



City of Bellevue

Watermain Replacement Program

Informational Briefing

Environmental Services Commission

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AGENDA



Background



Challenges of the Aging Water System



Watermain Replacement Program



Financial Strategies

DRINKING WATER – A VITAL RESOURCE FOR QUALITY OF LIFE

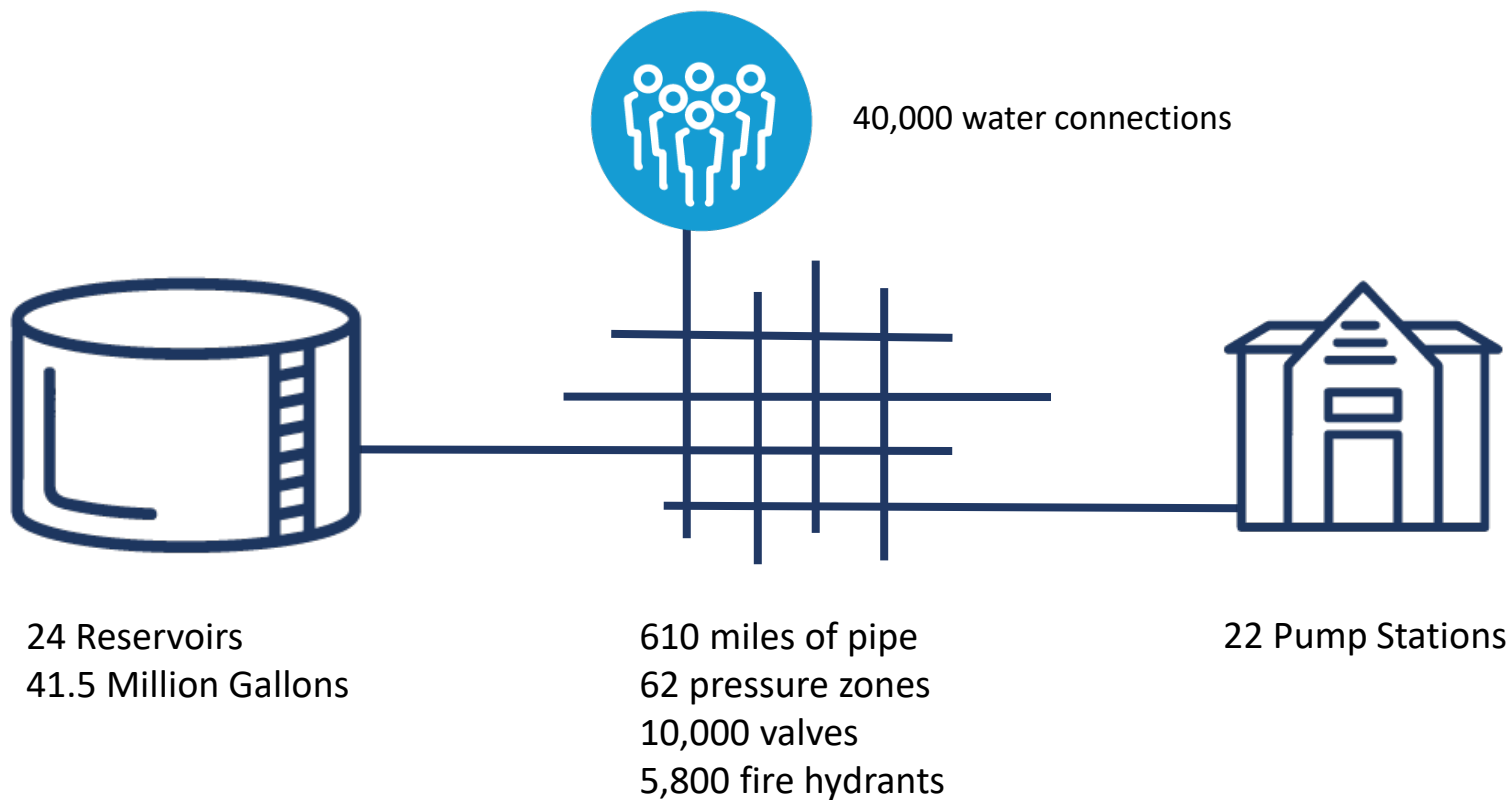




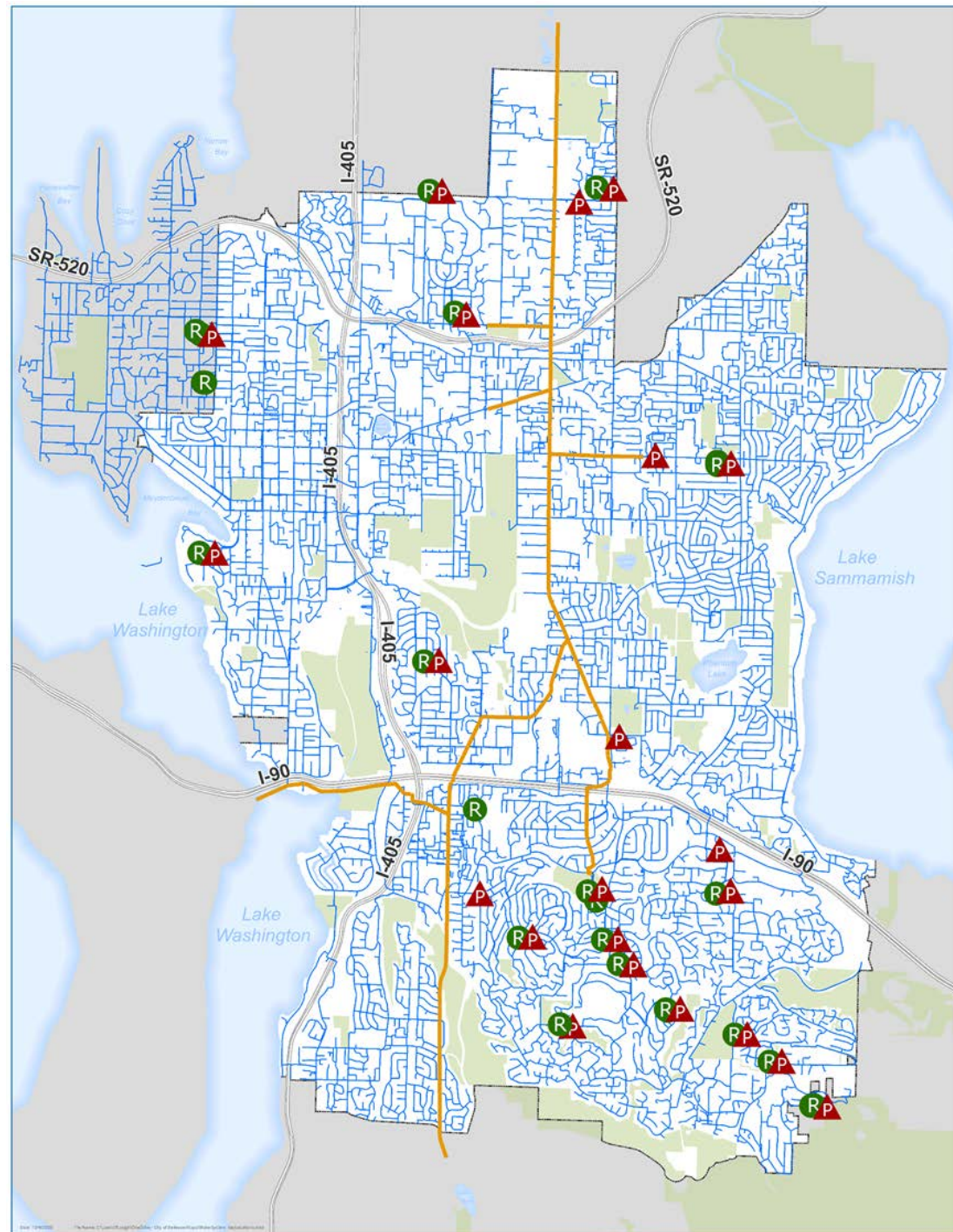
Water Infrastructure

Crucial for reliable delivery of high-quality drinking water to our community

A \$1.2 Billion Water System – By The Numbers



Water Infrastructure System





UNDERGROUND PIPE INFRASTRUCTURE

- Watermains are critical infrastructure to distribute water to our customers
- Pipe network built 50 to 70 years ago
- Aging pipes pose risk for failure, so system renewal is needed
- Replacement costs will steadily increase over next 75 years



