

Draft URBAN FORESTRY MANAGEMENT PLAN

May 8, 2023 Workshop

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PlanIT Geo



Meeting Agenda

- ☐ **Project Background**
- ☐ **Findings & Highlights**
- ☐ **Outreach**
- ☐ **Draft Goals & Strategies**
- ☐ **Next Steps**



Alignment with City Council Priorities



Climate

- Addresses heat island effect, carbon sequestration and improves water and air quality



Equity


- Ensures that the benefits of trees are distributed equitably throughout the city



Safety

- Improves safety by reducing storm damage, traffic calming and crime reduction

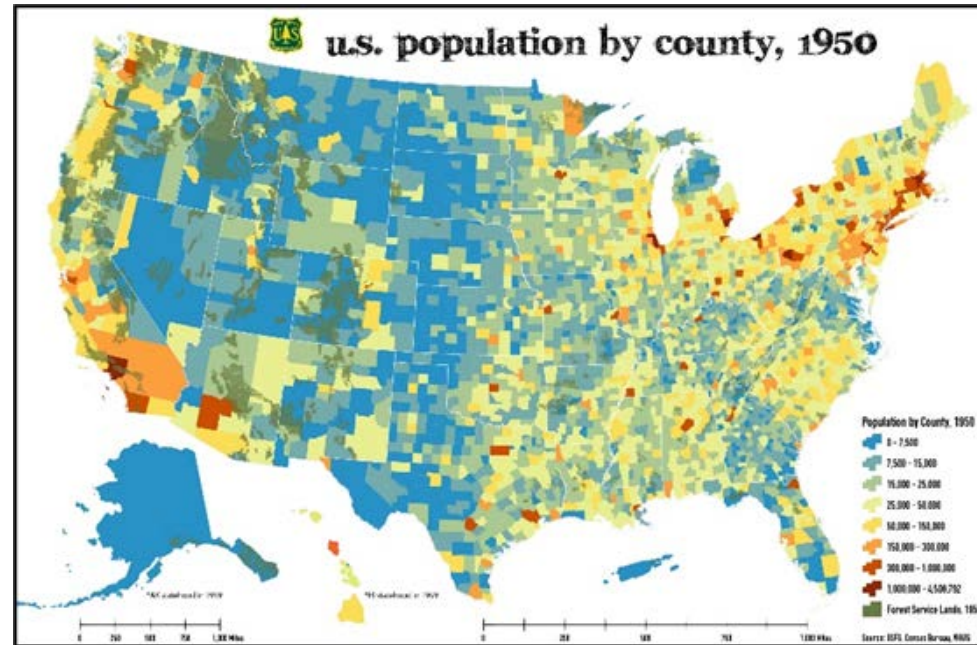
What are urban forests?

An aerial photograph of a city, likely Vancouver, showing a mix of urban development and greenery. In the foreground, there are several large, mature trees with vibrant autumn foliage in shades of yellow, orange, and red. A large, light-colored building with a prominent roof is visible in the center. The background shows a dense urban landscape with various buildings, including a tall, modern skyscraper, and more trees. The overall scene illustrates the integration of nature within an urban environment.

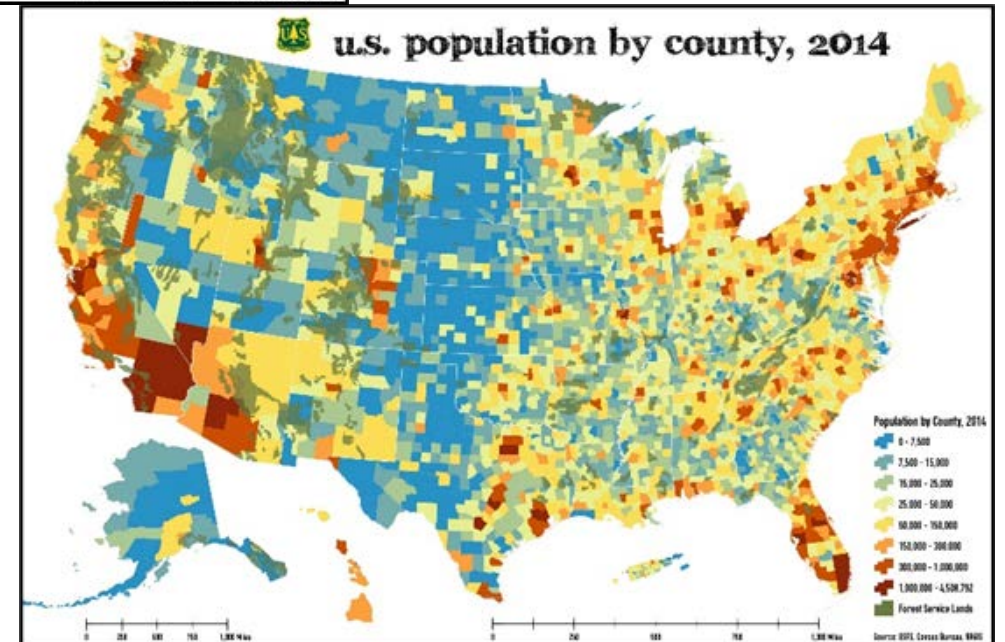
Urban forestry is the study and management of the city's urban forest, which is comprised of the **trees, shrubs and other vegetation in parks, along streets, in yards, on unbuilt properties, and in urban natural areas**

Over 141 million acres of America's forests are located right in our cities and towns.

Urban Forests



More than 80% of the U.S. population, and more than 50% of all people in the world live in urbanized areas.



Project Background

Extent



Project Background

Purpose

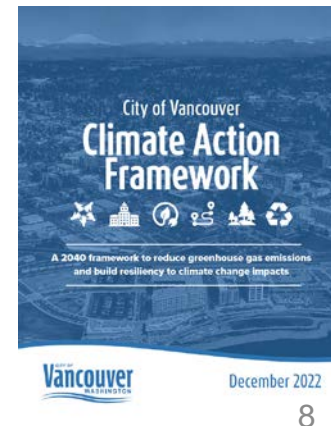
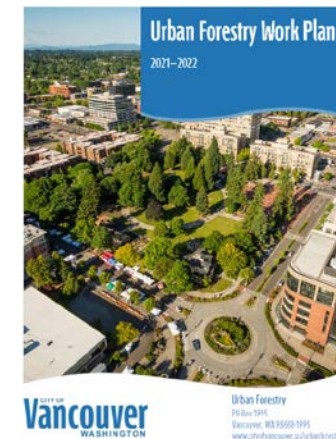
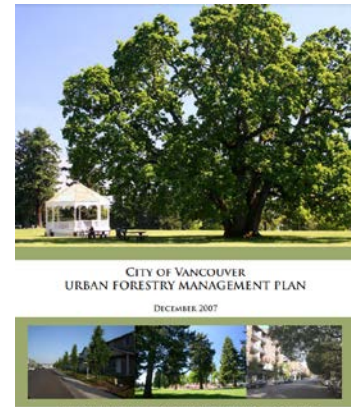
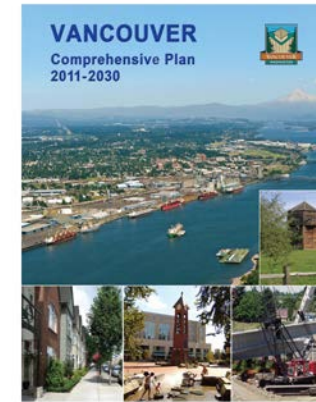
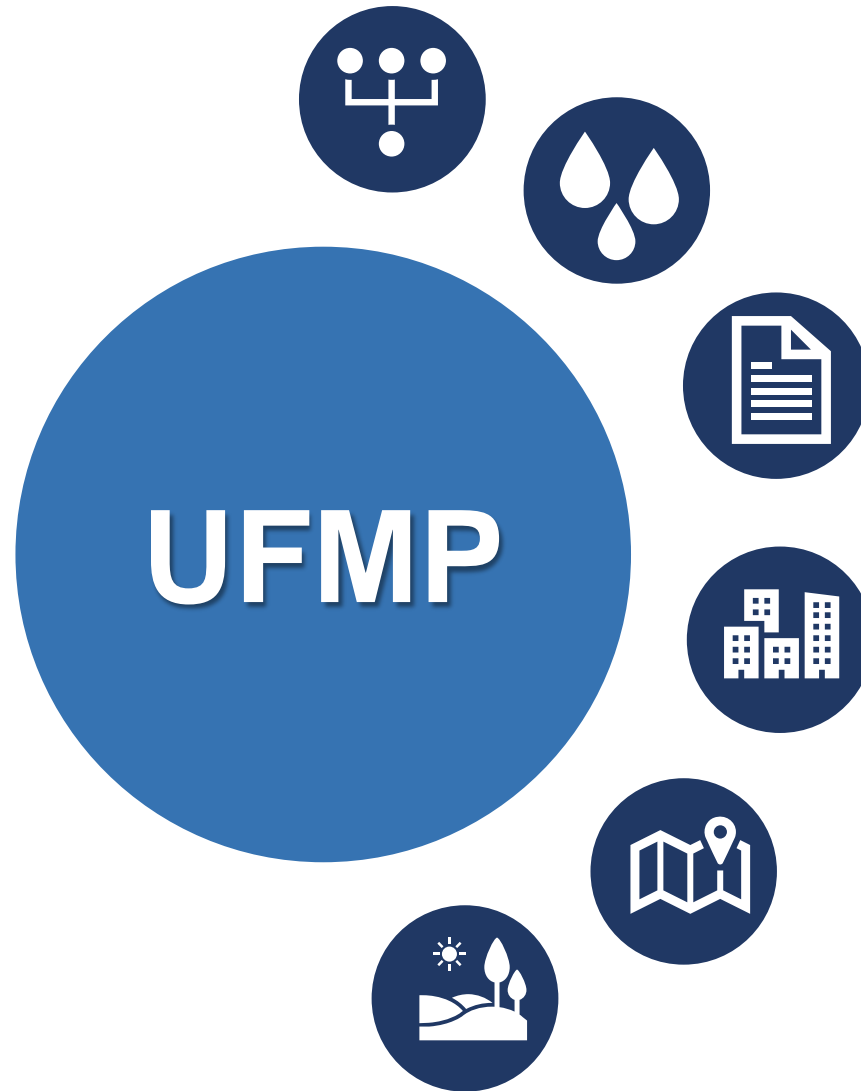
“Urban trees and forests are considered integral to the sustainability of cities as a whole. Yet, sustainable urban forests are not born, they are made. They do not arise at random, but result from a community-wide commitment to their creation and management.”

