



Massachusetts Water Resources Authority

Presentation to the

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

THE CHALLENGES AHEAD

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September 20, 2012

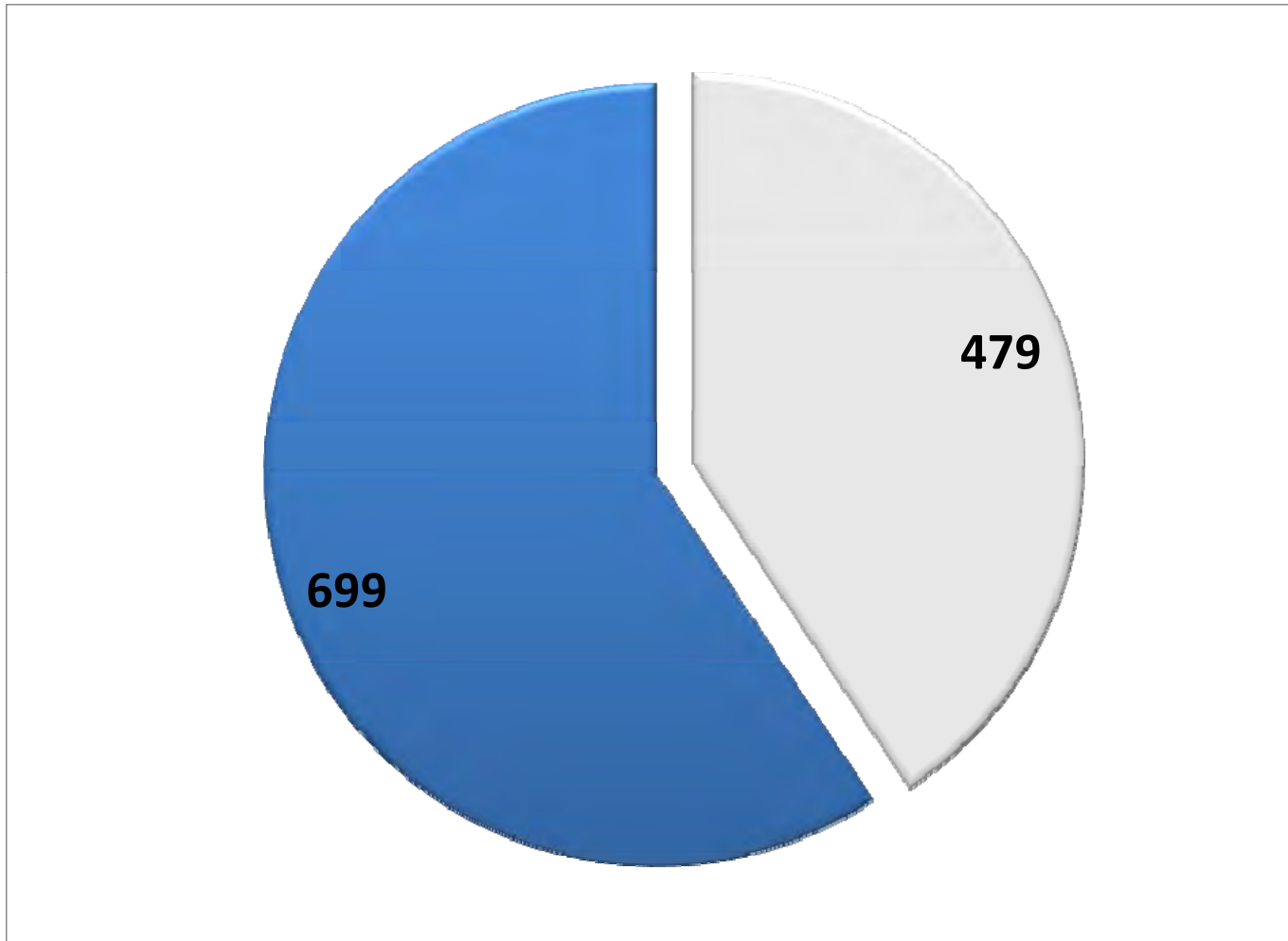


Succession Planning

- The average age of MWRA employees is 52
- The average years of service is 18.5 years