Challenges of the Aging Water System

Aging Pipes Break



City of Bellevue

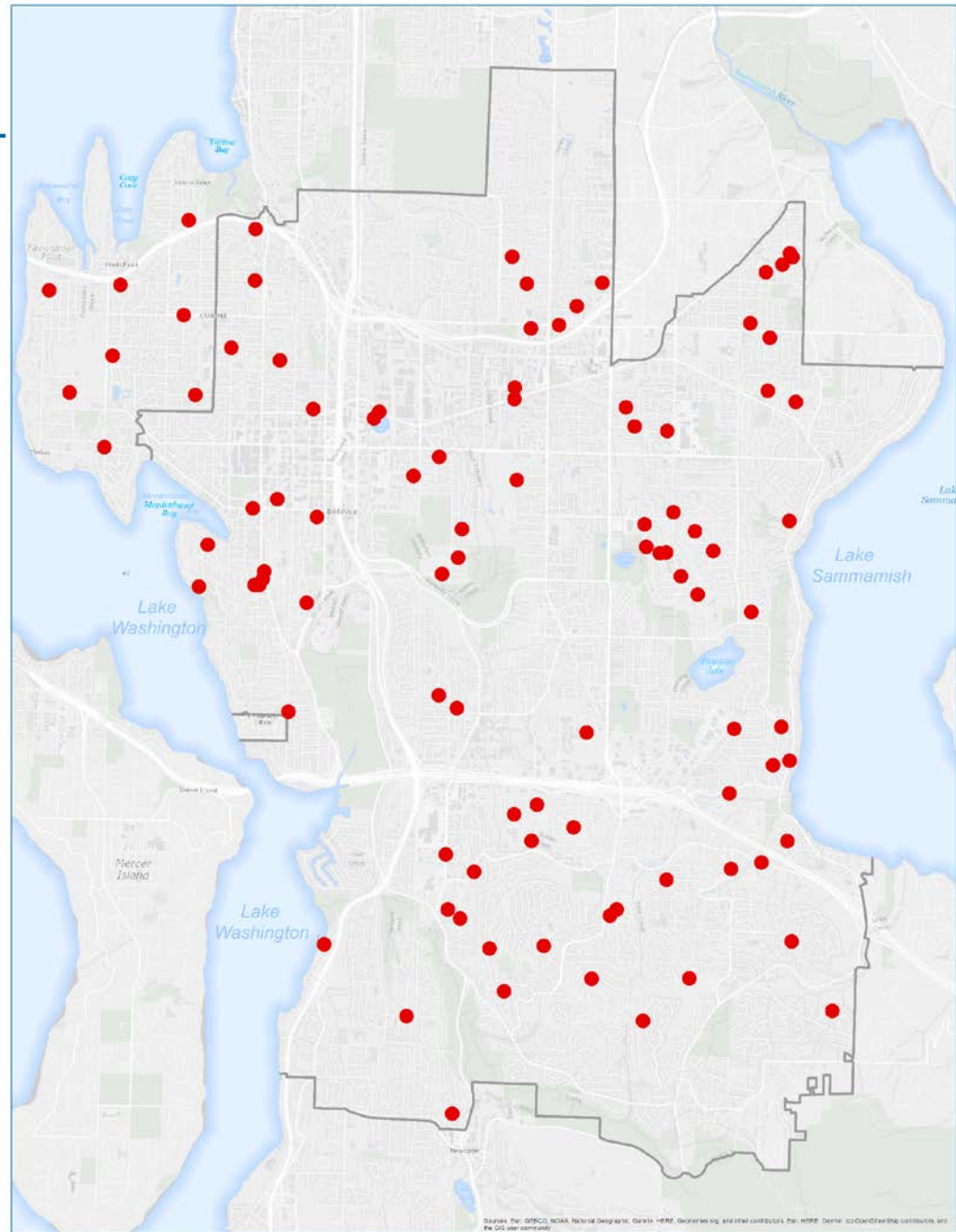
Watermain Breaks: 2016-2019

2016 – 17 main breaks

2017 – 34 main breaks

2018 – 25 main breaks

2019 – 22 main breaks





Main Break Impacts

- Injury to people
- Harm to personal property
- Loss of water supply to customers
- Drinking water quality impacts
- Roadway structures / traffic
- Streams and creeks
- Clogged storm and sewer pipes
- Loud equipment, work lights, nighttime loss of sleep for customers

West Lake Sammamish Parkway Watermain Break and Roadway Repair 2012