James Clark et al.: A Model of Urban Forest Sustainability



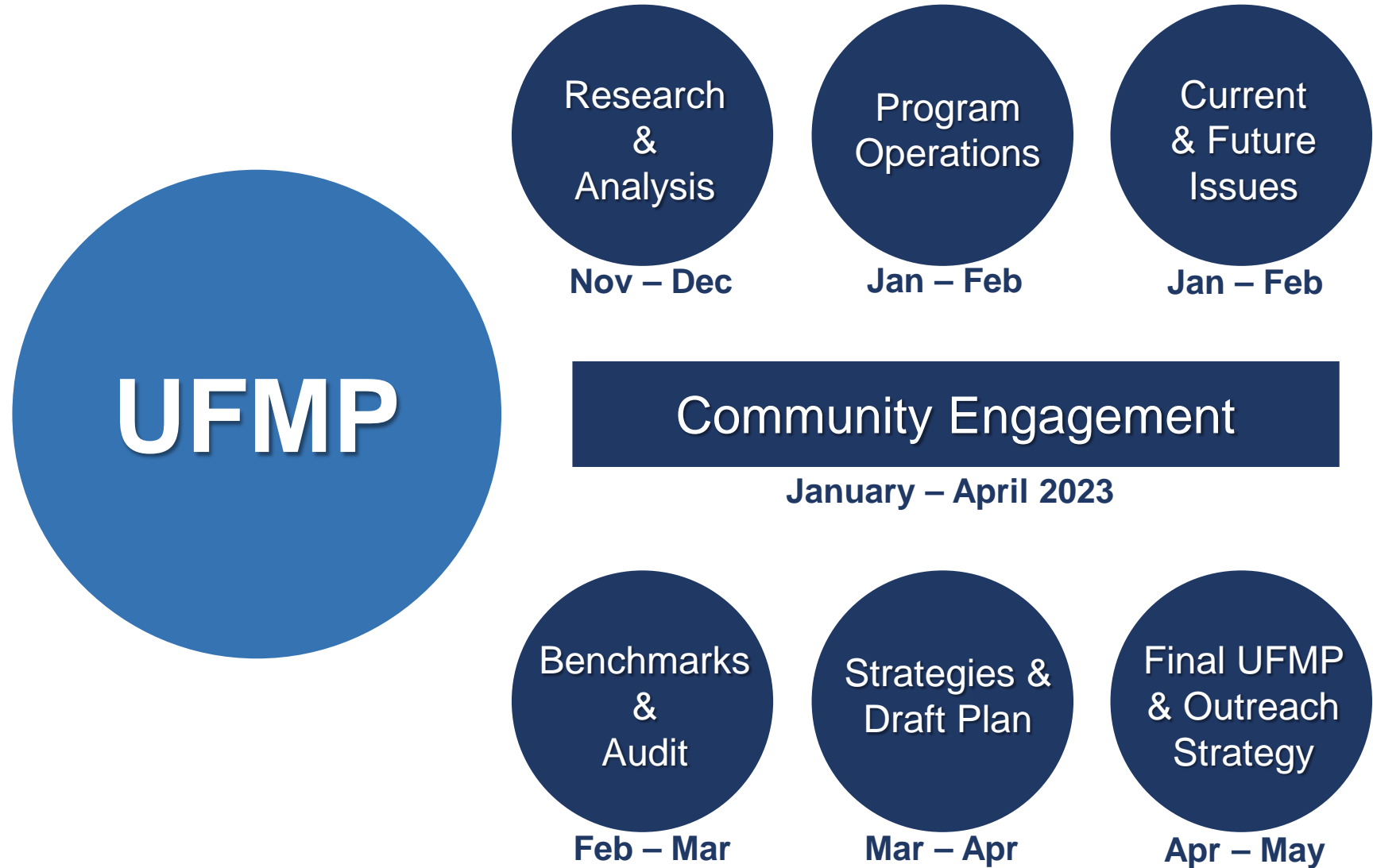
Project Background

Context



Project Background

Scope & Timeline

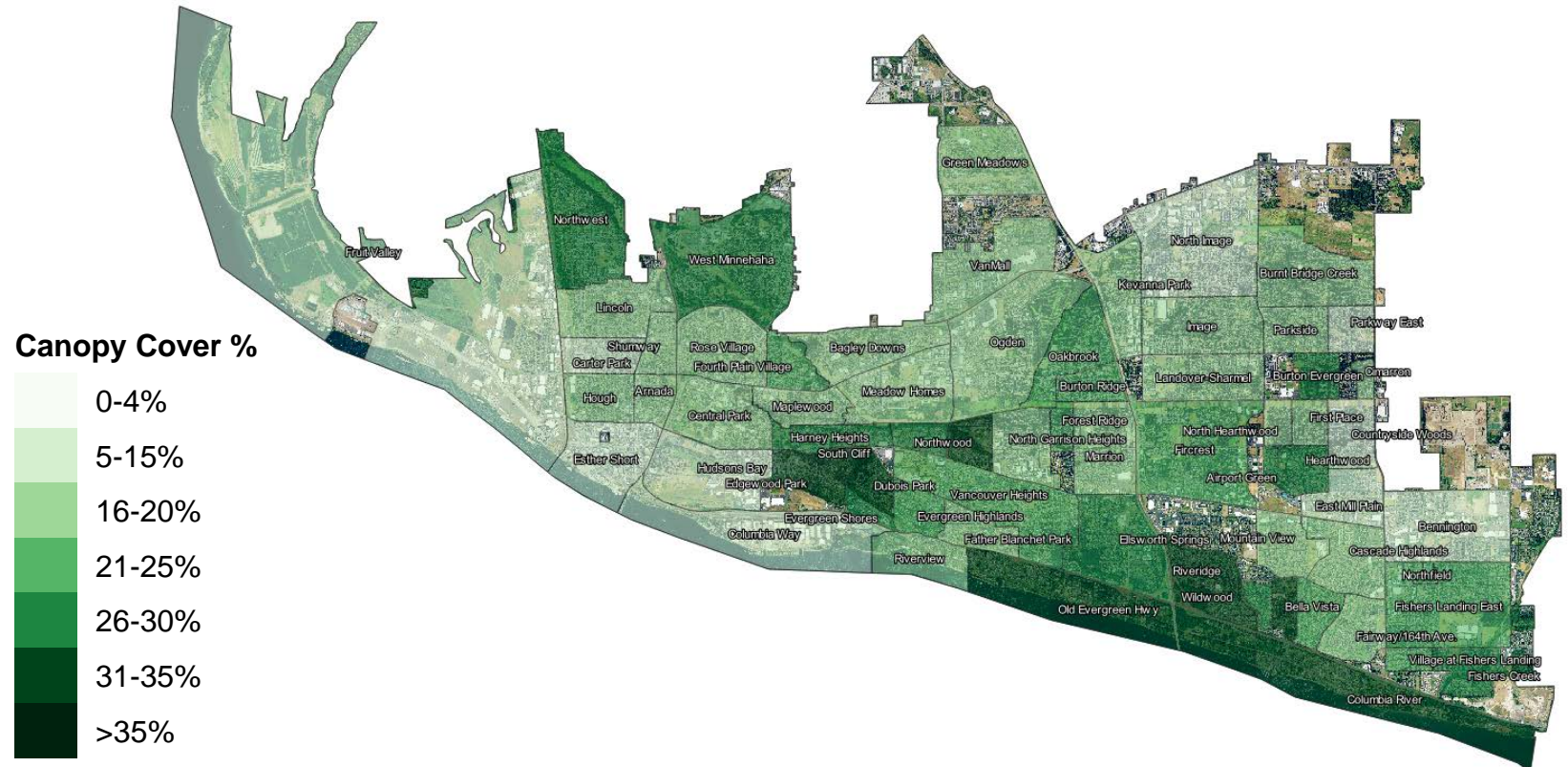
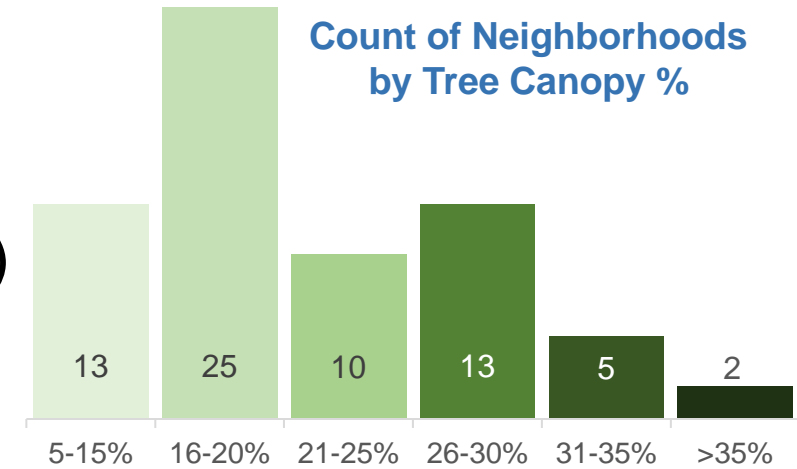


