RWSP Road Map - *Tentative*

• **Module #1:** *Draft* "Sets of Actions" for 8 categories of capital investments for 3 Conceptual Approaches	Q2 2025 – Q1 2026
• **Module #2:** Evaluation Framework and Affordability Metrics to compare Approaches and evaluate tradeoffs to inform selection of Final Proposal	Q2 2026 – Q3 2026
• **Module #3:** Planning level cost estimation for the 24 sets of detailed actions	Q2 2026 – Q1 2027
• **Module #4:** Phase 1 Financial Policies	Q1 2026 – Q4 2026
• **Module #5:** *Draft* RWSP with 3 Conceptual Approaches with associated cost estimates (and DEIS, if needed)	2027
• **Module #6:** Apply Evaluation Framework (Module #2 work)	2027/28
• **Module #7:** Final Proposed Plan (may be a hybrid set of actions from the 3 Approaches) with RWSP Policies and Phase 2 Financial Policies (and FEIS, if needed)	2028/29

Draft Plan Conceptual Approaches

- **Stay the Course** – Implement operations and a capital program that focus on compliance for all applicable current and future regulations. Use industry-accepted standard operating procedures and proven and reliable technologies.

- **Strategic Enhancement** – Provide strategic enhancements to the operations and capital program beyond the Stay the Course approach. Focus on continual improvement and optimizing services.

- **Transformative** – Transform from where we are today to a more innovative, future-focused utility. Employ practices that focus on managing wastewater as a valuable commodity. Foster and invest in a culture of innovation, collaborative development, and active engagement with employees.

Module #1 RWSP Working Group Meeting Timeline

for Understanding Current Conditions and Brainstorming Potential Actions

Date	Categories of Capital Investment
July 2025	Combined System Management
August 2025	Asset Renewal and Replacement
September 2025	Separated System Conveyance (including Infiltration and Inflow)
October 2025	Pollution (Source Control and Legacy)
November 2025	Odor Control
December 2025	*Holiday break*
January 2026	Climate Impact Preparedness and Natural Disaster Resiliency
February 2026	Treatment
March 2026	Resource Recovery (Biosolids, Energy, Recycled Water)

Module #1: What are "Actions" ?

- Policy options for projects & programs associated with the eight Categories of Capital Investment
- Actions are not standalone solutions
- Actions are building blocks that will be shaped and combined throughout the planning process to develop specific policies

Categories of Capital Investment
Combined System Management
Asset Renewal and Replacement
Separated System Conveyance (including Infiltration and Inflow)
Pollution (Source Control and Legacy)
Odor Control
Climate Impact Preparedness and Natural Disaster Resiliency
Treatment
Resource Recovery (Biosolids, Energy, Recycled Water)

Module #1: Actions Menu

Combined System Management (example)

Stay the Course

- SC.1: Comply with Consent Decree
- SC.2: Meet State Standard
- SC.3: Intervene as/when CSOs trend out of control

Strategic Enhancement

- Action 1
- Action 2
- Action 3

Transformative Approach

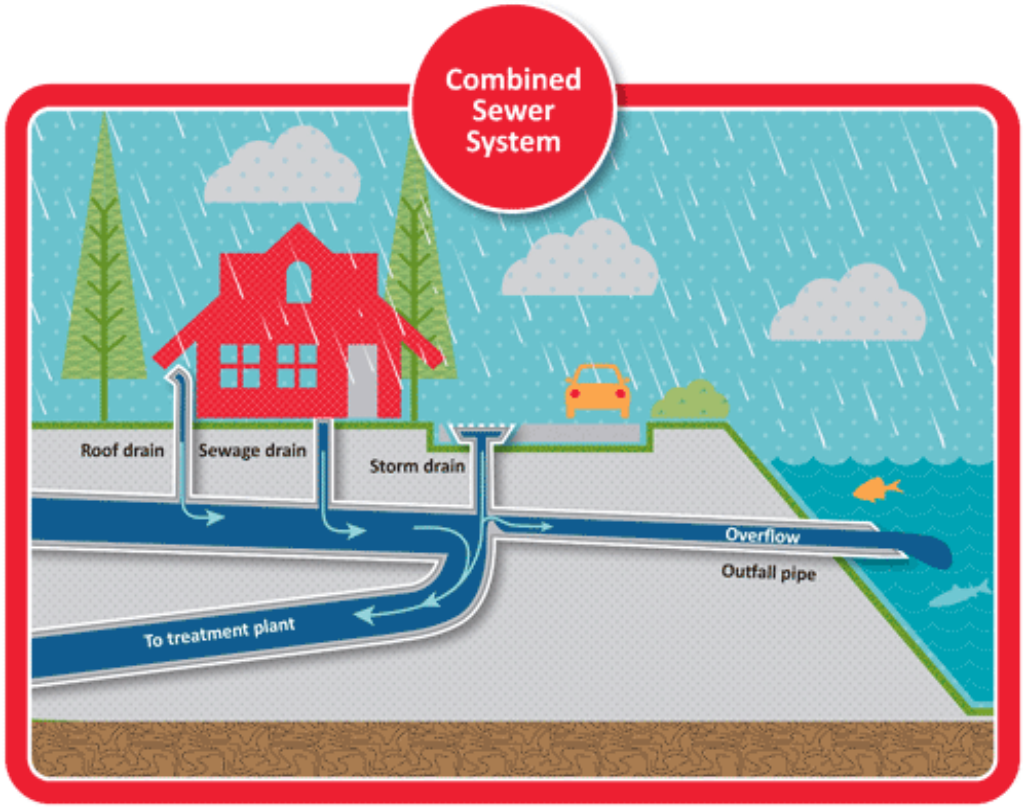
- Action 1
- Action 2
- Action 3
- Action 4

