

# 2019 Water System Plan: Overview

Civil Rights, Utilities, Economic Development & Arts Committee  
*September 11, 2018*



# What is a Water System Plan?

Describes how Seattle Public Utilities will:

- meet current and future water demands,
- ensure delivery of high-quality drinking water,
- enhance system reliability and resiliency, and
- cost-effectively invest in and maintains the water system.

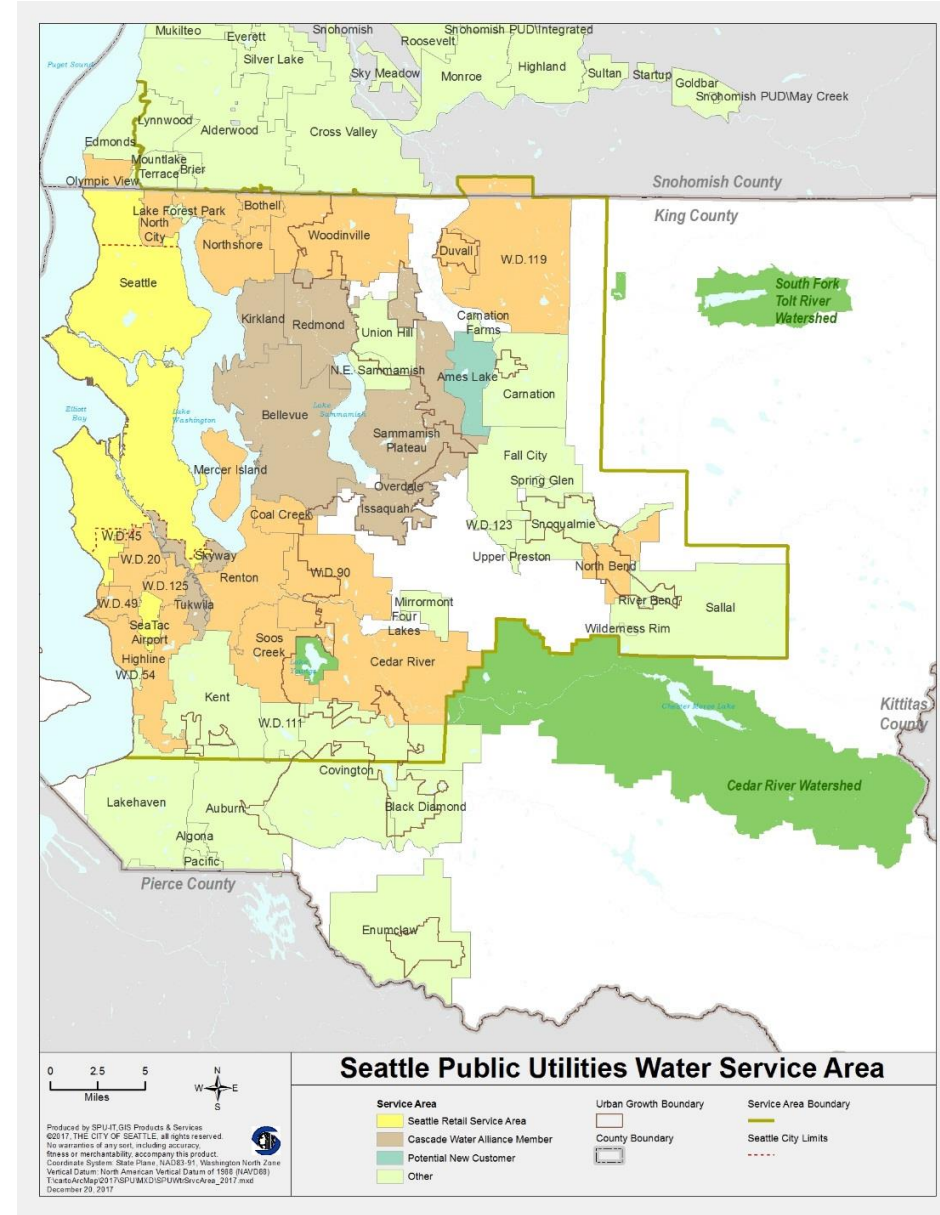
# Why is it important?