Key Findings

Urban Forest Status

Urban Tree Canopy

- 19% canopy (up 3% from 2011)
- 6,066 canopy acres
- 4,600 football fields of canopy



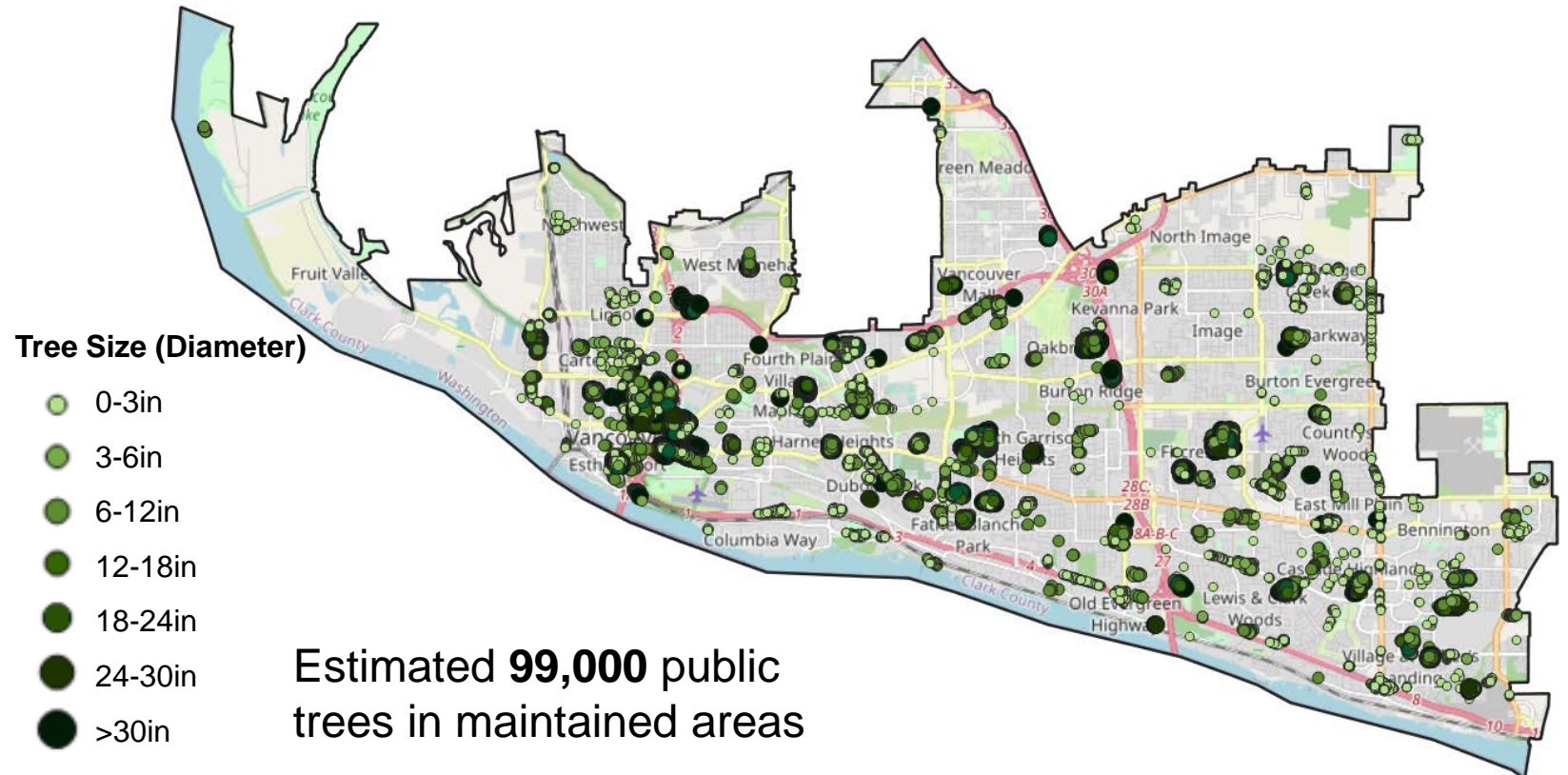
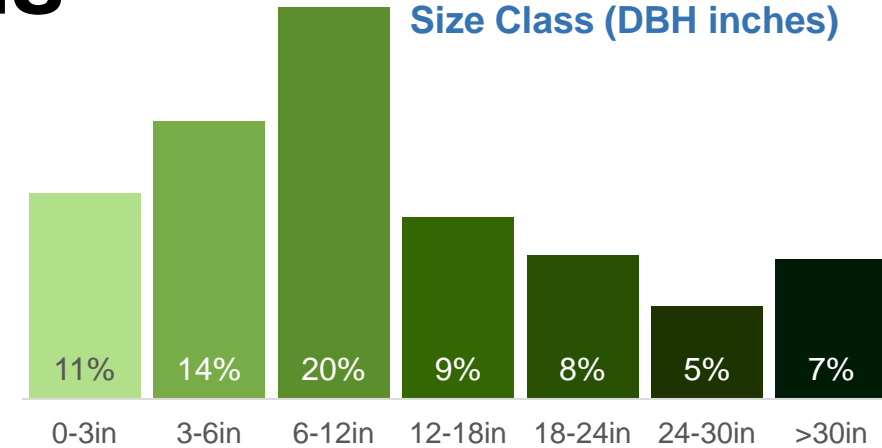
Key Findings

Urban Forest Status

Public Trees

- 12,000 trees added
- 870 trees > 30" diameter
- ~360 unique tree species
- 16% Douglas firs, 15% maples, 7% oaks, 4% western red cedars

Distribution of Trees by Size Class (DBH inches)



Key Findings

Ecosystem Benefits

Citywide Urban Forest (18.9% canopy)

- \$44 million in total benefits
- 224,000 tons of carbon stored
- 7,000 tons of carbon sequestered
- 149 tons of pollutants captured
- 243 million gallons of stormwater prevented

Public Trees (~99k trees)

- \$9.9 million in total benefits
- \$100 per tree
- \$51 per capita
- \$4.12 ROI

Other Benefits

- Property values
- Reduced health care costs
- Reduced crime
- Urban forest replacement value (\$500M)

CARBON STORAGE



In one year, an acre of mature trees absorbs the amount of CO₂ produced by a car driven 26,000 miles.

STRESS REDUCTION

Workers without views of nature from their desks claimed 23% more sick days than workers with views of nature.



CLEANER AIR

Roadside trees reduce nearby indoor air pollution by more than 50%.



WILDLIFE HABITAT



Planting and protecting trees provides habitat for hundreds of birds and small animals.

STORMWATER MANAGEMENT



Contiguous tree canopy is estimated to intercept 4" of rain over 1 acre in a typical year— about 108,000 gallons.

SHADE AND COOLING

Shaded surfaces may be 20–45°F cooler than unshaded areas.



