



Urban Forestry

PO Box 1995 Vancouver, WA 98668-1995 www.cityofvancouver.us/urbanforestry









Vancouver City Council:

Mayor Anne McEnerny-Ogle,
Councilmember Bart Hansen, Councilmember Ty
Stober, Councilmember Linda Glover,
Councilmember Laurie Lebowsky, Councilmember
Erik Paulsen, Councilmember Sarah J. Fox

City Manager: Eric Holmes

City of Vancouver
Department of Public Works:

Brian Carlson, Director

Rich McConaghy
Environmental Resources Manager
360-619-4125
Rich.McConaghy@cityofvancouver.us

Charles Ray
Urban Forester
360-487-8328
Charles.Ray@cityofvancouver.us

Nicholas Redmond Urban Forestry Specialist 360-487-8332 Nick.Redmond@cityofvancouver.us

Jesse Batty
Urban Forestry Specialist
360-487-8327
Jesse.batty@cityofvancouver.us

Jessica George
Urban Forestry Outreach Coordinator
360-487-8308
Jessica.George@cityofvancouver.us









Urban Forestry Commission

Established for the purpose of preserving, managing, and increasing the city's urban forest, thereby protecting a vital environmental, social and economic resource that benefits all residents and visitors, and for the purpose of assisting property owners and public agencies in improving and maintaining the urban forest in a manner consistent with adopted city policies.

The Commission is an advisory board of seven members who have demonstrated an interest in preservation and enhancement of the unban forest and appointed by City Council to four-year terms.

The Commission meets the third Wednesday of each month at 6 p.m., at Vancouver City Hall, 415 W Sixth Street.

Commission:

Susan Law, Chair
Melissa Johnston, Vice Chair
Susan Sanders
Ben Joner
Clif Barnes
Chuleana Wheeler
vacant

Introduction	5
Goal One	7
Goal Two	10
Tree Canopy Project	13
Goal Three	14
Proper Tree Care	17
Goal Four	18
Benefits of Trees	20
Conclusion	23
Works Cited	24



Vancouver Urban Forestry Program

Our urban forest comprises all trees, shrubs and other vegetation within the City of Vancouver. Along with the Columbia River, trees are one of Vancouver's most prominent natural features. Vancouver's trees are not merely beautiful; the urban forest is critical to the healthful functioning of the city and greatly improves the quality of life for all residents.

Urban trees are "green infrastructure" and provide significant environmental, social and economic benefits. By capturing stormwater, trees help prevent flooding, reduce pollution from runoff, minimize erosion and promote groundwater recharge (Soak Up the Rain.). Urban trees filter airborne pollutants, including particles such as dust and soot, and gases, such as ozone and nitrogen oxides. Trees also produce oxygen and store vast amounts of carbon dioxide (Nowak, et al.). By shading, cooling and blocking wind, trees reduce heating and cooling energy use up to 25 percent (Heat Island Effect.). In neighborhoods, trees promote stronger social ties, encourage more outdoor activity, decrease crime and violence and increase community pride (Wolf.). Property values are shown to be 10 to 20 percent higher for houses with large, well-maintained trees (Trees in the City.). These benefits translate directly into increased real estate values. Additional research suggests that urban trees also have significant economic benefits for communities, such as positively influencing consumer shopping behavior in business districts and promoting economic development (Wolf.).

However, a healthy urban forest doesn't just happen by itself. A healthy urban forest requires thoughtful planning and ongoing maintenance through all sectors, including involvement from citizens as well as development and business communities. With less than 20 percent tree canopy coverage, Vancouver is not realizing the maximum of potential urban forest benefits. Vancouver's Urban Forestry program works to optimize and grow these benefits by preserving and enhancing tree canopy while engaging the community in stewardship. This document outlines Urban Forestry program activities for 2021-22.



Vancouver Urban Forestry Program

Our vision for Vancouver's urban forest is a healthy, dynamic, diverse and cohesive ecosystem that is valued and cared for by all residents. This balances economic vitality with the conservation of natural resources now and for future generations.

The mission of Vancouver's Urban Forestry Program is to maximize the aesthetic, environmental and economic benefits that trees provide to city residents and visitors by preserving, managing and enhancing existing trees and other vegetation and promoting the reforestation of the urban area, through an active integrated program with community support and participation.

The 2021–2022 goals of the Urban Forestry program are to:

- Preserve existing trees and continue planning, maintenance and operating principles that improve canopy health.
- **Restore canopy**-deficient areas through tree planting to provide equitable distribution of urban forest benefits to all Vancouver residents.
- Promote an urban forest stewardship ethic within the community through education and community outreach.
- Adhere to The Vancouver Way and establish Urban Forestry as a leader in Pacific Northwest municipal forest management.



