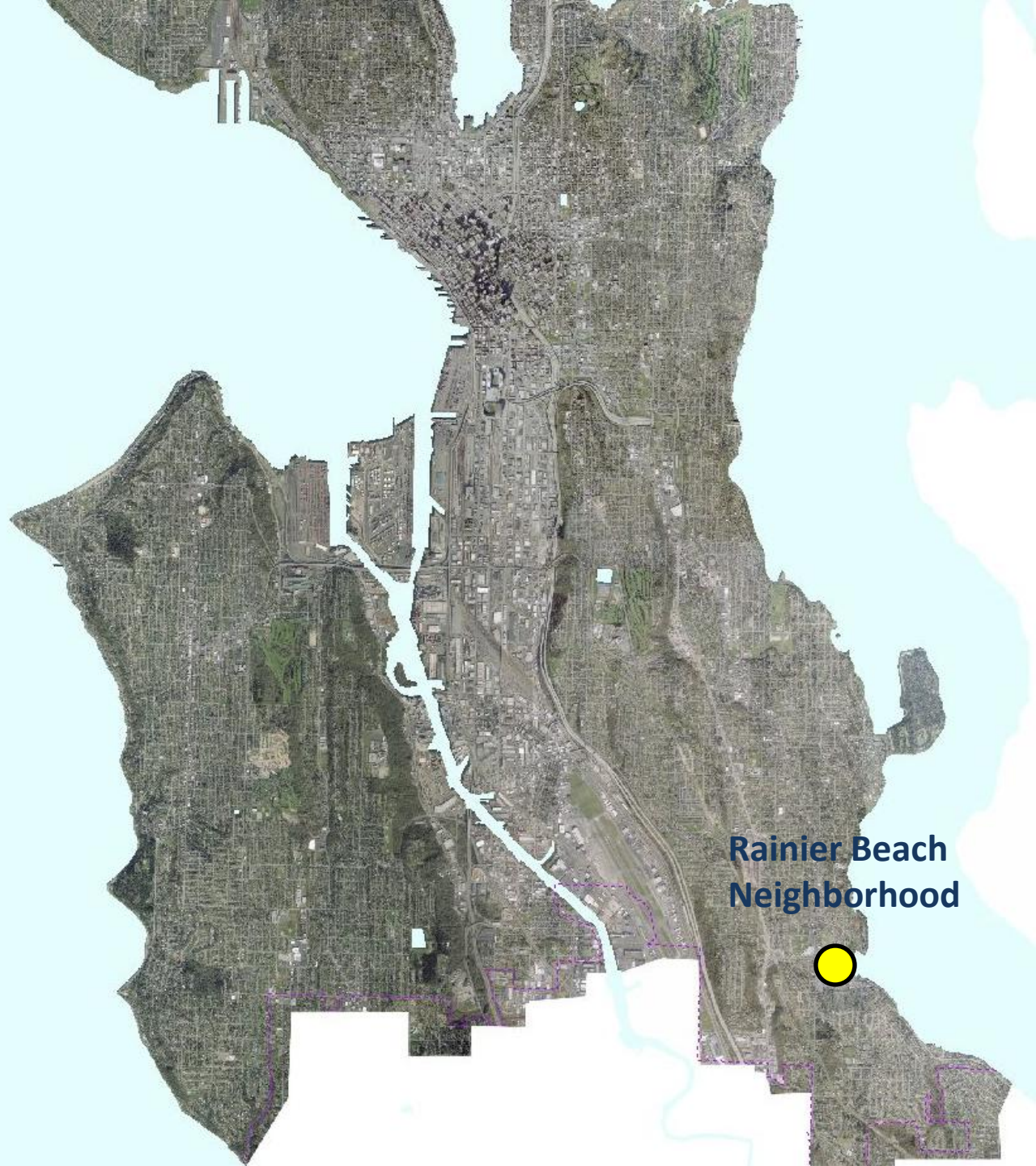


Lower Mapes Creek Restoration and 52nd Ave CSO Conveyance Projects



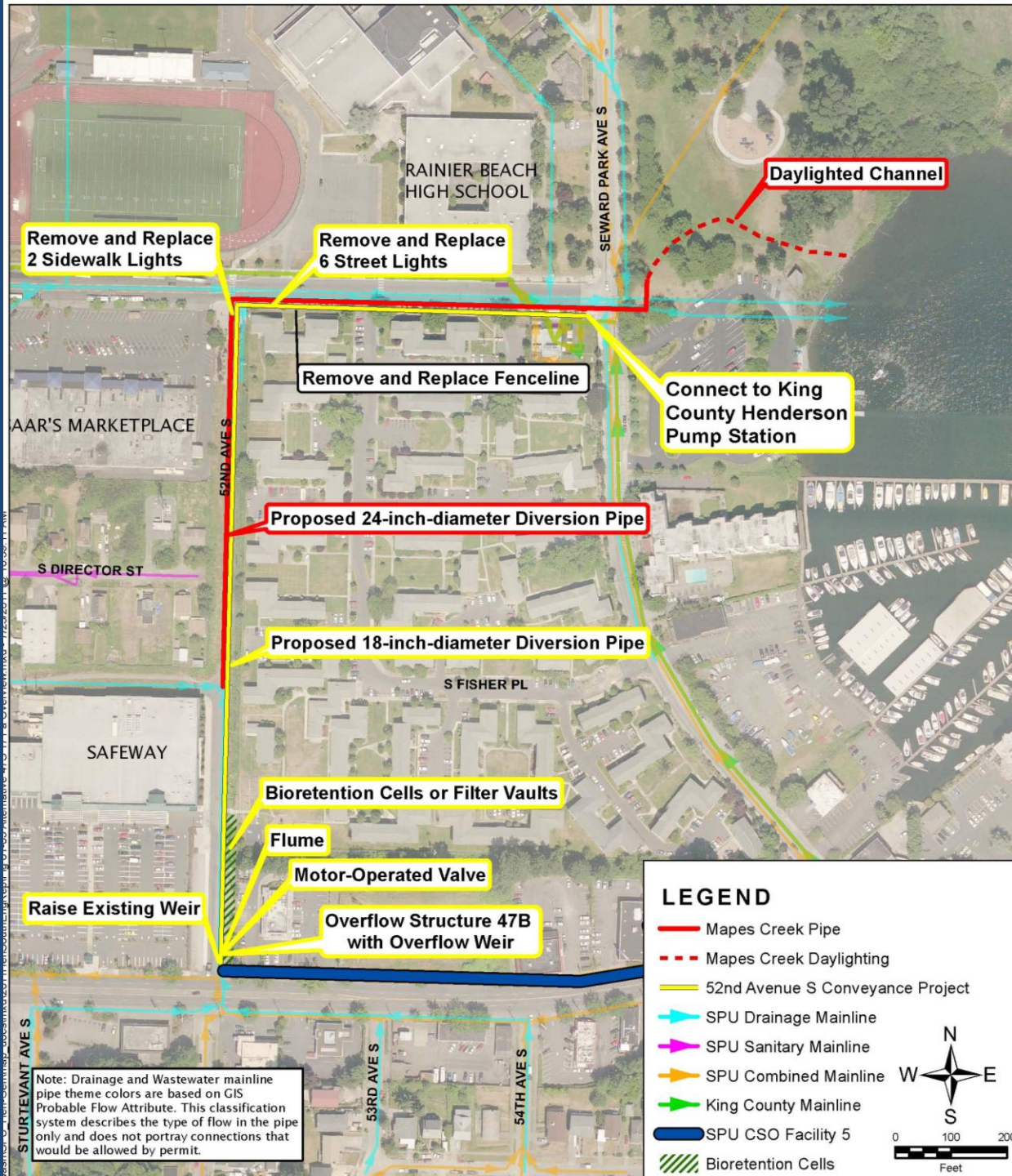
Project Location



**Rainier Beach
Neighborhood**

Project Objectives

- 52nd Ave CSO Reduction
 - Reduce combined sewer overflows by building new conveyance line to meet regulatory requirements and Level of Service goals
- Mapes Creek
 - Improve aquatic habitat through reconnecting Mapes Creek to Lake Washington.
 - Increase juvenile Chinook salmon rearing and migration habitat.
 - Provide an accessible environmental amenity in the Rainier Beach neighborhood
- 1% for the Arts – Artist selected; location and art TBD



Remove and Replace 2 Sidewalk Lights

Remove and Replace 6 Street Lights

Remove and Replace Fenceline

Connect to King County Henderson Pump Station

Proposed 24-inch-diameter Diversion Pipe

Proposed 18-inch-diameter Diversion Pipe

Bioretention Cells or Filter Vaults

Flume

Motor-Operated Valve

Raise Existing Weir

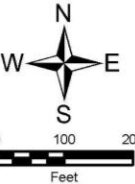
Overflow Structure 47B with Overflow Weir

Daylighted Channel

Note: Drainage and Wastewater mainline pipe theme colors are based on GIS Probable Flow Attribute. This classification system describes the type of flow in the pipe only and does not portray connections that would be allowed by permit.

