



**Seattle
Public
Utilities**



King County

Ship Canal Water Quality Project

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Regional Water Quality Committee

December 1, 2021

Keith Ward

Project Executive

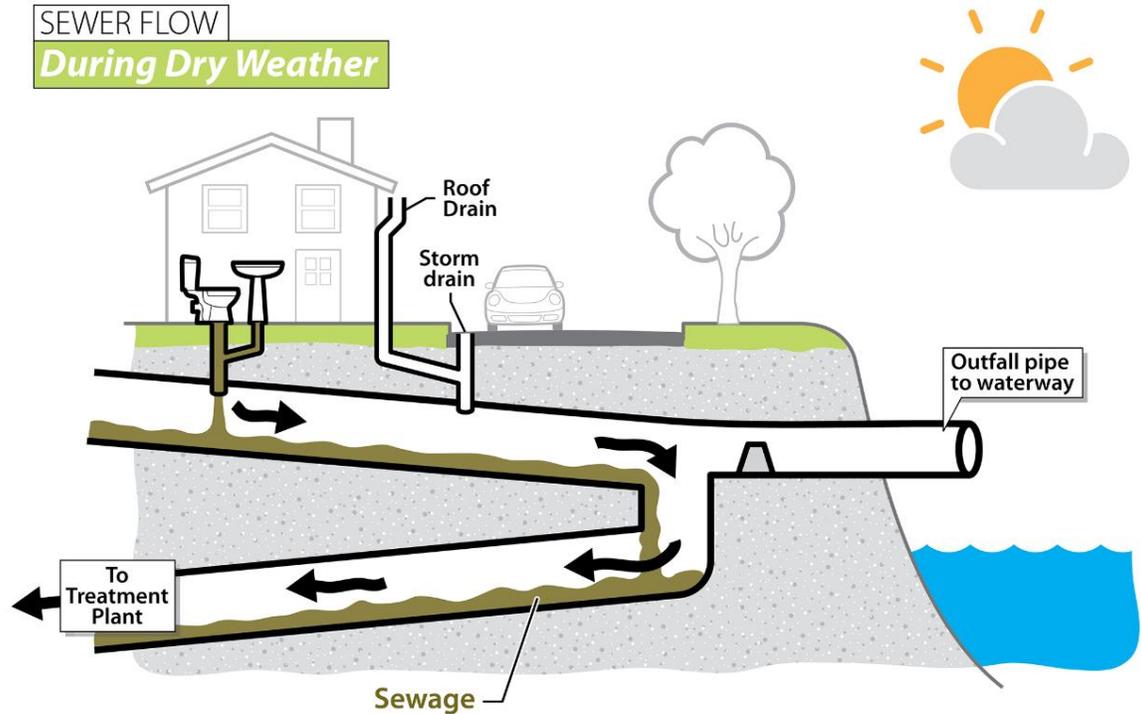


Ship Canal Water Quality Project

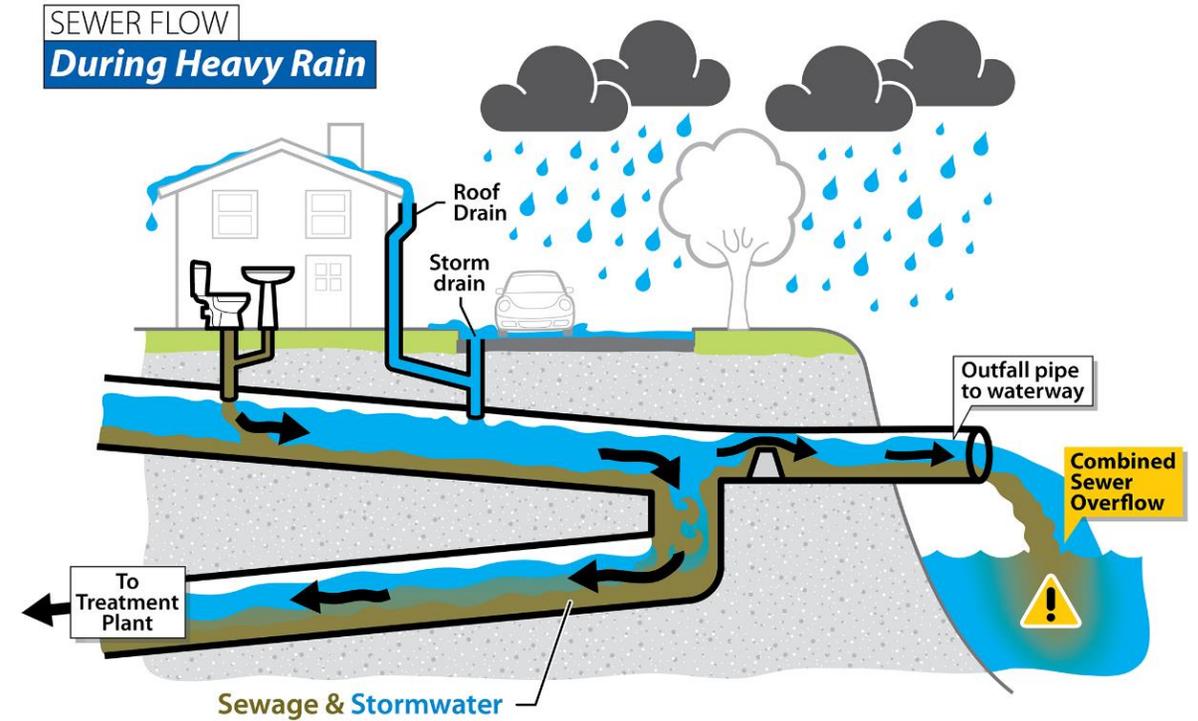
- Program Overview
- Construction Status
- Program budget, schedule and risks

