Briefing on Seattle Parks and Recreation's Role in Urban Forestry

City Council Parks, Public Utilities and Technology Committee

June 12, 2024

Seattle Parks and Recreation

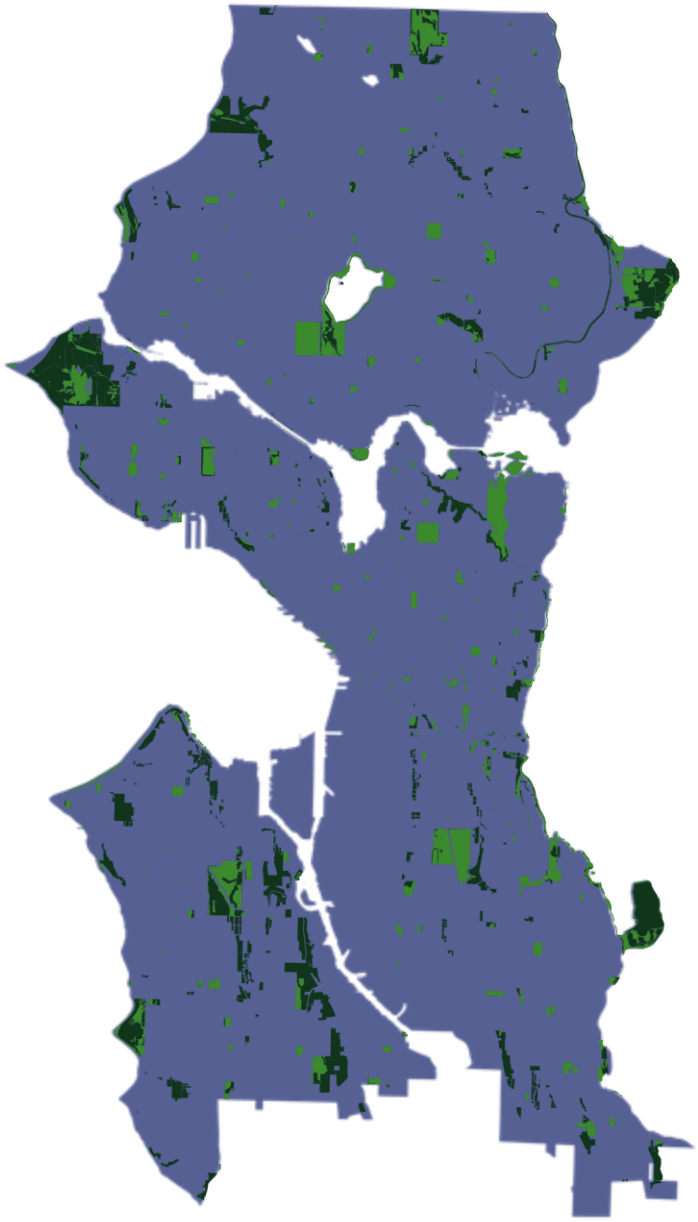
City of Seattle

Briefing Agenda

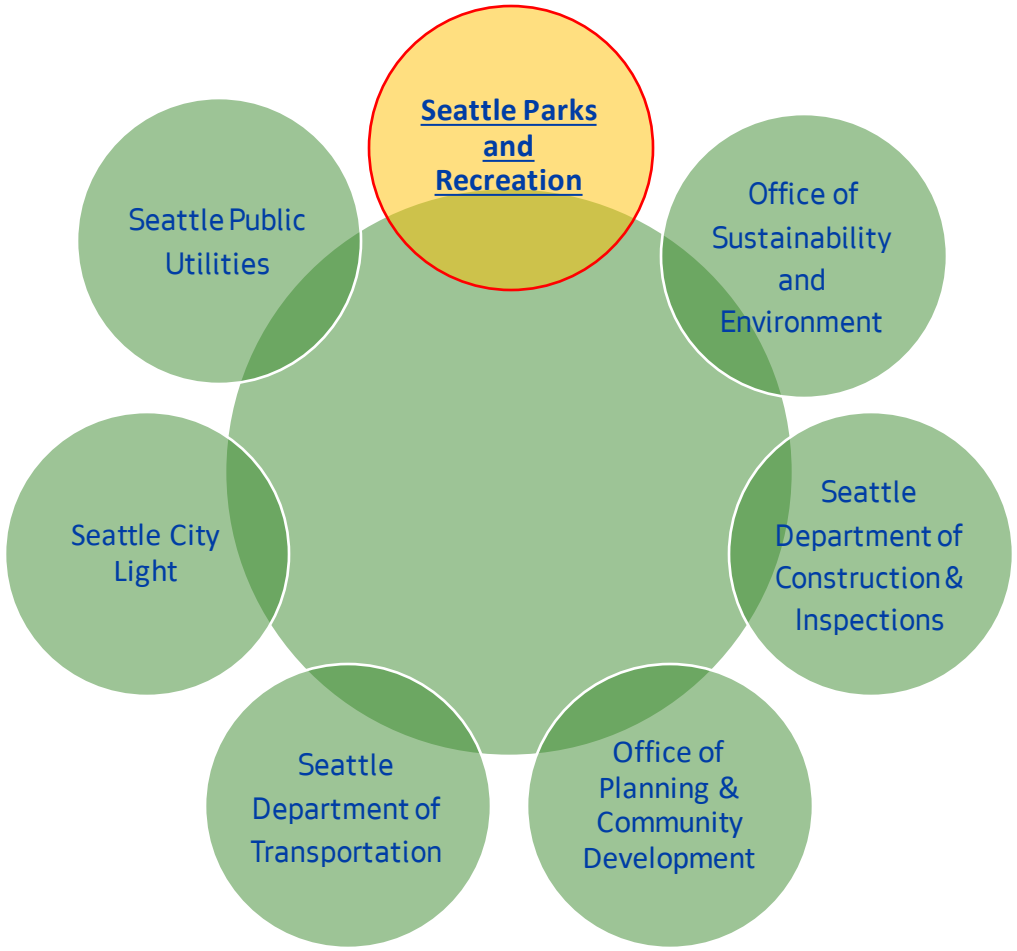
- SPR's Role in Citywide One Seattle Tree Plan
- Tree Canopy Assessment in SPR managed land
- Urban Forestry Programs – Developed Parks and Natural Areas-Green Seattle Partnership
- Canopy Restoration: Programs, initiatives and funding
- Questions

