

# Landscape and Habitat Management and Restoration at SPU Municipal Properties

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6-9-21

# Outline

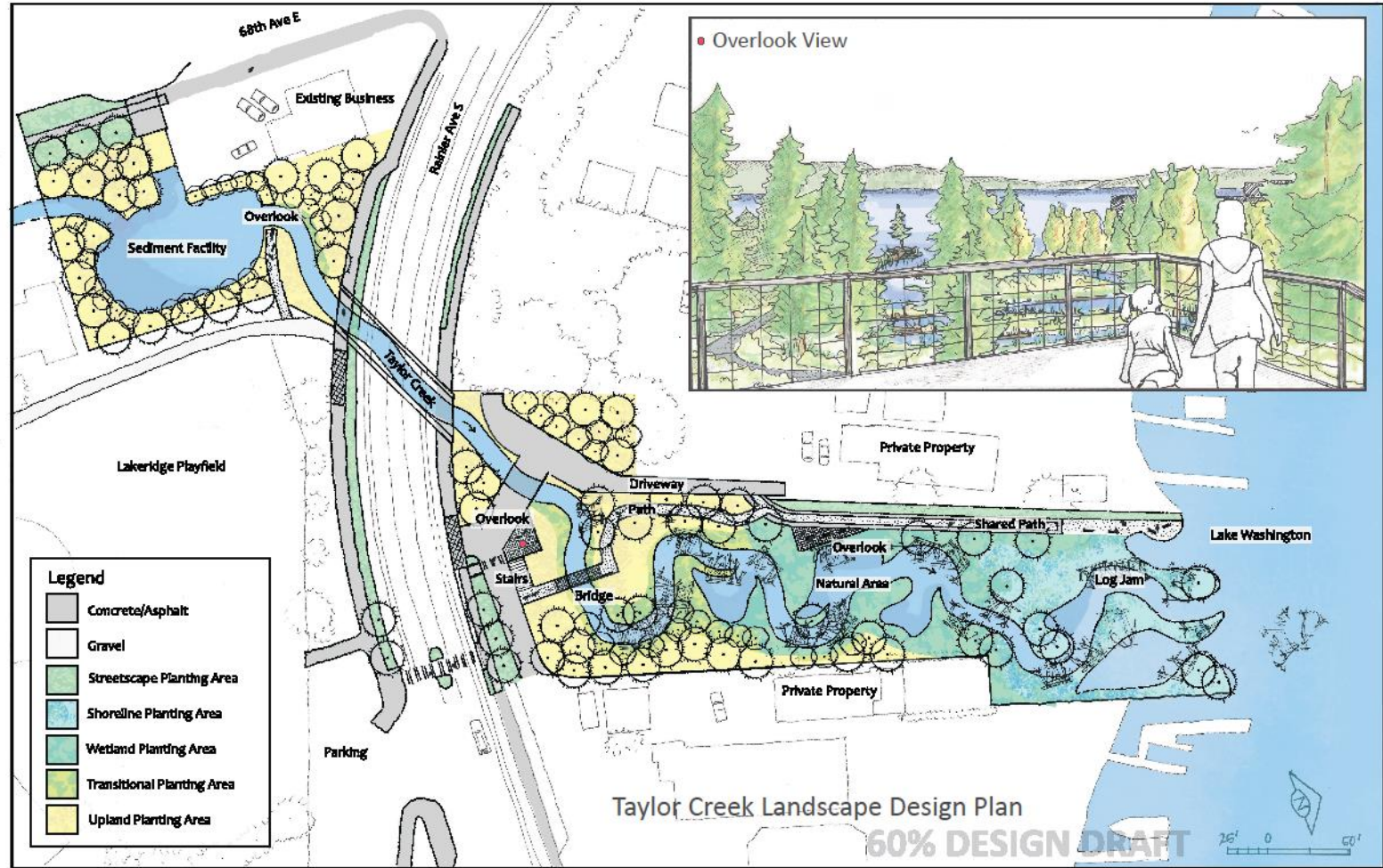
- Context of Landscape-Habitat Work
- Landscape Asset Management Planning (LAMP)
- LAMP x RSJI
- Restoration
- Enhancement
- Mitigation
- Nexus with Other Departments
- Summary
- Questions



