



**Portland State**  
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## **Regional Urban Forestry Assessment and Evaluation for the Portland-Vancouver Metro Area**

**Prepared by Audubon Society of Portland and  
Portland State University's Department of Environmental  
Science and Management with funding from Metro**

**June 2009**

*(Revised June 2010)*

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## KEY FINDINGS

### **Policies relating to tree removal and preservation on private land outside regulated natural resource areas<sup>1</sup>**

1. There is considerable variation in local urban forestry policies and programs in the region. Policies and programs vary with respect to the applicability, strength and enforcement of regulatory elements, in the level of public investment and extent of incentive/voluntary programs for tree preservation and planting and in the level of citizen involvement and public/private partnerships.
2. Twenty-five out of 30 jurisdictions have some sort of ordinance regulating tree removal or preservation on private land outside of riparian areas subject to water quality and habitat protections.
3. The applicability of these tree removal and preservation regulations vary dramatically. The size of regulated trees, whether development is proposed, zoning and permit exemptions can all determine whether a given tree is subject to preservation, protection and mitigation standards.
4. Seven of those 25 jurisdictions do not apply regulations consistently across all land-uses categories. Thirteen jurisdictions have significant regulatory exemptions that allow the removal of urban trees without a permit or any permit review. Eleven jurisdictions require tree removal permit whether development is proposed or not. Four jurisdictions have Goal 5 programs that regulate removal of upland tree groves. Several others regulate tree removal associated with hillside development.
5. Exemptions, the limited spatial extent of regulations, and/or the absence of protection outside the development review process reduce the applicability and therefore the effectiveness of tree preservation and mitigation standards in several municipal or development codes.
6. Where tree removal or preservations regulations do apply, the authority of local governments to require preservation and mitigation also vary considerably. Jurisdictions tend to fall into four categories with respect to the types of regulations they apply: those that emphasize preservation, those that emphasize mitigation, those with limited regulations, and those with no regulations.
7. Few jurisdictions have clear and objective preservation and mitigation standards. Most have discretionary standards that are reviewed by public officials or staff. Some rely only on the broad policy goals and staff discretion. Six jurisdictions have the authority to require new development to demonstrate proposed designs will remove the least number of trees or basal area.
8. Mitigation standards vary among jurisdictions that require little or no mitigation, to those that require 1 to 1 replacement of trees, and to those that require 1 to 1 replacement of tree diameter.
9. It is difficult to assess the efficacy of compliance and enforcement of local tree regulations, but there appears to be a clear link to level and quality of staffing and citizen involvement. Ten of the 25 jurisdictions with tree regulations reported taking some sort of enforcement of compliance action within the last year.

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<sup>1</sup> This excludes regulations involving permits or design standards related to for heritage tree programs or tree removal on environmentally sensitive lands or natural hazard areas. This section includes regulations applying to publically-owned land regulated by a jurisdiction the same as private land.

### **Policies relating to trees in the public right-of-way**

1. There is greater consistency in policies relating to street trees relative to those regulating trees on private land.
2. Twenty-two out of 30 jurisdictions regulate street tree removal and 19 require a permit for removal in all cases.
3. Twenty-two jurisdictions require street trees to be planted as a condition for approving development. Most jurisdictions that regulate street trees require replacement of street trees when they are removed and have tree planting standards relating to size, species and location.
4. Landowners are responsible for maintaining street trees and the condition of sidewalks and planter strips in most jurisdictions. With few exceptions, local governments provide little or no funding for street tree maintenance and management. Only West Linn, Beaverton, and Tualatin have routine street tree maintenance programs.
5. One of the biggest gaps in street tree policies and programs appears to exist in county urban service areas where permits are not required for street tree removal, policies are weak, patchy, or non-existent and there is less staffing and funding for urban forestry-related activities.

### **Urban forestry management**

1. While most jurisdictions have some local funding sources for urban forestry related-activities, results indicate that the levels and sources of funding vary considerably.
2. Five jurisdictions (Durham, Portland, Lake Oswego, Tualatin, and Vancouver) have an adopted urban forestry management plan. Gresham and Tigard have one in the works.
3. Half of local governments have an established urban tree committee, board or urban forestry commission.
4. Four jurisdictions have an inventory of urban forestry canopy (Vancouver, Tigard, Tualatin, and Lake Oswego) and two have established targets for urban forest cover (Vancouver and Portland).
5. Eleven local governments have heritage tree programs that protect trees at landowner's request.

### **Regional gaps and future research**

1. There are a number of areas where greater regional coordination and consistency would help address gaps and support local urban forestry efforts:
  - Support local governments with little or no tree removal regulations in developing policies for tree preservation, planting and mitigation.
  - Assist in monitoring canopy cover and setting targets for expanding the urban forest.
  - Research and disseminate best management practices for tree protection during construction.
  - Research and disseminate best management practices for tree mitigation.
  - Identify and eliminate barriers to protecting, managing and expanding the urban forest in public right-of-ways, particularly in denser urban neighborhoods.
  - Identify new funding sources for protecting, managing and expanding the urban forest.

- Quantify ecosystem service values of urban trees at a local level.
  - Develop strategies for improving enforcement of tree preservation and protection regulations.
2. Future research and assessment of local urban forestry programs should look more closely at:
- Urban forest management in public parks and greenspaces.
  - Different levels and mechanisms for funding urban forestry related activities.
  - Compliance with tree preservation, planting and mitigation regulations and efficacy of enforcement activities.

## INTRODUCTION

In 2005 the Portland Metro region adopted the Nature in Neighborhoods program (Title 13 of the Regional Functional Plan) to protect and restore regionally significant fish and wildlife habitat in the Portland metro region. This program established land-use protections for the highest value riparian habitats in Metro's inventory of regionally significant fish and wildlife habitat. In adopting Nature in Neighborhoods, the Metro Council chose to rely on a combination of voluntary measures and other local programs to protect the region's upland wildlife habitat including much of the region's urban forest. Nature in Neighborhoods established regional performance indicators and targets to assess and evaluate progress toward protecting and restoring all 80,000 acres of regionally significant fish and wildlife habitat in the region. These measures and targets came to include a region-wide measure of urban forest canopy (although no target) to assess future trends. This regional indicator will provide a means to evaluate the efficacy of voluntary protection efforts and local programs to protect, enhance and manage the regional urban forest over time for its habitat, water quality and other environmental values.

In order to successfully implement the Nature in Neighborhoods program and achieve regional performance targets, the region needs to strengthen and better coordinate local programs while fostering greater citizen understanding and ownership of regional performance targets. There is great potential in making local urban forestry programs and policies a strategic focus in engaging citizens and successfully implementing Nature in Neighborhoods. Despite a growing interest in urban forestry at a local level, a preliminary examination of local urban forestry programs suggests that they vary substantially across the Portland-Vancouver region. Portland State University planning student Clint Wertz conducted a description and analysis of municipal urban forestry programs in 1998 (Wertz 2000).<sup>2</sup> However, the region lacked an up-to-date assessment of urban forestry programs and policies to understand which jurisdictions are doing what and where.

The Regional Urban Forestry Assessment and Evaluation project begins to fill this gap by generating and sharing a consistent body of information on local urban forestry programs in the Portland-Vancouver region. The project aims to provide information to support the efforts of citizens, planners and elected officials to improve local and regional policies and programs over time. Many jurisdictions are in the process of updating their urban forestry programs. Even the process of conducting interviews as part of this study resulted in numerous opportunities to share and exchange information. The project sought to assess policies and programs as comprehensively as possible, but additional research is needed to assess the relative success of policies and programs and the amount and precise mechanisms for funding urban forestry-related activities at the local level. The results of this project and other research combined with information on changes in population and forest canopy cover in the region could provide the basis for evaluating the success of policies and programs over time.

Audubon Society of Portland completed the project from July 2008 to June 2009 under a contract with Metro. Audubon Society of Portland subcontracted with Portland State University Department of Environmental Science and Management to assist with research. The researchers were Jim Labbe, Urban Conservationist, Audubon Society of Portland, and Denisse Fisher, Ph.D. candidate at Portland State University Department of Environmental Science and Management (See Appendix D). Shayna Denny with WEST Consultants, Inc. volunteered her time to complete the GIS analysis.

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<sup>2</sup> Clinton Everette Wertz. Municipal Urban Forestry Programs in the Portland/Vancouver Metropolitan Region. A description and analysis of urban forestry best management practices. Submitted in partial fulfillment of Master's Degree in Urban and Regional Planning. Portland State University. March 2000. Pp. 79.

Dr. Alan Yeakley also provided feedback and guidance throughout the project. Over 30 local government staff from jurisdictions across the region also helped complete this project. Local staff and a number of other citizens actively involved in urban forestry issues in the Portland-Vancouver region lent their time and knowledge in helping complete survey questions and participate face-to-face interviews.

## SCOPE OF WORK AND METHODS

We assessed and evaluated urban forestry policies and programs in the three-county Portland-Metro region plus Vancouver and Clark County Washington. The regional assessment emphasized a review of regulatory policy and programs but included non-regulatory elements as well in order to assess and evaluate:

1. How do local urban forestry policies and programs compare with each other?
2. Where are there policy and programmatic gaps at the local level?
3. What are strengths and weaknesses of local policies and programs in protecting and expanding the urban forest for multiple public values (including urban wildlife)?
4. What opportunities exist to coordinate planning and implementation at the regional scale?

Phase I of the project consisted of an online survey (Appendix A) with city and county staff in 30 jurisdictions across the Portland-Vancouver region. The more detailed Phase II included research, additional surveys (Appendix B), and interviews with city and county staff. In addition to interviewing staff, in some cases we also interviewed local residents actively involved in urban forestry issues and program implementation (Appendix C). Face-to-face interviews were conducted with 21 of the 30 jurisdictions that participated in Phase I and had policies governing tree removal on private land *and* in the public right-of-way. A technical team consisting of city and county staff, non-profit staff, and local residents actively involved in urban forestry issues reviewed and provided feedback on Phase I and Phase II survey design.<sup>3</sup>

### Phase I approach

Phase I consisted of a survey (Appendix A) completed online by local government staff (Appendix C). The purpose of Phase I was to broadly evaluate programs in the region to determine which municipal jurisdictions and counties currently have or lack general urban forestry polices and programs. The Phase I surveys were also designed to collect and distill information to allow easy comparison between cities and counties. Most critically the Phase I survey assessed whether a given municipality or county:

- has adopted urban forestry policy goals
- has an adopted urban forestry plan
- has a tree protection ordinance in its municipal or development code
- regulates tree removal on private land, in the public right-of-way or on public land
- has an active tree preservation committee or urban forestry commission
- requires tree planting as a condition of development
- considers tree species in its forestry program (for example, by maintaining a tree list to regulate or inform tree removal and/or planting)
- maintains an inventory of trees or urban forest canopy
- systematically tracks tree removal and planting
- has a dedicated funding stream for urban forestry programs
- funds tree planting
- has Tree City USA designation through the National Arbor Day Foundation.

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<sup>3</sup> Individuals serving on the technical team included Tracy Morgan and Jennifer Karps (City of Portland, Margo Barnett (Portland Urban Forestry Commission), Jonna Papaefthimiou (City of Lake Oswego), Barbara Fryer (City of Beaverton, Chris Neamtzu (City of Wilsonville), Dan Rutzick (City of Hillsboro), Kristin Ramstad (Oregon Department of Forestry), John Frewing (Tigard resident), Todd Prager (City of Tigard), Lee Dayfield (Gresham resident) and Scott Fogarty (Friends of Trees).

The Phase I survey also questioned jurisdictions on guiding goals and policies of local programs and the specific intent and/or purposes of local tree preservation ordinances. Finally, as part of Phase I we collected information on the size and median income of each jurisdiction in the Portland-Vancouver region. The results of Phase I determined the extent of surveys, interviews and research conducted in Phase II.

## **Phase II approach**

Phase II investigations assessed and evaluated policies and programs in more detail with research, additional surveys and face-to-face interviews. We conducted face-to-face interviews with local staff from 23 of the 25 jurisdictions (all but Hillsboro and Multnomah County) that have any regulations governing the removal of urban trees on private land outside environmentally sensitive lands. For the five jurisdictions that do not regulate tree removal on private land, we conducted additional online research and corresponded with staff via email or telephone to answer relevant Phase II questions and complete narrative summaries.

Like Phase I, the Phase II surveys (Appendix B) attempted to collect comparable information about urban forestry programs but also attempted to collect information on unique aspects of local policies and programs and to identify and document program elements in more detail to evaluate their overall strength and effectiveness. Phase II surveys and interviews included details on local regulatory and non-regulatory programs including:

- Tree preservation standards (regulated tree sizes, permit requirements, and exemptions)
- Performance/protection standards for preserved trees
- Heritage/historic tree programs
- Environmental overlay zones or tree preservation in natural resource areas
- Street trees programs and landscaping standards
- Mitigation
- Inspection and enforcement
- Planning and monitoring
- Education, tree planting and maintenance programs
- Staffing and funding for urban forestry-related activities.

## **GIS analysis of natural resource overlays and water resource regulations**

Using GIS, we assessed whether and to what extent local natural resource overlay zones or water resource regulations protect urban forest canopy (Metro 2007) and regionally significant wildlife habitat (Classes A, B, I and II and Habitats of Concern) across the Portland metro area. Since most tree preservation ordinances focus on individual trees, apply inconsistently across a given jurisdiction and do not require specific stands of trees to be preserved, it was not possible to consistently assess the efficacy of tree preservation ordinances in protecting existing urban forest canopy and regionally significant fish and wildlife habitat. Therefore, we focused this portion of our analysis on environmental overlay zones and/or existing stream or wetland vegetated buffer standards in each jurisdiction. We quantified the approximate percentages of the urban forest canopy cover and regionally significant habitat within each jurisdiction that is “mostly” and “partially” protected by existing local regulations. We used environmental overlay zones boundaries, floodplain or wetland boundaries, steep slopes, vegetated buffer, and/or other regulated area proxies to approximate areas where some level of tree preservation and/or

mitigation of tree removal are likely to occur with new development.<sup>4</sup> We then classified each overlay or regulated area into three categories:

**Mostly protect:** Establishes a minimum area where disturbance of native vegetation and soils on a lot is allowed such that no more than 15 percent of the entire overlay district or proxy regulated area would likely be disturbed and/or developed at build-out of the base zoning. In addition, some level of compensatory mitigation for disturbed areas may be required.

**Partially protect:** Limits disturbance of native vegetation and soils on a lot such that no more than 85 percent or more of the entire overlay district or proxy regulated area will be disturbed and/or developed at build-out of the base zoning. Actual allowed disturbance per lot could range from 16 to 84 percent. In addition some level of compensatory mitigation for disturbed areas may be required.

**Compensatory mitigation:** Some level of compensatory mitigation for disturbed areas is required. *Could* limit or effectively limit the disturbance of native vegetation and soils on a lot such that more than 85 percent of the entire overlay district or proxy regulated area would likely be disturbed and/or developed at build-out of the base zoning.

Appendix E provides details and classifications for overlay zones or other natural resource regulations used in the analysis. Note that because Metro canopy and regional habitat inventories do not extend into Clark County these jurisdictions were excluded from the analysis. Also Maywood Park, Gladstone, Multnomah County and Happy Valley were excluded from the analysis because data layers on natural resource overlay or proxy regulated areas were not available.

### **Narrative summaries**

To complement our comparative analysis of Phase I and II survey results we also developed narrative summaries of local programs and policies. In many cases these narratives provided the opportunity to explain the particular strengths and weakness of policies and programs in individual jurisdictions.

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<sup>4</sup> Note that tree cover does not necessarily provide desired habitat conditions in every circumstance. For example, many Habitats of Concern include important and less common meadow or oak woodland habitats that have little or sparse tree cover. Hence this analysis assesses the degree to which local natural resource overlay zones and water resource regulations provide protection of any regionally significant habitat area, whether or not tree cover is the desired habitat condition.

## RESULTS AND FINDINGS

Table 1 (Appendix F) provides summary data on year of incorporation (or year founded for counties), acreage, population, median income and urban tree canopy cover within the 30 jurisdictions that completed Phase I surveys. Considerable variation in the age, size, median income and canopy cover reflect the unique histories of settlement and development over the last 200 years and provides an important context for assessing local urban forestry programs.

