

# South Park

## Overview of SPU projects

**CDWAC**

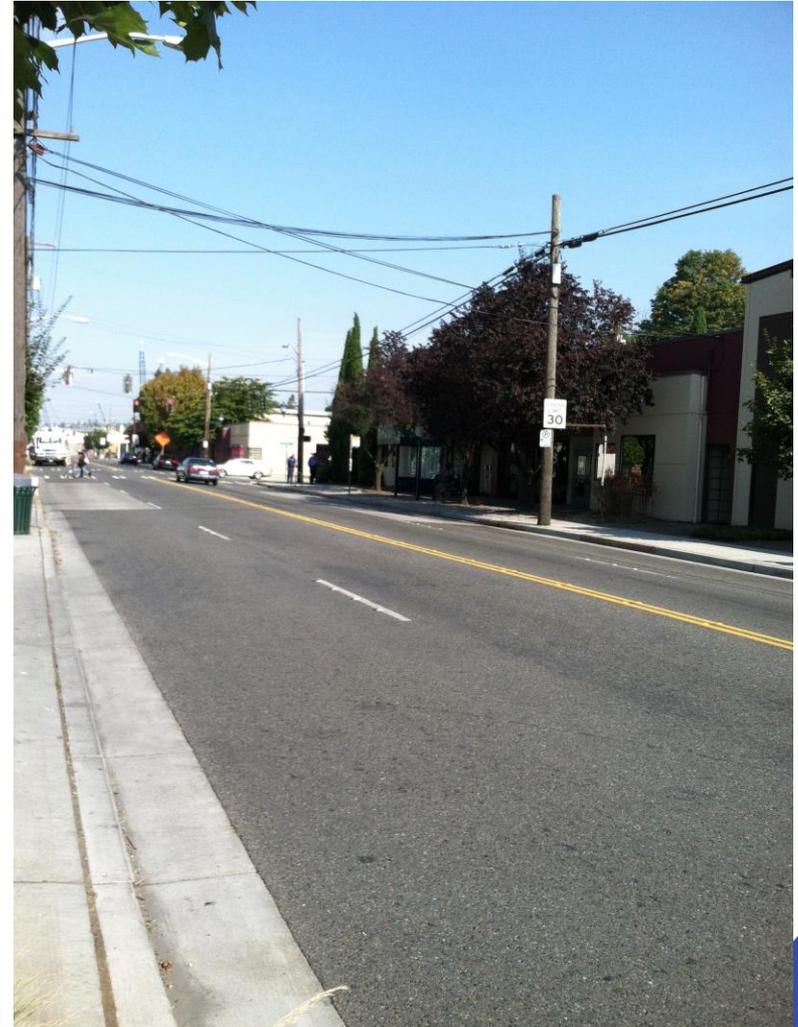
**February 11, 2015**

### Project Team

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WQ PM	Alan Lord
FOM Rep	Vicki Marsten
PS Design Engineer	Young Kim
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Budget Analyst	Brian Larson