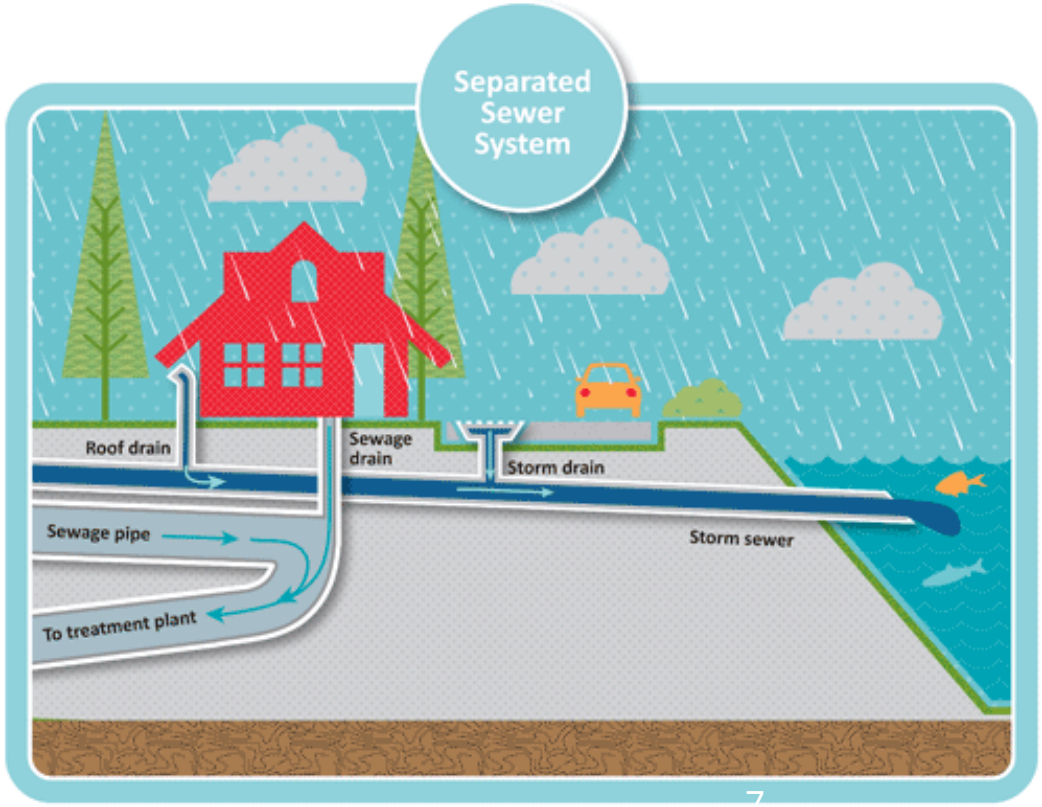
RWSP Module #1 Topic 1 Combined System Management Background & Current Conditions

Presented to the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)

