

## FY2017-2023 Capital Investment Program

## W-16 Small Diameter Water Main Replacement

Category: Water  
Department: Utilities

Status: Ongoing  
Location: Water Service Area

## Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget	FY 2022 Budget	FY 2023 Budget
133,469,885	63,175,885	10,325,000	9,542,000	9,722,000	9,916,000	10,114,000	10,317,000	10,358,000

## Description and Scope

This program focuses primarily on replacing small diameter asbestos cement (AC) pipe that has reached its useful life. A secondary benefit is increasing the emergency fireflow available to neighborhoods. This investment will ramp up water pipeline replacement to 5 miles/year by 2018, and then be adjusted with inflation to maintain the 5 miles per year replacement rate. At that rate, water pipe will need to last on average 100-125 years. Pipes are selected for replacement based on risk of failure (likelihood and consequence), failure history, and coordination with other construction, such as planned street overlays (which reduce restoration costs). Project costs include a 2.8% cost increase reflecting actual bid experience for pipe replacement.

## Rationale

In the short term, this program reduces the likelihood of catastrophic system failures, unplanned service interruptions, damage claims to the city, and sharp rate increases to react to system failures rather than proactively managing the system. In the long term, timely replacement or repair of water system assets keeps customer rates as low as practical by managing the system at the least life-cycle cost while maintaining target service levels and meeting regulatory requirements.

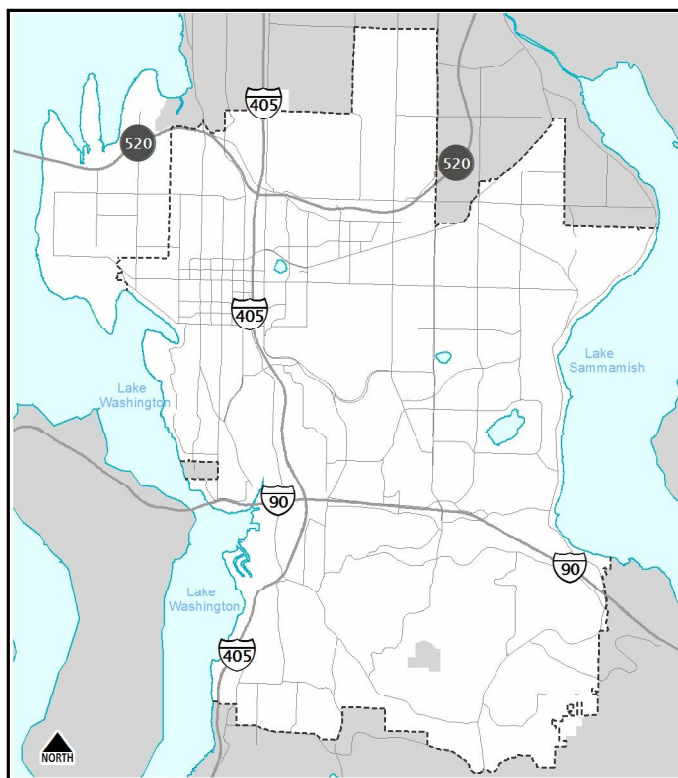
## Environmental Impacts

Replacing aging water infrastructure ensures a reliable supply of safe drinking water in sufficient quantity for homes and businesses. Minimizing water system failures means reduced environmental damage such as flooding and erosion, which can damage lakes, streams, and wetlands. Timely replacement of aging water pipes and appurtenances reduces the volume of treated, potable water lost to leakage into the ground or following system breaks.

## Operating Budget Impacts

This program will have no significant impact on operating revenues and/or expenditures.

## Project Map



## Schedule of Activities

Project Activities	From - To	Amount
Project Costs	Ongoing	133,469,885

**Total Budgetary Cost Estimate:** 133,469,885

## Means of Financing

Funding Source	Amount
Utility Rates/Fees	133,469,885

**Total Programmed Funding:** 133,469,885  
**Future Funding Requirements:**

## Comments