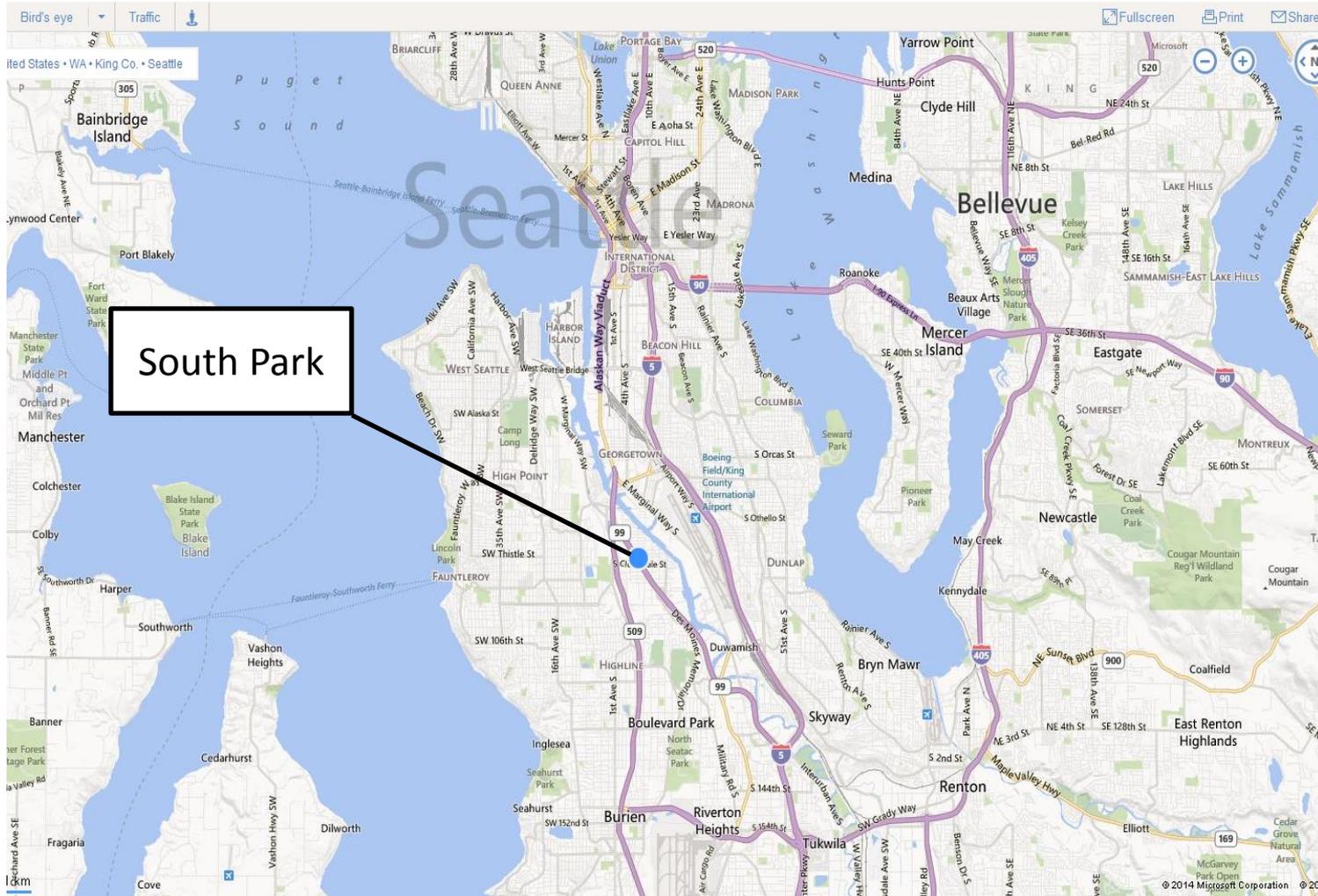
# Agenda

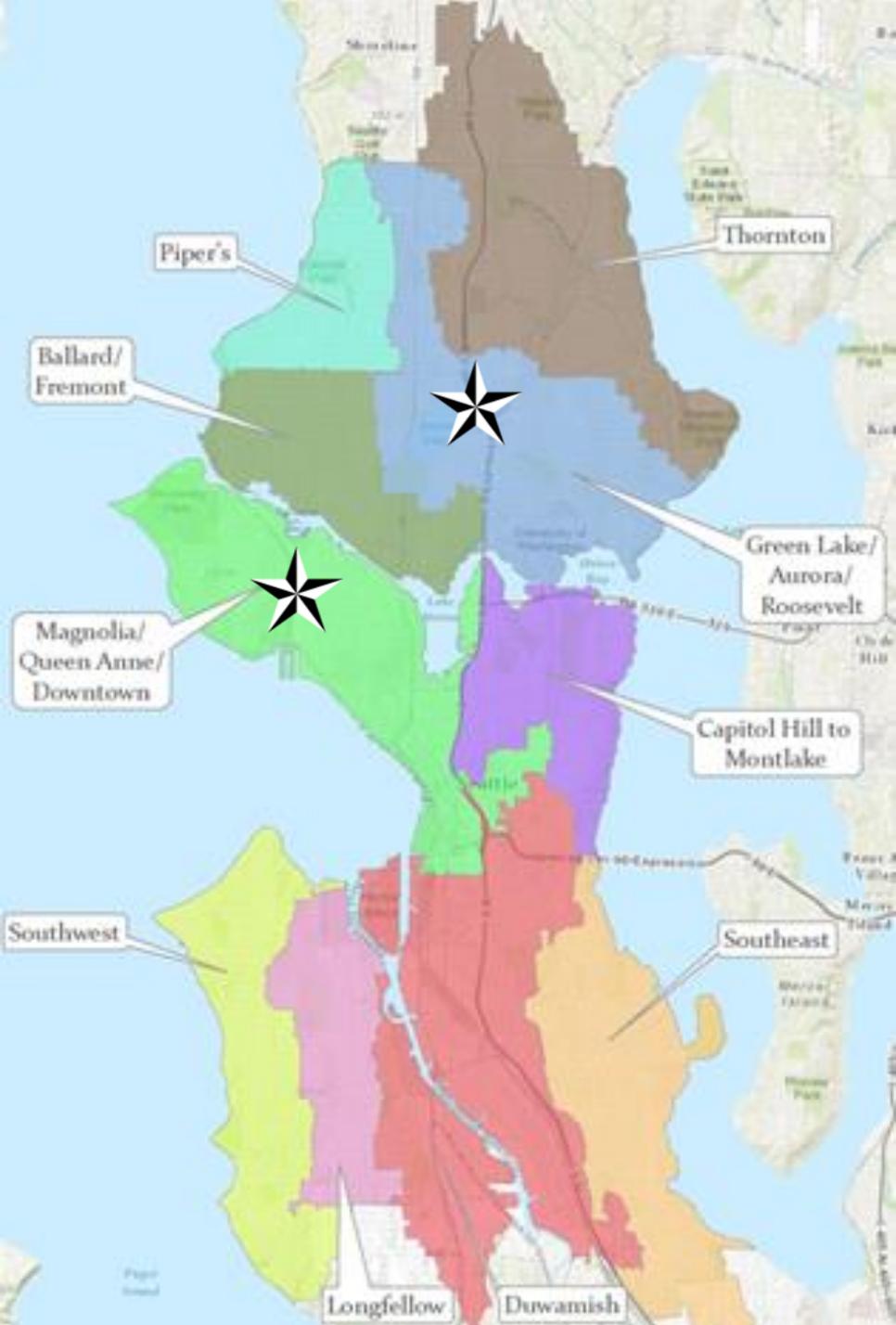
1. South Park Overview
  - Demographics
  - Systems
2. Brief discussion of projects in the combined sewer basin
3. 7<sup>th</sup> Ave S drainage basin
  - Flooding
  - Water Quality
4. Next steps