Preserve existing trees and continue planning, maintenance and operating principles that improve canopy health.

Support the Community and Economic Development Department in critical review of development tree plans and ensure replanting and response to all violations of the Tree Conservation Ordinance.

Support Code Compliance in enforcement of the Minimum Property Maintenance Ordinance by evaluating the hazard potential of trees on private property and ensuring trees that are not hazardous are not removed unnecessarily.

Support Public Works and Community and Economic Development Department by reviewing street plans for tree species selections and locations to maximize planting of site-appropriate trees and minimize potential future hardscape infrastructure damage.

Support Public Works and Parks and Recreation in the development of natural resource management plans for significant urban natural areas, especially natural area parks, and respond to tree issues within Vancouver's Park system. Develop tree canopy and secession plans that incorporate tree replacements into adopted park master plans.

Support all Public Works divisions on priority projects and efforts to implement reforestation projects to improve watershed health.

Enforce the Street Tree Ordinance to preserve street tree canopy, minimize conflicts between trees and the built environment with replacements, and reduce incidence of improper tree care.

- Continue community outreach about tree ordinance requirements.
- Refine protocols for reviewing and issuing permits for major pruning, removal and planting
 of street trees and for the Street Tree Worker License program.
- Enforce the ordinance in a fair and reasonable manner to ensure no net loss of tree canopy.
- Implement new street tree removal posting protocols to inform the community on proposed street tree removal.

Recognize and protect significant trees through the Heritage Tree Program.

- Increase awareness of program through outreach, tours, publications and events.
- Encourage nominations from the public, Neighborhood Tree Stewards, neighborhood associations and Urban Forestry Commission.
- Identify and designate new Heritage Trees every biennium, announcing new Heritage Trees at festivals and/or community events.
- Record relevant historical and arboricultural information about each tree, compile information into Heritage Tree Inventory and install signs at each designated tree.

Collaborate with the Old Apple Tree Research Team (OATRT) to evaluate progress and chart a course of action to care for the Old Apple Tree and ensure the legacy lives on. The OATRT includes representatives from: Arborscape Tree Care, City of Vancouver, City of Vancouver Urban Forestry Commission, Bartlett Tree Experts, Joe's Farm and the U.S. National Park Service.

Preserve existing trees and continue planning, maintenance and operating principles that improve canopy health.

Continue to update a dynamic inventory of street trees and trees on City property to facilitate effective management, assess the overall condition and value of the urban forest and improve record keeping.

- Refine data collection protocol to maximize efficiency and accuracy.
- Build inventory gradually over time, beginning with canopy projects and service requests.
- Utilize the online tree inventory program to input and manage the street and park tree inventory with staff and interns. Create a public portal for citizens to learn about our urban forest and the benefits of trees.

Coordinate young tree pruning on canopy restoration project sites and explore options for the city to proactively maintain trees through a pruning cycle as City assets, as part of asset preservation. Provide young tree care workshops to volunteers in coordination with neighborhoods and Friends of Trees.

Proactively manage trees on City property for safety and to minimize potential storm-damage costs through hazard tree identification and removal. Continue the parks tree pruning cycle to mitigate hazards and increase health of trees.

Provide training for Operations crews and other City staff on proper pruning and tree care to improve management of City grounds; encourage City staff to contact Urban Forestry staff for assistance.

Promote tree-friendly development and land use practices through low impact development standards, such as preserving mature trees and planning for appropriate replanting.

- Support Urban Forestry Commission's Policy Subcommittee to evaluate development standards related to trees.
- Explore incentives to preserve mature trees and incorporate these into policy and planning decisions.
- Develop protocols for tree preservation on construction sites using the most current research and practices; share these techniques with City staff and developers through training.
- Encourage retention or planting of canopy corridors, or tree tracts, to function as buffers and wildlife corridors; utilize these corridors to connect parcels and build a cohesive forest ecosystem.
- Recognize model projects by nominating projects for the Community Pride Design Award or the Gordon and Sylvia MacWilliams Evergreen Award (Mac Award).
- Recognize property owners and developers who strive to help the City of Vancouver attain its adopted goal of 28 percent urban tree canopy cover through the Tree Canopy Achievement Program (TreeCAP) designation. TreeCAP awards various groups who have met or exceeded their tree canopy coverage goals per their land use zoning through both mature trees and new tree plantings that contribute to the urban canopy once these plantings mature. TreeCAP inspires others and helps the entire city realize the environmental, social and economic benefits of a healthy tree canopy.

Preserve existing trees and continue planning, maintenance and operating principles that improve canopy health.