June 25, 2025

Combined Sewer System
vs
Separated Sewer System



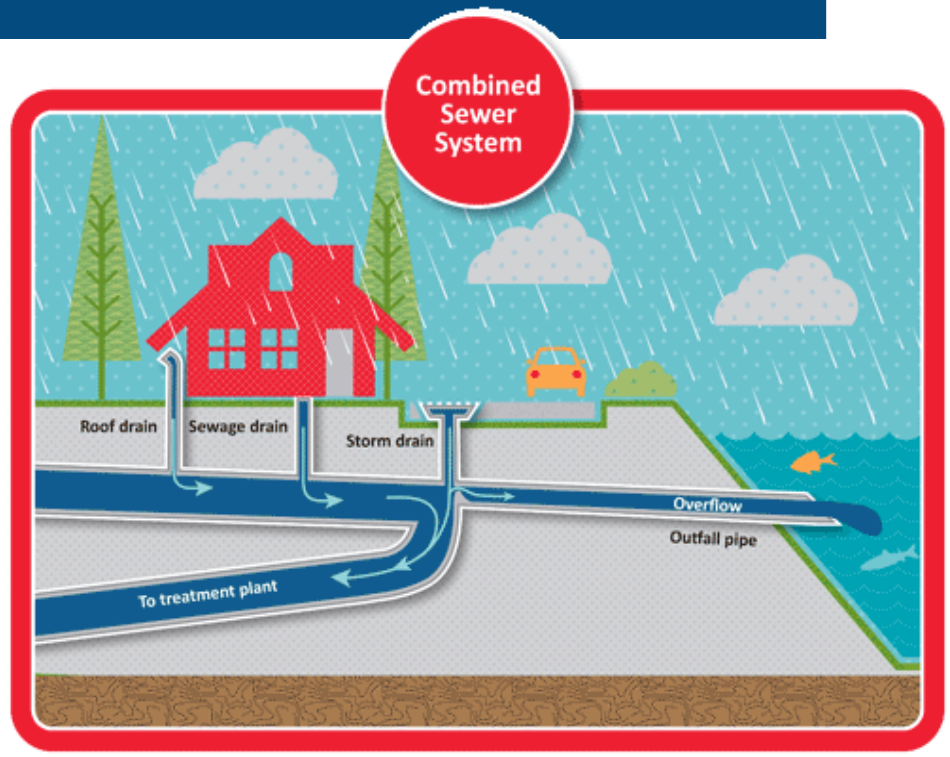


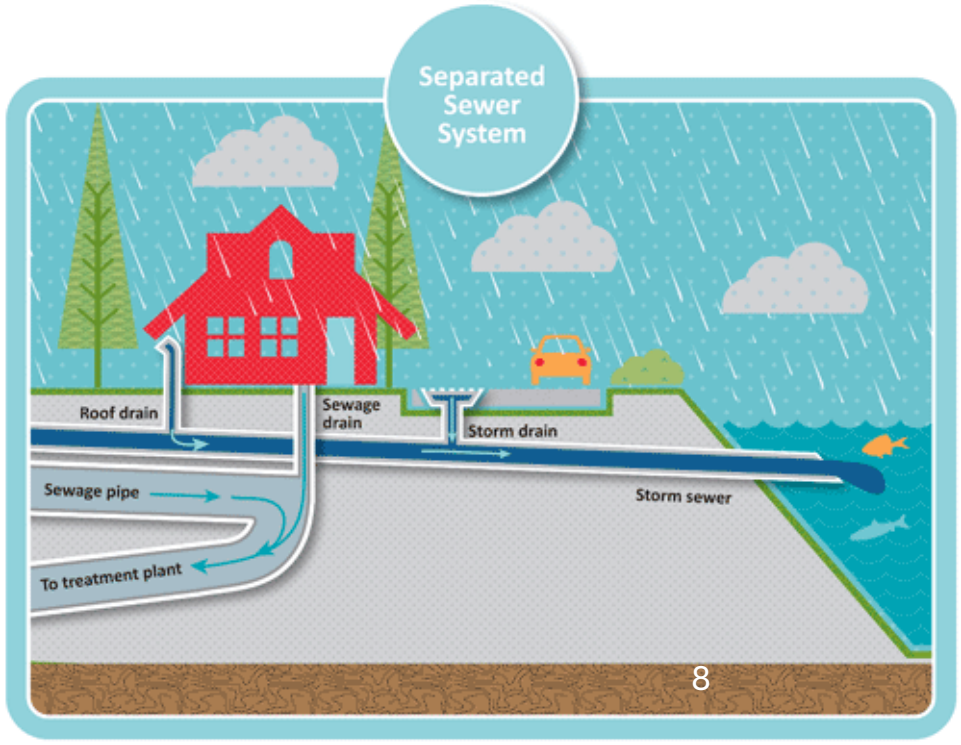
Combined Sewer Overflows

CSOs are relief points in older sewer systems that carry sewage and stormwater in the same pipe.

When heavy rains fill the pipes, CSOs protect homes and businesses by overflowing excess sewage and stormwater into local water bodies.

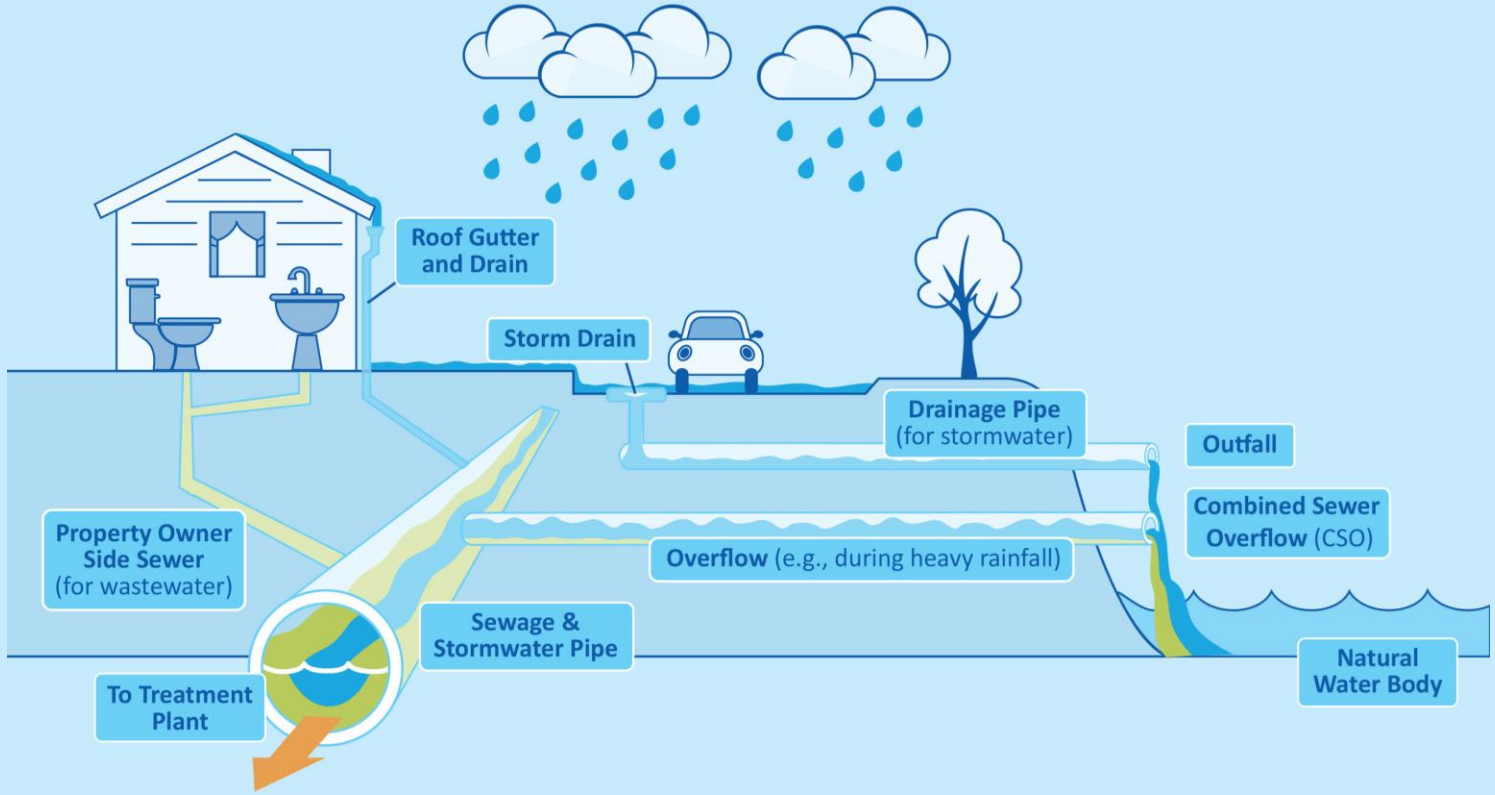
Separated sewer systems have separate pipes for sewage and stormwater.