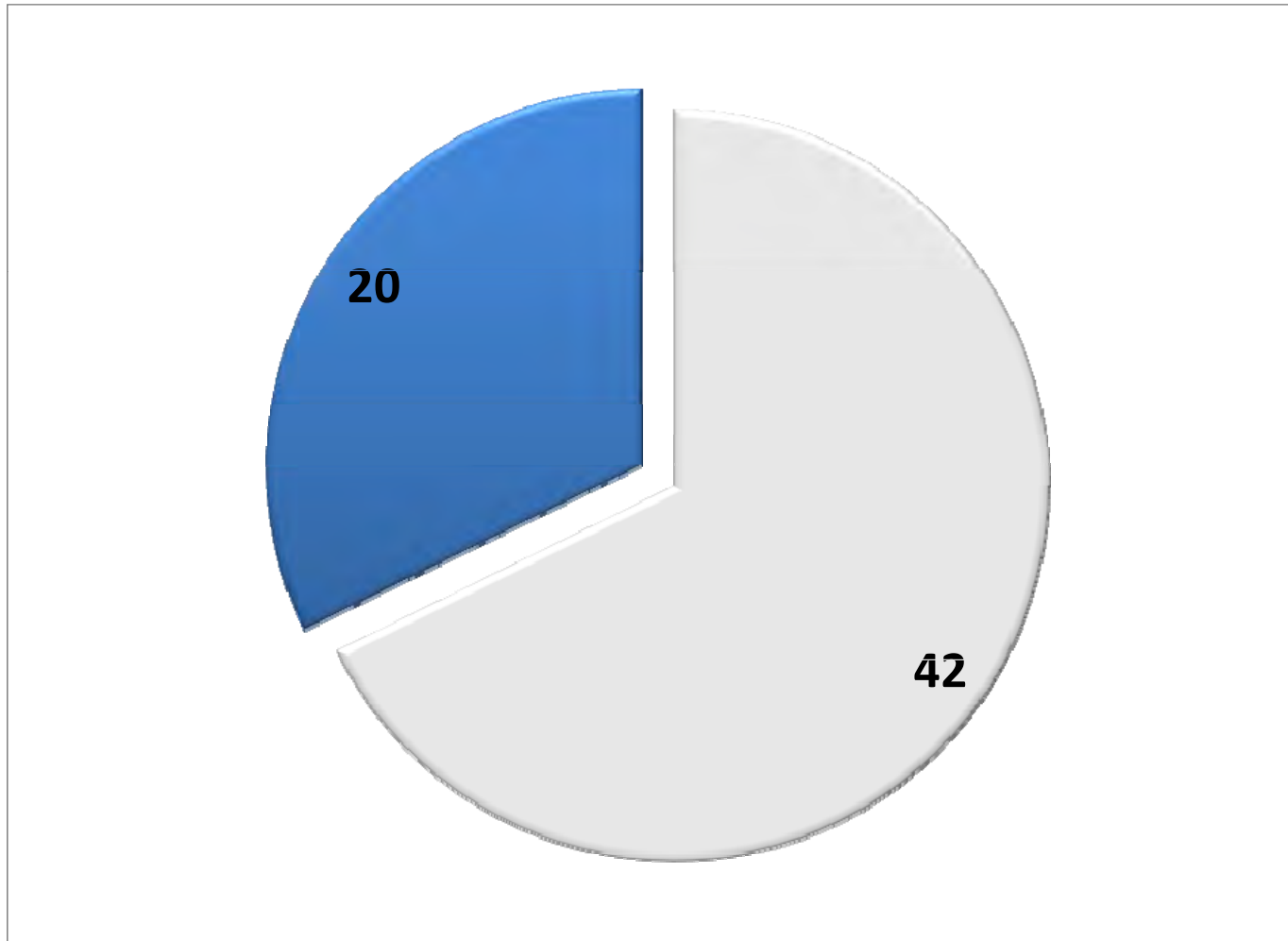


40 Percent of MWRA's Workforce is Age 55 or Older



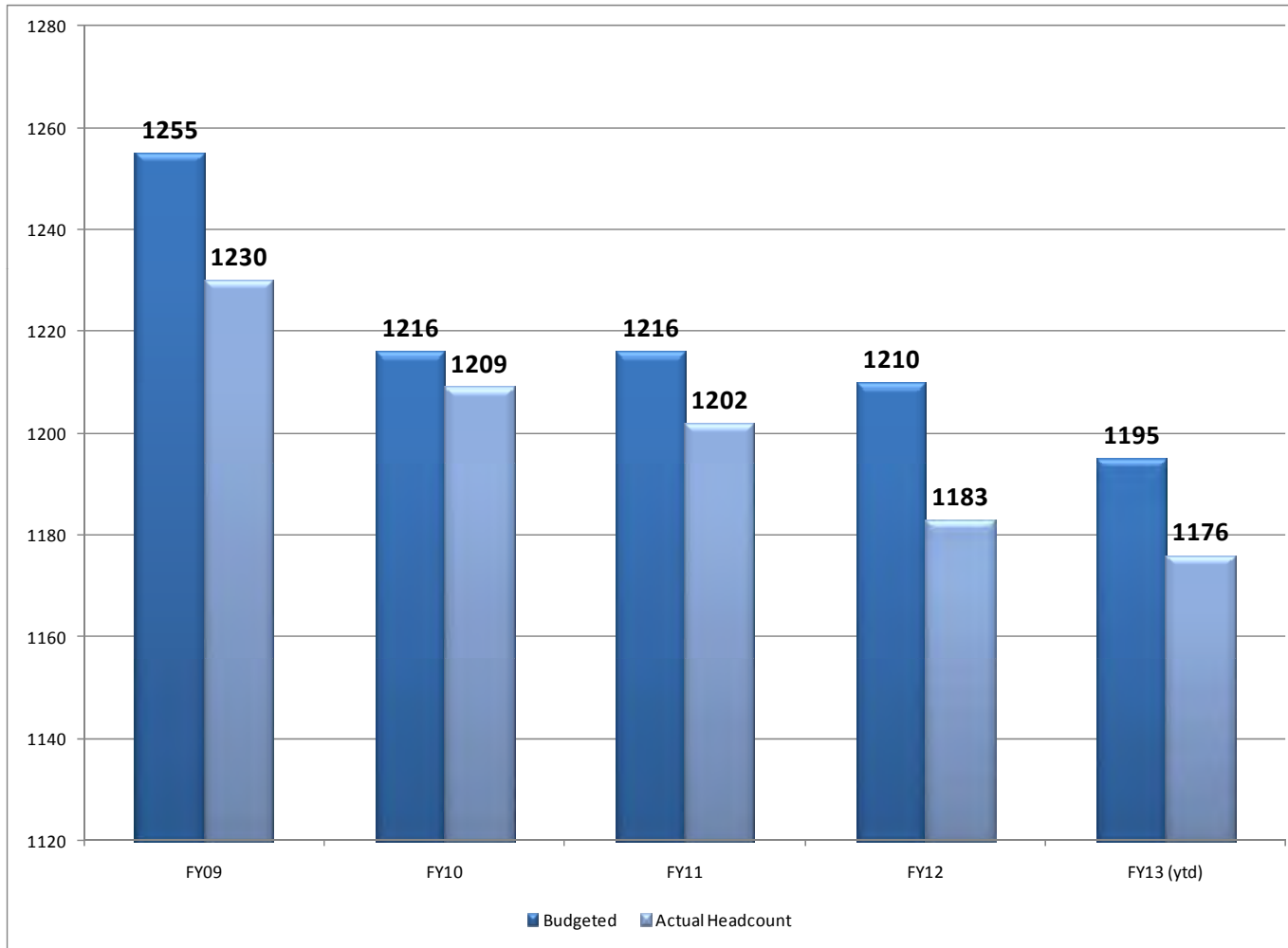


67 Percent of MWRA's Senior Managers are Age 55 or Older





Staffing Trend Continues Downward



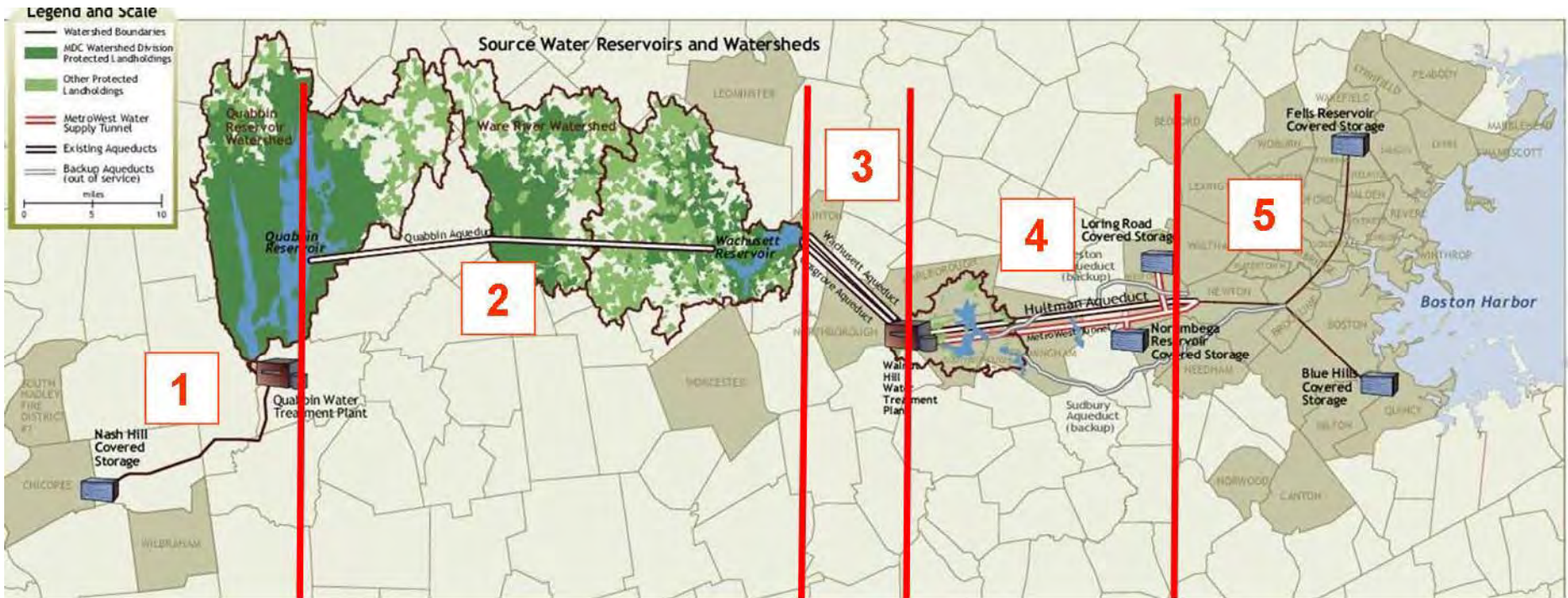