Combined Sewer Overflows

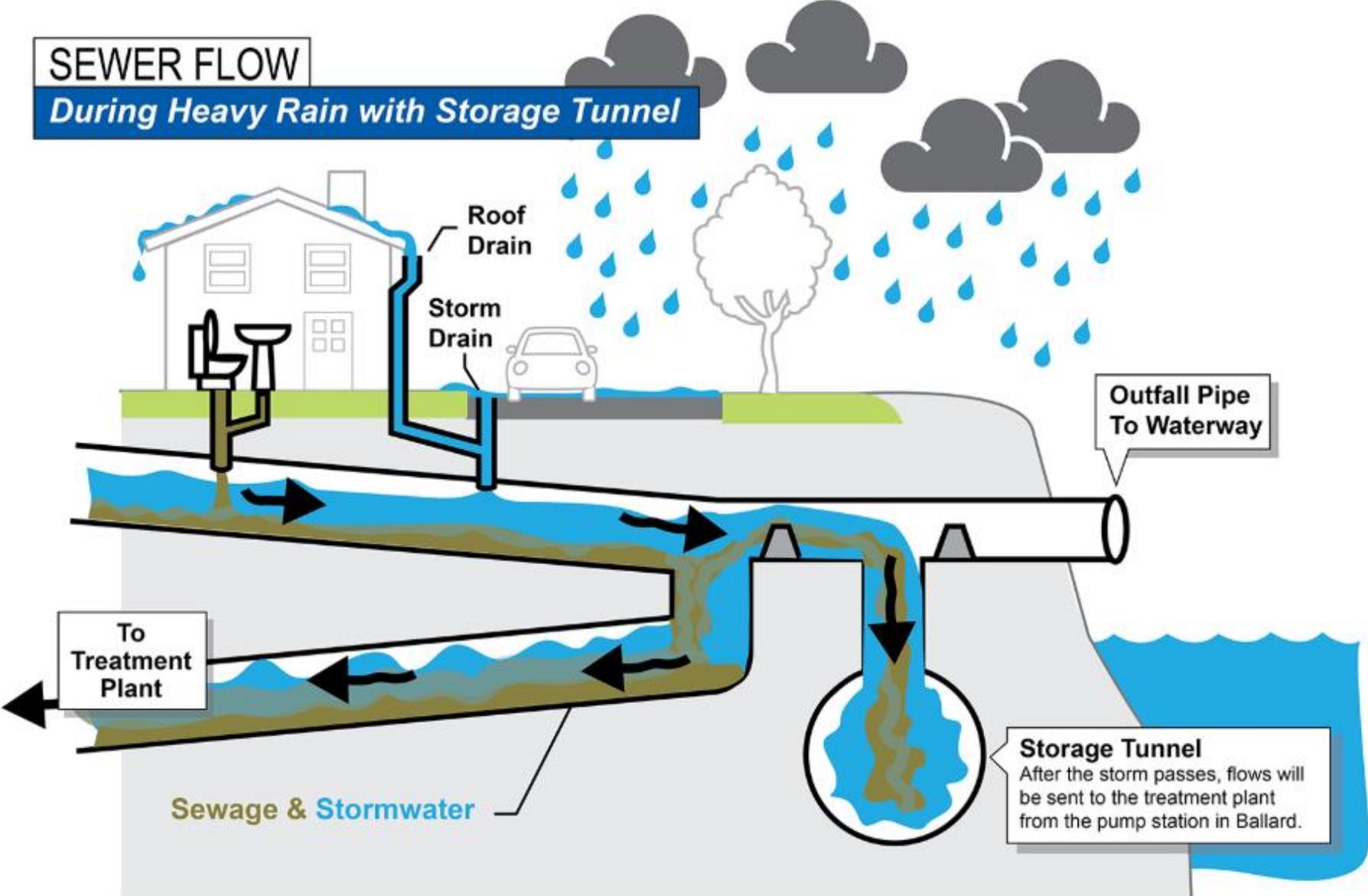
SEWER FLOW
During Dry Weather

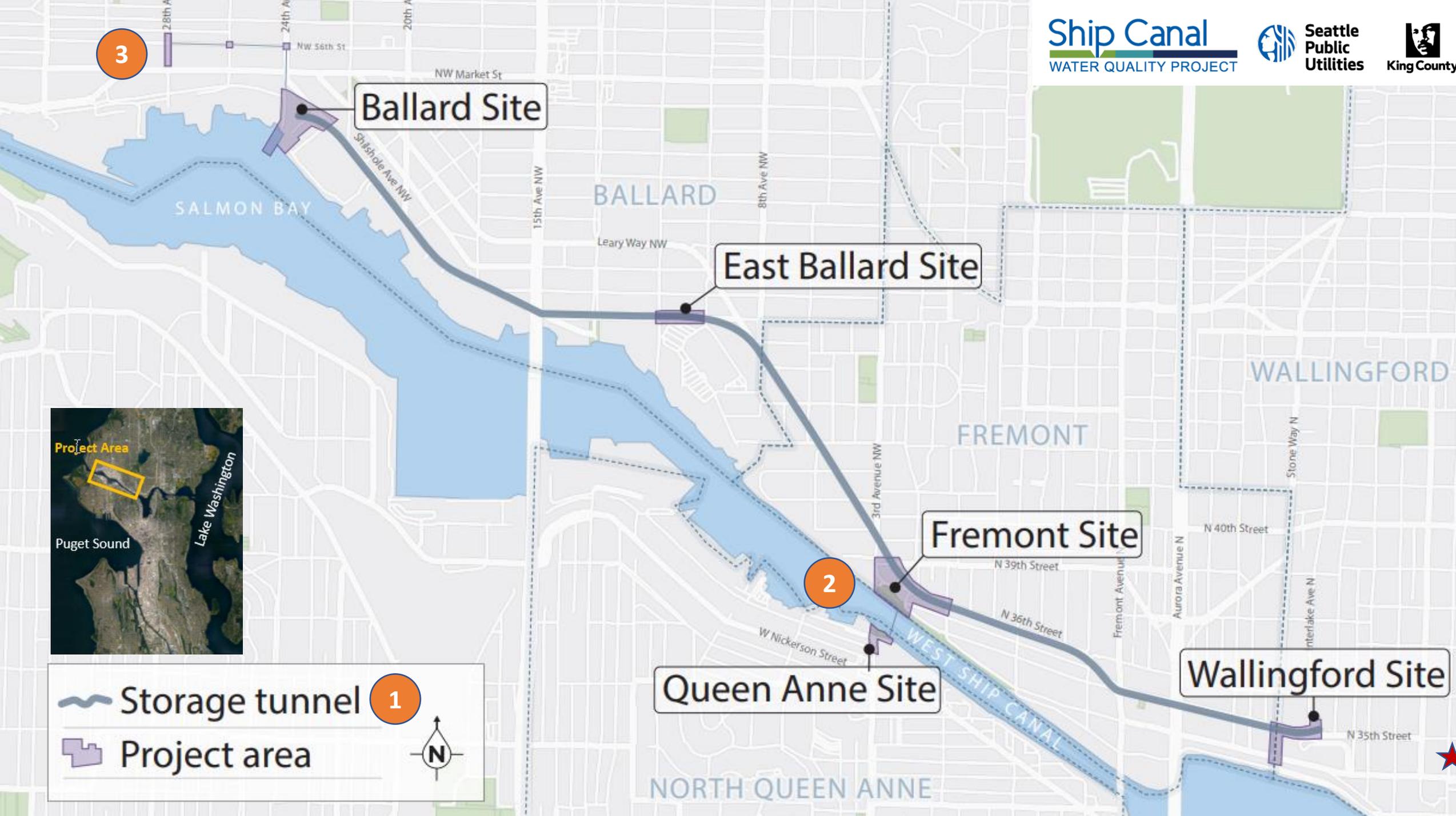