Context: SPR Parks & Natural Areas

- 12% of city land area (6,400 acres)
  - Major canopy contributor (19% of citywide canopy)
- Critical space for people, ecosystem services, and wildlife habitat
- Two core programs using data-driven stewardship
  - Developed Parks
  - Natural Areas
- Equity – justice-based work programs
- United Nations Role Model City, national leader



One Seattle Framework: Urban Forestry Vision

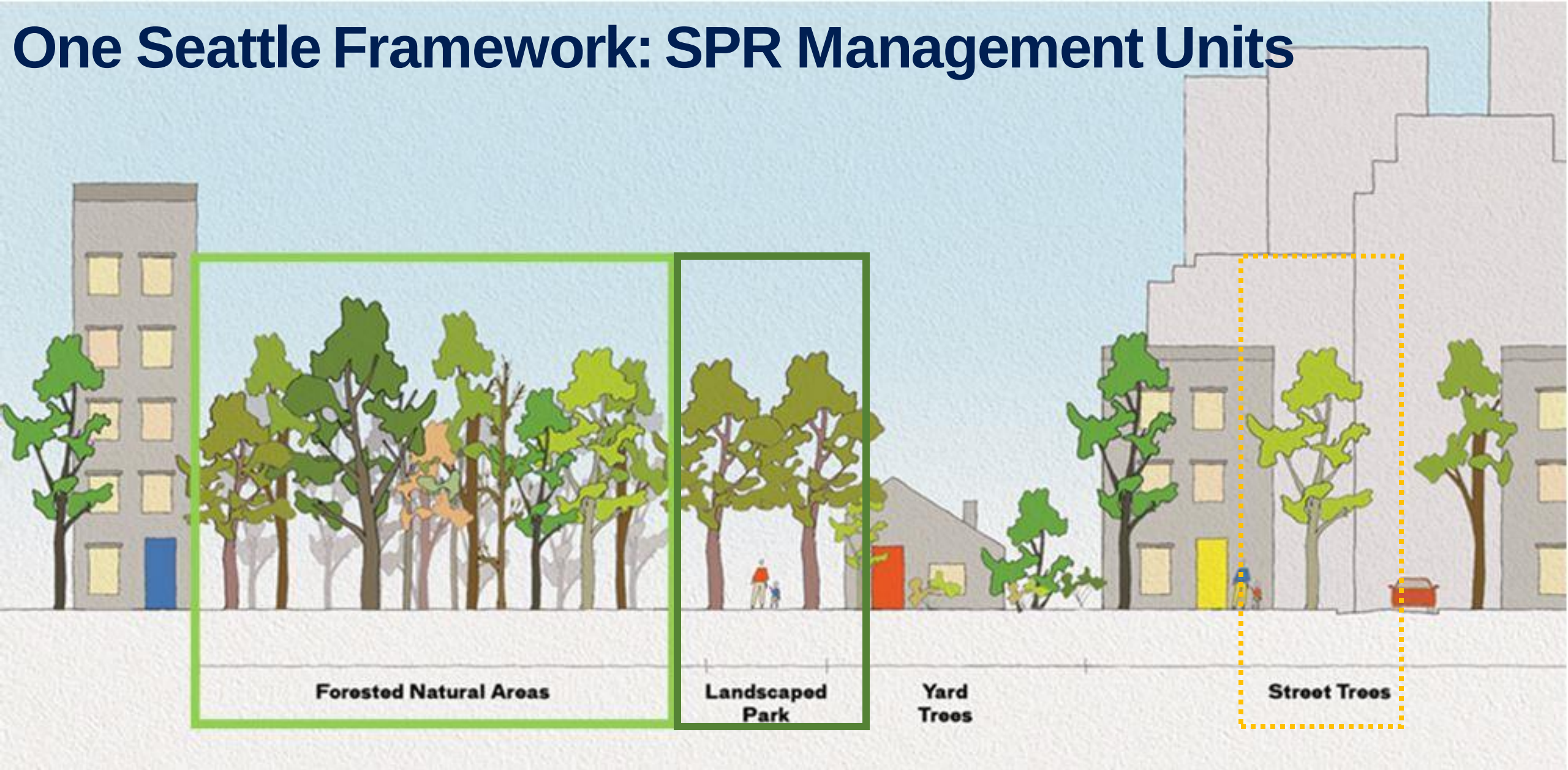


- Framework for setting urban forest vision and goals with an Action Agenda that drives near-term strategy and management
- Underscores the unique management needs for landscape types and the opportunities for collaborative cross-department work under OSE
- 2023 Mayor's Executive Order One Seattle Tree Plan reinforces need and builds new strategies for urban forestry efforts

