Combined Sewer Overflow Program Update

Regional Water Quality Committee
September 7, 2022

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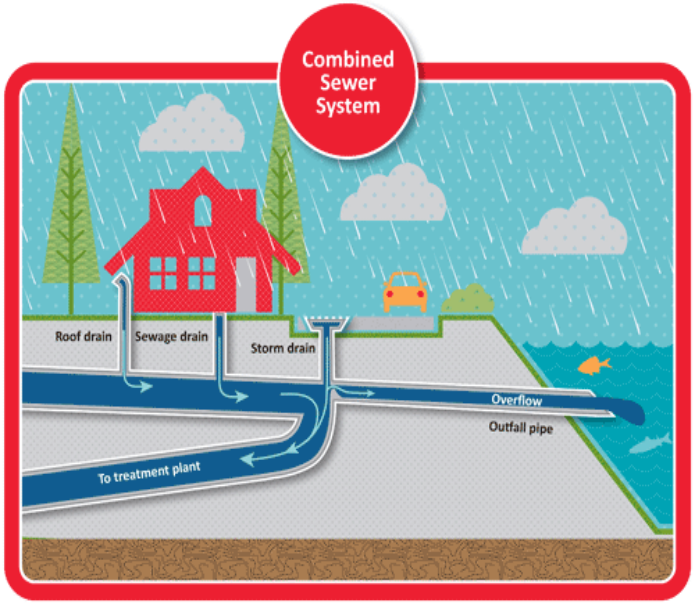
Presentation topics:

- What are Combined Sewer Overflows (CSOs)?
- Overview of County's CSO System
- Overview of County's CSO Long Term Control Plan and Consent Decree
- CSO Control Capital Projects

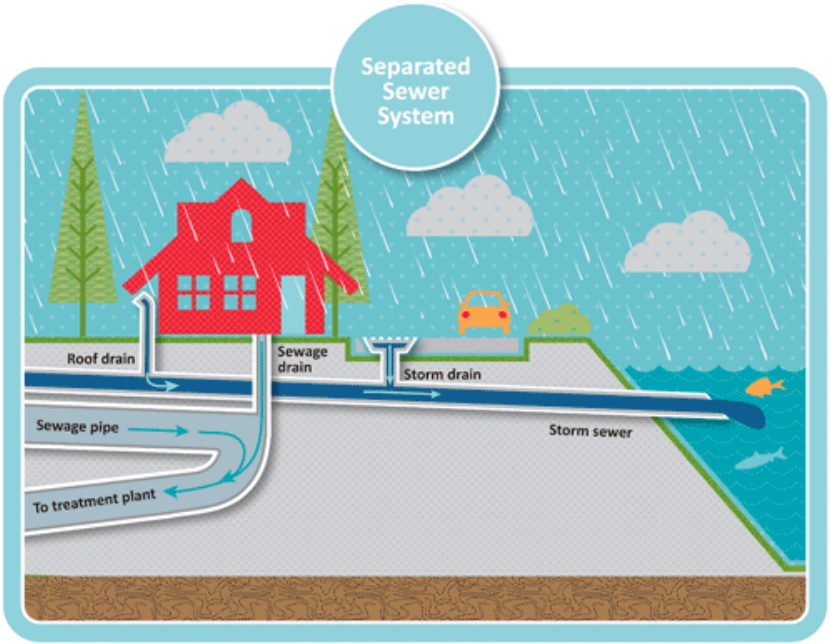
What are Combined Sewer Overflows?

- 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 system

Separated sewer systems have separate pipes for sewage and stormwater.