14<sup>th</sup> Ave S – Main Commercial Corridor

# South Park





# Planning Areas

# South Park Community

- Residential, commercial and industrial areas
- Diverse neighborhood with high percentage of low-income families with children
- Continue to address service equity issues
- Many roads unpaved or in poor condition
- Neighborhood was significantly impacted by extended closure of the South Park Bridge.



S Director St Middle Drainage Basin

- In Lower Duwamish Superfund Site

# Years of Construction Impacts

Main connection between many businesses and a significant portion of their customer base



Closed July 2010

Re-opened June 2014



2014-1.17\_x0824

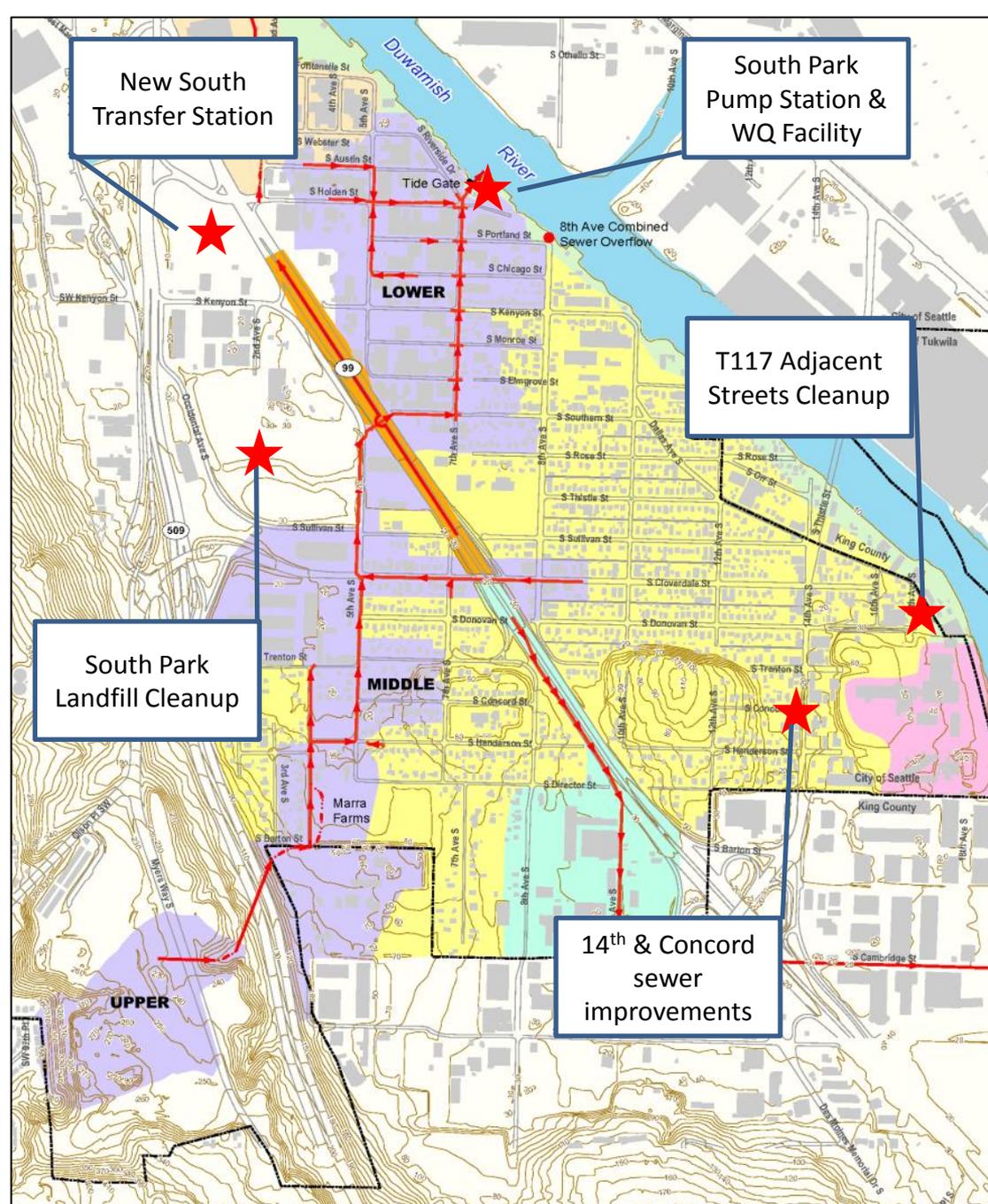
Seahawks "12th Man" banner on north draw span facing Boeing.

