scale.

Means to Expand Private Funding for Infrastructure

- **Remove the volume cap for private activity bonds related to water / wastewater investments.**
 - ✓ **The volume cap applies to a vast number and type of projects. Exempting water infrastructure will unleash needed capital.**

Improves access to capital.

Ways to Expand Private Funding for Infrastructure

- **Improve state revolving fund loan programs.**
 - ✓ **Amend the Clean Water Act to make private water companies eligible.**

Allows currently excluded taxpayers to benefit from assistance provided through funds; improves access to capital.

Conclusion

Bill Rogers

Treasurer

American Water

William.Rogers@AmWater.com

856-309-4572