

# Connecting Canopies

## Portland-Vancouver Regional Urban Tree Policy and Program Report

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# Executive Summary

Authority and resources for urban tree policies and programs in the Portland-Vancouver metropolitan region is delegated to local jurisdictions: cities, and counties for unincorporated urban areas. There are over 40 local jurisdictions within the bi-state Portland-Vancouver metropolitan region and each has a different mix of policies and programs with widely varying levels of urban tree protections, staff, investment, and planning. Overlaid on this complex mix of local authorities, there are differing state patterns of policy and investment: Washington State Department of Natural Resources has more resources and support for local urban tree conservation initiatives as compared to Oregon Department of Forestry.

As part of the Connecting Canopies regional urban forestry collaborative, the Urban Greenspaces Institute developed a summary of local jurisdiction urban tree policies and programs for the Portland-Vancouver metropolitan region. In parallel, The Nature Conservancy is developing high-resolution canopy cover and change analyses. We are actively exploring potential linkages between patterns of urban tree canopy distribution and change, with the array of local urban tree policies and programs. Key questions are:

- What set of policies, programs, and investments support expansion of urban tree canopy? What array of things diminish tree canopy?
- What combination of tree regulations, incentives, investment, and partnerships are needed to address urban tree declines, and canopy cover disparities between neighborhoods and communities?
- How can community members and governments best work together to care for urban trees and expand urban tree canopy in a changing climate?

No single factor or array of policies, programs, or investments has been identified yet that is associated with tree canopy expansion or decline within the Portland-Vancouver metropolitan region. Trees are long-lived and there has been some evolution of tree policies and programs over the last 20 years. However, certain informative patterns are emerging from our ongoing review and analysis:

1. **Approximately two-thirds of the region's urban populations live in communities with a comprehensive set of tree policies and programs**, which address trees in all/most settings. These communities generally do more with urban trees whether they are located along streets, in private yards, or in public parks/greenspaces, and they tend to regulate trees in all or most zoning designations including residential, mixed use, commercial, and industrial land uses. These jurisdictions have more investment in urban trees, better planning for trees (e.g. tree canopy targets), incentives or cost-share programs for tree planting, stronger tree removal regulations, and/or mitigation.
2. **Approximately one-third of the region's population lives in communities where there is partial, incomplete, or no policies or programs for urban trees.** In these communities some urban trees - like those in private yards or industrial zones - are not protected and/or no investment occurs there. Some of these jurisdictions lack urban tree protections and programs altogether, and others may have weak regulations, little or no investment in trees, and/or no canopy targets. Unincorporated Washington, Clark, and

Clackamas counties are the most populous communities within the region with no meaningful urban tree protections or programs. Over 500,000 people combined live in these communities (one-half million, or one-quarter of the combined urban populations within Multnomah, Washington, and Clackamas counties in Oregon, plus Clark County in Washington).

3. **In general, well-treed communities have more resources and policies for urban trees, and active partnerships between the government and volunteer community tree stewards. Those with fewer policies and resources for urban trees have little/no active partnerships.** There are also neighborhood-level disparities within jurisdictions that parallel these regional disparities. Most jurisdictions with urban tree programs have historically relied on volunteer tree planting and care, which may exacerbate disparities in tree cover over time if there is less investment in trees in settings with low levels of volunteer engagement.
4. **We compared our results with two prior assessments of regional urban tree policies and programs in 2000 and 2010 and found some progress in urban tree conservation over time. We also determined that there is no ongoing tracking of local tree policy, programs or investment by any agency or nonprofit.** Certain cities with active urban tree programs, can apply and be recognized as a 'Tree City USA' community, but this is a voluntary opt-in system. Most communities lack 'Tree City USA' status, and the details of what Tree City USA jurisdictions are doing or not doing around urban trees is not transparent. Some urban tree policies and program information is available online, but most is difficult to access or understand. Patterns of investment in trees by local jurisdictions are particularly difficult to access and ascertain.
5. **Our investigation reveals gaps in urban tree protection and investment, but also highlights promising local examples of progress** in communities like Milwaukie, Wilsonville, Forest Grove, Gresham, Vancouver, and Portland where there have been recently updated tree codes, new urban forest management plans, and expanding tree planting and care programs. There are now many examples of smaller jurisdictions developing more robust urban tree policy and programs that can serve as models for others to follow.

# Acknowledgments

This report was made possible by a community partnership called [Connecting Canopies](#). Connecting Canopies is spearheaded by the Blueprint Foundation, The Intertwine Alliance, The Nature Conservancy of Oregon (TNC), and formerly the Urban Greenspaces Institute. Financial support was provided through the U.S. Forest Service award ORFO-091922 to TNC, an Oregon Health Authority grant to the Blueprint Foundation, as well as Bullitt Foundation and Jubitz Family Foundation grants to the Urban Greenspaces Institute.

The bulk of this report was developed by the Urban Greenspaces Institute before Ted Labbe and Theresa Huang left the organization in June 2023, and coordination of the Connecting Canopies initiative transitioned over to The Intertwine Alliance.

Individuals who provided feedback on early drafts include: Derron Coles, Greg Wolley, Sergio Lopez, Shonene Scott, Ryan Haugo, Bruce Nelson, Noelle Studer-Spevak, Natalie Rodgers, Tina Osterink-Nunez, Yashar Vasef, Rudy Roquemore, and Axcelle Campana. Special thanks go to Shonene Scott with TNC for help with Figure 12. Numerous staff from area jurisdictions provided information for this report. All errors and omissions are the responsibility of the primary author, Ted Labbe. Please direct any comments or corrections to [ted.labbe@gmail.com](mailto:ted.labbe@gmail.com).

## Introduction and Background

Urban trees are crucial to climate change adaptation and mitigation. Trees reduce pollution, cool air temperatures, infiltrate runoff, create habitat, and boost mental and physical health for city dwellers. Urban trees face an array of threats and competition for limited space in cities. Without sufficient planning and a commitment to their conservation, trees and canopy cover may be degraded or lost as cities grow and redevelop.

Despite their significance, the general public may find it difficult to learn how urban trees are managed in our cities. In the Pacific Northwest and across the USA, urban tree management is delegated to local jurisdictions: city and county governments. State forestry agencies may offer support, but the policies, programs and levels of investment in urban trees are left to individual local cities and counties.

As part of the Connecting Canopies regional urban forestry collaborative, the Urban Greenspaces Institute developed a summary of local jurisdiction urban tree policies and programs for the Portland-Vancouver metropolitan region. In parallel, The Nature Conservancy is developing high-resolution canopy cover and change analyses for the region. When completed, these two efforts will be linked to explore patterns and relationships between urban canopy cover and policies/programs.

To ascertain levels of protection, management, stewardship, investment, and community partnerships for urban trees, we conducted a review of 42 local government policies and

programs in the bi-state Portland-Vancouver metropolitan region. We studied city and county codes, reviewed websites and available plans, conducted interviews, compared and contrasted jurisdictions, and summarized findings in tables and figures. This report distills our learning and makes it available to others, to improve and refine urban tree management over time.

Two prior assessments of urban tree policies and programs within the Portland-Vancouver region were conducted in 2000 and 2010. We provide a high-level comparison of our findings with these prior assessments to understand how urban tree policies have changed over the past 20 years.

## *Limitations*

This policy and program assessment focuses on urban trees, along streets, in parks or other public spaces, and in private yards. It does not evaluate community-level Goal 5/Significant Natural Resources programs in Oregon, or equivalent Critical Areas programs in Washington. These local programs address protection of sensitive lands like streams, wetlands, floodplains, riparian areas, and certain imperiled upland habitats like oak and prairie. While these Goal 5 and Critical Areas policies and programs are also important for climate adaptation and mitigation, they are beyond the scope of this review.

A chief constraint on this assessment is that it is presently limited to what can be documented from reviews of codes, websites, and plans; or through interviews with city/county staff. Information on urban tree policies and programs for certain jurisdictions - especially the smallest ones - is scant and difficult to access. Moreover, this review focuses on what local jurisdictions report that they do or plan to accomplish for urban trees, not on what they actually do or not do.

## *Language*

Urban forestry is defined as the planting, maintenance, care and protection of tree populations in urban settings. 'Urban forestry' is a term familiar to government staff, and is frequently used to describe programs and systems that manage urban trees. Although it may be beneficial for community members to visualize the 'urban forest', in this assessment we refer to urban tree policy and programs since at least some community members may be less familiar with technical terms like 'urban forestry.'

# Methods

Here we provide a brief overview of the methods and approach. A more detailed documentation of methods is provided in [Appendix A](#).

## *Geographic scope*

The focal geography of this urban tree policy and program assessment is the Portland-Vancouver metropolitan region and surrounding communities, lying within '[The Intertwine](#)'

region. Within this region, we assessed urban tree policies and programs for 42 jurisdictions, including most incorporated cities within the Multnomah, Washington, Clackamas, and Clark counties, unincorporated urban areas (governed by counties), and cities with populations greater than 4,000 in outlying areas beyond the urban core, including portions of adjacent Columbia, Yamhill, and Cowlitz counties. See Table 1 for a list of the evaluated jurisdictions, and their 2020 census populations.

The jurisdictions include large cities (Portland, Vancouver, Gresham, Hillsboro), incorporated cities within the Metro urban core with populations as small as 500 or more (e.g. Rivergrove and Maywood Park), unincorporated urban areas of Clark, Clackamas, Multnomah, and Washington counties; as well as small cities in neighboring Yamhill, Columbia, and Cowlitz counties with populations of 4,000 or more. The assessment includes communities on the periphery of the Intertwine region including: Canby, Estacada, Molalla, Newberg, Sandy, Scappoose, St Helens, and Woodburn (in northwest Oregon), as well as Battle Ground, Ridgefield, and Woodland (in southwest Washington).

**Table 1. Portland-Vancouver metropolitan region jurisdictions evaluated for their urban tree policies and programs.**

<b>Jurisdiction</b>	<b>2020 Population</b>	<b>Jurisdiction</b>	<b>2020 Population</b>
Portland	635,067	Sherwood	20,030
Urban Washington Co	239,100	Canby	18,074
Urb Clark Co	195,579	Troutdale	16,926
Vancouver	194,512	Washougal	15,686
Urban Clackamas Co	118,311	St Helens	14,431
Gresham	111,621	Cornelius	14,369
Hillsboro	107,299	Gladstone	14,251
Beaverton	97,053	Sandy	12,953
Tigard	55,762	Molalla	11,951
Lake Oswego	40,108	Fairview	10,768
Oregon City	37,327	Ridgefield	10,171
Tualatin	27,797	Scappoose	8,230
West Linn	27,371	Woodland	6,523
Wilsonville	27,290	King City	5,308
Forest Grove	26,931	Wood Village	5,040
Woodburn	26,784	Estacada	4,775
Camas	26,597	Urban Multnomah Co	2,000
Newberg	26,456	Durham	1,887
Happy Valley	25,777	Maywood Park	809
Battle Ground	21,628	Johnson City	546
Milwaukie	21,375	Rivergrove	539



## *General approach*

From a review of prior assessments and select jurisdictions, we understood that local urban tree policies, programs and investment vary widely across the region. We developed a framework and set of common evaluation measures and criteria that focused on the strength and comprehensiveness of tree codes, mitigation, goals, plans, inventories, staffing, level of investment, funding sources, and community partnerships.

There were three phases to our assessment. In phase one, we conducted an exhaustive review of online codes, program descriptions, and plans. In phase two, we reached out to local government representatives with questions to clarify, validate, and expand our phase one research. In phase three, we developed a scoring rubric and scored communities on the comprehensiveness and strength of their tree codes, as well as their tree management programs. In the future, we may expand the assessment and/or incorporate expert/community-member evaluations.

For most evaluation criteria, each jurisdiction was scored for the presence or absence of certain policies or program elements. For certain criteria (e.g. regulated tree size, typical urban forestry annual budget), we recorded numeric values. For each measure and jurisdiction, we recorded our assessment in a spreadsheet, with detailed notes on the reasoning and justification for individual scores. Access to these regional urban tree policy and program scores with the notes and justifications for individual jurisdictions is provided via an open access Google Sheet [here](#).

To summarize the findings, we developed graphics and statistics comparing and contrasting different policy and management regimes. We also developed overall scores for individual jurisdictions' urban tree policies, and separately, their urban tree programs. We summarize results by the percentage of the region's urban population living within jurisdictions with differing urban tree policies and programs. See Appendix A for a more detailed treatment of our methods.

## Results

### *Urban tree policies and programs at-a-glance*

- Approximately two-thirds of the region's population live in communities with comprehensive tree codes that protect street, park/public, and private yard trees.<sup>1</sup> Of the 42 jurisdictions, nine - with over one-quarter of the region's population - have no tree codes, including:
  - Unincorporated Clackamas, Clark, and Washington counties,

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<sup>1</sup> Street trees are those along right-of-ways that are typically the responsibility of the adjacent property owner to plant and maintain but owned by the jurisdiction. Park/public trees are those located in parks or on other public lands. Private yard trees are those on private property, and are frequently the most lightly regulated trees but most numerous of trees in an urban setting.

- The cities of Cornelius, Estacada, Gladstone, Johnson City, Washougal, and Wood Village.
- Where they are applied, tree codes may be more robust on residential lands, along streets, or in parks - depending on the jurisdiction. Over 60% of the regional population live in a community where tree removal is not regulated or inconsistently regulated (with permits) during development. Nearly one-half of urban residents live in a community where tree removal is unregulated when no new development is proposed.
- A majority of communities use six inches diameter at breast height as a threshold for triggering tree regulations (versus a larger tree size threshold, which leaves more trees at risk). A majority of the region's residents (69%) live in communities that require protection of trees remaining during development with silt fences or setbacks. Less than half of the region's residents live in communities that require mitigation for tree removal.
- Municipal-led management of street trees is very limited in extent, occurring in only 14 communities covering a fraction of their overall street tree network. Just over one-half of the region's residents live in communities with a certified arborist on staff, and nearly 70% have an urban tree committee or board.
- Only seven communities representing 21% of the region's population have an up-to-date urban forest management plan<sup>2</sup>, though a majority of communities (83.5%) have policy goals for urban trees. Only 44% of the region's residents live in a community with targets for urban tree canopy.
- On-the-ground tree inventories are incomplete in most communities, with the exception of Portland, Wilsonville, and Forest Grove. Eight communities representing almost half of the region's population (49.8%) have urban tree canopy assessments.
- A comparison of our findings with two prior assessments from 2000 and 2010 suggests that there has been modest progress in the development of urban tree policy and programs over the past 24 years. More jurisdictions have tree codes that are stronger and more protective of trees, as compared to prior periods. And more jurisdictions have urban forest management plans, an urban tree committee or board, and/or urban tree canopy targets to guide and facilitate urban tree planning and management.

### *Applicability of tree codes*

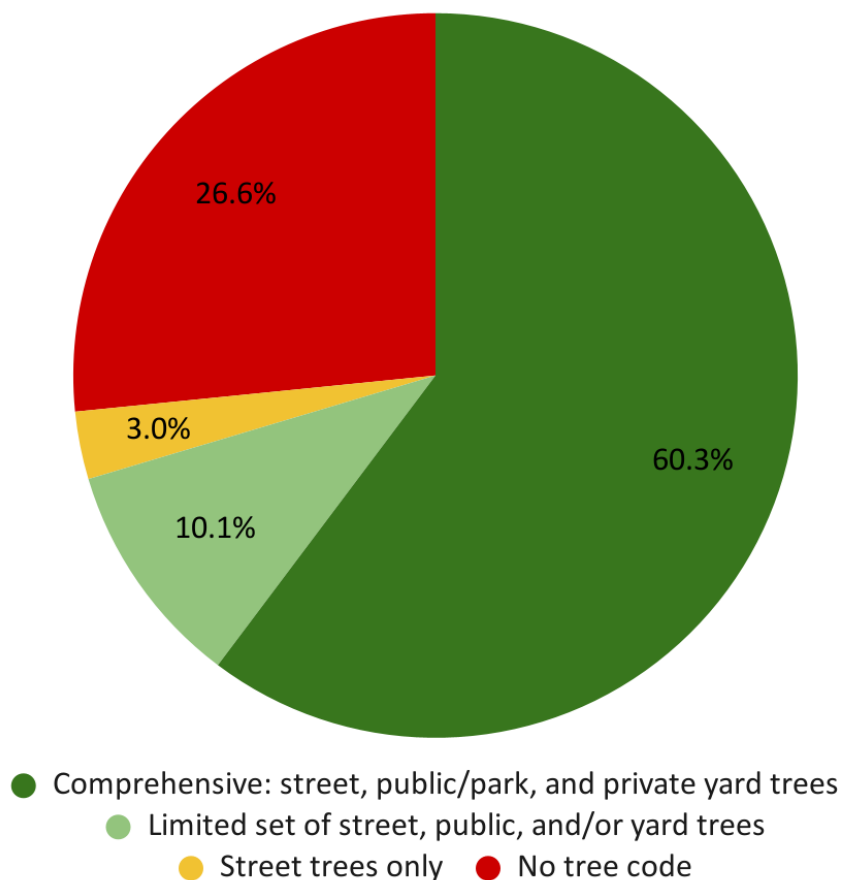
Of the 42 jurisdictions, nine have no tree code, four apply their tree codes to street trees only, nine have codes that apply to limited set of street, park/public, and private yard trees, and 20 have codes that are comprehensive, applying to all or most street, park/public, and private yard trees. The most populous urban jurisdictions without tree codes are unincorporated urban Washington, Clark, and Clackamas counties, which together represent over one quarter of the region's urban population. Nearly two thirds of the region's population is in communities with comprehensive tree codes, governing street, park/public, and private yard trees (Figure 1).

