

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

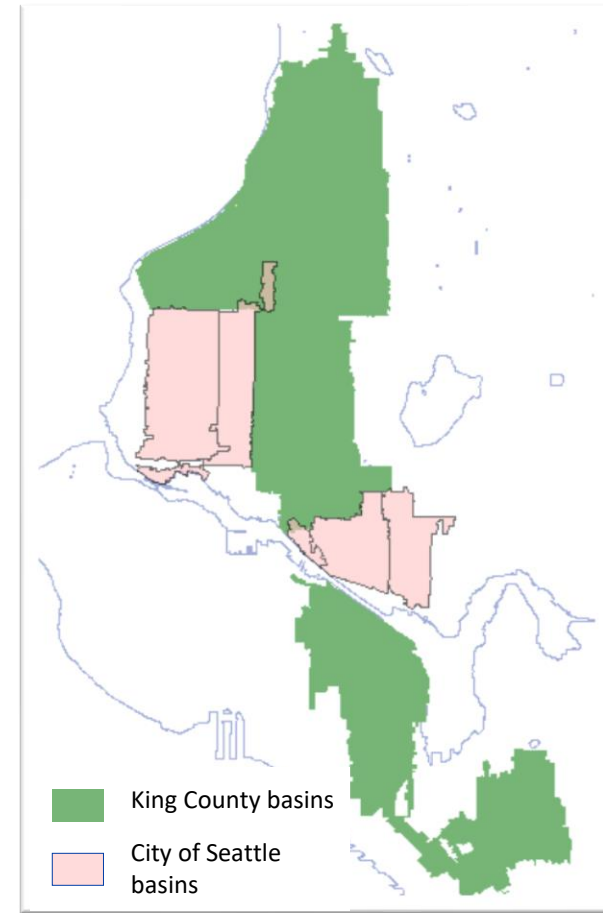
This project will improve water quality by reducing SPU and King County's combined sewer overflows.

Consent decree

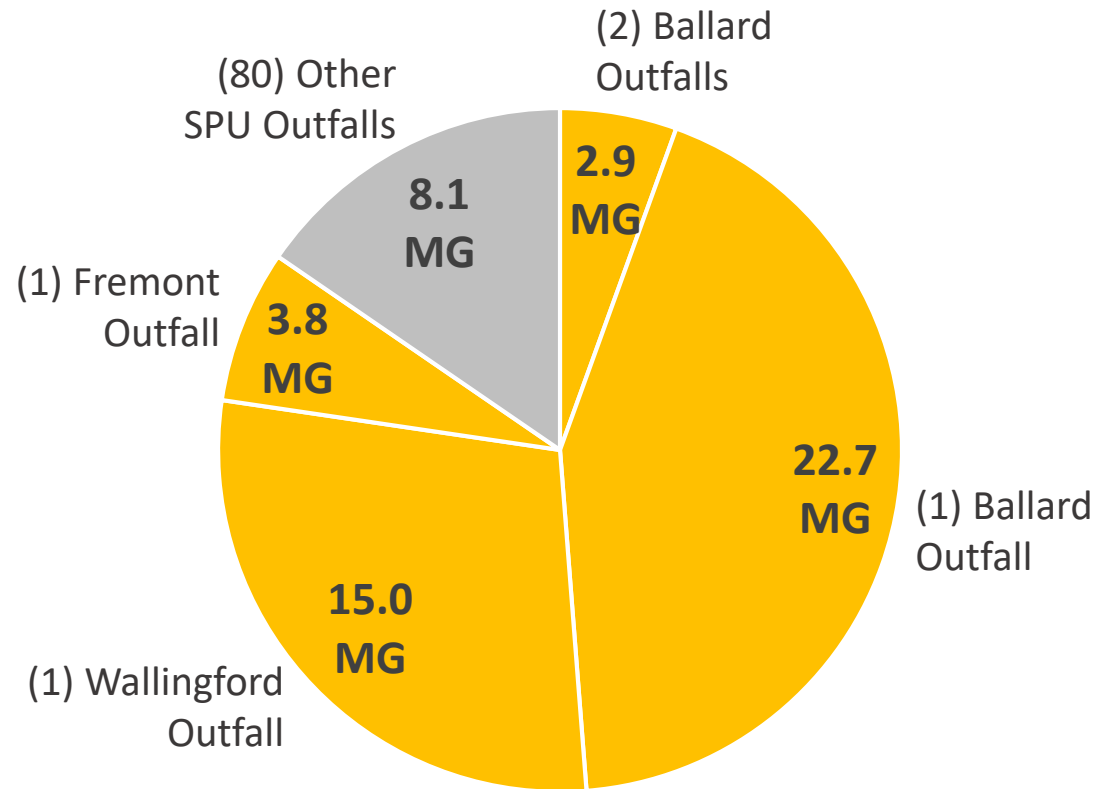
- With US Department of Justice, US Environmental Protection Agency, and WA Department of Ecology
- Less than 1 combined sewer overflow per outfall per year on a 20-year moving average