Combined Sewer Overflows

In partially separated combined systems, street and right-of-way flows are kept in a separate drainage system while stormwater flows from nearby parcels connect into the combined sewer system. Forward Thrust investments in the 1960s-1970s helped to partially separate flows in targeted areas of Seattle.

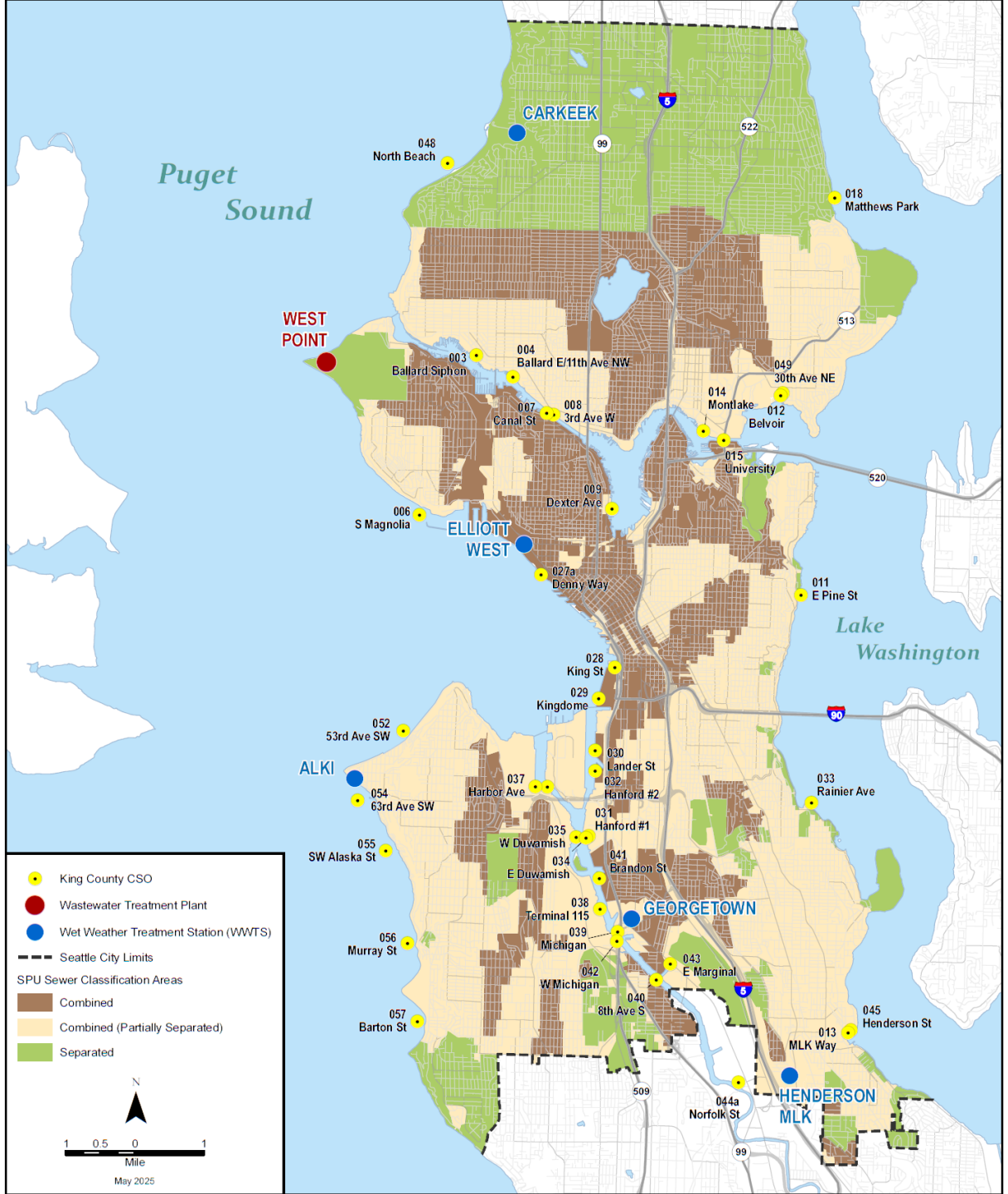


Combined vs Separated flows in Seattle

Seattle's wastewater conveyance system shows legacy of combining and separating storm and sanitary flows:

- 29% is fully **combined**
- About 44% of Seattle is **partially separated/ combined**, with right-of-way storm flows conveyed to the drainage system and parcel-based flows conveyed to the combined sewer system
- About 26% is fully **separated** into storm/drainage and sanitary flows*

*In some cases, separated storm flows reconnect to the downstream combined system



King County | Wastewater Treatment

Why is CSO Control important?

- CSOs are a recognized source of water pollution and public health concern, regulated under the Federal Clean Water Act and Washington State administrative code
- Outfalls must be controlled so that no more than one untreated discharge occurs per year on average. (WAC 173-245-20)
- West Point's NPDES Permit, renewed in 2024, updated the CSO control program to include corrective actions for CSOs that have trended above the one discharge per year average
- In 2013, a Consent Decree was signed between the EPA, WA State, and King County to bring all CSOs under control by 2030. In 2024-25, this consent decree was updated to extend the deadline to 2037.

King County CSO Policies

King County Code (K.C.C. 28.86) and CSO control policies (CSOCPs 1-13) guide the County's combined sewer management.

- Control CSOs by 2030 (due to be updated with CD Modification)
- Adherence to state and federal regulations and agreements
- Prioritization of CSO control activities for human health and environmental benefits
- Coordination with Seattle
- Preclusion of design for new or contaminated stormwater sources unless certain considerations are addressed
- Consideration of green stormwater infrastructure projects
- Implementation of sediment management strategies
- Implementation and regular amendments of the Long-term CSO Control Plan with most current studies and information and appropriate Council and regulatory approvals.