**Great Blue Heron at Meadowbrook Pond**

# Context

- Capital Project Review
- Programmatic and Operations Review
- Service Requests – Internal and External
- Storm and Sediment Pond and Drainage Facilities Operations and Maintenance
- Landscape Asset Management Plan (LAMP)
- Habitat Restoration, Enhancement, Mitigation



60% Design for Lower Taylor Creek Restoration

# LAMP: Overview

- Inventory and Assessment
- Analyses
- Team Development
- Racial Equity Toolkit
- Drafting
- Timeline

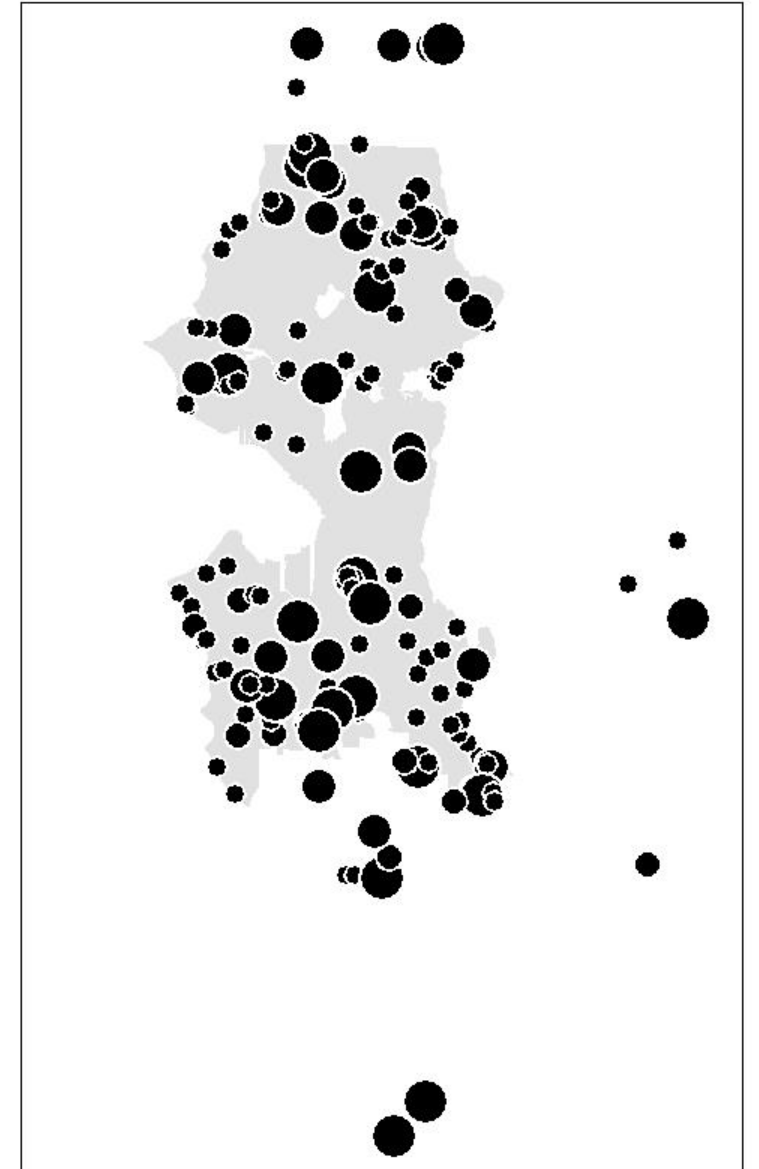
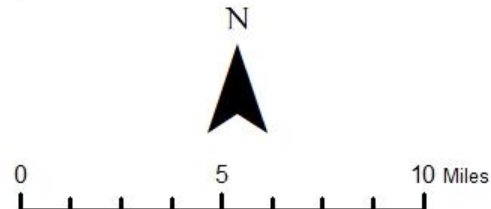
## SPU Municipal Properties (Seattle + surrounding municipalities)