SOIL STABILIZATION

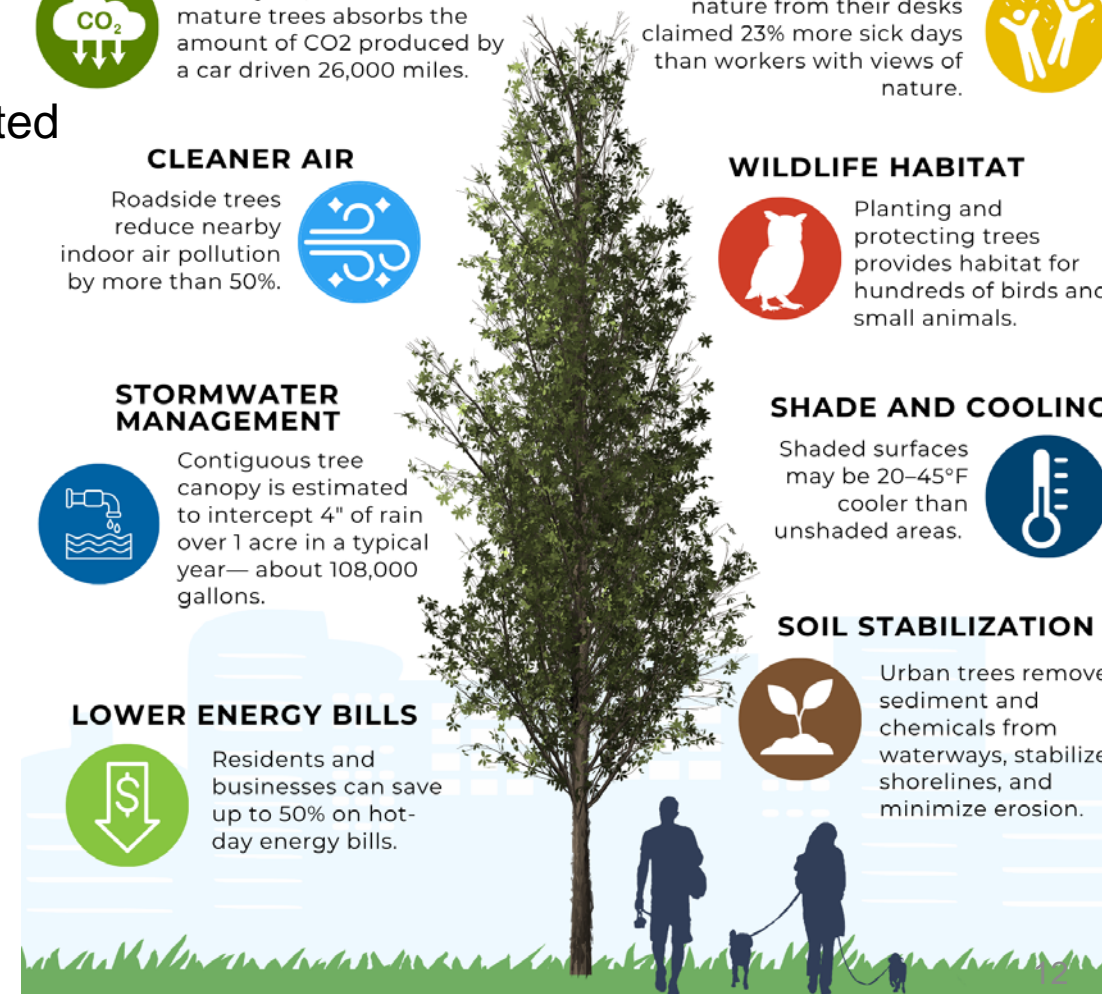


Urban trees remove sediment and chemicals from waterways, stabilize shorelines, and minimize erosion.

LOWER ENERGY BILLS

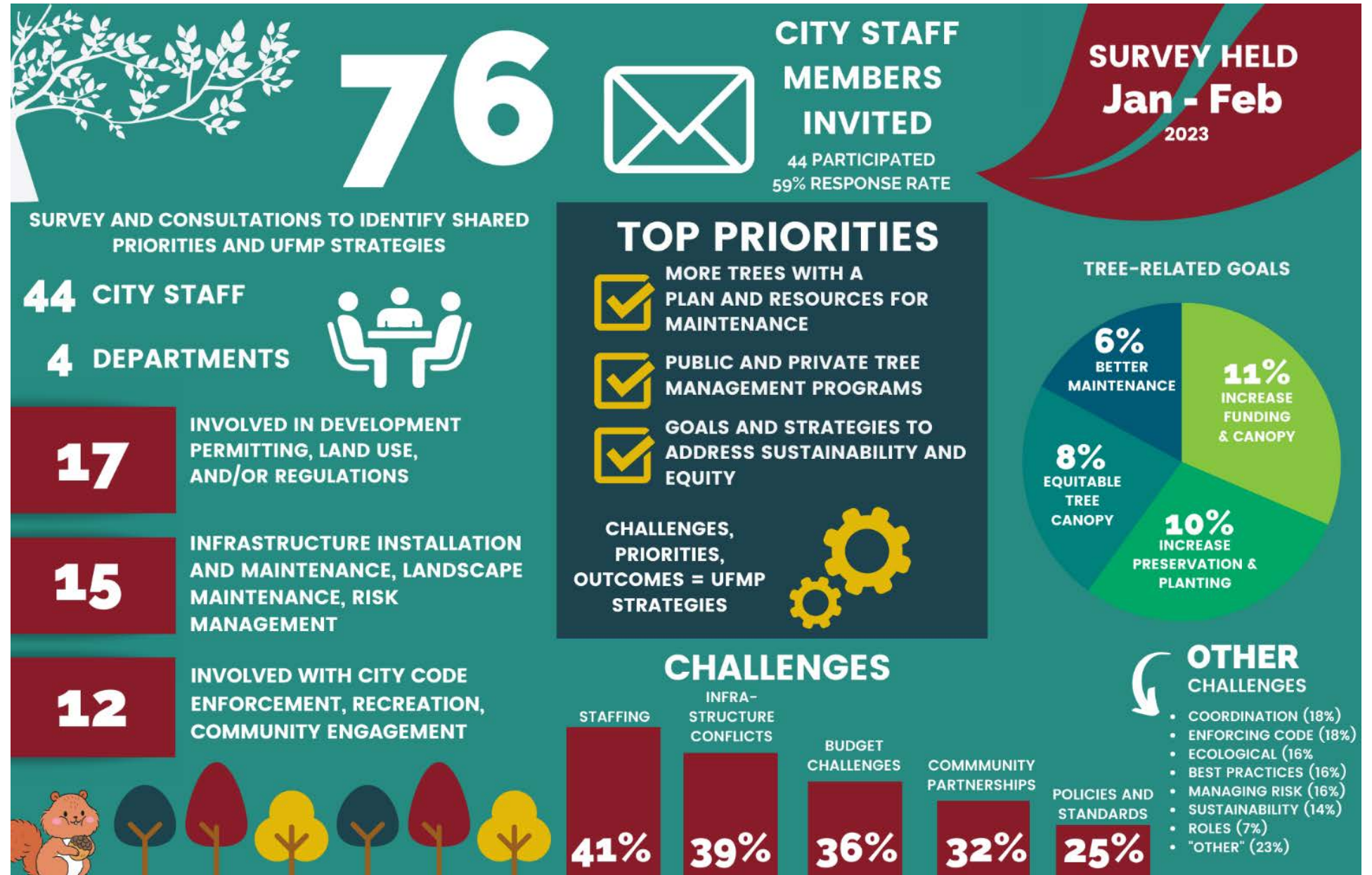


Residents and businesses can save up to 50% on hot-day energy bills.



Key Findings

City Staff Engagement



Key Findings

External Stakeholder Engagement



Key Findings

Public Engagement

Jan – Feb 2023, 155 Responses

Location of Responses (Zip Codes)



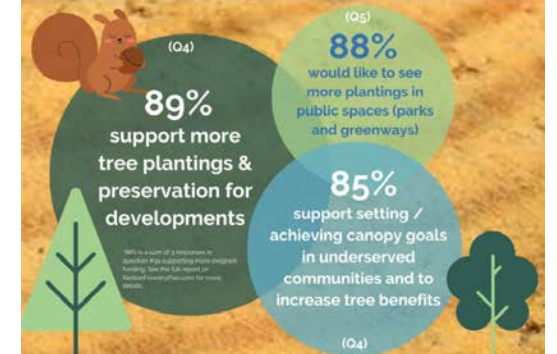
Note: Zip code boundaries were recreated and formatted to Vancouver. Map is not intended for additional use.

PUBLIC SURVEY RESULTS

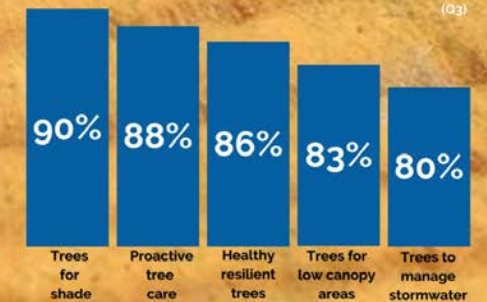
HEALTH AND QUALITY OF TREES IN THE LAST 10 YEARS?



WHERE SHOULD VANCOUVER FOCUS FUNDING?



