

# Ship Canal Water Quality Project

Project Update



# Ship Canal Water Quality Project

- Overview
- Schedule
- Cost
- Uncertainties and risks
- Communications next steps



# Ship Canal Water Quality Project

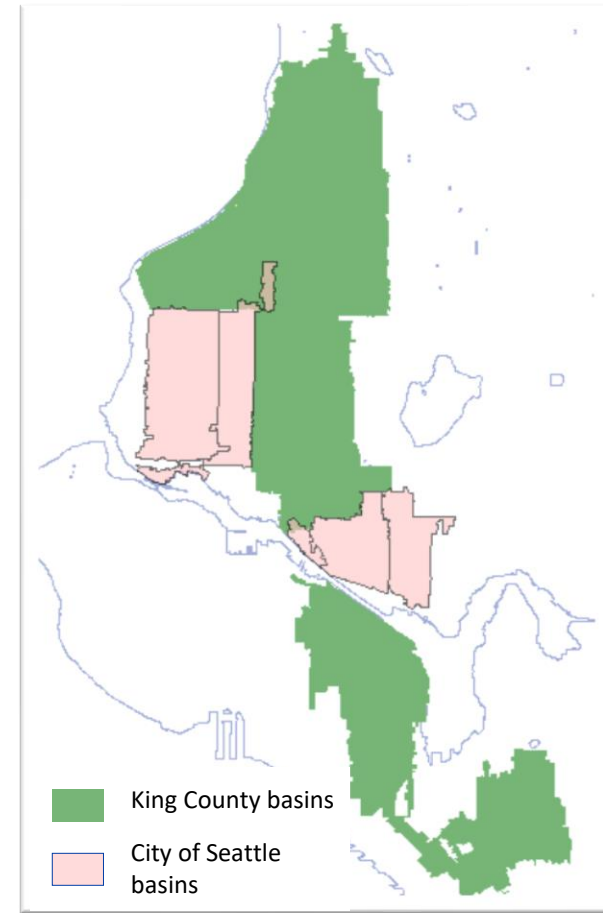
This project will improve water quality by reducing SPU and King County's combined sewer overflows.

## Consent decree

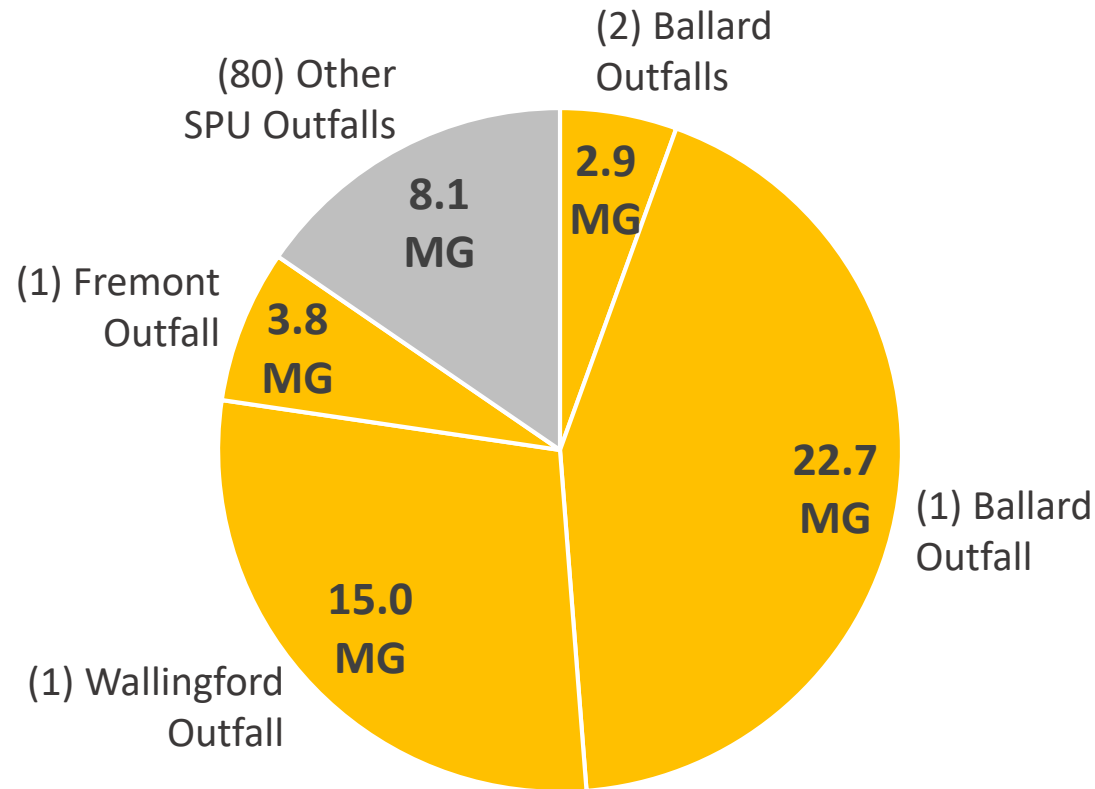
- With US Department of Justice, US Environmental Protection Agency, and WA Department of Ecology
- Less than 1 combined sewer overflow per outfall per year on a 20-year moving average