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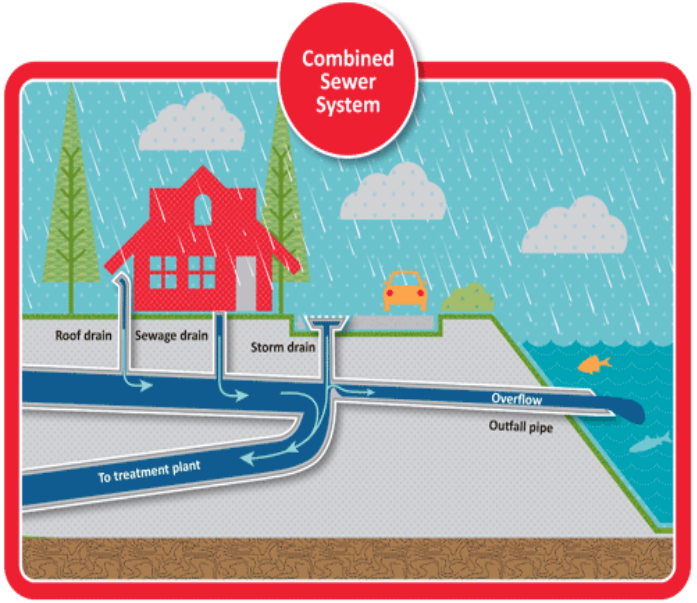
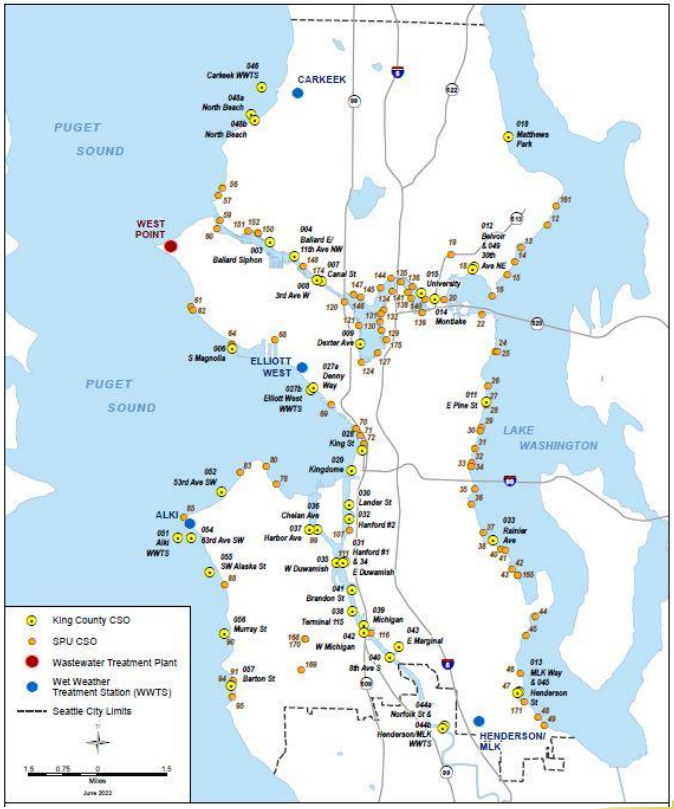
Why is CSO Control important?

- CSOs are a recognized source of water pollution and public health concerns.
- CSOs are regulated under the Federal Clean Water Act
- Washington State requires the “greatest reasonable reduction of combined sewer overflows at the earliest possible date.” (RCW90.48.480)
- Outfalls must be controlled so that no more than one untreated discharge occurs per year on average. (WAC 173-245-20)



King County and Seattle each manage their own CSO systems

- King County has 39 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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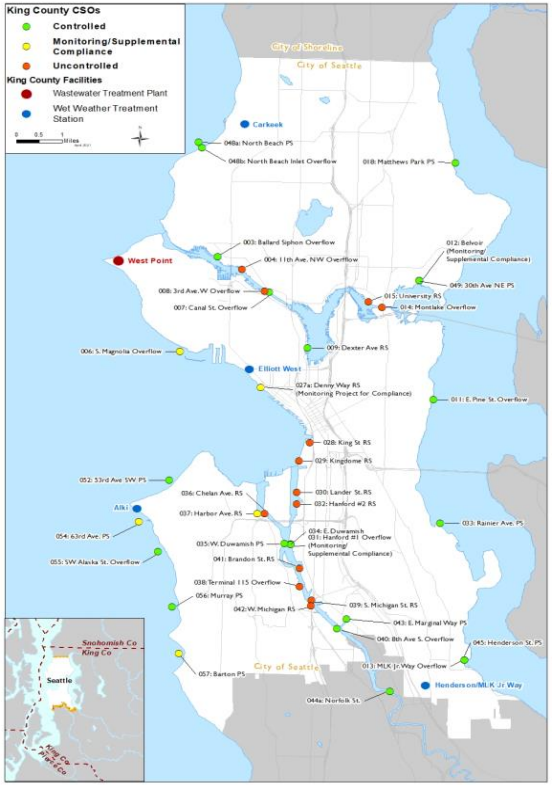
- 39 CSO outfalls
  - 19 controlled
  - 7 monitoring /supplemental compliance
  - 13 uncontrolled