- Required by Washington State as condition for Operating Permit and low-interest loans
- Ensures consistency with growth management act and other local plans



# SPU's Water System Plan

- Retail and wholesale service areas
- Future water demand and supply outlook
- New Water Use Efficiency Goal
- Water Shortage Contingency Plan update
- Infrastructure needs for next 20 years





# Public Review and Comments

- Public Review: March 12- June 1, 2018
- Water System Advisory Committee
- Changes made:
  - Added background information
  - Corrected error in cost projection for future water main replacements

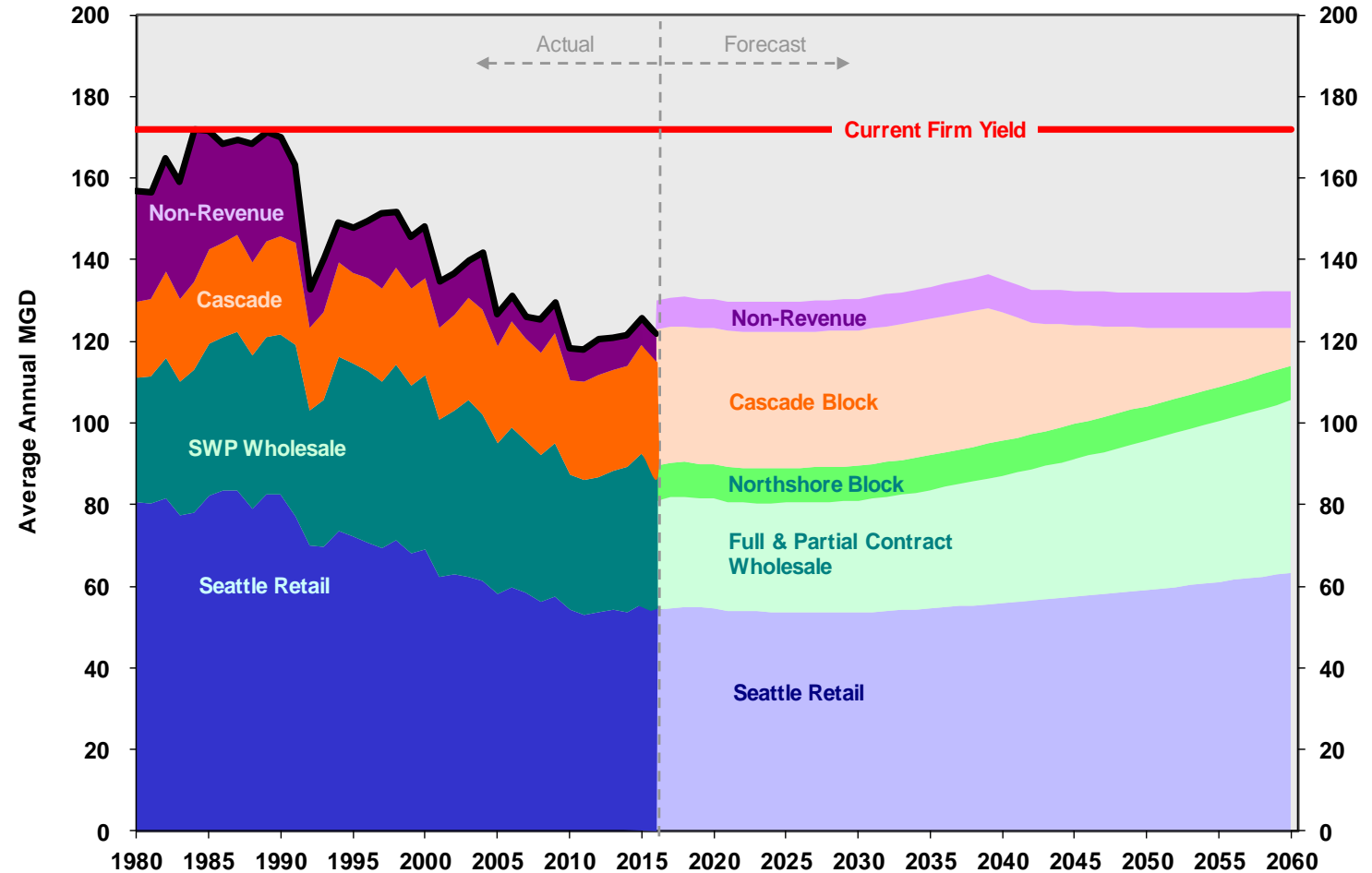




# Meeting Future Water Demand

- SPU is now and will continue to provide high-quality drinking water to the region.
- No new water supplies are needed before 2060, even with climate change.
- Will evaluate and implement climate change adaptations to improve resiliency.