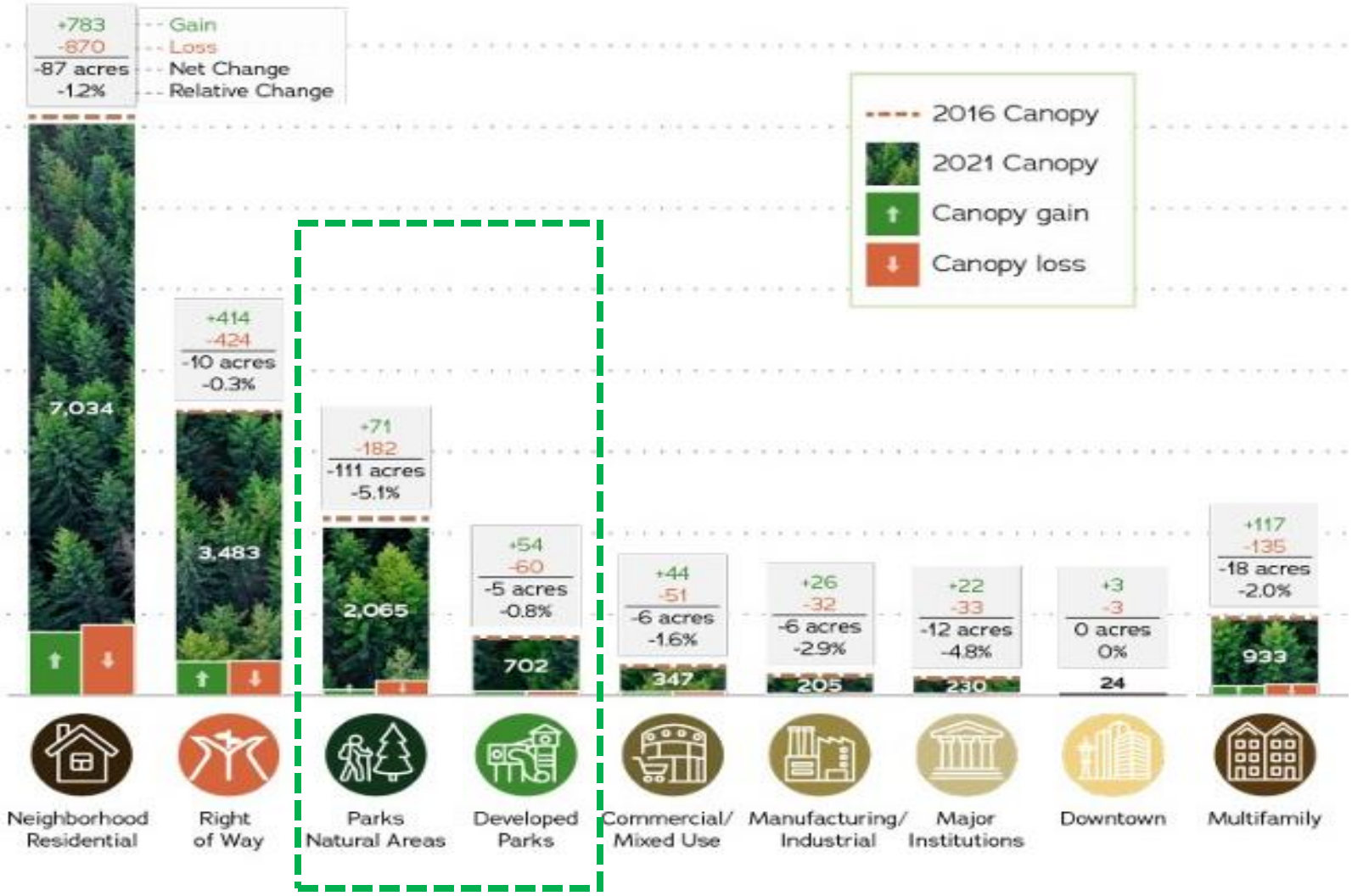
One Seattle Framework: Tree Plan (Executive Order 2023-03)

- 2:1 and 3:1 tree replacement ratios
- Post-planting care change to 5 years
- Native and climate-adapted trees
- Public-private partnerships
- Prioritize tree planting in BIPOC communities, areas of low canopy cover and High Heat Island impacts
- No tree size minimum (revised 2" caliper)
- Accountability reporting

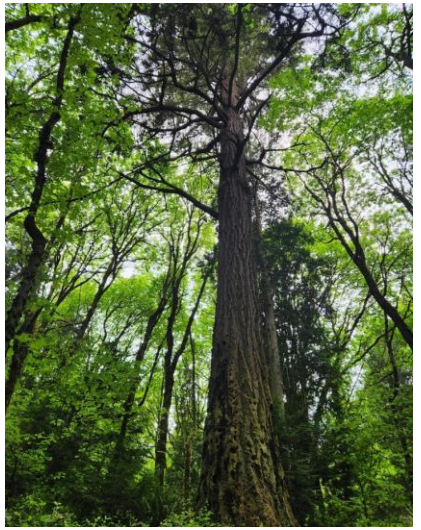
One Seattle Framework: SPR Management Units



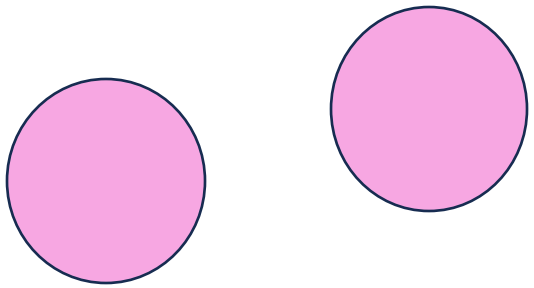
Tree Canopy Assessment – SPR Management Units