MOST IMPORTANT CONSIDERATIONS FOR TREES



155 responses were received
Survey open from January 10 - February 28, 2023
For more details go to BeHeardVancouver.org/UFMP

Opportunities for Public Input



Engagement Sessions

Be Heard Vancouver Website

Urban Forestry Management Plan



Trees are a valuable community asset, enhancing our parks and open spaces, cooling our neighborhoods, capturing air pollution, intercepting stormwater runoff and improving safety in our community. Growing and caring for our city's urban tree canopy is no small task; a healthy tree canopy is the result of proper planning, management and community involvement.

To guide the future of trees in our community, the City is developing an **Urban Forestry Management Plan (UFMP)**. This plan will engage the community in creating a vision for the future, so that trees can continue to benefit everyone who lives, works and plays in Vancouver for generations to come.

We invite you to share your thoughts by [taking the survey](#) below. You can also join us for a virtual community meeting on January 25 and in person on March 18, RSVP below.



+ What is an Urban Forest?

+ How Does the Urban Forest Benefit our Community?

+ What is an Urban Forestry Management Plan?

+ Meet the Project Team

+ Ways to Get Involved

Public Survey



Let's Talk Trees! Public Meeting



Vancouver, WA Urban Forestry Management Plan

Let's Talk Trees, Vancouver! – Noon Session

Key Dates



Let's Talk Trees: Online Project Kick-Off Meeting

January 25 2023

**March 18th 10-noon @ MLK Elementary
(4801 Idaho St, Vancouver, WA 98661)**

5) Where would you like to see the City prioritize future tree plantings? (Select all that apply)



A



B



C



D



E

F

Not Applicable

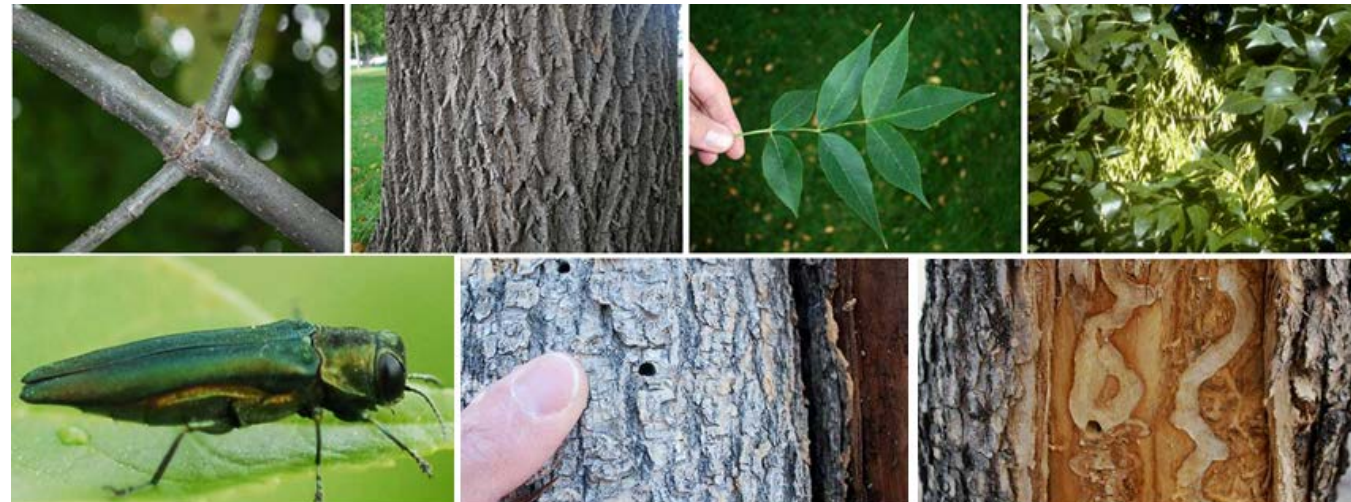
- ☐ A) Street trees (planted in the median or adjacent to the street)
- ☐ B) Parks, greenways, and other public spaces
- ☐ C) Private residential property
- ☐ D) Commercial or industrial areas
- ☐ E) School campuses
- ☐ F) I do not support adding more trees or canopy cover
- ☐ Other: _____

Key Findings

Key Strategies

Key Strategy	SUPPORT?		
	Staff	Stakeholders	Public
Tree Regulations	✓	✓	✓
Proactive Public Tree Maintenance	✓	✓	✓
Tree Planting Initiative	✓	✓	✓
Staffing Levels	✓	✓	✓
Data Management	✓		
Emerald Ash Borer (EAB) Management	✓	✓	

Ash Tree & EAB ID



Key Findings

Urban Forestry Audit

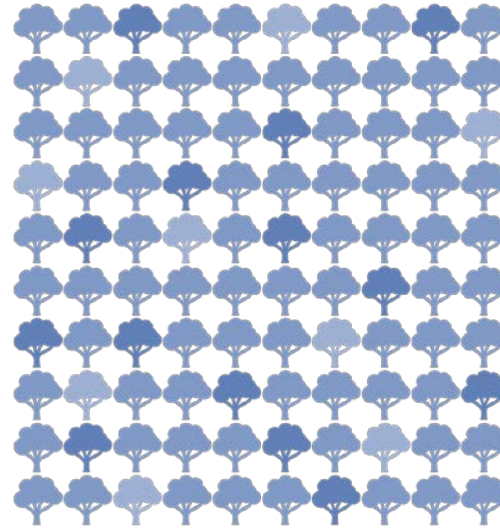


Score
78 out of 100

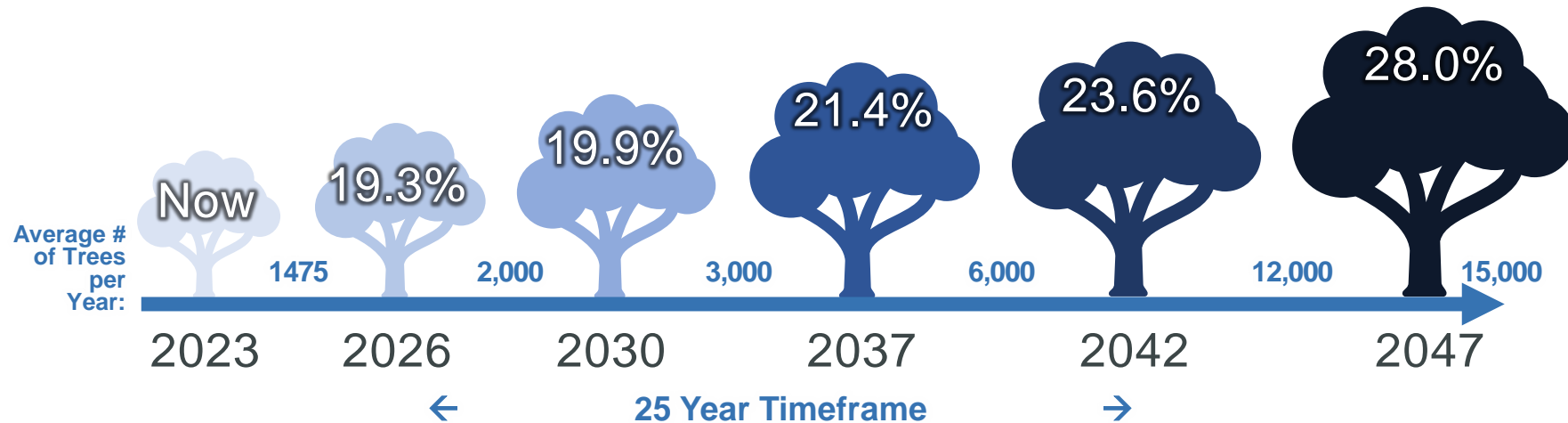
Canopy Goals & Planting Priorities

Canopy Goals

28% by 2047



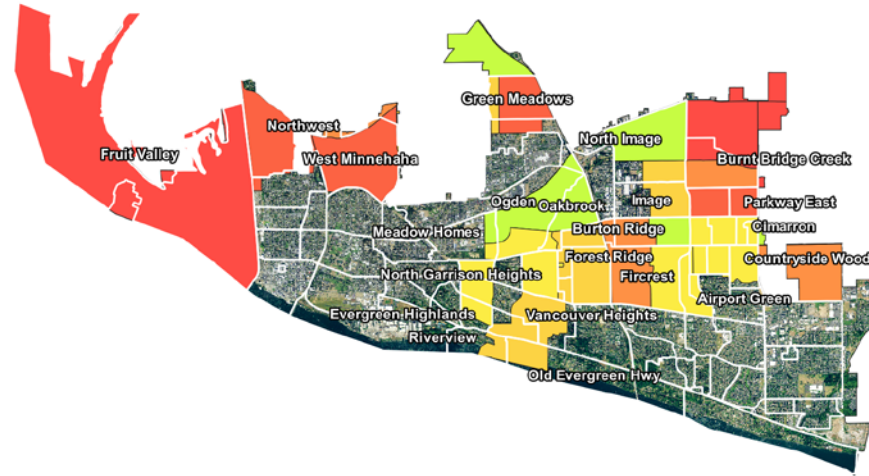
100 trees planted across the City that have large canopy cover at maturity equals 3 acres of new canopy cover. Approximately 3,000 acres of new canopy cover is needed to reach 28%