LEGEND

- Mapes Creek Pipe
- - - Mapes Creek Daylighting
- 52nd Avenue S Conveyance Project
- SPU Drainage Mainline
- SPU Sanitary Mainline
- SPU Combined Mainline
- King County Mainline
- SPU CSO Facility 5
- ▨ Bioretention Cells



Pipeline Alignment



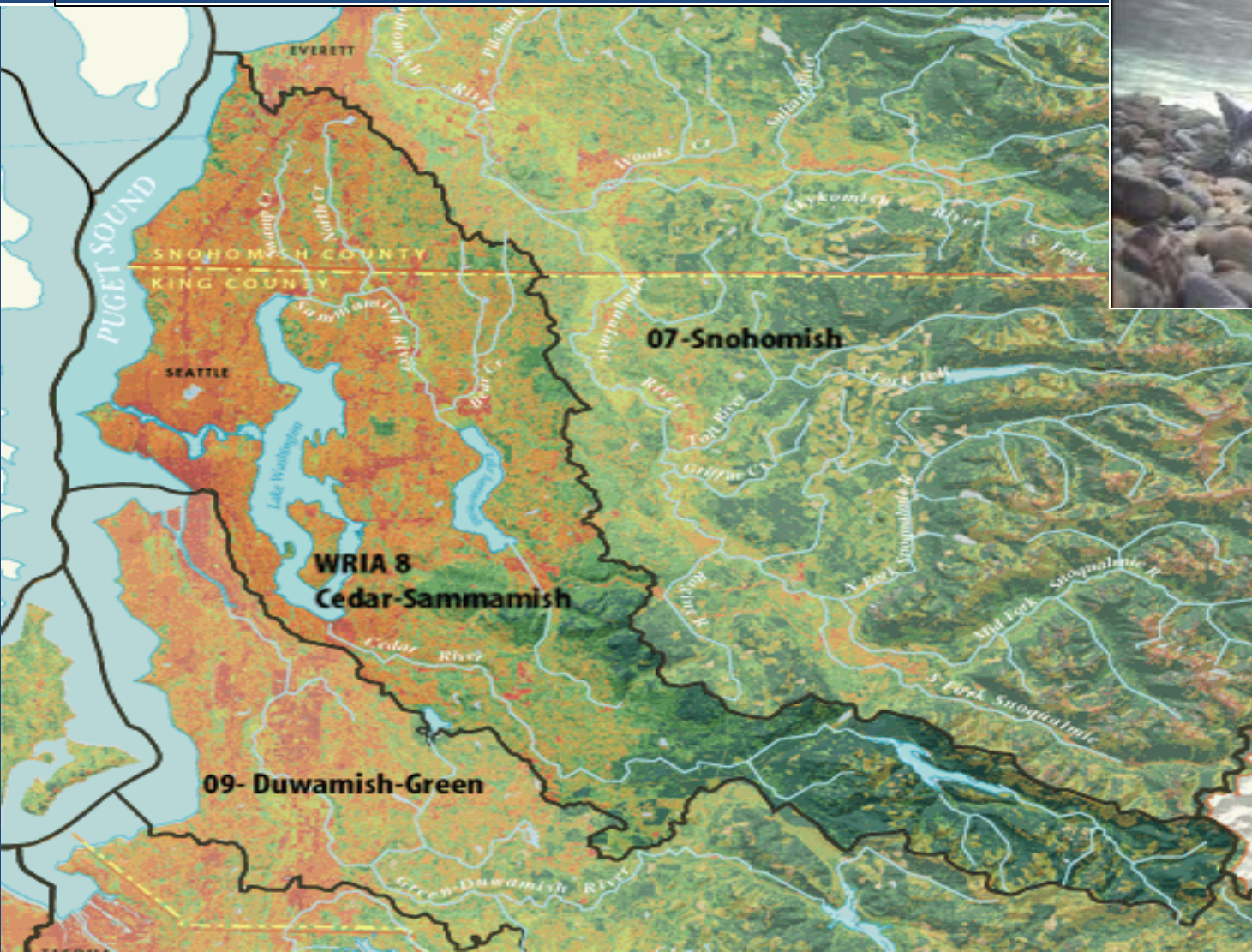
Focus: Mapes Creek Project and Changes in Beer Sheva Park

- Why are we doing this project?
- How is the park used now? What are the major park amenities?
- How are we proposing to change the park?
- How will that affect park amenities and the experience for park users?

Focus: Mapes Creek Project and Changes in Beer Sheva Park

- **Why are we doing this project?**
- How is the park used now? What are the major park amenities?
- How are we proposing to change the park?
- How will that affect park amenities and the experience for park users?