### Legend

#### Acreeage Range (sites/acre range)

- 0.0049 - 0.5000 (95)
- 0.5001 - 1.0000 (13)
- 1.0001 - 3.0000 (22)
- 3.0001 -  $\geq 20.5000$  (21)

#### Seattle Municipal Boundaries



# LAMP: Inventory Methods and Status

- 442 acres, 151 sites
- Mixed methods: remote, field census, field plot
- Field Inventory North (north of Denny Way)
  - Number of sites: 31 (21%)
  - Total Acreage: 96.7 (22%)
- Field Inventory South (south of Denny Way)
  - Number of sites: 32 (21%)
  - Total Acreage: 84.3 (19%)
- Sum of Field Inventory
  - Number of sites: 63 (42%)
  - Total Acreage: 181.0 (41%)

## SPU Municipal Properties Landscape Asset Inventory

### Legend

#### Acreage Range (sites/acre range)

- 0.0049 - 0.5000 (95)
- 0.5001 - 1.0000 (13)
- 1.0001 - 3.0000 (22)
- 3.0001 - ≥20.5000 (21)

#### Inventoried Sites (Σ151)

Completed    Remotely Sensed



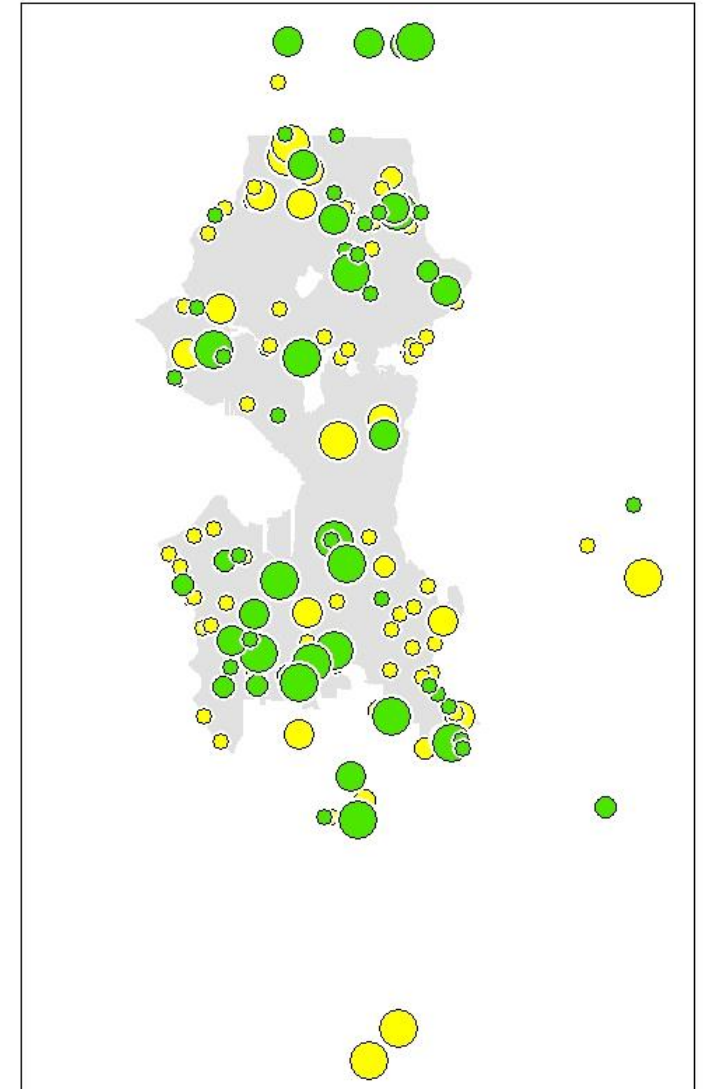
#### Seattle Municipal Boundaries



N



0      5      10 Miles



# LAMP: SPU sites x Equity Priority

- Equity priority inversely correlated with SPU green spaces
- Prioritize new restoration and landscape/habitat sites in equity priority areas (South, Southeast, Inner Southwest, pocket of Northeast-Lake City)