Succession Planning

- Automation
- Extensive SOPs
- Cross-training
- Selective recruitment



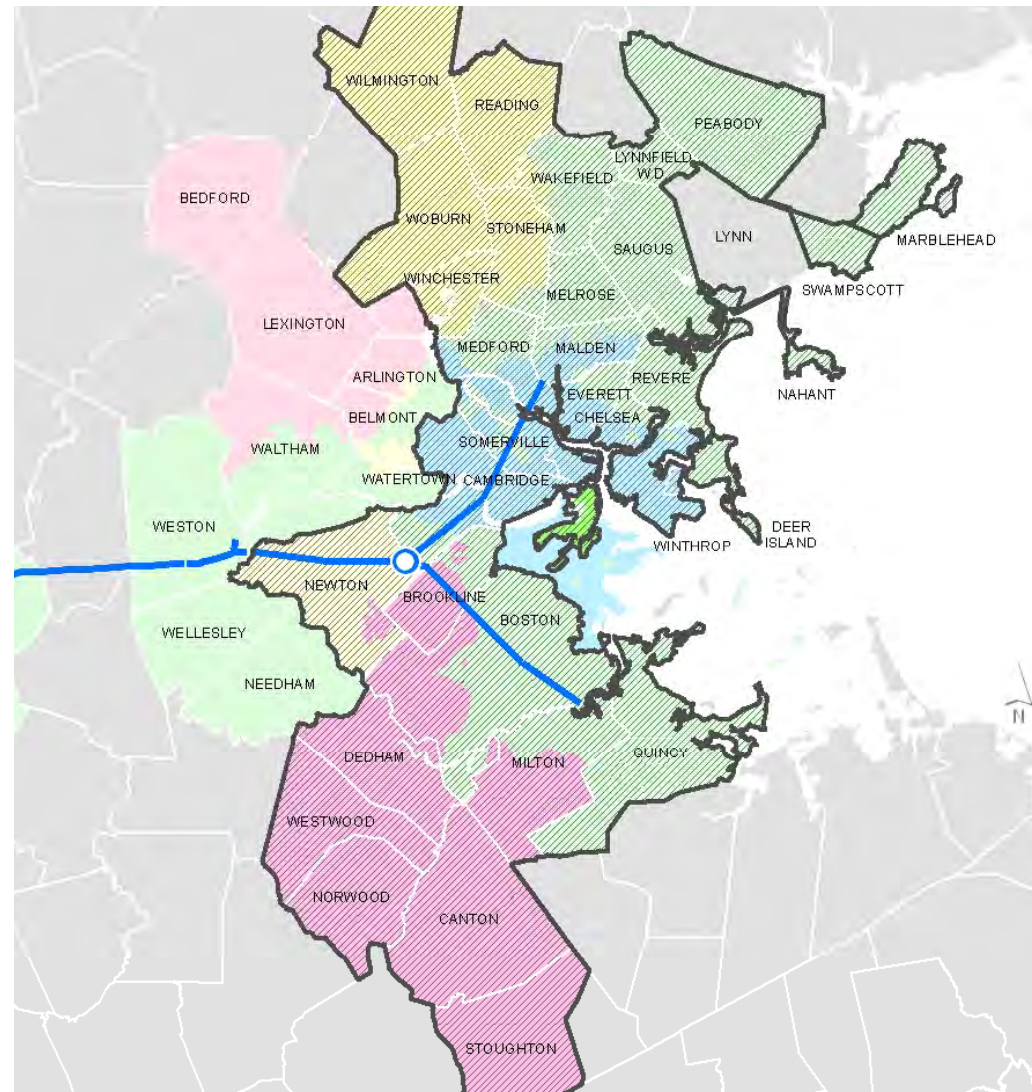
On-Going Redundancy Initiatives





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



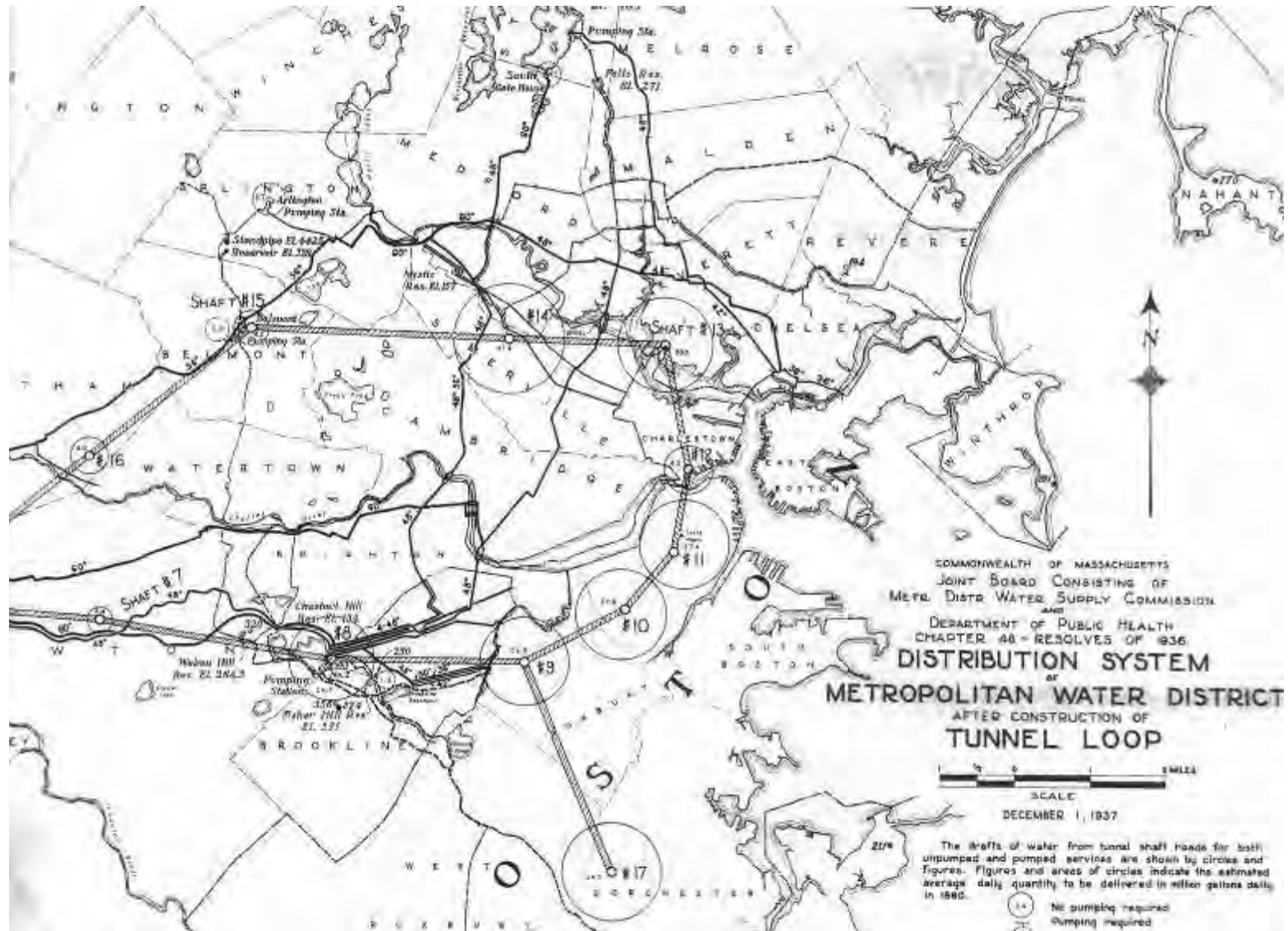