Chinook Salmon listed under Endangered Species Act in 1999



Chinook salmon habitat research



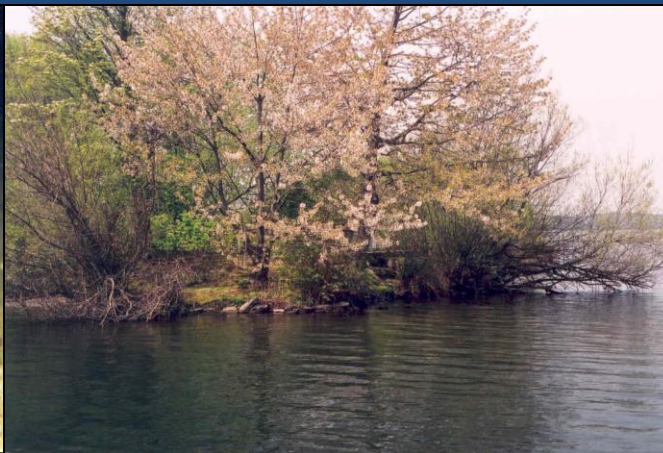
Scientist Roger Tabor conducts a snorkeling survey along the Lake Washington shoreline



The U.S. Fish and Wildlife Service studies how small Chinook use vegetation as protection from predators



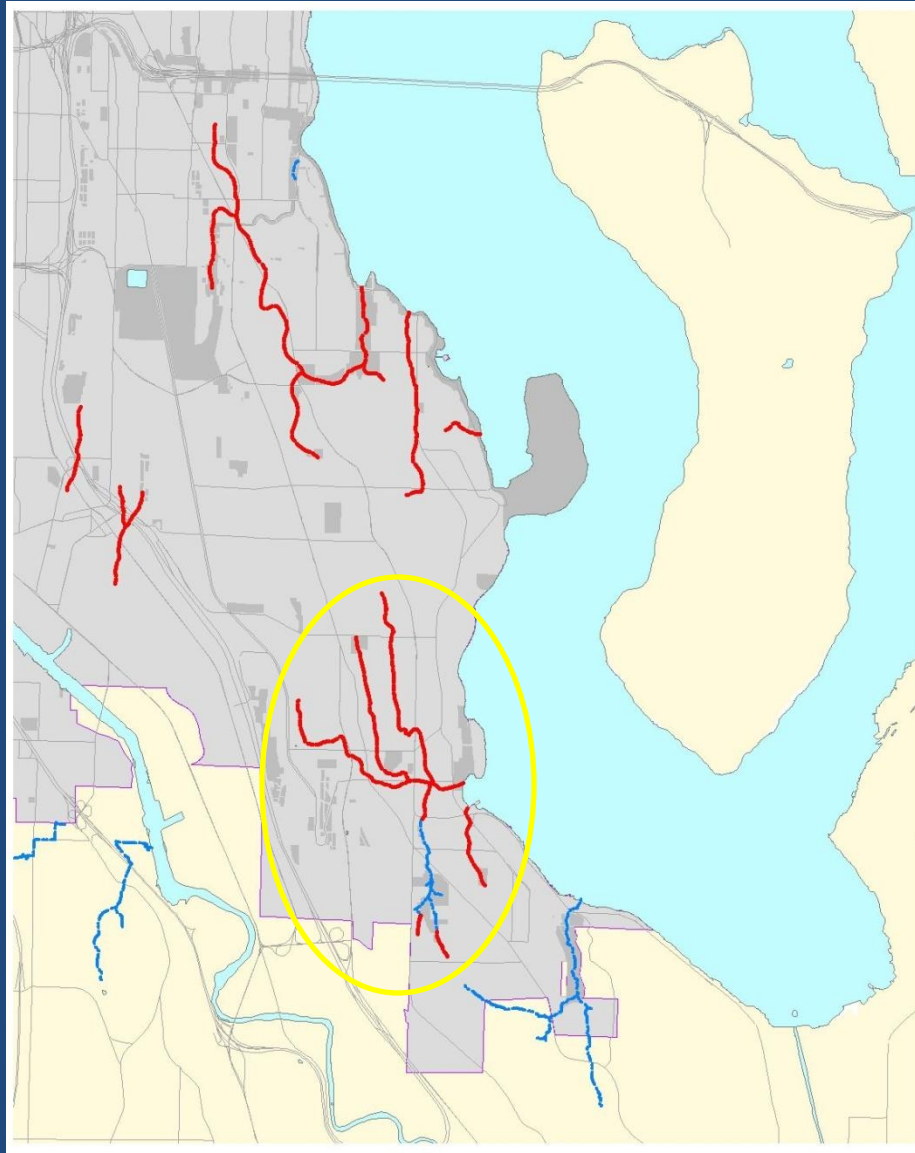
Juvenile Chinook salmon need rearing habitat and “rest stops” for the 3-5 months they inhabit Lake Washington



Preferred rearing habitat includes:

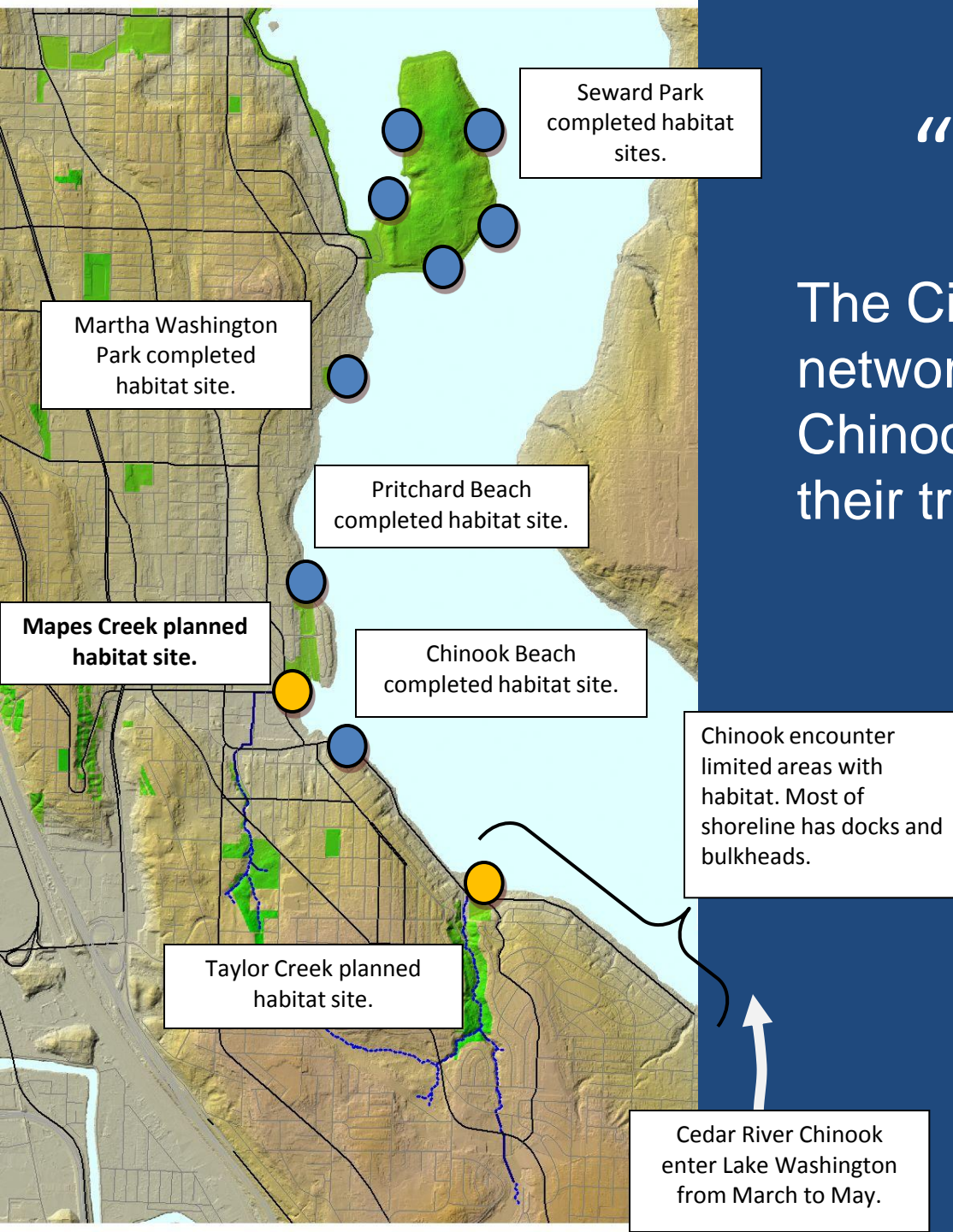
- Shoreline areas with shallow depths (>1 m) and gentle slopes
- Fine substrates
- Overhanging vegetation/small woody debris
- **Small creeks: mouths and shallow, low gradient, upstream portions**

Vanished Small Creeks in South Lake Washington



“Rest Stops”

The City of Seattle is building a network of rest stops for juvenile Chinook salmon to use during their trip to Puget Sound.