SEWER FLOW
During Heavy Rain



Reducing Combined Sewage Overflows





3

Ballard Site

East Ballard Site

Fremont Site

2

Queen Anne Site

Wallingford Site

Storage tunnel

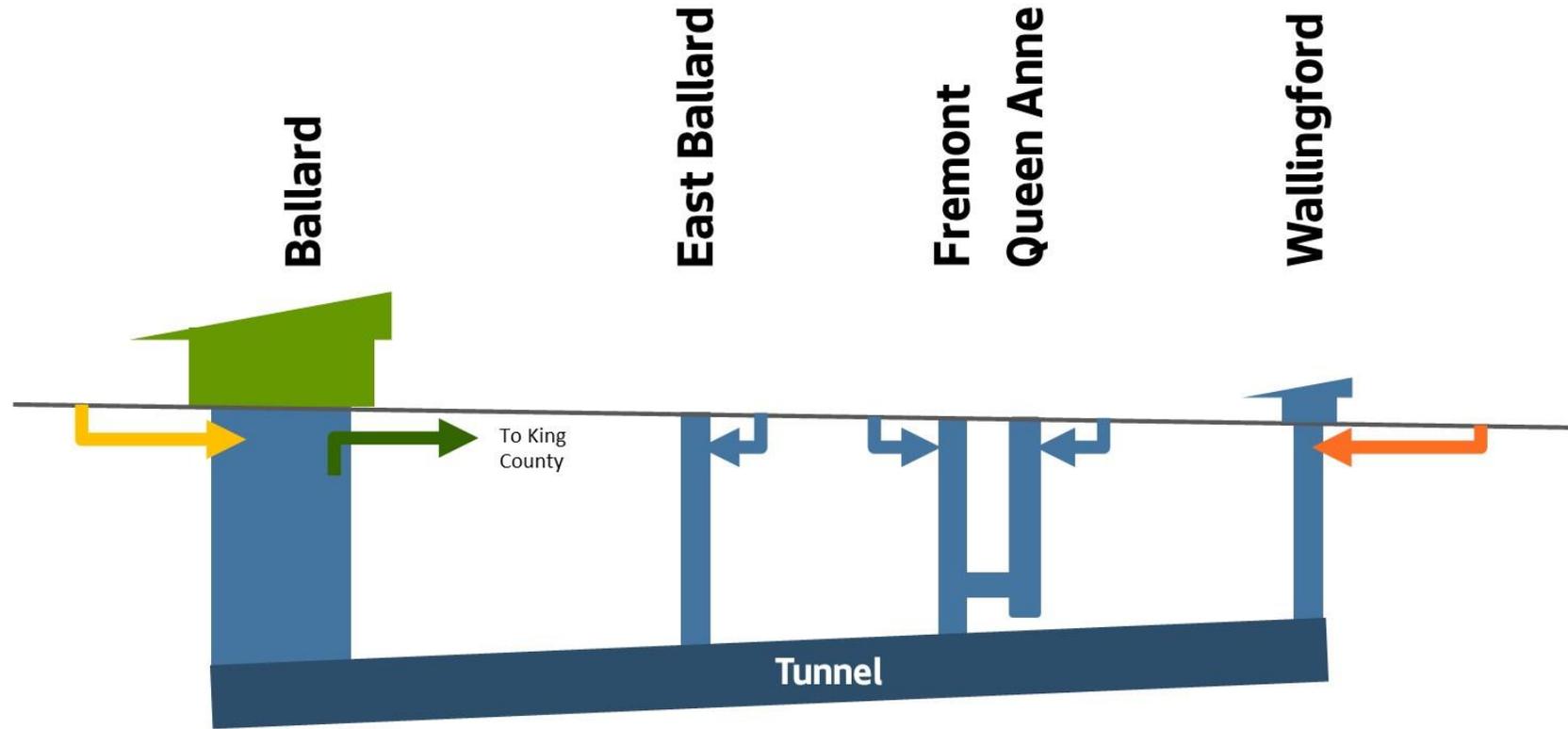
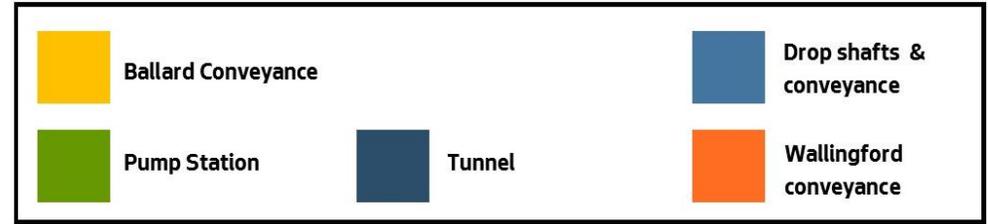
1