## SPU Municipal Properties x Demographic Priority

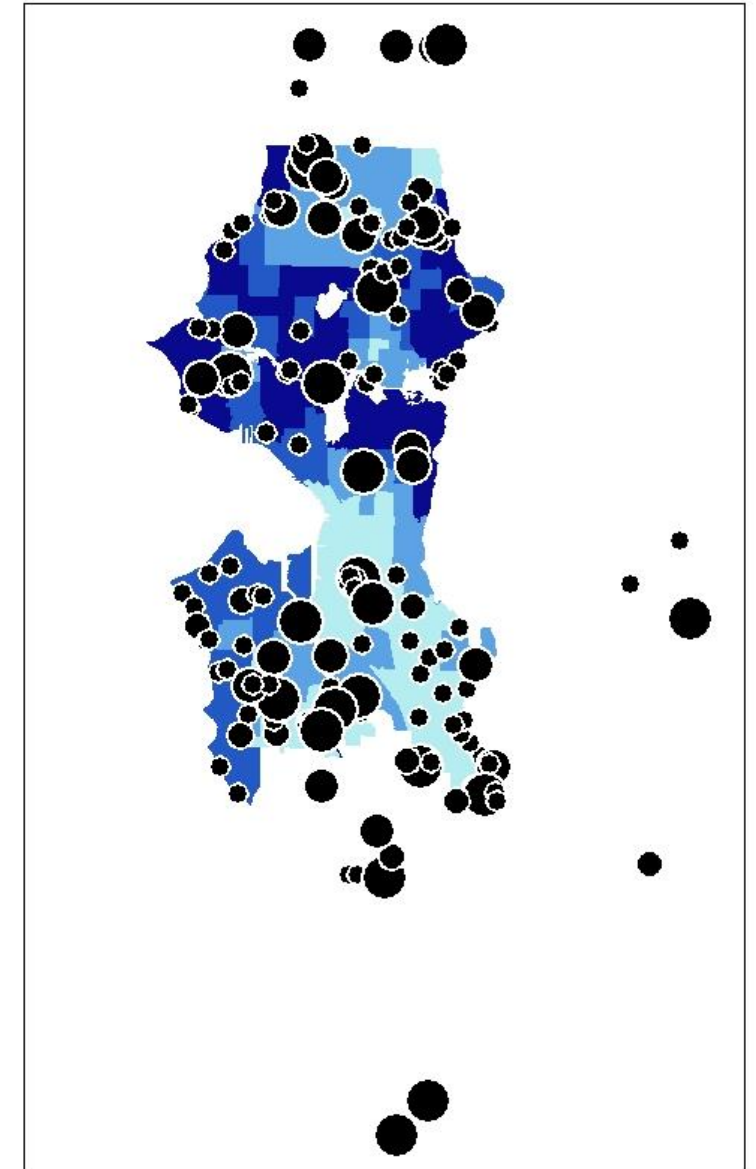
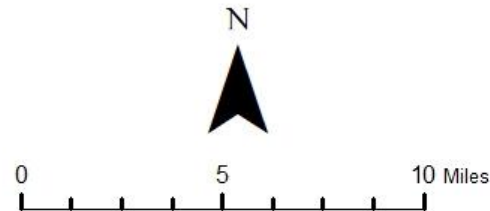