Components of Actual and Forecast Demand: 1980-2060





# Water Resources

## Sources:

- Cedar River
- South Fork Tolt River
- Seattle Well Fields

## Operating Objectives:

- Water supply for people
- Instream flows for fish
- Hydropower generation
- Flood management

## Needs:

- Water Supply Resiliency
- Climate Change Studies
- Dam Safety Upgrades
- Water Conservation



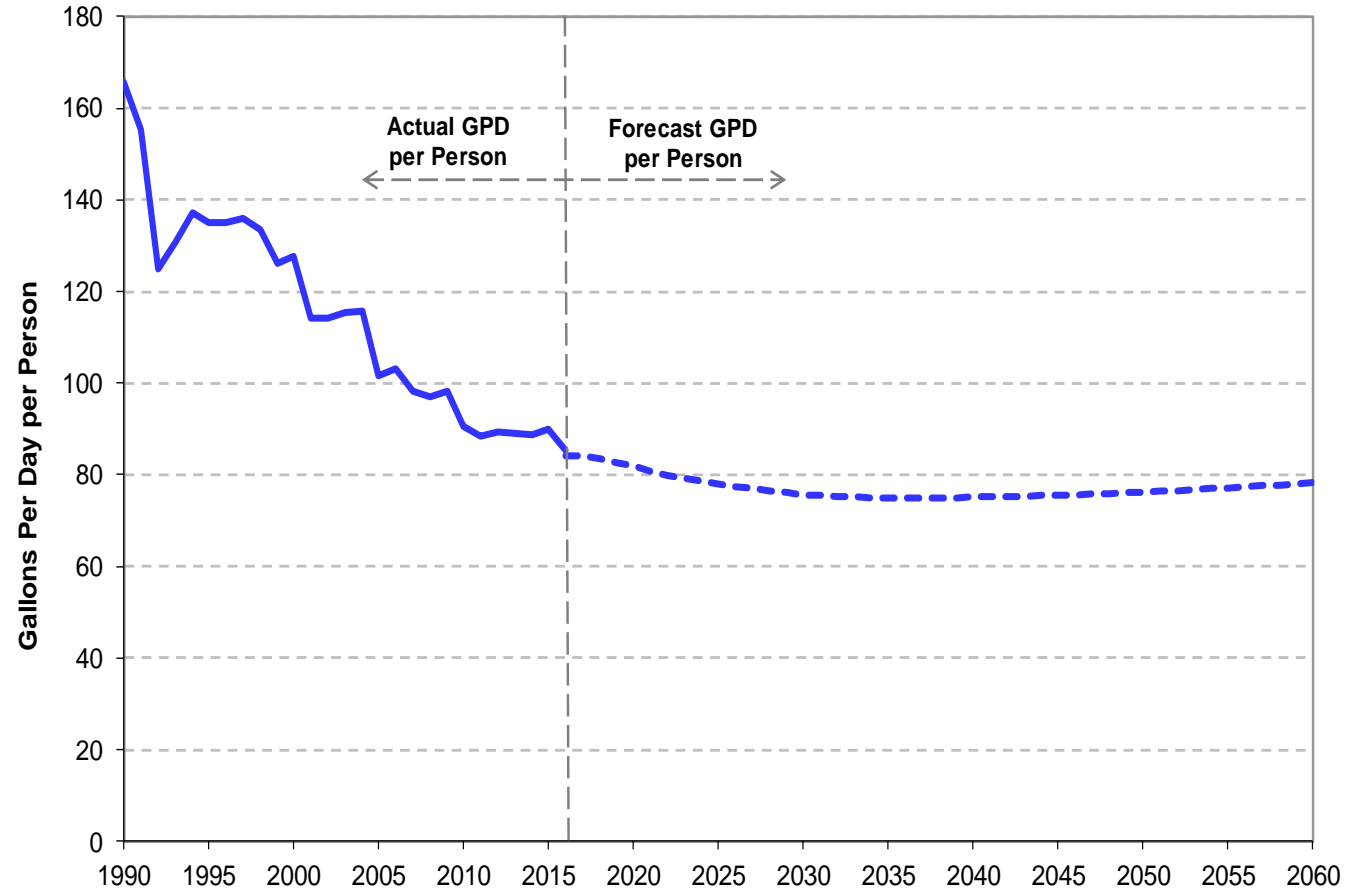
# Water Use Efficiency Goal 2019-2028

Keep the total average annual  
retail water use

of Saving Water Partnership members  
under 110 million gallons per day  
through 2028

despite forecasted population growth  
by reducing per capita water use.