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<sup>2</sup> An urban forest management plan is a roadmap to create a shared vision for the future of urban trees and tree canopy in a city. It sets goals and priorities to guide the maintenance and improvement of the urban forest.

Protecting trees in all urban settings is important to maintaining and growing the urban forest canopy. This includes trees along streets, in parks or other public lands, and in private yards.

**Figure 1. Fraction of the region's urban population living in jurisdictions with different urban tree code regulations.**



### *Land use setting*

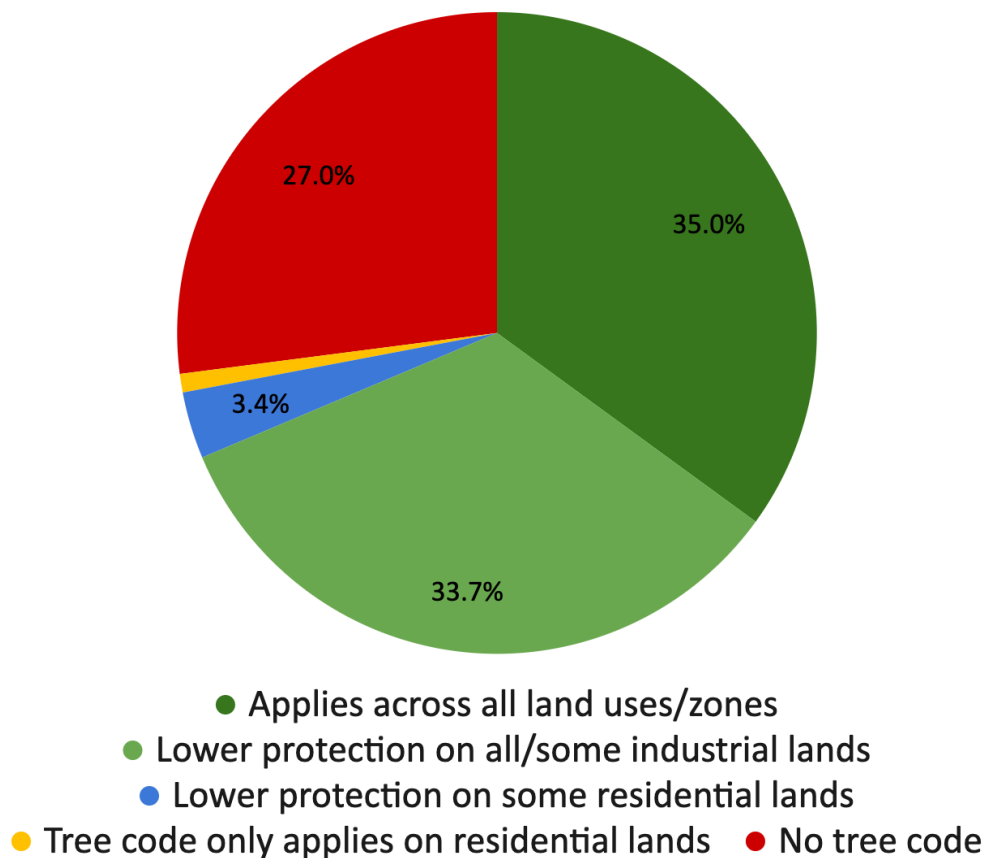
Tree codes are not universally applied to all land use settings or zones within a jurisdiction. Nearly all of the communities with tree codes apply them to single-family residential zones, but fewer apply them across all of their land uses and zoning designations. Some communities exempt or have lower tree protection in industrial zones, and a few exempt or have lower tree protection in certain residential zones or below a minimum lot size (Figure 2).

Approximately 68% of the region's urban population lives in jurisdictions that have urban tree protection in single-family residential settings, and 72.1% live where urban tree codes apply in multi-family residential and mixed use zones. A few jurisdictions (Portland, Hillsboro, and Camas) apply lower standards for tree conservation on some or all of their industrial lands. Tigard, Sandy, and Scappoose apply lower standards of tree conservation on some or all of

their residential lands. Milwaukie only applies their tree code on residential lands, not in commercial or industrial zones.

Tree protection in mixed use, commercial, and industrial land use settings matters because these are where urban heat islands and vulnerable populations are found in close proximity. Allowances for lower or no tree protection on smaller residential lots or in commercial areas may jeopardize tree canopy where it is most needed in cities.

**Figure 2. Fraction of the regional population living in jurisdictions with different tree code land use/zone applicability**



### Tree removal permits

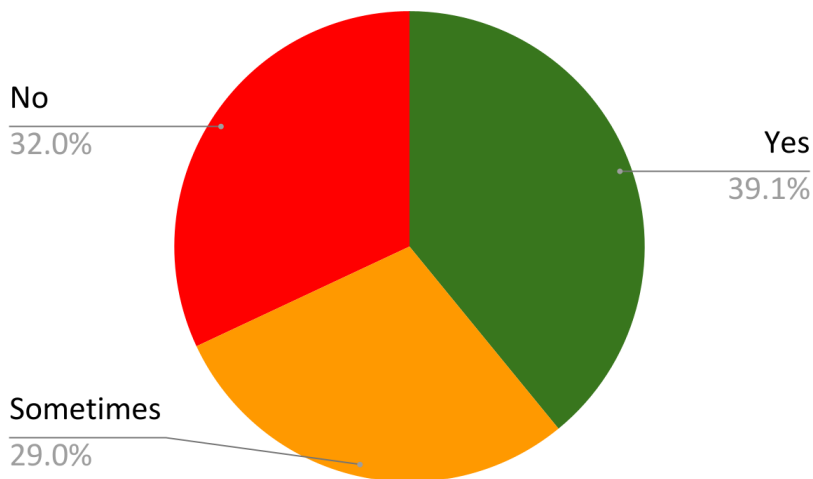
Permits to remove trees are frequently required by jurisdictions, but some jurisdictions may implement tree removal permits in more limited circumstances. A permit system for urban tree removal is one check on tree removal and may be applied in both development and/or non-development situations: when a developer/property owner applies for a development permit versus situations where no development is proposed.

Twenty-three communities require tree removal permits in all development situations, and two others require them in certain circumstances. Eighteen communities require tree removal

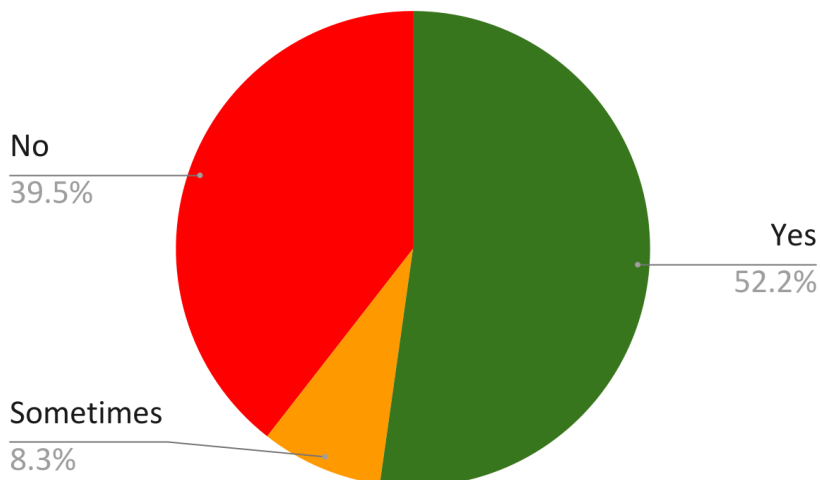
permits in non-development situations, and four others may require them in certain circumstances. Overall, 39.1% of the region's urban residents live in communities where tree removal permits are required during development, and 29% live where they are sometimes required. For tree removal in non-development situations, 53% of the region's residents live in communities with required tree removal permits, and 8.3% live where they are sometimes required (Figure 3).

**Figure 3. Fraction of the regional population living in jurisdictions where a tree removal permit is required, not required, or required in certain circumstances.**

**A. When development is proposed**



**B. In non-development situations**



Several communities requiring tree removal permits focus on development situations and may exempt all/certain tree removal in non-development situations. The largest city - Portland - exempts development-related tree removal on small sites (<5,000 square feet), but requires

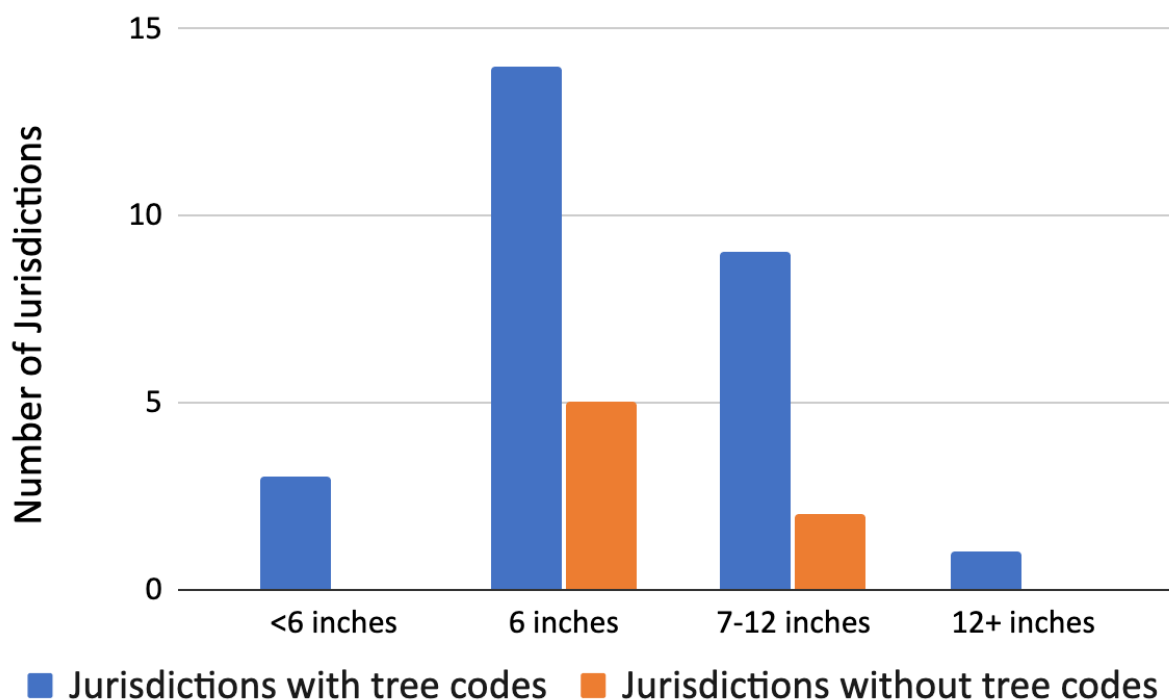
permits on these small sites in non-development situations. As a result of this Portland nuance, a higher percentage of the region's urban residents live in settings where tree removal permits are required in non-development situations (52.2%) as compared to when development is proposed (39.1%).

Tree removal without permits occurs across the region, including places where permits are required but not fully administered due to limitations related to staffing or other resources. Requiring tree removal permits does not guarantee tree protection, but it is one check or safeguard on the indiscriminate removal of urban trees.

### *Regulated tree size*

Regulated tree size varies, but the majority of jurisdictions with tree codes (14) use six inches diameter at breast height (DBH) as the threshold size for determining which trees to regulate (Figure 4). A few communities protect smaller trees, nine use size thresholds in the 7-12 inch DBH range (Table 2), and seven communities have additional protections and/or mitigation requirements for heritage or large trees with diameter thresholds greater than 10-36" DBH.

**Figure 4. Regulated tree size thresholds within the Portland-Vancouver metropolitan region.**



Trees equal to or larger than these size thresholds are regulated by jurisdictions, whereas smaller trees may not be regulated. In certain cases, jurisdictions lacking tree codes may specify a minimum size of tree elsewhere in their code (e.g. site plan submission requirements,

or landscaping code). For the latter group, six inches DBH was also the most common tree size referenced.

Tree codes that use regulatory tree size thresholds larger than six inches DBH put significantly more trees at risk of removal. One simple reform to enhance protections for urban trees is to lower the regulated tree size threshold to six inches DBH for all or most trees.

**Table 2. Jurisdictions with tree codes that use regulated tree size thresholds greater than six inches diameter at breast height (DBH).**

<u>Jurisdiction</u>	<u>Regulated tree size threshold (inches DBH)</u>	<u>Details</u>
Beaverton	10	
Camas	8 / 12	8" DBH for conifer, and 12" DBH for deciduous trees
Gresham	8	
Hillsboro	8	8" DBH for deciduous, and 30 ft tall for conifer trees
Maywood Park	7 / 12	7" DBH for conifer, 12" for broadleaf trees
Rivergrove	12	12" DBH for most trees, 6" for Oregon white oak, madrone, yew, and dogwood
Sandy	11	
Sherwood	5 / 6 / 10 / 20	5-10" DBH for street tree removal; 6" DBH for tree inventories; 10" DBH for deciduous and 20" DBH for coniferous trees when regulating tree removal on residential lands in non-development situations
Tualatin	8	
West Linn	12	12" DBH for most trees, 6" for Oregon white oak, madrone, yew, and dogwood
Woodburn	24	

### *Tree code exemptions*

All jurisdictions with tree codes have exemptions that allow for tree removal under certain circumstances. Most jurisdictions have tree codes that allow for emergency tree removal, pruning or removal along utility easements, and for the removal of dead, dying, or diseased trees. Jurisdictions with more protective regulations (like Portland and Lake Oswego) may require an arborist report before allowing for the removal of diseased trees.

Other common and permissive tree code exemptions allow for the removal of several (2-6) trees per year on developed residential lots, as in Beaverton, Gresham, Tualatin, Sherwood, and King City. Troutdale exempts tree cutting and removal on all developed lots. Forest Grove allows for the removal of up to 20% of a site's tree canopy in one year, whereas Sherwood limits tree removal to 10% of the trees per site per year.

Certain jurisdictions waive all or portions of their tree code for small sites: Portland exempts lots less than 5,000 square feet, Beaverton and Camas exempt lots less than one-half acre, whereas Vancouver and Sandy exempt lots less than one acre in size. A few cities exempt removal of trees within ten feet of building foundations (Portland, Tualatin) or where building coverage exceeds some limit (like 85%, as in Portland).

Other tree code exemptions covered elsewhere in this report include: exempting all or certain industrial areas (Portland, Camas, Milwaukie), and tree removal that is not associated with a development permit (Hillsboro, Oregon City, Camas, Newberg, Battle Ground, Canby, St Helens, Sandy, Fairview and Scappoose).

Tree code exemptions are varied and common across the region, jeopardizing trees and tree canopy. While allowances for tree removal in certain emergency situations is important, the piecemeal removal of exempt trees in non-emergency situations contributes to the cumulative loss of urban forest canopy.

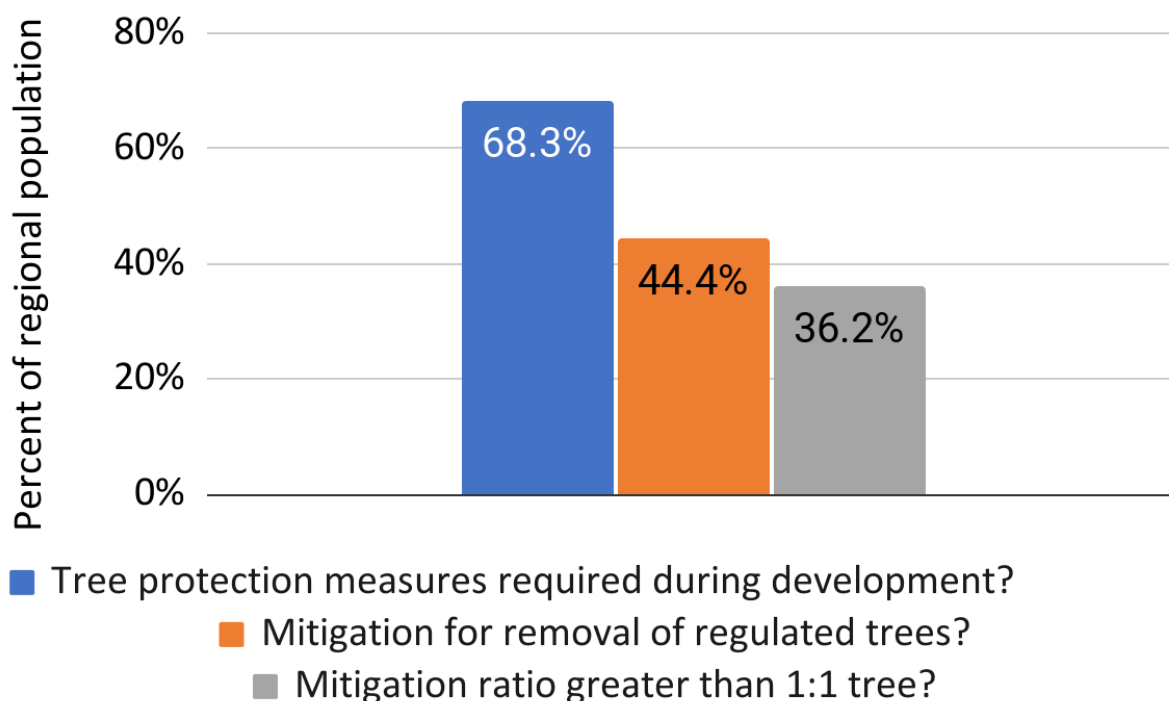
### *Tree protection and mitigation during development*

During development, certain communities impose tree protection requirements like silt fences around tree drip lines, setbacks for excavation, and other practices. Twenty-three municipalities have these requirements, representing 68.3% of the regional urban population. A few additional communities may require tree protection at the discretion of staff, or in limited settings.