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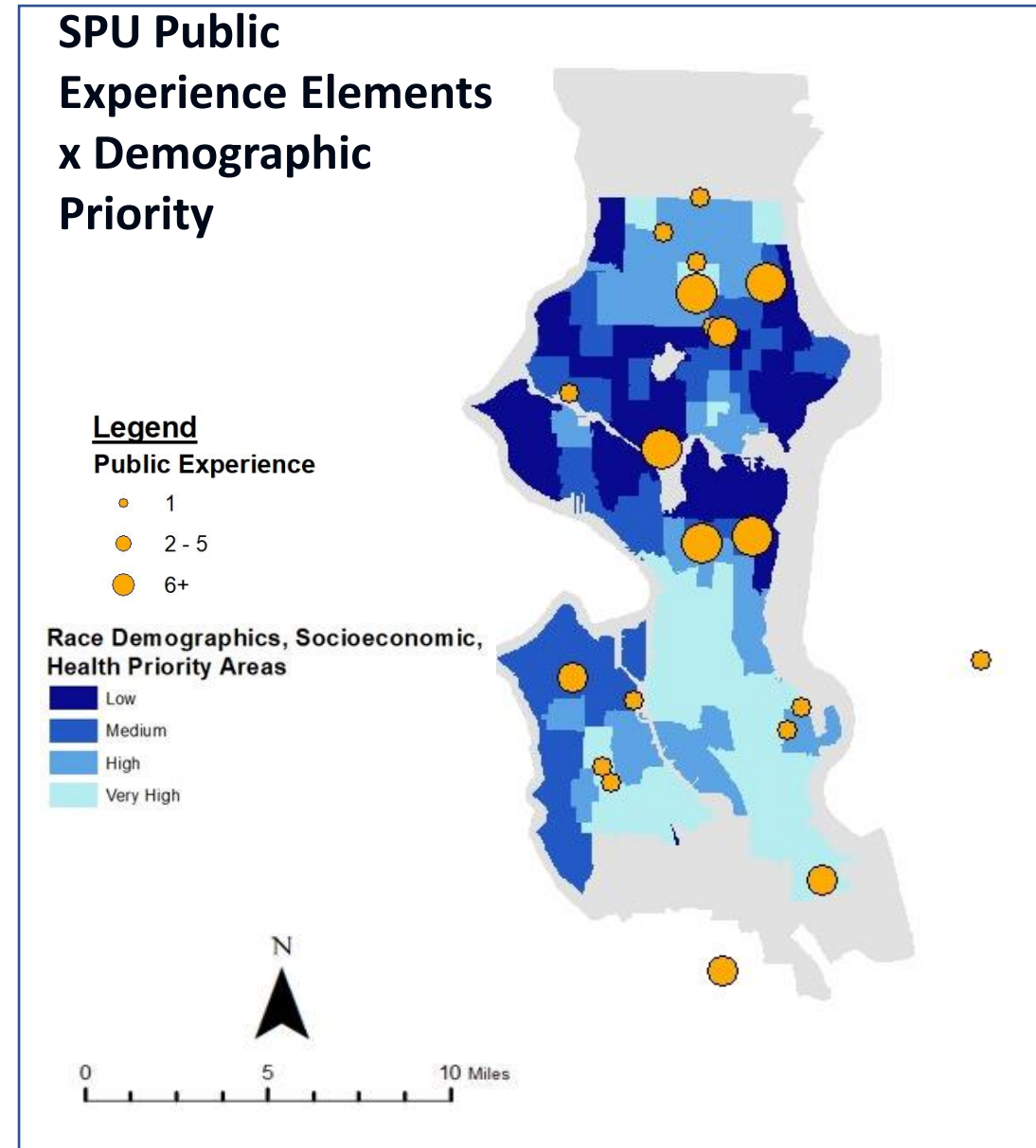
#### Race Demographics, Socioeconomic, Health Priority Areas