Encourage proper tree placement and pruning along transportation corridors to reduce potential tree and transportation conflicts. Support the pavement management program to ensure proper clearance along streets and replacement of the right tree in the right location.

Identify significant wooded areas as natural resource systems and support their acquisition and/or protection with the Public Works and Parks Acquisition Programs.

Explore Hazard Tree Abatement Program/ Save a Tree Program to ensure a healthy, safe tree canopy for all residents

- Program to assist with the removal and/or pruning of hazard trees, either private or public property.
- Prioritize focusing on equity and environmental justice, working with underserved communities.

For every \$1 we spend on our urban forest today, our region will receive more than \$2.50 in benefits over 40 years.

Western Washington and Oregon Community Trees Guide: Benefits, Costs and Strategic Plantings.



Restore canopy-deficient areas through tree planting that equally distributes the benefits of urban forests to all Vancouver residents.

Use the 2011 tree canopy GIS data to strategically plan Canopy Restoration Program efforts.

- Categorize neighborhoods based on tree cover ratio and distribution patterns; prioritize lowest canopy areas for tree planting projects.
- Implement action items identified in the 2011 Tree Canopy Report.
- Incorporate demographics on race, language, and income from the 2020 Census and American Community Survey in future canopy mapping projects to analyze and address tree canopy distribution and environmental justice.
- Plan and budget to repeat GIS canopy analysis in 2021; establish a five to 10-year cycle for future canopy mapping.

Promote the citywide tree canopy goal of 28 percent total canopy.

- Plant approximately 1,000 trees per year throughout Vancouver.
- Promote specific canopy goals based on zoning and property types identified in the Urban Forestry Management Plan.
- Foster community support through education and outreach focusing on the benefits of trees.

 Partner with organizations like Fourth Plain Forward and Wisdom of the Elders to develop culturally-specific education and outreach materials to better engage all Vancouver residents.
- Encourage property owners and developers to participate in the TreeCAP canopy goal recognition program.
- Encourage participation in the Treefund tree planting discount program.
- Distribute free yard trees to residents during the Yard Tree Giveaway to incentivize planting native and large-form trees on private, residential property in the City of Vancouver.
- Utilize Washington Tracking Network maps, which provide environmental public health data, and overlay with tree inventory maps to determine areas with socioeconomic, health and environmental disparities to focus tree planting efforts.

Plant trees and shrubs on public property, including parks and natural areas.

- Assess park properties and lands to determine tree planting needs.
- Prioritize planting in lower-canopy, underserved areas first.
- Utilize both contractors (to maximize efficiency and effectiveness) and volunteers (to maximize public involvement and reduce costs) for planting projects.
- Work with park planners and designers to include canopy targets in the park development process; encourage incorporation of tree planting as a funded element in park master plans.
- Plant trees to replace turf in hard-to-mow or unused grassy areas.
- Encourage planting native trees and shrubs where appropriate. Native plants are adapted to local conditions, require less water and are more resistant to pests and diseases.
- Maximize canopy through species selection and tree location.
- Ensure equitable geographic distribution of tree planting projects to ensure marginalized communities benefit from a healthy tree canopy.
- Develop and implement tree succession, replacement and planting plans to guide future planting needs in parks.

Restore canopy-deficient areas through tree planting to provide equitable distribution of urban forest benefits to all Vancouver residents.

Encourage street tree planting

- Coordinate with Friends of Trees to continue a fiveyear planting campaign to conduct volunteer neighborhood tree plantings in at least 15 neighborhoods with four major planting events; encourage new neighborhoods to participate.
- Secure an AmeriCorps member to increase neighborhood participation in tree planting projects.
- Update and distribute the Street Tree Selection list, available online.
- Work with transportation planners and designers to include canopy targets; encourage incorporation of street tree planting as a funded element in master plans.
- Inspect all proposed street tree planting sites prior to installation to minimize future infrastructure conflicts.
- Encourage planting of street trees along sidewalks and in planter strips and medians as an effective traffic-calming technique, coordinating with Neighborhood Traffic Safety Alliance and project applicants.
- Partner with the Vancouver Downtown Association to revitalize downtown core with street tree plantings.
- Partner with Fourth Plain Forward action group to increase street trees along this busy corridor.
 Partner with local school districts to plant trees on school grounds with students.

Encourage tree planting on private property

- Partner with property owners, the Watershed Alliance and others on project design, incentives and implementation.
- Collaborate with community organizations, specifically organizations serving underserved communities, to address equitable geographic distribution of tree canopy.

Partner with Washington Department of Transportation to restore canopy along highways.

Assist Neighborhood Tree Stewards in coordination of canopy restoration projects.