Project area



Project Area
Puget Sound
Lake Washington

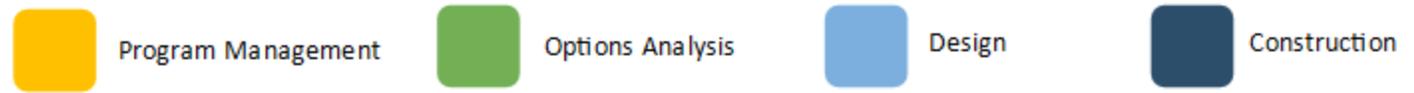
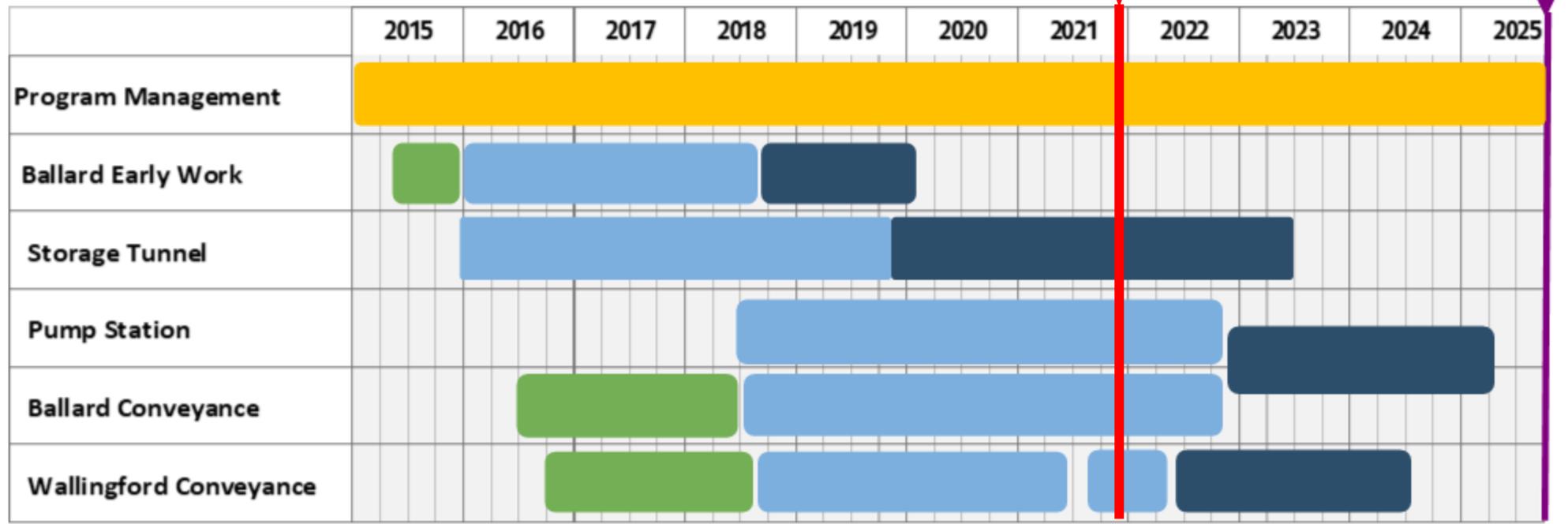
Project Components