Redundancy Planning is Not New

- 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

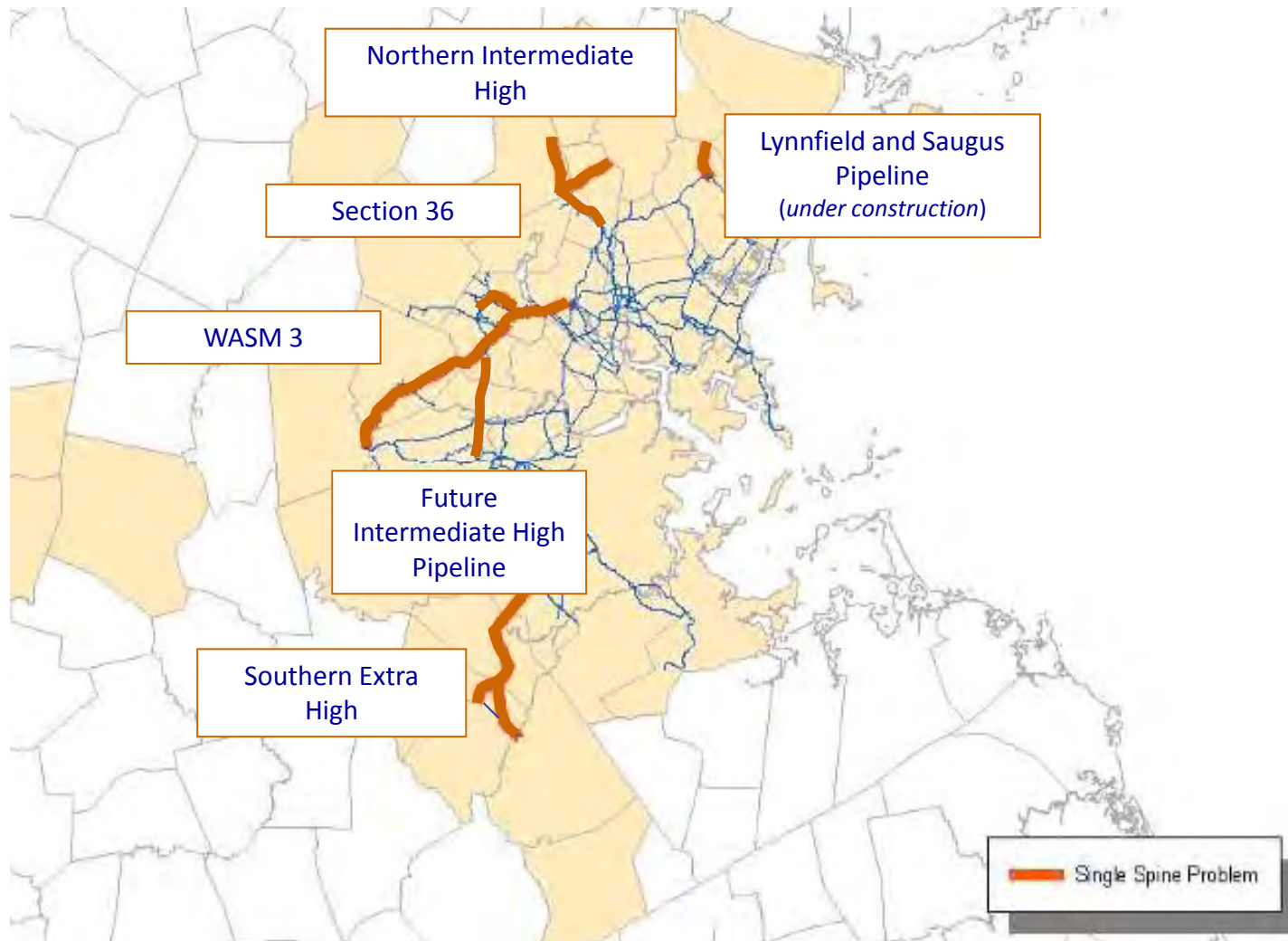


1937 Tunnel Loop Plan





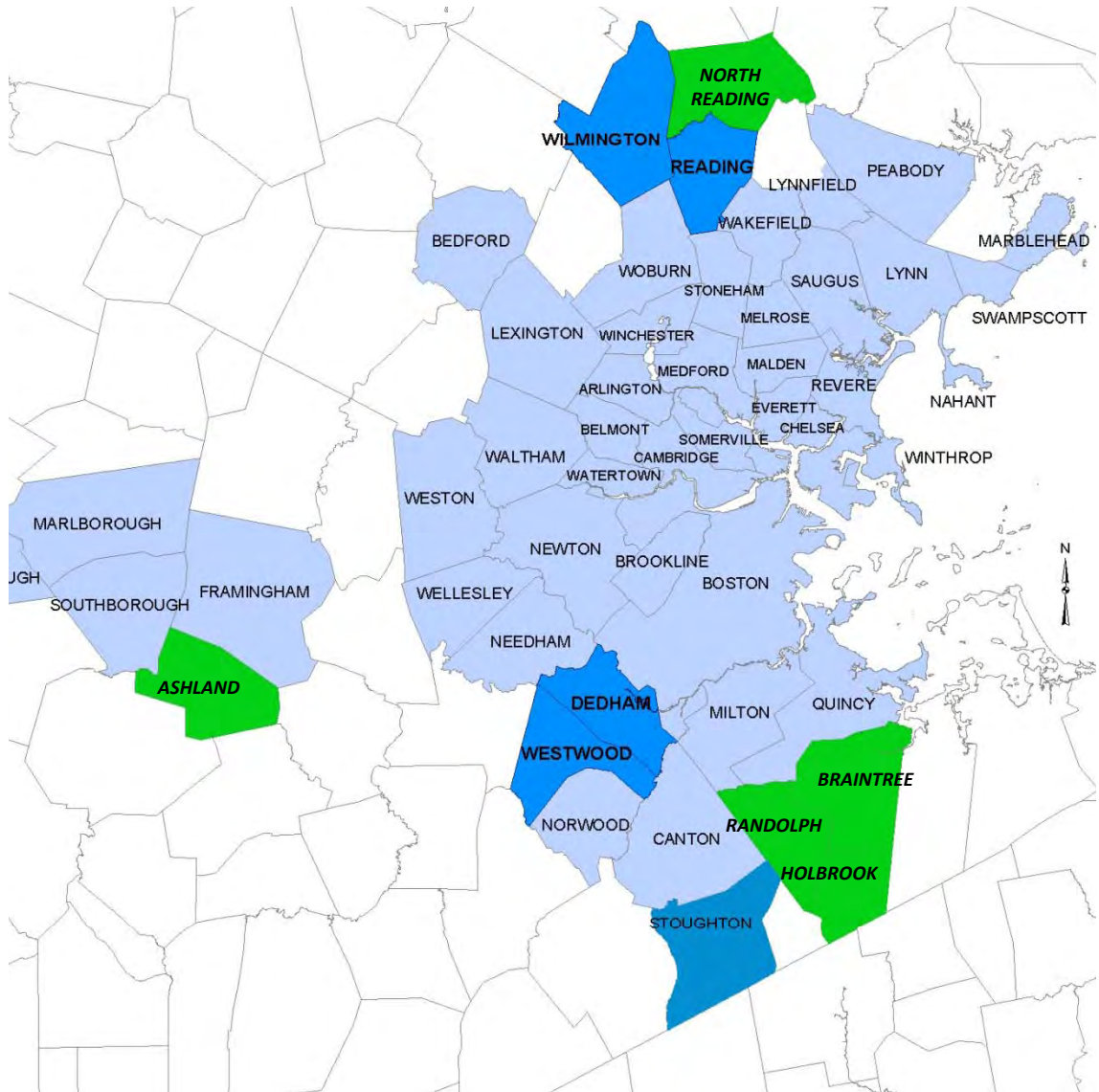
Single Spine Problems





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

