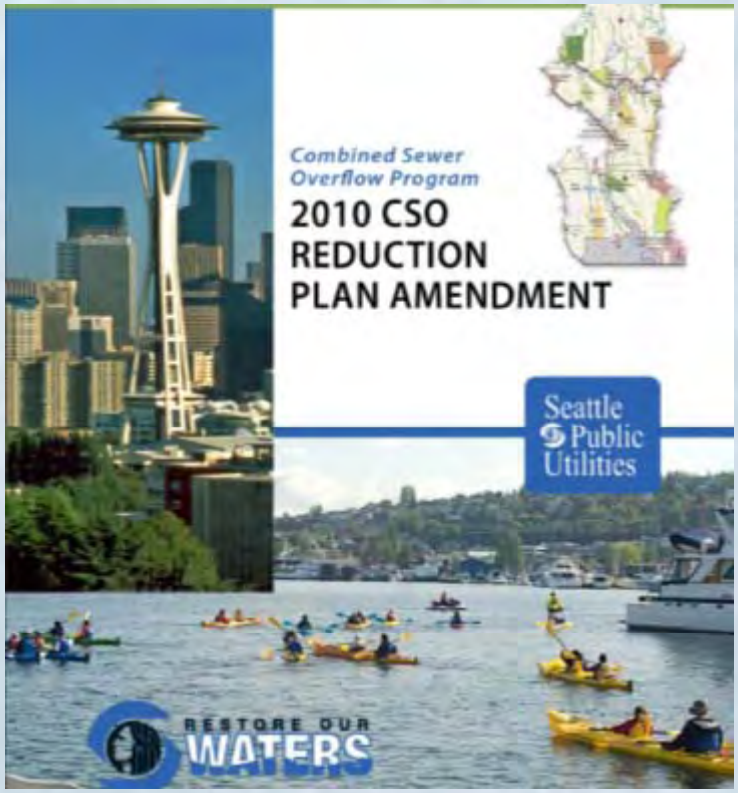
CSO Program

Seattle Public Utilities

July 8, 2010

CSO Program Goals

- Finish the historic effort
- Improve water quality
- Comply with the Clean Water Act, state/federal regulations, permits & orders
- Minimize rate impacts
- Partner for cost-effective solutions



Seattle Combined Sewer Overflows (CSOs)

- 90 Permitted CSO outfalls
- 100 million gallons CSO discharge annually (based on average of 2007-2009 data)
- About 200 CSO discharge events annually

Focus on Next 5 Years

- Improve existing system - retrofits
- Construct three large storage projects
- Pilot green infrastructure projects
- Complete Long-Term Control Plan

How SPU and County work together

- Share flow monitoring and system data
- Joint modeling
- Identify, evaluate, and implement joint projects where feasible and cost-effective
  - *Flow transfers*
  - *Green Stormwater Infrastructure (GSI)*
  - *Joint storage facilities*
- Consider boundary conditions and/or hydraulic limitations

Siting Strategy for Facilities

Available sites in order of preference:

- Public right-of-way (R/W)
- SPU owned land
- City owned land (i.e., Parks, Fleets & Facilities, City Light, Office of Housing, surplus property, etc.)
- Publicly owned land (i.e., State, County, Port, etc.)
- Private property for sale (Commercial, residential, industrial)
- Private property acquisition with willing seller(s)
- Private property acquisition through eminent domain

Public Involvement Strategy

Customize public involvement process to the impact of the project

- For complex projects:
  - *Identify and involve stakeholders early on*
  - *Hold early outreach briefings through existing venues*
  - *Set up advisory boards with key stakeholders during the alternatives analysis process to solicit public feedback*
  - *Coordinate the public involvement process with the environmental review process*
  - *Continue to reach out to affected parties during design and construction phases*
- Long-Term Control Plan
  - *Sounding Board*