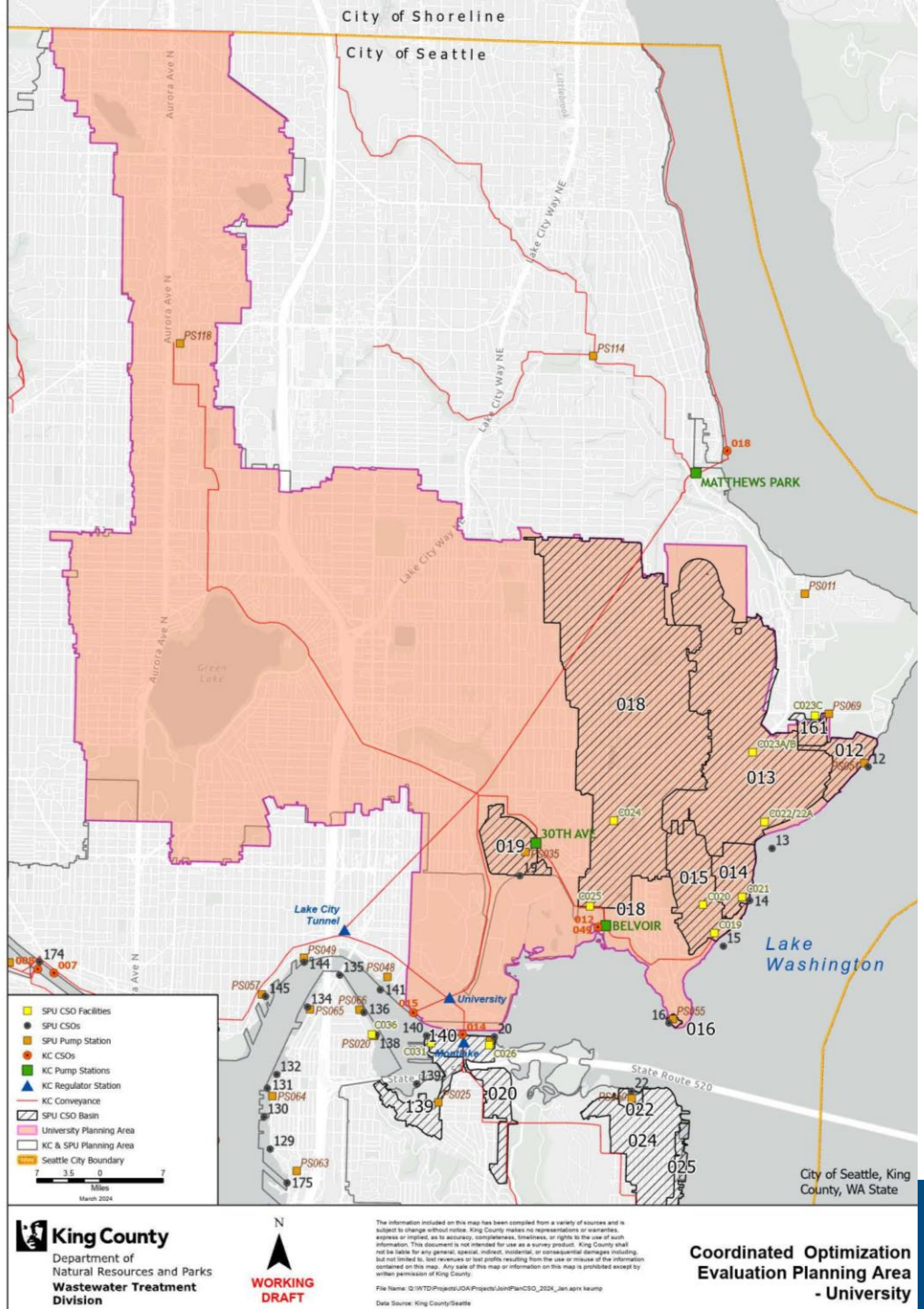
King County and Seattle each manage their own CSO systems

In 1958, voters created Metro and developed a regional wastewater treatment system

CSO authority based on sewersheds:

- King County manages CSOs from basins greater than 1000 acres
- Seattle manages CSO basins that serve smaller areas

University basin example:
Seattle manages seven "upstream" CSO basins (hatched basins in map) that geographically overlap with King County's University RS CSO basin