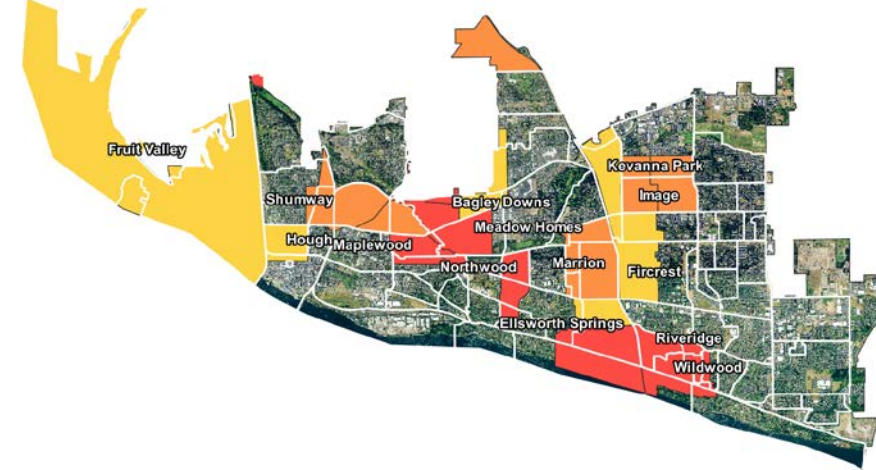
Canopy Goals & Planting Priorities

Priority Planting Areas

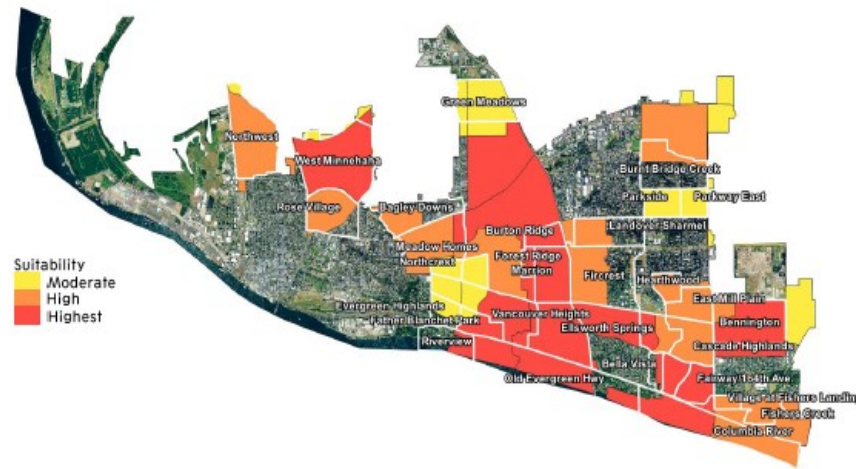
Greatest Available Space



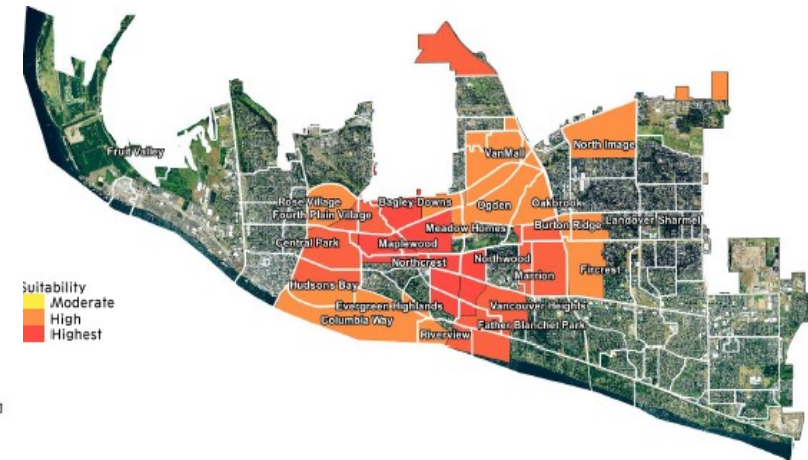
WA Environmental Health Disparities Priorities