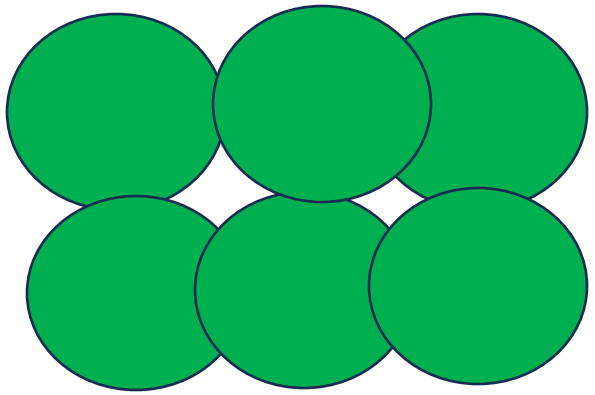


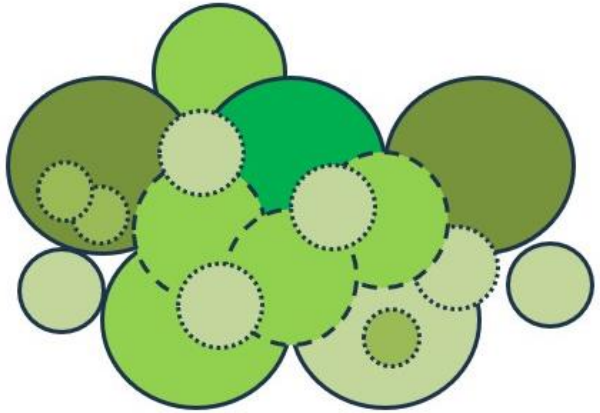
Tree Canopy Assessment: Considerations



- Tree cover varies
- Healthy urban forests have vertical layers







Tree Canopy Assessment: SPR Management Unit

APPENDIX A: CANOPY LOSSES AND GAINS BY MANAGEMENT UNIT

Management Unit	2016 Canopy Area (Acres)	Canopy Loss		Canopy Gain		Net Change		2021 Canopy Area (Acres)
		Acres	Percent	Acres	Percent	Acres	Percent	
Parks Natural Areas	2,176	182	8%	71	3%	-111	-5.1%	2,065
Developed Parks	708	60	8%	54	7%	-5	-0.8%	702

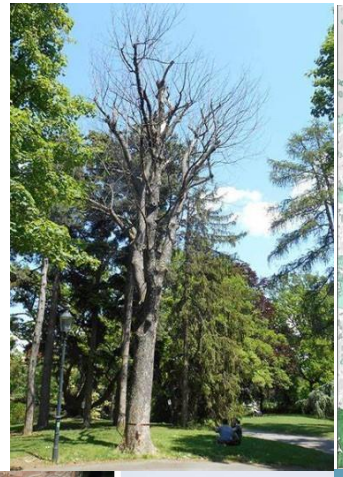
	Management Unit	Land Area (% of City)	2021 Canopy Cover	% Contribution to City's Canopy Cover in 2021
Public	Developed Parks	4%	30%	5%
Public	Parks Natural Areas	5%	82%	14%
	Right of Way	27%	24%	23%
	City Total	100%	28%[16]	100%

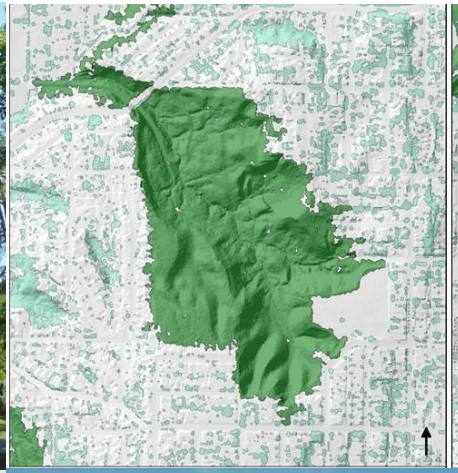
Urban Forest Health: Failure and Canopy Loss Drivers

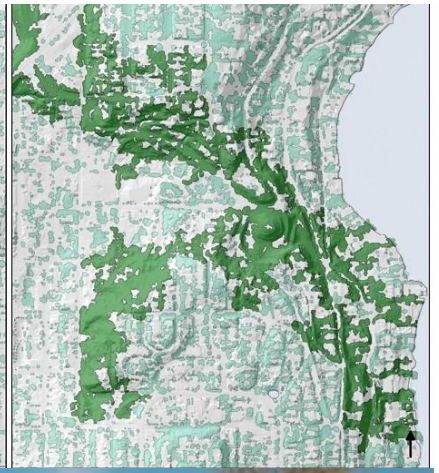
All SPR Management Units

Climate change

- Pest and disease impacts
- Stress from high heat and drought
- Wind and storm events
- Aging deciduous trees







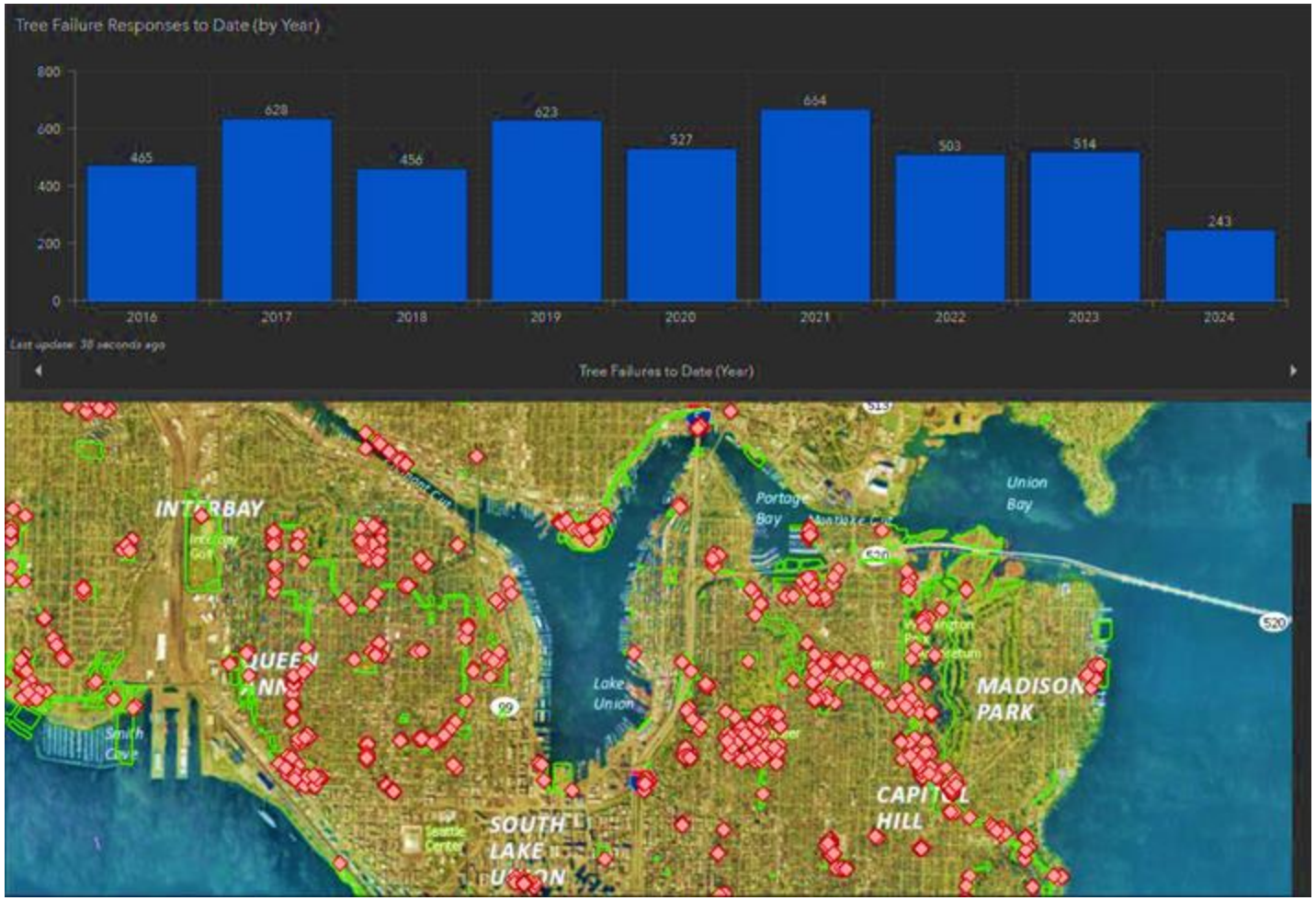
Developed Parks (pre-2022)