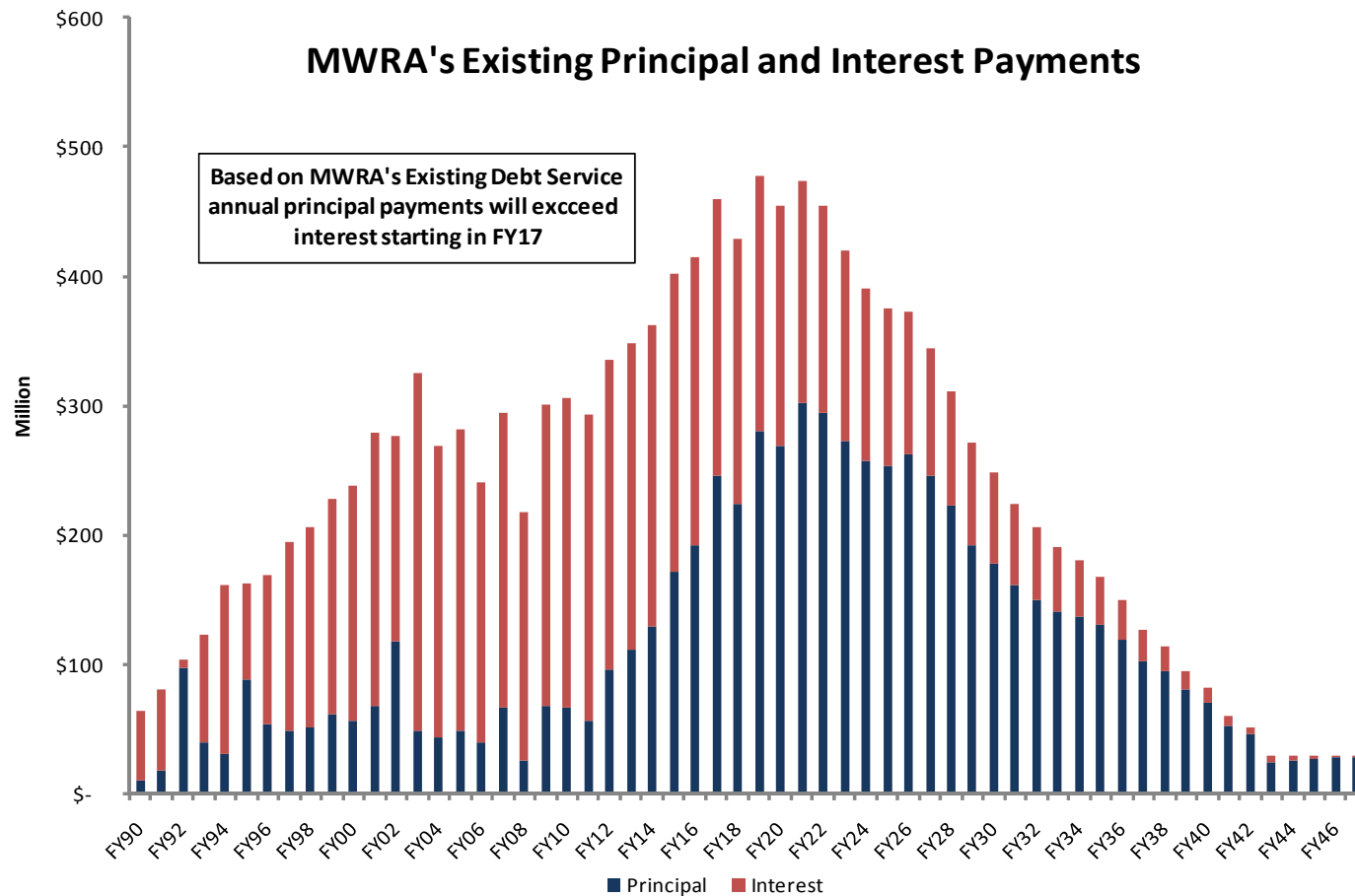
Nutrient Removal





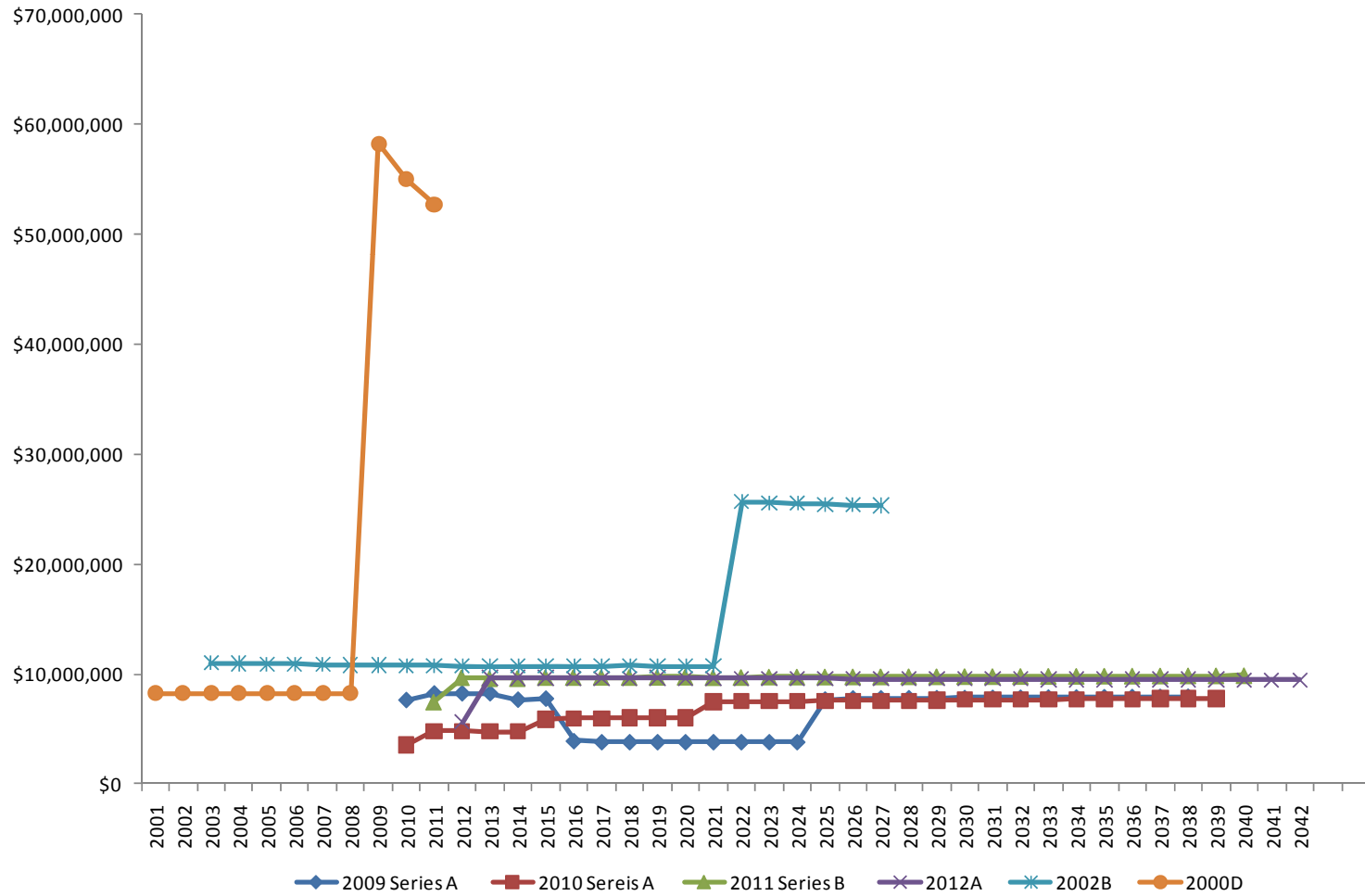
Debt Service

- Since 1990 MWRA has issued \$7.1 billion to fund construction and paid \$1.5 billion in principal - \$5.6 billion total indebtedness