To check the current status of an outfall, click here: https://kingcounty.gov/services/environment/wastewater/cso-status.aspx



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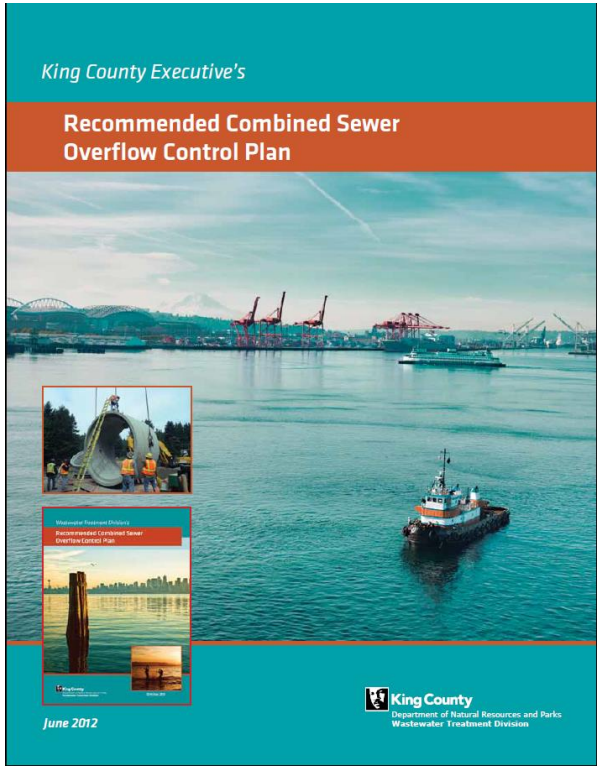


https://kingcounty.gov/services/environment/wastewater/cso/library/plan-updates.aspx

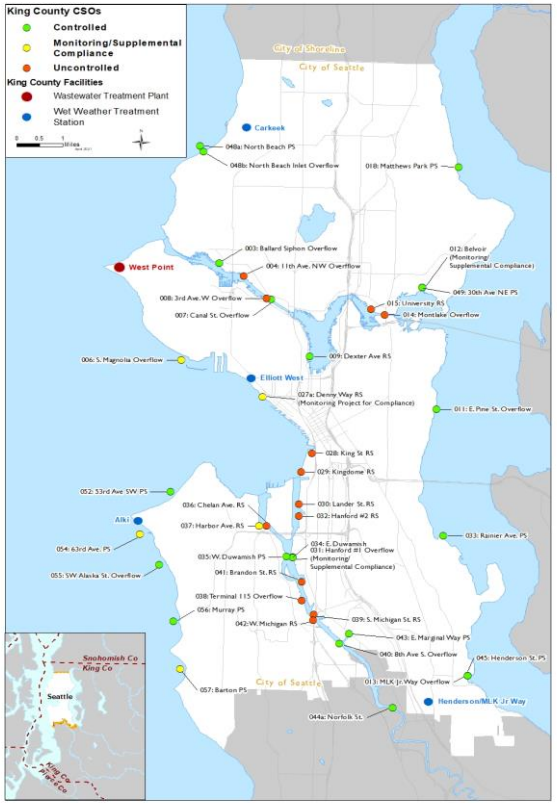
King County CSO Long Term Control Plan (LTCP)

- The LTCP is a comprehensive review of program successes, updates, and future projects.
- It is the "road map" that describes how the County will meet the state law of achieving the greatest reasonable reduction of CSOs at the earliest possible date.