photo ©John Stamets

Seattle  
Public  
Utilities

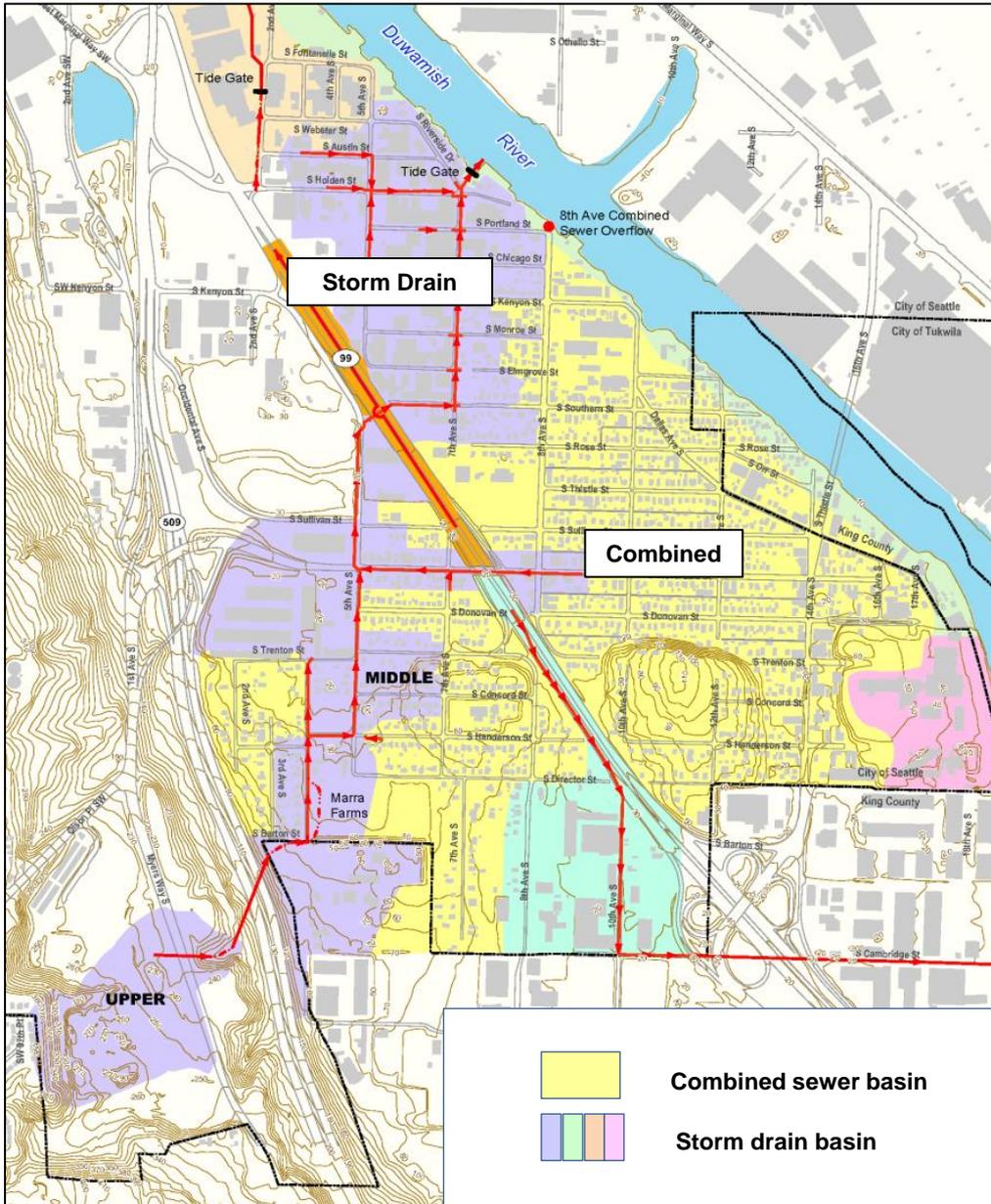
# South Park Project Sites

- 14<sup>th</sup> & Concord sewer improvements
- T117 Adjacent Streets cleanup (Superfund)
- S Portland St roadway/drainage improvements
- Landfill cleanup (MTCA)
- South Park pump station/water quality facility

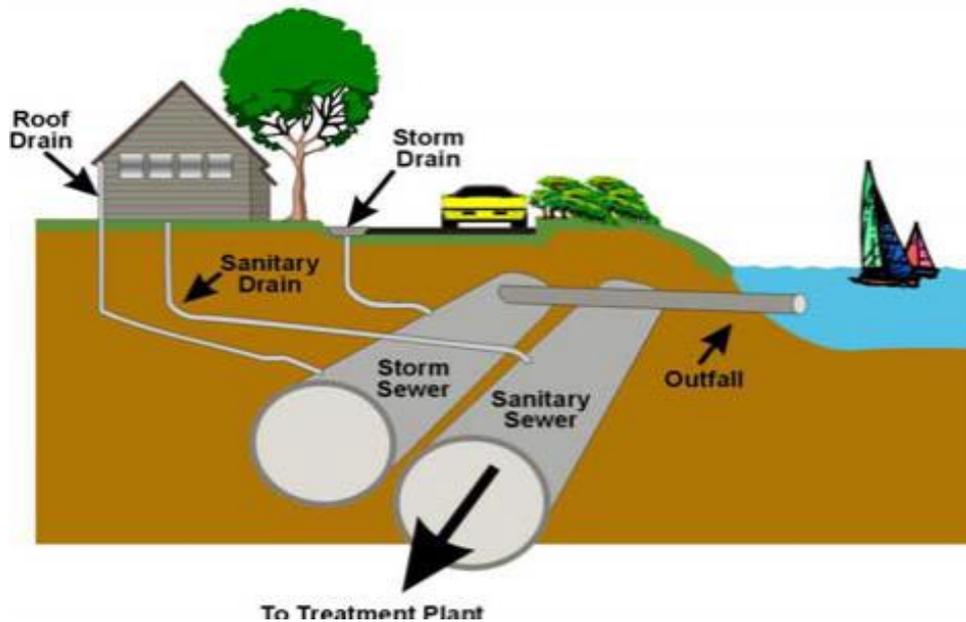


# South Park Systems

- Combined sewer and storm drain basins are independent of each other
- Combined sewer
  - 14th & Concord
- Storm drain – 7<sup>th</sup> Ave S
  - S Portland St
  - Flood Control Pump Station
  - Water Quality Facility
  - Drainage Conveyance Improvements
- T117 Adjacent Streets Cleanup



# What's the Difference between a Combined Sewer and a Separated System?



# 14<sup>th</sup> & Concord sewer improvements

## Capacity issue in the combined basin

- Flooding and backups
- First major project scheduled for construction in 2016
- Backflow prevention program across South Park
- Coordination with King County
- Approach likely to be incremental

