Presentation to the

MWRA Advisory Board
Wastewater Advisory Committee
and
Water Supply Citizens Advisory Committee

THE CHALLENGES AHEAD

Frederick A. Laskey
Executive Director

September 20, 2012
• The average age of MWRA employees is 52

• The average years of service is 18.5 years
40 Percent of MWRA’s Workforce is Age 55 or Older
67 Percent of MWRA’s Senior Managers are Age 55 or Older
Staffing Trend Continues Downward

<table>
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<tr>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13 (ytd)</th>
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- Budgeted
- Actual Headcount
Succession Planning

- Automation
- Extensive SOPs
- Cross-training
- Selective recruitment
On-Going Redundancy Initiatives
Consequences of Shaft 7 Failure

• Failure of Shaft 7 would affect most of the service area

  – Boil Water Order
  – Activate Sudbury Aqueduct, Chestnut Hill Reservoir and Pump Station for south
  – Activate Spot Pond Reservoir for north
Redundancy Planning is Not New

• 1930s - Waterworks Master Plan raised the idea of the Northern Tunnel Loop

• 1950s - City Tunnel includes a stub was included in Watertown

• 1960s - City Tunnel Extension includes a stub at Shaft 9 in Somerville

• 1980s - Anderson-Nichols study reinforced need for redundancy

• 1990s - MetroWest Tunnel planning

• Current CIP has $700 million in redundancy projects
Single Spine Problems

Northern Intermediate High

Section 36

Lynnfield and Saugus Pipeline (under construction)

WASM 3

Future Intermediate High Pipeline

Southern Extra High

Single Spine Problem
Potential System Expansion

- MWRA has had inquiries from
  - Ashland
  - North Reading
  - Tri-Town (Braintree, Randolph and Holbrook)
New Regulatory Requirements for Wastewater

Stormwater
SSOs
Co-Permittees
Infiltration/Inflow
Collection System O&M
Nutrient Removal
• Since 1990 MWRA has issued $7.1 billion to fund construction and paid $1.5 billion in principal - $5.6 billion total indebtedness
Impact of Bond Structures
• $42 million unfunded liability to amortize in 2024 rather than 2040
Pension Liability + OPEB

Pension Cost + OPEB

OPEB Amortization Payments Normal Cost
Other Post-Employment Benefits

- MWRA’s OPEB liability continues to grow
MWRA has made additional payment to the pension fund to lower future annual payments or shorten the amortization period.
Between FY06 and the second FY12 defeasance, MWRA has defeased $257 million in debt service.
Addressing These Challenges

• Pay now or Pay more later
  – Generational equity is fair but deferral should be used sparingly

• Resist simple solutions
  – Deferring principle payments
  – Extending the time to payoff
Rate Increase History and Projections

Historical and Projected Rate Revenue Changes

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F Y96 F Y97 F Y98 F Y99 F Y00 F Y01 F Y02 F Y03 F Y04 F Y05 F Y06 F Y07 F Y08 F Y09 F Y10 F Y11 F Y12 F Y13 F Y14 F Y15 F Y16 F Y17 F Y18 F Y19 F Y20 F Y21 F Y22
Household Water and Sewer Bills

FY 1991: $443
FY 1992: $523
FY 1993: $559
FY 1994: $570
FY 1995: $593
FY 1996: $626
FY 1997: $648
FY 1998: $674
FY 1999: $699
FY 2000: $724
FY 2001: $751
FY 2002: $794
FY 2003: $842
FY 2004: $889
FY 2005: $946
FY 2006: $1,006
FY 2007: $1,072
FY 2008: $1,136
FY 2009: $1,203
FY 2010: $1,254
FY 2011: $1,298
FY 2012: $1,303
FY 2013: $1,367
Who’s Going To Pay For It?

- The same ratepayers...
  - Unemployment is still high
  - Foreclosures are up