King County CSO Consent Decree (CD)

- In 2013, the County signed a legal agreement with the state and federal governments to control all CSO outfalls by 2030.
- The County is in negotiations to modify the agreement.

https://kingcounty.gov/services/environment/wastewater/cso/consent-decree.aspx



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Outfall	Facilities Plan Milestone	Completion of Bidding Milestone	Construction Completion Milestone
Georgetown Wet Weather Station (Brandon/S. Michigan)	12/31/2015	12/31/2017	12/31/2022
Joint Ship Canal Water Quality Project (11th Ave NW/3rd Ave W)	N/A	N/A	12/31/2025
Chelan	12/31/2018	*12/31/2020 **	CD Modification Under Negotiation
West Duwamish (W. Michigan/Terminal 115)	12/31/2020		
Montlake			
University			
Hanford #2/Lander/Kingdome/King (HLKK) (Also known as Mouth of Duwamish or MOD)			

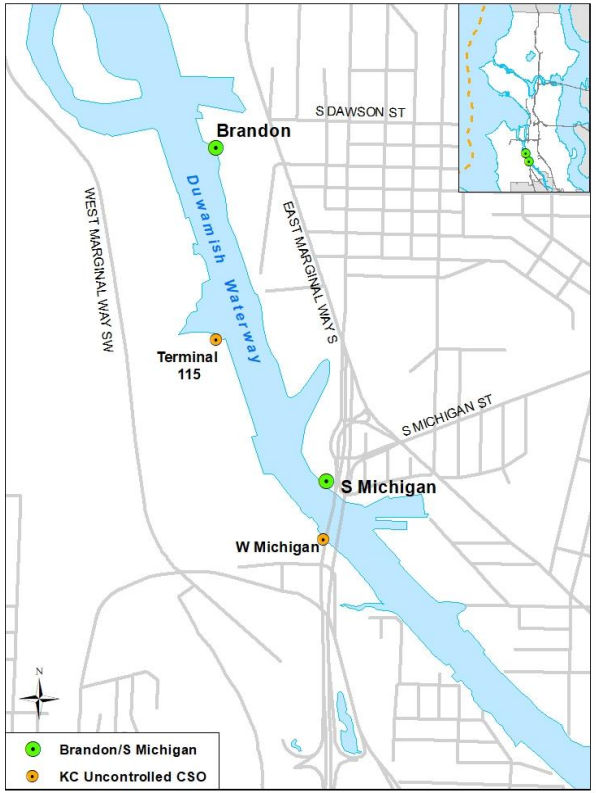
*The County requested that the Chelan completion of bidding and construction completion milestones be adjusted to match HLKK milestones, and the Chelan completion of bidding milestone was missed.

CSO costs in 2023 Adopted Rate Forecast

2023-2032 Forecast	Adopted 2021	2022 Process									
2023 Adopted Rate Forecast	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
Rate Increase %	4.00%	**5.75%**	5.75%	5.75%	5.75%	5.75%	9.00%	9.00%	9.00%	9.00%	9.00%
Monthly Sewer Rate	$49.27	**$52.11**	$55.11	$58.28	$61.64	$65.19	$71.06	$77.46	$84.44	$92.04	$100.33
Rate Increase $	$1.90	**$2.84**	$3.00	$3.17	$3.36	$3.55	$5.87	$6.40	$6.98	$7.60	$8.29
All-In Debt Service Coverage	1.55x	1.59x	1.63x	1.64x	1.65x	1.67x	1.69x	1.72x	1.70x	1.70x	1.71x
Policy Cash Funding						6-Year Average	45%			10-Year Average	40%
Projected CIP Spend ($m)	$283	$307	$326	$381	$429	$503	$633	$752	$849	$928	$908

The adopted 2023 rate forecast includes 35% of the total CSO costs ($1.4 billion)*. This is an increase of $700 million through 2032 from the adopted 2022 rate forecast.