Only 15 communities - representing 44.4% of the region's population - require mitigation for tree removal, and just 5 jurisdictions (36.2% of the regional population) require tree removal mitigation ratios of greater than 1 to 1 (1:1, or 1 tree planted for each removed). Mitigation for tree removal is important to stem the inevitable loss of trees from development in cities. Imposing a requirement to plant multiple trees to replace a single (typically larger) urban tree is one approach to compensate for the loss of a large tree canopy (Figure 5).



**Figure 5. Fraction of the region's urban population living in communities that require tree protection during construction, mitigate for removal of regulated trees, and mitigate tree removal at greater than a 1:1 ratio.**



### *Street tree management*

Street trees represent an important opportunity for community partnerships. Many jurisdictions initiate their tree programs with a focus on street trees, and nearly all tree codes within the region have provisions for street tree conservation. Thirty-five of 42 urban communities within the region have street tree planting standards, covering 98.8% of the urban population. Communities in the region lacking street tree planting standards are: Gladstone, Wood Village, Durham, Maywood Park, Johnson City, and Rivergrove (in Oregon), as well as Woodland, Washington.

Fewer jurisdictions have programs to actively manage street trees - typically only for a limited portion of their street network - leaving responsibility for the care for most street trees with adjacent property owners. Fourteen of the 42 evaluated jurisdictions have limited or partial street tree management, covering just downtown districts or along certain arterial streets. Approximately 61.3% of the regional population live in communities with limited or partial management of street trees, but the fraction of the region's trees benefiting from municipal tree care is tiny. The vast majority of urban trees within the region have no active management or care by jurisdictions.

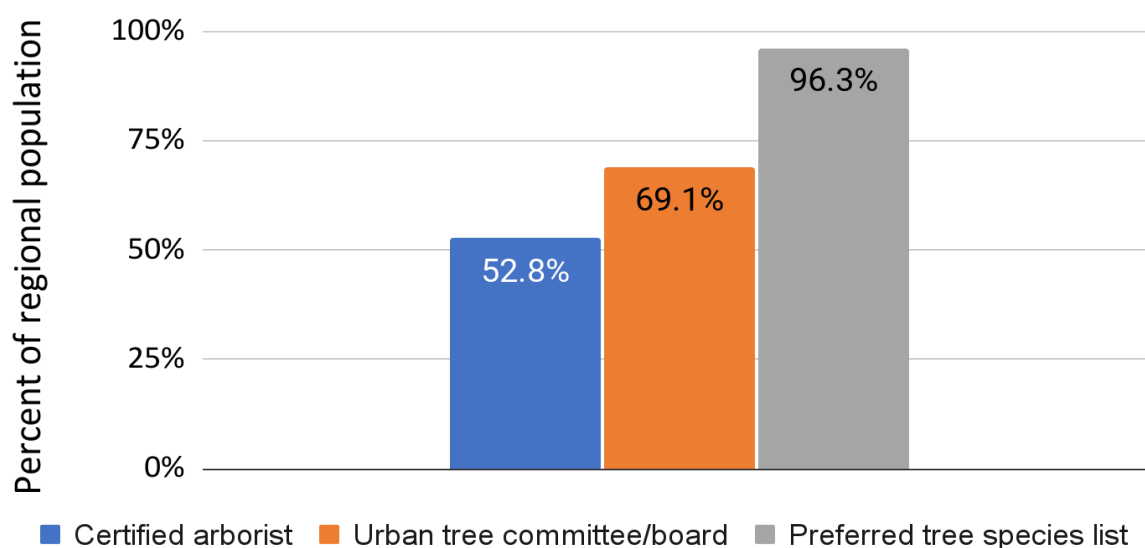
In 2023, the City of Vancouver, Washington began a new street tree management program with ambitions to manage the pruning and maintenance of 100% of its street trees on a ten-year cycle, aligned with the City's pavement management treatment schedule. In 2024, the City of Portland announced a pilot for City-led management of street trees in select neighborhoods of east Portland. At the time of this report, these programs were brand new and not yet fully operational, but they represent the first such comprehensive municipal-led street tree management program in the Portland-Vancouver region.

### *Staff arborists, tree committees/boards, and preferred tree species lists*

Other measures of the commitment by local jurisdictions towards urban tree management include whether they have certified arborists on staff, an urban tree committee or board, and a preferred tree species list. Just over one half (52.8%) of the region's population is in a community with a certified arborist on staff, and a strong majority have an urban tree committee or board (69.1%). At least 96.3% of the region's population are within communities that maintain preferred tree species lists.

For the 18 jurisdictions that we conducted interviews with, many of the most developed urban forestry programs had staff arborists including Portland, Vancouver, Beaverton, Lake Oswego, Wilsonville, Forest Grove, and Milwaukie. Other cities like Gresham, Hillsboro, Oregon City, Camas, Newberg, Battle Ground, and smaller cities lacked staff arborists.

**Figure 6. Fraction of the region's urban population living in jurisdictions with at least one certified arborist, with a tree committee or board, and with a preferred tree species list.**



### *Urban forest management plans, tree policy goals, and canopy targets*

Only 20.9% of the region's population live in one of the seven communities with a current urban forest management plan (UFMP). This includes: Vancouver, Gresham, Tigard, Lake Oswego,

Wilsonville, Forest Grove, and Milwaukie. Another 30.2% live in three communities with expired UFMPs or with a plan that partially fills the place of an UFMP, including Portland, Tualatin, and West Linn (Figure 7).

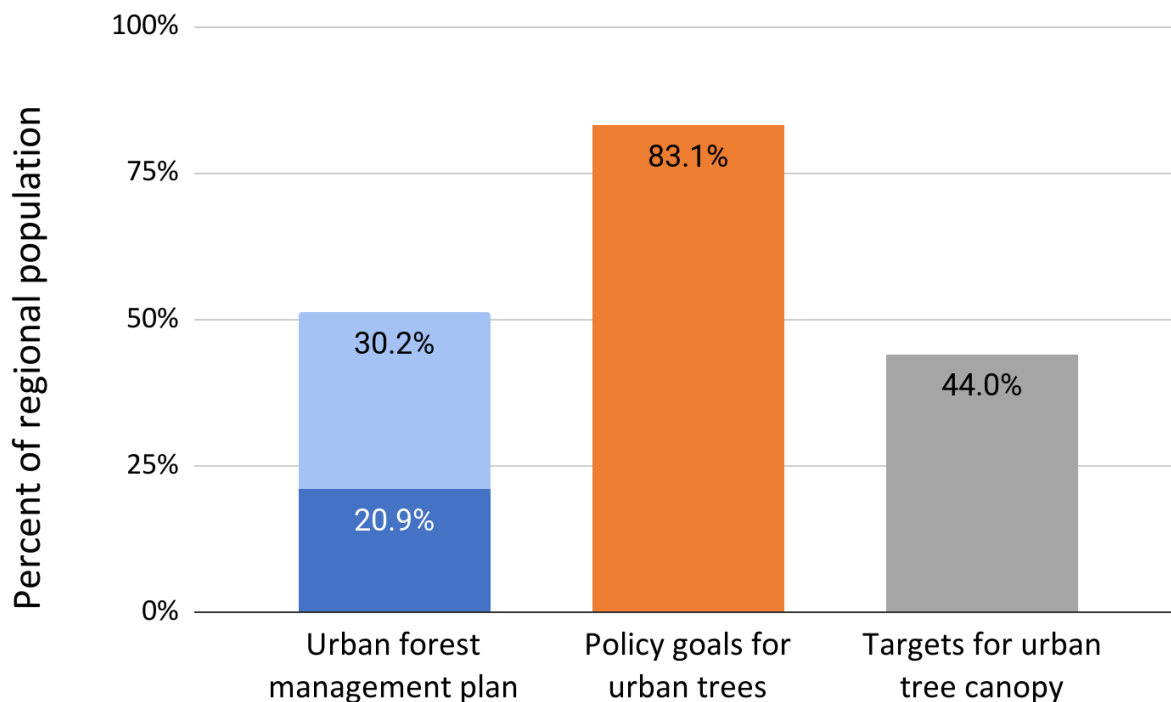
Portland is currently updating their UFMP. For West Linn, the Sustainable West Linn strategic plan sets an urban tree canopy goal for the City, but it does not have a traditional UFMP with program goals and measures. Altogether, approximately one-half of the region's urban population (51.1%) live in communities with either current or expired urban forest management plans. Though many communities lack UFMPs, most within the region have policy goals related to urban trees in a comprehensive plan, resolution or ordinance, covering 83.1% of the regional population.

Fewer communities have targets for urban tree canopy to guide their urban forest planning and program work. Forty-four percent of the region's urban population live in communities that have targets for urban tree canopy. Conversely, a bit more than one-half of the region's population (56%) live in communities that lack targets for urban tree canopy.

**Figure 7. Fraction of the region's urban population in jurisdictions with an urban forest management plan, with policy goals for urban trees, and with targets for urban tree canopy.**

Dark blue = Current urban forest management plan

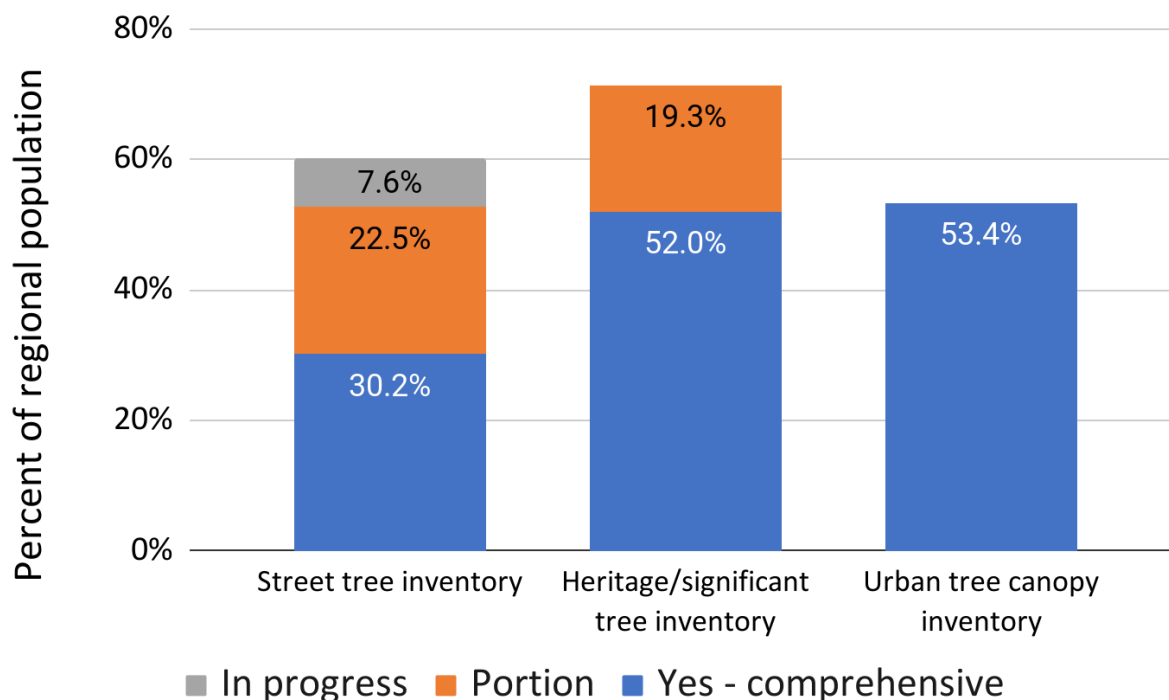
Light blue = Expired urban forest management plan, or a similar plan



## Tree inventories and canopy assessments

Local street, park and heritage tree inventories can help communities identify and value community trees, and adapt their management to promote their growth and retention. Thirteen communities within the region have inventories of at least a portion of their street trees, and 16 communities have inventories of heritage or significant trees. In communities with tree inventories, not all trees are typically inventoried. Most often the inventories focus on a sample of street trees, and/or only the largest and oldest of the cities' heritage or significant trees. Altogether, 52.7% of the region's population live in communities with a comprehensive or partial street tree inventories, and 71.3% are in communities with inventories of heritage or significant trees (Figure 8).

**Figure 8. Fraction of the region's population in jurisdictions with inventories of urban trees and tree canopy.**



Portland and Wilsonville are two communities in the region with comprehensive street and park tree inventories, which are using their inventories to actively guide their urban tree management. Forest Grove has a current tree inventory based on a statistical sample that is generalizable to the whole City, so was deemed complete. Hillsboro had a comprehensive tree inventory completed in 2006, which is now out of date. Communities including Vancouver, Gresham, Hillsboro, Beaverton, Tigard, Lake Oswego, Tualatin, and West Linn have partial inventories of street trees. An on-the-ground inventory of street and park trees can help guide communities in their tree planting, maintenance and care strategies.

A growing list of jurisdictions have urban tree canopy assessments, including Portland, Vancouver, Gresham, Hillsboro, Tigard, Lake Oswego, Wilsonville, Forest Grove, and Milwaukie. At present, 53.4% of the region's population live in communities with an urban tree canopy assessment. Understanding the current extent of tree canopy and its changes over time is key to mobilizing community action on urban tree conservation.

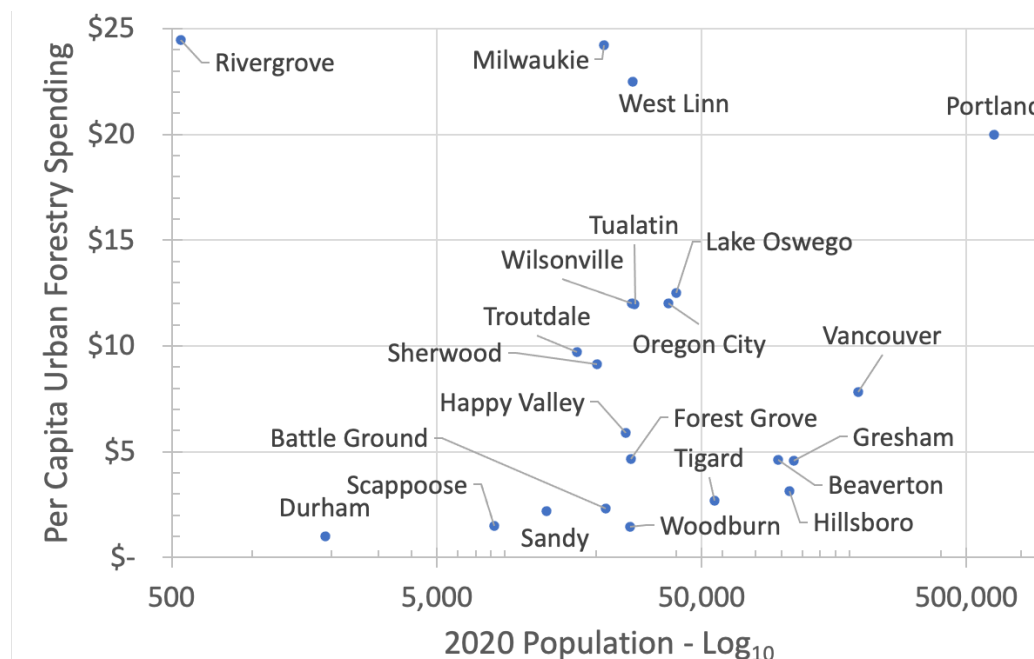
### *Interviews completed*

Under phase 2 we collected supplemental information on urban tree budgets and financing, staffing and work areas, as well as community partnerships and workforce development for 26 jurisdictions. For this phase, we gleaned information from interviews with staff from 18 jurisdictions during the period November 2022-June 2023, and available Tree City USA applications for 19 jurisdictions. Eight jurisdictions did not participate in the interviews but were included in the analyses that follow based on the information they submitted on their Tree City USA applications including: Tigard, Tualatin, Woodburn, West Linn, Happy Valley, Troutdale, Sandy, and Rivergrove.

### *Tree budgets and financing*

Reported spending on urban forestry - where available - ranged from \$1 to 1.50 per capita (Durham, Scappoose, Woodburn) up to \$20 to \$24.50 (Portland, West Linn, Milwaukie, Rivergrove), with most jurisdictions reporting in the \$4 to \$12.50 per capita range (Beaverton, Forest Grove, Gresham, Lake Oswego, Milwaukie, Oregon City, Vancouver, and Wilsonville; Figure 9).