**Table 1 – Demographic and tree canopy data by jurisdiction**

Incorporated city/urban area	Year incorporated or founded	Acres	Estimated population (2008)	Estimated median income (1999)	Acres of tree canopy cover (2007)	Percent tree canopy cover (2007)
Beaverton	1893	11840	86,205	47,863	3,020	25.4%
Cornelius	1893	1293	10,955	45,959	235	18.4%
Damascus	2004	10333	9,975	n/a	3,711	37.4%
Durham	1966	265	1,395	51,806	144	54.3%
Fairview	1908	2275	9,735	40,931	429	18.8%
Forest Grove	1872	3192	21,465	40,135	858	23.2%
Gladstone	1911	1586	12,215	46,368	441	27.7%
Gresham	1905	14288	100,655	43,442	4,064	27.1%
Happy Valley	1965	3868	11,455	93,131	1,531	34.0%
Hillsboro	1876	14665	89,285	51,737	3,384	22.9%
Johnson City	1970	43	675	35,517	7	15.1%
King City	1966	392	2,775	28,617	60	13.5%
Lake Oswego	1910	7134	36,590	71,597	3,405	47.1%
Maywood Park	1967	107	750	56,250	47	44.0%
Milwaukie	1903	3166	20,915	43,635	757	23.9%
Oregon City	1844	5947	30,405	45,531	1,697	27.0%
Portland	1851	95260	575,930	40,146	27,231	29.4%
Rivergrove	1971	114	350	85,000	57	48.3%
Sherwood	1924	2644	16,420	62,518	541	19.8%
Tigard	1961	7416	47,150	51,581	1,920	25.4%
Troutdale	1907	3278	15,465	56,593	773	20.0%
Tualatin	1913	5088	26,040	55,762	1,028	19.8%
West Linn	1913	5037	24,400	72,010	1,977	38.7%
Wilsonville	1969	4740	17,940	52,515	1,176	24.9%
Wood Village	1951	603	3,100	43,384	87	14.3%
Vancouver	1857	29485	162,400	41,618	5,425	19.7%
Urban Multnomah County*	1854	7422	Not avail.	Not avail.	Not avail.	Not avail.
Urban Clackamas County*	1843	27648	Not avail.	Not avail.	6,609	23.9%
Urban Washington County*	1849	20404	185,786	Not avail.	8,512	41.7%
Urban Clark County*	1845	17623	Not avail.	Not avail.	Not avail.	Not avail.

\* Unincorporated land inside Metro UBG or in Clark County Three Creeks Planning Area.

### Sources:

**Population for Oregon Cities:** Population Research Center, Portland State University <http://www.pdx.edu/prc/>. **Population for Urban Washington County:** Steve Kelley, Washington County Land Use and Transportation [Steve\\_Kelley@co.washington.or.us](mailto:Steve_Kelley@co.washington.or.us). **Population for Vancouver:** State of Washington Office of Financial Management: <http://www.ofm.wa.gov/pop/april1/>. **Acreages of Jurisdictions:** Regional Land Information System (Metro). **Median Income:** US Census 1999. **Tree Canopy for Oregon Cities:** Metro State of the Watershed Report <http://www.oregonmetro.gov/index.cfm/go/by.web/id=27579>. **Tree Canopy for Vancouver in 2005:** Vancouver Urban Forestry Management Plan, [http://www.ci.vancouver.wa.us/parks-recreation/parks\\_trails/urban\\_forestry/docs/UFMP\\_final-web.pdf](http://www.ci.vancouver.wa.us/parks-recreation/parks_trails/urban_forestry/docs/UFMP_final-web.pdf). **Tree Canopy for Multnomah, Clackamas, Washington Counties** Calculated from RLIS and Metro Urban Forest Canopy 2007 Data layer.

## Phase I

Local staff from all 30 jurisdictions completed the Phase I survey (Appendix G). In some cases involving smaller jurisdictions with limited staff, it was easier for us to complete the survey over the telephone. The majority of survey questions were answered. Questions that involved specific answers, such as a jurisdiction's annual expenditure on urban forestry related activities, were more often left blank.

## Phase II

For the most part, we completed Phase II surveys (Appendix H) after interviews with local staff. In many cases questions were not applicable or could not capture the unique circumstances, practices or policies in a given jurisdiction. Therefore, Phase II surveys were less complete and we addressed specific questions or issues in the narrative summaries.

### **Policies relating to trees on private land outside regulated natural resource areas.<sup>5</sup>**

Table II, "Comparative analysis of local tree regulations for private land" (Appendix I) and Table III, "Comparative analysis of local tree preservation and mitigation standards on private land" (Appendix J) group and compare tree ordinances on private land and, in many cases, on publically-owned land as well. Both tables summarize policies and standards relating to tree preservation, removal, mitigation and planting, excluding those applying to heritage tree programs or environmentally sensitive lands regulated under Goals 5, 6, and 7 of Oregon land-use planning programs. For the purposes of comparative analysis of policies and programs governing tree removal on private land, we found it useful to classify jurisdictions into the following four categories.

1. **Preservation emphasis:** Jurisdictions that have specific tree preservation standards, criteria or authority to require tree preservation. These jurisdictions tend to have higher staffing levels and political support for implementing robust tree policies and programs.
2. **Mitigation emphasis:** Jurisdictions that have general requirements for tree preservation but put greater relative emphasis on mitigating tree removal at greater than 1 to 1 trees. These jurisdictions also tend to have higher staffing levels and political support for implementing tree policies. In these jurisdictions higher mitigation ratios appear to provide an incentive for tree preservation while maintaining flexible design, but may result in less tree preservation.
3. **Some regulation:** Jurisdictions without clear standards, criteria and little or no discretionary authority to preserve trees, that allow extensive un-permitted tree removal through exemptions, and/or that do not require mitigation of tree removal greater than 1 to 1 trees.
4. **No tree ordinance:** Jurisdictions that do not regulate tree removal on private land. Tree removal regulations on private land vary significantly with respect to where and when they apply. The size of regulated trees, whether development is proposed, the zoning, and permit exemptions, all can determine whether a given tree is subject to preservation, protection and mitigation standards.

Table II (Appendix I) illustrates the wide range of urban tree regulations that potentially apply to developed and developing properties. Twenty-five out of 30 jurisdictions have some sort of ordinance regulating tree removal or preservation on private land. Seven of those 25 jurisdictions do not apply regulations consistently across all land-uses categories. Milwaukie, for example, only

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<sup>5</sup> Our analysis of policies relating to "tree removal on private land" excludes policies related to heritage tree programs or tree removal on environmentally sensitive lands or natural hazard areas. It includes policies applying to publically-owned land where jurisdictions apply regulations to public land.

applies tree regulations to development of flag lots while Portland does not regulate tree removal in some situations that do not involve formal land-divisions.

Thirteen jurisdictions have significant regulatory exemptions that allow the unmitigated removal of trees without a permit or permit review. For example, Gresham allows three to six trees of any size to be removed within a 12 month period depending on lot size. Beaverton entirely exempts developed properties less than ½ acre and has annual exemptions on developed properties greater than ½ acre.

Another gap in most local tree preservation ordinances is the lack of any permit required for tree removal outside the development review process. Eleven jurisdictions always require tree removal permits, whether development is proposed or not. Many jurisdictions do not have clear procedures for ensuring trees that are preserved as a condition of past development are not cut after a development application is approved. Instead these jurisdictions tend to rely on citizen complaints or inquiries in lieu of an established permit process. Other jurisdictions have specifically addressed this issue by requiring a permit to remove any tree above a minimum size even if tree removal is granted without review.

Exemptions, the limited spatial extent of regulations, and/or the absence of protection outside the development review process reduce the applicability and, therefore, the effectiveness of tree preservation and mitigation standards in several municipal or development codes.

Where tree removal or preservation regulations do apply, the authority of local governments to require preservation and mitigation also varies considerably, as illustrated by Table III (Appendix J). Only Portland, West Linn, Oregon City and Vancouver have clear and objective criteria for tree preservation. Most jurisdictions that regulate tree removal have discretionary criteria that staff or public officials must consider before granting a tree removal permit. However, not all of these standards and criteria – whether discretionary or clear and objective – can or do require applicants to avoid and minimize tree removal by demonstrating a low or least impact design. Six jurisdictions have the authority to require new development to demonstrate that proposed designs will remove the least number of trees or basal area. Finally, mitigation standards vary among jurisdictions that require little or no mitigation to those that require 1 to 1 replacement of trees and to those that require 1 to 1 replacement of tree diameter.

Specific regulatory requirements are important to ensure that new development avoids and minimizes tree loss. However, in interviewing local staff and citizens, the efficacy of regulatory programs also depends on local political leadership, staffing levels, the level of citizen involvement and associated enforcement efforts. For example, Wilsonville's code consists of a highly discretionary review process for determining tree preservation, removal and mitigation and specific criteria for tree removal that are not exceptionally restrictive or protective relative to other jurisdictions. However, per-capita staffing levels and expertise allow the city to work more actively and effectively with developers and landowners than other jurisdictions, ensuring the technical expertise and follow-through needed to implement policies and enforce requirements that preserve trees, minimize impacts or more effectively mitigate tree removal.

It was difficult to assess the efficacy of enforcement of tree regulations by local governments. Some local staff admitted and many citizens actively involved in urban forestry issues asserted that enforcement of tree regulations is weak and inconsistent. But in other jurisdictions, staffing levels or organized citizen advocates clearly improve enforcement of tree regulations. To provide a litmus test of a local government's enforcement activities related to tree preservation and protection, we asked each jurisdiction whether or not they had taken enforcement action or compliance efforts

related to their local tree regulations sometime in the past year. Ten of the 25 jurisdictions with tree regulations reported taking some sort of action in the last year.

### **Policies and Programs Relating to Trees Public Right-of-Way**

Table IV, “Comparative analysis of local street tree policies” (Appendix K) compares basic components of local street tree policies and programs in the Portland-Vancouver region. In general, there is greater consistency in policies relating to street trees relative to those regulating trees on private land. Most jurisdictions – 22 out of 30 – regulate street tree removal to some degree and 19 require a permit in all cases. Twenty-two require street trees to be planted as a condition for approving development. Most jurisdictions that regulate street trees require replacement of street trees when they are removed and have tree planting standards relating to size, species and location. Most also make landowners responsible for maintaining street trees and the condition of sidewalks and planter strips. With few exceptions, local governments provide little or no funding for street tree maintenance and management. West Linn, Beaverton, and Tualatin have routine street tree maintenance programs.

Smaller jurisdictions tend not to make policy distinctions between trees located on private land and those located in the public right-of-way. For example, Durham and Rivergrove lack a significant number of street trees and cover street trees under a general tree-cutting ordinance. Cornelius and Sherwood report being able to police street tree removal without a specific permitting process for removal. One of the biggest gaps in street tree policies and programs appears to exist in county urban service areas where permits are not required for street tree removal, policies are weak, patchy, or non-existent and there is less staffing and funding for urban forestry-related activities.

### **Urban forestry management: funding, planning, voluntary programs and partnerships**

Table V, “Comparative analysis of urban forestry management” (Appendix L) details the wide range of staffing, funding and programming levels relating to urban forestry among local governments in the region. While most jurisdictions have some local funding sources for urban forestry-related activities, our results indicate that the levels and sources of funding vary considerably. Five jurisdictions (Durham, Portland, Lake Oswego, Tualatin, and Vancouver) have an adopted urban forestry management plan, while two more (Gresham and Tigard) have one in the works. Half of local governments have an established urban tree committee, board or urban forestry commission. Four jurisdictions have an inventory of urban forestry canopy (Vancouver, Tigard, Tualatin, and Lake Oswego) and two have established targets for urban forest cover (Vancouver and Portland). Ten jurisdictions have a certified arborist on staff. Eight jurisdictions have a dedicated tree fund that pools in lieu planting or penalty funds. Eleven local governments have heritage tree programs that protect trees at landowner’s request.

### **GIS analysis of natural resource overlays and water resource regulations**

The extent of existing urban forest canopy and regionally significant habitat varies considerably among jurisdictions.<sup>6</sup> This is clearly a product of historic land-use patterns, both pre-urban agricultural uses and more recent urbanization. State or regional law requires jurisdictions to limit tree removal adjacent to streams and wetlands to protect water quality, fish and wildlife habitat, or public health and safety. Four jurisdictions – Portland, Wilsonville, Lake Oswego and Hillsboro – have Goal 5 programs that preserve upland forests inside the 2002 UGB, and Beaverton and

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<sup>6</sup> Note that recent analyses in the Metro State of the Watershed Report assessed forest cover within unincorporated areas within Metro’s Boundary however this analysis assessed unincorporated areas inside the UGB.

Washington County require mitigation when development displaces upland forests. Other jurisdictions like Gresham and Tigard regulate tree removal associated with hillside development.

Appendix E provides the results by jurisdiction from the GIS analysis of natural resource overlays and water resource regulations that preserve tree canopy, mitigate removal of trees, or otherwise protect regionally significant wildlife habitat (not all of which includes tree canopy). Results indicate that jurisdictions provide a wide range of protection for their existing urban forest canopy through natural resource overlay zones or other regulations applying to environmentally sensitive lands. Jurisdictions like Gresham and Wilsonville mostly protect a relatively high percentage of their existing urban forest canopy with natural resource overlay zones (38.4% and 37.4% respectively). In contrast, jurisdictions like Damascus, Wood Village, Cornelius and Milwaukie mostly or partially protect a relatively small percentage of existing urban forest canopy (0%, 6.7%, 7.4%, and 9% respectively) with overlay zones or other regulations.

## **URBAN FORESTRY POLICIES AND PROGRAM NARRATIVE SUMMARIES**

The following narrative summaries detail the specific elements of local urban forestry policies and programs while highlighting strengths, weaknesses and unique circumstances that characterize programs in individual jurisdictions. In surveying local governments' urban forestry policies and programs throughout the entire region, several features of individual jurisdictions stand out as exceptions in their apparent strength, effectiveness, scope or comprehensiveness.

In terms of regulatory programs applying to private land, there are several local government programs that stand out for one or more characteristics. Lake Oswego and Portland both have the most extensive programs for protecting upland tree groves. Lake Oswego's tree removal regulations are particularly thorough at addressing tree removal outside the development review process and in situations involving annexation. Portland's tree regulations for land division provide particularly detailed regulations for preserving trees of different species. Tigard and Oregon City have some of the strongest provisions for mitigating tree removal, requiring mitigation based on regulated tree diameter with few exceptions. Most other jurisdictions require replacement of mature trees with a single sapling. Vancouver's tree regulations include a minimum tree density requirement that can be achieved by either planting or preservation and discretionary provisions to preserve trees of particular ecological or social significance. This mix of clear and objective standards and discretionary criteria provide for both consistency and flexibility in application.

Several local governments have particularly strong or comprehensive urban street tree programs. The City of Portland's Neighborhood Tree Liaison Program provides an exceptional level of training and education to local citizens. Portland has also invested heavily in street tree stocking inventories and funded extensive street tree planting. Beaverton has an especially thorough street tree maintenance program.

Most cities require street tree planting as a condition of approving development but frequently tree planting is lowest on the priority of right-of-way improvements or are not planted due to a higher priority given to driveways, intersection sightlines, utilities and other aspects of the built environment. To address this issue in its planned Villebois community, Wilsonville has developed a system of prioritizing right-of-way improvements to ensure that street tree planting is given higher priority. Oregon City addresses the issue by requiring a set number street trees to be planted based on the length of street frontage associated with a new subdivision lot. If one or more street trees cannot be accommodated due to the placement of driveways, utilities, signage and other built infrastructure, developers must pay into a tree planting fund that pays for trees to be planted on public land at other locations in the city.

Few jurisdictions have conducted urban forestry management plans. Vancouver, Portland and Lake Oswego have the most recent Urban Forestry Management Plans. Vancouver and Portland include specific goals and targets for expanding urban forest cover. The City of Portland also has an Urban Forestry Action Plan and has produced a number of other reports quantifying the ecosystem service value of the urban forest.