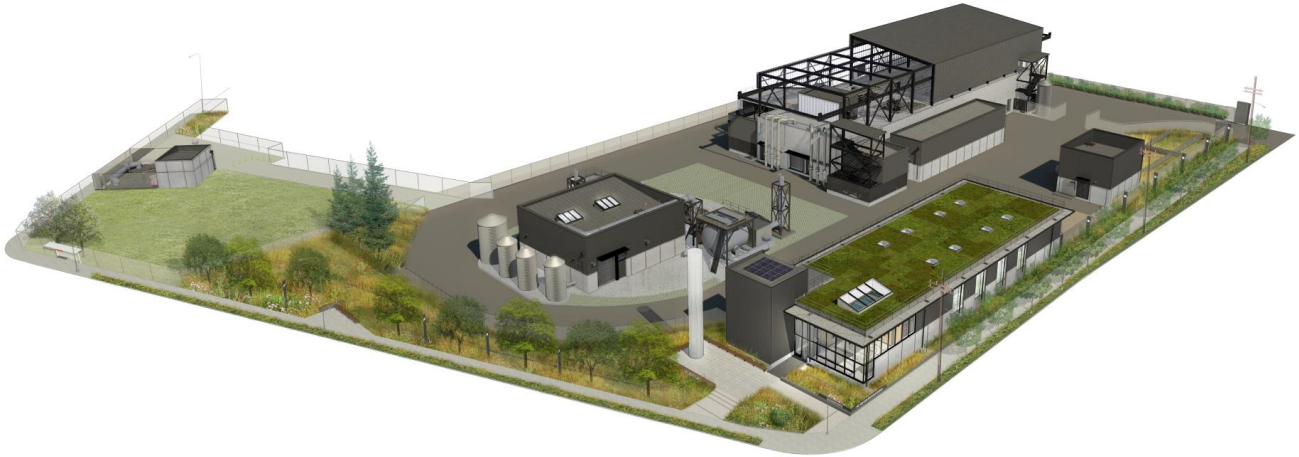
**Previously reported 40% was part of a preliminary sensitivity.*



Georgetown Wet Weather Treatment Station (Brandon, S. Michigan)

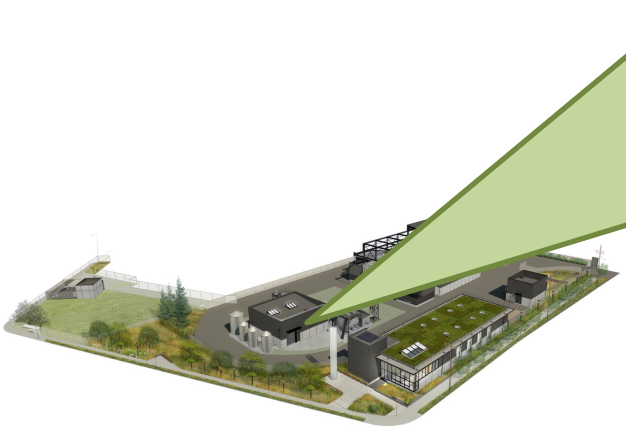
Georgetown Wet Weather Treatment Station (Brandon, S. Michigan)

Facility will be able to treat up to 70 million gallons of combined rain and wastewater per day



Georgetown Wet Weather Treatment Station

Pump Station



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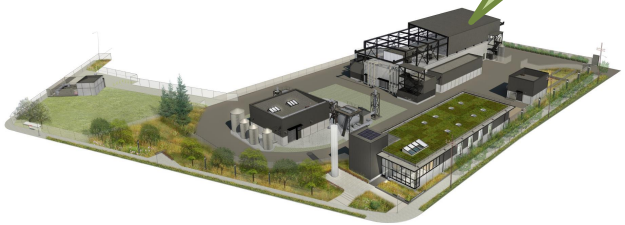
Georgetown Wet Weather Treatment Station

Ballasted Sedimentation

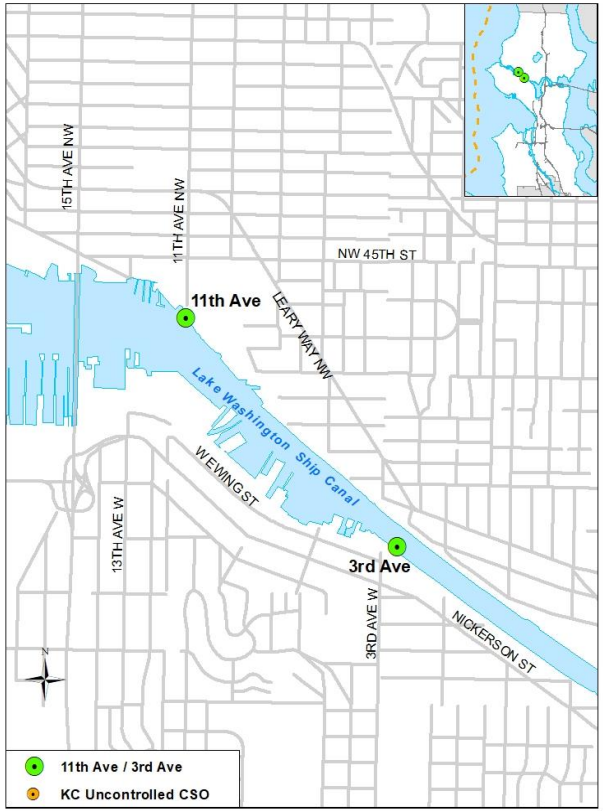
Georgetown Wet Weather Treatment Station