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Lake Hills Boulevard WM Break August 2020





Watermain Replacement Program

Solving the big challenge of an aging system

Watermain Replacement Program Goals

- Replace 5 miles of pipe per year
- Focus on Asbestos Cement Pipe
- Seismic mitigation benefit
- Improved fire flow benefit
- 100 to 125-year replacement cycle



Project Delivery informed by Asset Management

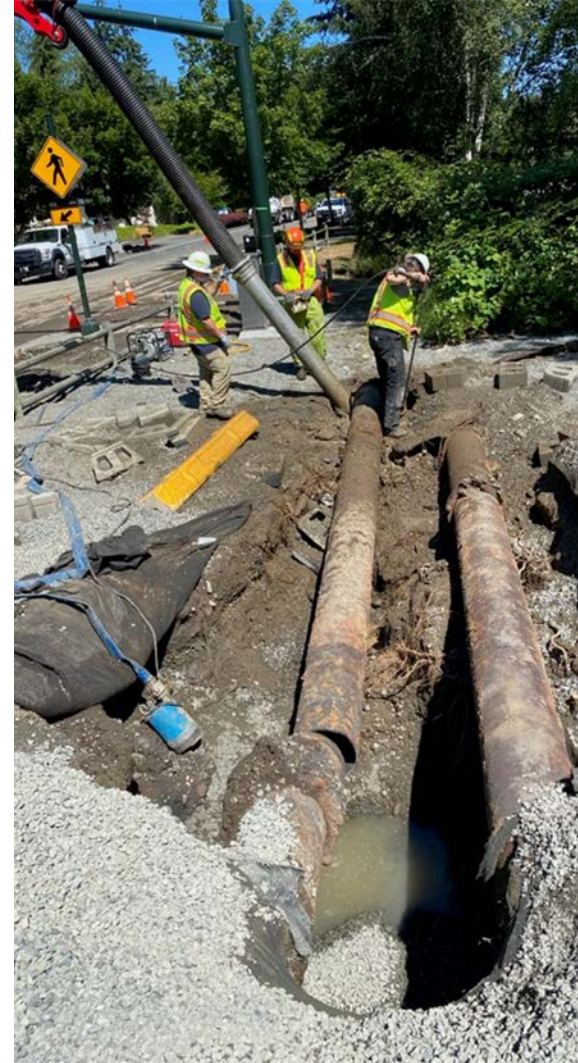
Major Factors:

- Size, age and condition of pipe
- Break history – severity & frequency
- Probability and consequence of failure