### **City of Beaverton**

Beaverton has been part of Tree City USA for the last 15 years. Beaverton has a particularly thorough street tree maintenance program with a set schedule for inspecting and maintaining all street trees every three years.

Beaverton first adopted regulations related to preservation of Significant Natural Resource Areas in 1985 (ORD 3441). In 1990 Beaverton adopted regulations for Preservation of Trees and Vegetation

(ORD 3740), outlining specifics for tree protection, pruning and removal while refining the 1985 regulations. Revisions to the regulations for preservation of trees and vegetation within the Development Code occurred over time with the most recent edits adopted in 2006.

Several types of trees are regulated by Beaverton's development code and defined within Chapter 90:

- **Significant individual trees or tree groves** – Trees and groves that have been identified as possessing exceptional characteristics and are mapped on the city's Inventory of Significant Trees and Groves (60.60)
- **Historic trees or tree groves** – Trees of historic significance due to their association with historic properties or the general growth and development of the city (60.60)
- **Landscape trees** – Trees that have been preserved or planted as part of an approved landscape plan (40.20 and 60.05)
- **Street trees** – Trees located within the public or private right-of-way or easement for vehicular access, or associated with public utility easements (60.15)
- **Trees within a significant natural resource area** (SNRA includes wetlands and riparian corridors) – Trees located within Goal 5 areas (60.67)
- **Community trees** - Healthy trees of at least ten inches (10") DBH located on developed, partially developed or undeveloped land; also includes trees of at least of 6" for various native species (60.60)
- **Mitigation trees** (60.60) – Trees planted in an effort to alleviate the impact of the removal of other trees; a mitigated trees takes on the designation of the tree removed

The city just finished updating a Tree Inventory Map, effective April 30, 2009, that combines the contents of previous mapping efforts and reflects recent changes. Currently, there are no plans to change the development code as it relates to trees and tree regulations.

### **Clackamas County, unincorporated urban**

Clackamas County has extensive and detailed comprehensive plan language relating to urban forests and trees under Chapter 3 for "Natural Resources and Energy." Policy 6 for "Forests" calls for initiating "a tree conservation and planting program for the northwest urban area to preserve urban forest areas and promote tree landscapes." Specific implementation items under this policy include an urban forest inventory; adoption of tree conservation standards in design review, grading and subdivision ordinances that minimizes removal of trees and vegetation on undeveloped lands within the urban area; development of a urban street tree planting and maintenance program; and creation of a special review process for commercial timber harvesting within the urban area.

Despite the breadth and specificity of the comprehensive plan policies, the County has yet to implement them, in part due to funding constraints. Outside the recently adopted Title 13 Habitat Conservation Areas and the Willamette Greenway overlay zone, zoning and development ordinances (ZDOs) have limited and nebulous code language relating to tree preservation and protection inside the Metro UGB. The regulations only apply to new single-family subdivisions and no permit is required for tree removal outside a development application. The County's heritage tree program is entirely voluntary and affords no protection for designated heritage trees. The County has tree-planting requirements for parking lots but only requires street tree planting along a few designated boulevards and in the Sunnyside Village District. Clackamas County is currently undergoing a planning process to adopt more explicit code language governing tree preservation

and protection. A recently convened Urban Tree Task Force aims to improve existing ZDOs to better implement urban tree and forest related policies in the comprehensive plan (see below).

In September 2008, the Clackamas County Board of Commissioners appointed the 13-member Trees Task Force, charged to recommend changes to the ZDOs “to assure that the tree canopy is maintained, preserved and enhanced, by controlling predevelopment tree cutting without prohibiting development.” The citizen task force is also charged with making other recommendations “to contribute to long-term management of the County’s urban forest reserves.”

### **Clark County, unincorporated urban**

Clark County has no urban forestry policies or programs. The County’s development code does require landscaping associated with development within the public right-of-way including 2-year maintenance and survival requirements (Subtitle 40.320.020), but no specific standards require tree planting. Clark County’s critical area ordinance (Subtitle 40.4) governs tree removal in areas of critical natural resource concern, mainly along streams, wetlands, shorelines and geologic and flood hazard areas. Title 40 requires development and redevelopment to avoid, minimize and provide compensatory mitigation for any impacts to critical area functions and values such that there is no net loss in those functions and values. This includes the functions and values provided by trees and other woody vegetation. Clark County also has forest practices regulations that govern conversion of forest land to other uses and ensure that the County’s critical areas ordinance is applied in these situations.

### **City of Cornelius**

Cornelius has limited urban forestry policies and programs and is one of a handful of jurisdictions in the region that do not have Tree City USA status. Cornelius does not regulate tree removal on private land outside its Natural Resource Overlay and does not have a permit process for removing street trees, although staff report that they are able to police street tree removal effectively given Cornelius is roughly two square miles in area. Cornelius’s development code Title 17 for subdivisions does require the planting of street trees as part of frontage improvements for street construction. Trees must be installed along every 30 lineal feet of street frontage in accordance with an approved public works street tree list. City Transportation System Plan details required planter strip widths for new streets; they range from 4 to 6 feet for residential streets.

### **City of Damascus**

As Oregon’s newest city, Damascus does not have an adopted comprehensive plan and zoning code. Therefore it does not currently regulate tree removal as a part of development. However, an increase in clear cutting and tree removal has emerged as a major issue of community concern. To address this issue the Damascus City Council adopted an interim tree-cutting ordinance in 2007 to prevent the wholesale clearing of trees in advance of pending comprehensive plan and zoning decisions. The Council has renewed the ordinance continuously since 2007 (most recently May 4, 2009).

The ordinance prohibits the clear-cutting of trees within the urban growth boundary (UGB) of the city with the intent to protect citizens of the city from personal injury and property damage due to an increased susceptibility to wind and other hazards to public peace, health and safety resulting from clear cuts. The ordinance is interim until the city can consider and adopt long-term legislation regulating forest practices, tree preservation and habitat protection. This ordinance is expressly not intended as be a moratorium on construction or land development, function as a land use regulation, implement Metro Title 13 (Nature in Neighborhoods), or regulate forest practices.

The ordinance’s most significant provision is a prohibition on clear-cutting defined as “the removal of more than ten (10) trees, from a parcel or from adjoining parcels in common ownership, within

any twelve (12)-month period; or the removal of more than five trees from a parcel that leaves less than an average of one tree per 1,000 square feet of lot area, distributed throughout the entirety of the site." The ordinance includes a provision for permitted removal of hazardous trees.

The City of Damascus and local citizens are currently in the process of developing a comprehensive plan and zoning designations including conservation overlays. The community has repeatedly expressed the desire to conserve forested buttes in Damascus for scenic values, wildlife, water quality and sense of place. The city is on schedule to adopt policies to protect natural features in some form within the coming year.

### **City of Durham**

Like many smaller jurisdictions Durham does not have Tree City USA designation, an urban forestry committee or tree board, or a heritage tree program. However, Durham is known for its extensive urban forest cover and for prioritizing tree preservation. It is also one of a handful of jurisdictions that have an adopted urban forestry plan. Durham reports spending roughly \$1,000 on urban forestry-related activities in the 2007/2008 fiscal year, provided by development fees and general fund allocations (property taxes).

In 1975, the city passed its first tree ordinance prohibiting the cutting of trees on both public and private property without a permit whether or not development is proposed. Tree regulations are mostly located within their development code, but some requirements can also be found within the comprehensive plan. The city does not actively regulate trees in the public right-of-way, as very few actually exist in association with a particular property. Durham's tree ordinance (Ordinance Number 228-05) applies to all trees  $\geq 5$  inches in diameter within the city limits, regardless of their location. Unless a tree is dead or hazardous, all tree removals must be approved by the city's planning commission and require a permit. The cost for a tree removal permit is \$10 per tree, plus a \$5 application fee. Emergency removals require an emergency permit and do not have a fee, as determined by the city administrator.

### **City of Fairview**

Fairview has Tree City USA designation but no adopted urban forestry plan or established tree board/committee or urban forestry commission. Fairview funds urban forestry-related activities through stormwater fees and city general fund allocations.

Fairview defines "significant vegetation" as trees with a diameter of  $\geq 6$  inches, except for non-native, invasive species. The city protects "significant vegetation" associated with some development and public work projects. No trees can be planted or removed in the public right-of-way and public property without permission of the city public works director and a tree removal permit. Street trees must be planted no more than 30 feet apart for all developments that are subject to land division and site design review. However, street tree standards may be waived when trees preserved within the front yards provide the same or better shading and visual quality as street trees. The city requires the developer to provide a performance bond in an amount determined by the city engineer to ensure the planting and care of street trees during the first two years after planting. After this time period, street trees become the responsibility of landowners. If street trees are removed they must be replaced with trees of the same type (coniferous or deciduous). While not clearly delineated within its code, the city requires on-site mitigation for regulated trees as part of the development process and for the replacement of street trees (unless trees are hazardous). The mitigation standard stands at 1:1 tree. Mitigation trees must be 1½ inch caliper if deciduous and six inches in height if coniferous.

### **City of Forest Grove**

Forest Grove has had tree-related policies regulations and a tree board/committee in place since 1992, the year it received Tree City USA status. Forest Grove does not have an urban forestry plan but is the only jurisdiction in the region that has a street tree inventory for its entire street network.

In March 2009, Forest Grove adopted new tree-related regulations and administrative practices to better address tree preservation in the land division and development review process. The new code (10.5.100) clarifies when and where tree regulations apply. The new code also requires a tree removal permit to occur earlier in the development permitting process, adds requirements for development applications involving regulated trees, and revises tree preservation and mitigation standards. Forest Grove does not require a permit to remove trees on private property outside the development process, although there are specific criteria for removing trees that were preserved as a condition of past development. Owners of significant “registered trees” are notified annually of their responsibilities that include a public hearing before tree removal. Depending on the code, tree removal decisions are discretionary decisions of staff, the planning director, or the Community Forestry Commission. Forest Grove applies a slightly modified version of Metro’s Title 13 model ordinance to habitat conservation areas. The city requires tree planting for new developments in parking lots, along streets and in buffer areas between zones and provides limited funding for neighborhood tree planting.

### **City of Gladstone, urban**

Gladstone only manages trees within parks and lacks a tree ordinance for private land. Within parks, if trees need to be removed, the city hires an arborist. There is no permitting system for tree removal on private property or in the public right-of-way. Existing street tree maintenance is the responsibility of property owners, except for any street trees that have been planted by the city. The city has limited staff and budget and water and sewer services have been a budgeting priority. Gladstone’s landscaping standards require 15% of a property to be landscaped as part of most new development. However, no tree planting or placement standards exist. Trees are also informally protected within riparian areas as part of the city’s acknowledged Goal 5 program that will be updated before the end of the year in order to substantially comply with Metro Title 13. Gladstone has no tree committee or urban forestry commission, does not have Tree City USA status, and has no adopted urban forestry plan.

### **City of Gresham**

In 2009, Gresham became the newest jurisdiction in the Portland-Metro area to achieve Tree City USA status. Gresham has had tree regulations that apply both during development and outside of the development review process for over 10 years. Development Code Section 9.1000 covers all regulated trees and Section A14.004 applies to significant trees. Gresham has three overlay zones that either directly require or indirectly result in retention of trees when properties are developed and requires planting of street and parking lot trees as a condition of new development. Gresham funds urban forestry-related activities through a combination of stormwater fees, development fees and grants. The staff reported some \$600,000 dedicated to urban forestry-related activities in the 2007-2008 fiscal year.

Gresham hired an urban forestry planner in 2008 who reports to the planning director. The urban forestry planner is charged with a number of tree-related responsibilities including drafting an Urban Forestry Management Plan in 2009 and subsequent review and revision of tree-related codes in 2010. The city also renamed and reconstituted its Tree Preservation Committee into a newly formed Urban Forestry sub-committee to the Natural Resource and Sustainability Advisory Committee.

### **City of Happy Valley**

Happy Valley adopted its tree regulations five years ago and achieved Tree City USA in 2008. Its planning commission acts as its tree board. The city does not have an adopted urban forestry management plan and has yet to develop a heritage tree program. Happy Valley reports spending \$70,000 on urban forestry-related activities in the 2007/2008 fiscal year, provided by development fees.

In May 2009, the city adopted new code and comprehensive plan amendments. Happy Valley requires a permit for trees  $\geq 6$  inches at four feet whether or not development is proposed. The city applies different discretionary standards for tree preservation depending on zoning and whether and what type of development is proposed. Tree mitigation is required for all zones and can be greater than 1:1 when development is proposed. Happy Valley has special regulations that apply to newly annexed lands. Street trees must be planted depending on district and landscaping standards. These requirements include tree planting and buffering requirements for parking lots. Native, nuisance and prohibited plant lists can be found in Appendix A of the development code.

### **City of Johnson City**

Johnson City has no urban tree or forestry related policies or programs.

### **City of Hillsboro**

Urban forestry goals and policies have been embedded in Hillsboro's comprehensive plan for 30 years. In 2005, the revised Hillsboro 2020 Vision and Action Plan (a guiding community vision document and not adopted policy) included a new strategy to establish a tree planting, maintenance and preservation organization and program over the coming years. Other strategies in the action plan address the preservation of natural resources including trees. Hillsboro currently does not have an urban forestry plan, an urban tree board or commission or Tree City USA status.

Hillsboro has limited tree preservation or protection standards outside its natural resource overlay zone; however, the overlay zone does include some protections for upland forests. Mature trees on private land listed on the city's cultural resource inventory or within station community planning areas (near light rail stations) are regulated and can be preserved as a condition of development. In addition, staff reports that some new development approvals include conditions of approval designed to preserve and protect trees on private land but no specific code language was cited.

Street tree planting is required with new development in Hillsboro. All street trees must be planted in compliance with city standards. Property owners in Hillsboro are responsible for the maintenance of adjacent trees within the public right-of-way. Hillsboro does require a permit for street tree removal in most parts of the city. However, mature street trees listed in the city's cultural resource inventory and within Hillsboro's Orenco Townsite Conservation District are regulated. For example, mature street trees within the Orenco Townsite Conservation District may be removed only with prior permission from the planning department based on a report from a registered arborist. Mature street tree removal in this district must be supervised by a registered arborist or professional tree service, and tree replacement standards are in place.

In 2003, Hillsboro adopted a Goal 5 Natural Resources Management Plan that included a Significant Natural Resource Overlay (SNRO) District. The SNRO requires new development in or near mapped natural resource areas – including some upland forests – to avoid, minimize or mitigate impacts and these impacts include those associated with tree removal.

Hillsboro is in the process of completing a citywide street tree inventory using ArcGIS-based software loaded on handheld computers. The location, species, size and condition of 14,000 street trees have been catalogued by community residents, 4-H youth, and university student interns since 2005. The anticipated inventory completion date is fall 2009.

### **City of King City**

According to King City's comprehensive plan, the protection of all regulated trees is to be encouraged so that the "removal of existing trees should be limited to what is necessitated by land development, safety and disease." The city regulates trees that are  $\geq 6$  inches at four feet. City policy aims to limit the removal of existing trees to what is necessitated by land development, safety and disease.

King City adopted its current tree regulations in 2004 under Chapter 16 of its municipal code. This chapter covers tree preservation on developable properties, which require the submittal of a site plan that includes a description of all trees that are to be retained or removed. Trees are also to be protected under best management practices during construction. The city keeps a list of any vegetation listed on a plat map or a document recorded with the plat.

King City has no designated funding source for urban forestry, does not have a designated tree committee or urban forestry commission, an urban forestry plan, or Tree City USA designation.

### **City of Lake Oswego**

Since it initiated its tree preservation efforts over a decade ago, Lake Oswego has had one of the most comprehensive urban forest programs in the region. The city has had Tree City USA designation since 1990 and adopted a new urban forestry plan in 2007. According to their comprehensive plan, Lake Oswego emphasizes tree preservation rather than mitigation. A previous study on this region's urban forestry policies identify the city of Lake Oswego as one of the most active in terms of monitoring and maintenance programs, both for trees on private property and in the public right-of-way. This study recognized that Lake Oswego has some of the most stringent tree preservation standards in the Portland-Vancouver Metro region (Wertz, 2000).