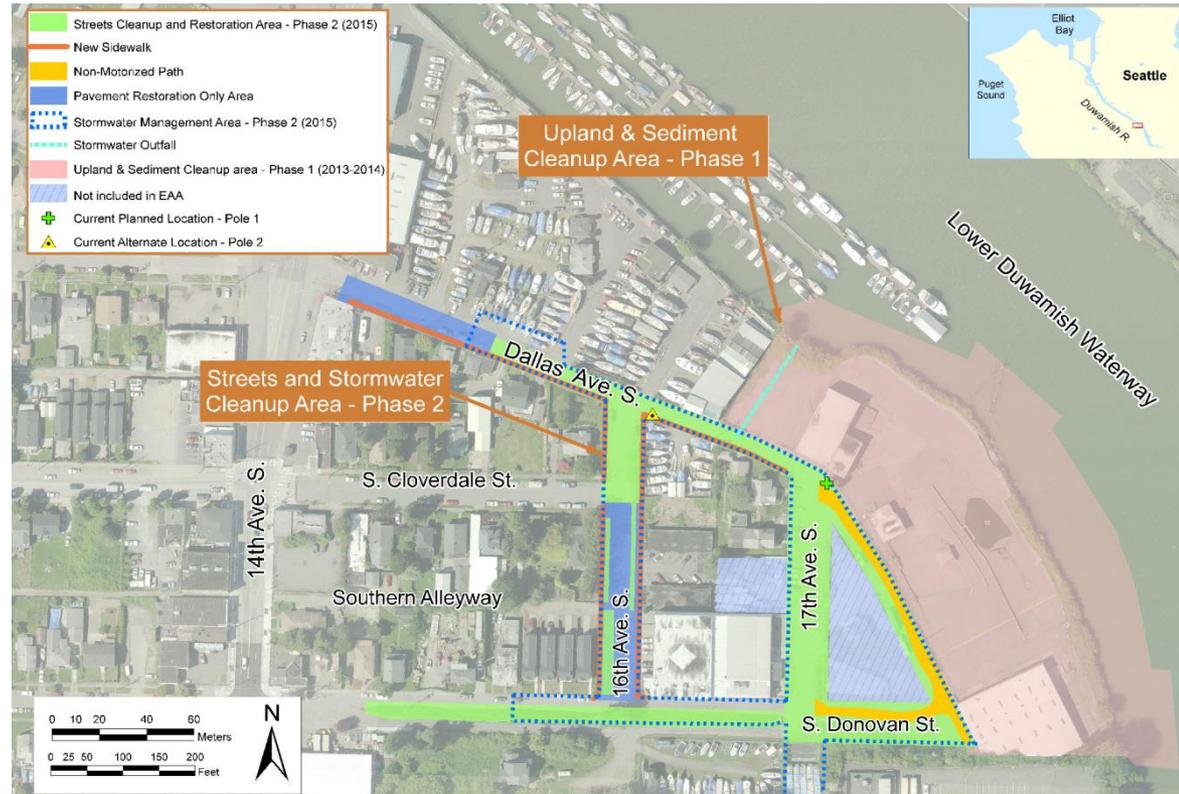


December 2010

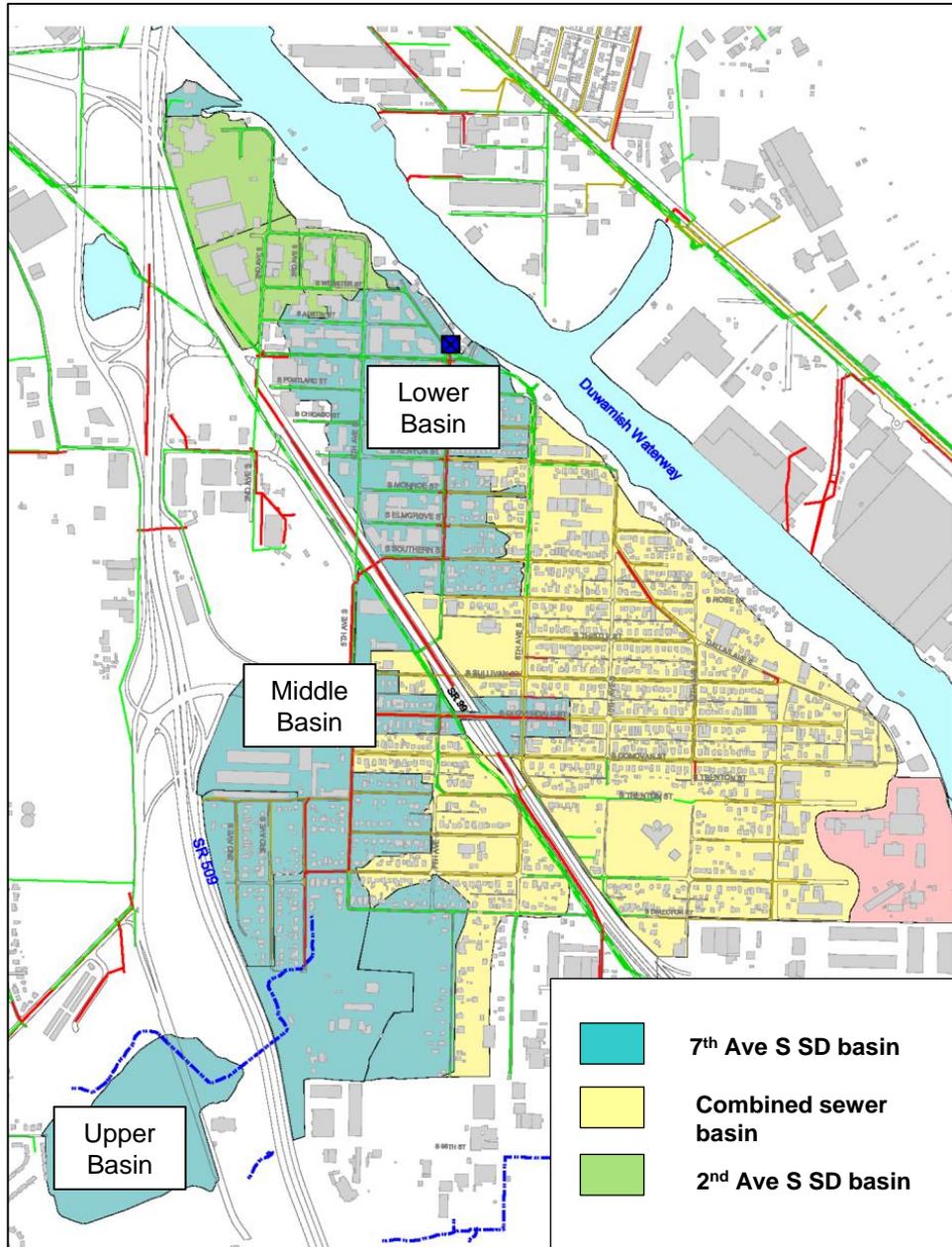
(25-50 year recurrence/ 2-4% probability of this happening in any one year)

# T-117 Adjacent Streets Cleanup

- SCL completed yard cleanup in 2013
- Port completed upland/sediment cleanup in January 2015
- Adjacent street cleanup scheduled to start in 2015—Joint SPU/City Light project
  - Remove PCB-contaminated soil from right-of-way
  - Replace streets
  - Install stormwater collection and treatment



# 7<sup>th</sup> Ave S Storm Drain Basin Characteristics



- 238-acre basin
- 3 distinct areas
  - Upper basin industrial/undeveloped
  - Middle largely residential
  - Lower – largely industrial
- Significant, frequent flooding in lower basin
- Tidal influence and sea level rise impacts in lower basin
- No stormwater treatment, discharges directly to Duwamish Waterway

# Typical Flooding in Lower 7<sup>th</sup> Ave Basin



Global Inc., November 19, 2012  
(10-25 year event, 4-10% probability  
of this happening in any one year)



5<sup>th</sup> Ave S at S Webster- 2003  
(50-year recurrence, 2% probability of  
this happening in any one year)

# How Can We Address Water Quality And Flooding Problems?



7<sup>th</sup> Ave S & S Chicago St - 11/19/12  
(5-10 year recurrence, 10-20% probability of this happening in any one year)

- Level of Service
- Social Equity
- Strategic Business Plan
- Cumulative impacts of multiple projects on the community
- Commitments to the Community
- \$6.5M King County Flood Control District funding
- Water Quality Facility design data