**Figure 9. Per capita urban forestry program spending for select jurisdictions in the Portland-Vancouver metropolitan region.**



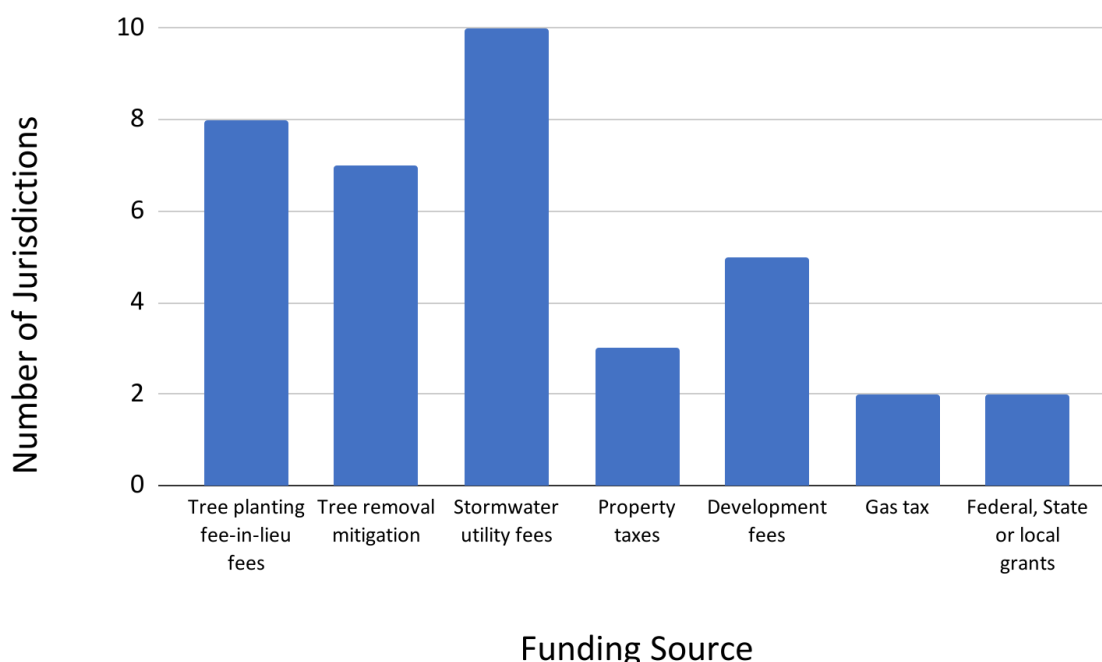
Urban forestry program spending areas were widely variable from one jurisdiction to another and did not show patterns among large versus small jurisdictions. Twenty-two jurisdictions provided spending area breakdowns. Of those, six indicated that less than 10% of their overall urban forestry budget went to program oversight and management, and 14 reported spending 10-50%.

Eight jurisdictions spent 10-20% of their budgets on tree planting and initial care, with another eight spending less than 10% and six spending 20% or more. Seven jurisdictions reported spending 10-20% of their urban forestry budget on tree maintenance, with six spending less and eight spending more. Eleven jurisdictions reported spending up to 10% of their urban forestry budget on tree removals, with two spending none and nine spending more. Few jurisdictions reported spending on leaf pickup, but seven indicated that they spent up to 10% of their overall urban forestry budget for this program area.

Tigard and Milwaukie were the only jurisdictions reporting more than 10% of their urban forestry spending under 'Other'. For Tigard no specifics regarding this Other category of spending was available. For Milwaukie, this spending went toward the annual Arbor Day celebration.

Among 17 cities who reported details on their income sources for urban forestry, the most common sources of income cited were: stormwater utility fees (10 jurisdictions), tree planting fee-in-lieu monies (8), tree removal mitigation (7), development fees (5), property taxes (3), and gas tax or federal/state/local grants (2 for each; Figure 10).

**Figure 10. Sources of funding for urban forestry for select jurisdictions in the Portland-Vancouver metropolitan region.**



Because urban tree spending and duties were frequently split between municipal departments and/or spending on trees was embedded in other budget line items, it was often difficult to

obtain total spending on urban forestry for a jurisdiction. Other themes from the interviews were: the lack of consistent and stable local funding for urban forestry programs, and the availability of state funding in Washington versus the lack of funding in Oregon for local governments implementing urban forestry programs.

### *Community partnerships and workforce development*

Most jurisdictions interviewed had community partnerships to conduct tree plantings, tree care, or other outreach activities with Friends of Trees, watershed councils, neighborhood associations, or other community-based organizations.

Only Portland, Vancouver, Gresham, and Beaverton had an equitable procurement policy and/or partnerships with Black, Indigenous, or People of Color (BIPOC)-led community organizations. Beaverton has an equitable procurement process with a goal of 15% City dollars spent under contracts with COBID-certified<sup>3</sup> firms but has no active partnerships with BIPOC-led organizations on trees at this time. Gresham has one partnership emphasizing minority community engagement in urban forestry in west Gresham (Green Gresham-Healthy Gresham).

Vancouver does not have an equitable procurement policy, but has worked with the Vancouver chapters of the National Association for the Advancement of Colored People (NAACP) and League of United Latin American Citizens (LULAC), and an urban BIPOC youth program in the past. The City of Portland put into place equitable construction contracting goals in 2012, and has made some progress towards these goals ([Pape and Friedman 2020](#)). However, the City lacks a comprehensive strategy in equitable contracting and hiring practices ([Schildt and Enelow, 2017](#)). Both Portland Parks and Recreation and BES have partnered with BIPOC-led community based organizations for urban tree planting, care, and education.

### *Overall urban tree policy and program scores*

We developed an overall score for each jurisdiction's urban tree policies and program by assigning points according to the presence or absence of various policies and program elements (see [Appendix Table A3](#) for a description of the scoring approach and [Table B4](#) for overall scores). For this scoring, we did not incorporate certain information from the interview phase because it was not available for all 42 jurisdictions.

Three groups are evident within a plot of urban tree policy scores versus urban tree management scores (Figure 11). A group of cities including Portland, Vancouver, Lake Oswego, West Linn, Wilsonville, Milwaukie, and Forest Grove have relatively high urban tree policy and program scores. A middle cluster - composed of Gresham, Hillsboro, Beaverton, Tigard, Oregon City, Camas, Woodburn, Newberg, Happy Valley, and smaller cities - have medium-to-high urban tree policy or management scores. A third group - composed of urban Clark, Washington,

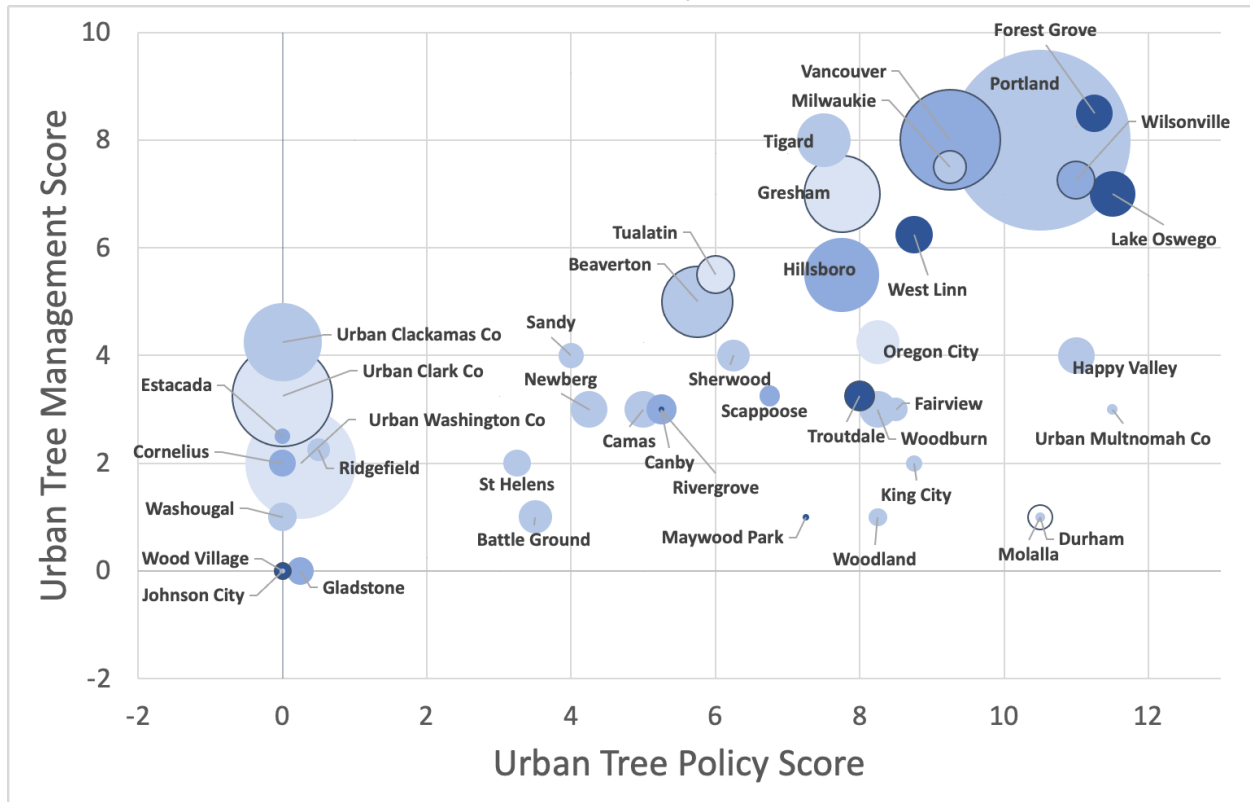
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<sup>3</sup> COBID stands for "Certification Of Business Inclusion and Diversity" and is administered by Business Oregon to recognize businesses that are owned and managed by minorities, women, and service-disabled veterans, as well as emerging small businesses.

and Clackamas counties and several small cities - have low scores for both measures indicating under-developed urban tree policies and management programs.

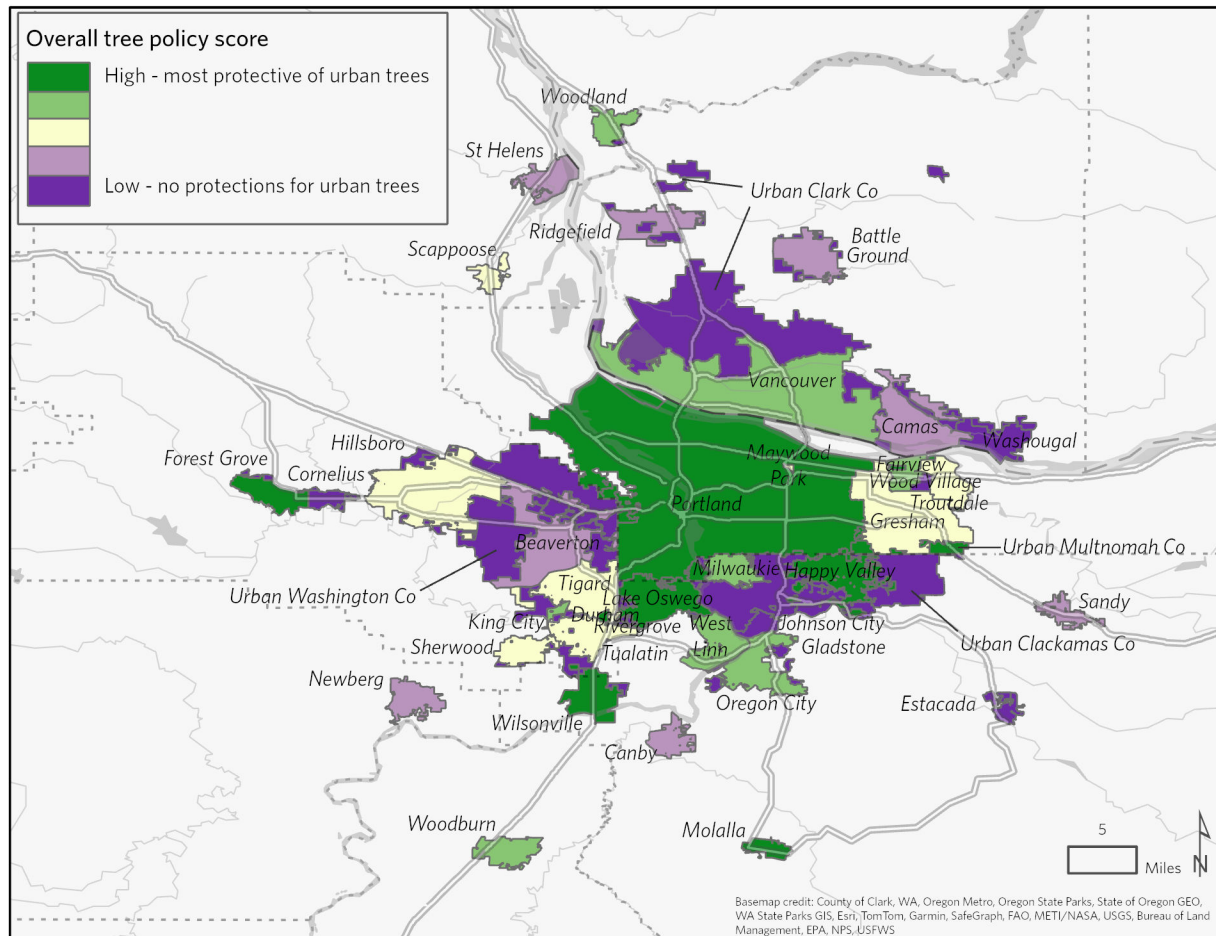
**Figure 11. Overall urban tree policy and program scores for the Portland-Vancouver metropolitan region.**

Bubble size corresponds to population size for each jurisdiction.





**Figure 12. Map of urban tree policy scores for Portland-Vancouver metropolitan region jurisdictions.**



### *Comparisons with previous regional urban tree assessments*

Two prior assessments of urban forestry programs from across the Portland metro region provide a snapshot of policy change over the past twenty years. In 2000, [PSU master's student Clint Wertz](#) completed an assessment of urban forestry programs within the region.<sup>4</sup> In 2010, Audubon Society of Portland and PSU Environmental Science and Management assessed [the state of Portland-Vancouver metro area urban forestry programs](#). Both of these previous assessments evaluated a different set of jurisdictions, and neither evaluated all 42 of the jurisdictions in this present investigation. However, general comparisons with their findings are helpful for understanding how urban tree policies and programs have evolved over the last 24 years (Table 3).

<sup>4</sup> The Wertz assessment of urban tree programs in 2000 was limited to select cities that responded to a survey. Beaverton, Oregon City, Vancouver, unincorporated urban county areas, and many smaller jurisdictions at the periphery of the region were not included.

Broad patterns of policy and program change are evident. Generally, more jurisdictions have tree codes that are stronger and more protective of trees, as compared to ten and twenty years ago. A majority of jurisdictions now regulate street, park/public, and private yard trees, where historically most tree regulations focused more narrowly on street trees. More communities now have urban forest management plans, an urban tree committee or board, and urban tree canopy targets to guide and facilitate urban tree planning and management.

**Table 3. Comparisons with prior urban tree policy and program assessments.**

Reported figures are the number and percentages of jurisdictions, not of the overall regional population with such policies or programs as reported elsewhere in this assessment.

Assessment Measure	Wertz 2000 26 jurisdictions evaluated		Audubon/PSU 2010 30 jurisdictions evaluated		UGI 2022 42 jurisdictions evaluated	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Has an urban tree code	18	69%	25	83%	32	76%
Requires permit for all/most private yard tree removal	11	42%	19	63%	22	60%
Has an urban forest management plan	4	15%	5	17%	10	24%
Has an established urban tree committee or board	10	38%	15	50%	18	43%
Has urban tree canopy targets	Not assessed	--	4	13%	8	19%

To enable direct comparisons, we evaluated the 26 jurisdictions assessed in 2000 and 2022 for four indicators: whether the jurisdiction had an urban tree code, whether tree removal permits were required in private yards, whether the jurisdiction had an urban forest management plan, and a tree committee or board. In 2000, 18 of the 26 (69%) evaluated jurisdictions had a tree code which rose to 23 of 26 (88%) in 2022. In 2000, 11 of 26 (42%) jurisdictions required permits for private yard tree removal, which rose to 12 of 26 (46%) in 2022. In 2000 only four jurisdictions (15%) had an urban forest management plan, rising to 7 (27%) in 2022. In 2000, only 10 (38%) had an urban tree committee or board, which rose to 16 (62%) in 2022.

## Discussion and Next Steps

Across the USA and Portland-Vancouver metropolitan region urban tree cover varies by land use, jurisdiction, and socio-demographics. Historical housing policy (e.g. red-lining) also drives differences observed in tree cover between neighborhoods (Hoffman, Shandas, and Pendleton 2020). For several years, local policymakers and residents have benefited from tools like the

[Trees and Health app](#) to understand fine-scale variations in tree cover. Tree cover is lower in where low-income and people of color predominate, in unincorporated urban, industrial and commercial areas. Tree cover is higher in upper income neighborhoods, single-family residential and parks/natural areas.

Less well-documented and accessible is how urban tree policy and programs vary across jurisdictions. Like other urban conservation programs, urban tree policies and programming vary in comprehensiveness, resources, and support. Most jurisdictions have tree codes, but the codes vary in strength and where or how they are applied and over one-quarter of the region lives in a community with no tree code. Few jurisdictions have inventories of trees and canopy cover, and fewer still use these inventories to direct their tree management and investments. The largest jurisdictions have urban forest management plans and canopy cover targets, but most smaller cities and unincorporated urban areas lack such plans and management goals.

Communities with little or no urban tree policies or programs are typically those that offer lower levels of urban services and property taxes, and are among the least expensive places to live and work. As redevelopment occurs and housing affordability declines, people of color and lower income groups may be displaced to locations with weaker urban tree policies or programs and lower tree canopy cover, which may exacerbate historical inequities stemming from red-lining.