According to their comprehensive plan, the city must develop a planting and maintenance program for trees in public right-of-way, open spaces and parks. Unfortunately, this request was not funded this year. The plan also explains that the city will preserve natural resource sites, through public acquisition and other methods such as conservation easements, to permanently preserve trees and tree groves. Lake Oswego Parks and Recreation is primarily responsible for acquiring conservation easements to protect valuable forest habitats, such as oak savannah.

Lake Oswego adopted a new tree preservation ordinance in 2007 and established a Tree Code Task Force that evaluates and provides amendments to the new tree code. This task force includes an arborist from the Community Forestry Commission, a general arborist, a Natural Resources Advisory Board (NRAB) representative and local residents. Meanwhile, the Community Forestry Commission was formed to hear requests concerning Type II tree cutting permits.

Tree removal is regulated under Lake Oswego's Code (Chapter 55) and the Sensitive Lands Code (Chapter 50). Chapter 50 permits removal of up to two trees greater than 10" dbh a year on single-family residential zones unless the trees are 1) protected as a condition of past development; 2) designated as a Heritage Tree; or 3) located within a Resource Conservation (RC) or Resource Protection (RP) overlay district. The city also provides detailed tree protection instructions during development.

### **City of Maywood Park**

Maywood Park has no urban forestry-related policy goals in its comprehensive plan but has had an ordinance regulating tree removal since 1989. The city requires some tree planting as a condition of development. Removal permits are required for trees on private land and in the public right-of-way. In the latter case, the city tracks street tree planting and removal and also funds some tree planting in the public right-of-way. Urban forestry activities are funded by tree removal permit fees. Maywood Park does not have Tree City USA designation, an adopted urban forestry plan, or an

established tree committee or urban forestry commission. However, the city does have a volunteer city forester.

### **City of Milwaukie**

Milwaukie has had a tree ordinance governing tree removal for 10 years. However, these only apply to trees located in the public right-of-way and trees on flag lots, and the latter only when development is proposed. The city council considered broader tree regulations in the past but these were never adopted. The city's Willamette Greenway zone and Water Quality Resource Areas also govern tree removal. Milwaukie provides limited funding for urban forestry-related activities through its engineering and code enforcement divisions. Milwaukie does not have Tree City USA designation, an adopted urban forestry plan or an established tree committee or board.

### **Multnomah County, urban unincorporated**

Multnomah County has very little land to which it provides urban services and planning. Multnomah County regulates tree removal on this small amount of urban service area through an agreement with the City of Portland. Therefore, the applicable regulatory policies relating to tree removal, preservation and planting are the same as the City of Portland. Multnomah County does not have a tree board or urban forestry commission, an urban forestry plan or Tree City USA designation.

### **City of Oregon City**

Oregon City's tree ordinances have been in place for more than a decade. The city's comprehensive plan identifies the need to develop better policies to protect its urban forest, as the "total tree cover in the city has diminished" as result of development. Oregon City has created tree regulations that apply during development, annexation and land division. Annexations (14.04.050), subdivisions (16.08.040) and multi-family and commercial/industrial development (16.12) require site plans that identify, among other features, wooded areas, isolated trees (all trees  $\geq 6$ " dbh) capable of being preserved and significant natural resource areas.

For new development in single-family residential zones, the development code requires that all regulated trees "shall be preserved outside the building area, which is defined as right-of-way, public utility easements and within building setbacks." According to the code, all regulated trees will remain after development of the site if it is situated in a building setback, is part of landscaping, a public park or landscape strip, or legally reserved open space; is in or separated from the developable remainder of a parcel by an undevelopable area; or is on the applicant's property and not affected by the development. Oregon City currently does not waive building setback requirements to preserve trees. Oregon City does not currently have tree preservation standards that could modify subdivision design. Nor are there discretionary development standards that could require adjustments of building or driveway areas to preserve regulated trees.

Oregon City allows tree removal outside development application and without approval, on all private land with a few exceptions. Additionally, approval for regulated tree removal must be applied for in private properties located in a) the Canemah National Registered Historic District; b) designated historic structures; c) the Unstable Slope Overlay District (slopes over 25% and other unstable areas); d) the Water Quality Resource Overlay District (within 200 feet of stream or wetland); and f) outside single-family residential zones. Additionally, in commercial zones all regulated trees within the property must be mitigated. There is currently no permit system to track tree removal and replacement outside the development review process unless the tree is in the public right-of-way.

Chapter 12.08 regulates community forests, heritage trees and street trees. The city also requires planting of street and parking lot trees as a condition to most new development. Overall, the city's

focus is on retaining canopy cover, with a large emphasis on tree mitigation during development and within sensitive areas. Oregon City is currently in the process of revising its tree regulations, which should be completed sometime this year. The city is also updating its natural overlay district (17.49) to comply with Metro's Title 3 and 13. Historic/heritage trees are regulated by the city. Heritage trees are to be designated by the Natural Resources Committee. A process for designation of Heritage Trees has been written into the latest code amendment, but no trees have been designated yet.

Oregon City does not have Tree City USA designation, an established urban tree committee or board, or an adopted urban forestry plan.

### **City of Portland**

Portland first received Tree City USA designation in 1979. In 1995 Portland adopted its first urban forestry management plan and its current tree regulations and urban forestry commission. The City of Portland's urban forestry plan was revised in 2004 and followed by an Urban Forestry Action Plan in 2007. Both these documents and the comprehensive plan contain policies relating to urban forestry in Portland. Other than Vancouver, it is the only jurisdiction that has explicit targets for urban forest canopy cover by land-use category. Portland has an established Neighborhood Tree Liaison Program that has trained neighborhood representatives as neighborhood tree stewards (NTS) in urban tree care and the city's urban forestry rules and programs. The Parks Urban Forestry Division offers a 7-session course to prospective NTSs that educates stewards on general tree care, tree biology, tree planting, preservation and identification. Once trained, NTSs work with Portland Parks and Recreation staff on tree projects in their neighborhood.

Various city codes and chapters regulate tree removal, protection and mitigation depending on the location, size, species, land use zone and type of development proposed. On a single property, regulations may vary further depending on size of property, size of trees and canopy cover, whether it is public or private ownership, the type of development proposed, whether the property is developed, or whether the tree was preserved as a condition of past development. Since 1972 Portland Parks and Recreation's (Parks) Urban Forestry Division has regulated trees in parks and in the public right-of-way (Chapter 20.40). Since 1995 the parks department has also regulated tree removal on private property in instances that do not involve development (Chapter 20.42). Parks also staffs the Urban Forestry Commission and runs the Heritage Tree Program, a Neighborhood Tree Liaison Program, and various education and planning efforts. Title 16 and Title 17 also include tree regulation in the public right-of-way and associated with other public infrastructure (sewer and stormwater systems). The City is considering a new rule to regulate private street trees by administrative rule (under Chapter 24). The Bureau of Development Services regulates tree preservation, protection and mitigation associated with land divisions and with all development in special overlay zones and plan districts.

In recent years there has been considerable confusion about Portland's tree regulations and concern about regulatory gaps, loopholes, adequacy of mitigation, inspections and enforcement. The City of Portland is in the midst of a comprehensive review and evaluation of tree regulations and their administration and enforcement. The "City-Wide Tree Project" identified a number of problems with the existing regulatory structure including regulatory gaps and administrative complexity. The project has suggested the need for greater consolidation and consistency and to elevate tree preservation and protection in the development review process.

The City of Portland funds urban forestry and urban forestry-related activities through a variety of sources and through different bureaus. The Bureau of Development Services is funded largely through permit fees. The Urban Forestry Division is funded largely through the general fund but also through grants. Portland Parks also conducts natural area acquisition with funds from bonds and system development charges. The Bureau of Environmental Services coordinates Portland's

“Grey to Green Initiative” which uses some sewer and stormwater fees to fund natural area acquisition and watershed re-vegetation, including tree planting. The Grey-to-Green initiative has a goal of planting 83,000 trees over a five-year period at a cost of roughly \$14 million. Meeting this goal will depend on success in securing federal stimulus funds. As part of that goal the city planted some 1,700 street trees through a partnership with Friends of Trees and 144 trees in public parks and natural areas.

In 2007 the City of Portland began the Citywide Tree Project, “a multi-bureau effort to clarify, simplify and provide a consistent and effective regulatory framework for trees in the City of Portland.” Over several months the city has worked with a diverse group of stakeholders to develop a series of issue papers describing the city’s policies, regulations and administrative processes and indentify problems and possible solutions for reform. In February 2009 staff presented a preliminary set of policy solutions and regulatory improvements to the planning commission. The interbureau project staff is currently preparing a refined set of policy and regulatory changes scheduled to go before the planning commission in Fall 2009. These include proposals to:

**Establish a clear, cohesive regulatory framework**

- Establish a single point of contact for the public
- Pilot a 24-hour response line
- Create comprehensive consolidated tree/urban forestry title
- Develop a tree technical manual
- Create a consistent, equitable tree cutting permit system
- Clarify and build community understanding of the public and street tree permit system
- Consolidate permitting functions

**Enhance the urban forest through development and redevelopment**

- Establish flexible development standards to improve tree preservation
- Provide advanced mitigation credit for proactive tree planting
- Improve tree preservation, planting and mitigation in land division and other discretionary reviews
- Establish tree planting standards for building permits
- Better address tree preservation and protection in public works and capital projects
- Optimize tree preservation and solar energy systems, sign visibility and views
- Update and clarify in-lieu of planting fees and tree fund
- Improve implementation, inspections and resolution of violations

**City of Rivergrove**

Rivergrove has no urban forestry-related policy goals in its comprehensive plan but has had an ordinance regulating tree removal for over 10 years. The tree ordinance was most recently updated in 2004 and regulates trees on private land and in the public right-of-way. City staff are currently in the process of be updating the ordinance again. The City of Rivergrove regulates tree removal near streams and wetlands consistent with Metro’s Title 13 performance standards.

Ordinance No. 74-2004 requires tree-cutting permits for trees on private land and in the public right-of-way with 11.5 inch diameter measured 4.5 from the ground with special provisions for retroactive emergency permits. Permits are granted promptly for up to three trees within a 12-month period on lots located outside a water quality resource area. If located inside a water quality resource area the permit requires the approval of the planning commission at one of its meetings.

**City of Sherwood**

Sherwood has had urban tree regulations in place for the last 17 years, located within their Zoning and Community Development Code and implemented new tree regulations in 2007 (16.142). The city has had Tree City USA designation for four years and has an established urban tree board or

committee. The main goal of the city's tree preservation standards is to minimize the removal of trees and woodlands within the city. Sherwood does not have an adopted urban forestry plan.

The code regulates the size of regulated trees depending on species differently for tree removal and protection requirements within the development process and outside of it. For planned unit developments, site review and subdivision, the code protects Douglas fir, ponderosa pine, red cedar, white oak, big leaf maple and American chestnuts that are ten inches or greater, while all other species are regulated if they are five inches or greater. The code only allows tree removal during development within areas that are needed to build utilities and infrastructure, streets and grading necessary for development in PUD and subdivisions.

Outside of the development process, regulated deciduous trees are those that are 10" or greater and coniferous trees that are 20" or greater. Landowners are allowed to remove five trees per year, not exceeding 100" dbh total. However, there is no permit system in place. Instead, the landowner must report to the planning department at least 48 hours before tree removal. If landowners wish to remove more than the maximum allowance then they must apply for a site plan review at a cost of \$200.

Sherwood's natural resource overlay zones define minimum disturbance standards for resource protection, but do not have any regulations that target tree conservation specifically and regulated areas are exceeded by Clean Water Service's vegetated corridor standards. Sherwood does not regulate any heritage or historic trees.

### **City of Tigard**

Tigard has had Tree City USA designation since 2000 and an established tree board for the past seven years. Tigard implemented its first tree ordinances and regulations 25 years ago. Those tree regulations governed the removal of all trees on undeveloped land, developed commercial and industrial land, and public land. However, changes to the tree ordinance in 1997 now allow the removal of any tree as long as its removal is mitigated. Currently, tree removal permits are processed by means of a Type I procedure.

Tigard regulates trees on both public and private property. Regulated trees during development are defined as any tree  $\geq$  6 inches dbh. Trees that require a removal permit include street trees, trees on city property, trees that were planted as a condition of development approval, trees in sensitive lands areas, trees on developing properties, trees that are restricted on the deed of a property, and heritage trees. Removal is defined as the cutting or removing of 50 percent or more of a crown, trunk or root system of a tree (Section 9.06.020).

In fiscal year 2007/2008, Tigard spent approximately \$200,000 on urban forestry-related activities. Funding comes from general fund allocations (mostly property taxes), development fees and grants. Additional funding comes for urban forestry-related activities from Clean Water Services stormwater service fees. Through a partnership with Clean Water Services, the City of Tigard is conducting stream restoration and enhancement projects that will result in the planting of approximately 100,000 native trees from 2001 to 2011. Also, the city's public works department annually plants approximately 250 new or replacement trees on public lands, distributes street trees each year to private property owners through the Street Tree Program, and plants 25 trees in celebration of Arbor Day.

Tigard is currently developing an Urban Forestry Master Plan, scheduled for completion in November 2009. This will include revisions to Tigard's tree and landscaping ordinances and the development of a tree grove protection program.

### **City of Troutdale**

Troutdale has had tree regulations that apply both during development and outside of the development review process for at least eight years. The city has had Tree City USA status since 2000 with its parks advisory committee acting as the city's tree board. Troutdale's tree ordinance is in the city's municipal code. It addresses the planting and maintenance of street trees, heritage trees and the removal of trees on undeveloped properties.

The city's street tree fund is restricted to the planting, maintenance and removal of street trees. Resources come from street tree fees during development, donations, grants or penalties. The city has also created a manual that includes a list of approved street trees, prohibited street trees and planting and pruning guidelines. It also has a street tree plan to regulate the maintenance and tree removal of street trees.

Troutdale regulates trees that are  $\geq 6$  inches in diameter. Tree removal regulations can be found within section 13.10.270 of the municipal code. There is no permit requirement for tree removal in developed property, only for undeveloped or underdeveloped properties. These include any vacant platted subdivision lots or partition parcels, or any developed properties able to be partitioned into two or more lots. A tree removal permit can be obtained in conjunction with a land use permit or under a Type II permit when not in concordance with a land use permit. The code allows for the removal of hazardous, dead or diseased trees within city limits, within all land uses.

### **City of Tualatin**

Tualatin has had Tree City USA status since 1987 and has had a tree preservation ordinance and urban tree committee in place since 1979. The city council adopted the existing ordinance in 2001 with an urban forestry management plan that focuses on street trees. Tualatin has won several awards for its urban forestry activities over the last 25 years.

Tualatin regulates removal of trees greater than eight inches in diameter during development review and outside the development process. However, various exemptions allow removal of trees greater than eight inches outside these permit processes. The city of Tualatin does not require mitigation when regulated trees are removed unless those trees were designated for preservation and were lost or damaged during construction. Tualatin is working on developing new regulations that would require mitigation. Some tree preservation and tree protection apply in Tualatin's natural resource protection overlay but these areas are mostly covered by Clean Water Service's vegetated corridor standards. Tualatin regulates street trees and requires the planting as a condition of approving development. The city also pays for some street tree planting. Additional tree planting requirements are applied in parking lots and as part of landscaping requirements. Over the years, urban forestry activities in Tualatin have been funded via a combination of property taxes, development fees, general fund allocations, grants and the city's road fund. In the 2007-2008 fiscal year Tualatin spent \$215,465 on urban forestry-related activities.

Tualatin officials are currently considering a number of potential changes to the city's tree codes including reducing exemptions that allow tree removal outside the permit process, the size of regulated trees, and requiring some mitigation of tree removal. There is also discussion of raising additional funds for urban forestry activities by establishing a tree bank fund for in-lieu mitigation and/or raising funds through a street utility fee.

### **City of Vancouver**

Vancouver first established a street tree ordinance in 1963. The city established an Urban Forestry Commission in 1987 and achieved Tree City USA status with updated policies and regulations relating to urban forestry. Vancouver adopted its existing policies and regulations governing private tree removal and mitigation in 1997. In 2006, Vancouver adopted a revised street tree ordinance to reflect national standards and best management practices.