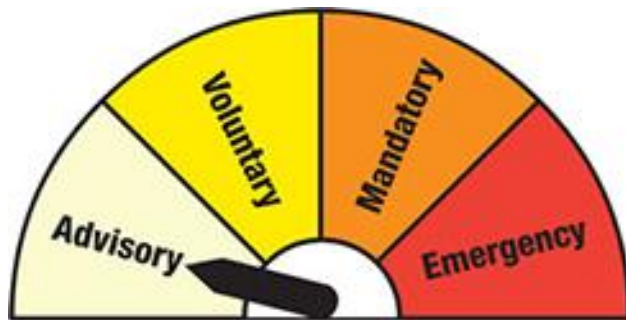
Saving Water Partnership Customers





# Water Shortage Contingency Plan

- Guides SPU during droughts and other types of water shortages
- Phased approach
- Updated based on lessons learned in 2015
- Allows SPU to enter Advisory Stage to begin planning





# Water Quality and Treatment

## Treatment Facilities:

- Tolt Treatment Facility
- Cedar Treatment Facility
- Well Field Treatment Facilities
- In-Town Reservoirs

## Objectives:

- Public health protection
- Regulatory compliance
- Customer confidence

## Needs:

- Floating Cover Replacement  
Bitter Lake Reservoir  
Lake Forest Park Reservoir
- Maintain Treatment Facilities



# Water Transmission System

## Facilities:

- 193 miles of pipeline, 16-96 inches in diameter
- 7 covered reservoirs
- 15 pump stations
- 7 elevated tanks and standpipes
- 131 wholesale meters

## Objectives:

- Deliver water from sources to retail and wholesale customers

## Needs:

- Tolt Slide Mitigation
- Lockbar Pipe Inspections
- Cathodic Protection
- Seismic Improvements



# Water Distribution System

## • **Facilities:**

- 1,630 miles of water mains
- 6 covered storage reservoirs
- 16 pump stations
- 6 elevated tanks and standpipes
- 17,000 valves
- 19,000 fire hydrants
- 191,000 services/meters