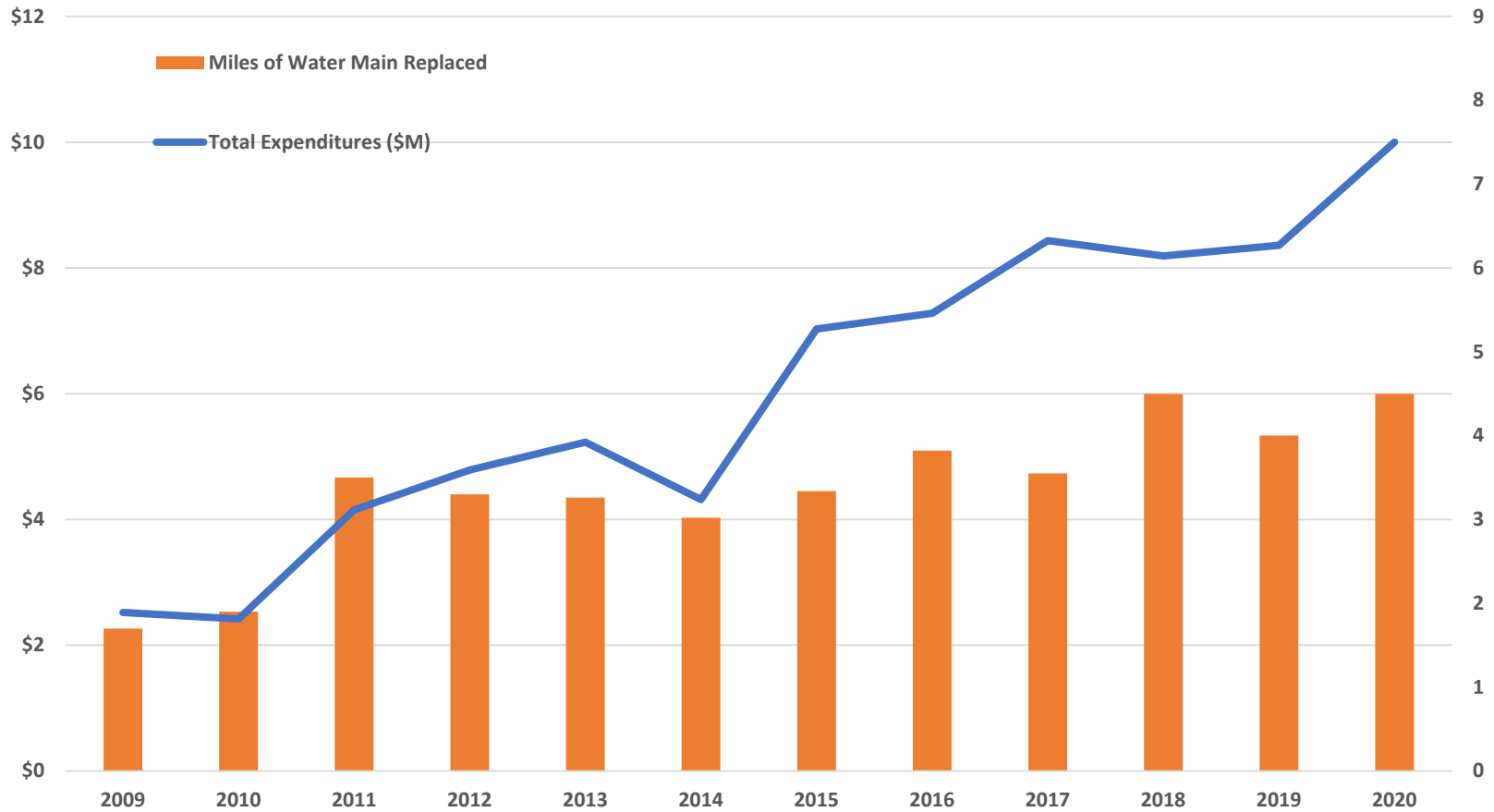


Additional Project Selection Drivers

- Other city projects including transportation, sewer & storm
- Other state and local governments, private developers and franchise utilities