Ultraviolet Disinfection



Georgetown Wet Weather Treatment Station (Brandon, S. Michigan) Update

- Construction is 95% complete
- System and operational testing has begun and will continue through the summer
- Substantial Completion of Construction by December 31, 2022



Ship Canal Water Quality Project (11th, 3rd)

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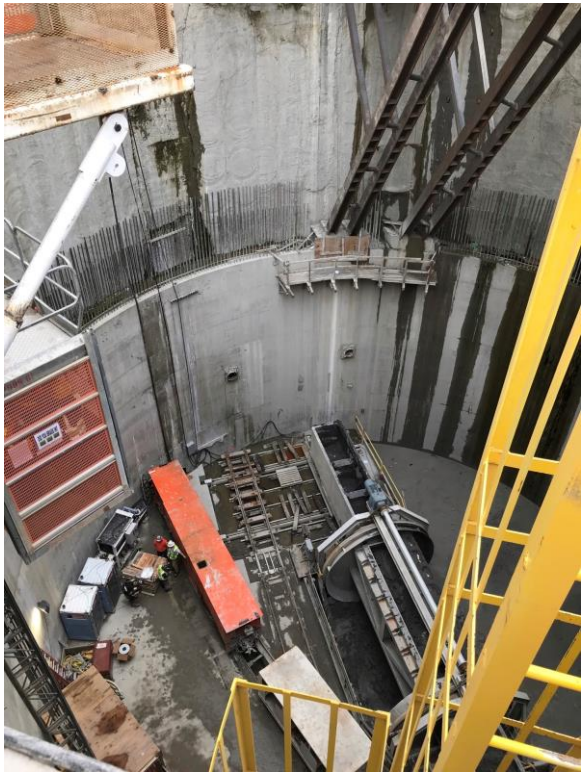
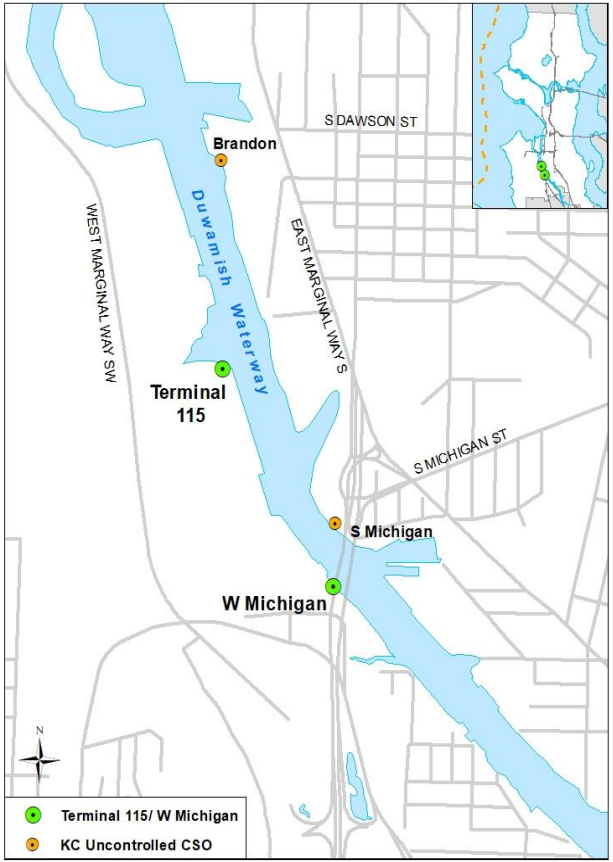


Project Background

- Project in partnership with Seattle Public Utilities to control 5 Seattle CSO outfalls and 2 County CSO outfalls
- Estimated Project cost ~$570 million (35% King County and 65% Seattle)