We have incomplete information on investment in trees and tree programs, and community partnerships to plant and care for trees. We have little information on how jurisdictions enable and support workforce development programs in urban natural resources, to help inspire and financially support urban tree care. Some cities have volunteer tree planting initiatives, but these programs may reach into low tree canopy settings, or engage populations of low-income or people of color - who are on the frontlines of climate change impacts.

We compared our results with two prior assessments of regional urban tree policies and programs (Wertz 2000, Audubon Society of Portland and PSU 2010) and found some progress in urban tree conservation over time. However, aside from this investigation and the two prior assessments, there is no entity at the regional or state level tracking progress on urban tree policies and programs. We found spending on urban trees in individual jurisdictions to be the most difficult parameter to access and gather information on. Because urban tree programs and spending are often split between different departments within a jurisdiction, even staff at a jurisdiction may have incomplete spending information for their city or county.

Tree City USA (a program of the Arbor Day Foundation) is often cited as the best source of information for local urban tree policy and programs. However, Tree City USA is a voluntary, opt-in program. Jurisdictions can apply and be recognized, but most communities are not members. The details of what Tree City USA-member communities are doing or not doing for their trees is not transparent or accessible, and the thresholds for qualifying are low (Tree City USA only requires \$2 per capita spending on trees to qualify for membership).

Some urban tree policies and program information is available online, but often this information is difficult to access or understand, in order to gain a comprehensive understanding of how jurisdictions are faring relative to one another or in relation to their urban tree canopy goals. This assessment is intended to serve as a platform for policymakers and the general public to evaluate their urban tree policies and programs, and to gain ideas on how to improve them.

Our investigation reveals gaps in urban tree protection and investment, but also highlights promising local examples of progress. Communities like Milwaukie, Wilsonville, Forest Grove, Gresham, Vancouver, and Portland have made important recent strides with adoption or updates to tree codes, urban forest management plans, and tree planting and care programs. There are now many examples of smaller jurisdictions developing more robust urban tree policy and programs that can serve as models for others.

Potential next steps are to:

- Include additional assessment parameters such as: tree mitigation costs, miscellaneous zoning or development code details that impact tree conservation, and community member or peer review of urban tree policies and programs;
- Expand the geography of interest to include other communities in Oregon and Washington, and/or peer cities across the USA; and
- Link the summary of policies and programs with the TNC canopy distribution information to understand how and if policies and programs contribute to expansion or loss of urban tree canopies.

Beyond this assessment, the Connecting Canopies partnership may utilize this collected information to identify gaps and opportunities to advance urban tree policies and programs within the Portland-Vancouver metropolitan region. These efforts could include:

- Development of a model tree code to strengthen protections for urban trees,
- Increased funding for urban trees across the region, particularly where there is little investment at present,
- Collaboration and sharing of resources across jurisdictional boundaries to address gaps in investment and stewardship for urban trees,
- Shared communication strategies and campaigns to raise awareness of and profile the importance of urban trees in a changing climate, and
- Improved planning and conservation outcomes for urban trees (e.g. more communities with UFMPs, and tree canopy targets), and better integration of urban forestry programs with transportation, housing, urban design, zoning, and economic development decision-making.

## Appendix A: Methods Detail

As part of the Portland-Vancouver metropolitan regional urban forestry collaborative - 'Connecting Canopies' - the Urban Greenspaces Institute developed a scan to summarize local governments' policies and programs related to urban trees. This appendix explains the methods and assumptions for this regional urban forestry policy/program assessment.

We developed a set of criteria to evaluate urban tree codes, programs, plans, investment levels, funding sources, and community partnerships. In phase 1, we conducted an exhaustive review of online codes, program descriptions, and plans and used this information to score the jurisdictions based on our criteria. In phase 2, we reached out to local government representatives with questions to clarify, validate, and expand our phase one research. In phase 3, we developed a scoring rubric and scored communities on the comprehensiveness and strength of their tree policies, as well as their overall tree management programs. In future phases, we may expand the assessment and/or incorporate expert/community-member evaluations.

### *Phase 1: Review and evaluation of codes, plans, and other program information online*

Phase 1 began with a review of prior urban forestry assessments, and identification of potential evaluation criteria. We reviewed two prior regional urban forestry assessments by [Wertz \(2000\)](#) and [Audubon Society of Portland-PSU \(2010\)](#). From a preliminary review of municipal codes, plans, and urban tree program information found online we developed a set of evaluation measures and criteria focused on: the strength and comprehensiveness of tree codes, mitigation, goals, plans, inventories, staffing, investment, funding sources, and community partnerships.

For most evaluation criteria, each jurisdiction was scored for the presence/absence of certain policies/programs. For select criteria (e.g. regulated tree size, typical urban forestry annual budget), we recorded numeric values. For each measure and jurisdiction, we recorded our assessment in a spreadsheet, with detailed notes on the reasoning and justification for individual scores. Tables [A1](#) and [A2](#), below, describe the evaluation measures and criteria we used to assess urban tree codes and urban tree programs, respectively. The details of how individual evaluation criteria were scored is provided [below](#). Appendix tables [B1](#) and [B2](#), include the evaluation criteria scores for each jurisdiction for the measures of urban tree policies and programs, respectively.

### *Phase 2: Interviews with staff on urban tree programs, partnerships and investment*

With the preliminary review of online information related to urban tree policies and programs, we identified evaluation measures with missing or low-certainty information and prioritized outreach and interviews with staff from local jurisdictions. We conducted outreach by phone and email, and gave respondents the opportunity to provide information via an online survey, phone calls/video conference. A summary of the interview findings is provided in [Appendix D](#).

In the course of this phase 2 interview and refinement phase, we interrogated the phase 1 results, revisited the preliminary assessments and revised them, as necessary to create a consistent evaluation framework and measures. This iterative process created more alignment and consistency across the different jurisdictions, each with their own unique suite of urban tree policies and programs. We obtained and utilized Tree City USA application data from the Arbor Day Foundation to supplement information from the interviews.

During the interviews, respondents were asked about details of their urban tree budgets, staffing, work areas, management, and partnerships. See the bottom of [Table A2](#) below for a list of questions and categories noted.

### *Phase 3: Overall urban tree policy and program scores*

From the summary of urban tree policies and programs, we developed overall scores for each jurisdiction. [Table A3](#), below documents the scoring rubrics that we utilized, one for urban tree policies and one for urban tree programs. The urban tree policies scoring rubric emphasized tree protection measures over tree mitigation and excluded information from the interviews, which was incomplete for all 42 jurisdictions evaluated. Access to these regional urban tree policy and program scores is provided in [Appendix Table B4](#) with the notes and justifications for individual scores provided via an open access Google Sheet [here](#).

**Appendix Table A1. Urban tree policy evaluation measures and criteria for Portland-Vancouver metropolitan region communities.**

#	Evaluation Measure	Criteria Descriptions	Points Available
<i>Phase 1: Does the jurisdiction...</i>			
P1	Have a tree preservation/removal ordinance?	Yes, or No (Latter includes jurisdictions with lax and permissive tree preservation/removal ordinances, where there are effectively little/no limitations on tree removal)	Not scored
P2	Have a tree code that governs street trees?	Yes, or No (Latter includes jurisdictions with lax and permissive regulations, where there are effectively little/no limitations on street tree removal or requirements for their upkeep. In several cases, street tree planting is not required for new residential development below a certain size threshold)	1
P3	Have a tree code that governs park/public trees?	Yes, or No (Latter includes jurisdictions with lax and permissive regulations, where there are effectively little/no limitations on park/public tree removal or requirements for their upkeep)	1
P4	Have a tree code that governs private yard trees?	Yes, No, or Some (Tree code governs only certain trees in select circumstances/settings, and/or review is discretionary)	1
P5	Require tree removal permits with development or land division?	Yes, No, or Some (A tree removal permit is sometimes required for certain select development or land divisions - it may not be required on small properties, in certain zones, or in other extenuating circumstances)	1
P6	Require tree removal permits in non-development situations?	Yes, No, or Some (A tree removal permit may required in certain circumstances - for trees above a certain size threshold, on sensitive lands only, or only for heritage trees)	1
P7	Have liberal exemptions for tree removal?	Yes, or No (Liberal tree codes allow for the removal of 2-6 tree per year, or only apply at sites one-half acre or larger)	-2
P8	What is the minimum size of regulated tree?	The minimum size (diameter at breast height) of trees regulated by the jurisdiction. Trees smaller than this minimum are not regulated. Certain jurisdictions may have additional regulations/fees for removal of large trees above some larger size threshold. Some jurisdictions have different size thresholds for different species of trees.	2
P9	Have a tree code that applies across all land uses and development?	Yes, or No (Tree code applies in only select land use settings/zones or on properties above a certain minimum threshold size. It may exempt all/certain commercial/industrial zones, higher-density residential, and/or properties smaller than a certain minimum threshold square footage/acreage)	Not scored
P10	Have a tree code that applies in single-family residential zones?	Yes, No, or Some (A tree removal permit is sometimes required in certain single-family residential zone development, but not consistently across all single-family residential zones)	1
P11	Have a tree code that applies in multi-family residential/mixed use zones?	Yes, No, or Some (A tree removal permit is required in some multifamily residential/mixed use zones, but not consistently across all multifamily residential/mixed use zones)	1
P12	Have a tree code that applies in commercial/industrial zones?	Yes, No, or Some (A tree removal permit is required in some commercial/industrial zones development, but not consistently across all commercial/industrial zones)	1
P13	Require tree protection measures during development?	When development occurs around trees to remain, are measures required like setbacks or silt fences at tree drip lines to protect them from disturbance: Yes, No, or Some (Tree protection measures are only required for trees in certain settings, under certain limited circumstances, or at the discretion of staff)	1
P14	Mitigate for trees approved for removal?	Trees permitted for removal are replaced or mitigated for in some way: Yes, No, or Some (Mitigation for the removal of trees is only required for certain trees, in select settings, or at the discretion of city staff)	1
P15	Have tree mitigation ratios greater than 1:1?	Mitigation for tree removal requires planting more than one replacement tree: Yes, No, or Some (May be required for removal of larger trees / many trees during a larger development, only in certain settings, or at the discretion of staff)	1

**Appendix Table A2. Urban tree management programs evaluation measures and criteria for Portland-Vancouver metropolitan region communities.**

#	Evaluation Measure	Criteria Descriptions	Points Available
<i>Phase 1: Does the jurisdiction...</i>			
M1	Have street tree planting standards?	Yes, or No	1
M2	Have a preferred tree species list?	Yes, or No	1
M3	Have an adopted urban forest management plan?	Yes, No, or Partial (For jurisdictions with an expired plan, or a similar plan that sets specific tree canopy goals)	1
M4	Have policy goals related to urban trees within any adopted plan, resolution or ordinance?	Yes (Has language in a comp plan, resolution, ordinance, or similar that prioritizes or sets goals for urban trees or tree canopy) , or No	1
M5	Have an established urban tree committee/board?	A designated committee/board that meets regularly to assist staff with administering urban tree policy and programs: Yes, or No	1
M6	Have urban tree canopy cover targets/goals?	Yes, or No	1
M7	Have a street tree inventory for all or a portion of its street trees?	All/Most, In-Progress (An active inventory is underway), Partial (Covering some small fraction of the street network), None	1
M8	Have an inventory of heritage/significant trees?	Has an inventory of designated heritage trees or trees deemed significant based upon their size/species or other characteristics: Yes, Partial (Very small, less than 20 trees), or No	0.5
M9	Have an inventory of urban tree cover?	Has employed aerial photography or remote sensing to map and inventory urban tree canopy: Yes, or No	1
<i>Phase 2 Interview Questions:</i>			
M10	Does the jurisdiction manage street trees?	All (Actively manage in along all/most streets), Limited (Manages along less than 15% of street network), None, or Unknown	Not scored
M11	Does the jurisdiction have at least one certified arborist on staff?	Yes, No, or Unknown	Not scored
M12	What types of tree-related activities are your staff responsible for?	Checklist for: Tree planting, Tree maintenance, Tree inspection and permits, Communications and dispersing technical knowledge to community members, or Other [LIST] (where information is available)	Not scored
M13	What is the typical annual and per capita budget for urban forestry?	Typical annual or per capita budget, in dollars, for all urban forestry spending	Not scored
M14	What categories of urban forestry spending do you have?	Approximate percentage of total urban forestry spending for: Program oversight and management, Tree planting and initial care, Tree maintenance, Tree removal, Leaf pickup, and/or Other [LIST]], Not reported, or Unknown	Not scored
M15	What sources of funding do you have for urban forestry?	Checklist for: Tree planting fee-in-lieu fees, Tree removal mitigation, Stormwater utility fees, Property taxes, Development fees, Gas tax, Federal, State or local grants, and/or Other [LIST]	Not scored
M16	Are you engaged in community partnerships to promote urban trees and a diverse workforce?	Yes [LIST], None, or Unknown	Not scored



**Appendix Table A3. Summary of fractional scoring for select urban tree policy and program evaluation measures.**

#	Evaluation Measure	Yes / All / Most	Some / Partial / In Progress	No / None / Unknown
<b>Urban tree policy:</b>				
P1	Have a tree preservation/removal ordinance?		[Not scored]	
P2	Have a tree code that governs street trees?	1		0
P3	Have a tree code that governs park/public trees?	1		0
P4	Have a tree code that governs private yard trees?	1	0.5	0
P5	Require tree removal permits with development or land division?	1	0.5	0
P6	Require tree removal permits in non-development situations?	1	0.5	0
P7	Have liberal exemptions for tree removal?	-2		0
P8	What is the minimum size of regulated tree?	≤ 6 inches DBH = 2	7-8 inches DBH = 0.5	> 8 inches or none specified = 0
P9	Have a tree code that applies across all land uses and development?		[Not scored]	
P10	Have a tree code that applies in single-family residential zones?	1	0.5	0
P11	Have a tree code that applies in multi-family residential/mixed use zones?	1	0.5	0
P12	Have a tree code that applies in commercial/industrial zones?	1	0.5	0
P13	Require tree protection measures during development?	1	0.5	0
P14	Mitigate for trees approved for removal?	1	0.5	0
P15	Have tree mitigation ratios greater than 1:1?	1	0.5	0
<b>Total potential tree policy points available:</b>		<b>13</b>		
<b>Urban tree management:</b>				
M1	Have street tree planting standards?	1		0
M2	Have a preferred tree species list?	1		0
M3	Have an adopted urban forest management plan?	1	0.5	0
M4	Have policy goals related to urban trees within any adopted plan, resolution or ordinance?	1		0
M5	Have an established urban tree committee/board?	1		0
M6	Have urban tree canopy cover targets/goals?	1		0
M7	Have a street tree inventory for all or a portion of its street trees?	1	0.5	0
M8	Have an inventory of heritage/significant trees?	0.5	0.25	0
M9	Have an inventory of urban tree cover?	1		0
<b>Total potential tree management points available:</b>		<b>8.5</b>		

Details on the scoring of individual TREE POLICY evaluation measures in Table A1, above:

- P 1. Does the jurisdiction have a tree preservation/removal ordinance? Jurisdictions with regulations governing tree conservation and removal were scored YES. To qualify as YES, a jurisdiction must have specific tree preservation/removal requirements, specify where and how the regulations apply, and not leave the standards for compliance to staff discretion. Jurisdictions lacking tree regulations were scored NO. Jurisdictions with minimal regulations on tree removal were also scored NO for this measure. For example, Washington County prohibits clearcutting, and Clackamas County imposes a five-year development moratorium at sites where more than three trees have been removed in a year, but neither jurisdiction applies other defined limits or regulations on tree removal in their unincorporated urban areas. Ridgefield was scored NO because it only regulates designated heritage trees, which represent a small fraction of its trees. Certain cities lack tree codes though may require street tree planting or landscaping with trees for new development (e.g. Washougal, Wood Village). The latter communities were scored NO for this measure because they lack requirements to maintain such trees post-development, and have no other requirements around tree removal or conservation. Some communities that scored NO for this measure *may* impose tree preservation requirements as part of a design review process for certain types of large development, but these requirements are subjective and only applied at the discretion of staff.
- P 2. Does the jurisdiction have a tree code that governs street trees? - Jurisdictions that regulate the street trees scored YES on this measure. To qualify as YES, a jurisdiction must have specific street tree planting/removal requirements, specify how the regulations apply, and not leave the standards for compliance to staff discretion. This question pertains only to the regulation of street tree planting and removal; see evaluation measures M1, M7, and M10 below relating to street tree planting standards, inventories, and active management. Certain jurisdictions like Washougal, Washington and Clackamas counties scoring NO on this measure may require the planting of street trees for new development in certain zones under their street design standards, but they do not require that these street trees be maintained or regulate their removal and replacement.
- P 3. Does the jurisdiction have a tree code that governs park/public trees? - Jurisdictions that apply protections for trees in parks or other public lands with minimal exceptions score YES, whereas those that exempt or fail to regulate the majority of trees in parks or on other public lands from compliance with the tree code score NO. Certain jurisdictions scoring NO, may impose tree protection in limited circumstances on park/public lands when design review is applied (Newberg) or where designated heritage trees are impacted (Ridgefield).
- P 4. Does the jurisdiction have a tree code that governs private yard trees? - Jurisdictions that regulate tree removal on private lands score YES, whereas those that exempt some/all private lands from tree regulations score NO. Certain jurisdictions imposed tree regulations on private lands in limited settings or on an ad hoc basis, and were also scored NO. Rivergrove only applies its tree removal regulations on properties bordering wetlands and waterways. Canby and Wood Village may offer credit for tree retention under their landscaping codes but do not require tree preservation or mitigation. Ridgefield only regulates designated heritage trees, not the majority of trees within its jurisdiction. In other cities (like Newberg) tree preservation may be required as part of a discretionary development review, but there are no standards that are consistently applied. We scored three jurisdictions as SOME for this measure: Beaverton, Tigard and Scappoose. Beaverton has extremely lax tree protection rules on private lands. Tigard tree code only applies to planted trees, street/median trees, trees in significant natural

resources areas, designated heritage/significant trees/groves, and trees planted for mitigation or using the urban forestry fund. In addition landscaping and tree canopy codes may apply but these do not apply across large portions of the City's residential zones. Scappoose applies its tree code in higher-density commercial and multi-family residential zones, but not in lower-density single-family residential zones which comprise the majority of the jurisdiction's land area.