- Low
- Medium
- High
- Very High



# LAMP: Public Experience Elements x Equity Priority

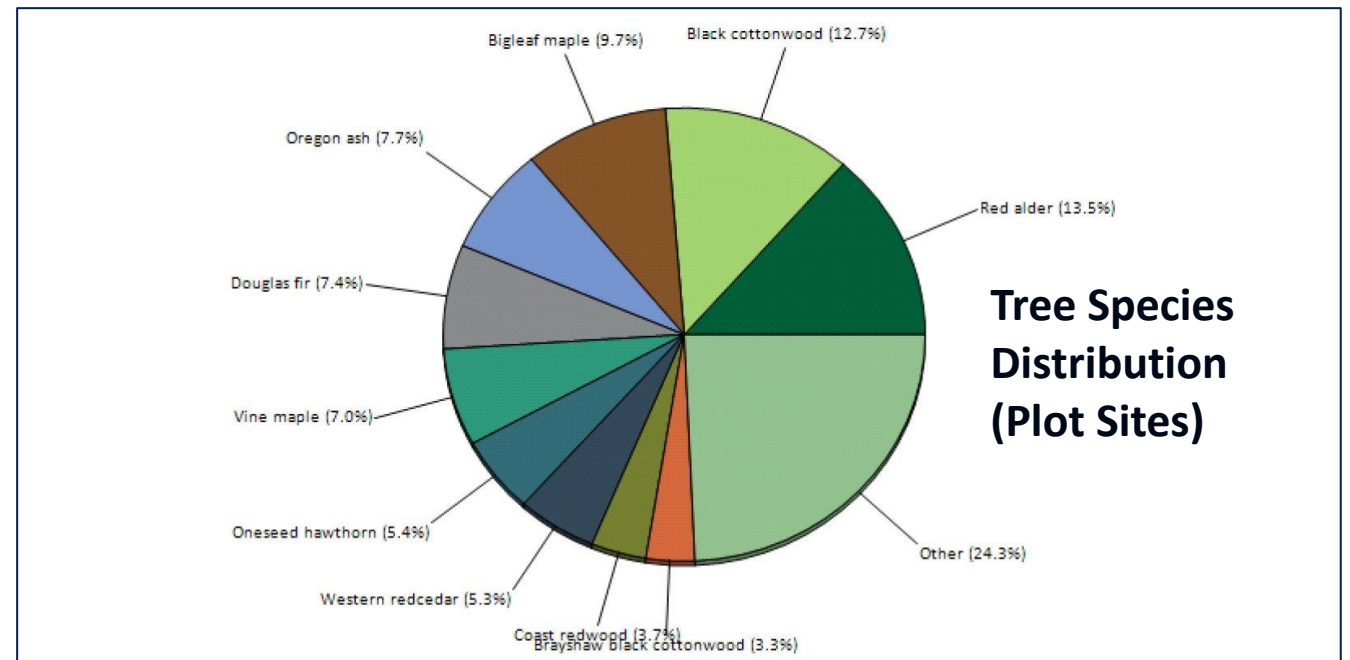
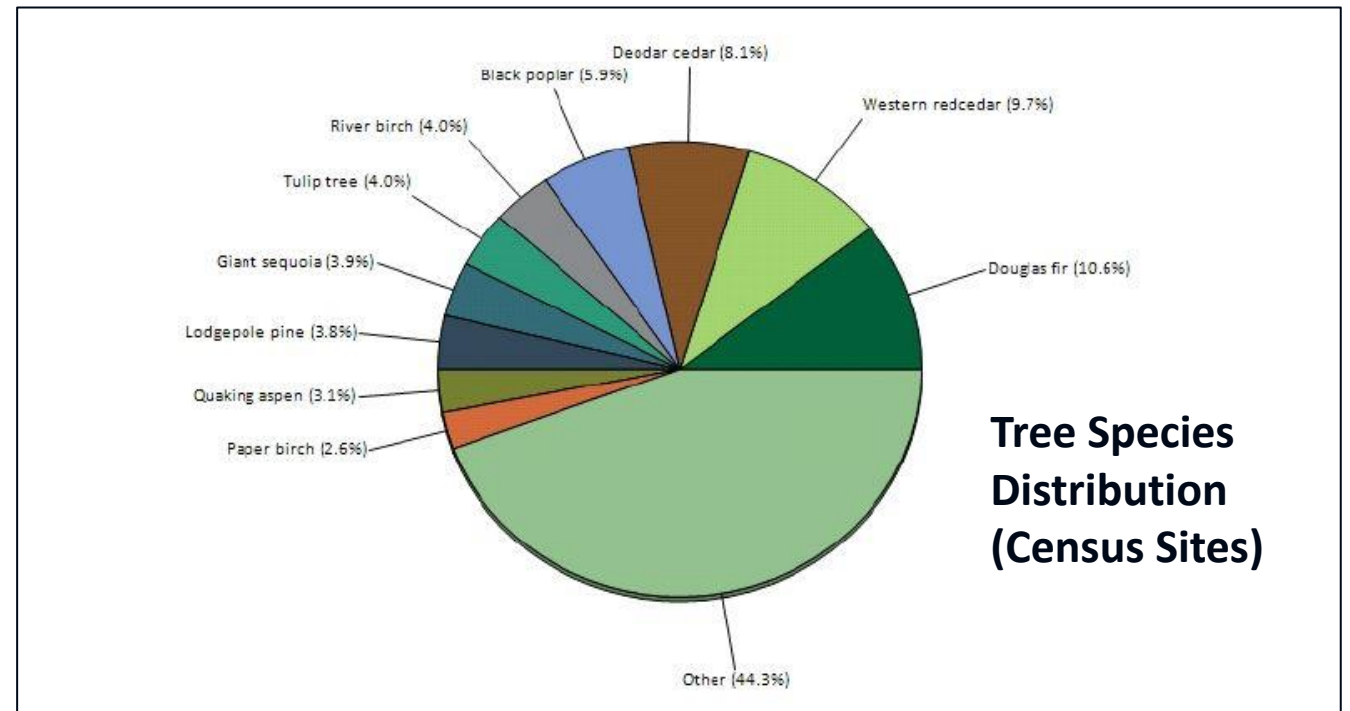
- Public Experience Elements Include: Art, Bench, Bridge, Path, Sign or Kiosk, Other (trash bins, parking lots, staircases, etc.)
- Total: 75 across 20 sites
- North: 59 (79%) across 12 sites
- South: 16 (21%) across 8 sites
- As with other indicators equity priority is inversely correlated with public experience elements
- Prioritize new public experience elements in equity priority areas (South, Southeast, Inner Southwest, pocket of Northeast-Lake City)