- Competing Objectives
- No formal replacement program
- No post-Establishment care

Urban Forest Health: Canopy losses and Gains

Tree Failure Responses (2016-to date)

- Removals rate roughly consistent
- Average 548 trees removed annually
- Only trees posing public safety risk
- Dead trees in natural areas retained

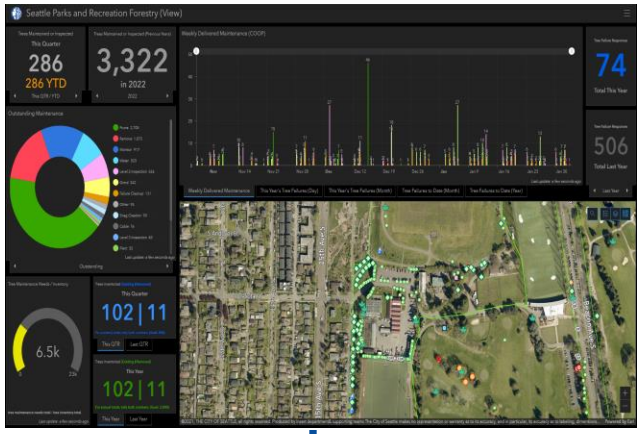


SPR's Urban Forestry Database: supporting data informed management

Canopy Restoration Programs

To protect, preserve and grow the urban forest of Seattle

Public Safety

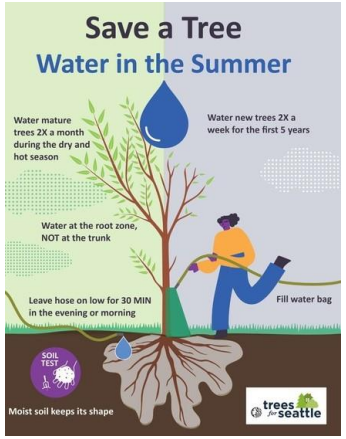


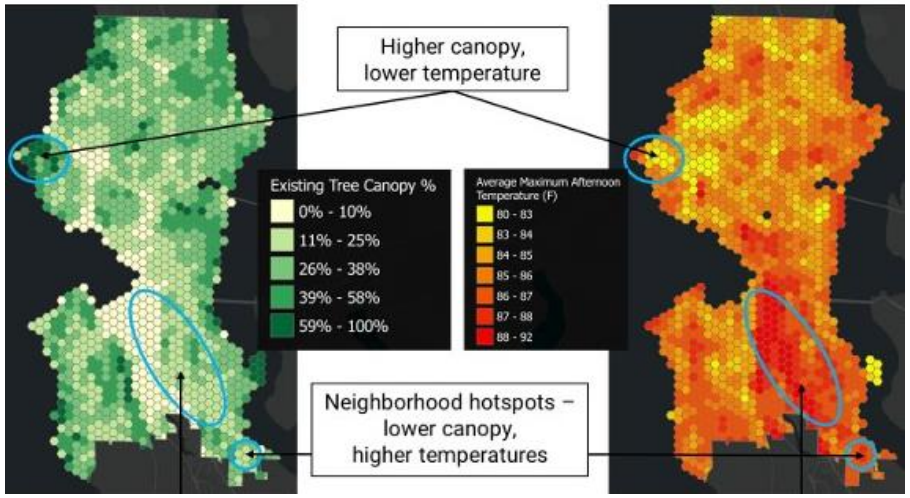
Tree Inspections

Tree Preservation

Tree Planting

Developed Parks Program: New Tree Planting Initiative

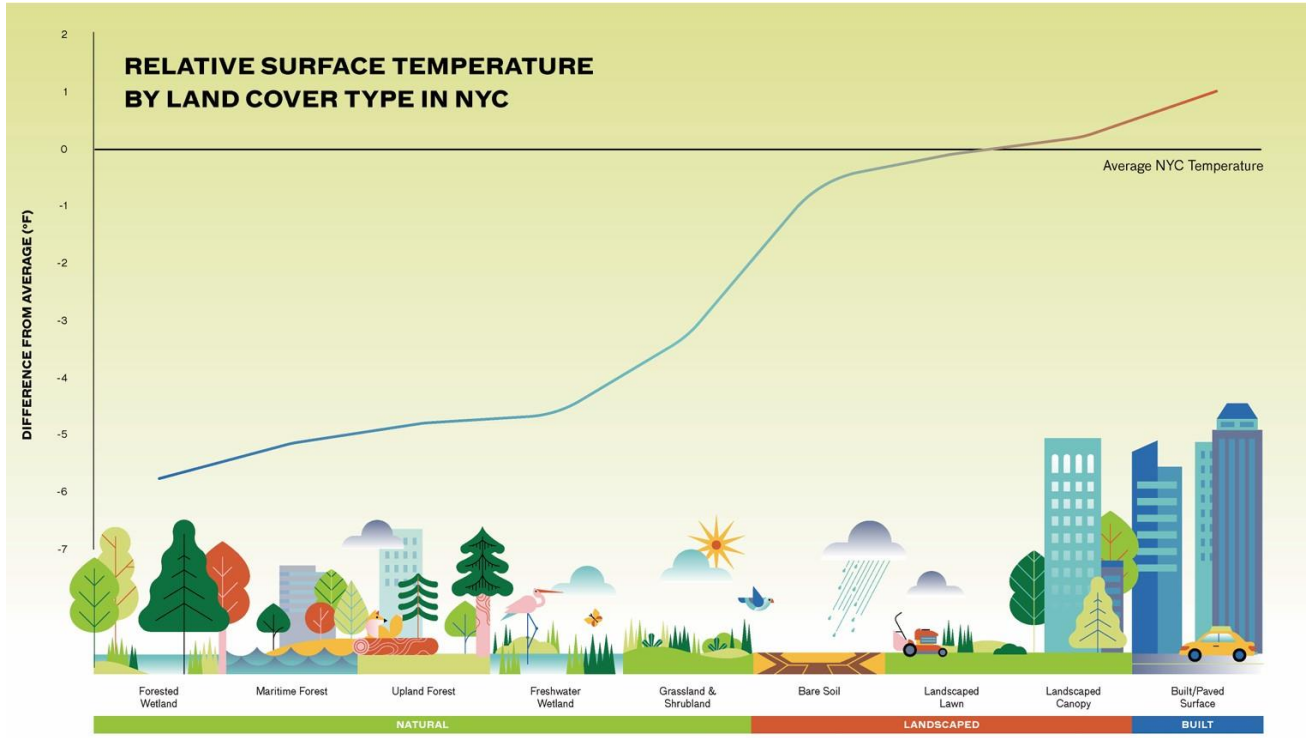


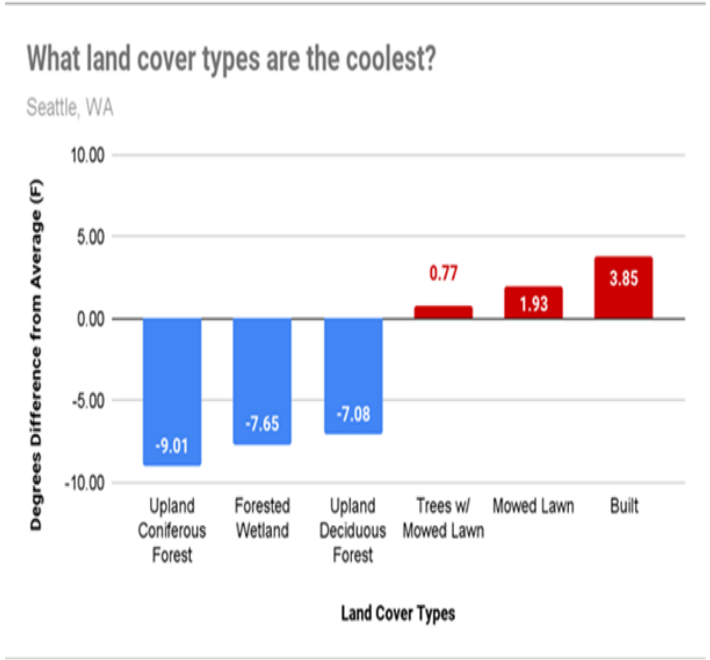


- Park District Cycle 2 expanded capacity of SPR's urban forestry teams to respond to climate change through tree planting and extending the tree care establishment period
- Uses RSJI and Heat Island prioritization (75%)
- Builds new systems for site and species selection planning
- Improves post planting care (5 years)
- Expands data collection and metrics reporting
- Meets tree replacement policy
- Emphasizes iterative learning

Developed Parks Program: Site Considerations

Trees and Heat Island Mitigation





- Forested areas reduce citywide temperatures by 7-9 degrees
- Green and white roofs can be sustainable strategies for structures

Developed Parks Program Tree Establishment Care (5 years)

- Tree planting outside of CIPs is new (2023)
- New tree mortality monitoring to be initiated in 2024

- One Seattle Tree Plan Reporting metrics
  - Number of trees planted
  - Trees removed
  - Tree mortality and cause
  - Survivorship
  - Final EO reporting details are being refined (OSE)