Project Expenditures vs. Miles of Pipe

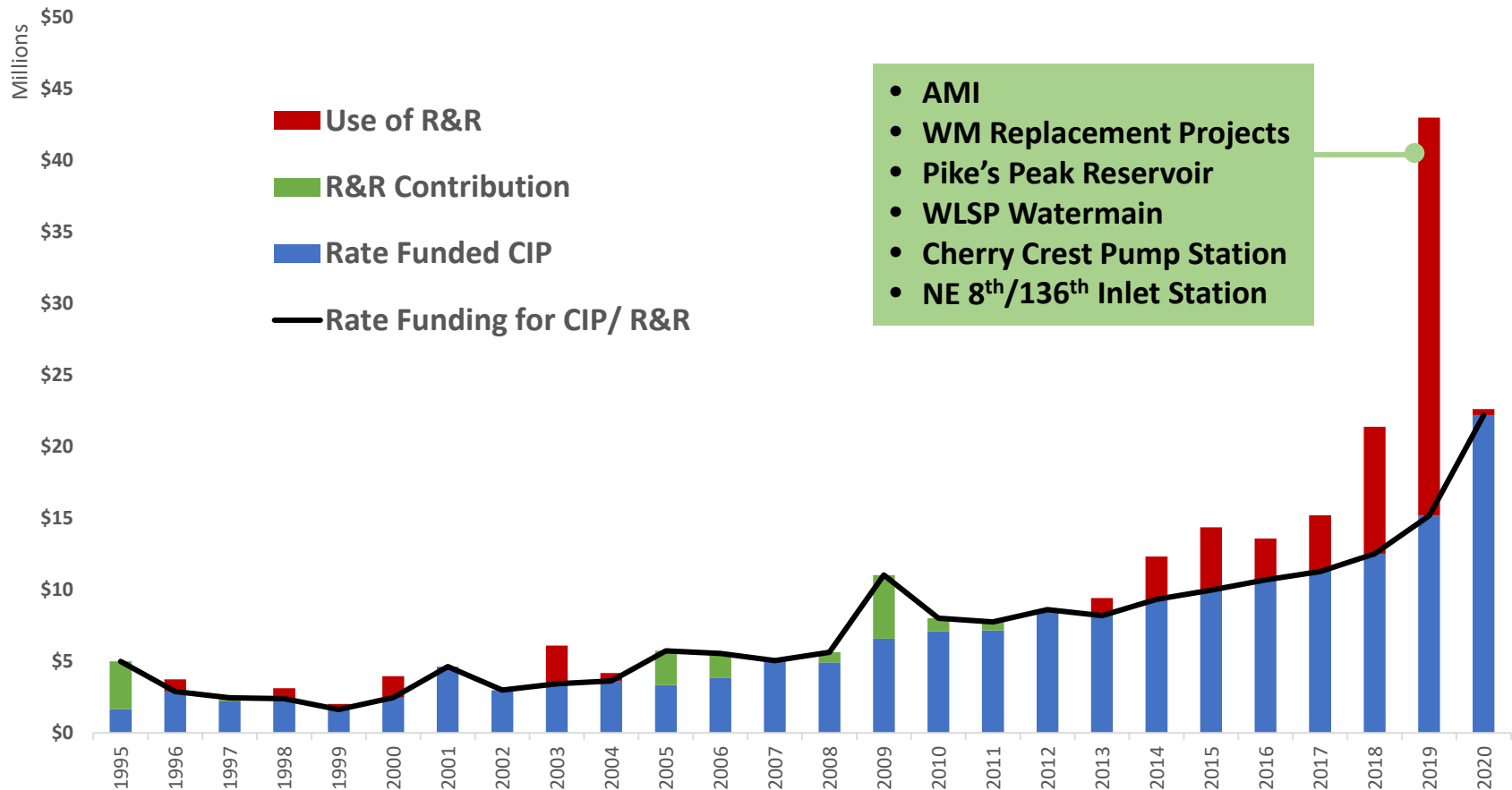




Financial Strategies

\$80M Watermain Replacement Program

Water Infrastructure Funding Strategy



Bellevue is positioned to meet the challenges of aging watermain

- Actively replacing AC main now – the Watermain Replacement Program will continue in future CIPs
- Fiscally responsible schedule for replacement - 5 miles per year is prudent
- Infrastructure R&R funding plan in place



High-Quality Drinking Water for a penny a gallon

\$1 Retail



90 gallons delivered to your tap





END OF PRESENTATION