P 5. Does the jurisdiction require tree removal permits with development or land division?

Jurisdictions that uniformly require a tree removal permit with a development permit or land division score YES. Those that do not issue tree removal permits score NO. Jurisdictions that sometimes require a tree removal permit in certain select development or land division situations score SOME (Portland and Camas).

P 6. Does the jurisdiction require tree removal permits in non-development situations? When

no development permit is sought by a property owner/developer seeking to remove a tree, a jurisdiction may or may not impose a tree removal permit requirement. We scored jurisdictions requiring a permit in non-development situations as YES, and those that do not require such permits as NO. Certain jurisdictions - like Beaverton, Tigard, Sherwood and Troutdale - may require tree removal permits in only certain non-development situations, and were scored SOME.

P 7. Does the jurisdiction have liberal exemptions for tree removal? - Certain jurisdictions

with tree codes may offer exemptions that allow for the removal of 2-6 or more regulated trees per year on developed or all lots. Other jurisdictions may exempt tree removal from lots below a certain size, and where the lot size threshold is set high then this results in little or no regulations on tree removal. Jurisdictions with tree removal regulations that were deemed permissive were: Vancouver, Gresham, Beaverton, Tigard, Oregon City, Tualatin, Camas, Sherwood, Troutdale, Sandy, and King City. See cell notes for individual cities on how tree code exemptions were interpreted and scored.

P 8. What is the minimum size of regulated tree? - For jurisdictions with tree codes, we

recorded the minimum size of regulated tree, which is the smallest tree triggering tree preservation/removal regulations (usually measured as 'diameter at breast height' or DBH). Jurisdictions regulating trees six inches DBH or smaller scored the highest. Those regulating trees in the 7-12 inches DBH range given partial credit, and those regulating trees greater than 12 inches or lacking a minimum size threshold of regulated tree scored the lowest. Certain jurisdictions utilize more than one minimum regulated tree size, for different settings, tree types, and/or high-conservation value species. Other jurisdictions that lack tree codes may reference a minimum size of tree required to be identified on site plans. We noted this minimum diameter tree when specified, but scored these communities no differently than other jurisdictions lacking tree codes since the specified tree size does not affect their urban tree protections.

P 9. Does the jurisdiction apply tree code that applies across all land uses and development?

Jurisdictions that apply their tree codes across all land uses and development zones score YES, whereas those that exempt certain land uses or development zones score NO. Jurisdictions lacking an effective tree code were scored N/A for this measure. For example, the City of Portland exempts heavy industrial and small sites less than 5,000 square feet from its tree preservation code (scoring a NO). Others that impose their tree code in only certain land use zones include Tigard, Camas, and Milwaukie, and other small cities. Hillsboro was scored as a YES, although it imposes less restrictive tree protection measures in certain industrial zones.

- P 10. Does the tree code apply in single-family residential zones? - Jurisdictions that apply their tree code in all/most of single-family residential zones were scored YES. Jurisdictions that apply their tree code in none or a small fraction of their single-family residential zones scored NO. Tigard and Sandy were scored as SOME because certain tree code elements are imposed uniformly, whereas others only apply to certain areas or only properties above a certain size threshold. Although the City of Portland tree code exempts residential sites <5,000 square feet in area, the code applies to the vast majority of the City's residential lands so it was scored YES for this evaluation measure.
- P 11. Does the tree code apply in multi-family residential/mixed use zones? - Jurisdictions that apply their tree codes in these zones were scored YES, whereas those that exempt or do not regulate trees in these zones were scored NO. No jurisdictions in the Portland metropolitan region were found to apply their tree code selectively in multi-family residential/mixed use zones.
- P 12. Does the tree code apply in commercial/industrial zones? - Jurisdictions that regulate trees in commercial zones were scored YES, whereas those that do not were scored NO. Jurisdictions that regulate trees in some commercial and industrial zones (Portland), or impose lower tree preservation standards in certain commercial/industrial zones (Hillsboro, Camas) were scored SOME.
- P 13. Does the jurisdiction require tree protection measures during development? Jurisdictions that require silt-fencing and/or land disturbance setbacks from the drip lines of trees retained on development sites were scored YES. Those that lacked explicit requirements and standards for tree protection during construction were scored NO.
- P 14. Does the jurisdiction mitigate for trees approved for removal? Jurisdictions with requirements that trigger mitigation for tree removal (e.g. to replant new trees) were scored YES. Those lacking specific mitigation requirements were scored NO. Jurisdictions with mitigation requirements that are triggered in only certain circumstances or settings, or are imposed at the discretion of staff were scored SOME. In certain jurisdictions and circumstances, trees removed illegally (without or in violation of an applicable permit) may be mitigated if the violation is discovered but this evaluation did not delve into this level of specificity.
- P 15. Does the jurisdiction have tree mitigation ratios greater than 1:1? When mitigation is required, jurisdictions may or may not specify 'mitigation ratios', which define a quantitative measure of how much mitigation is required for tree removal. In cases where one tree must be planted for each tree removed, they are said to have 1:1 (one-for-one) tree replacement. In other cases, a jurisdiction may require more than one tree to be planted for each tree removed, specifying mitigation ratios of 2:1, 3:1, or more. We scored jurisdictions imposing greater than 1:1 tree removal mitigation ratios as YES, and NO for those that are silent on mitigation ratios, use a 1:1 mitigation ratio or anything less than this. Jurisdictions that impose greater than 1:1 mitigation ratios for select trees (typically for removal of large trees or many trees) or in select circumstances were scored as SOME. For illegal, unpermitted tree removal the City of Forest Grove may require one or more replacement trees with a cumulative diameter equal to the illegally removed tree, which is a higher mitigation standard than that used for permitted tree removal.

Details on the scoring of individual TREE MANAGEMENT evaluation measures in Table A2, above:

- M 1. Does the jurisdiction have street tree planting standards? Jurisdictions with street tree planting standards were scored YES, and those lacking them were scored NO. In some cases,

a jurisdiction may lack a tree code, but include street tree planting specifications in its street design standards.

- M 2. Does the jurisdiction have a preferred tree species list? Jurisdictions with a preferred tree species list were scored YES, and those lacking such a list were scored NO. In some cases a jurisdiction may reference another jurisdiction's preferred tree species list, which qualifies as a YES. Some jurisdictions were scored as PARTIAL when the preferred tree species list is applied only to street right-of-ways, versus natural areas and parks. Those with preferred tree species list for specific occasions/settings - such as a tree give away program or downtown commercial core areas - were scored as NO when the application of the preferred species list was deemed narrow or specialized.
- M 3. Does the jurisdiction have an adopted urban forest management plan? Jurisdictions with a current urban forest management plan (UFMP) were scored as YES; those lacking a plan were scored NO; and those with an expired UFMP, one under development, and/or an adopted plan that sets specific tree canopy goals but does not outline an urban tree program work plan were scored as PARTIAL. Portland, West Linn, and Tualatin were scored PARTIAL because they have expired UFMPs, and all - except West Linn - are updating their plans. Hillsboro is at the early stages of developing a first-ever UFMP, and was scored NO.
- M 4. Does the jurisdiction have policy goals related to urban trees within any adopted plan, resolution or ordinance? Jurisdictions that have language in a comprehensive plan, resolution or ordinance that prioritizes or sets goals for urban trees or tree canopy were scored YES; those lacking language that prioritizes trees/tree canopy in a plan, resolution or ordinance were scored NO.
- M 5. Does the jurisdiction have an established urban tree committee/board? Jurisdictions with a committee/board that meets regularly to assist staff with administering urban tree policy and programs were scored YES; those lacking a tree board/committee were scored NO. Some cities may assign a parks/natural resources/design review committee to function as their tree committee, and these may qualify so long as they are designated as such in the city code and meet regularly.
- M 6. Does the jurisdiction have urban tree canopy cover targets/goals? Jurisdictions were scored YES, or NO. Lake Oswego has urban tree canopy cover data but has not established goals for urban tree canopy, so was scored NO. At this time, this evaluation measure simply recognizes whether a jurisdiction has or does not have one tree canopy goal for the whole jurisdiction. For jurisdictions with wide disparities in urban tree cover across different neighborhoods, it may be beneficial to have neighborhood-level tree canopy goals.
- M 7. Does the jurisdiction have a street tree inventory for all or a portion of its street trees? Jurisdictions with all or most of their street trees inventoried (>50%) were scored as ALL; those with less than half their trees inventoried or with inventories that are ten or more years out of date were scored as PORTION; those with an inventory under development were scored as IN-PROGRESS; and those lacking an inventory were scored as NONE. Several jurisdictions are currently developing street tree inventories (Vancouver, Gresham, Lake Oswego, Milwaukie), or have historical inventories that are out of date (Hillsboro). Just two jurisdictions (Portland and Wilsonville) have street tree inventories that are comprehensive, where all or most trees have been inventoried. Forest Grove utilized a recent statistical sample of street trees to make inferences to the whole city, so it was scored as ALL.
- M 8. Does the jurisdiction have an inventory of heritage/significant trees? Heritage trees are trees designated for special protections based on their size, species or historical significance.

Significant trees are typically protected outright (without a special legislative designation process) based upon their size, species, or other characteristics. Jurisdictions that maintain an inventory of heritage or significant trees were scored as YES; those with small inventories of heritage/significant trees (less than 20) were scored as PARTIAL; and those lacking such inventories were scored NO.

- M 9. Does the jurisdiction have an inventory of urban tree cover? Jurisdictions may employ aerial photography or remote sensing to map and inventory urban tree canopy to assist with identifying and charting progress towards urban tree canopy goals. Jurisdictions with urban tree canopy cover inventories were scored as YES, whereas those lacking a tree canopy inventory were scored NO.

For evaluation measures M 10-17, we used the narrative responses from interviews with jurisdiction staff and available Tree City USA applications to derive 3-5 generalized response categories to show patterns among respondents. This information was not available for all jurisdictions so was not used to develop overall urban tree policy and program scores.

- M 10. Does the jurisdiction manage street trees? Vancouver is the only jurisdiction that actively manages all or most of its street trees. Though their program just began in 2023 we scored this city as ALL. Jurisdictions with limited management along less than 15% of their street tree network, and/or only in emergency situations were scored LIMITED. Those with no active management were scored as NONE, and for jurisdictions with no information were scored as UNKNOWN.
- M 11. Does the jurisdiction have at least one certified arborist on staff? Scored as YES, NO, or UNKNOWN.
- M 12. What types of tree-related activities are your staff responsible for? For each jurisdiction we completed a checklist for categories of different urban tree management activities, including: tree planting, tree maintenance, tree inspection and permits, communications and information sharing, and other activities defined by the jurisdiction representative.
- M 13. What is the typical annual budget for urban forestry? For each jurisdiction, we noted the typical annual budget in dollars for urban forestry programs, and per capita annual spending. Annual spending on urban trees may vary. We used values reported in the most recent Arbor Day Foundation Tree City USA applications we were able to obtain, or budget values supplied by jurisdiction representatives from interviews.
- M 14. What categories of urban forestry spending do you have? We recorded the approximate percentage of total urban forestry spending in the following program activity categories: program oversight and management, tree planting and initial care, tree maintenance, tree removal, leaf pickup, and other (defined by jurisdiction representative). Approximate percentage of total urban forestry spending was recorded in the following bins: <5%, 5-10%, 10-20%, 20-30%, 30-40%, 40-50%, and >50%. We noted NONE REPORTED for program categories that had no reported spending, and we noted UNKNOWN for jurisdictions where this spending information was not available.
- M 15. What sources of funding do you have for urban forestry? For each jurisdiction we completed a checklist for sources of funding for urban forestry, including: tree planting fee-in-lieu fees, tree removal mitigation, stormwater utility fees, property taxes, development fees, gas tax, federal/state/local grants, and other (defined by jurisdiction representative).
- M 16. Are you engaged in community partnerships to promote urban trees and a diverse workforce? Jurisdiction representatives were asked to detail any active community partnerships

focused on urban tree stewardship. We scored jurisdictions with active partnerships to promote urban tree stewardship, lead tree plantings, and/or tree care as YES; those without such partnerships were scored NONE, and those for which we lacked this information were scored as UNKNOWN. Jurisdictions with current or recent past partnerships with black, indigenous, or people of color (BIPOC) organizations to develop a more diverse urban tree workforce were scored as YES +.

# Appendix B: Urban Tree Policy and Program Scores for Jurisdictions

**Appendix Table B1. Urban tree policy scores for individual jurisdictions.**

Jurisdictions are arrayed from most to least populous to enable comparisons between peers. Values for 'Minimum size of regulated tree' preceded by a \* are from jurisdictions that lack tree codes but reference a tree size elsewhere.

Jurisdiction	2020 Population	Has a tree preservation/removal ordinance?	Tree code governs: Street trees	Tree code governs: Park/public trees	Tree code governs: Private yard trees	Tree removal permit required with development or land division?	Tree removal permit required in non-development situations?	Has liberal exemptions for tree removal?	Minimum size of regulated tree?	Tree code applies across all land uses and development?	Tree code applies to: Single-family residential zone	Tree code applies to: Multi-family residential/mixed use zones	Tree code applies to: Commercial and industrial zones	Tree protection measures required during development?	Are regulated trees mitigated if approved for removal?	Mitigation ratio greater than 1:1 tree?
Portland	635,067	yes	yes	yes	yes	sometimes	yes	no	3-6"	no	yes	yes	some	yes	yes	yes
Urban Washington Co	239,100	no <sup>5</sup>	no	no	no	N/A	N/A	N/A	staff discretion	N/A	N/A	N/A	N/A	no	sometimes	N/A
Urban Clark Co	195,579	no	no	no	no	N/A	N/A	N/A	* 8"	N/A	N/A	N/A	N/A	no	N/A	N/A
Vancouver	194,512	yes	yes	yes	yes	yes	yes	yes	1"	yes	yes	yes	yes	yes	yes	sometimes
Urban Clackamas Co	118,311	no <sup>5</sup>	no	no	no	N/A	N/A	N/A	* 6"	N/A	N/A	N/A	N/A	no	no	N/A
Gresham	111,621	yes	yes	yes	yes	yes	yes	yes	8"	yes	yes	yes	yes	yes	sometimes	yes
Hillsboro	107,299	yes	yes	yes	yes	yes	no	no	8" for deciduous, 30 ft tall for conifers	yes	yes	yes	some	yes	sometimes	no
Beaverton	97,053	yes	yes	yes	some	yes	sometimes	yes	10"	yes	yes	yes	yes	yes	sometimes	no
Tigard	55,762	yes	yes	yes	some	yes	sometimes	yes	6"	no	some	yes	yes	yes	yes	no
Lake Oswego	40,108	yes	yes	yes	yes	yes	yes	no	6"	yes	yes	yes	yes	yes	yes	yes
Oregon City	37,327	yes	yes	yes	yes	yes	no	yes	6"	yes	yes	yes	yes	yes	sometimes	yes
Tualatin	27,797	yes	yes	no	yes	yes	yes	yes	8"	yes	yes	yes	yes	yes	no	N/A
West Linn	27,371	yes	yes	yes	yes	yes	yes	no	12" <sup>6</sup>	yes	yes	yes	yes	yes	sometimes	no

<sup>5</sup> Urban Washington and Clackamas counties have minimal regulations for tree protection regulations, so were scored as 'no' for this measure

<sup>6</sup> West Linn and Forest Grove use a smaller minimum regulated tree size for certain species: West Linn uses 6" for Oregon white oak, madrone, and dogwood; Forest Grove uses 3" for Oregon white oak