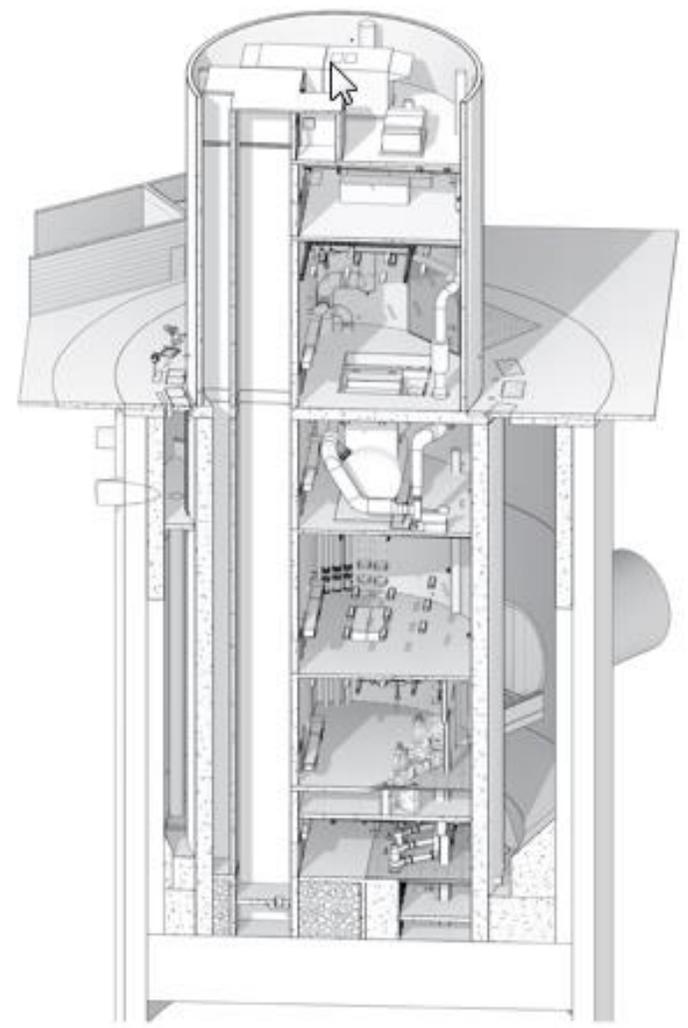
Schedule

Construction Complete Deadline

Four major construction packages



Ballard: Shaft and Pump Station



Ballard: Future Pump Station

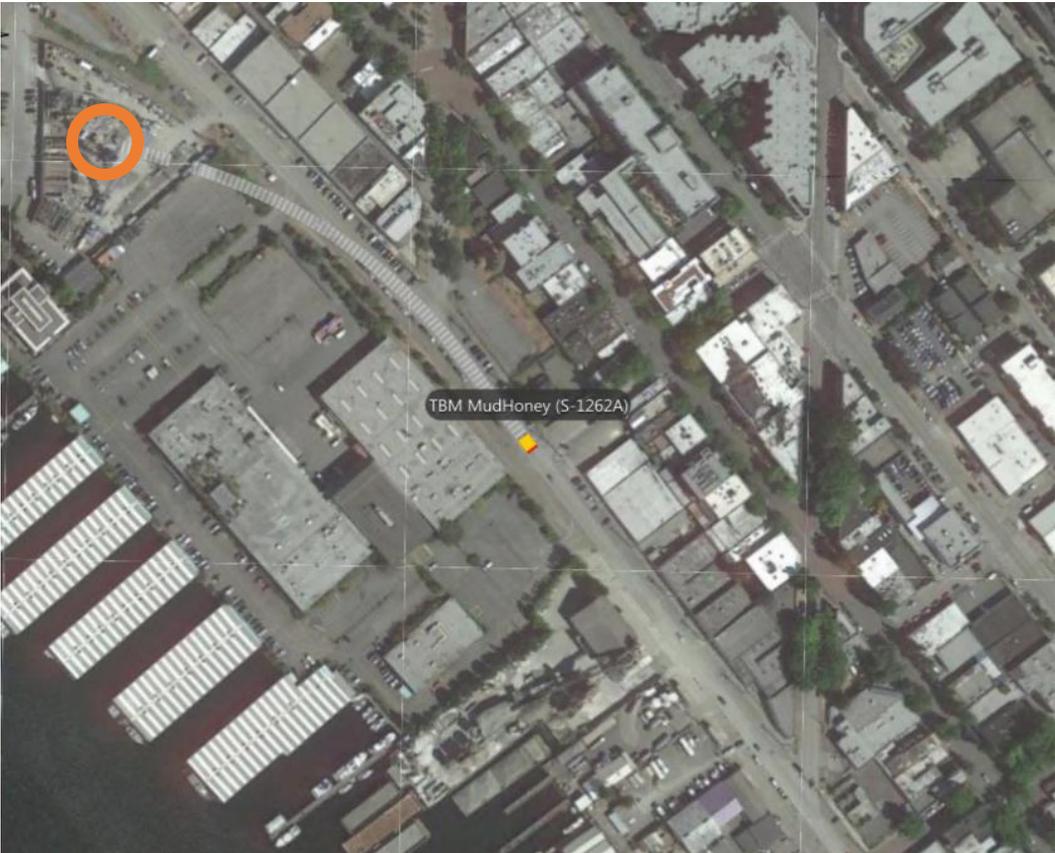


Storage Tunnel: MudHoney

The Storage Tunnel's Tunnel Boring Machine (TBM)



Storage Tunnel: Mining



Other Construction Activities



Cost Estimate "Confidence"



**Costs we can estimate
in current and future
dollars?**

Single value

**What could happen and
what would be the cost
or time impact? How
likely is it to happen?**

Based on probability

Program Budget and Schedule

Budget

- \$570M at 65% confidence*
- No change from 2018 budget/confidence.
- Current King County capital cost share is approximately \$174M