Call Before You Cut!

Before removing any tree or pruning any street tree, call 360-487-8328 to check if a permit is required.

In Vancouver, a permit is required to remove a tree if the tree is:

- A street tree in the public right-of-way;
- * A nuisance or hazard tree:
- On a property zoned for industrial, commercial, or multifamily use;
- On a single-family residential lot that is larger than 1 acre or can be further sub-divided;
- On an undeveloped or developing parcel;
- In a sensitive area such as a slope, riparian area or wetland buffer.

The Street Tree Ordinance, VMC 12.04, states that a permit is required for major pruning of street trees. Work must be performed to national arboricultural standards by an individual or a company possessing a Street Tree Workers License.

Restore canopy-deficient areas through tree planting that equally distributes the benefits of urban forests to all Vancouver residents.

Ensure proper maintenance and monitoring of all trees.

- Continue a summer tree maintenance program involving AmeriCorps members, interns and volunteers.
- Encourage young tree care through proper mulching, structural pruning and watering.
- Hold contractors accountable on projects for tree health, including proper planting and watering to ensure establishment.
- Support Friends of Trees planting events, pruning events and crew leader and summer inspector trainings.
- Monitor all projects for at least five years.
- Replace all trees that decline during the first three growing seasons.
- Coordinate volunteer efforts on community projects.

Review development project proposals to maximize tree planting opportunities and tree retention to reestablish native conifer ridge lines that reflect the Northwest landscape. Create greenway corridors through tree canopy connecting properties.

Promote stewardship of native plant communities on private and public property.

- Encourage planting of native trees and shrubs where appropriate.
- Distribute a comprehensive list of Vancouver's native trees and shrubs.
- Encourage local nurseries to expand stock of native trees and shrubs.

Promote Witness Tree Program as a means to memorialize loved ones through planting trees.

- Manage the Witness Tree mapping interface.
- Utilize Witness Tree funding to reduce tree planting costs.
- Market the Witness Tree program and how to participate.



Vancouver's Tree Canopy

In 2011, Vancouver Urban Forestry conducted a tree canopy study using high-resolution infra-red imagery data. This study revealed that Vancouver's total tree canopy has declined to 18.6 percent, down from approximately 19.7 percent in 2003.

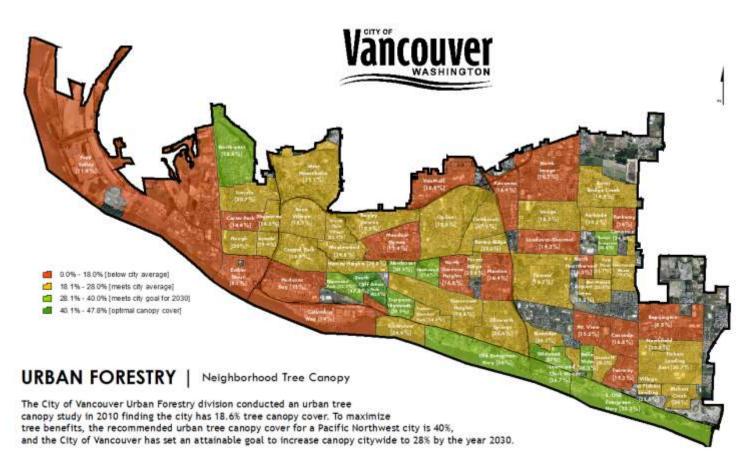
To maximize the many benefits of trees in communities, including to air and stormwater, and to minimize urban heat island effect, American Forests (www.americanforests.org) recommends 40 percent canopy cover for Pacific Northwest cities. Vancouver has established an achievable goal of 28 percent tree canopy by 2030. All residents are encouraged to help Urban Forestry reach this goal by planting new trees and caring for existing trees.

Through the Canopy Restoration Program, Urban Forestry is planting trees with both contractors and volunteers to achieve its canopy goal. Tree plantings can occur in parks, on school grounds, in neighborhoods, and even on private property. You can help. Please contact Urban Forestry to learn more about helping to restore Vancouver's tree canopy.



Friends of Trees is Urban
Forestry's non-profit partner
that assists in coordinating
community tree plantings to
build social networks with
neighborhoods and the
community.

To learn more, volunteer, or coordinate a planting in your neighborhood, visit www.friendsoftrees.org.



Promote an urban forest stewardship ethic in the community.

Strengthen and expand community partnerships, especially with the following groups:

- Underserved organizations and communities.
- Local businesses, developers and firms.
- Tree care companies and consultants, including women and minority owned businesses.
- Vancouver and Evergreen school districts, private schools, WSU Vancouver and Clark College.
- City departments and programs, including Parks, Grounds, Streets and others.
- Civic, faith-based, non-profit and service organizations.
- Regional partners, such as the Intertwine Alliance, Friends of Trees and Watersheds Alliance.