Status

- Design of tunnel effluent pump station is nearing completion
- Large diameter tunneling operations are underway
- Bid and award of last portions of the project are scheduled for Fall 2022



West Duwamish CSO Control (W. Michigan, Terminal 115)

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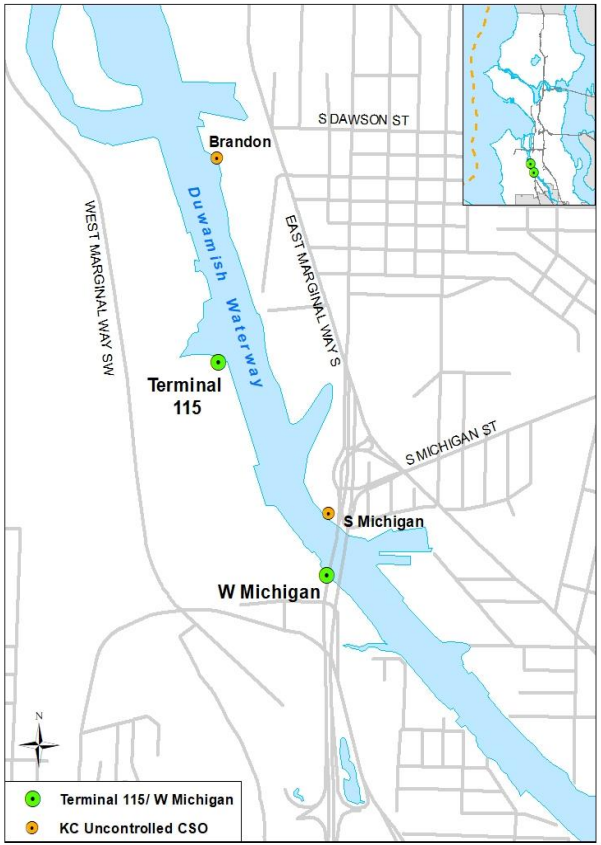


West Duwamish CSO Control (W. Michigan, Terminal 115)

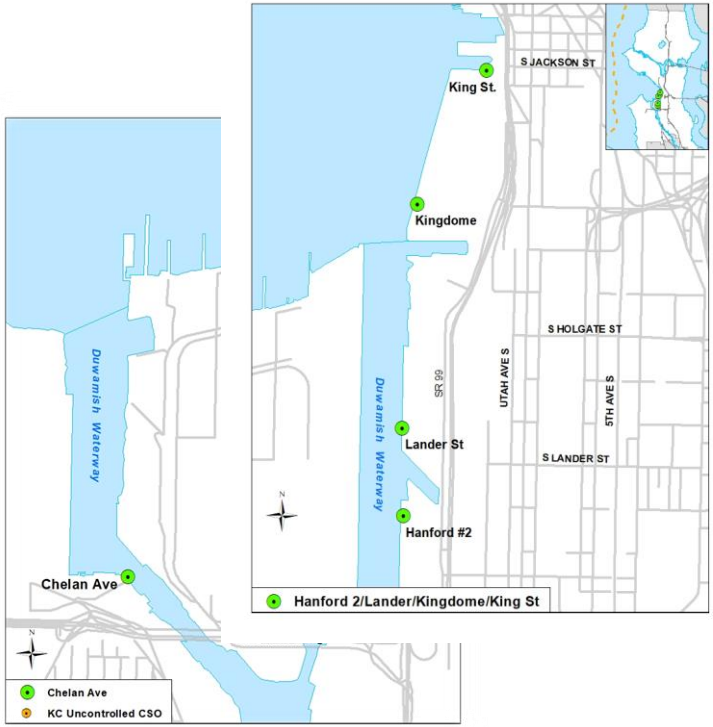
Project Background

- Storage tank along West Marginal Way
- Controls two County outfalls
- Estimated Project cost ~$110M

Status

- Updated tank size based on climate change modeling
- Submitted Revised Facilities Plan in October 2021
- Working on property acquisition
- Proceeding with project design

Future CSO Projects



Chelan, Hanford 2, Lander, Kingdome, King (Mouth of Duwamish – MOD)

University, Montlake

Questions?

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