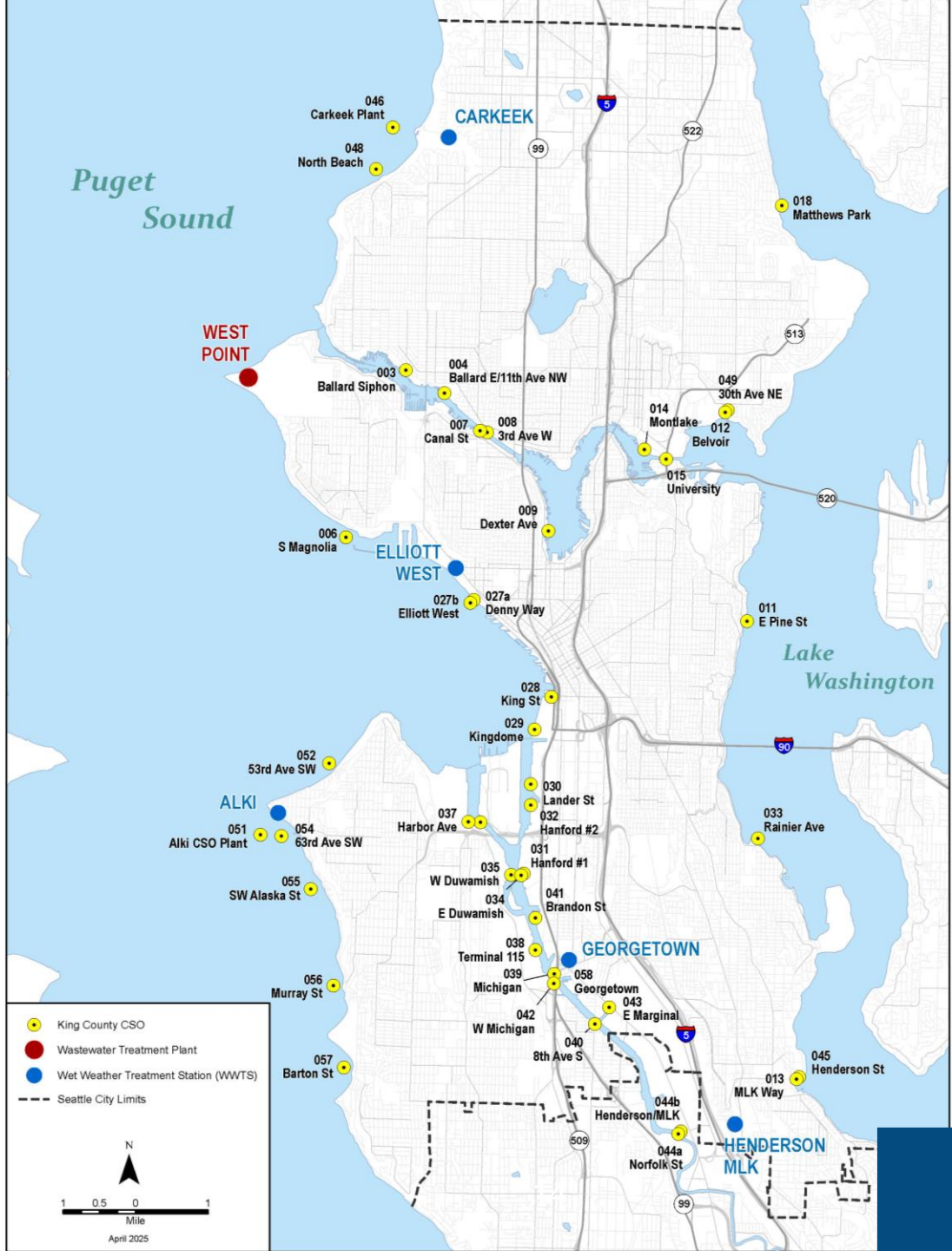


King County and Seattle each manage their own CSO systems

King County has 38 CSO outfalls.

Seattle has 82 CSO outfalls.

King County and Seattle are obligated to control their CSOs to meet the state standard of one untreated discharge per year on average.