In 2007 Vancouver adopted its current Urban Forest Management Plan. The plan included a 2003 urban forest canopy inventory that established a baseline of canopy cover by land-use type and established goals for expanding urban forest cover over time. Although the plan specifies no target date for achieving canopy cover goals, the inventory will be revisited in 2011 to evaluate whether existing policies and programs are adequate.

Regulations governing tree protection, removal and mitigation include:

- The Tree Conservation Ordinance, VMC 20.770, established in 1997 and amended in 2004 to regulate trees on private land including Vancouver's Heritage Tree program. VMC 20.770 primarily applies when a property is developed or to trees preserved or planted as a condition of past development.
- Street Tree Ordinance, Vancouver Municipal Code (VMC) 12.04, established in 1963 and amended in 2006 to regulate trees in the public right-of-way.
- Critical Areas Ordinance, VMC 20.740, adopted in 2005 to protect environmentally sensitive or natural hazard lands.
- Landscaping Code, VMC 20.925, requiring tree planting.

The existing suite of ordinances aim to protect and enhance a variety of public values associated with urban forests including air and water quality, wildlife habitat, public health and safety, property values, economic development and implementation of state and federal law. Vancouver requires the planting of street and parking lot trees as a condition of development.

Vancouver's Urban Forestry division's budget for the 2007-2008 fiscal year totaled 950,000. The division has three full time employees including a city forester, funds tree planting in the public right-of-way and on public and private land, and has a number of partnerships with private and private-non-profit entities to promote stewardship and expansion of Vancouver's urban forest. Funding from urban forestry comes from stormwater fees, the city's general fund and compensatory mitigation via a city tree fund.

Vancouver has no specific plans for making policy changes. However an assessment of urban forest canopy cover in 2011 for the entire city will aid in evaluating progress in achieving the goals and targets established in the urban forestry management plan. If goals are not being achieved then the policies and regulations could be revisited and revised. This could include revisiting the required minimum tree density standard.

### **Washington County, urban unincorporated**

Washington County limited policies and regulations relating to tree preservation or mitigation outside "Significant Natural Resources Areas" mapped and regulated as part of the county's acknowledged Goal 5 program or floodplain and natural drainage hazard areas. Policy 10.h for "Biological Resources and Natural Areas" of the comprehensive plan circumscribes tree regulations to significant natural areas by committing the county to "Develop tree conservation standards to regulate the removal of or damage to trees and vegetation in identified Significant Natural Areas within the unincorporated urban area, in order to retain the wooded character and habitat of urban forested lands." Section 421 references the retention of "large trees" in flood areas. Section 422 governs tree removal associated with Significant Natural Resource Areas. These regulations have been in place since 1983. In addition, Section 407 for Landscape Design of the Community Development Code has standards for tree removal but not for tree preservation. Section 407 also contains planting standards associated with development, including street trees. Some community plans have additional tree protections for specific sites; however, all but community plan subordinates tree retention to "development of the site at the planned density." Section 404 has specific tree-related standards for planned developments. No mitigation of tree removal is required.

No permit is required to cut trees outside the development review process unless the site is identified as a Goal 5 resource on the applicable community plan. Washington County has no official sanctioned tree committee, board, or commission. The county does not have an urban forestry management plan.

Discussions with planning staff and citizens in Washington County reveal that tree removal is often deemed unavoidable because of zoned densities. This widespread view may limit more innovative designs. Section 207-5.1 of the CDC specifies that conditions on approved development “shall not restrict densities to less than that authorized by the development standards of this Code.” This provision is often invoked as the reason for not preserving more trees. However there is also some disagreement as to whether staff can or does use its full discretion to preserve trees through clustering or design modification. The widespread view that tree preservation is impractical or unachievable at planned densities may dissuade staff from using their discretionary authority to preserve trees. In sum, both a lack of specific standards for tree preservation and the presumption that trees cannot be accommodated at zoned densities result in little tree preservation in urban unincorporated Washington County.

The Joint-CPO Tree Code Group formed in the summer of 2007 to explore policy and code changes and stem the accelerated loss of trees in urban unincorporated Washington County. CPO representatives and interested citizens worked together to research what policies and development codes other counties and cities have implemented to address tree preservation and increase urban forest canopy. The Joint-CPO Tree Code Group produced an executive summary and research report in Spring 2009 that was submitted to the Washington County Board of Commissioners. The group has requested that development of urban forestry policies be included on the county’s 2009 work program as a Tier 1 (priority) item. The county commissioners did not include the request in the 2009 work program but they will consider it for future work plans. For more information on the Joint-CPO Tree Code Group see: <http://www.washcotreegroup.org/>.

### **City of West Linn**

West Linn has had Tree City USA status for over a decade. West Linn has no explicit urban forestry-related policy goals, beyond those outlined in the purpose of its community tree ordinance No. 1542. The city council adopted these regulations into Sections 8.500-8.750 of the municipal code in 2006 and revised them in 2008 to regulate tree removal on private property and in the public right-of-way when development is not proposed or in instances where tree removal is proposed after a development application for a site has been approved. The West Linn Development Code contains Section 54 Landscaping and Section 55 Design Review that also regulate removal and planting when development is proposed.

West Linn funds urban forestry through development permits and money from the city’s general fund. These funds amounted to \$100,000 in the 2007/2008 fiscal year. Staff in planning, parks, and public works all have responsibilities related to urban tree or forestry. West Linn has a city arborist who works for the parks department but coordinates with planning and public works. West Linn has no urban forestry management plan, tree committee or urban forestry commission. Tree removal, especially in environmentally sensitive areas, has been a controversial issue in West Linn.

No major changes are planned to the tree codes. West Linn staff is planning some minor changes to the municipal code to close loopholes and tighten up some definitions and is also considering revisions to Section 28 for Willamette and Tualatin River protection.

### **City of Wilsonville**

Wilsonville has had Tree City USA designation since 1997. In part due to strong political leadership and community support, the city has put a high priority on conservation of trees, vegetation and natural areas as integral parts of the city’s urban form and quality of life. Since 1997 Wilsonville has

received the Tree City USA Growth Award for its progress in education, partnerships, land-use planning coordination, planning and management and wildlife habitat conservation.

Wilsonville's comprehensive plan and development code includes urban tree and forestry-related policy goals. Section 4.600 of the development code requires a permit whether or not development is proposed. However, approval to remove up to three trees within a 12-month period is granted if the trees proposed for removal are not in a zoned natural resource area, are not street or Heritage trees, and were not required to be retained as a condition of past development. Provisions allow for the removal of trees that are hazardous, diseased, dead or damaged. The city applies discretionary standards including a least impact alternative analysis for situations proposing to remove more than four trees and where development is proposed. Decisions are the discretion of the development director and can be appealed to the development review board and the city council. Wilsonville requires mitigation of most regulated trees. In addition to Section 4.6000, Wilsonville regulates tree removal in the public right-of-way, through a heritage tree program and in its significant resource overlay zone (Section 4.139.00) and Willamette River Greenway overlay zone (Section 4.600.30)

Wilsonville funds urban forestry through development permits, grants, general fund allocations, a local improvement district and a tree mitigation fund. These funds amounted to \$220,000 in fiscal year 2007/2008 and funded three positions engaged in urban forestry-related planning, permitting and programming including two certified arborists. Staff in planning, parks and public works all have responsibilities related to urban tree or forestry. Wilsonville has no urban forestry management plan but does have an established tree board.

### **City of Wood Village**

Apart from some landscaping standards that require some street tree planting and some tree planting and vegetation maintenance in one city park (funded by general funds), Wood Village has no policies or programs related to urban forestry.

Wood Village regulates tree removal near streams and wetlands consistent with Metro's Title 13 performance standards. Riparian transition areas are 50' from top of bank and extending up to 200 feet where adjacent slopes are greater than 25 percent. As of May 2009, Wood Village had yet to substantially comply with Metro Title 13 for water quality and regionally significant fish and wildlife habitat.

## REGIONAL GAPS, FUTURE RESEARCH AND NEXT STEPS

Many of the functions provided by the urban forest, such as watershed health and some scenic values, are regional in scope and interdependence. Hence the region has a collective interest in addressing gaps in local programs to protect, enhance and expand the urban forest. Several gaps are clearly evident from this assessment. Clearly the handful of jurisdictions that lack any tree ordinances regulating tree removal on private land or in the public right-of-way represents a major gap in policies and programs protecting the urban forest. The relatively small number of adopted urban forestry management plans to guide strategic investment in the urban forest is clearly a major gap. It is indicative of the inconsistency of policy, funding and staffing levels associated with urban forest management at the local level. That gap is most stark in county urban service areas that appear to most clearly lack the resources, if not the community interest, in urban forestry.

There are a number of areas where greater regional coordination and consistency would help address gaps and support local urban forestry efforts.

- Support local governments with little or no tree removal regulations in developing policies for tree preservation, planting and mitigation.
- Provide assistance in monitoring canopy cover and setting targets for expanding the urban forest.
- Research and disseminate best management practices for tree protection during construction.
- Research and disseminate best management practices for tree mitigation.
- Identify and eliminate barriers to protecting, managing and expanding the urban forest in the public right-of-ways, particularly in denser urban neighborhoods.
- Identify new funding sources for protecting, managing and expanding the urban forest.
- Quantify ecosystem service values of urban trees at a local level.
- Identify strategies for improving enforcement of tree preservation and protection regulations.

In conducting this project we encountered numerous opportunities to share and exchange information about the work of individual jurisdictions and Metro in the arena of urban forestry. There would seem to be great value in initiating a regional forum through which local staff, citizens and urban forest practitioners could regularly meet and exchange information on local programs and policies.

There are three of areas of focus that would be of value in future assessments. It was difficult as part of this assessment to summarize urban forest management on public parklands for individual jurisdictions because a significant number of public parks are owned and managed by districts that encompass multiple jurisdictions. As a consequence, urban forestry activities of local park departments occurring on public land were not adequately summarized here and could be a focus of future assessment work. Another challenge is related to consistently and adequately assessing funding for local urban forestry-related programs and activities. In part, this challenge stemmed from the diversity of local programs and the fact that urban forestry-related activities are likely to occur in many different city bureaus or departments. Future assessments should attempt to comprehensively address the funding mechanisms and amounts that support local urban forest management. Finally, it was difficult to assess the efficacy of enforcement and compliance of regulatory programs that appeared to depend on staffing levels, political leadership and citizen organization and involvement. There is widespread perception by citizen advocates and some recognition by local staff that enforcing tree regulations is a lower policy and administrative

priority relative to enforcement of other zoning or land-use regulations. While it could be time consuming and labor intensive, future research should assess the degree to which new development complies with local governments' tree preservation, planting and mitigation requirements.

## Urban forestry policy survey questions (Phase I)

1) Name (First, Last)

---

2) Jurisdiction

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3) Does the jurisdiction have policy goals relating urban trees and/or urban forestry within any of the following? (please select all that apply)

- Strategic Plan
- Comprehensive Plan
- Resolution or Ordinance

4) For how long have these urban forestry policy goals been in place? (total number of months)

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5) If the jurisdiction currently has no adopted urban forestry goals and are developing them, when are they scheduled to be adopted?

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 [Year/Date]

6) Does the jurisdiction have an adopted urban forestry management plan?

- Yes
- No

7) If so, for how long? (number of months)

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8) If not, and the jurisdiction is currently developing an urban forestry plan, when is it scheduled to be completed?

---

 [Year/Date]

9) Does the jurisdiction have an established urban tree committee/board, urban forestry commission, or similar citizen committee focused on urban trees and/or forestry?

- Yes
- No

10) If so, for how long? (number of months)

---

- 11) **Does the jurisdiction have any urban tree preservation ordinance containing regulations and requirements governing the removal of trees?**
- Yes
  - Yes, and currently being updated
  - No
- 12) **If so, for how long? (number of months)**
- \_\_\_\_\_
- 13) **If not, and the jurisdiction is currently developing tree preservation ordinance, when is it scheduled to be completed?**
- \_\_\_\_\_ [Year/Date]
- 14) **Does the jurisdiction have goals and policies for any of the following? (please select all that apply)**
- Tree preservation
  - Tree planting
  - Tree diversity
- 15) **Does the jurisdiction have a guidance document or manual to administer its tree code?**
- Yes
  - No
- 16) **Do any policies require tree planting as a condition for development permits?**
- Yes
  - No
- 17) **Are regulations related to urban tree preservation and protection in any of the following? (please select all that apply)**
- Municipal code
  - Development code
- 18) **Does the purpose or intent of urban tree regulations relate to any of the following? (please select all that apply)**
- Improving or maintaining air quality
  - Improving or maintaining water quality
  - Improving or maintaining water quantity
  - Improving or maintaining wildlife habitat
  - Improving or maintaining public health and safety
  - Protecting heritage/historic trees for aesthetics or scenic values
  - Improving or maintaining property values
  - Contributing to business activity or economic development
  - Complying with federal environmental laws (CAA, CWA, ESA, other) (please specify in comments section)
  - Other (please specify)

If you selected other, please specify

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Additional comments

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19) **Do regulations/standards govern removal of urban trees in the following? (please select all that apply)**

- Public right of way
- Private land
- Public land

20) **Does the jurisdiction have a urban tree list for (please select all that apply)**

- Nuisance and/or prohibited tree species
- Preferred native tree species
- Tree species for specific locations within the jurisdiction
- Street trees

21) **Does the jurisdiction have a street tree stocking inventory for all or part of its street network?**

- All
- Portion
- None

22) **When was this inventory last updated?**

---

 [Year/Date]

23) **What is the percentage of street trees currently inventoried?**

- 0 - 10% of streets inventoried
- 10 - 50% streets inventoried?
- 50 - 100% streets inventoried?

24) **Does the jurisdiction maintain an updated inventory of heritage/significant trees?**

- Yes
- No

25) **When was it last updated?**

---

 [Year/Date]

26) **Does the jurisdiction maintain an updated inventory of urban forest canopy cover for the entire jurisdiction?**

- Yes
- No

27) **When was it last updated?**

\_\_\_\_\_ [Year/Date]

28) **Does the jurisdiction have specific targets or benchmarks for urban forest canopy cover for all or part of its area?**

- Yes
- No
- Partial

29) **Does the jurisdiction have specific targets or benchmarks for tree planting?**

- Yes
- No
- Partial

30) **Does the jurisdiction fund the urban tree planting in any of the following? (please select all that apply)**

- Public right of way
- Private land
- Public land

31) **Is the jurisdiction engaged in any partnerships with other jurisdictions or non-profits to promote urban forestry and with which of the following?**

	Yes	No
Other jurisdictions	<input type="checkbox"/>	<input type="checkbox"/>
Non-profits	<input type="checkbox"/>	<input type="checkbox"/>
Private businesses	<input type="checkbox"/>	<input type="checkbox"/>

32) **Does the jurisdiction systematically track the removal and replacement of individual trees in any of the following (please select all that apply):**

- Public right of way
- Private land
- Public land

33) **How does the jurisdiction fund urban forestry? (please select all that apply)**

- Stormwater fee
- Frontage fee
- Property tax
- Development fee
- General Fund Budget Allocation
- Grants
- Gas tax
- Other (please specify)

If you selected other, please specify

\_\_\_\_\_

34) **Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following:**

- Planning/Community Development
- Parks
- Public Works
- Transportation
- Environmental Services or Surface water management
- Other (please specify)

If you selected other, please specify

\_\_\_\_\_

35) **What was the jurisdiction's total annual expenditure related to Urban Forestry during the last fiscal year?**

\_\_\_\_\_

36) **Please specify the following staffing levels by entering the number of FTE for the jurisdiction:**

- a) Urban forester or equivalent that directs planning and implementation of jurisdiction's urban forestry policies and programs \_\_\_\_\_
- b) Certified arborist \_\_\_\_\_
- c) Tree maintenance or planting staff \_\_\_\_\_
- d) Contract staff \_\_\_\_\_
- e) Code inspector \_\_\_\_\_
- f) Volunteer staff \_\_\_\_\_
- g) Other \_\_\_\_\_ (please specify position)

If you have questions or comments about any part of the survey, please contact  
Denisse Fisher at [fisherda@gmail.com](mailto:fisherda@gmail.com)

## Urban forestry policy survey questions (Phase II)

1) **Jurisdiction**

\_\_\_\_\_

2) **Does the jurisdiction regulate street trees outside the development review process?**

Yes

No

3) **What is the minimum size of regulated street trees? (in inches)**

Caliper/DBH \_\_\_\_\_

Tree height \_\_\_\_\_

4) **Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply)**

Tree is hazardous

Dead tree

Disease/insects

Sidewalk damage

Owner request

Leaf or fruit mess

Development

Invasive species

Storm damage

Other (please specify)

If you selected other, please specify

\_\_\_\_\_

5) **Is street tree pruning regulated?**

Yes

No

6) **Is street tree topping regulated?**

Yes

No

7) **Does the jurisdiction have policies, regulations, or standards that require planting street trees in association with new development, separate from mitigation?**

Yes

No

Additional comments

\_\_\_\_\_

- 8) **If you answered yes to the previous question, please select all that apply**
- Tree planting is done by developer or builder
  - A fee is charged to the developer to pay the jurisdiction to plant street trees
- 9) **Are master street tree plans required for new planned unit developments?**
- Yes
  - No
- 10) **If a performance bond is required for planting street trees in new PUDs or commercial/ industrial development, please specify the amount in notes**

---

- 11) **Are there specific street tree species standards?**
- Yes
  - No

Additional comments

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- 12) **Are there specific street tree placement standards?**
- Yes
  - No

Additional comments

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- 13) **Do any street tree regulations apply to public work projects to the Public ROW?**
- Yes
  - No

Additional comments

---

- 14) **Are landowners responsible for maintenance of street trees?**
- Yes
  - No
  - Partial

Additional comments

---

- 15) **Are landowners responsible for damage to sidewalks caused by street trees?**
- Yes
  - No
  - Partial

Additional comments

---

16) Does the jurisdiction fund maintenance programs for street trees?