Environment

Cities Are Good at Planting Trees. They're Not So Good at Keeping Them

One city managed to buck the trend, and its urban canopy is flourishing

BY MIRA MILLER

Updated 8:08, Mar. 14, 2024 | Published 6:30, Mar. 14, 2024

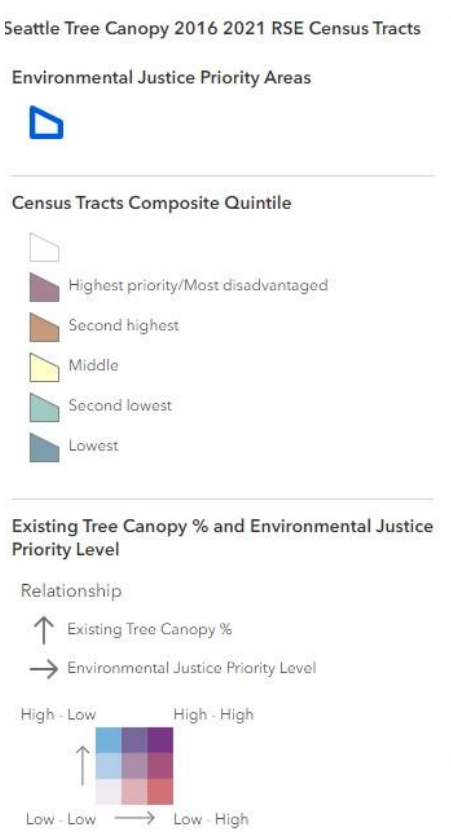
Guy Banville/iStock

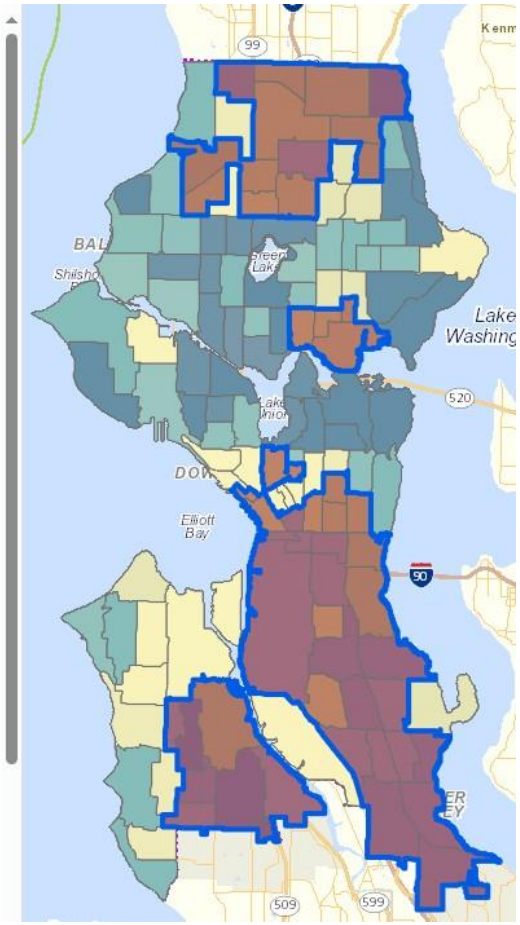
Developed Parks Program: 2023 - 2024 Goals

- Initiate Tree Planting program
- Hire 4 Maintenance Laborers
- Confirm planning model and budget
- Build out data collection and monitoring
- Improve species and site selection
- Plant 500 large caliper trees
- Care for establishing trees
  - Mulch 300 trees
  - Water 500+ trees 2x per week
  - Prune 100 young trees

Developed Parks Program: Accomplishments 2023+

80%
Planted in Equity Zones





Developed Parks Program: Canopy Gains

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- 6 acres of future canopy planted in Year 1 of new Tree Crew initiative
  - (Canopy by 2055 maturity)
- 500 trees/year with 5 years management
  - (2500 in establishment care by 2028)

Natural Area Program: Green Seattle Partnership

GREEN SEATTLE PARTNERSHIP

A collaborative effort to restore and enhance the forested parklands of Seattle

Improving human health through access to nature

Building wildlife habitat and improving Puget Sound health

Strengthening neighborhood cohesion

Increasing climate adaptation and resiliency

Natural Areas: Measuring Healthy Urban Forests

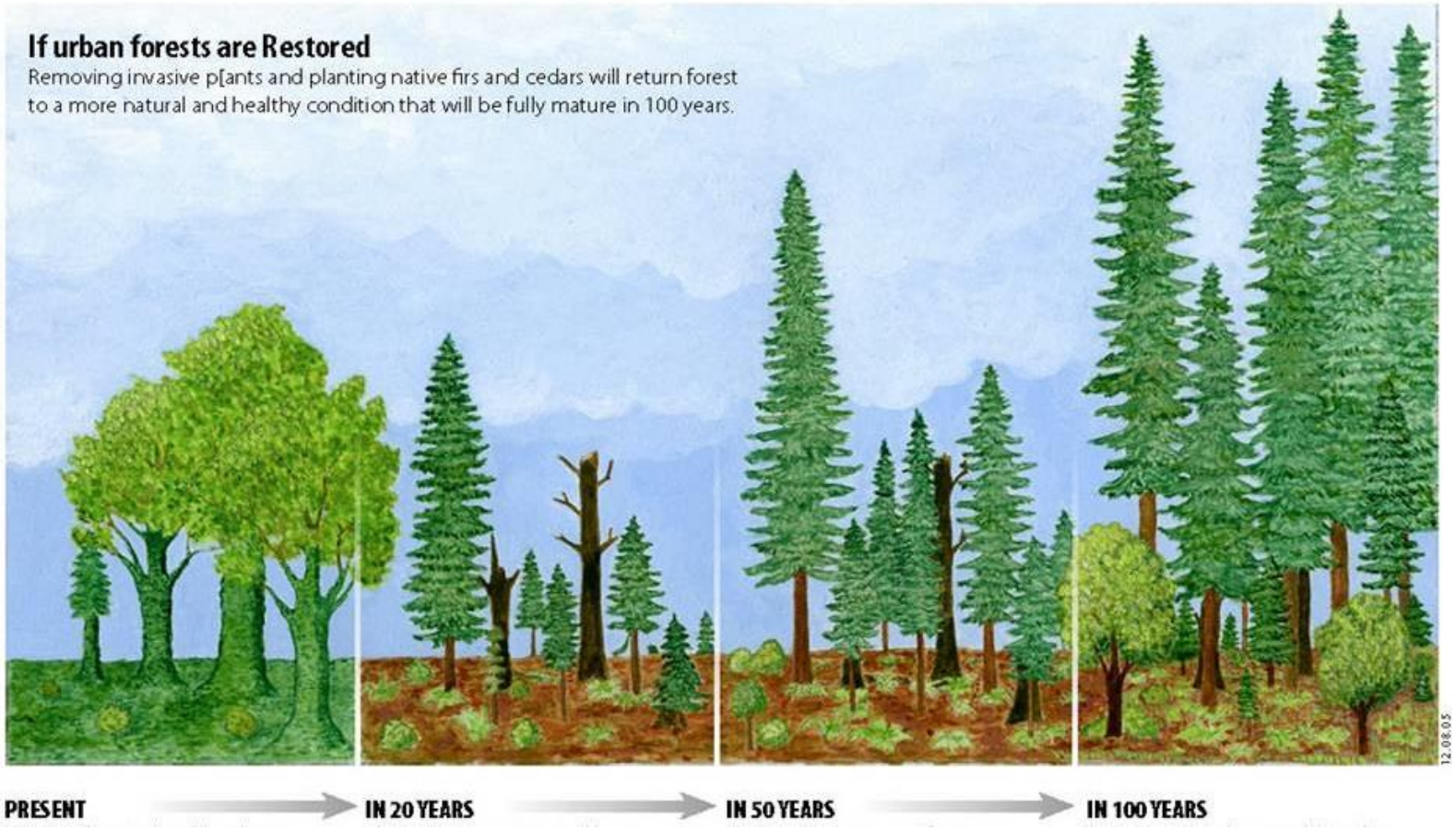
seattle.greencitypartnerships.org/event/calendar/