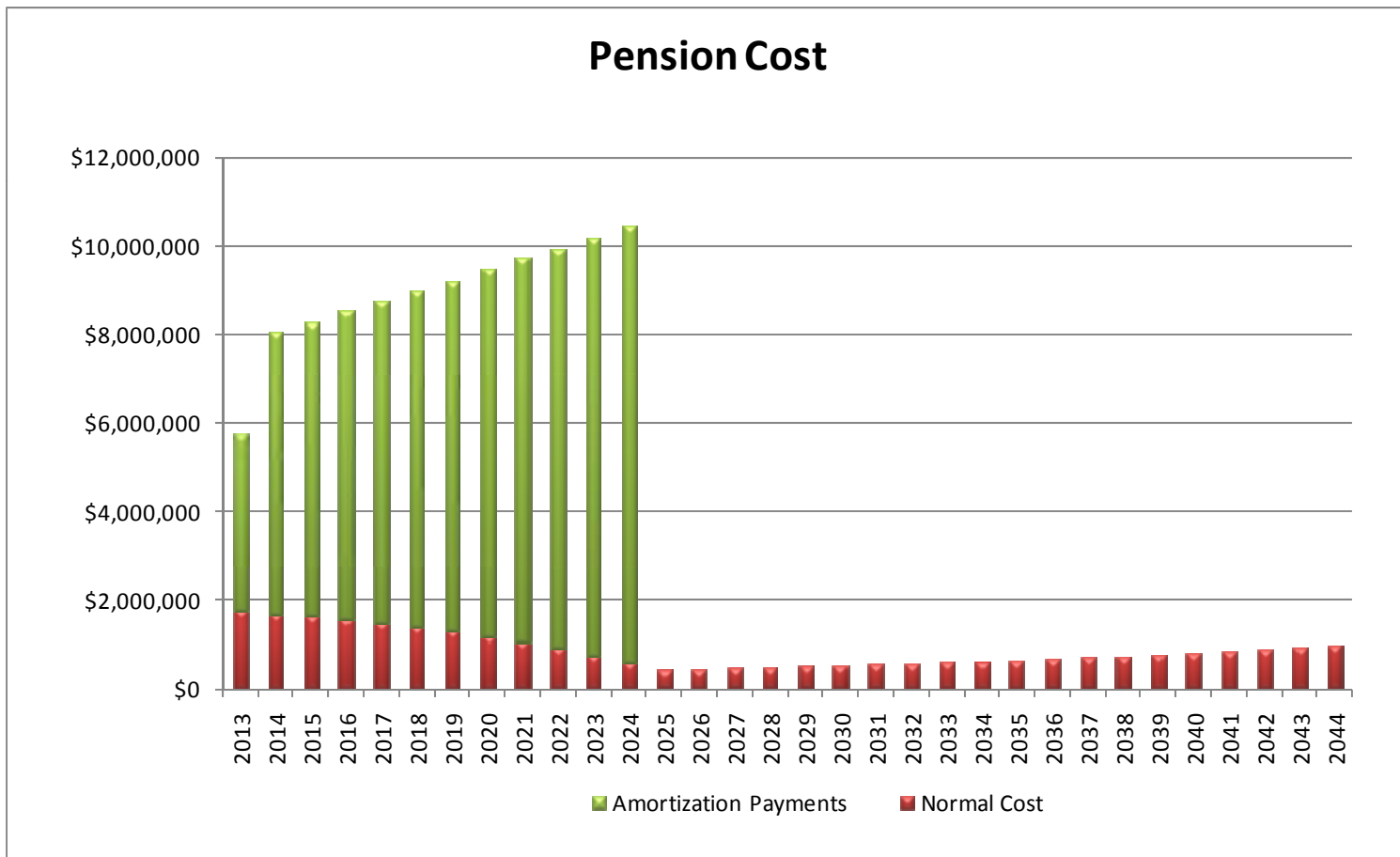
Impact of Bond Structures





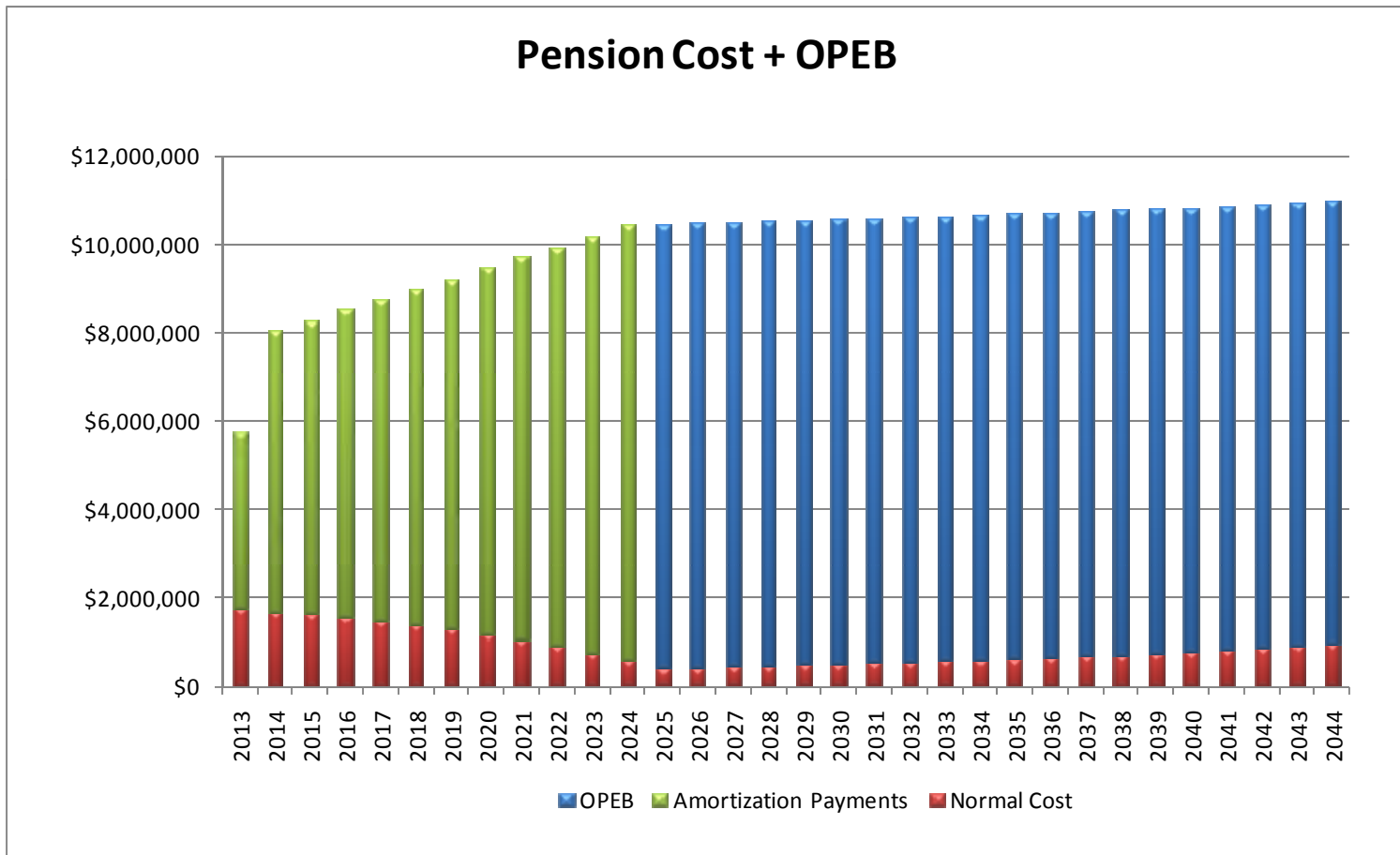
Pension Liability

- \$42 million unfunded liability to amortize in 2024 rather than 2040





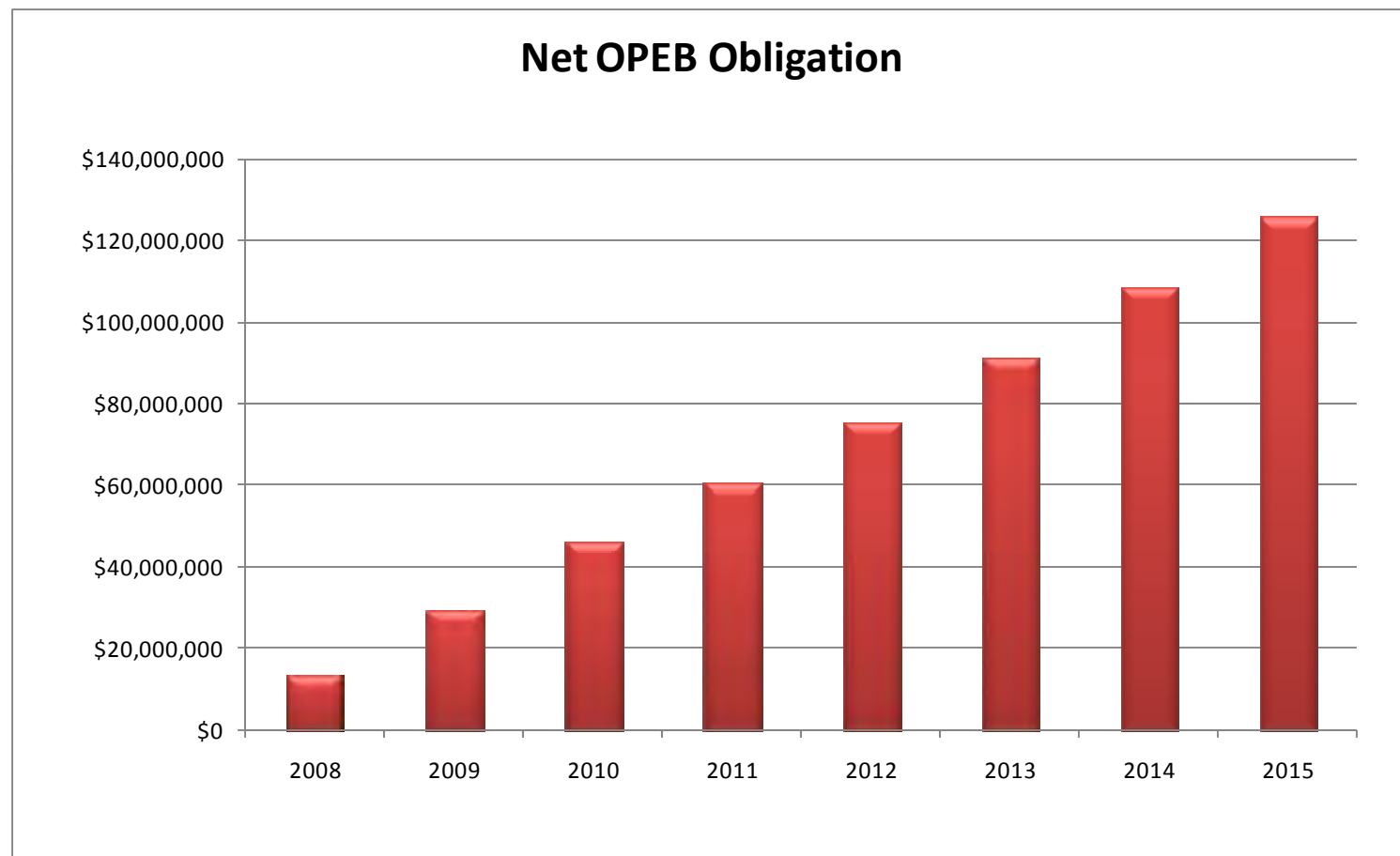
Pension Liability + OPEB





Other Post-Employment Benefits