## Joint Project: King County & City of Seattle

- 7 Outfalls: 2 KC, 5 Seattle
- Joint Project Agreement: City of Seattle (65%), King County (35%)



# Seattle's 2018 Combined Sewer Overflow Volume



MG = Million Gallons

# 84%

of Seattle's 2018 sewer overflow volume came from **five** Ship Canal Water Quality Project outfalls

# 16%

of Seattle's 2018 sewer overflow volume came from remaining **eighty** outfalls



Seattle  
Public  
Utilities



King County

# Ship Canal Water Quality Project



**Ballard Site**

**East Ballard Site**


**Fremont Site**

**Queen Anne Site**

**Wallingford Site**

 Underground storage tunnel

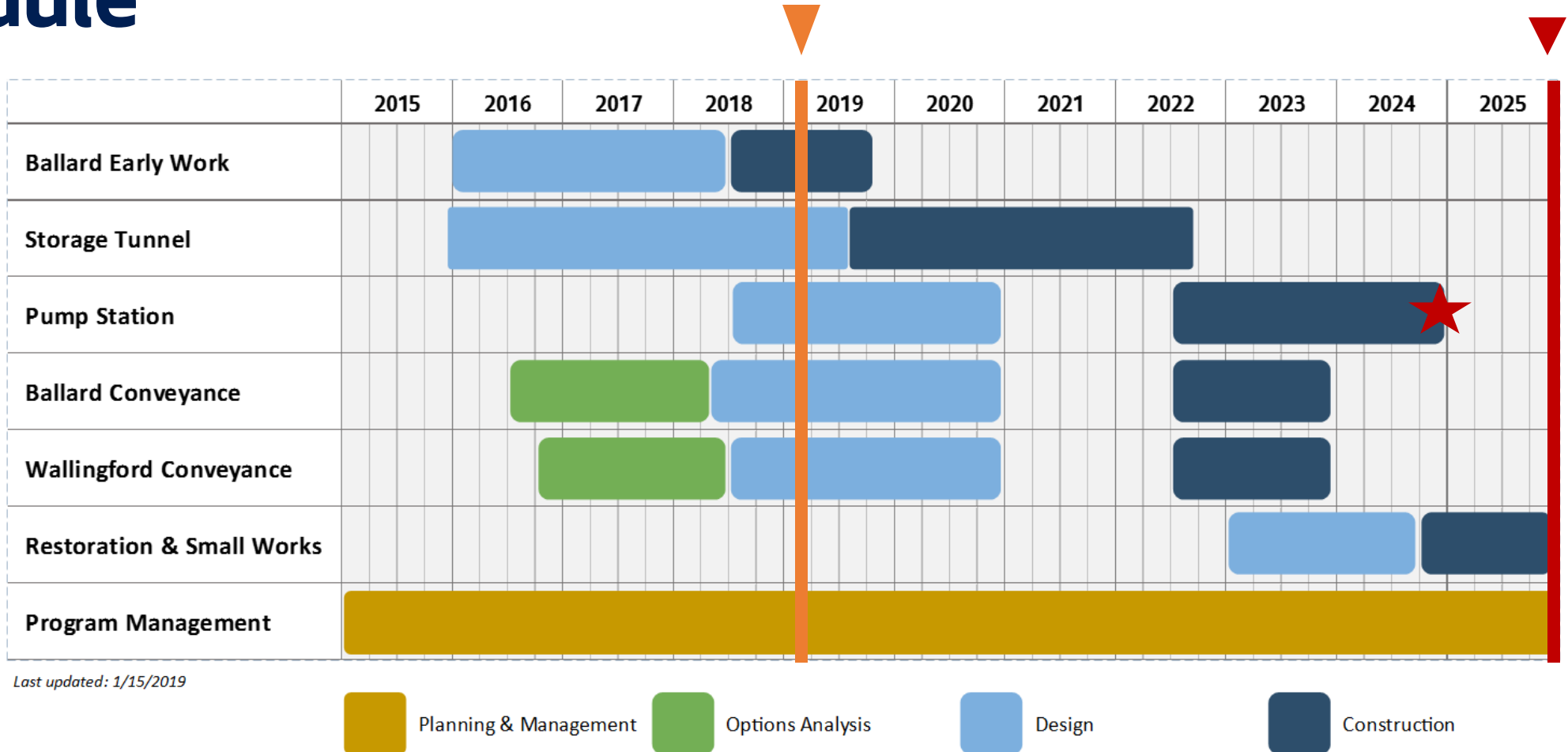
 Project elements

 Neighborhood boundary



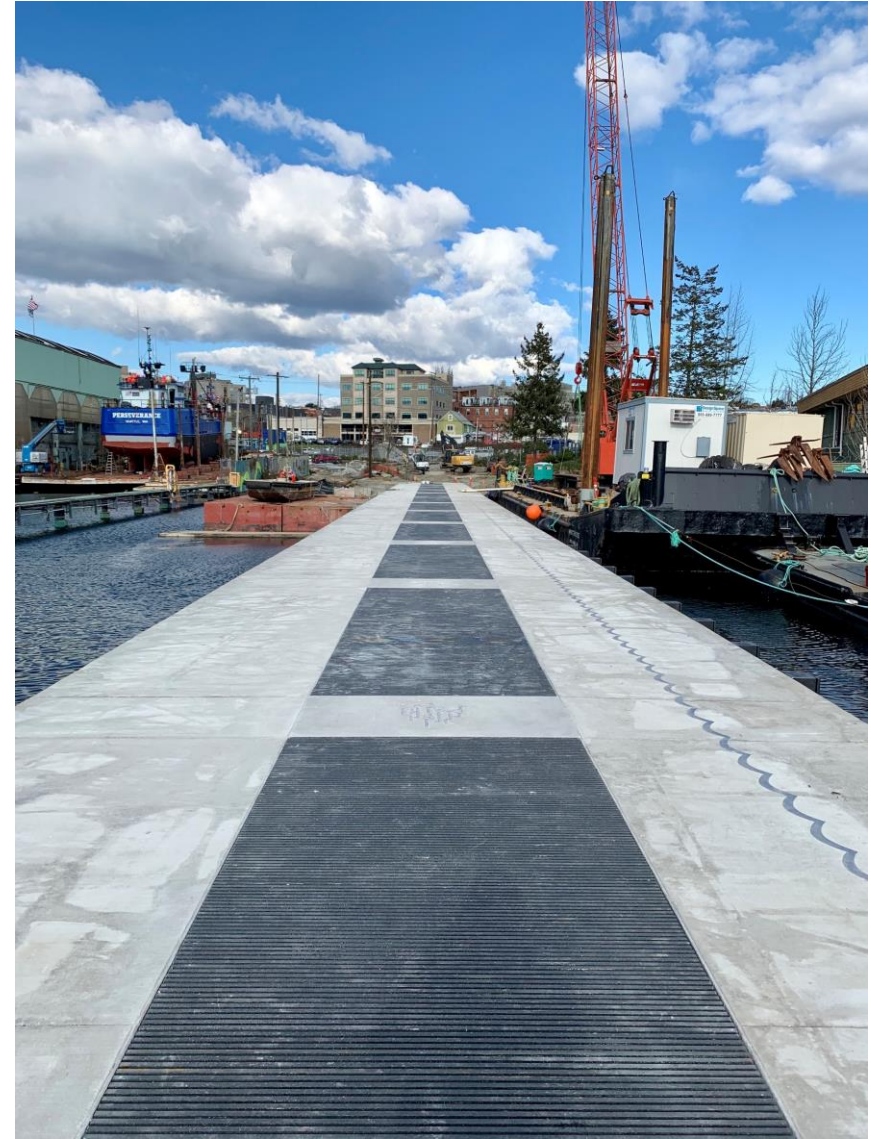
# Schedule

Five major construction packages





# Construction: Ballard Early Work



# Project Cost Estimate: \$570M with 70% confidence\*

SPU's share is approximately \$389M

Cost Categories	April 2018 Cost Estimate	January 2019 Cost Estimate
Base Costs (Hard + Soft + Property) & Change Orders	\$447	\$438
Escalation	\$59	\$64
Cost Reserves for Uncertainty, Risk Costs, and Schedule Risks	\$64	\$68
Schedule Risk Impact Escalation	\$0	\$0
<b>Subtotal Cost Projection</b>	<b>\$570**</b>	<b>\$570**</b>
<b>Subtotal % Confidence</b>	<b>65%</b>	<b>70%</b>

\*There is a 70% chance costs will be at or below the estimated cost and a 30% chance the estimated cost will be exceeded.

\*\*Joint Project Agreement: City of Seattle – 65%, King County – 35%





# Potential Scope Adjustments - Update

## Partially or Fully Realized

- Use of selective refurbished Tunnel Boring Machine
- Pump Station Value Engineering Recommendations
- Construction staging cost reduction
- SDOT Street Use Permit Credit

## Not realized

- Earlier construction of Wallingford and Ballard Conveyance projects
- Tunnel bid alternative
- Odor control changes at 3rd, Fremont, and 11<sup>th</sup> Sites