Foster civic involvement through the Neighborhood Tree Stewards program, a comprehensive training and education program that empowers neighborhood volunteers to become leaders in urban forest management.

- Recruit at least 10 new Stewards to participate annually.
- Refine training program and curriculum binder annually based on participant feedback.
- Involve partners as program presenters.
- Assist Stewards with identification of potential projects and provide support to help them successfully implement these projects.
- Maintain communication with Stewards through email list-serve and social gatherings.

Offer Tree Talk workshops on various tree-related topics monthly throughout the year.

- Continue to meet the community's needs and interests by developing new workshops, such as the Tree Selection Workshop held prior to the planting season. This workshop focuses on right-tree, right-place and Low Impact Development practices to restore the watershed ecological functions. Participants then learn about a variety of trees to plant in landscapes that offer a myriad of benefits.
- Develop online learning opportunities to engage residents of all ages on the benefits of trees.

Celebrate trees on Arbor Day in April.

- Host an Arbor Day event involving youth and elected officials.
- Award the Mac Award annually during Arbor Day to recognize individuals, organizations and business that have made a positive impact on the urban forest.
- Capitalize on Arbor Day as an opportunity for increased media coverage and awareness.

Celebrate Heritage Trees at Old Apple Tree Festival in October.

- Explore strategies to boost attendance and improve the festival, including interactive activities.
- Include entertainment, partner booths and children's activities.
- Highlight Vancouver's many Heritage Trees.

Distribute tree care brochures and outreach materials at community events, workshops and City offices throughout Vancouver.

Neighborhood Tree Stewards receive more than 20 hours of free treerelated education. In exchange, they serve as a resource for their neighborhood on tree matters.

Promote an urban forest stewardship ethic in the community.

Partner with Neighborhood Associations to enhance local urban forest management.

- Encourage Neighborhood Associations to incorporate urban forestry elements and planting projects into Neighborhood Action Plans; assist with implementation of these projects.
- Give presentations to at least 12 neighborhood meetings.
- Submit articles for inclusion in neighborhood newsletters.
- Encourage neighborhoods to apply for grants and seek sponsors to implement urban forestry projects; provide assistance if necessary.
- Continue Urban Forestry Commission liaison program through neighborhood outreach.
- Nominate for the Gordon and Sylvia MacWilliams Evergreen Award (Mac Award) those neighborhood associations that meet the following criteria: implemented a neighborhood tree planting with Friends of Trees or others, have an active Neighborhood Tree Steward and have urban forestry elements in Neighborhood Action Plan.
- Recognize those who strive to help the City of Vancouver attain its adopted goal of 28 percent urban tree canopy cover through the Tree Canopy Achievement Program (TreeCAP) designation program.
- Communicate and promote the benefits of trees and the importance of an effective Urban Forestry program to City Council, local decision-makers, media and the general public.
- Engage volunteers in hands-on urban forestry projects such as tree plantings, invasive species removal, young tree care and tree pruning.
- Use existing and new communications and marketing tools to deliver priority messages to target audiences on a seasonally-appropriate timeframe.
- Incorporate Community Based Social Marketing strategies into all outreach and education programs to promote sustainable behavior change and increase public awareness of tree care and tree benefits.
- Maintain Urban Forestry website as a comprehensive and dynamic source for urban forestry information.
- Utilize available free media such as CVTV videos, NextDoor website and newsletter articles to deliver targeted messages and share Urban Forestry activities.
- Release at least one media advisory (press release) regularly and as needed to promote educational and community engagement opportunities, tree health care and seasonal tree communications, such as summer watering and fall leaf management.
- Recognize extraordinary contributions to Urban Forestry through the Silva Bolds Whitfield Award plaque, located at 13th and Main streets in downtown Vancouver.
- Increase visibility of Urban Forestry by having a table presence at six or more community events, such as the Recycled Arts Festival, Earth Day, Noon Concerts, and Sturgeon Festival.

Promote an urban forest stewardship ethic in the community.

Give presentations to various civic, service or community organizations and involve these organizations in volunteer projects, such as tree plantings and tree care workshops.

Expand environmental education efforts in local schools and community groups.

Coordinate with the Water Resources Education Center to design, create and update an indoor educational tree exhibit to re-connect visitors to the natural environment. Explore concepts, ideas and funding sources.

Inform the general public and tree care companies about Vancouver's tree ordinances and tree permit requirements.

• Review public notice procedures for street tree permits and Level III Tree Plans.