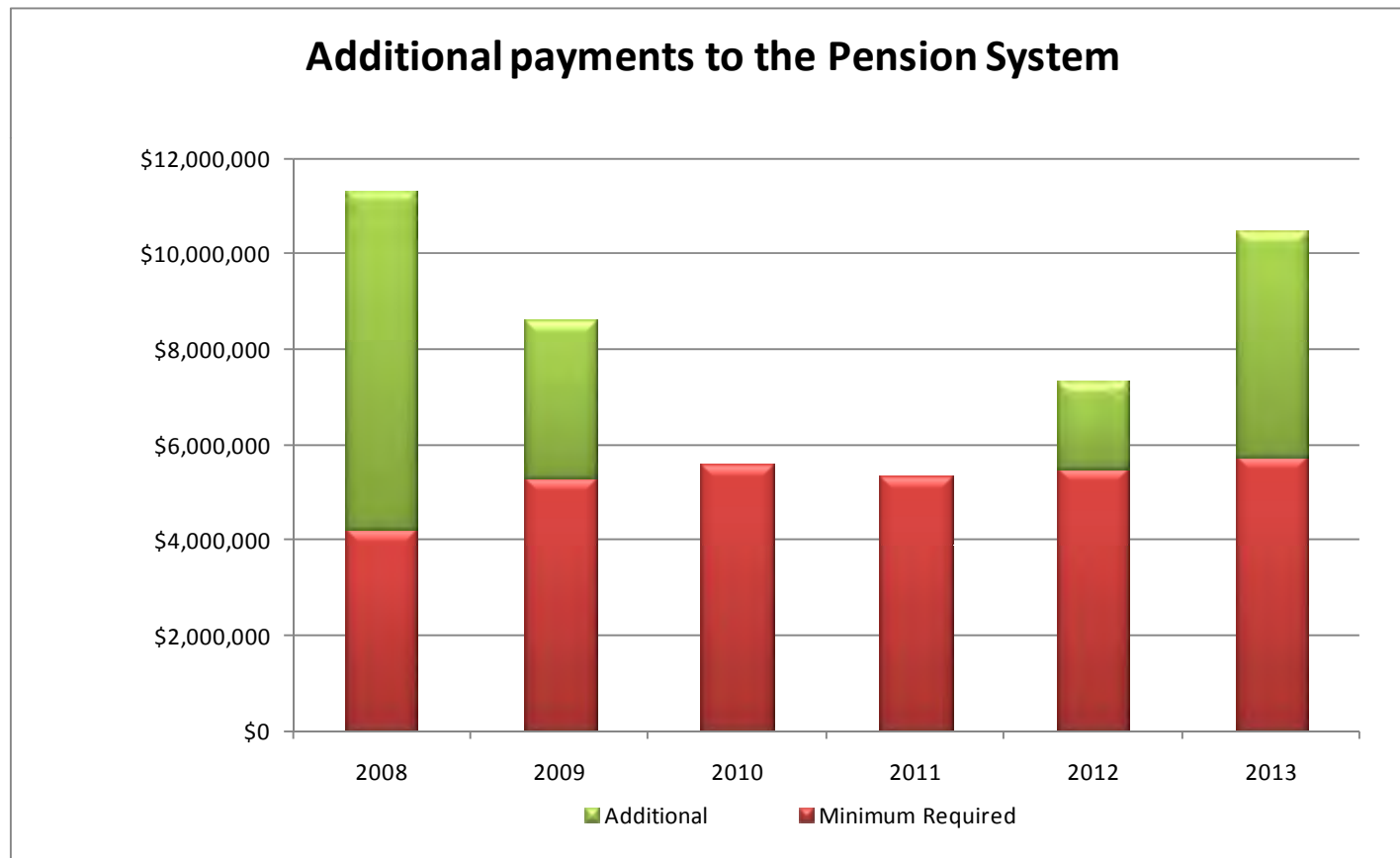
- MWRA's OPEB liability continues to grow





Addressing the Pension Challenge

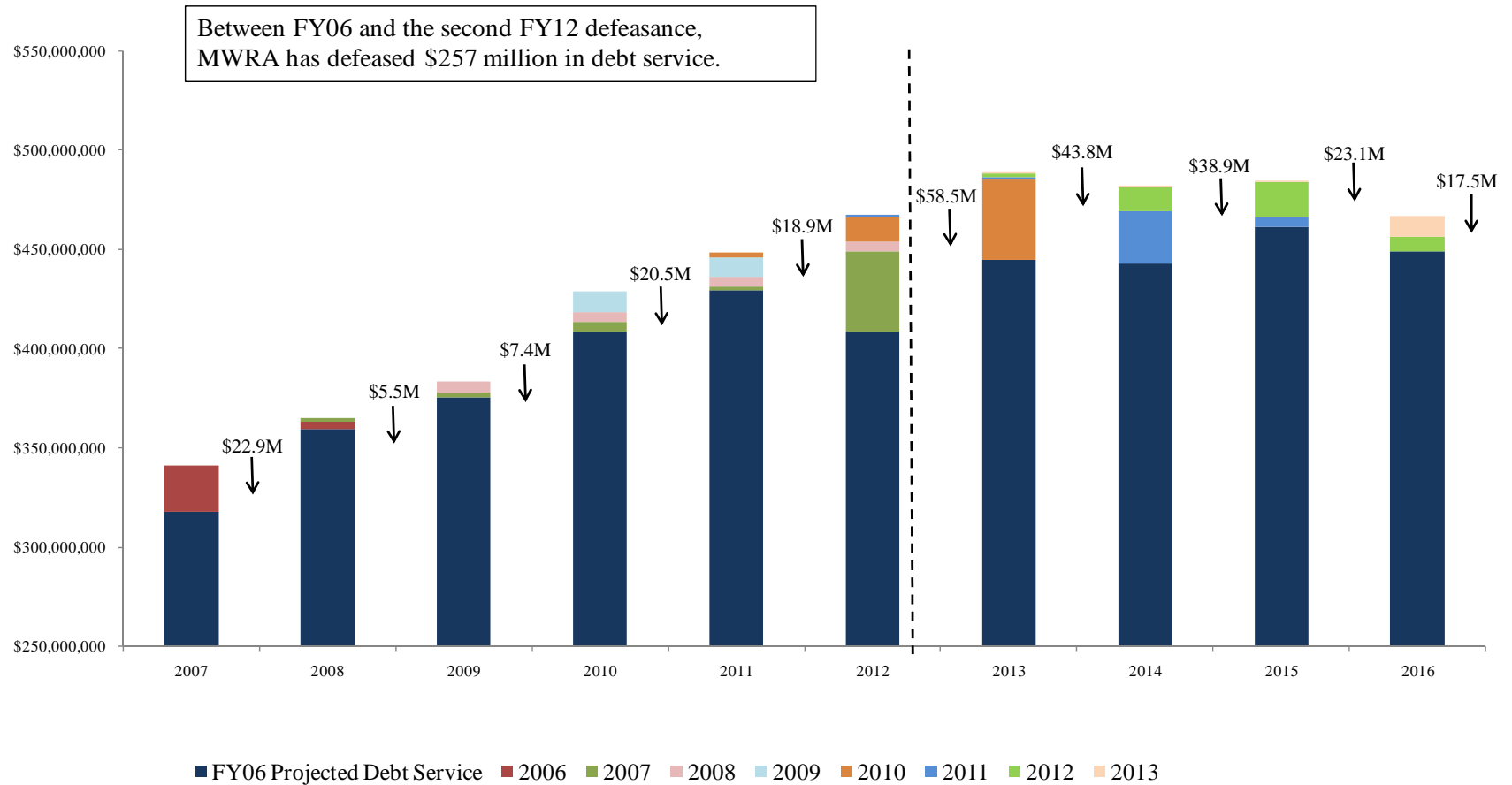
- MWRA has made additional payment to the pension fund to lower future annual payments or shorten the amortization period