## New!

- Shilshole Pipe Removal

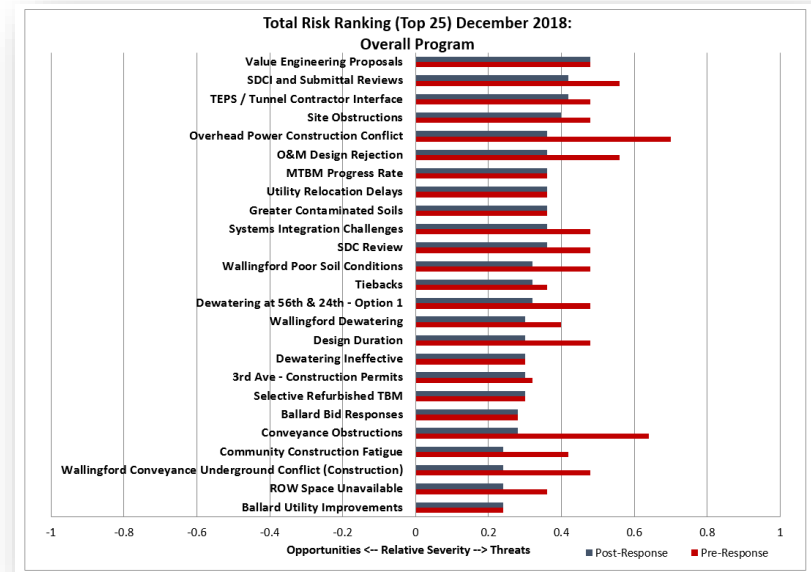
# Uncertainty and Risk Management

## Uncertainties

- Decreases as designs develop
- Decreases with construction bids

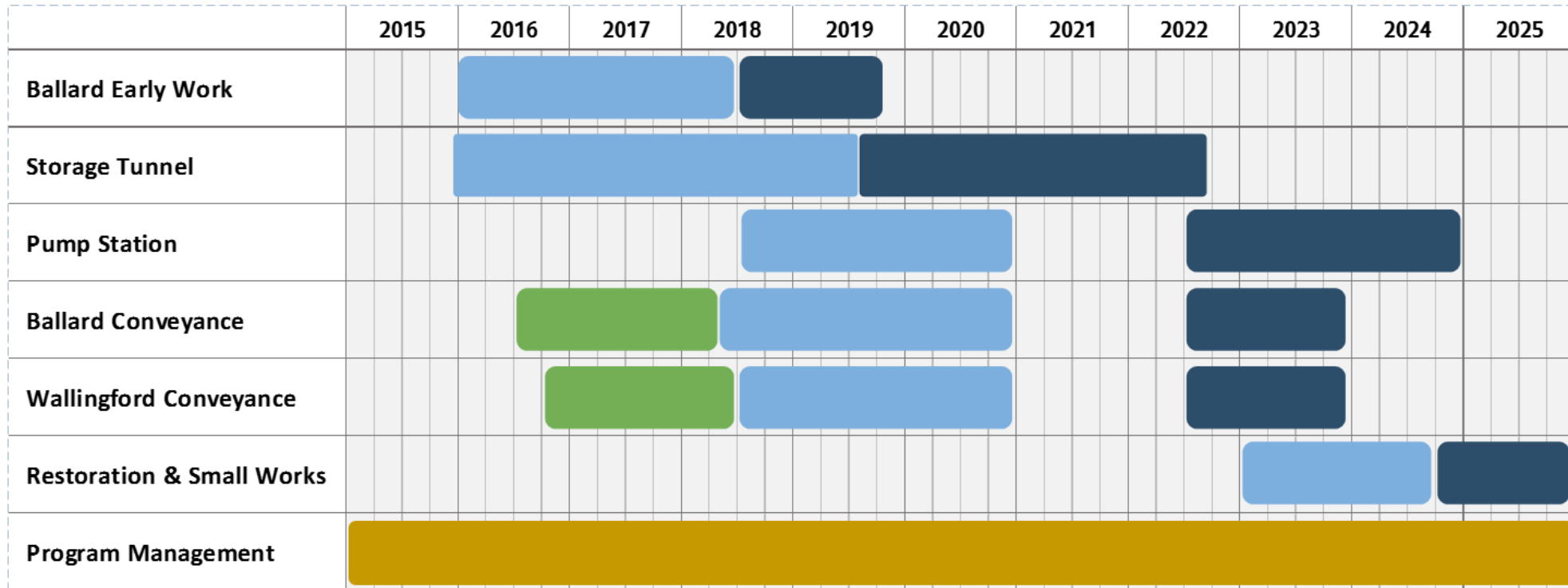
## Risks

- Cost and schedule risks
- Manage based on likelihood and impact
- Update cost and schedule confidence every 4 months

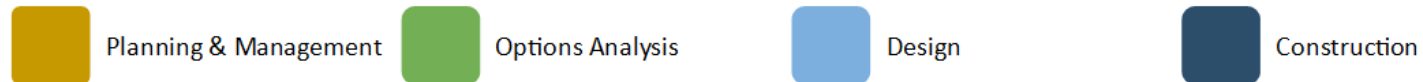


# Risk: Remaining Consent Decree Milestone

Construction Complete Deadline



Last updated: 1/15/2019



# Tunnel Construction Package Cost

- 2018 Contractor outreach
- Uncertainty range has decreased
- Estimated cost of \$220 million
- **Milestone:** We will receive bids for 80% of our construction costs in Summer 2019



# Construction

## Community and business impacts

- Traffic and noise
- Long construction durations

## Construction issues

- Underground
- Unknown risk events





# Communication Next Steps

- Semi-annual reports, continued
- Proviso, April/May 2019
- Project update, Summer 2019
- Groundbreaking celebration, Q1 2020





**Seattle  
Public  
Utilities**



**King County**

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