Jurisdiction	2020 Population	Has a tree preservation/removal ordinance?	Tree code governs: Street trees	Tree code governs: Park/public trees	Tree code governs: Private yard trees	Tree removal permit required with development or land division?	Tree removal permit required in non-development situations?	Has liberal exemptions for tree removal?	Minimum size of regulated tree?	Tree code applies across all land uses and development?	Tree code applies to: Single-family residential zone	Tree code applies to: Multi-family residential/mixed use zones	Tree code applies to: Commercial and industrial zones	Tree protection measures required during development?	Are regulated trees mitigated if approved for removal?	Mitigation ratio greater than 1:1 tree?
Wilsonville	27,290	yes	yes	yes	yes	yes	yes	no	6"	yes	yes	yes	yes	yes	yes	no
Forest Grove	26,931	yes	yes	yes	yes	yes	yes	no	6" <sup>6</sup>	yes	yes	yes	yes	yes	yes	sometimes
Woodburn	26,784	yes	yes	yes	yes	yes	yes	no	24"	yes	yes	yes	yes	no	sometimes	no
Camas	26,597	yes	yes	yes	yes	sometimes	no	yes	8" for conifers, 12" for deciduous	no	yes	yes	some	yes	sometimes	sometimes
Newberg	26,456	yes	yes	no	no	no	no	no	N/A	yes	yes	yes	yes	no	sometimes	no
Happy Valley	25,777	yes	yes	yes	yes	yes	yes	no	6"	yes	yes	yes	yes	yes	sometimes	sometimes
Battle Ground	21,628	yes	yes	no	no	no	no	no	N/A	yes	no	yes	yes	yes	N/A	no
Milwaukie	21,375	yes	yes	yes	yes	yes	yes	no	6"	no	yes	no	no	yes	yes	sometimes
Sherwood	20,030	yes	yes	yes	yes	yes	sometimes	yes	varies, 5-20"	yes	yes	yes	yes	yes	sometimes	no
Canby	18,074	yes	yes	yes	no	no	no	no	N/A	yes	yes	yes	yes	no	sometimes	no
Troutdale	16,926	yes	yes	yes	yes	yes	sometimes	yes	6"	yes	yes	yes	yes	yes	no	no
Washougal	15,686	no	no	no	no	N/A	N/A	no	* 6"	N/A	N/A	N/A	N/A	no	no	no
St Helens	14,431	yes	yes	no	no	no	no	no	* 6"	no	no	yes	yes	no	sometimes	no
Cornelius	14,369	no	no	no	no	N/A	N/A	no	* 6"	N/A	N/A	N/A	N/A	no	N/A	no
Gladstone	14,251	no	no	no	no	N/A	N/A	no	* 6"	N/A	N/A	N/A	N/A	sometimes	N/A	no
Sandy	12,953	yes	yes	yes	some	no	no	yes	11"	no	some	yes	yes	yes	sometimes	sometimes
Molalla	11,951	yes	yes	yes	yes	yes	yes	no	8 ft tall	yes	yes	yes	yes	no	yes	no
Fairview	10,768	yes	yes	yes	yes	no	no	no	6"	yes	yes	yes	yes	yes	N/A	no
Ridgefield	10,171	no	no	no	no	N/A	N/A	N/A	* 36" <sup>7</sup>	N/A	N/A	N/A	N/A	yes	N/A	no
Scappoose	8,230	yes	yes	yes	some	no	no	no	6"	no	no	yes	yes	no	sometimes	no
Woodland	6,523	yes	yes	no	no	yes	yes	no	4"	yes	yes	yes	yes	sometimes	no	no
King City	5,308	yes	yes	yes	yes	yes	yes	yes	6"	yes	yes	yes	yes	yes	sometimes	no

<sup>7</sup> Ridgefield uses 36" for identifying heritage trees

Jurisdiction	2020 Population	Has a tree preservation/removal ordinance?	Tree code governs: Street trees	Tree code governs: Park/public trees	Tree code governs: Private yard trees	Tree removal permit required with development or land division?	Tree removal permit required in non-development situations?	Has liberal exemptions for tree removal?	Minimum size of regulated tree?	Tree code applies across all land uses and development?	Tree code applies to: Single-family residential zone	Tree code applies to: Multi-family residential/mixed use zones	Tree code applies to: Commercial and industrial zones	Tree protection measures required during development?	Are regulated trees mitigated if approved for removal?	Mitigation ratio greater than 1:1 tree?
Wood Village	5,040	no	no	no	no	N/A	N/A	N/A	* 8"	N/A	N/A	N/A	N/A	no	no	no
Estacada	4,775	no	no	no	no	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no	no	no
Urban Multnomah Co	2,000	yes	yes	yes	yes	yes	yes	no	3-6"	yes	yes	N/A	N/A	yes	yes	yes
Durham	1,887	yes	yes	yes	yes	yes	yes	no	5"	yes	yes	yes	yes	sometimes	sometimes	no
Maywood Park	809	yes	yes	yes	no	yes	yes	no	7" for conifer, 12" for deciduous	yes	yes	yes	yes	no	sometimes	no
Johnson City	546	no	no	no	no	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	no	N/A	no
Rivergrove	539	yes	yes	yes	no	yes	yes	yes	12" <sup>8</sup>	yes	yes	N/A	N/A	no	sometimes	no

<sup>8</sup> Rivergrove uses 6" for Oregon white oak, madrone, and dogwood

## Appendix Table B2. Urban tree program scores for individual jurisdictions.

Jurisdictions are arrayed from most to least populous to enable comparisons between peers.

Jurisdiction	2020 Population	Has street tree species planting standards?	Has a preferred tree species list?	Has an adopted urban forest management plan?	Has policy goals related to urban trees within any adopted plan, resolution, or ordinance?	Has an established urban tree committee/board?	Has targets for urban canopy cover?	Has a street tree inventory for all or a portion of street trees?	Has an inventory of heritage/significant trees?	Has an assessment of urban tree canopy?
Portland	635,067	yes	yes	partial	yes	yes	yes	all	yes	yes
Urban Washington Co	239,100	yes	yes	no	no	no	no	none	no	no
Urban Clark Co	195,579	yes	yes	no	yes	no	no	none	partial	no
Vancouver	194,512	yes	yes	yes	yes	yes	yes	portion	yes	yes
Urban Clackamas Co	118,311	yes	yes	no	yes	yes	no	none	partial	no
Gresham	111,621	yes	yes	yes	yes	yes	no	in progress	yes	yes
Hillsboro	107,299	yes	yes	no	yes	yes	no	portion	no	yes
Beaverton	97,053	yes	yes	no	yes	yes	no	portion	yes	no
Tigard	55,762	yes	yes	yes	yes	yes	yes	portion	yes	yes
Lake Oswego	40,108	yes	yes	yes	yes	yes	no	in progress	yes	yes
Oregon City	37,327	yes	yes	no	yes	yes	no	none	partial	no
Tualatin	27,797	yes	yes	partial	yes	yes	no	portion	yes	no
West Linn	27,371	yes	yes	partial	yes	yes	yes	portion	partial	no
Wilsonville	27,290	yes	yes	yes	yes	no	yes	all	partial	yes
Forest Grove	26,931	yes	yes	yes	yes	yes	yes	all	yes	yes
Woodburn	26,784	yes	yes	no	yes	no	no	none	no	no
Camas	26,597	yes	yes	no	yes	no	no	none	no	no
Newberg	26,456	yes	yes	no	yes	no	no	none	no	no
Happy Valley	25,777	yes	yes	no	yes	yes	no	none	no	no
Battle Ground	21,628	yes	no	no	no	no	no	none	no	no
Milwaukie	21,375	yes	yes	yes	yes	yes	yes	in progress	no	yes
Sherwood	20,030	yes	yes	no	yes	yes	no	none	no	no
Canby	18,074	yes	yes	no	no	yes	no	none	no	no
Troutdale	16,926	yes	yes	no	no	no	yes	none	partial	no
Washougal	15,686	yes	no	no	no	no	no	none	no	no

Jurisdiction	2020 Population	Has street tree species planting standards?	Has a preferred tree species list?	Has an adopted urban forest management plan?	Has policy goals related to urban trees within any adopted plan, resolution, or ordinance?	Has an established urban tree committee/board?	Has targets for urban canopy cover?	Has a street tree inventory for all or a portion of street trees?	Has an inventory of heritage/significant trees?	Has an assessment of urban tree canopy?
St Helens	14,431	yes	yes	no	no	no	no	none	no	no
Cornelius	14,369	yes	yes	no	no	no	no	none	no	no
Gladstone	14,251	no	no	no	no	no	no	none	no	no
Sandy	12,953	yes	yes	no	yes	yes	no	none	no	no
Molalla	11,951	yes	no	no	no	no	no	none	no	no
Fairview	10,768	yes	yes	no	yes	no	no	none	no	no
Ridgefield	10,171	yes	no	no	yes	no	no	none	partial	no
Scappoose	8,230	yes	yes	no	yes	no	no	none	partial	no <sup>9</sup>
Woodland	6,523	no	yes	no	no	no	no	none	no	no
King City	5,308	yes	no	no	yes	no	no	none	no	no
Wood Village	5,040	no	no	no	no	no	no	none	no	no
Estacada	4,775	yes	yes	no	no	no	no	portion	no	no
Urban Multnomah Co	2,000	yes	yes	no	yes	no	no	none	no	no
Durham	1,887	no	yes	no	no	no	no	none	no	no
Maywood Park	809	no	no	no	yes	no	no	none	no	no
Johnson City	546	no	no	no	no	no	no	none	no	no
Rivergrove	539	no	yes	no	yes	yes	no	none	no	no

<sup>9</sup> Scappoose has a tree canopy assessment underway but it was not complete at the time of this assessment.

## Appendix Table B3. Urban tree program interview responses.

Jurisdictions are arrayed from most to least populous to enable comparisons between peers.

Jurisdiction	Staff responsible for:			Percent spending for:						Income from:										Partnerships to promote urban trees and diverse workforce? <sup>10</sup>			
	2020 Population	Jurisdiction street trees?	Has at least one certified arborist on staff?	Communities & information sharing				Typical annual budget for urban forestry	Per capita annual spending	Program oversight and management						Tree planting fees						Federal, State or local grants	
				Tree planting	Tree maintenance	Tree inspection & permits	Tree planting and initial care			Tree maintenance	Tree removal	Leaf pickup	Other [LIST]	Tree planting fees	Tree removal fees	Stormwater utility fees	Property taxes	Development fees	Gas tax				
Portland	635,067	limited	yes	yes	yes	yes	yes	\$12 million	\$20.00	40 - 50	20 - 30	10 - 20	10 - 20	< 5	NR	yes	yes	yes	yes	yes	no	no	yes +
Urban Washington Co	239,100	none	no	no	no	no	no		UNK	UNK	UNK	UNK	UNK	UNK	UNK	no	no	yes	no	no	no	no	none
Urban Clark Co	195,579	none	no																				
Vancouver	194,512	partial	yes	yes	no	yes	yes	\$1,518,467	\$7.81	40 - 50	10 - 20	10 - 20	5 - 10	5 - 10	NR	yes	no	yes	no	no	no	no	yes +
Urban Clackamas Co	118,311	none	no																				
Gresham	111,621	limited	no	no	yes	no	no	\$489,997	\$4.59	40 - 50	10 - 20	10 - 20	5 - 10	UNK	< 5	yes	yes	yes	no	no	no	yes	yes +
Hillsboro	107,299	limited	no	yes	yes	no	no	\$317,000	\$3.14	5 - 10	20 - 30	40 - 50	5 - 10	5 - 10	NR	no	yes	yes	no	no	no	no	yes
Beaverton	97,053	partial	yes	yes	yes	yes	yes	\$693,932	\$4.60	30 - 40	10 - 20	10 - 20	5 - 10	5 - 10	NR	yes	yes	no	no	no	yes	no	yes +
Tigard	55,762	none	yes						\$2.70	10 - 20	10 - 20	5 - 10	10 - 20	UNK	30 - 40								yes
Lake Oswego	40,108	limited	yes	yes	yes	yes	yes	\$500,000	\$12.50	30 - 40	10 - 20	10 - 20	10 - 20	UNK	NR	yes	UNK	UNK	UNK	UNK	UNK	UNK	yes
Oregon City	37,327	limited	yes	yes	yes	yes	yes	\$447,924	\$12.00	20 - 30	20 - 30	UNK	30 - 40	UNK	UNK	yes	yes	yes	no	yes	no	no	yes
Tualatin	27,797	limited	yes						\$11.99	20 - 30	5 - 10	30 - 40	10 - 20	UNK	NR								yes
West Linn	27,371	limited	no						\$22.48	10 - 20	< 5	10 - 20	>50	UNK	NR								yes

<sup>10</sup> Jurisdictions with community partnerships to promote a more diverse tree care workforce are denoted YES +.

Jurisdiction	2020 Populat ion	Jurisdi ction manag es street trees?	Has at least one certifi ed arbori st on staff?	Staff responsible for:				Typical annual budget for urban forestry	Per capita annual spendin g	Percent spending for:						Income from:									Partnerships to promote urban trees and diverse workforce? <sup>10</sup>
				Tree plant ing	Tree mainte nance	Tree inspect ion & permit s	Communi cation ns & informa tion sharing			Progra m oversig ht and manag ement	Tree plantin g and initial care	Tree mainte nance	Tree remov al	Leaf pickup	Other [LIST]	Tree plant ing fee- in- lieu fees	Tree rem oval mitig ation	Stormw ater utility fees	Prope rty taxes	Develo pment fees	Gas tax	Federal, State or local grants			
Wilsonville	27,290	limited	yes	yes	yes	yes	yes	UNK	\$12.00	40 - 50	10 - 20	30 - 40	< 5	10 - 20	5 - 10	no	yes	yes	yes	yes	yes	no	no	yes	
Forest Grove	26,931	none	yes	yes	yes	yes	no	\$125,000	\$4.64	30 - 40	>50	5 - 10	< 5	5 - 10	NR	no	no	yes	no	yes	no	no	yes		
Woodburn	26,784	limited	UNK						\$1.47	NR	NR	NR	NR	NR	NR										
Camas	26,597	UNK	UNK	NR	NR	NR	NR		\$0.00	UNK	UNK	UNK	UNK	UNK	UNK	no	no	no	yes	yes	no	yes			
Newberg	26,456	UNK	UNK	yes	yes	no	no		UNK	UNK	UNK	UNK	UNK	UNK	UNK	no	no	yes	no	no	no	no	none		
Happy Valley	25,777	limited	yes						\$5.90	20 - 30	20 - 30	20 - 30	10 - 20	UNK	NR								yes		
Battle Ground	21,628	UNK	UNK	yes	yes	yes	no		\$2.31	< 5	< 5	>50	< 5	< 5	UNK	no	no	UNK	UNK	no	UNK	UNK			
Milwaukie	21,375	none	yes	yes	yes	yes	yes	\$335,000	\$24.22	>50	10 - 20	< 5	< 5	UNK	10 - 20	yes	yes	yes	no	no	no	no	yes		
Sherwood	20,030	none	no	UNK	UNK	UNK	UNK		\$9.13	< 5	10 - 20	30 - 40	>50	UNK	NR	UNK	UNK	UNK	UNK	UNK	UNK	UNK	yes		
Canby	18,074	limited	UNK																						
Troutdale	16,926	none	yes						\$9.72	5 - 10	>50	10 - 20	< 5	UNK	< 5								yes		
Washougal	15,686	UNK	UNK																						
St Helens	14,431	UNK	UNK																						
Cornelius	14,369	UNK	UNK	no	no	yes	no		UNK	< 5	< 5	< 5	5 - 10	< 5	NR	no	no	no	no	no	yes	no			
Gladstone	14,251	UNK	UNK																						
Sandy	12,953	UNK	UNK						\$2.21	20 - 30	< 5	20 - 30	>50	UNK	NR										
Molalla	11,951	UNK	UNK																						
Fairview	10,768	UNK	UNK																						

Jurisdiction	2020 Populat ion	Jurisdi ction manag es street trees?	Has at least one certifi ed arbori st on staff?	Staff responsible for:				Typical annual budget for urban forestry	Per capita annual spendin g	Percent spending for:						Income from:										Partnerships to promote urban trees and diverse workforce? <sup>10</sup>
				Tree planti ng	Tree mainte nance	Tree inspect ion & permit s	Commu nicatio ns & informa tion sharing			Progra m oversig ht and manag ement	Tree plantin g and initial care	Tree mainte nance	Tree remov al	Leaf pickup	Other [LIST]	Tree plant ing fee- in- lieu fees	Tree rem oval mitig ation	Stormw ater utility fees	Prope rty taxes	Develo pment fees	Gas tax	Federal, State or local grants				
Ridgefield	10,171	UNK	UNK																							
Scappoose	8,230	UNK	UNK	no	yes	yes	yes		\$1.51	NR	NR	NR	NR	NR	NR	no	no	no	no	no	no	no				
Woodland	6,523	UNK	UNK																							
King City	5,308	UNK	UNK																							
Wood Village	5,040	UNK	UNK																							
Estacada	4,775	limited	UNK																							
Urban Multnomah Co	2,000	UNK	UNK																							
Durham	1,887	UNK	UNK	no	no	no	no		\$1.00	UNK	UNK	UNK	UNK	UNK	UNK	yes	no	no	no	no	no	no				
Maywood Park	809	UNK	UNK																							
Johnson City	546	UNK	UNK																							
Rivergrove	539	UNK	UNK						\$24.46	< 5	5 - 10	20 - 30	5 - 10	UNK	NR									yes		

**Appendix Table B4. Overall tree policy and program scores for Portland-Vancouver metropolitan area jurisdictions.**

<b>Jurisdiction</b>	<b>2020 Population</b>	<b>Overall tree policy score</b>	<b>Overall tree management score</b>	<b>Has Tree City USA status?</b>
Portland	635,067	10.5	8	yes GA25
Urban Washington Co	239,100	0.25	2	no
Urban Clark Co	195,579	0	3.25	no
Vancouver	194,512	9.25	8	yes GA22
Urban Clackamas Co	118,311	0	4.25	no
Gresham	111,621	7.75	7	yes
Hillsboro	107,299	7.75	5.5	yes GA1
Beaverton	97,053	5.75	5	yes GA18
Tigard	55,762	7.5	8	yes
Lake Oswego	40,108	11.5	7	yes
Oregon City	37,327	8.25	4.25	yes
Tualatin	27,797	6	5.5	yes
West Linn	27,371	8.75	6.25	yes GA3
Wilsonville	27,290	11	7.25	yes GA12
Forest Grove	26,931	11.25	8.5	yes GA8
Woodburn	26,784	8.25	3	no
Camas	26,597	5	3	no
Newberg	26,456	4.25	3	no
Happy Valley	25,777	11	4	yes
Battle Ground	21,628	3.5	1	no
Milwaukie	21,375	9.25	7.5	yes GA3
Sherwood	20,030	6.25	4	yes
Canby	18,074	5.25	3	no
Troutdale	16,926	8	3.25	yes
Washougal	15,686	0	1	no
St Helens	14,431	3.25	2	no
Cornelius	14,369	0	2	no
Gladstone	14,251	0.25	0	no
Sandy	12,953	4	4	yes
Molalla	11,951	10.5	1	no
Fairview	10,768	8.5	3	no
Ridgefield	10,171	0.5	2.25	no
Scappoose	8,230	6.75	3.25	yes



<b>Jurisdiction</b>	<b>2020 Population</b>	<b>Overall tree policy score</b>	<b>Overall tree management score</b>	<b>Has Tree City USA status?</b>
Woodland	6,523	8.25	1	no
King City	5,308	8.75	2	no
Wood Village	5,040	0	0	no
Estacada	4,775	0	2.5	no
Urban Multnomah Co	2,000	11.5	3	no
Durham	1,887	10.5	1	no
Maywood Park	809	7.25	1	no
Johnson City	546	0	0	no
Rivergrove	539	5.25	3	yes

# Appendix C: Recommendations For Individual Jurisdictions

The following descriptions are intended to help jurisdiction staff and tree advocates focus their energies on the specific needs of their respective community.