Encourage proper tree species selection and optimal planting locations to maximize benefits of trees and minimize future conflicts (i.e. "right tree, right place").

Collaborate with partners to continue the comprehensive and creative tree awareness campaign, Think Before You Top, to reduce the improper practice of topping trees.

Educate the general public about invasive trees and the infrastructure damage and native habitat loss they cause. Distribute the 'Guide to Invasive Trees' brochure and door hanger. To reach a wider audience, partner with other programs, such as Master Gardeners, Watersheds Alliance, neighborhood associations and others.

Empower the general public to take action to stop the degradation of native plant communities due to invasive species.

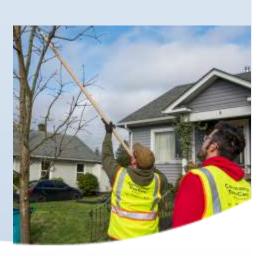
• Work with volunteers to remove and control invasive species, such as English ivy, Himalayan blackberry, Tree of Heaven and Black Locust, which threaten native plant communities on private and public lands.

Provide public interface to the current tree inventory through the Tree Plotter inventory program and website for the community to learn about our urban forest and the benefits of our tree canopy.



Get involved through volunteering:

- Neighborhood Tree Stewards
- TreeTalk workshops
- Tree planting events
- Restoration events
- Special events outreach



Protect your trees with proper tree care

Around our homes or along the streets, trees are one of our most valuable assets. They are also a long-term investment. Like any investment, trees require careful decisions and the occasional advice and service of a professional.

ISA Certified Arborists

In the tree world, arborists are the professionals that can help safeguard your trees and save you from long-term consequences of neglect or improper care. Arborists certified by the International Society of Arboriculture (ISA) have demonstrated a minimum level of knowledge and a commitment to be aware of the latest national standards and best practices. Although not a guarantee of good service or performance, ISA certification suggests that a company or individual takes tree care seriously. The City of Vancouver cannot recommend specific arborists, but encourages those interested to call 1-888-472-8733 or visiting www.isa-arbor.com or www.pnwisa.org for a complete listing.

City Licensed Street Tree Workers

A Street Tree Workers License is required to perform major pruning on street trees. Urban Forestry maintains a list of contractors who have met the minimum qualifications to work on street trees.

Think Before You Top—Get the Facts

"Topping" is defined as indiscriminate cutting of branches to stubs or branches too small to assume the terminal role. Research in the last several decades has repeatedly proven that topping is very harmful to trees and is almost never an acceptable practice. Protect your trees from becoming hazardous. Do not top your trees and do not hire any tree care provider that suggests this service.

Attend a TreeTalk Workshop

Free TreeTalk workshops offer a variety of tree care topics throughout the year. Common workshop topics include Proper Pruning, Tree Planting, Identify Common Pests and Diseases in Trees, Tree ID Walks and A Homeowners Guide to Hazard Trees.

Get the Facts

Tree regulations in the Vancouver Municipal Code:

VMC 12.02, Urban Forestry Commission: Established and defined the role of the Urban Forestry Commission, a citizen advisory group appointed by City Council.

VMC 12.04, Street Trees: Regulates the planting, pruning and removal of trees within the right-of-way. Permit requirements available on the website or by contacting Urban Forestry directly.

VMC 20.770, Tree, Vegetation and Soil Conservation: Regulates tree removal on private property before, during and after development.

Adhere to City of Vancouver's Operating Principles and establish Vancouver Urban Forestry as a leader in Pacific Northwest municipal forest management.

Coordinate the roles, responsibilities, policies and projects of City and other government agencies and local partners to ensure sound planning and management of the urban forest.

Ensure stable and adequate funding to achieve Urban Forestry goals.

- Maintain partnerships with all departments.
- Seek grants and sponsorships to leverage program funds and expand capacity.
- Utilize the Parks Foundation to accept private donations and business sponsorships.
- Promote Urban Forestry as a core municipal service that works across all departments and is directly linked to the City's Stormwater Management Strategy and adopted Strategic Commitments.

Continually implement City values of leadership, stewardship, integrity, collaboration and accountability throughout the program.

Highlight program accomplishments in an Annual Report and provide quarterly Urban Forestry updates to Public Works and Parks managers.

Revise and submit the Urban Forestry Work Plan and budget request biennially.

Utilize and implement the Urban Forestry Management Plan, an integrated and sustainable approach to preserving and enhancing the City's urban forest resources, to achieve the goals over the next 20 years.

• Explore feasibility to update management plan in 2022.

Employ highly-qualified individuals within the program.