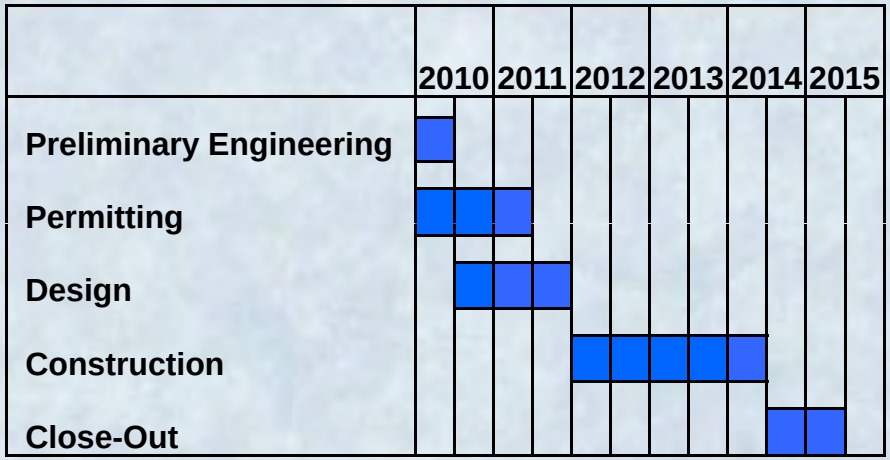
CSO Retrofits

- Goal: Optimize existing sewer system operations; maximize existing storage
- Budget: $2 million per year budgeted for 2009-2015
- Examples:
  - *Raise weir heights (Compliance Order Requirement)*
  - *Install of actively controlled gates*
  - *Upgrade overflow structures*
  - *Abandon or consolidate outfalls*
  - *Improve hydraulic controls to optimize storage*

Green Stormwater Infrastructure: Ballard

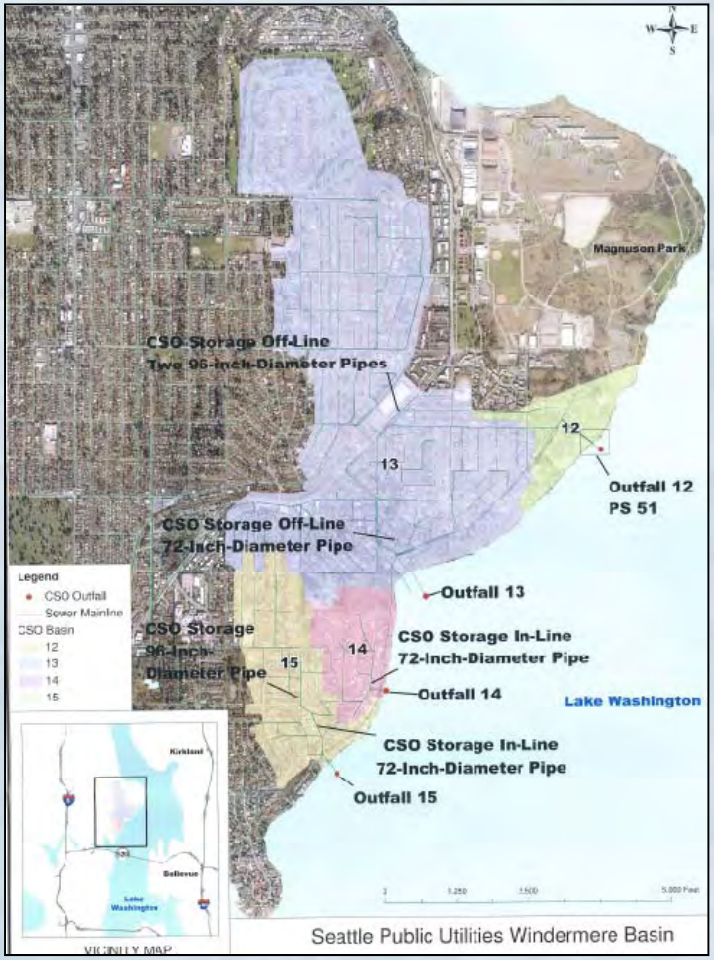
- Ballard GSI Phase 1
  - *Roadside Raingardens*
  - *Design 2009, Construction 2010, Monitoring 2011*
- Ballard GSI Phase 2 (2010-2015)
  - *Residential Rainwise (Private Property)*
  - *Green Alleys*
  - *Roadside Raingardens*
- Total Cost of GSI in Ballard: $19 M
- Estimated Control Volume Reduction: 923,000 gallons

Windermere Project



Milestones

- Facilities Plan to Ecology by end of July 2010
- SEPA DNS out for public comment/appeal in July 2010
- 30% Design Complete by end of November 2010
- 60% Design Complete by end of April 2011
- Type V Land-Use Decision in 2010-2011
- 90% Design Complete by end of August 2011
- 100% Design Complete by end of December 2011
- Construction NTP by August 2012
- Substantial completion of construction by Summer 2014
- Construction close-out: 2Q 2015