* There is a 65% chance costs will be at or below the estimated cost and a 35% chance the estimated cost will be exceeded.

Schedule

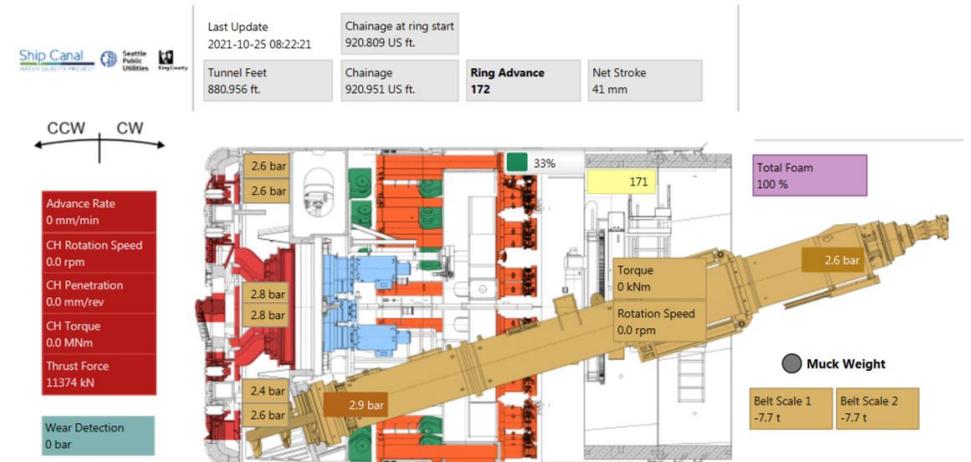
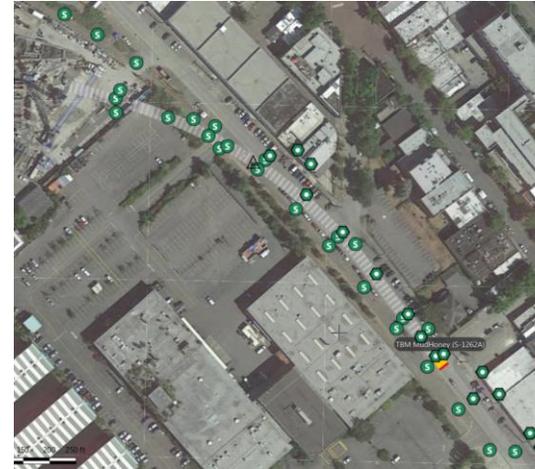
- On-track to meet Construction Completion deadline at the end of 2025 with a 74% confidence

Project Risks and Uncertainties

1. Unknown underground tunneling issues
2. Escalating market conditions

Tunneling Risk Management

1. Extensive subsurface investigation program
2. Tunnel boring machines designed for ground conditions
3. Surface and sub-surface monitoring
4. Tunnel boring machine monitoring
5. Oversight





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