# LAMP: Tree Species Distribution and Natural Capital Value (iTree Eco)

- Majority of sites and area are captured in census
- Conifers prevalent in census (upland habitat)
- Native broadleaf species prevalent in plot (riparian habitat)
- Total estimated and scaled natural capital valuation from iTree Eco:

structure + C sequestration + C storage + avoided runoff + pollution removal = **~\$13 M**





# Forest Restoration: SW Carroll Street

- Brittle cinder (*Kretzschmaria deusta*) impacted bigleaf maple stand (~0.5 ac) in West Seattle
- Hazards: Infected bigleaf maple stand next to houses, over drainage pipe, next to public stairs and ROW
- Treatment: tree reduction and snagging; invasive weed treatment – mechanical and minimal chemical
- Restoration: Erosion control, replanting with native conifers and shrubs



**First Step in Forest Restoration May Involve “Cirque du Chainsaw”**

# SW Carroll St Forest Restoration



**Pre-Restoration Treatment – August 2020**



**Early Restoration Treatment – December 2020**

# Mitigation: Maple Creek

- SPU projects that require permitting require mitigation
- Maple Creek flooding at Matthews Beach in December 2019
- Required emergency operations
- Required emergency HPA and associated mitigation



**Emergency SPU Operations – Dredging and Bypass in Lower Maple Creek– December 2019**

# Riparian Forest Mitigation and Restoration: Upper Maple Creek



**Pre-Mitigation/Restoration – March 2020**



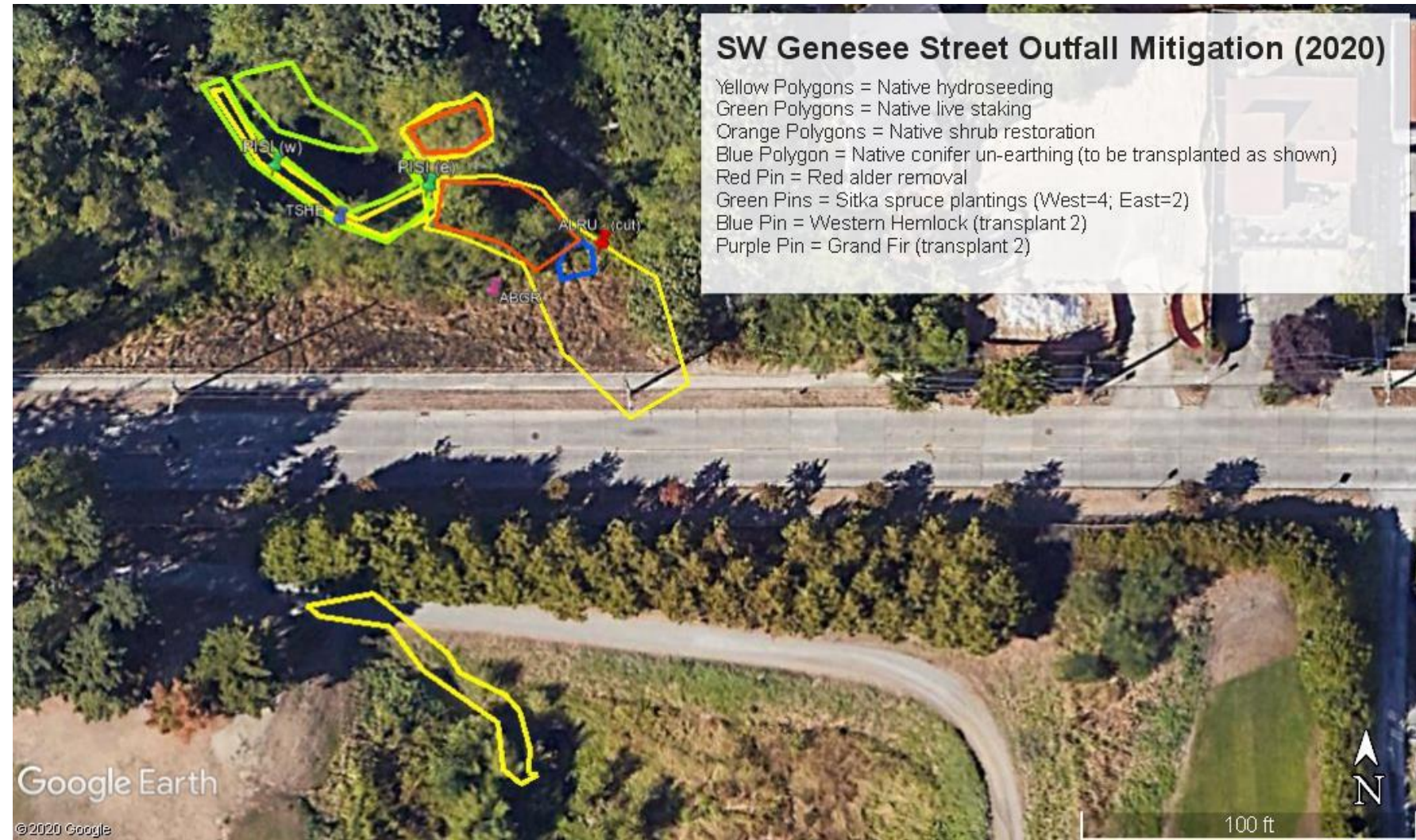