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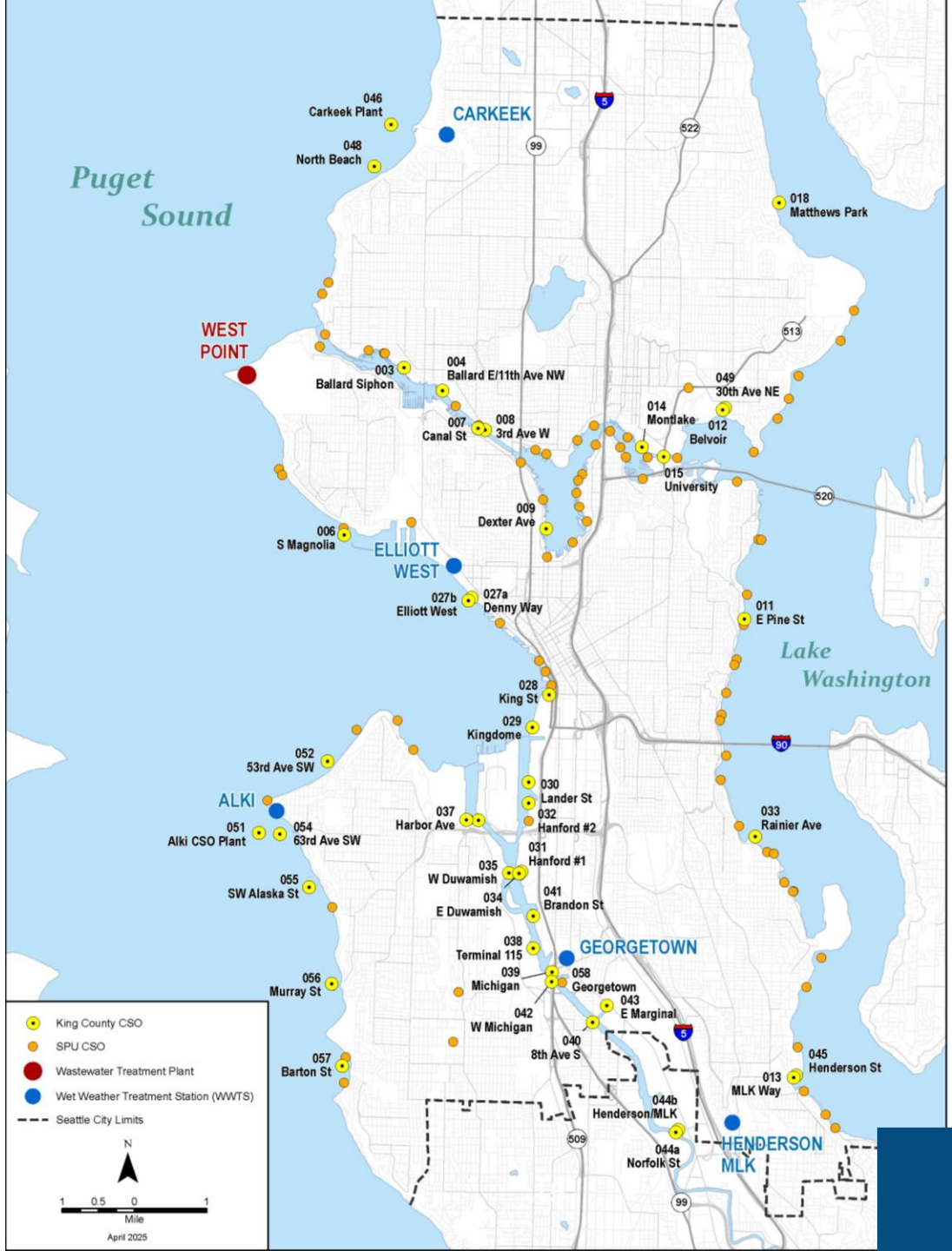
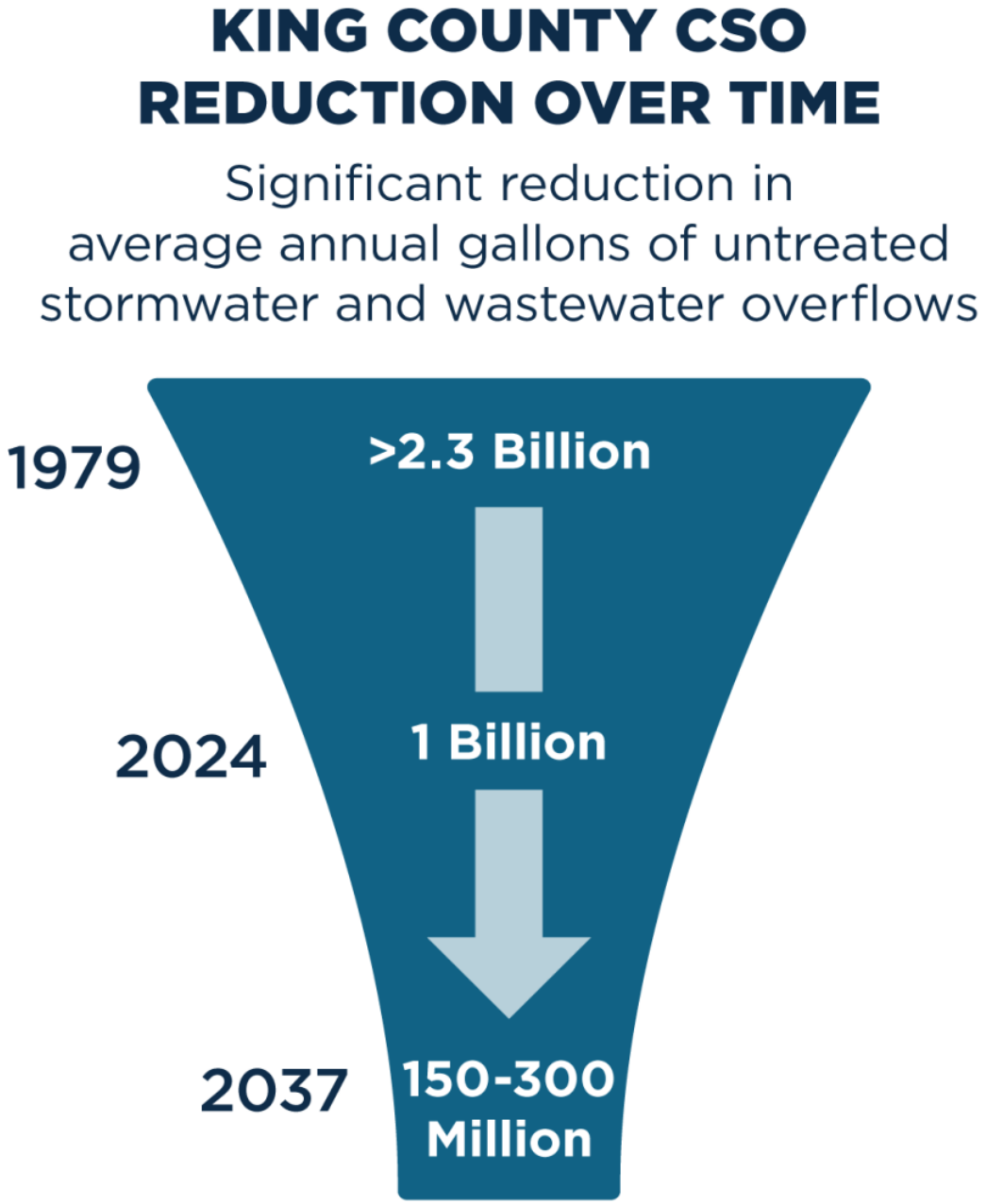