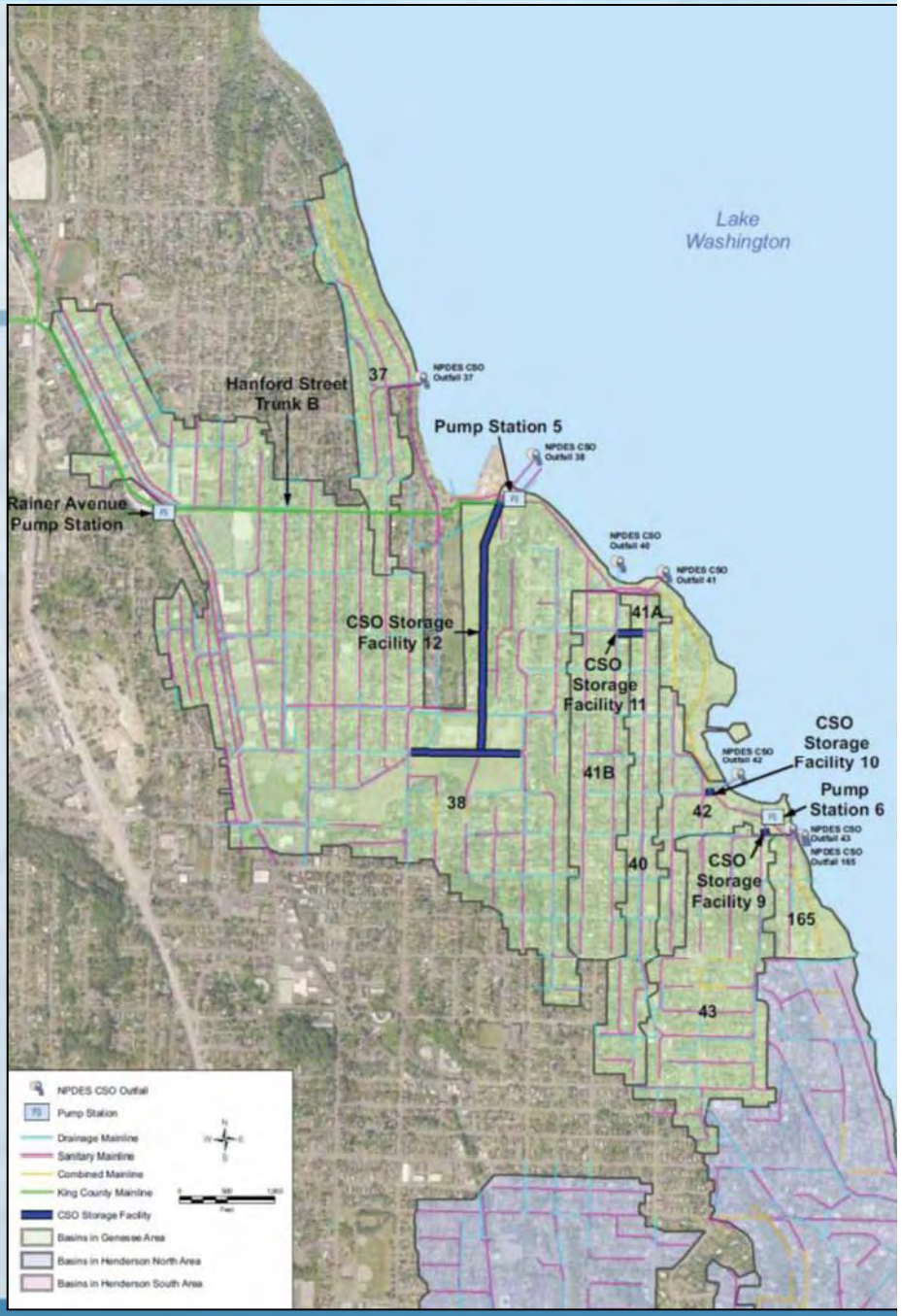
Windermere CSO Project Preferred Site – Magnuson Park Parcel 9 (South of NE 65th St)