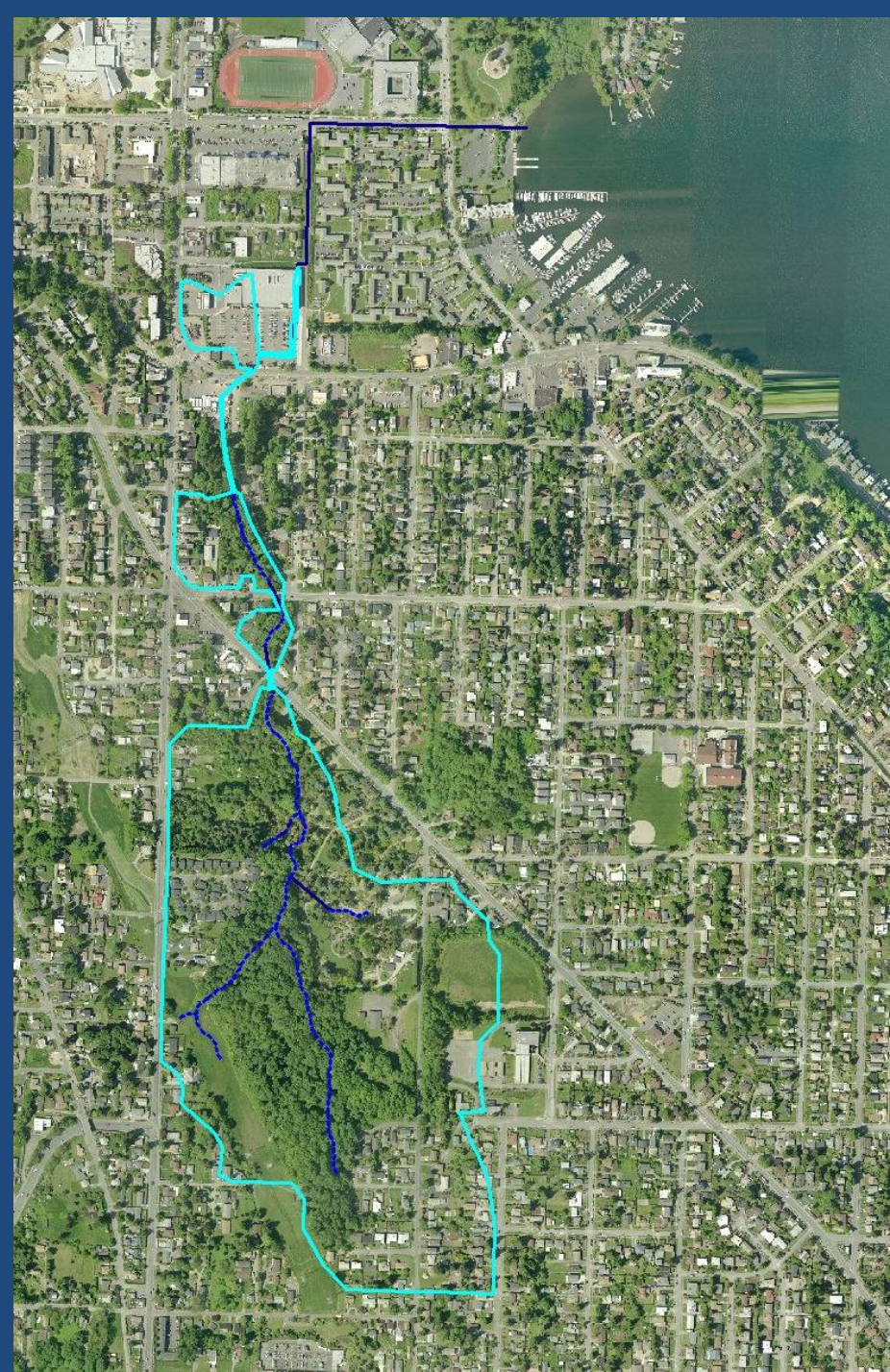
Neighborhood "Charrette" Suggested Creek Daylighting

Early concept for Beer Sheva Park:



Mapes Creek Watershed

- Headwaters are mostly forested
- Little pavement , buildings, roads
- Stable creek flows
- Relatively good water quality



Focus: Mapes Creek Project and Changes in Beer Sheva Park

- Why are we doing this project?
- How is the park used now? What are the major park amenities?
- How are we proposing to change the park?
- How will that affect park amenities and the experience for park users?