Stormwater and Water Quality

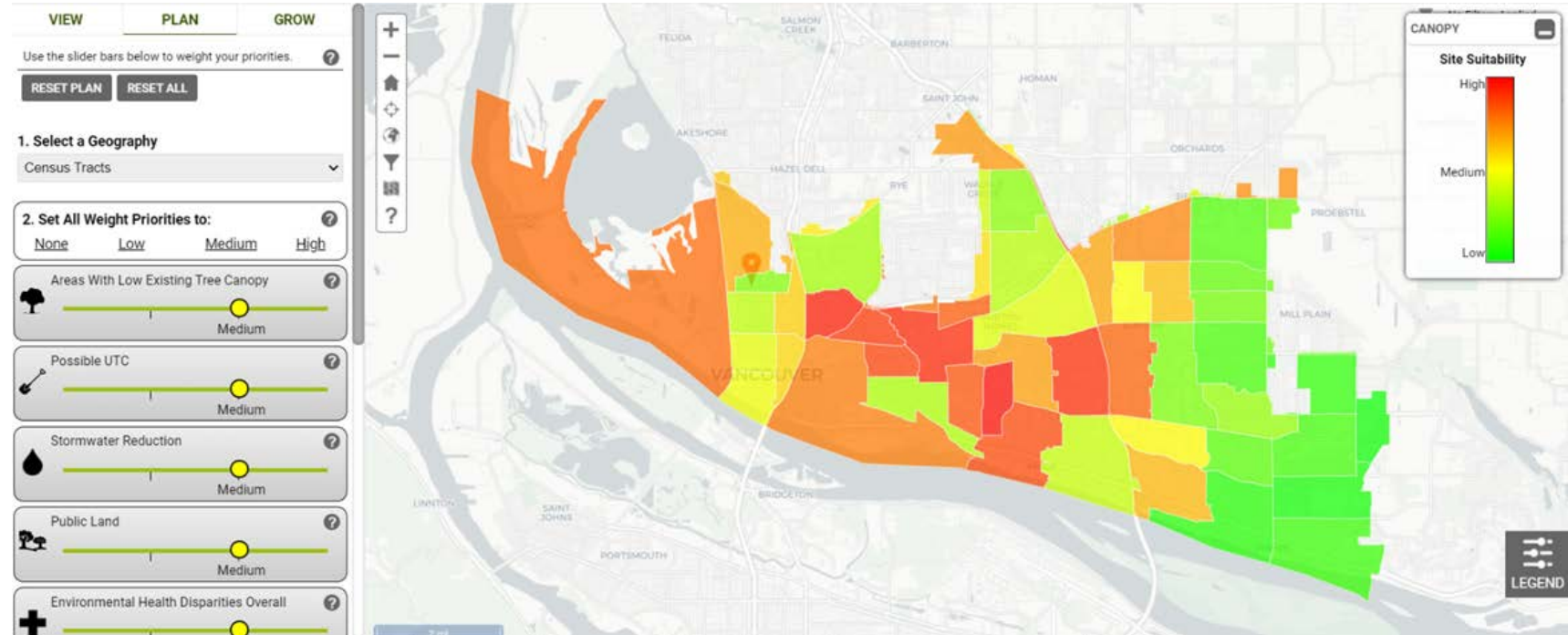


Composite Map of High Priority Areas



Tree Equity: View, Plan, Grow

Tree Equity

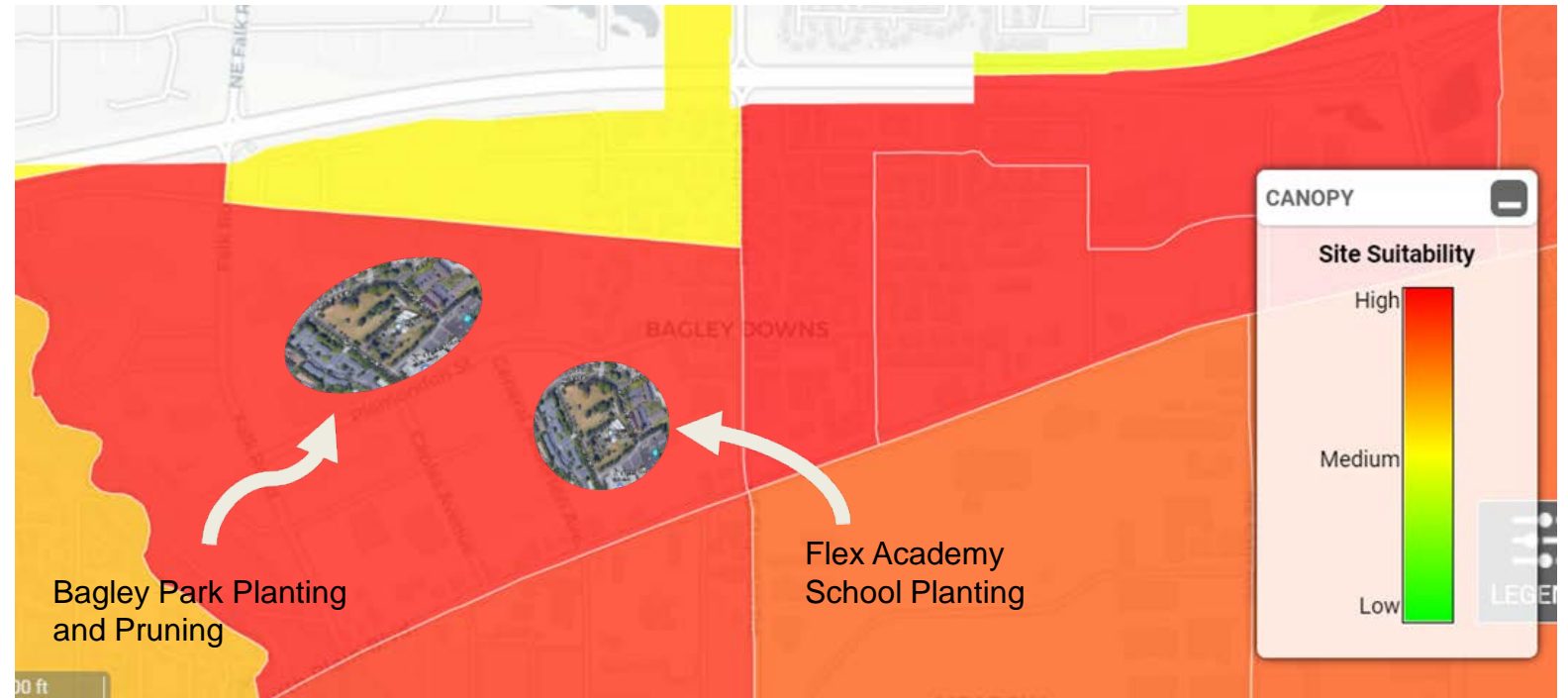


Interactive mapping tool that overlays tree canopy, census data, and health disparities to inform urban forestry management

<https://pg-cloud.com/VancouverWA/>

Tree Equity: View, Plan, Grow

Tree Equity across the community



Tree Equity considers tree canopy cover, climate, demographic, and socioeconomic data. These datasets include Average Temperature, Median Household Income, People of Color %, Vulnerable Population, Unemployment %, Health Index

UFMP Long-Term Framework

Long-Term Framework

- ❖ 3 Goals, 8 Objectives, 23 Strategies
and 50+ Actions
- ❖ Short, Mid, Long-Term and Ongoing Actions
- ❖ Implementation Strategy

Long-term Framework

Draft Goals & Strategies (paraphrased)

GOAL 1	GOAL 2	GOAL 3
Proactively manage public trees, continue to grow and expand a healthy canopy to achieve the 28% citywide canopy goal, maintain public safety, and optimize urban forest benefits.	Achieve environmental justice through a partnership with the City and its residents to improve well-being, human health, local economies, and urban forest sustainability.	Strengthen policies for preserving the environmental benefits, management, and the character of Vancouver's urban forest.
Update and maintain the public tree inventory.	Maintain Tree City USA recognition.	Protect trees during construction projects.
Utilize current and future canopy assessments.	Maintain active communications with diverse audiences.	Apply a no-net-loss approach to tree canopy cover.
Stay current with industry research, tools, tech and innovation.	Provide education and training workshops.	Use tree canopy assessment data for tree management policies.
Implement a proactive pruning cycle and management program.	Implement program services through the lens of environmental justice.	Update and strengthen tree-related ordinances, design standards, and protocols.
Formally update the Tree Planting Initiative.	Expand partnerships and the Neighborhood Tree Stewards program.	Enforce tree regulations.
Increase citywide tree canopy cover.	Coordinate implementation and engagement with the UFC and local partners.	
Grow a sustainable and resilient urban forest.	Effectively manage volunteers and events.	
Develop a Risk Tree Management Plan.		
Institute a formal rotation for risk tree inspections.		

UFMP

Next Steps

Steps for Plan Adoption

- ❖ City Council May 8th (today)
- ❖ Planning Commission May 9th
- ❖ Department of Commerce/SEPA Review
Process May-June
- ❖ Final UFMP Draft Summer 2023
- ❖ Seek Adoption by City Council Fall 2023

Draft Urban Forestry Management Plan

THANK YOU!

www.beheardvancouver.org/UFMP
www.cityofvancouver.us/urbanforestry



Funding to support this project was provided by the State of Washington Department of Natural Resources Urban and Community Forestry Program.



Long-term Framework

Draft Short-term Actions (paraphrased)

Short-term (0-5 years)

Action 1.1A.1 Utilize an asset management program to collect and manage public tree inventory data and regularly update the inventory. Begin by completing the parks inventory and start a street tree inventory.

Action 1.1B.1 Update policies and design guidelines to preserve existing tree canopy cover (see Goal 3).

Action 1.2A.1 Identify and finalize members for an interdepartmental green team or similar and establish meeting intervals and team objectives.

Action 1.2B.3 Continue the 7-year pruning cycle for Park sites and include all public facilities such as cemeteries, stormwater facilities, community centers, and police and fire stations to address equity and climate resilience.

Action 1.2b.4 Build off successes of the City's Park Pruning cycle to develop a proactive street tree maintenance program on a 7-10-year cycle like other communities to address equity and climate resilience by working with adjacent property owners.

Action 1.2C.1 Establish maintenance plans for new plantings.

Action 1.2C.4 Acquire commitments from the local community and property owners to water new trees.

Action 1.3A.1 Finalize tree canopy goals (short- and long-term) and priority planting areas and themes such as areas that score 8 or above on the WA Health Disparities Map and/or areas experiencing severe urban heat island effects.

Action 1.3A.2 Establish a citywide tree planting plan with strategies.

Action 1.3C.7 Plan for and manage Emerald Ash Borer which was identified in Oregon in June 2022.

Action 1.3C.8 Strengthen storm and disaster preparations, communications, mitigation, and recovery strategies, protocols, and mechanisms.

Action 1.3C.9 Complete the WA Urban Forest Pest Readiness Playbook Assessment to identify current and future management strategies.

Action 1.3C.10 Develop and implement a tree assistance program to address hazardous and invasive trees on public and private property.

Action 1.3C.11 Develop a working group to address English ivy on public and private property, develop a plan, and begin implementation.

Action 1.4A.1 Develop a scope and secure funding to complete a Risk Tree Management Plan for public trees.

Action 2.1B.1 Finalize a robust Community Outreach Strategy and a communications plan to garner support, spur behavior change, and increase participation from the community. Increase outreach and marketing for improving and expanding tree canopy for the public good by utilizing a designed marketing campaign by professional firms to seek public behavior change.

Action 2.1B.2 Aligned with the Community Outreach Strategy, conduct outreach in multiple languages with a variety of audiences and stakeholders (e.g., property owners, developers, HOAs, youth, tree care companies).

Action 2.1C.1 Use the Outreach Strategy (Action 2.1B.1) to finalize topics, audiences, approach.

Long-term Framework

Draft Short-term Actions (paraphrased)

Action 2.1C.2 Identify existing resources and tools for workshops.

Action 2.1C.3 Identify and collaborate with community partners.

Action 2.1D.1 Use the Outreach Strategy (Action 2.1B.1) to identify local community groups and partners that represent all neighborhoods.

Action 2.1D.2 Identify low canopy neighborhoods for targeted engagement.

Action 2.2B.1 Identify actions in the Plan where the Urban Forestry Commission can lead or support implementation.

Action 2.2C.1 Identify needs and interests from multiple departments.

Action 2.2C.2 Work with community partners and City volunteer coordinators to strengthen the Outreach Strategy (Action 2.1B.1).

Action 2.2C.3 Identify roles for past Urban Forestry Commissioners and Neighborhood Tree Stewards to keep them engaged.

Action 3.1B.1 Explore a fee-in-lieu of payment for the value of any trees removed from the development site and not planted back into the landscape. Consider fee schedules based on the type of project, the number of trees, the size of trees, Heritage Trees, among other considerations.

Action 3.1C.2 Update policies, regulations, standards, and plans to include the long-term and intermediate citywide and local canopy goals.

Action 3.1D.1 Evaluate city codes in an effort to increase tree preservation and create space for existing trees during the development process as well as space for new larger stature trees to be planted both on private property and within the public right-of-way.

Action 3.1D.2 Establish requirements for minimum soil volumes for new tree planting that align with industry standards and best practices.

Action 3.1D.3 Explore opportunities to update City standards such as the Transportation Standards to increase growing space that supports large-canopied trees.

Action 3.1D.6 Codify TreeCAP Program as part of new development instead of a voluntary program to ensure all new development is fulfilling their role in urban forest management.

Action 3.1D.7 Require Silver Leaf achievement in the City's TreeCAP program, which sets a goal of 15% tree canopy cover for commercial development and 33% tree canopy cover for single-family residential development.