# Multi-Phased Problem Solving Approach to Reduce Flooding

**Step 1** - Build flood control pump station to overcome the tidal influence.

**Step 2** - Street and drainage improvements: this future SPU/SDOT effort will alleviate street flooding.

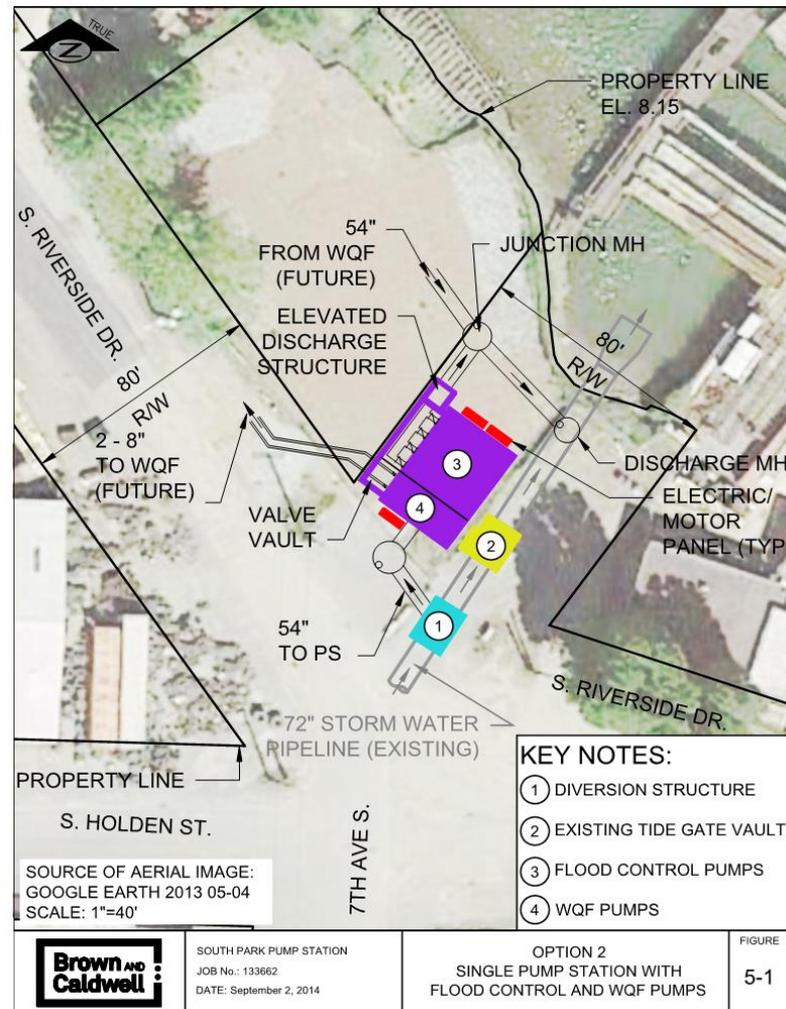
**Step 3** - Individual property owner improvements: this non-SPU effort can provide drainage for low-lying sites.



5<sup>th</sup> Ave S, looking north from Holden  
November 19, 2012  
(10-25 year event, 4-10% probability of this occurring in any year)

# Step 1 – How Do We Overcome the Tide?

- Project is in design and is included in the baseline budget
- Overcomes tidal influence at the outfall & trunk
- Addresses flooding in areas directly connected to the drainage trunk (S Portland St & 7<sup>th</sup> Ave S)
- No immediate benefit on streets that lack a stormwater collection system



## Step 2 - Drainage Collection System Improvements

- Build a stormwater collection system
- Coordination with SDOT is key
- Provides benefits in drainage and street improvements
- Planning and sequencing of improvements



# SPU's Commitment to getting flows to the Pump Station – the SBP Action Plan

**South Park** - *“To completely solve the existing severe flooding problem in the basin, additional capital improvements are needed to improve the pipe conveyance system and carry water to the new pump station.”*

How will we deliver on our commitment?

- SPU will develop strategy, layout, sequencing and costs
- SPU will Coordinate implementation with budget constraints
- SPU hopes to identify and establish partnerships with SDOT to design and construct phases

# Step 3 – How Will Low-Lying Sites be addressed?

- Individual property owners are responsible for draining their sites and connecting to the system
- Policy issues still need to be worked out



# To put it all together again

## 3 Steps to Address Flooding

Project	Tidal Influence	Incomplete Drainage System	Low Lying Sites
SPU Pump Station	◆		
SPU Collection System		◆	
Individual Property owners			◆

# What Next?

## We're Building a Water Quality Treatment Facility

Project is in Options Analysis and is in the Baseline Budget

### Overarching Goal

Improve the water quality of runoff from the Lower 7<sup>th</sup> Ave S drainage basin discharging to the Duwamish Waterway.



In the existing condition, runoff is discharged to the Duwamish Waterway untreated

# Project Driver

## SPU Consent Decree & Integrated Plan

- Implement stormwater quality projects before smaller-volume sewage overflow projects for better improvement in overall water quality
- South Park Water Quality Facility is one of 3 projects proposed
- Specific pollutant load reductions detailed in the Integrated Plan will be the performance criteria for the project
- Must be constructed by December 31, 2025

# Project Drivers – Water and Sediment Quality

- Deferred code compliance
- Superfund/Lower Duwamish source control plan
- Reduce impacts to sediment and water quality.



# In Closing

**We'll be back....**

*Questions?*

and

**Thank You!**