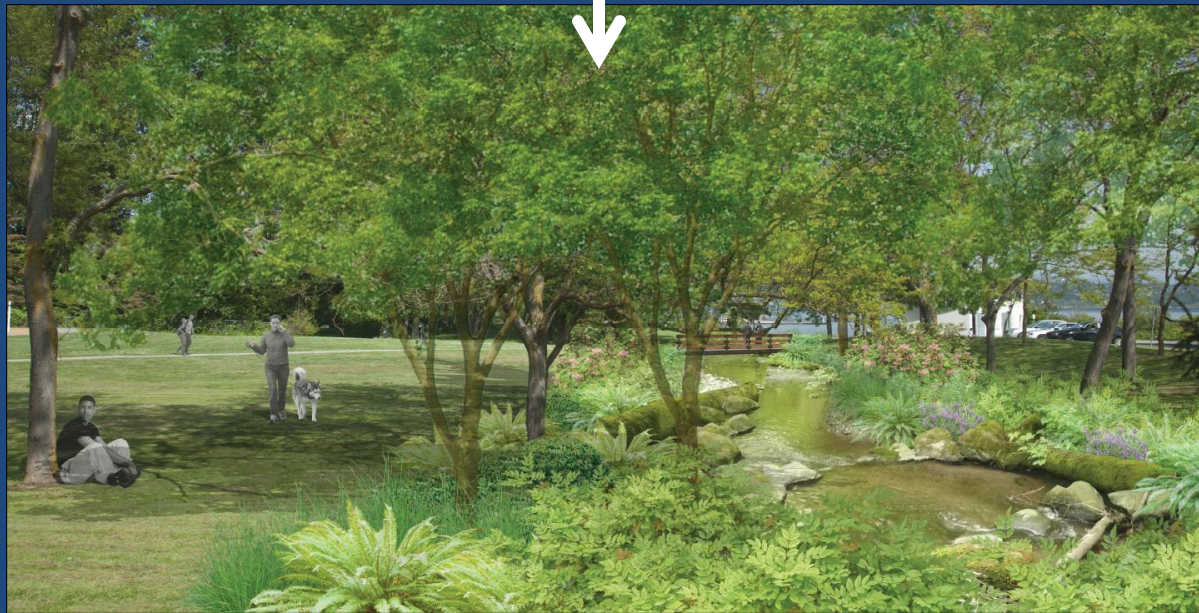
Focus: Mapes Creek Project and Changes in Beer Sheva Park

- Why are we doing this project?
- How is the park used now? What are the major park amenities?
- How are we proposing to change the park?
- How will that affect park amenities and the experience for park users?

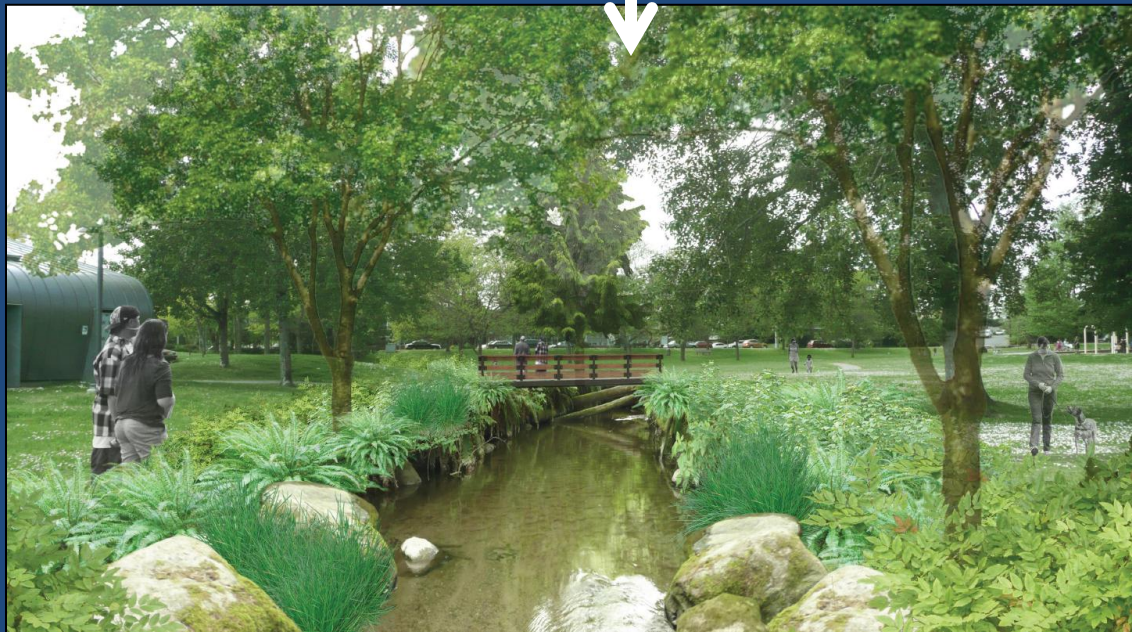
View into Beer Sheva Park from S Henderson St.