Windermere Project Pipeline Alignment

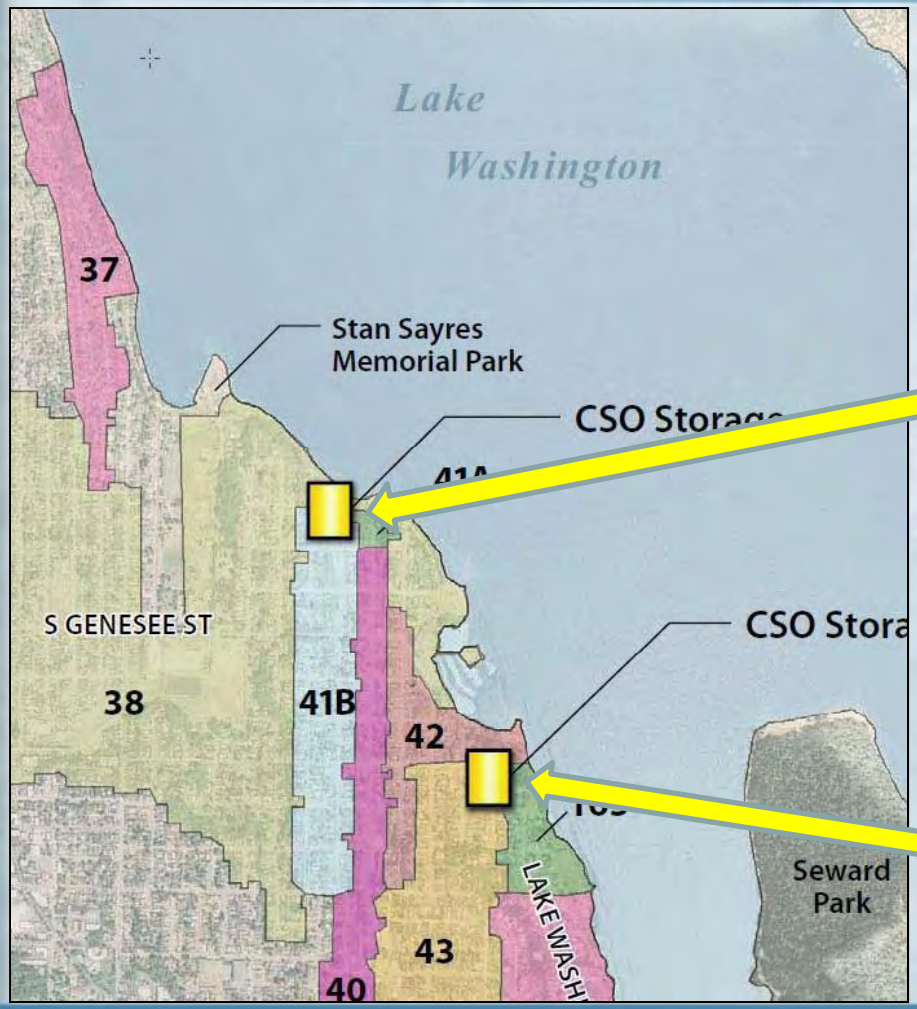
- No impact to Burke-Gilman Trail
- Impacts to Sand Point Way: 1-2 lane closures for approximately 3-4 months
- Maintain access on NE 65th St and to boat ramp

Genesee CSO Reduction Project

- Top-Priority Basin
- 700 Acres
- Construction 2013-2015
- Reduces CSOs from 10 times to 1 time per year
- Storage Volumes:
  - *Basins 40/41: 430,000 gal*
  - *Basin 43: 190,000 gal*



Genesee Area Alternative #3: Distributed Storage (Preferred)