Addressing the Debt Challenge

Impact of Defeasances FY06-FY12





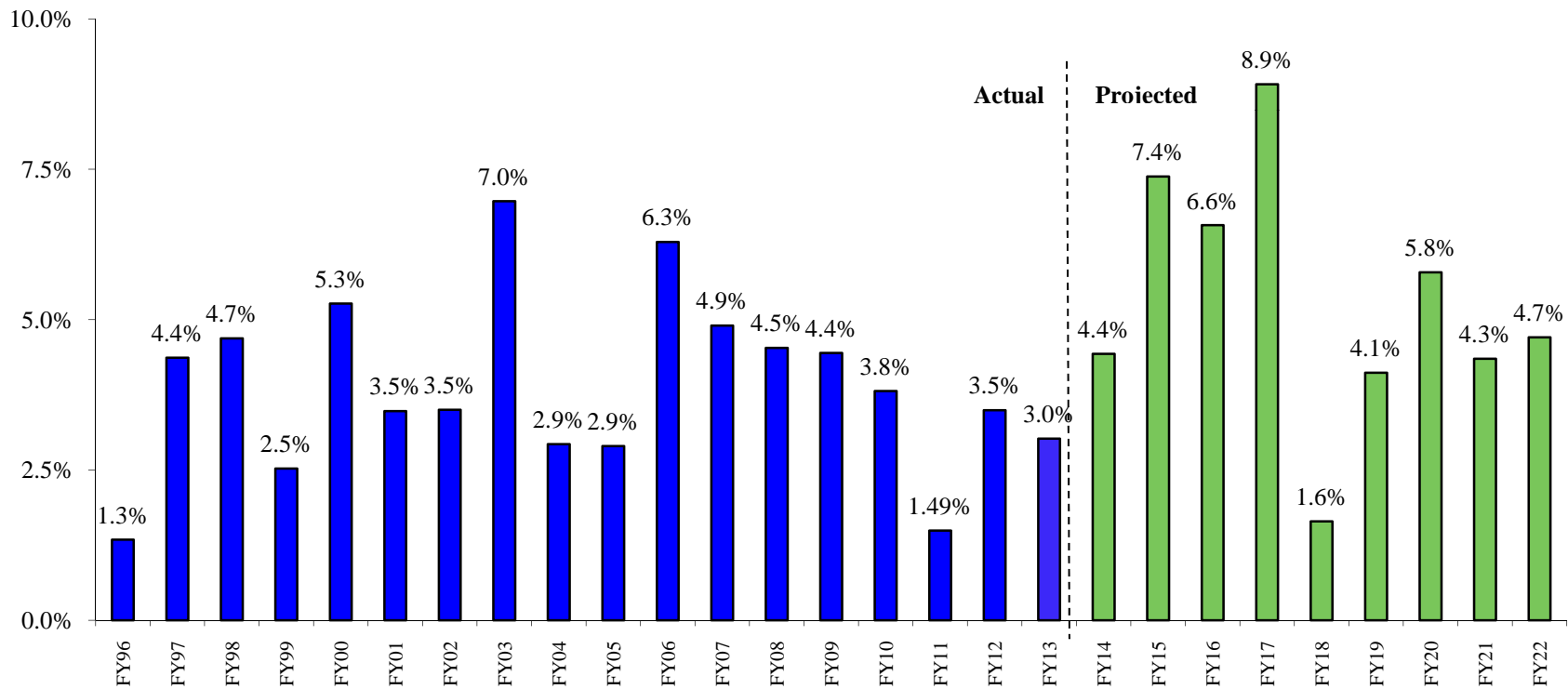
Addressing These Challenges

- 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



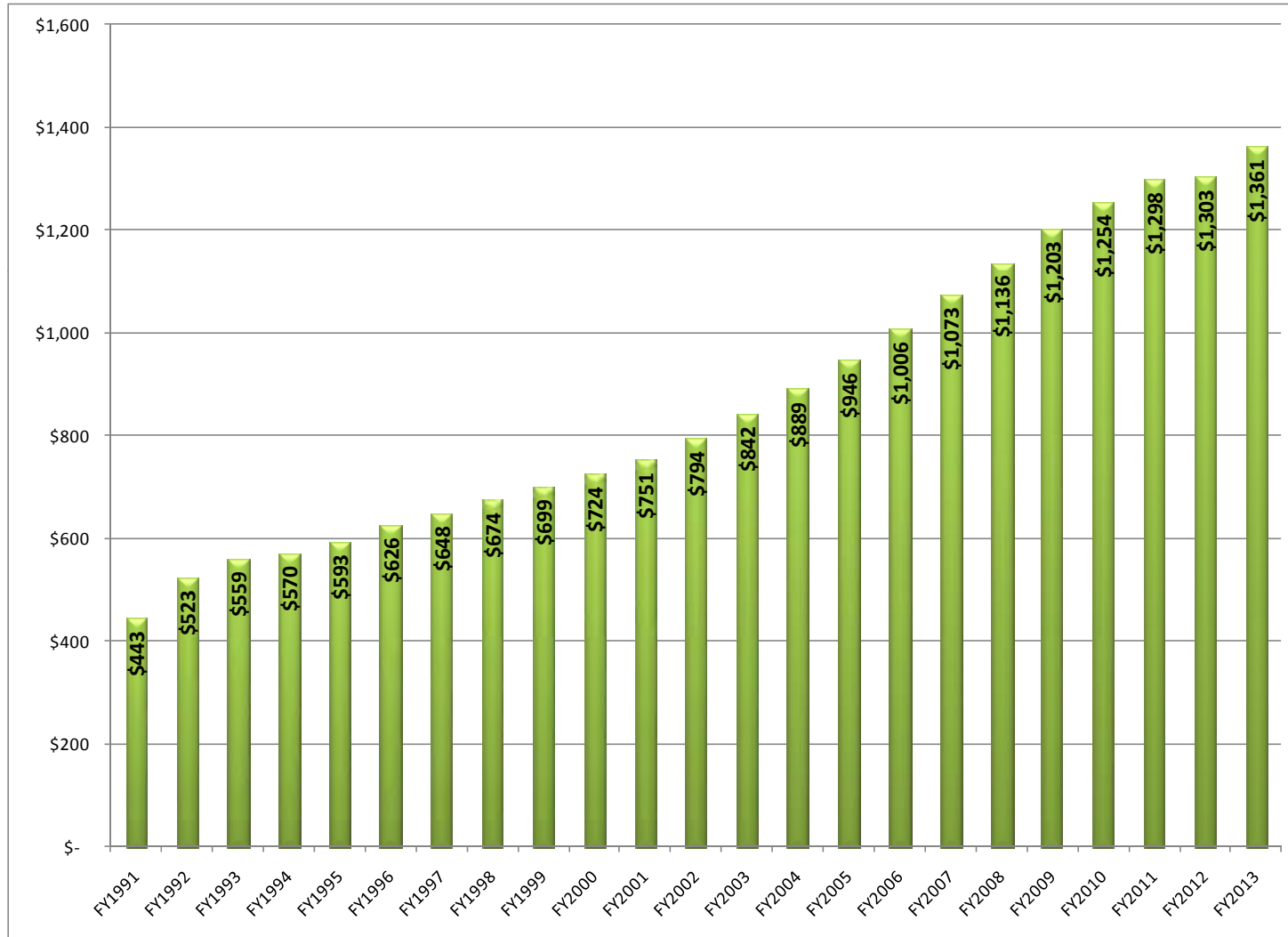
Rate Increase History and Projections

Historical and Projected Rate Revenue Changes





Household Water and Sewer Bills





Who's Going To Pay For It?

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