**Early Mitigation/Restoration – November 2020**

# Mitigation: Longfellow Creek Salmon Habitat - Genesee Pond



# Mitigation and Restoration: Longfellow Creek - Genesee Pond

- Compensation for dredging operations
- For external and internal permitting (USACE, WDFW, and SPR)
- Work was delayed in 2020 due to permitting delays
- Prep work in June 2021
- Dredging operations in July 2021
- Initial mitigation and restoration activities July 2021-March 2022



# Meadowbrook Pond and Thornton Confluence: Mitigation, Enhancement, Restoration



# SPU-SPR-SDOT Nexus: Kingfisher Floodplain





# SPU-SDOT Nexus- Salmon Bay Natural Area



# Potential New Restoration Site a la Meadowbrook Pond: Webster Pond

- Sediment and water quality facility within Longfellow Creek
- Equity priority area
- Salmon habitat
- Potential for trails and public amenities
- High native tree and shrub diversity
- Relatively intact wetland and floodplain



# Summary

- Work across City in diversity of habitats and communities
- Work to focus new sites, habitat restoration, and public experience elements assets in equity priority areas
- Work with community partners and groups for implementation and engagement
- Landscape Asset Management Plan is a key part of program development
- Working to increase staff and resources with ever-expanding scope and onboarding of sites
- Focusing on multiple benefits (salmon habitat, water quality, equity), native planting palette, and ecological restoration principles



**Meadowbrook Pond**

# Questions?

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