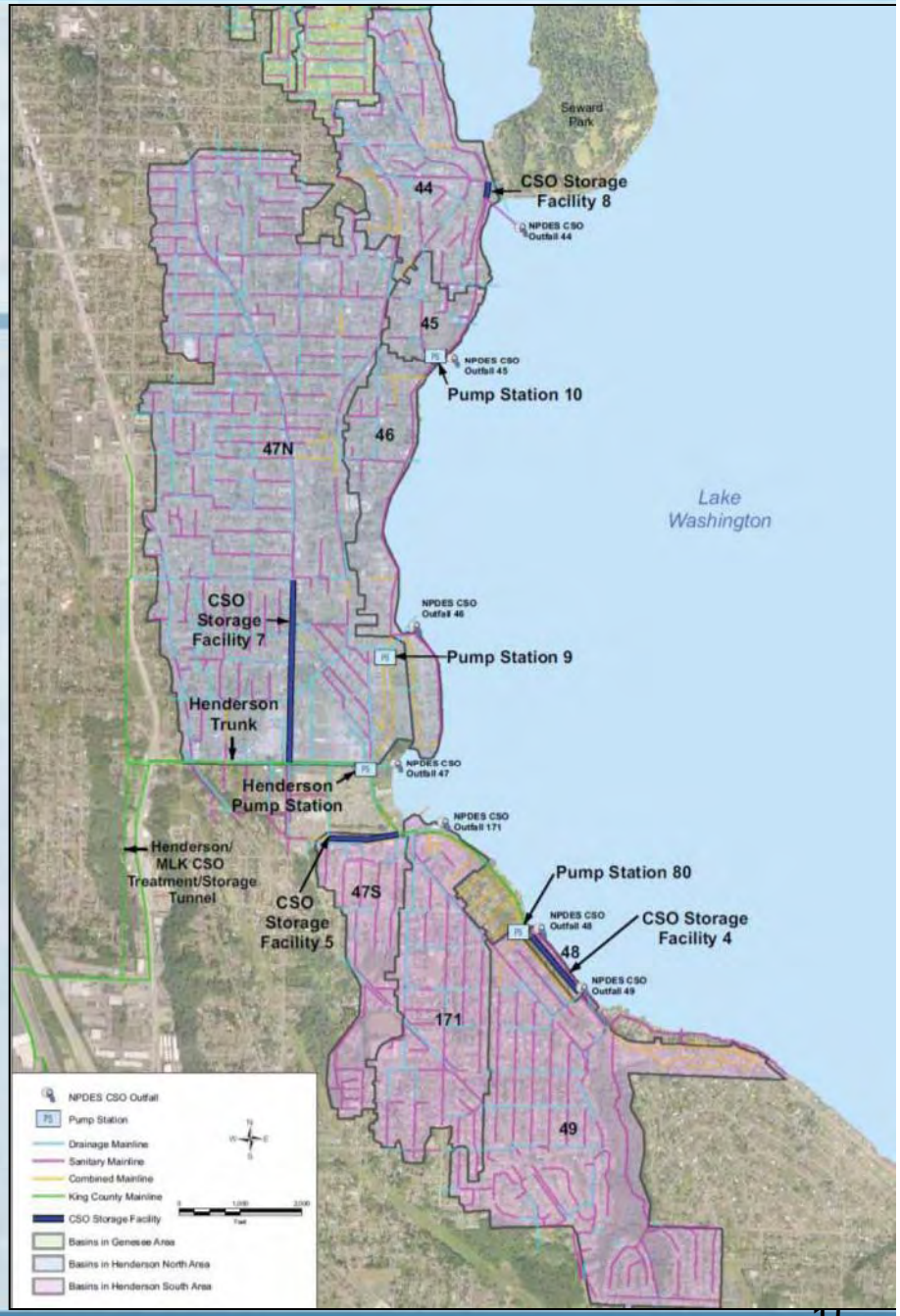


Storage in Triangle Parking Lot

Storage along S. Alaska St

Henderson CSO Reduction Project

- Top-Priority Basin
- 1,800 Acres
- Construction 2014-2018
- Reduces CSOs from 17 times to 1 time per year
- Storage Volumes:
  - Basin 44: 2.4 Mgal
  - Basin 45: 200,000 gal
  - Basin 46: 350,000 gal
  - Basins 47/171: 260,000 gal
  - Basin 49: 160,000 gal