Beer Sheva Park – Current and Proposed

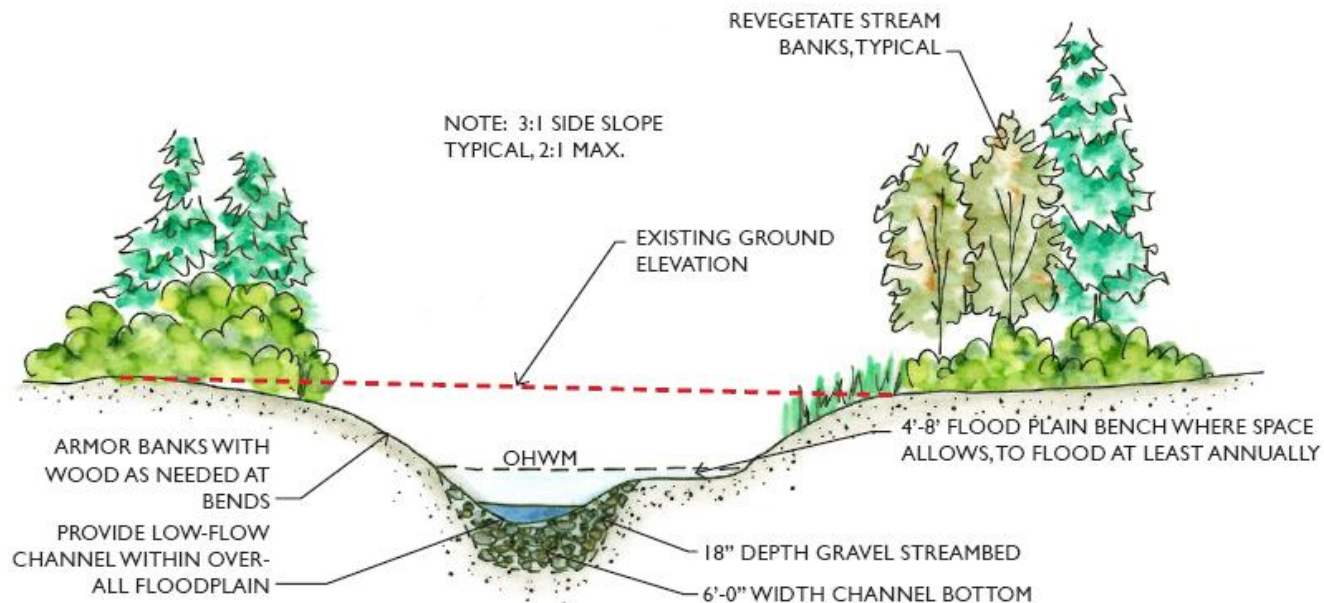
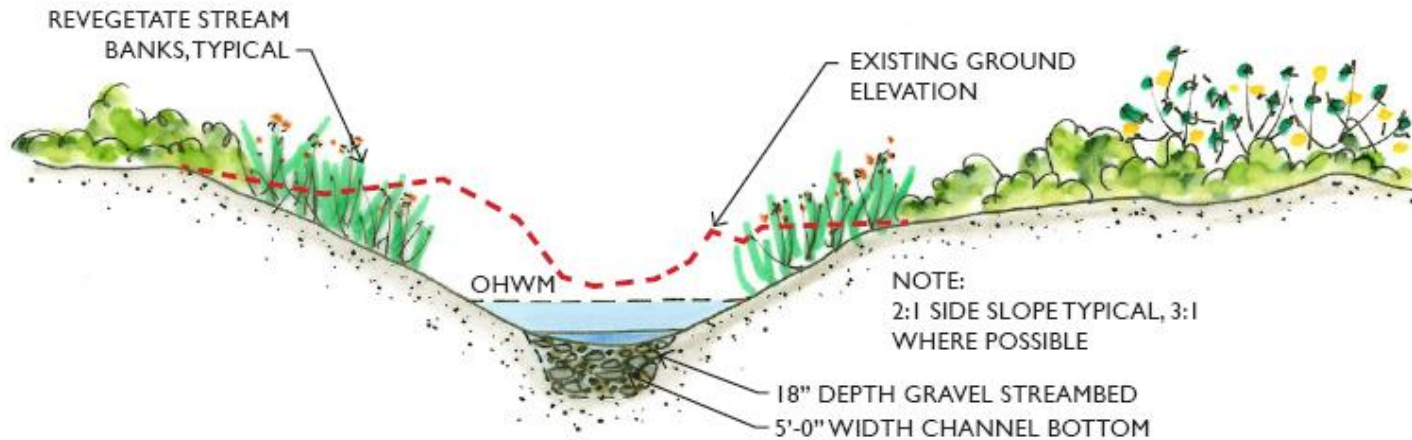


Beer Sheva Park – Current and Proposed



Example Planting Plans

* Not to scale



Example Bridge Designs

- Considerations
 - Views: for users, for police
 - ADA access/code requirements
 - Maintenance/graffiti
 - Match comfort station (galvanized, metallic finish)



Signage

- None is proposed
 - Maintenance/graffiti
- Need to acknowledge funders
 - Rock with logos?



Project Schedule

for Mapes Creek and 52nd Ave CSO Conveyance

Phase	Timeline
Project Design and Permitting	2012-June 2013
Public Meetings	July 2012-July 2013
Construction	August 2013 - November 2014
Plant Establishment and Monitoring	2015-2017