- Maintain active International Society of Arboriculture certification for all full-time staff.
- Maintain Municipal Specialist certification for at least one staff member.
- Maintain Tree Risk Assessor certification for at least one staff member.
- Seek opportunities for meaningful continuing education.
- Remain current with latest arboricultural research, trends, techniques and knowledge.

Pandemic and Natural Disaster Preparedness

- Maintain mobile work stations.
- •Provide guidelines and protocols for health and safety measures for all staff, volunteers, interns and AmeriCorps members.
- Purchase respirators and other safety equipment to reduce impacts to service levels and provide a safe work environment



Urban Forestry staff perform more than 1,000 site visits annually to help citizens manage their trees.

TREE CITY USA

Adhere to City of Vancouver's Operating Principles and establish Vancouver Urban Forestry as a leader in Pacific Northwest municipal forest management.

Continued leadership in utilizing advances in technology to continue efficiency on a mobile, paperless system for service requests and daily activities to improve customer service and response time with limited resources and growing workloads. Utilize tree management platform Tree Plotter for tree inventory, management and outreach.

Collaboration of the Urban Forestry Commission in their liaison assignments with other boards, commissions and groups, such as Vancouver Parks and Recreation Advisory Commission and the Vancouver Planning Commission, to work cooperatively and develop solutions that reflect the City's values.

Manage tree pruning and planting contracts to ensure contractor compliance with specifications and that they are accountable for providing successful projects. Staff has since provided contract models to other municipalities.

Respond to all citizen requests for service and information.

- Achieve at least 75 percent customer satisfaction, as evidenced through customer feedback.
- Reduce average response time for site inspections to less than ten days.

Recognized as a "Tree City USA" annually and prestigious "Tree City Growth Award"; celebrate prestige of awards at Arbor Day celebration.

Staff speaks and presents at regional and national arboriculture events and submits articles for publication in industry magazines and journals.

Continue to be a leader and resource for other urban forestry programs throughout the region.

Vancouver has been recognized by the National Arbor Day Foundation as a Tree City USA each year since 1989. The Tree City USA program is designed to recognize communities that effectively manage their urban forest and meet the four Tree City USA standards.

Vancouver has continually been selected for this national recognition for managing its urban trees as a valuable natural resource and for making trees a priority. Maintaining this national status shows that Vancouver and its citizens recognize that urban trees are closely linked to quality of life. Our citizens take pride in working together as stewards to preserve and enhance the urban forest.

Improvements to the urban forest promote sustainability and counteract local threats of poor air and water quality and the global threat of climate change.

We all live in a watershed!

Watersheds are regions or areas defined by ridges where the water drains into a particular stream, lake or river. In Vancouver, our community has bountiful water bodies, including Vancouver Lake, Burnt Bridge Creek and the Columbia River. What happens in our neighborhoods affects the water quality in Vancouver's waterways. Improving our water quality requires a watershed approach that looks not just at waterways, but the land and land uses that can send polluted runoff to rivers and streams.

Here are 10 steps you can take to help improve our water quality:

- 1. Avoid chemical fertilizer and pesticides, or if you must use, use sparingly. Switch to non-toxic alternatives and apply in proper amounts following labels and instructions.
- 2. Preserve established trees in your yard and neighborhood.
- 3. Plant street and yard trees, shrubs and groundcovers that filter pollutants and reduce stormwater runoff; remove turf and invasive plants.
- 4. Mulch landscape beds to prevent erosion and reduce irrigation water.
- 5. Don't let sprinklers water sidewalks and streets.
- 6. Use non-toxic alternatives to home-cleaning chemicals.
- 7. Never dump used motor oil, paint or household chemicals on the ground or in a stormwater drain. Monitor containers for unintentional spillage.
- 8. Sweep instead of hosing driveways and sidewalks.
- 9. Reduce vehicle trips. Use public transportation, carpool, bike or walk more.
- 10. Scoop pet poop, bag it and put it in the trash.

Vancouver's tree canopy covers 18.6 percent of the city, helping to preserve watershed health and reduce runoff while improving the livability of our neighborhoods.

The Economic Benefits of Trees

Consumer Behavior

Recent research by Dr. Kathy Wolf at the University of Washington suggests that trees in business districts can significantly impact consumer shopping behavior. Wolf reports that shoppers were willing to travel farther, pay more for parking, and shop longer at business districts with more trees. Per Wolf, those shoppers also assume that goods or services sold in these areas are higher quality and that retailers are more trustworthy. Most importantly, shoppers in tree-lined business districts are reportedly willing to pay up to 11 percent more for goods and services. See www.naturewithin.info for research details.