## **Communities with populations of ~100,000 or more:**

*Portland* - Portland has among the strongest tree codes in the region, governing trees along streets, in parks and private yards. Nonetheless, tree removal in certain circumstances and settings is unregulated (such as on small residential lots less than 5,000 square feet in area when development is proposed, in heavy industrial areas, and commercial areas where lot coverage is greater than 85%). Urban tree management is relatively well-resourced. The City has an update to its urban forest management plan in progress, an active urban forestry committee and highly-trained staff, as well as an engaged tree advocates community. Portland has a robust inventory of its street trees, a tree canopy assessment, and goals for planting and tree cover.

In spite of these strengths, the City lacks neighborhood- or district-level tree canopy targets, and the goals for tree canopy do not play into development decision-making on a par with other City guidelines around transportation level-of-service, affordable housing availability, and the like. A recent assessment determined that the City's tree canopy is no longer expanding and may even be declining. The City is not yet managing street trees to lift this financial burden off of property owners and support the planting of large-form trees, though it has recently approved a pilot for this in east Portland neighborhoods.

Portland has famously relied on volunteer action to plant trees over many years, which has helped expand urban tree canopy in those neighborhoods where volunteer action can be mobilized. It has been less successful with paid employment for tree planting and care in low canopy neighborhoods, where people of color and lower income dwell. Quite recently, a long-term partnership with Friends of Trees to plant street trees was terminated and it is not yet clear if the replacement City-led tree planting will achieve the City's lofty goals for expansion of tree canopy in low-canopy east Portland neighborhoods.

Community groups active in urban tree advocacy in Portland include: Trees for Life, We Keep Trees Standing, Bird Alliance of Oregon, Friends of Trees, 350PDX, and others. The Blueprint Foundation, Verde and others have helped spearhead paid employment for tree care, outreach and stewardship among people of color and other disadvantaged groups.

Areas for improvement could include:

- Lifting exemption on regulation of tree removal on small residential lots less than 5,000 square feet when new development is proposed, removing the tree code exemption on heavy industrial lands, and for commercial sites with greater than 85% lot coverage.

- Expanding the City-led management of street trees City-wide, and developing new sources of revenue to finance these operations.
- Creating and sustaining paid tree planting and stewardship contracts for low-income and people of color, in order to build community support for trees in low tree canopy neighborhoods.

*Urban Washington County* - Over 230,000 people live in unincorporated Washington County, which is more than one-third the population of the City of Portland, and the second-most populous urban community within the region. Yet Washington County has no urban tree protections or management to speak of. The County's development code contains language that prohibits clearcutting, and it does require the planting of street trees for new development. But no other tree regulations, financing, staff, or programs exist to support urban trees and tree canopy conservation.

The top priority for Washington County is to develop an urban tree code to preserve trees. Community groups active in urban tree advocacy in Washington County include: Treekeepers of Washington County, Tualatin Riverkeepers, and several Community Planning Organizations.

*Urban Clark County* - Over 195,000 people live in unincorporated Clark County, Washington, which is approximately equal to the population of Vancouver, Washington. Yet urban Clark County lacks any tree protections and management. The County's development code has no language that protects trees, though there are some tree planting requirements under the landscaping requirements, and street trees are required for some new development.

The top priority for Clark County is to develop an urban tree code to preserve trees. There are no known community groups active on urban tree advocacy in Clark County, though neighboring Vancouver, Washington has one group, Save Vancouver Trees.

*Vancouver* - Vancouver has an urban tree code that governs street, park, and private yard trees, which applies across all land uses and zones. The City has a robust tree replacement and mitigation requirement for trees down to 1" in size. However, a major loophole allows for the unregulated removal of trees on developed single-family residential lots of less than one acre in size, and up to six trees can be removed within a three-year period on lots that will remain undeveloped for six years.

In 2022, the City began active management of street trees, in coordination with its street maintenance efforts. The City has an inventory for a portion of its street tree network, and a tree canopy assessment that is being used to guide future urban tree management.

A high priority for the City of Vancouver is to scale back or remove loopholes or exceptions for tree protection on developed residential lots of less than one acre, and on undeveloped sites. In addition, more resources and community engagement are needed to support the City's new program to actively manage its street tree network. The community group Save Vancouver Trees is active with urban tree advocacy in Vancouver, Washington.

*Urban Clackamas County* - Urban Clackamas County is the third-largest unincorporated urban population within the region, with just over 118,000 residents. The County has no urban tree code, although it does impose a development moratorium on sites where more than three healthy trees of six inches or greater in diameter have been removed in one year. At the discretion of staff, the County may also impose tree conservation requirements as part of design review for certain large developments. The County does not require the planting of street trees on lots with new detached single-family or duplex housing units. This represents a major exemption to the requirement to plant street trees with new development since the residential zone makes up the majority of the jurisdiction's land area.

The top priority for Clackamas County is to develop an urban tree code to preserve trees. A small community group Urban Green Clackamas County has been active in the past with urban tree advocacy in north Clackamas County, especially in the Oak Grove. In addition, several Community Planning Organizations have been active on urban tree issues, especially the CPOs for Jennings Lodge and Oak Grove.

*Gresham* - Gresham has a population of over 110,000, and has a tree code that protects street, park, and private yard trees across all land uses. It sometimes - but not always - requires mitigation for removal of trees that are 8 inches in diameter or larger. Depending on lot size, Gresham allows for the removal of up to three or six trees per year from a site. Although it has recently completed a tree canopy assessment and begun an inventory of street trees in West Gresham, the City lacks a target for urban tree canopy and has limited staff and resources to manage urban trees. Gresham recently eliminated its urban tree committee and moved urban tree management from the Parks to Urban Design and Planning departments.

A top priority for Gresham is to strengthen its urban tree code to eliminate the piecemeal and incremental removal of trees without regulation, to develop tree canopy targets for the City, and to invest in the Green Gresham, Healthy Gresham effort to employ youth of color in tree outreach, care, and planting in low canopy West Gresham neighborhoods. Gresham could also lower its threshold for minimum size of protected tree to 6 inches or larger diameter at breast height. There is no existing advocacy group working to strengthen urban tree protections in Gresham.

*Hillsboro* - Hillsboro has an urban tree code that protects street, park, and private yard trees across most land use settings. Hillsboro has weaker tree protection in certain industrial zones, and tree removal permits are not required when no new development is proposed. Hillsboro protects deciduous trees of 8 inches or larger, conifer trees that are 30 feet or taller, and the City has additional protections for large specimen trees greater than 12-24 inches in diameter (size threshold depends on species). Hillsboro does not have an adopted urban forest management plan, nor targets for urban tree canopy but it recently completed an urban tree canopy assessment and is presently working on a plan for its urban forest.

A top priority for Hillsboro is to secure additional resources and staff for urban trees, and to strengthen its urban tree code by creating common standards for tree protections across all land uses and reducing the size of protected trees to 6 inches or larger diameter at breast height. There is no existing advocacy group working to strengthen urban tree protections in Hillsboro.

*Beaverton* - Beaverton has a population of nearly 100,000 and has a tree preservation ordinance but it has among the weakest protections for trees among the larger cities in the region. Beaverton protects all street and park trees, but only some yard trees. A permit for tree removal is only sometimes required in non-development situations. Beaverton only protects trees that are 10 inches in diameter or larger, leaving smaller trees unprotected. The City also allows for unregulated tree removal for all trees on developed properties of less than one-half acre, and it allows for the removal of up to four trees 10 inches in diameter and larger per year on lots of one-half acre and larger. The City lacks an urban forest management plan and has no targets for urban tree canopy. A recent assessment of the City's tree protection recommended changes to strengthen its urban tree protections.

Top priorities for Beaverton is to develop stronger urban tree protections, eliminate liberal exceptions for unregulated tree removal, and to lower the size of regulated trees to 6 inches diameter at breast height. There is no existing advocacy group working to strengthen urban tree protections in Beaverton.

#### **Communities with populations of 20,000-60,000:**

*Tigard* - With a population just over 55,000, Tigard has among the strongest urban tree codes in Washington County and may serve as a model for other communities to follow. Tigard's emphasis is on urban tree canopy protection and management, versus individual tree protection. The City has good protections for street, park, and some private yard trees across all or most land uses. However, select trees are exempt from regulation and the code could be simplified to eliminate confusion over what trees are regulated versus exempt from protection. Most notably the City protects trees down to 6 inches diameter in size, and it has a good start to an inventory of its street trees and canopy cover. Tigard also has an urban tree committee, a current urban forestry plan, and targets for tree canopy.

There is no existing advocacy group working specifically on urban tree protections in Tigard, but Tualatin Riverkeepers has been active in the past on related natural resources issues in the City.

*Lake Oswego* - With a population of approximately 40,000, Lake Oswego has among the oldest and strongest urban tree protections in the region. Lake Oswego protects street, park, and yard trees across all land uses, and it regulates all trees in both development and non-development situations. It regulates trees down to 6 inches diameter, and has robust mitigation standards for tree removal. The City of Lake Oswego has recently updated its urban forest management plan and it has an urban forestry committee, but it does not have a target for its urban tree canopy cover. The new UFMP contains a good summary of needed next steps to safeguard and more actively manage the City's urban tree canopy. There is no existing advocacy group working

specifically on urban tree protections in Lake Oswego, but there is a robust network of Friends groups who work on the many City park properties.

*Oregon City* - Oregon City has a population of approximately 37,000 and is the Clackamas County seat of government. It has an urban tree code that protects street, park, and yard trees across all land uses, but does not regulate tree removal in non-development situations. Oregon City protects trees down to 6 inches diameter at breast height and sometimes requires mitigation for removal of regulated trees. Oregon City lacks an urban forest management plan and targets for urban tree canopy cover, but it does have an active and engaged Natural Resources advisory committee. A top priority for Oregon City is to develop more robust tree removal mitigation requirements, and to re-examine its exceptions for normal cutting, pruning, and maintenance of trees on private property to ensure that tree loss is not exacerbated by these allowances. There is no existing advocacy group working specifically on urban tree protections in Oregon City.

*Tualatin* - Tualatin (population approximately 27,000) has middling urban tree protections. Tualatin has liberal allowances for the unregulated removal of up to four trees per year from a site, and the City only regulates trees that are 8 inches in diameter and larger. Tree removal mitigation requirements could also be strengthened. The City has no current urban forest management plan, nor any targets for tree canopy.

*West Linn* - West Linn (population approximately 27,000) has middling urban tree protections for a city of its size. West Linn regulates all street, park, and private yard trees across all land uses. However the City only regulates relatively large trees of 12 inches in diameter or larger for most species. For Oregon white oak, dogwood, and madrone the City regulates trees of 6 inches and larger. West Linn does not have a distinct urban forest management plan, but its City sustainability plan sets tree canopy targets and addresses many of the topics in an UFMP.

*Wilsonville* - For a city of its size (population approximately 27,000), Wilsonville has among the strongest protections and management programs for urban trees, and should be a model for other small- to medium-sized cities to follow. Wilsonville protects street, park, and yard trees across all land uses, and regulates trees down to 6 inches in size or larger. It has a recently adopted urban forest management plan, a tree canopy target, and a full inventory of its street trees. The City's strength is in flexible urban design standards to accommodate saving and integrating existing trees as redevelopment occurs around them.

*Forest Grove* - Like Wilsonville, Forest Grove (population approximately 27,000), has a model program for urban tree protection and management. Forest Grove protects street, park, and private yard trees across all land uses. The City regulates trees 6 inches in diameter or larger, and it safeguards Oregon white oak trees 3 inches in diameter or larger. The City has an active urban tree committee, a current urban forest management plan, targets for urban tree canopy, and an inventory of its street trees.

*Woodburn, Camas, Newburg, Battle Ground* - These four cities (each with populations of approximately 21,000 to 26,500) have middling to weak protections for urban trees, with elements that require strengthening to forego tree loss. Woodburn only regulates trees of 24 inches or larger in size, leaving the majority of its urban trees unregulated and vulnerable to loss. Camas does not regulate tree removal in the downtown commercial areas, on developed lots less than 24,000 square feet, and on undeveloped properties greater than 24,000 square feet; together these exceptions put a large number of trees and areas of the City vulnerable to loss of tree canopy. Newburg only regulates street trees, with no protections for trees in parks and private yards. Battle Ground similarly only protects street trees. None of these four cities have urban forest management plans, tree canopy targets or tree committees/boards. We recommend that tree advocates in these communities look to similar-sized cities like Wilsonville, Forest Grove, and Milwaukie for examples of potential urban tree protections and programs.

*Happy Valley, Milwaukie, and Sherwood* - These three cities with populations ranging from 20,000 to 25,700 have medium to good protections for urban trees. Happy Valley, Milwaukie, and Sherwood protect street, park, and private yard trees across all or most land uses (Milwaukie does not yet regulate trees in industrial zones but is contemplating a tree code update for this). Happy Valley and Milwaukie have relatively limited allowances for unregulated tree removal, but Sherwood allows for up to five trees or 10% of the total on a lot to be removed per year without a permit. Happy Valley and Milwaukie regulate all trees 6 inches or larger in diameter, but Sherwood has a confusing mix of size thresholds triggering tree removal regulations depending on species, and whether tree removal is proceeding as part of a permitted development or not. Of the three cities only Milwaukie has an urban forest management plan and tree canopy targets.

For Milwaukie we recommend development of tree regulations for industrial lands. For Sherwood, we recommend simplifying and lowering the threshold for regulated tree size and limiting unregulated tree removals. Happy Valley is fringed by Damascus and other urbanizing areas of Clackamas County where no tree regulations are in effect, so we recommend working with the County to develop safeguards to protect trees in areas that will be incorporated into Happy Valley in the future.

#### **Communities with populations of 10,000-20,000:**

Of the various small communities in this size range, only Canby, Troutdale, St Helens, Sandy, Molalla, and Fairview protect at least some urban trees. Canby and Sandy protect street and park trees, but have limited or no protections for private yard trees. Troutdale protects street, park, and private yard trees - but only protects trees on undeveloped residential lots and allows for removal of any number of trees on developed residential lots. St Helens only protects street trees, but it exempts certain residential lots from any tree planting requirements. Sandy protects street and park trees, but only safeguards trees that are 11 inches or larger in diameter on residential lots of one acre in size or bigger. All other trees on residential lots are unregulated in Sandy. Molalla and Fairview have better urban tree protections and may serve as models for other similarly-sized small communities.

The remaining communities of Washougal, Cornelius, Gladstone, and Ridgefield have few or no protections for urban trees. A top priority for these communities is to develop urban tree codes, and begin with protection and managing street and park trees, then eventually expand to protection of private yard trees.

#### **Communities with populations less than 10,000:**

Of these very small communities, Scappoose, Woodland, King City, Urban Multnomah County, Durham, Maywood Park, and Rivergrove have some urban tree protections. The remaining communities of Wood Village, Estacada, and Johnson City have little or no protections for urban trees. Though far from perfect, King City and Durham may represent the best models for urban tree protection in the region for small communities with populations of less than 10,000. Urban Multnomah County also has very good protections for urban trees.

## Appendix D: References

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## Appendix D: Interviews Summary

A summary of interviews with staff from 18 jurisdictions and supplemental information from Tree City USA applications for 19 jurisdictions together provide more details on tree budgets and financing, staffing and work areas, as well as community partnerships and workforce



development for 26 jurisdictions. This summary is provided in a separate open access document [here](#).