## **Objectives:**

- Deliver water to retail customers
- Provide water for fire fighting

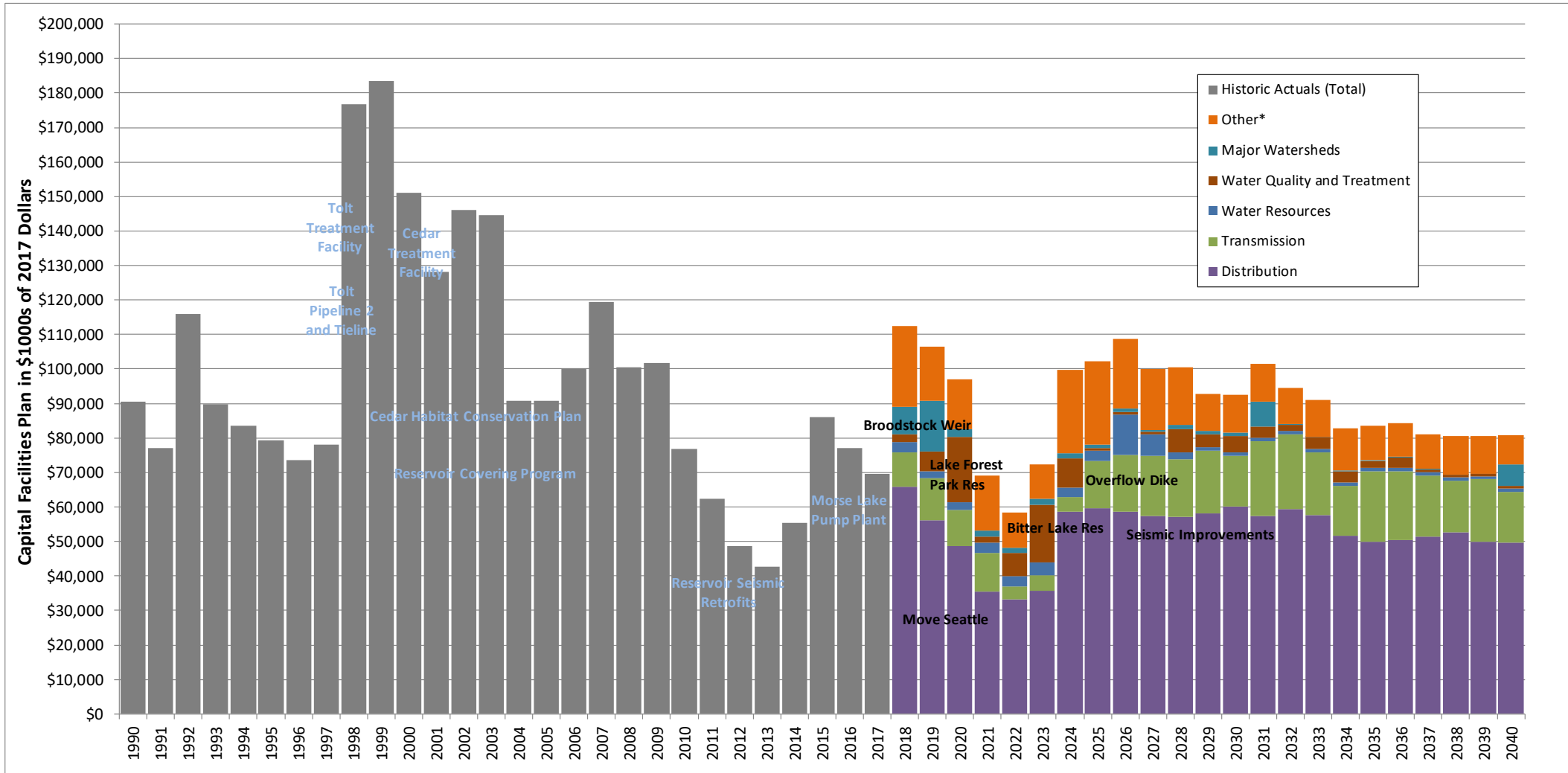
## **Needs:**

- Water Main Replacement
- Seismic Improvements
- Transportation-related





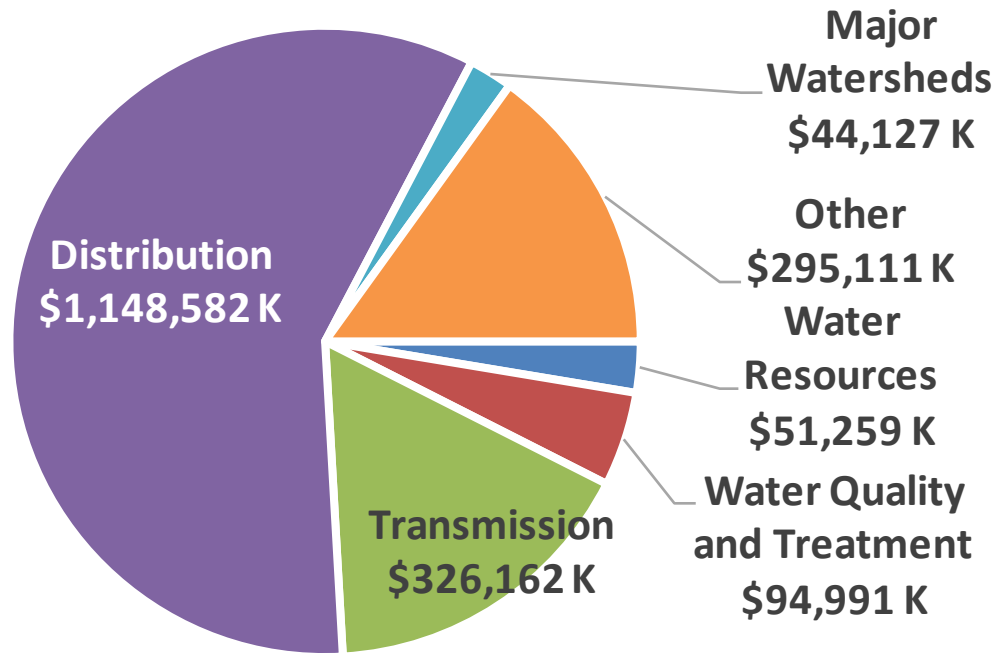
# Past and Projected Capital Investments





# Key Findings - Future Investments

## 2019-2040 Capital Facilities Plan



### Focus:

- Distribution and transmission
- Replace aging infrastructure
- Seismic improvements

\* Other includes Fleets, Facilities, Security, Information Technology, SCADA and other miscellaneous projects.



# Summary

- SPU is now and will continue to provide high quality drinking water to the region.
- No new water supplies are needed before 2060, even with climate change.
- 2019-2028 Water Use Efficiency Goal to be set will require continued reductions in per capita water use.
- Focus of future capital improvements will be in the distribution and transmission systems.

# Water System Plan Review and Approval



- Seattle City Council Review and Adoption by Ordinance: September/October 2018
- State Department of Health Review and Approval: By April 2019



# 2019 Water System Plan Questions?