Economic Development

Trees greatly improve quality of life for urban dwellers. Quality of life is often a significant determining factor when businesses are considering a move to a new location. A healthy, well-cared for urban forest signals that residents take pride in their community and that local government is effective at meeting the needs of its citizens. A healthy urban forest can help attract new businesses and jobs to Vancouver and increase property values (Nowak, et al.).

The Social Benefits of Trees

Research at the University of Michigan and at the University of Illinois at Urbana-Champaign demonstrates the profound impact that trees can have on psychological well-being and community.

Trees reduce stress and mental fatigue caused by urban living, create a cooler and more pleasant outdoor environment, encourage more walking and biking, are aesthetically beautiful, and provide many other benefits. Trees help make our community more livable.

For example, increasing greenery has been shown to: accelerate recovery from surgery and reduce reported pain; reduce crime, especially domestic violence; and help children diagnosed with ADHD concentrate better.

Visit www.naturewithin.info for more information about the social benefits of trees.



The Environmental Benefits of Trees

Urban trees provide significant environmental benefits that improve quality of life in the city. Trees are absolutely critical to protecting wildlife habitat and maintaining clean air and water. For example:

- 100 mature trees intercept approximately 250,000 gallons of rainwater each year. This reduces pollution from runoff, prevents erosion, and lowers the risk of flooding.
- Trees increase the rate of rainwater infiltration into the soil, which helps recharge groundwater resources and filter the water before it discharges into streams.
- Two trees can produce enough oxygen for one person.
- 100 mature trees annually sequester over 5 tons of carbon dioxide, a greenhouse gas linked to global warming.
- 100 mature trees absorb or intercept more than 500 pounds of airborne pollutants each year, including particulate matter, nitrogen and sulfur oxides and ground-level ozone.
- Trees, especially native species, provide food, shelter and other habitat for urban wildlife.
- Trees cool the city by up to 10°F by shading our homes and streets, breaking up urban "heat islands" and releasing water vapor into the air through their leaves.

Visit www.naturewithin.info for more information about the many benefits of trees.

Urban Forestry strongly values relationships with the community. We rely heavily on volunteers and partners to help us achieve our mission. Your business or organization can improve Vancouver's livability by becoming a partner.

Sponsors are needed to help fund tree planting projects, youth programs, Arbor Day, Old Apple Tree Festival, outreach materials and campaigns and other projects and programs. Donations are tax-deductible, and we are committed to giving our partners the recognition they deserve.

Working together we are making a difference. We encourage volunteer groups and potential planting locations on private property throughout Vancouver.







he opportunities to reap the many benefits of trees are numerous and significant to every citizen. Immediate action is required to reverse tree canopy decline and ensure a high quality of life for future generations in Vancouver. Widespread community tree planting and improved tree maintenance will help restore tree canopy throughout the city.

This Work Plan outlines through its defined goals the many ways that Vancouver Urban Forestry will achieve these goals through leadership, stewardship, integrity, collaboration, and accountability to promote sound urban forest management. However, there are multiple opportunities for every Vancouver resident to help make a difference. What can you do to restore tree canopy in Vancouver?

- Become a Neighborhood Tree Steward
- Attend a TreeTalk Workshop
- Volunteer at a community tree planting
- Organize a community tree planting in your neighborhood
- Plant trees on your property and remove English ivy and other invasive species
- Educate yourself about proper tree care
- Publish tree-related articles in your neighborhood newsletter
- Hire an arborist certified by the International Society of Arboriculture for major pruning and tree care needs
- Never top a tree
- Share your tree knowledge with friends and family

Learn more about Urban Forestry and how to get involved by calling 360-487-8308 or find us online at www.cityofvancouver.us/urbanforestry







Works Cited

Wolf, Kathleen. "Livable Cities." 2016. depts.washington.edu/hhwb/.

"Soak Up the Rain: Trees Help Reduce Runoff." EPA, Environmental Protection Agency, 30 Oct. 2018, www.epa.gov/soakuptherain/soak-rain-trees-help-reduce-runoff.

Nowak, David J., et al. "Environmental and Economic Benefits of Preserving Forests within Urban

Areas: Air and Water Quality. Chapter 4." Nez Perce National Historic Trail - History &

Culture, USDA Forest Service, Intermountain Region, Forest Health Protection, Boise Field

Office, 1 Jan. 1970, www.fs.usda.gov/treesearch/pubs/19529.

"Heat Island Effect." EPA, Environmental Protection Agency, 10 Dec. 2018, www.epa.gov/heat-islands.

"Trees in the City: Valuing Street Trees in Portland, Oregon." NeuroImage, Academic Press, 29

Aug. 2009, www.sciencedirect.com/science/article/pii/S0169204609001674.