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

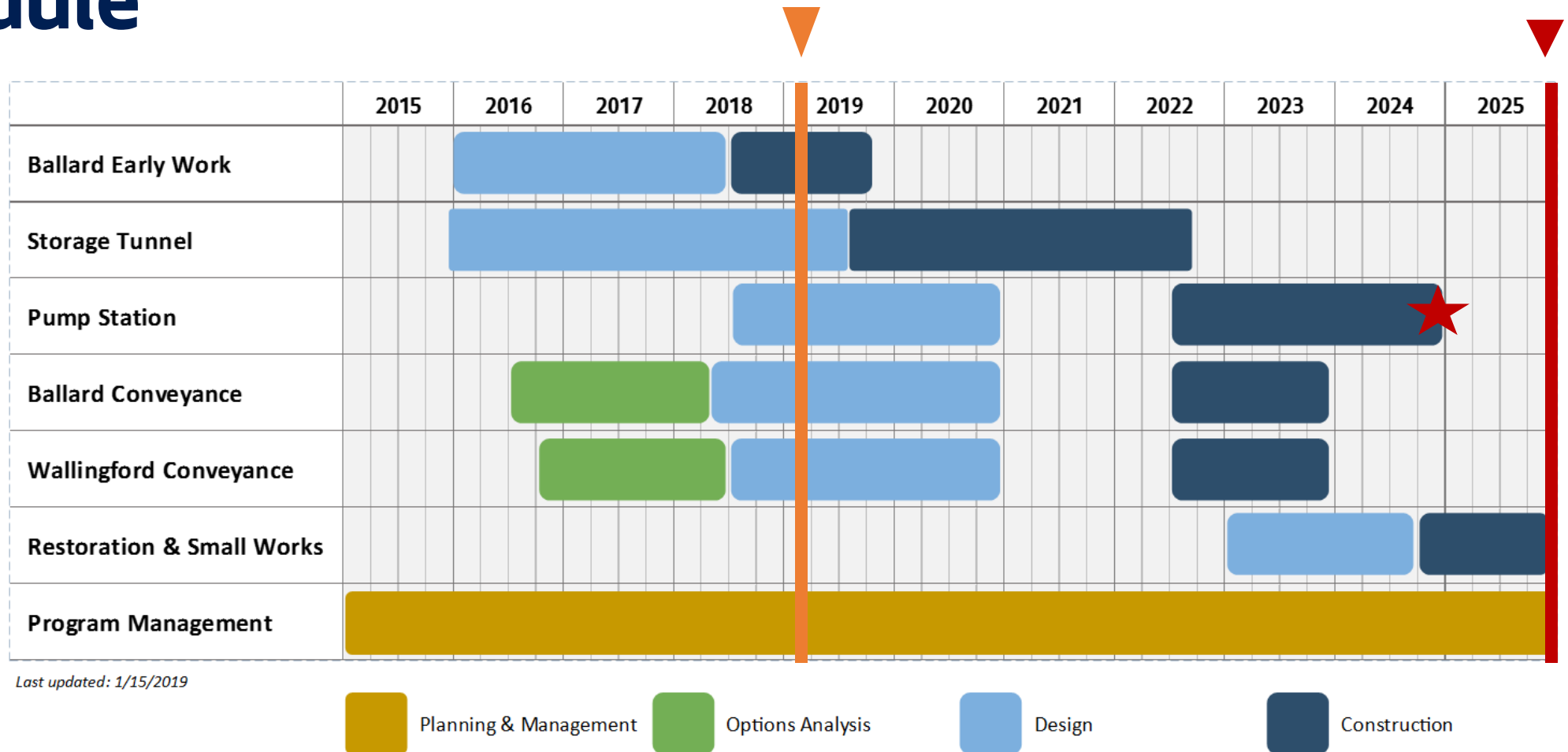
 Project elements

 Neighborhood boundary

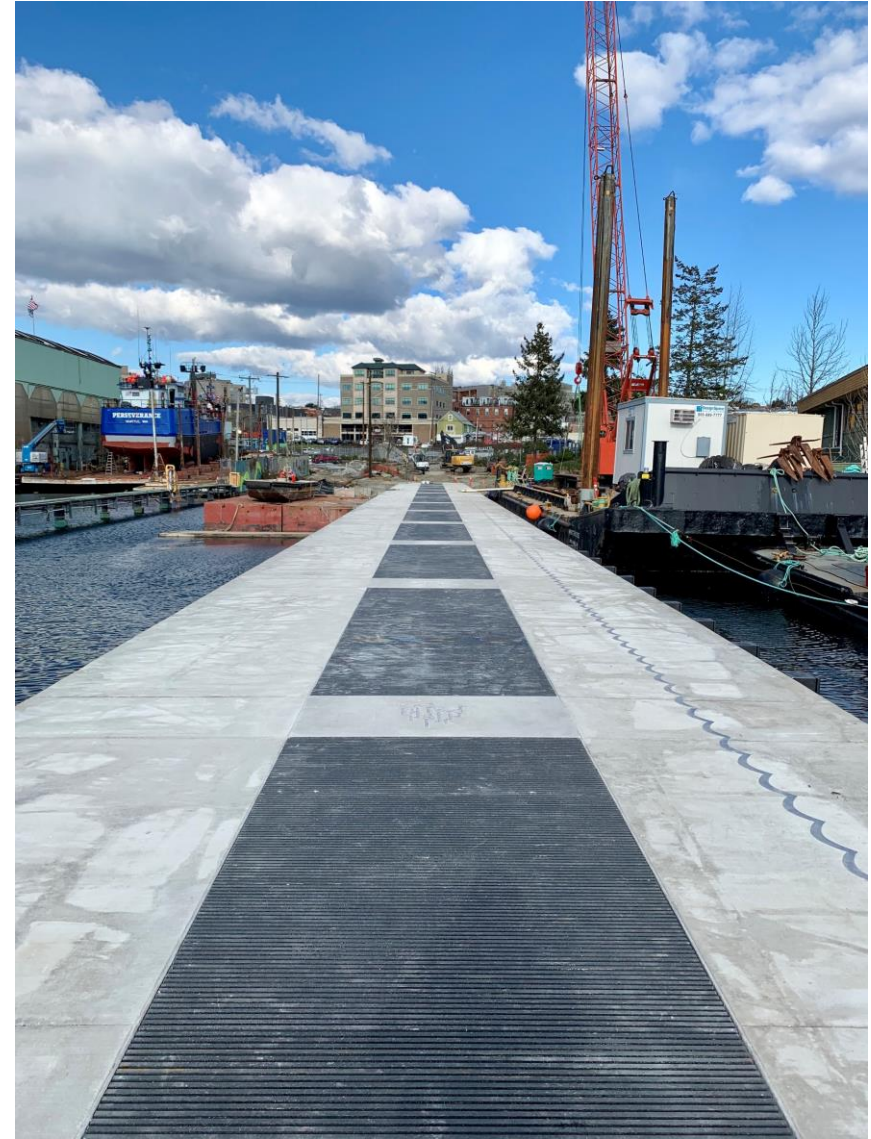


Schedule

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
Subtotal Cost Projection	\$570**	\$570**
Subtotal % Confidence	65%	70%

*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 11th Sites

New!