- Yes  
 No

17) How frequent are street tree maintenance inspections?

\_\_\_\_\_

18) Select maintenance responsibilities of jurisdiction (please select all that apply)

- Tree pruning  
 Leaf removal  
 Sidewalk damage  
 Utility trimming  
 Street tree removal  
 Other (please specify)

If you selected other, please specify

\_\_\_\_\_

19) Does the jurisdiction require mitigation of street tree removal?

- Yes  
 No

20) How does the jurisdiction ensure that mitigation is functionally equivalent to trees removed(species, size, location)?

\_\_\_\_\_  
 \_\_\_\_\_

21) Does the jurisdiction allow payment in lieu of mitigation?

- Yes  
 No

22) What are the mitigation requirements for removing a 24" dbh street tree?

\_\_\_\_\_

23) Are the majority of inspections initiated by citizen complaints or routine staff inspections?

- Complaint-initiated  
 Routine

24) If the jurisdiction does have an arborist; please specify the following:

# of FTE \_\_\_\_\_

How many square miles of jurisdiction  
do site inspectors cover? \_\_\_\_\_

Is this inspector a certified arborist or does  
he or she have natural resource expertise? \_\_\_\_\_

25) **Has the jurisdiction taken any enforcement action relating to the street tree preservation or protection in the last year?**

- Yes
- No

26) **Are there fines for illegal cutting, pruning, topping, or damage of street trees? (please select all that apply)**

- Minimum fines
- Discretionary fines
- No fines
- Other (please specify)

If you selected other, please specify

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27) **What are the minimum fines, if any?**

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28) **Are restitution or mitigation penalties required for illegal street tree cutting or violations of required street tree protection measures during construction activities?**

- Yes
- No
- Sometimes

Additional comments

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29) **What penalties exist? (please specify)**

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## Jurisdiction contacts

Jurisdiction	Contact	Email	Phone
Beaverton	Barbara Fryer	bfryer@ci.beaverton.or.us	
Cornelius	Dick Reynolds	rreynolds@ci.cornelius.or.us	503-357-3011
Damascus	Bob Short	bshort@ci.damascus.or.us	
Durham	Roland Signett	cityofdurham@comcast.net	503-639-6851
Fairview	John Gessner	gessnerj@ci.fairview.or.us	503-674-6205
Forest Grove	Jon Holan	jholan@ci.forest-grove.or.us	503.992.3227
Gladstone	Ron Partch	partch@ci.gladstone.or.us	503-557-2767
Gresham	David Odom	David.Odom@ci.gresham.or.us	503-618-2392
Happy Valley	Sarah Mizejewski	sarahm@ci.happy-valley.or.us	503-783-3811
Hillsboro	Dan Rutzick	danr@ci.hillsboro.or.us	(503) 681-5358
Johnson City	n/a	johnsoncity@pcpeople.com	503-655-9710
King City	Keith Liden	liden@pbworld.com	503-478-2348
Lake Oswego	Jonna Papaefthimiou	jpapaefthimiou@ci.oswego.or.us	
Maywood Park	Julie Risley	julierisley@integra.net	503-891-8355
Milwaukie	Katie Mangle	manglek@ci.milwaukie.or.us	503-786-7652
Oregon City	Peter Walter	pwalter@ci.oregon-city.or.us	503-496-1568
Portland	Christina Scarzello	cscarzello@ci.portland.or.us	
Rivergrove	Sheri Richards	cityofrivergrove@yahoo.com	503-639-6919
Sherwood	Zoe Monahan	monahanz@ci.sherwood.or.us	503-625-4202
Tigard	John Floyd	Johnfl@tigard-or.gov	
Troutdale	Clyde Keebaugh	ckeebaugh@ci.troutdale.or.us	503-666-8303
Tualatin	Carl Switzer	cswitzer@ci.tualatin.or.us	503.691.3064
West Linn	Mike Perkins	mperkins@westlinnoregon.gov	503-557-4700
Wilsonville	Chris Neamtzu	neamtzu@ci.wilsonville.or.us	503-570-1574
Wood Village	Randy Jones	randyj@ci.wood-village.or.us	503-667-6211
Clackamas Co.	Jennifer Hughes	jenniferh@co.clackamas.or.us	
Multnomah Co.	Chuck Beasley	charles.beasley@co.multnomah.or.us	503-988-3043x22610
Washington Co.	Laurie Harris	Laurie_Harris@co.washington.or.us	503-846-3963
Vancouver	Charles Ray	Charles.Ray@ci.vancouver.wa.us	360-619-1128

## Researcher biographies

**Jim Labbe**, Urban Conservationist since 2003, has over 20 years of experience in natural resource planning, research and advocacy as a student, watershed council coordinator, consultant and citizen advocate. He holds a BA in history from Reed College and an MS in Physical Geography from Portland State University. His past research includes a history of the Rogue River Salmon Fishery and a study of river channel morphology in the Tualatin River Watershed. Since 2002, Jim has represented Portland Audubon in advocating for natural resource-related policies and programs throughout the Portland metro region. He also coordinates outreach and education working with natural area “friends” organizations, watershed groups and neighborhood associations. In 2007 he completed an updated edition of Portland Audubon’s Urban Natural Resource Directory. Jim also chairs the Coalition for a Livable Future’s Natural Resource Working Group and recently authored a chapter in the Coalition for a Livable Future’s Regional Equity Atlas that assessed access to greenspace in the Portland metro region. In March 2005 Jim received the Coalition for a Livable Future’s Robert L. Liberty Regional Leadership Award. Jim also serves on the board of the Johnson Creek Watershed Council and the advisory board for Depave.org.

**Anna Denisse Fisher de Leon** has a BS in Biology from the Universidad de las Americas, Puebla, Mexico, and an MS in Natural Resource Studies from the University of Arizona. She is currently working on her Ph.D. in Natural Resource Management at Portland State University, where she is concentrating on monitoring water temperatures for urban streams in the Portland metro region. Past research projects include hummingbird distributions in a protected aridland in southern Mexico and vegetation changes as indicators of impacts in the Biosphere Reserve of El Pinacate and Gran Desierto de Altar Sonora. Denisse has also worked as environmental educator at the Udall Center for Studies in Public Policy and the Mount St. Helens Institute. She serves on the board of the Johnson Creek Watershed Council.

Urban forest cover protected by jurisdiction in 2007 (GIS analysis results)

Jurisdiction	Acres of tree canopy	Percent canopy cover by jurisdiction	Acres mostly protected	Percent mostly protected	Acres partially protected	Percent partially protected	Percent mostly and partially protected	Acres mitigation only	Percent mitigation only
Beaverton	2997.21	25.3%	496.09	16.6%	0.00	0.0%	16.6%	n/a	n/a
Cornelius	235.05	18.2%	17.33	7.4%	0.00	0.0%	7.4%	0.00	0.00
Damascus	3732.01	36.1%	0.00	0.0%	0.00	0.0%	0.0%	0.00	0.00
Durham	144.10	54.3%	48.26	33.5%	0.00	0.0%	33.5%	0.00	0.00
Fairview	427.86	18.8%	58.66	13.7%	99.13	23.2%	36.9%	0.00	0.00
Forest Grove	734.95	23.0%	73.64	10.0%	2.48	0.3%	10.4%	0.00	0.00
Gladstone	440.41	27.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Gresham	3893.72	27.3%	1493.57	38.4%	81.36	2.1%	40.4%	0.00	0.00
Happy Valley	1355.94	35.1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hillsboro	3333.48	22.7%	931.63	27.9%	111.71	3.4%	31.3%	0.00	0.00
Johnson City	6.42	14.8%	2.35	36.6%	0.00	0.0%	36.6%	0.00	0.00
King City	49.16	12.5%	9.60	19.5%	0.00	0.0%	19.5%	0.00	0.00
Lake Oswego	3369.08	47.2%	0.00	0.0%	850.75	25.3%	25.3%	0.00	0.00
Maywood Park	47.26	44.0%	0.00	0.0%	0.00	0.0%	0.0%	0.00	0.00
Milwaukie	757.28	23.9%	68.43	9.0%	0.00	0.0%	9.0%	0.00	0.00
Oregon City	1617.25	27.2%	386.69	23.9%	271.56	16.8%	40.7%	0.00	0.00
Pleasant Valley	404.31	27.2%	141.01	34.9%	0.00	0.0%	34.9%	0.00	0.00
Portland	27217.86	29.3%	7921.57	29.1%	4618.04	17.0%	46.1%	0.00	0.00
Rivergrove	54.73	48.1%	10.87	19.9%	0.00	0.0%	19.9%	0.00	0.00
Sherwood	525.90	19.9%	140.15	26.6%	14.99	2.8%	29.5%	0.00	0.00
Springwater	474.46	33.8%	261.46	55.1%	0.00	0.0%	55.1%	0.00	0.00
Tigard	1861.16	25.1%	319.52	17.2%	404.81	21.8%	38.9%	0.00	0.00
Troutdale	670.44	20.5%	135.93	20.3%	0.00	0.0%	20.3%	0.00	0.00
Tualatin	1014.38	19.9%	170.59	16.8%	162.11	16.0%	32.8%	0.00	0.00
West Linn	1957.29	38.9%	693.45	35.4%	42.68	2.2%	37.6%	0.00	0.00
Wilsonville	1180.59	24.9%	441.85	37.4%	0.00	0.0%	37.4%	0.00	0.00
Wood Village	85.79	14.2%	5.75	6.7%	0.00	0.0%	6.7%	0.00	0.00
Unincorporated Multnomah Co.*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Unincorporated Washington Co.*	8512.40	41.7%	1126.74	13.2%	951.59	11.2%	24.4%	44.05	0.5%
Unincorporated Clackamas Co.*	6609.47	23.9%	1380.08	20.9%	28.00	0.4%	21.3%	n/a	n/a

\* Within the Metro UGB. Note that recent analyses in the Metro State of the Watershed report assessed canopy cover within unincorporated areas by county within the jurisdictional Metro boundary.

n/a = not available

**Mostly Protect:** Establishes a minimum area where disturbance of native vegetation and soils on a lot is allowed such that no more than 15 percent of the entire overlay district or proxy regulated area would likely be disturbed and/or developed at build

**Partially Protect:** Limits disturbance of native vegetation and soils on a lot such that no more than 85 percent or more of the entire overlay district or proxy regulated area will be disturbed and/or developed at build-out of the base zoning. Actual allowed disturbance per lot could range from 16 to 84 percent. In addition some level of compensatory mitigation for disturbed areas may be required.

**Compensatory Mitigation:** Could limit or effectively limit the disturbance of native vegetation and soils on a lot such that more than 85percent of the entire overlay district or proxy regulated area would likely be disturbed and/or developed at build-out of the base zoning. In addition some level of compensatory mitigation for disturbed areas is required.

## Demographic data and urban tree canopy

Incorporated city/urban area	Year incorporated (cities) or founded (counties)	Acres	Estimated population (2008)	Estimated median income (1999)	Acres of tree canopy cover (2007)***	Tree canopy cover (2007)***
Beaverton	1893	11,841	86,205	47,863	3,020	25.4%
Cornelius	1893	1,293	10,955	45,959	235	18.4%
Damascus	2004	10,334	9,975	not available	3,711	37.4%
Durham	1966	265	1,395	51,806	144	54.3%
Fairview	1908	2,276	9,735	40,931	429	18.8%
Forest Grove	1872	3,192	21,465	40,135	858	23.2%
Gladstone	1911	1,587	12,215	46,368	41	27.7%
Gresham	1905	14,288	100,655	43,442	4,064	27.1%
Happy Valley	1965	3,868	11,455	93,131	1,531	34.0%
Hillsboro	1876	14,665	89,285	51,737	3,384	22.9%
Johnson City	1970	43	675	35,517	7	15.1%
King City	1966	392	2,775	28,617	60	13.5%
Lake Oswego	1910	7,134	36,590	71,597	3,405	47.1%
Maywood Park	1967	107	750	56,250	47	44.0%
Milwaukie	1903	3,167	20,915	43,635	757	23.9%
Oregon City	1844	4,957	30,405	45,531	1,697	27.0%
Portland	1851	95,260	575,930	40,146	27,231	29.4%
Rivergrove	1971	114	350	85,000	57	48.3%
Sherwood	1924	2,644	16,420	62,518	541	19.8%
Tigard	1961	7,416	47,150	51,581	1,920	25.4%
Troutdale	1907	3,278	15,465	56,593	773	20.0%
Tualatin	1913	5,088	26,040	55,762	1,028	19.8%
West Linn	1913	5,037	24,400	72,010	1,977	38.7%
Wilsonville	1969	4,740	17,940	52,515	1,176	24.9%
Wood Village	1951	603	3,100	43,384	87	14.3%
Vancouver	1857	29,485	162,400	41,618	5,425	19.7%
Urban Multnomah Co.*	1854	7,422	not available	not available	not available	not available
Urban Clackamas Co.*	1843	27,648	not available	not available	6,609.47	23.9%
Urban Washington Co.*	1849	20,404	185,786	not available	8,512.40	41.7%
Urban Clark Co.**	1845	17,623	not available	not available	not available	not available

\* Unincorporated inside Metro UGB

\*\* Unincorporated Three Creeks Planning Areas inside Urban Growth Area (UGA)

\*\*\* Metro State of the Watersheds Report 2009

## Sources:

**Population for Oregon Cities**

Population Research Center, Portland State University <http://www.pdx.edu/prc/>

**Population for Urban Unincorp. Washington County**

Steve Kelley Washington County Land Use and Transportation [Steve\\_Kelley@co.washington.or.us](mailto:Steve_Kelley@co.washington.or.us)

**Population for Vancouver**

State of Washington Office of Financial Management <http://www.ofm.wa.gov/pop/april1/>

**Area Cities:** Regional Land Information System (Metro)

**Median Income:** US Census 1999

**Tree Canopy for Oregon Jurisdictions**

Metro State of the Watershed Report <http://www.oregonmetro.gov/index.cfm/go/by.web/id=27579>