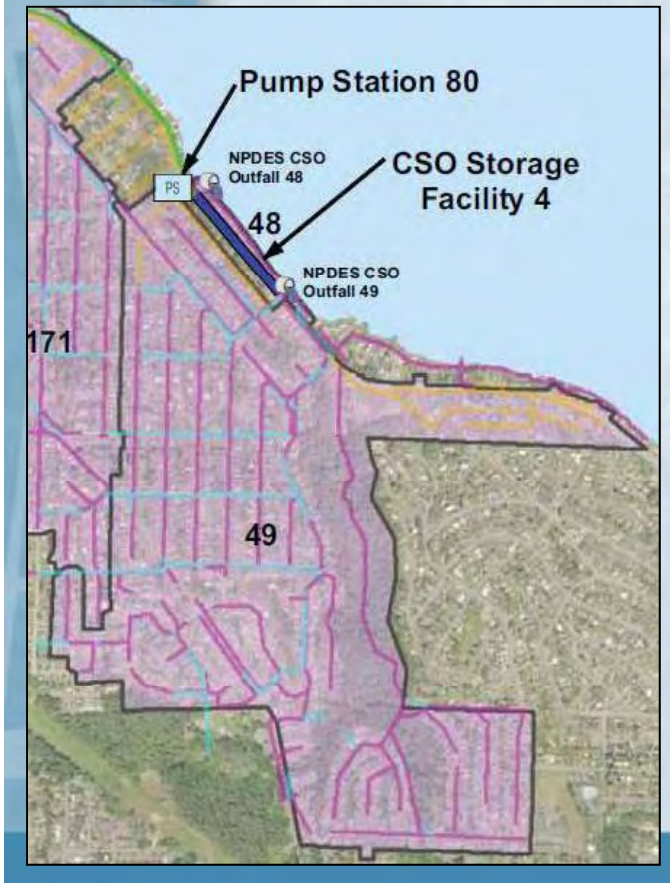


S. Henderson CSO Reduction Projects

Basin 49 Alternatives:

(1) Retrofit and possible pipe upgrade to send more flow to King County (Preferred)

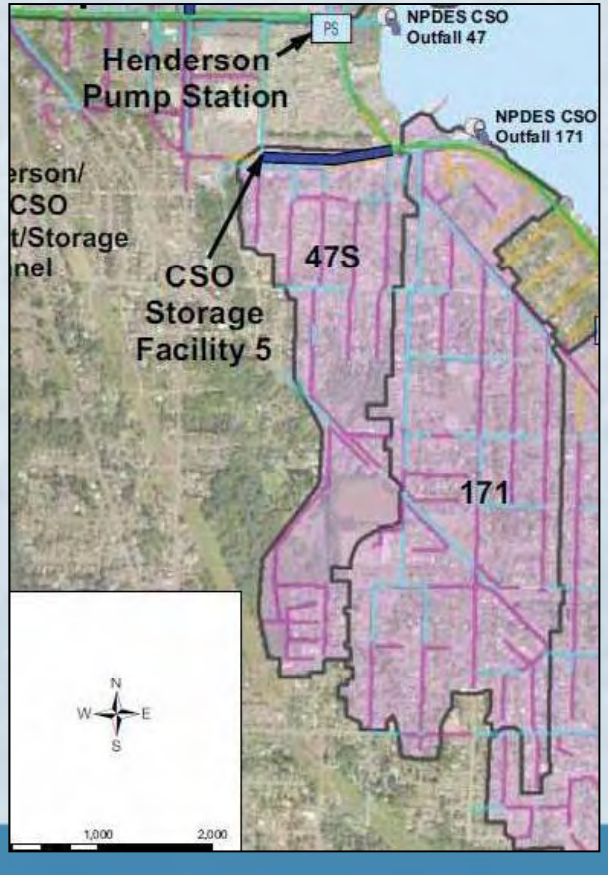
(2) Storage (160,000 gallons) in Rainier Avenue



Basin 47S/171 Alternatives:

(1) Retrofit and possible pipe upgrade to send more flow to King County **(Preferred)**

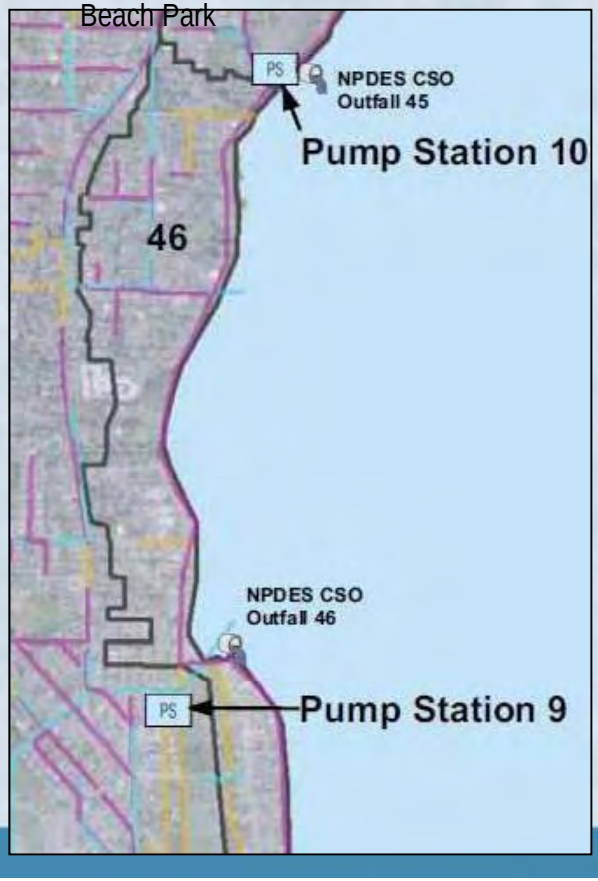
(2) Storage (260,000 gallons)