Progress Over Time

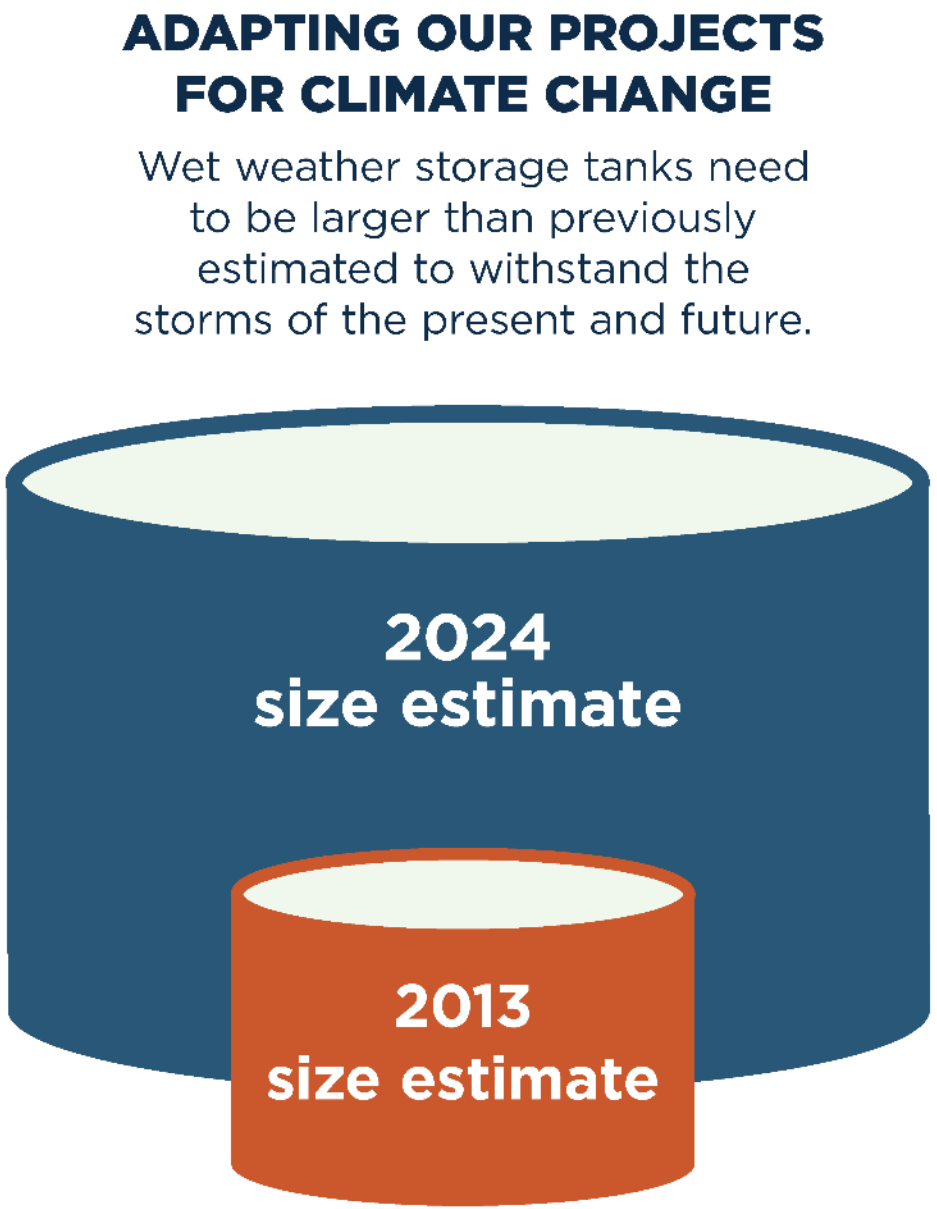
- Over $1B invested since the early 1990s

Outfall Status June 2025	Number of Outfalls
Controlled	18
Project complete - Post construction monitoring	2
Uncontrolled, project underway	9
Uncontrolled, under supplemental compliance	3
Uncontrolled, previously controlled	4
Uncontrolled, future project in planning	2



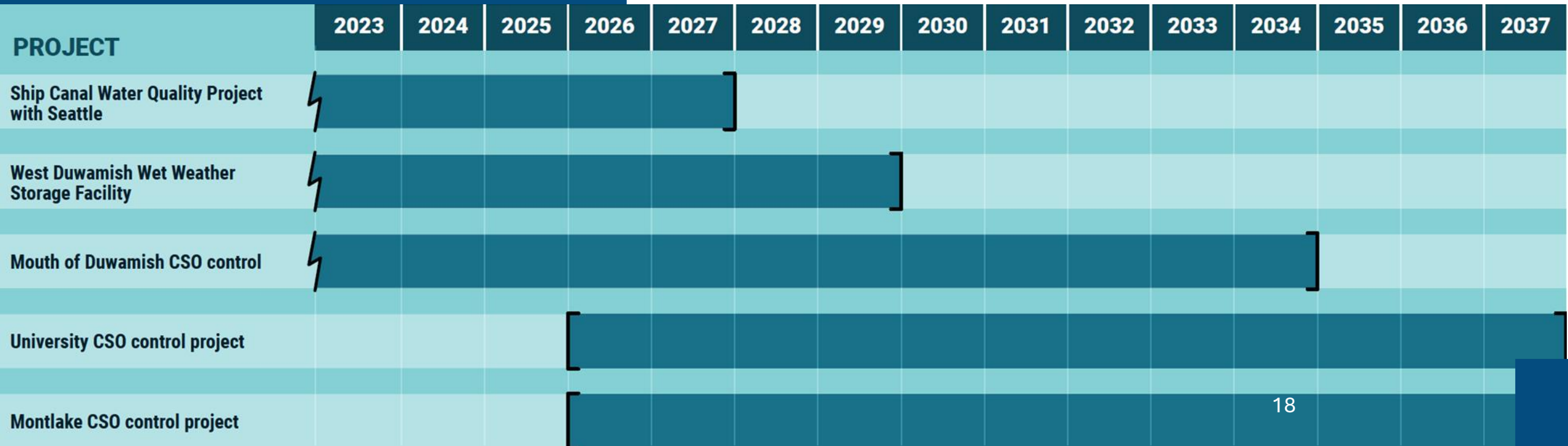
Climate Resilience

- Climate change is impacting how we design and build wastewater infrastructure.
- By the 2080s, the region's severe rainstorms are expected to bring 22% heavier rainfall flow to our system.
- We are adapting to climate impacts by building larger, more resilient projects that protect us against larger, more frequent storms.
- Ensures compliance with federal and state regulations and meets our goals for improving water quality.



Modified CD Project Schedule

- The CSO Consent Decree has been modified, with a new end date of 2037 to construct the remaining CSO control projects.
- Additional CSO requirements for supplemental compliance and NPDES permit requirements are under way in parallel.



CSO Delivery Program

King County has been implementing its Consent Decree projects since 2013:

Completed CSO Control Projects

- Ballard Siphon Project
- Barton CSO Control Project
- Murray CSO Control Project
- North Beach CSO Control Project
- Georgetown Wet Weather Treatment Station
- Rainier Valley Wet Weather Storage Project
- South Magnolia CSO Control Project

Active CSO Control Projects

- **Mouth of Duwamish Wet Weather Facilities** in planning
- **Elliott West Wet Weather Treatment Station Upgrade** in design
- **West Duwamish Wet Weather Storage Facility** in design moving to construction
- **Ship Canal Water Quality Project (joint project with SPU)** in construction

Remaining CSO Control Projects

- University/ Montlake CSO Control
- Supplemental Compliance (Barton, Magnolia, Hanford #1)

Q & A

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