**Tree Canopy for Vancouver in 2005**

Vancouver Urban Forestry Management Plan [http://www.ci.vancouver.wa.us/parks-recreation/parks\\_trails/urban\\_forestry/docs/UFMP\\_finalweb.pdf](http://www.ci.vancouver.wa.us/parks-recreation/parks_trails/urban_forestry/docs/UFMP_finalweb.pdf)

**Tree Canopy for Multnomah, Clackamas, Washington Counties**

Calculated from RLIS and Metro Urban Forest Canopy 2007 Data Layer

	Jurisdiction	Q3a	Q3b	Q3c	Q4	Q5	Q6	Q7	Q8	Q9
1	Beaverton	No	Yes	Yes	1991		No			Yes
2	Cornelius	No	No	No			No			No
3	Damascus	No	No	No			No			Yes
4	Durham	No	Yes	Yes	240		Yes	240		No
5	Fairview	No	Yes	Yes	120		No			Yes
6	Forest Grove	No	Yes	Yes	204		No			No
7	Gladstone	No	No	No			No			Yes
8	Gresham	No	Yes	Yes	120	Dec-09	No	0	Dec-09	Yes
9	Happy Valley	No	No	No			No			Yes
10	Hillsboro	Yes	Yes	No	10		No			No
11	Johnson City	No	No	No			No			No
12	King City	No	No	Yes	60		No			No
13	Lake Oswego	Yes	Yes	Yes	20		Yes	1		Yes
14	Maywood Park	No	No	Yes	240		No		not scheduled	No
15	Milwaukie	No	No	No			No			No
16	Oregon City	No	Yes	Yes	120		No			No
17	Portland	No	Yes	Yes	156		Yes	156		Yes
18	Rivergrove	No	No	Yes	60		No			Yes
19	Sherwood	No	No	Yes	204		No	0		Yes
20	Tigard	No	Yes	Yes	300		No		Nov-09	Yes
21	Troutdale	No	No	Yes	108		No			Yes
22	Tualatin	Yes	Yes	Yes	96		Yes	96		Yes
23	Vancouver	Yes	Yes	Yes	144		Yes	12		Yes
24	West Linn	No	No	Yes	48		No			No
25	Wilsonville	No	Yes	Yes	12		No			No
26	Wood Village	No	No	No			No			No
27	Unincorporated Multnomah County	No	No	No			No			No
28	Unincorporated Washington County	No	Yes	Yes	312		No			Yes
29	Unincorporated Clackamas County	No	Yes	Yes	408		No			Yes
30	Unincorporated Clark County	No	No	No			No			No

Jurisdiction	Q10 (number of months)	Q11 Does the jurisdiction have any urban tree preservation ordinance containing regulations and requirements governing the removal of urban trees?	Q12 (number of months)	Q13 If not, and the jurisdiction is currently developing urban tree preservation ordinance, when is it scheduled to be completed?	Q14a Does the jurisdiction have goals and policies for any tree preservation of the following: urban	Q14b Does the jurisdiction have goals and policies for any tree planting of the following: urban
Q2	Q10	Q11	Q12	Q13	Q14a	Q14b
Beaverton		Yes, and currently being updated		2009/2010	Yes	Yes
Cornelius		No			No	Yes
Damascus	12	Yes, and currently being updated	15		No	No
Durham		Yes	240		Yes	Yes
Fairview		Yes	120		Yes	Yes
Forest Grove	200	Yes	204		Yes	Yes
Gladstone		No			No	No
Gresham	192	Yes	120		Yes	No
Happy Valley	24	Yes	60		No	No
Hillsboro		No			Yes	Yes
Johnson City		No			No	No
King City		Yes	60		No	Yes
Lake Oswego	20	Yes	20		Yes	Yes
Maywood Park	0	Yes	240		Yes	No
Milwaukie		Yes	120		Yes	Yes
Oregon City		Yes, and currently being updated			Yes	Yes
Portland	156	Yes, and currently being updated	156		Yes	Yes
Rivergrove	24	Yes, and currently being updated	60		Yes	No
Sherwood	204	Yes	204		Yes	Yes
Tigard	84	Yes, and currently being updated	156		Yes	Yes
Troutdale	150	Yes	108		Yes	Yes
Tualatin	360	Yes	360		Yes	Yes
Vancouver	240	Yes	144		Yes	Yes
West Linn		Yes			Yes	No
Wilsonville		Yes	12		Yes	Yes
Wood Village		No			No	No
Unincorporated Multnomah County		No			No	No
Unincorporated Washington County	24	Yes	312		Yes	Yes
Unincorporated Clackamas County	2	Yes, and currently being updated	336		Yes	Yes
Unincorporated Clark County		No			No	Yes

Jurisdiction	Q14c	Q15	Q16	Q17a	Q17b	Q18a	Q18b	Q18c
Q2								
Beaverton	No	Yes	Yes	Yes	Yes	No	No	No
Cornelius	No	Yes	Yes	No	No	No	No	No
Damascus	No	No	No	No	No	No	No	No
Durham	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Fairview	No	No	Yes	Yes	Yes	No	Yes	No
Forest Grove	No	No	Yes	No	Yes	Yes	Yes	No
Gladstone	No	No	Yes	No	No	No	No	No
Gresham	No	No	Yes	No	Yes	No	No	No
Happy Valley	No	No	No	Yes	Yes	Yes	Yes	No
Hillsboro	Yes	No	Yes	No	Yes	No	No	No
Johnson City	No	No	No	No	No	No	No	No
King City	No	No	Yes	No	Yes	No	Yes	No
Lake Oswego	Yes	Yes	Yes	Yes	Yes	No	No	No
Maywood Park	No	No	Yes	Yes	No	Yes	Yes	No
Milwaukie	No	No	Yes	No	Yes	No	No	Yes
Oregon City	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Portland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rivergrove	No	Yes	No	No	Yes	No	Yes	Yes
Sherwood	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Tigard	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Troutdale	Yes	Yes	Yes	Yes	Yes	No	No	No
Tualatin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Vancouver	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
West Linn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Wilsonville	No	No	Yes	No	Yes	Yes	Yes	No
Wood Village	No		Yes	No	No	No	No	No
Unincorporated Multnomah County	No		Yes	No	Yes	No	Yes	Yes
Unincorporated Washington County	No	No	Yes	No	Yes	No	Yes	Yes
Unincorporated Clackamas County	No	No	Yes	No	Yes	Yes	Yes	Yes
Unincorporated Clark County	No	Yes	Yes	No	Yes	No	No	No

Jurisdiction	Q18d	Q18e	Q18f	Q18g	Q18h	Q18i	Q18j
Beaverton	No	No	Yes	No	No	No	No
Cornelius	No	Yes	No	No	No	No	No
Damascus	Yes	Yes	No	No	No	No	No
Durham	Yes	Yes	No	Yes	No	No	No
Fairview	Yes	No	No	No	No	No	No
Forest Grove	Yes	No	Yes	Yes	No	No	No
Gladstone	No						
Gresham	No	No	Yes	No	No	No	No
Happy Valley	Yes	No	No	No	No	No	No
Hillsboro	No	Yes	Yes	No	No	No	No
Johnson City	No						
King City	Yes	Yes	No	Yes	No	Yes	Yes
Lake Oswego	Yes	No	Yes	No	No	No	Yes
Maywood Park	Yes	Yes	Yes	Yes	No	No	No
Milwaukie	No						
Oregon City	Yes	Yes	Yes	Yes	Yes	Yes	No
Portland	Yes	Yes	No	Yes	No	No	Yes
Rivergrove	No	Yes	Yes	Yes	No	No	No
Sherwood	No	Yes	Yes	No	No	No	No
Tigard	Yes	No	Yes	Yes	No	No	No
Troutdale	No	No	Yes	No	No	No	No
Tualatin	Yes	Yes	Yes	No	No	No	No
Vancouver	Yes	Yes	Yes	Yes	Yes	Yes	No
West Linn	Yes	Yes	Yes	Yes	No	No	No
Wilsonville	Yes	No	Yes	Yes	Yes	Yes	No
Wood Village	No						
Unincorporated Multnomah County	Yes	No	No	No	No	No	Yes
Unincorporated Washington County	Yes	Yes	No	No	No	Yes	No
Unincorporated Clackamas County	Yes	Yes	Yes	Yes	No	Yes	No
Unincorporated Clark County	No	No	No	No	No	No	Yes

Jurisdiction	Does the purpose or intent of urban tree regulations relate to any of the following: OtherText	Does the purpose or intent of urban tree regulations relate to any of the following: Comment Text
Q2	Q18k	Q18l
Beaverton		
Cornelius		
Damascus		
Durham		
Fairview		
Forest Grove		
Gladstone		
Gresham		
Happy Valley		
Hillsboro		Natural Resource Management Plan being drafted by Parks Dept will address first four options.
Johnson City		
King City	CWS requirements	Through intergovernmental agreement, Clean Water Services (CWS) regulates vegetation removal and enhancement in stream corridors.
Lake Oswego	Visual quality / quality of life	
Maywood Park		
Milwaukie		No purpose section in the regulation.
Oregon City		
Portland	buffering from noise, wind, storms, visual screening, summer cooling, urban heat island impacts, maintain the beauty of the City and its natural heritage, reduce erosion & siltation, stabilize slopes	
Rivergrove		
Sherwood		
Tigard		
Troutdale		
Tualatin		
Vancouver		
West Linn		
Wilsonville		
Wood Village		Landscaping standards require some street planting.
Unincorporated Multnomah County	Goal 5 protection for fish and wildlife habitat	
Unincorporated Washington County		CWA, ESA
Unincorporated Clackamas County		
Unincorporated Clark County	revent unregulated conversion of forests to other land uses	

Jurisdiction	Q2										When was this inventory last updated?
	Q19a	Q19b	Q19c	Q20a	Q20b	Q20c	Q20d	Q21	Q22		
Beaverton	Yes	Yes	Yes	Yes	No	Yes	Yes	Portion			
Cornelius	Yes	No	No	No	No	No	No	None			
Damascus	Yes	Yes	No	No	No	No	No	None			
Durham	Yes	Yes	No	No	Yes	No	No	None			
Fairview	Yes	Yes	Yes	Yes	No	Yes	Yes	None			
Forest Grove	Yes	Yes	Yes	Yes	No	No	Yes	All	2006		
Gladstone	No	No	No	No	No	No	Yes	None			
Gresham	Yes	Yes	Yes	No	Yes	No	Yes	Portion	Jun-08		
Happy Valley	Yes	Yes	Yes	No	No	No	Yes	None			
Hillsboro	Yes	Yes	No	No	No	No	No	Portion			
Johnson City	No	None									
King City	Yes	Yes	Yes	No	No	No	No	None			
Lake Oswego	Yes	Yes	Yes	Yes	No	Yes	No	Portion			
Maywood Park	Yes	Yes	No	No	No	No	No	None			
Milwaukie	Yes	Yes	No	No	No	No	Yes	None			
Oregon City	Yes	None									
Portland	Yes	Yes	Yes	Yes	Yes	No	Yes	Portion	2006		
Rivergrove	Yes	Yes	No	No	No	No	No	None			
Sherwood	Yes	Yes	Yes	Yes	No	No	Yes	None			
Tigard	Yes	Yes	Yes	No	No	No	Yes	None			
Troutdale	Yes	Yes	Yes	Yes	Yes	No	Yes	None			
Tualatin	Yes	Yes	No	Yes	Yes	Yes	Yes	Portion	8-Dec		
Vancouver	Yes	Yes	Yes	Yes	Yes	No	Yes	None			
West Linn	Yes	Yes	Yes	No	No	No	Yes	Portion	1996		
Wilsonville	Yes	Yes	Yes	Yes	Yes	No	Yes	Portion	1998		
Wood Village	No	No	No	No	No	No	Yes	None			
Unincorporated Multnomah County	Yes	Yes	Yes	Yes	Yes	No	No	None			
Unincorporated Washington County	Yes	Yes	Yes	No	No	No	Yes	None			
Unincorporated Clackamas County	Yes	Yes	Yes	Yes	No	No	Yes	None			
Unincorporated Clark County	No	None									

Jurisdiction	Q23	Q24	Q25	Q26	Q27	Q28	Q29
Beaverton		Yes	2009/spring	No		No	Yes
Cornelius	0 - 10% of streets inventoried			No		No	No
Damascus	0 - 10% of streets inventoried	No		No		No	No
Durham	0 - 10% of streets inventoried	No		No		No	No
Fairview	0 - 10% of streets inventoried	No		No		No	No
Forest Grove	50 - 100% streets inventoried?	Yes	2008	No		Yes	Yes
Gladstone		No		No		No	No
Gresham	0 - 10% of streets inventoried	Yes	Sep-08	No		No	No
Happy Valley	0 - 10% of streets inventoried	No		No		No	No
Hillsboro	50 - 100% streets inventoried?	No		No		No	No
Johnson City				No		No	No
King City	0 - 10% of streets inventoried	No		No		No	No
Lake Oswego	0 - 10% of streets inventoried	Yes		Yes		No	No
Maywood Park							
Milwaukie	0 - 10% of streets inventoried	No		No		No	No
Oregon City	0 - 10% of streets inventoried	No		No		No	No
Portland	0 - 10% of streets inventoried	Yes	2008	No		Yes	Yes
Rivergrove		No		No		No	No
Sherwood	0 - 10% of streets inventoried	No		No		No	No
Tigard	0 - 10% of streets inventoried	Yes	Jan-09	Yes	Jan-09	No	No
Troutdale	50 - 100% streets inventoried?	No		No		No	No
Tualatin	0 - 10% of streets inventoried	Yes	2006	Yes	2000	No	Partial
Vancouver	0 - 10% of streets inventoried	Yes	2005	Yes	2005	Yes	Yes
West Linn	50 - 100% streets inventoried?	Yes	2008	No		No	No
Wilsonville	10 - 50% streets inventoried?	Yes	2008	No	2000	No	No
Wood Village		No		No		No	No
Unincorporated Multnomah County		No		No		No	No
Unincorporated Washington County		No		No		No	Yes
Unincorporated Clackamas County		Yes	2008	No		No	No
Unincorporated Clark County		No		No		No	Yes

Jurisdiction	Q30a	Q30b	Q30c	Q31a	Q31b	Q31c	Q32a	Q32b
Beaverton	No	No	Yes	Yes	Yes	No	Yes	Yes
Cornelius	No							
Damascus	No							
Durham	Yes	No	Yes	No	No	No	No	Yes
Fairview	No	No	No	No	No	No	Yes	No
Forest Grove	Yes	No	No	No	No	No	Yes	Yes
Gladstone	No	No	No	No	Yes	No	No	No
Gresham	No	No	Yes	Yes	Yes	Yes	Yes	No
Happy Valley	Yes	No	Yes	No	Yes	No	No	No
Hillsboro	No	No	Yes	No	Yes	No	No	No
Johnson City	No							
King City	No	No	No	Yes	No	No	No	No
Lake Oswego	No	No	No	No	No	No	Yes	Yes
Maywood Park	Yes	No	No	No	No	No	Yes	No
Milwaukie	No							
Oregon City	No	No	Yes	Yes	No	No	Yes	No
Portland	No	No	Yes	No	Yes	No	No	No
Rivergrove	No	Yes						
Sherwood	Yes	No	Yes	Yes	Yes	No	No	Yes
Tigard	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Troutdale	Yes	No	Yes	No	No	No	Yes	No
Tualatin	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Vancouver	Yes	No						
West Linn	Yes	No	Yes	No	No	No	Yes	Yes
Wilsonville	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Wood Village	No	No	Yes	No	No	No	No	No
Unincorporated Multnomah County	No							
Unincorporated Washington County	No	No	No	Yes	No	No	Yes	Yes
Unincorporated Clackamas County	Yes	Yes	Yes	Yes	Yes	No	No	No
Unincorporated Clark County	No							