Natural Areas: Urban Forests Structure and Stewardship

The different layers of the forest are constantly interacting with various biotic and environmental elements.

- 10,000 seedling trees planted annually
- New trees under existing canopy
- Stewardship actions allow forest succession (natural seedling regeneration)

Natural Areas: Monitoring



- Tree regeneration increases (seedlings per acre)
- Tree diversity increases
- Weed species decreased
- Native species increased 9.7-13.5 species per plot

Natural Areas: 19 Years of Transformative Programming

GREEN SEATTLE PARTNERSHIP

- 2,008 acres in ongoing restoration undergoing weed management and planting
- 1.37M volunteer hours since 2005
- 1.4M plants including 339K trees
- Nearing 50K trees freed from vines
- 164 active Forest Stewards in 75 parks leading their communities
- In 2023, 132 paid and stipend participants received on-the-ground restoration and community-building experience

Natural Areas: Community Forest Steward Program

Forest Steward-led event in the East Duwamish Greenbelt

- Leadership role design and implement site restoration and community and volunteer engagement
- Currently 164 active in 75 parks and 75 volunteer Forest Stewards have provided 10+ years of service
- June 2024 Orientation as well as "On-Ramp" Training Series in Fall 2024 and January 2025 Orientation
- 2-year workplan coordinated by Seattle Parks and Recreation Ecology Team

Summary: Model Program Leadership

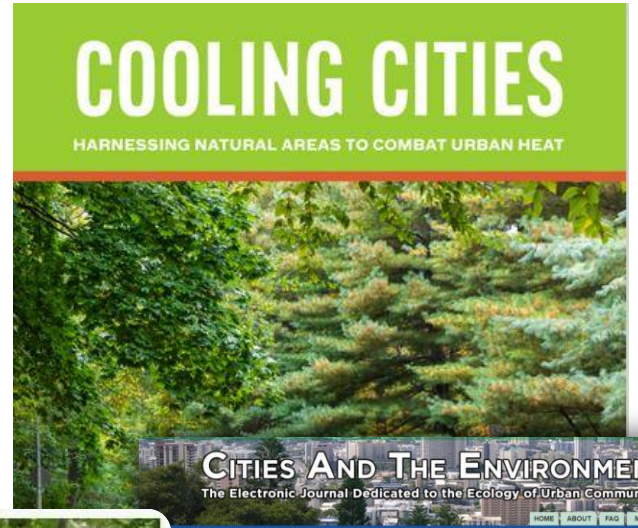
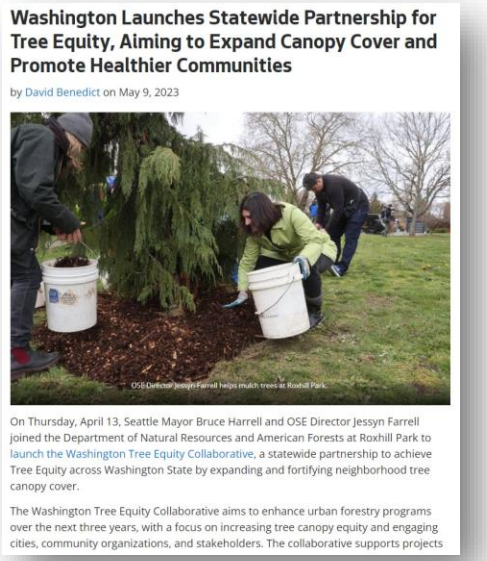


Fig. 2
Cities represented in the Forests in Cities network



Canopy Restoration: SPR Funding

SPR Investments	2023 Actuals	2024 Budget
Urban Forestry	$2,252,483	$2,382,935
Tree Crew Plus	$763,611	$861,092
Green Seattle Partnership	$3,801,329	$4,656,705
Natural Area Crew	$1,041,092	$1,519,430
Total	**$7,858,515**	**$9,420,162**

Includes new Cycle 2 of the Park District (2023-2028) with additional Tree and Urban Forestry Investments

- $960K plus 5.0 FTE to support new tree program in developed parks (slightly less in year 1 due to ramp up)
- $970K restored to Green Seattle Partnership funding to support urban forest health

High level six-year goals of the investments over Cycle 2 (2023-2028)

- 1,800 2-inch caliper trees planted (1,440 in High Priority Zones)
- 4,000 trees inspected and maintained (annual goal)
- 360,000 native plants installed (Green Seattle Partnership, excluding trees)
- 60,000 seedling trees planted (Green Seattle Partnership)

Questions?