- Shilshole Pipe Removal

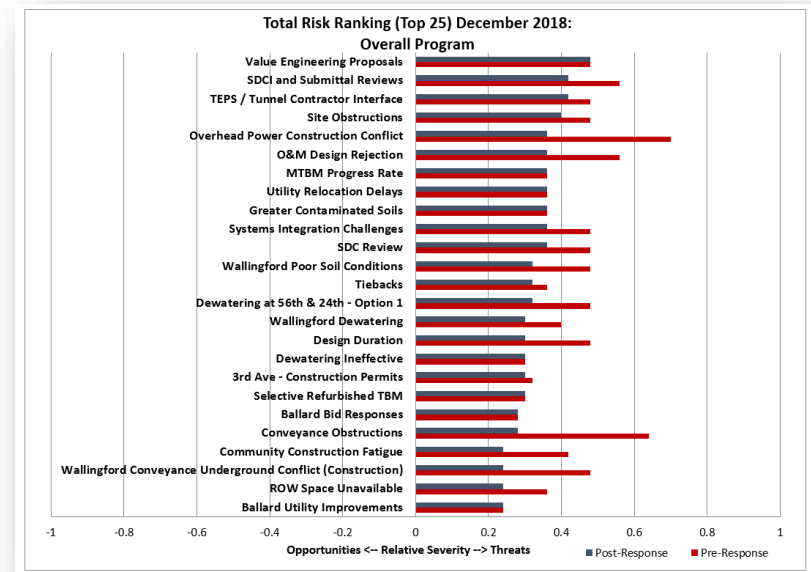
Uncertainty and Risk Management

Uncertainties

- Decreases as designs develop
- Decreases with construction bids

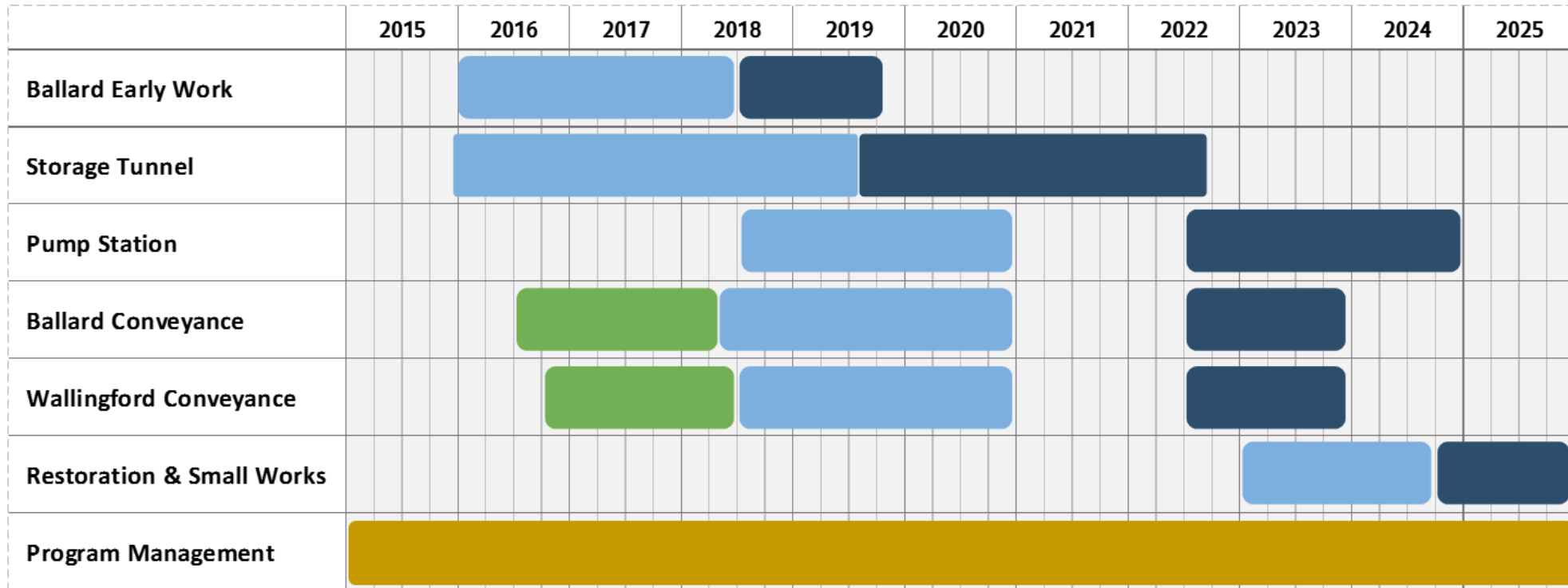
Risks

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

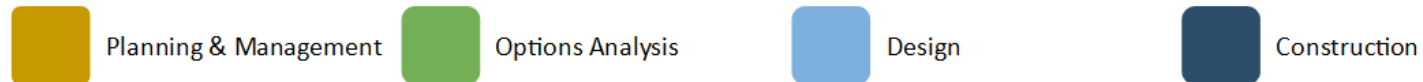


Risk: Remaining Consent Decree Milestone

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

Ship Canal Water Quality Project

