Water Research Foundation Workshop: Benchmarking

April 23, 2015
Vision. To be the safest, most efficient, cost-effective, resilient, and transparent water utility in the nation

Mission. To protect public health and the environment by supplying clean drinking water, collecting and treating wastewater, and reducing air, noise, and hazardous materials pollution
Water Supply System

- Supply one billion gallons of water per day to 8.4 million City residents and one million upstate residents
  - Protect 2,000 square mile watershed, including three upstate reservoir systems with 19 reservoirs and three controlled lakes
  - Eight upstate wastewater treatment plants
  - 550,000 water quality tests per year
  - 295 miles of aqueduct and tunnels
  - 6,800 miles of water mains
  - 56 shaft sites; 500 pressure regulators; three pump stations
  - 110,000 fire hydrants
Wastewater Management

• Treat 1.3 billion gallons of wastewater per day
  o 14 in-city treatment plants;
  o 7,506 miles of sewer: 3,326 miles of combined, 2,218 of sanitary, 1,824 of storm, & 138 of interceptor
  o 490 regulators (104 telemetered), 96 pump stations
  o 148,000 catch basins
  o 11 marine vessels: three sludge boats, four skimmer boats, two harbor survey vessels and two shoreline survey boats
  o Four combined sewer overflow ("CSO") facilities

• Manage stormwater with Green Infrastructure
Capital Projects

- Croton Filtration Plant ($3.2 B)
- City Tunnel No. 3 ($4.5 B)
- Newtown Creek Upgrade ($5 B)
- Cat-Del UV Disinfection Facility ($1.6 B)
Projected FY 2015 System Expenses

Total: $3,670 million

- Debt Service: $1,616 (44%)
- Operations & Maintenance: $1,411 (39%)
- Water Finance Authority & Water Board Expenses: $86 (2%)
- Defeasance/Cash-Financed Construction: $325 (9%)
- Rental Payment: $232 (6%)

Projections as of September 10, 2014. Dollars in millions. Does not include year-end cash balance.
Average Annual Residential Charges

Based on consumption of 80,000 gallons per year and rates in effect as of February 2015
Operational Excellence (OpX)

• DEP is in the middle of an agency-wide program to achieve operational efficiencies

• To date, initiatives implemented as part of the OpX program have an annual financial impact of $98 million
  o $45 million in cost savings
  o $53 million in additional revenue

• Initiatives include:
  o Creating strategic sourcing group to improve procurement of chemical and service contracts
  o Aggressively replacing large meters; 21,200 large meters replaced to date
  o Optimizing dewatering and sludge thickening at wastewater treatment plants
  o Improving aeration while reducing energy usage in wastewater treatment
Benchmarking Process

• Three Performance Areas – focused on expected strengths and weaknesses:
  o Product Quality
  o Employee and Leadership Development
  o Financial Viability

• Benchmarking pilot team
  o Kathryn Garcia, Chief Operating Officer
  o Gregory Anderson, Policy Analyst
  o Senior management from various bureaus
  o 20 total people involved, about 80 – 100 hours of staff time
Results

**Product Quality**
Target: High or Very High
Performance: High or Very High

**Financial Viability**
Target: Utility targets not as broad as benchmark targets
Performance: High

**Employee Development**
Target: High
Performance: Currently lacking, but in development
### Feedback

#### Pros:
- Benchmarking process was very useful, especially in Employee Development
- Identified potential new performance metrics, especially in Financial Viability attribute
- Engaged senior level management to evaluate top-level performance
- Took a step back from day-to-day management to evaluate long-term priorities

#### Cons:
- Large customer pool made some targets difficult to judge
- Lack of emphasis on CSOs, over-emphasis on SSO
- Difficult to quantify qualitative metrics
- Weighting regulatory vs. non-regulatory factors
Importance of Employee Development

Employee of the Month Event
Employee Development Initiatives

• Created and shared agency mission, vision, and values

• Held over 50 engagement sessions to solicit feedback from 3,000 employees

• Launched the Organizational Health Index Survey

• Established new HR units dedicated to workforce development and succession planning

• Initiated a Brown Bag series to encourage cross-agency knowledge sharing