Action 3.1D.11 Identify public areas and plant climate resilient trees where they can be integrated into stormwater management systems.

Action 3.2A.2 Explore requiring a landscape bond or escrow for new tree planting as part of development or inspecting all new development prior to occupancy and 3 years later to ensure new trees survived the establishment period and require replanting as needed.

Long-term Framework

Draft Mid-term Actions (paraphrased)

Mid-term (6-10 years)

Action 1.1A.2 Complete the comprehensive street tree inventory and actively manage the data as changes occur.

Action 1.1B.2 Secure funding, prepare a scope of work, and complete an updated tree canopy assessment.

Action 1.1B.3 Refine canopy goals and planting priorities as necessary.

Action 1.2A.4 Evaluate staffing needs and submit budget requests for additional staff when service demands and the needs of the urban forest exceed capacity.

Action 1.2B.1 Optimize management of the city's street (right-of-way) trees to increase carbon sequestration, resilience to extreme events, support overburden communities and consistent with anti-displacement best practices and ensuring equitable distribution of benefits, risk and resilience.

Action 1.2B.2 Optimize management of the city's natural lands to increase carbon sequestration and support resilience to extreme events, consistent with anti-displacement best practices and ensuring equitable distribution of risk and resilience.

Action 1.2B.5 Evaluate proactive maintenance programs for public facilities and street trees.

Action 1.2B.6 Evaluate the effectiveness of contract crews and explore the feasibility of developing an in-house tree crew rather than relying heavily on contract crews. Consider the insurance implications and identify the threshold when it would be more economical to have an in-house tree crew.

Action 1.3A.3 Identify additional local community partners for planting, maintenance, and funding support.

Action 1.3B.4 Identify additional opportunities beyond services city is currently providing for preserving and expanding tree canopy on private and city property to ensure equitable distribution of urban forest benefits to all Vancouver residents.

Action 1.3C.1 Monitor and analyze the inventory to inform tree species selection for new plantings and update the Approved Tree List as needed.

Action 1.3C.12 Continue implementing English ivy management with community support on public and private property.

Action 1.4B.1 Update public tree inventory and monitoring protocols based on the Risk Tree Management Plan.

Long-term Framework

Draft Mid-term Actions (paraphrased)

Action 2.1A.2 Retain the consecutive recognition as a Tree City USA city and strive for continual receipt of the Growth Award and Sterling Tree City USA from the Arbor Day Foundation.

Action 2.1A.3 Seek additional accreditation beyond Tree City USA such as Evergreen Community and American Public Works accreditation.

Action 2.2A.1 Expand the partnership with the local non-profit organization, Friends of Trees, to plant more trees on private property especially once barriers for overburdened communities have been removed such as a program for removing hazard and/or invasive trees.

Action 3.1C.1 Evaluate causes for canopy loss and gain from the 2021 assessment and future assessments to inform updates to policies and regulations.

Action 3.1D.4 Revisit Open Space District design standards to reduce and/or limit high maintenance turf area to increase possible planting area within the Open Space District and to maximize ecosystem services while still providing active play areas.

Action 3.1D.5 Identify street corridors where roadway widths can be reduced and remove pavement and plant trees and landscape that reduce reflected heat, remove impervious area, reduce future repaving needs, and provide traffic calming elements.

Action 3.1D.8 Explore the feasibility of incentivizing Gold Leaf achievement in the City's TreeCAP program, which sets a goal of at least 17% tree canopy cover for commercial development and at least 35% tree canopy cover for single-family residential development.

Action 3.1D.9 In support of the City's goal to reach 28% canopy cover by 2047, incentivize long-lived, large form, drought-tolerant, climate-resilient native plantings and retention of the mature canopy in existing and new developments.

Action 3.2A.4 Increase costs for street tree permits to align with the costs for administration and the needs of the urban forest.

Action 3.2A.6 Update the Street Tree Manual based on changes to City tree regulations, standards, and protocols.

Long-term Framework

Draft Long-term Actions (paraphrased)

Long-term (11-25 years)

Action 1.2A.5 Explore the development of an Urban Wood Reuse Program.

Action 1.2B.7 Focus on streamlining proactive tree maintenance and strive for a 7-year cycle for public facilities and street trees. Explore the feasibility of updating codes to transition from the adjacent property owner being responsible for street tree maintenance.

Action 1.2B.8 Develop in-house tree crews and rely on contractors for special projects and to supplement staff if or when the City identifies a practical need.

Action 1.3C.4 The City should retain remnant parcels as carbon sinks by planting with native conifers or climate adaptive conifers.

Action 1.3C.5 Purchase parcels citywide to increase carbon sequestration and support resilience to extreme events, consistent with anti-displacement best practices and ensuring equitable distribution of risk and resilience.

Action 1.3C.6 The City should acquire more parcels as part of the Open Space District for public use and to be used as carbon sinks to address climate, health, and equity.

Action 1.3C.13 Continue to work towards eradication of English ivy from tree canopies and from the landscape on both public and private property.

Action 1.3C.14 Collaborate with local tree nurseries to explore opportunities for expanding tree species options.

Action 3.1D.10 Strengthen and enforce code to protect critical areas such as contiguous forest areas, fish and wildlife habitats, frequently flooded areas, geologically hazardous areas, and special ecosystems.

Draft Ongoing Actions (paraphrased)

Ongoing

Action 1.1A.3 Analyze the public tree inventory data regularly to report on ecosystem services and benefits and to identify inequitable areas.

Action 1.1A.4 Monitor and assess the public tree population for risk and tree pests/diseases.

Action 1.1C.1 Attend training events, maintain understanding of industry research and innovation, and effectively implement data management solutions to their full potential.

Action 1.2A.2 The interdepartmental green team should meet regularly to address workflows, communications, and information sharing.

Action 1.2A.3 Tree managing staff should engage in City department planning such as updates to the Comprehensive Plan and Climate Action Framework.

Action 1.2C.2 Plant trees using the right tree, right place approach.

Action 1.2C.3 Educate the public and gather local community input on public tree plantings.

Action 1.2C.5 Utilize local partners and existing programs for the care of young public trees.

Action 1.3A.4 Continue to partner with Parks and Schools to replant trees and reduce unnecessary turf areas.

Action 1.3B.1 Plant trees to support an equitable expansion of the canopy with a focus on areas with low urban tree canopy, high susceptibility to urban heat island effects, areas of poor air quality, and areas with higher percentages of low-income people and communities of color.

Draft Ongoing Actions (continued) (paraphrased)

Action 1.3B.2 Replant climate-resilient trees where public trees were removed as appropriate.

Action 1.3B.3 Retain and preserve existing tree canopy through education, outreach, design review, and inspections to ensure low-income populations and overburdened communities understand and receive the benefits trees provide.

Action 1.3C.2 In support of the City's goal to reach 28% canopy cover by 2047, require long-lived, large form, drought-tolerant, climate-resilient native plantings (as feasible) in parks and other public properties to maximize carbon sequestration.

Action 1.3C.3 Mimic natural design or sustainable landscape design in new public development projects.

Action 1.3C.15 Continue to support and budget for professional training and certifications.

Action 1.4B.2 Apply industry standards and best practices and implement the Risk Tree Management Plan.

Action 2.1A.1 Maintain accurate records and conduct Arbor Day Celebrations to continue to receive the Tree City USA status from the Arbor Day Foundation.

Action 2.1B.3 Aligned with the Community Outreach Strategy, update the City's website with information in the Plan and share information regularly with the public through other mediums.

Action 2.1B.4 Aligned with the Community Outreach Strategy, gather public input and feedback regularly to inform future messaging, programs, and events.

Action 2.1C.4 Support youth education of environmental topics, engage schools with Arbor Day events.

Action 2.1C.5 Lead or support at least one training or education material annually.

Action 2.1D.3 Develop strategies to remove barriers to participation for all community members. Examples of barriers include ADA communications compliance, internet access, childcare, languages, and transportation needs.

Action 2.2B.2 Continue to coordinate with the Urban Forestry Commission on the development of annual reports and work plans aligned with the Plan's long-term framework and monitoring protocols.

Action 2.2C.4 Continue to support and expand programs such as the Heritage Tree and Witness Tree programs to sustain the urban forest and recognize exemplary urban forest stewards and volunteers.

Action 3.1A.1 Continue to review tree and hardscape conflicts and integrate alternative solutions that preserve trees where feasible.

Action 3.1A.3 Continue to perform construction project inspections to ensure proper tree protection requirements are implemented and maintained.

Action 3.2A.1 Inspect final landscape installation to ensure development projects are implemented as designed to meet code and contribute to environment.

Action 3.2A.3 Capture trees that are not planted as part of the VMC 20.925 and VMC 12.04 due to site constraints.

Action 3.2A.5 Continue to require the use of industry standards and best practices for the maintenance of public trees and encourage / educate the public to conduct similar practices on private trees.

Action 3.2A.7 Continue to administer and review tree permits.