Basin 46 Alternatives:

(1) Upgrade pump station to send more flow to King County **(Preferred)**

(2) Storage (350,000 gallons) in Pritchard Island Beach Park



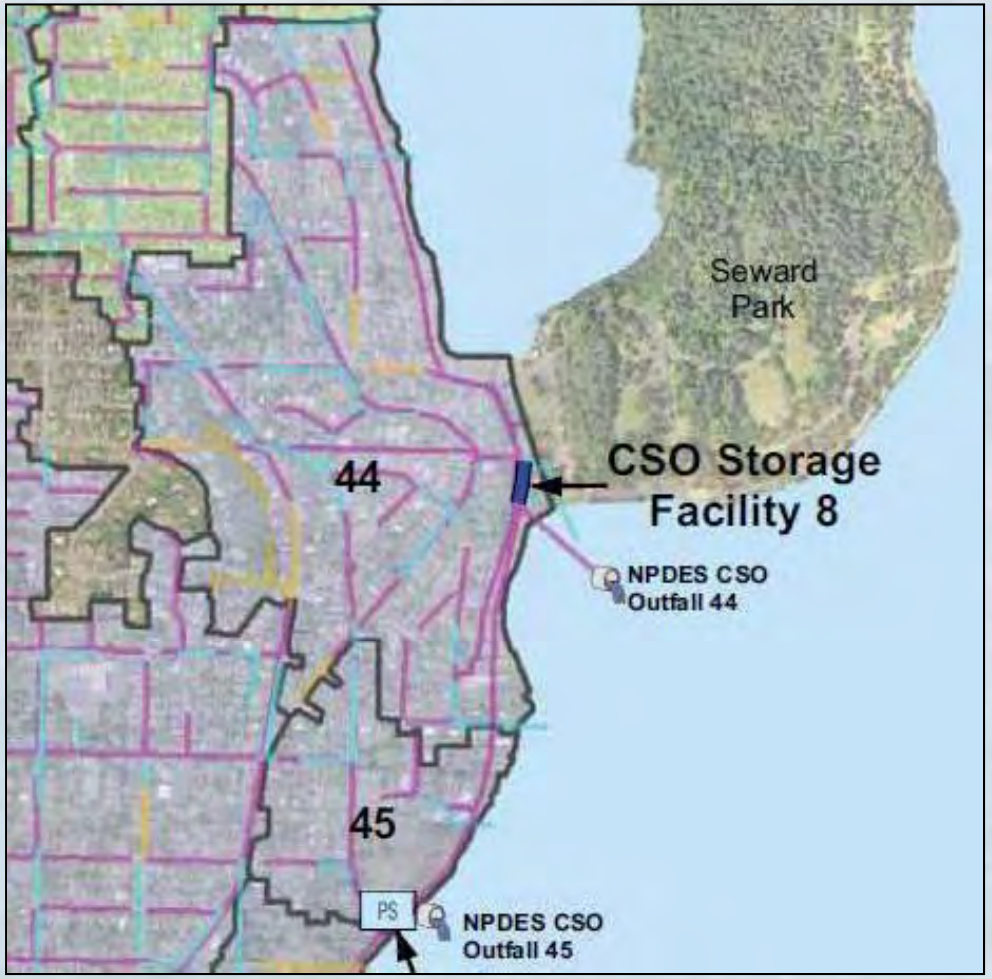
North Henderson CSO Reduction Project

Basins 44 and 45
Alternatives:

(1) Separate storage tanks in Basins 44 (2.4 million gallons) and Basin 45 (200,000 gallons)

(2) Transfer Basin 44 flows south to Basin 45; storage (2.6 million gallons in Basin 45)

(3) Tunnel Storage under Basins 44 and 45



Questions and Discussion