Does the jurisdiction fund the urban tree planting in any of the following:  
 Q30a Public right of way  
 Q30b Does the jurisdiction fund the urban tree planting in any of the following:  
 Private land  
 Q30c Does the jurisdiction fund any of the following:  
 Public land  
 Is the jurisdiction engaged in any partnerships with other jurisdictions or non-profits to promote urban forestry and with which of the following: Other  
 Q31a Is the jurisdiction engaged in any partnerships with other jurisdictions or non-profits to promote urban forestry and with which of the following: Non-profits  
 Q31b Is the jurisdiction engaged in any partnerships with other jurisdictions or non-profits to promote urban forestry and with which of the following: Private  
 Q31c Is the jurisdiction engaged in any partnerships with other jurisdictions or non-profits to promote urban forestry and with which of the following:  
 Does the jurisdiction systematically track the removal and replacement of individual urban trees in any of the following:  
 Q32a Public right of way  
 Q32b Does the jurisdiction systematically track the removal and replacement of individual urban trees in any of the following:  
 Private land



Jurisdiction	Q33h How does the jurisdiction fund urban forestry: OtherText	Q34a Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Planning/Community Development	Q34b Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Parks	Q34c Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Public Works
Q2				
Beaverton		Yes	No	Yes
Cornelius		Yes	No	Yes
Damascus		Yes	No	No
Durham		Yes	Yes	No
Fairview	general fund	Yes	Yes	Yes
Forest Grove		Yes	Yes	No
Gladstone		No	No	No
Gresham	wastewater, parks, transportation, building	Yes	Yes	Yes
Happy Valley		Yes	Yes	Yes
Hillsboro		Yes	Yes	Yes
Johnson City		No	No	No
King City	No source of funding	Yes	No	No
Lake Oswego		Yes	Yes	Yes
Maywood Park	tree removal permit fees	Yes	No	No
Milwaukie		Yes	No	Yes
Oregon City		Yes	Yes	Yes
Portland		Yes	Yes	No
Rivergrove		Yes	No	No
Sherwood	Fee- in-lieu collected for tree mitigation	Yes	No	Yes
Tigard		Yes	Yes	Yes
Troutdale		Yes	Yes	Yes
Tualatin	Road Fund	Yes	Yes	Yes
Vancouver	City Tree Fund	Yes	Yes	Yes
West Linn		Yes	Yes	Yes
Wilsonville	Local improvement district, tree mitigation fund	Yes	Yes	Yes
Wood Village	All for maintaining trees in public parks.	No	Yes	No
Unincorporated Multnomah County		No	No	No
Unincorporated Washington County		Yes	No	No
Unincorporated Clackamas County		Yes	Yes	No
Unincorporated Clark County		Yes	No	No

Jurisdiction	Q34d Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Transportation	Q34e Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Environmental Services or Surface water management	Q34f Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: Other	Q34g Please select all of the bureaus/departments within the jurisdiction that have responsibilities or duties related to urban forestry from the following: OtherText	Q35 What was the jurisdiction's total annual expenditure related to Urban Forestry during the last fiscal year?
O2					
Beaverton	No	Yes	No		
Cornelius	No	No	No		
Damascus	No	No	Yes	Code Enforcement	1000
Durham	No	No	No		
Fairview	No	No	No		
Forest Grove	No	No	Yes	Light and Power Department	130000
Gladstone	No	No	No		
Gresham	Yes	Yes	No		600000
Happy Valley	No	No	Yes	Community Services/Code Enforcement	70000
Hillsboro	Yes	No	No		200000
Johnson City	No	No	No		
King City	No	No	No		0
Lake Oswego	No	No	No		
Maywood Park	No	No	No		
Milwaukie	No	No	Yes	Engineering, Code Enforcement	200
Oregon City	No	No	Yes	Code Enforcement	40000
Portland	No	Yes	No		
Rivergrove	No	No	No		0
Sherwood	No	No	No		38923
Tigard	Yes	Yes	No		195669
Troutdale	No	No	No		48697
Tualatin	No	No	No		215465
Vancouver	Yes	Yes	No		950000
West Linn	No	Yes	No		100000
Wilsonville	No	No	No		220000
Wood Village	No	No	No		
Unincorporated Multnomah County	No	No	No		
Unincorporated Washington County	No	No	Yes	Operations and Maintenance	150000
Unincorporated Clackamas County	No	Yes	No		
Unincorporated Clark County	No	No	No		

Jurisdiction	a) Please specify the following staffing levels by entering the number of FTE for the jurisdiction:	b) Please specify the following staffing levels by entering the number of FTE for the jurisdiction:
Q2	Q36a	Q36b
Beaverton	1	3
Cornelius		
Damascus		
Durham		
Fairview	less than 1	by contract
Forest Grove	0	1
Gladstone		
Gresham	1	2
Happy Valley	1	0
Hillsboro		
Johnson City	0	0
King City		
Lake Oswego	0	1 but just left; may not be re-hired
Maywood Park		
Milwaukie	.1 (Planning/Engineering staff)	0
Oregon City		0.5
Portland		
Rivergrove	0	0
Sherwood	0	0
Tigard	1	1
Troutdale	0	1
Tualatin	1	3
Vancouver	1	2
West Linn	1	3
Wilsonville	3 staff planners	2 public works staff are certified
Wood Village		
Unincorporated Multnomah County		
Unincorporated Washington County		
Unincorporated Clackamas County		
Unincorporated Clark County		

Jurisdiction	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Same regulation for all development and in all zones (please go to question 3 and skip questions 4-7)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Land divisions (please answer question 4)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Development in commercial and industrial zones (please answer question 5)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Development in single-family residential zones (please answer question 6)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Development in mid-family residential zones (please answer question 7)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Annexation of land to a city or urban service area	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : None of the above	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Removal of trees outside of the development process (please answer question 9)	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : Other
Clackamas County	No	Yes	Yes	Yes	Yes	No	No	No	No
Gresham	Yes	No	No	No	No	No	No	Yes	No
Oregon City	No	Yes	Yes	No	Yes	No	No	No	Yes
Beaverton	Yes	No	No	No	No	No	No	Yes	No
Forest Grove	Yes	Yes	No	No	No	No	No	No	Yes
Fairview	Yes	Yes	Yes	Yes	No	No	No	No	No
Lake Oswego	Yes	No	No	No	No	No	No	Yes	No
Washington	Yes	No	No	No	No	No	No	No	No
Tualatin	Yes	Yes	No	No	No	No	No	Yes	Yes
Sherwood	Yes	No	No	No	No	No	No	Yes	No
Troutdale	Yes	No	No	No	No	No	No	No	Yes
Happy Valley	Yes	No	No	No	No	No	No	Yes	No
Vancouver	Yes	No	Yes	No	No	No	No	Yes	Yes
King City	Yes	No	No	No	No	No	No	Yes	No
Durham	Yes	No	No	No	No	No	No	Yes	No
Wilsonville	Yes	No	No	No	No	No	No	Yes	No
Tigard	No	No	No	No	No	No	No	Yes	No
Milwaukie	No	No	No	No	No	No	No	No	Yes
Portland	No	Yes	No	No	No	No	No	Yes	Yes
West Linn	Yes	Yes	No	No	No	No	No	Yes	No

Jurisdiction	Does the jurisdiction have specific tree regulations that apply in the following circumstances? (please select all that apply) : OtherText	If tree regulation applies to all development and all zones: please specify the standards that apply: minimum caliper / dbh inches of regulated trees	If tree regulation applies to all development: minimum caliper / dbh inches of regulated trees	Please describe what tree regulations apply for land divisions: minimum caliper / dbh inches of regulated trees
Clackamas County	Regulation only apply to Single Family Development subdivisions.	n/a		No definition of regulated trees.
Gresham		>8" at 4.5 feet		Preservation standards are largely discretionary. Code states that trees shall be retained "along property lines to serve as buffers to adjacent property." This standard is effectively only applied in land divisions.
Oregon City	historic trees and sensitive areas	6 inches at 4 and a half feet		
Beverton		greater or equal to 10 inches		
Forest Grove	Planners review requests to remove trees to ensure they are not registered trees or trees preserved as a condition of past development.	>6 inches and >3 inches for white oaks		Discretionary preservation standards applied by staff with a requirement for "exploring alternative designs."
Fairview		6 inches at four feet		no specific standards
Lake Oswego		5"		
Washington				No preservation standards. No specific regulated tree size. Clear-cutting is prohibited as defined by development code but not under the Forest Practices Act.
Tualatin	Regulations for annexation have been discussed but never adopted.	8 inches		Discretionary preservation standards applied by staff. No alternative analysis necessary. Trees allowed to be removed "to construct proposed improvements." Staff permits trees within 10 feet of proposed building footprints to be removed outright.
Sherwood		5 dbh or greater		must provide arborist report; mitigation for all trees removed
Troutdale	Only for areas that are classified as undeveloped or underdeveloped	greater than 6"		Disclose existence and plan for removal or preservation
Happy Valley		6" at 4'		
Vancouver	Varies by	> 6 inches		A minimum tree density requirement must be achieved by either tree retention or tree planting. Requirements can include site design modification to preserve trees especially large mature trees or trees in environmentally sensitive areas.
King City		6" at 4 feet		
Durham		5" at 4'		
Wilsonville		6" at 4.5'		See discretionary standards in Section 4.610.10. Standards For Tree Removal; Relocation Or Replacement
Tigard		6"		none
Milwaukie	none			
Portland	Different tree removal regulations apply in different districts and overlays zones. Trees preserved as a condition of past development.			6 inches but lower for some significant trees.
West Linn		6 inch trees or greater must be inventoried		6 inch trees or greater must be inventoried

Jurisdiction	Please describe what tree regulations apply for land divisions: minimum height of regulated trees	Please describe what tree regulations apply for land divisions: area, number of trees, etc.)	Please describe what tree regulations apply for commercial/industrial zones: minimum caliper / dbh inches for regulated trees	Please describe what tree regulations apply for commercial/industrial zones: minimum height of regulated trees	Please describe what tree regulations apply for commercial/industrial zones: : What preservation standards apply? (percent canopy cover, basal area, number of trees, etc.)	Please describe what tree regulations apply for single-family residential? : minimum height of regulated trees	Please describe what tree regulations apply for single-family residential? (percent canopy cover, basal area, number of trees, etc.)	Preservation standards entirely discretionary
Clackamas County		None. Preservation standards entirely discretionary.	No definition of regulated trees.		None. Preservation standards entirely discretionary			Preservation standards entirely discretionary
Gresham		retained along the outer edge of the property during the land division process						
Oregon City								
Beaverton								
Forest Grove		Some discretionary standards apply that allow staff to require design adjustments of subdivisions to preserve trees.						
Fairview								
Lake Oswego								
Washington								
Tualatin		Discretionary preservation standards applied by staff. No alternative analysis necessary. Trees allowed to be removed "to construct proposed improvements." Staff permits trees within 10 feet of proposed building footprints to be removed outright.						
Sherwood								
Troutdale								
Happy Valley								
Vancouver								
King City								
Durham								
Wilsonville								
Tigard								
Milwaukie								
Portland								
West Linn		Most "significant" trees (90-100%) on environmentally constrained lands and 20% site on all other lands.						

Jurisdiction	Please describe what tree regulations apply for multi-family regulated trees / dbh inches for regulated trees.	Please describe what tree regulations apply for multi-family regulated trees / minimum height of residential: : minimum height of regulated trees	Please describe what tree regulations apply for multi-family regulated trees / What preservation standards apply? (percent canopy cover; basal area; number of trees; etc.)	Are there any exemptions for removal of regulated trees?
Clackamas County	No definition of regulated trees.		Preservation standards entirely discretionary	While trees can be preserved and protected as a condition for development; Clackamas County has no formal process or staff to regulate trees outside the development process.
Gresham				3 trees per year can be removed on lots less than 35K.&CR;&LF;6 trees per year can be removed on lots greater than 35K.&CR;&LF;&CR;&LF;All trees in Hillside Physical Constraint Flood Plain; or Habitat Conservation Area Overlay District require a Type I or II Permit permit.
Oregon City				no
Beaverton				Four regulated trees are allowed to be removed annually without permit&CR;&LF;Single family residential less than 1/2 acre&CR;&LF;native trees - greater or equal to 6 inches dbh (i.e. hemlock; madrone; maple)
Forest Grove				
Fairview				non-natives in SEC exempted
Lake Oswego				
Washington				
Tualatin				With some exceptions for natural areas; up to four trees can be removed per calendar year on given site. Additional exemptions apply for tree removal on commercial forestry or agriculture lands; parks and golf courses. Also; staff permits all trees within 10 feet of proposed building footprints to be removed outright. See narrative.
Sherwood				Does not include annexations&CR;&LF;Tree removal outside the development process does not require a permit; must just report it to the planning department 48hrs before tree removal.
Troutdale				
Happy Valley				
Vancouver				Exemptions include: 1. Built out single family lots < 1 acre. 2. Six trees within a 36 month period on property to remain undeveloped for six years with a restrictive covenant. 3. Site disturbance less than 500 square feet without tree removal. 4. Emergency tree removal.
King City				landowners are allowed to move 2 trees per year without a permit
Durham	5"			
Wilsonville				Approval to remove one to three trees within a twelve (12) month period on any&CR;&LF;property shall be granted if the trees proposed for to removal are 1. not located in the Significant Resource Overlay Zone or the Willamette River Greenway; 2. not Heritage Trees; 3. not street trees; 4. not retained as a condition of site development approval.
Tigard				tree removal requires permit in water quality zones; community service uses; mixed zone development requires a tree inventory and in flag lots regulates 6"
Milwaukie				
Portland				Lot confirmation and multifamily dwellings on a single lot can bypass the land division code's tree preservation standards. &CR;&LF;&CR;&LF;Trees on developed single-family lots are exempt from Chapter 24.20. Trees were preserved as a condition of past development protected under Title 33 but there is no permit for their removal.
West Linn				6 inch trees or greater must be inventoried but only "significant" trees identified by the City Arborist are subject to preservation standards.

Jurisdiction	Please describe what tree regulations apply outside the development process? : minimum caliper / dbh inches for regulated trees	Please describe what tree regulations apply outside the development process? : minimum height of regulated trees	Please describe what tree development process? : What preservation standards apply? (percent canopy; basal area; number of trees; etc.)	Please describe what tree regulations apply outside the development process? : What is the cost of the permit?	Does the jurisdiction have environmental or significant natural resource areas overlay zones that regulate removal of trees or tree groves? (if not; skip to question 13)
Clackamas County	None		No process for regulating trees preserved as a condition of past development.		Yes
Gresham	>8" at 4.5 feet			Free Type I permit and \$1800 Type II Permit	Yes
Oregon City					Yes
Beaverton	greater or equal to 10 inches				Yes
Forest Grove			Planners review requests to remove trees to ensure they are not registered trees or trees preserved as a condition of past development.	NO Permit	Yes
Fairview					Yes
Lake Oswego					Yes
Washington					Yes
Tualatin	8 inches				Yes
Sherwood	10" dbh deciduous; 20" dbh conifers (mature trees)		Discretionary preservation standards applied by staff. No alternative analysis necessary.	\$276 plus \$10 per tree capped at \$300.	No
Troutdale	greater than 6"			none;	Yes
Happy Valley	6"				Yes
Vancouver	< 6 inches				Yes
King City	6"		Developed single family lots less than one acre are exempt. Level VIII Tree Plan for more than 6 trees per acre on properties > one acre.	?	No
Durham					Yes
Wilsonville	6" or greater			See Fee Sheet	Yes
Tigard	varies		Discretionary decision under Type B permit. See section 4.610.10 review criteria.		Yes
Milwaukie					Yes
Portland	12" or larger on developable properties and developed commercial or industrial properties.				Yes
West Linn	All trees >12" dbh and white oaks; mandrone; and dogwood >6" dbh		Discretionary based on criteria in Chapter 20.42. Generally favors mitigation.	\$35 per application	Yes
			Approval Criteria 8.630 in Municipal Code	\$0	Yes

Jurisdiction	Does the jurisdiction have environmental or significant natural resource areas that regulate removal of trees or tree groves? (If not, skip to question 13) : CommentText	Do environmental overlay or significant natural resource areas define a minimum disturbance area or a clear and objective standard for resource protection?	Do environmental overlay or significant natural resource areas define a minimum disturbance area or a clear and objective standard for resource protection? : CommentText	Do environmental overlay or significant natural resource areas include an discretionary review process?
Clackamas County	HCA's overlay; WQRAs; and Willamette Greenway Overlay	Yes	HCA overlay Yes; Willamette Greenway Overlay: No	Yes
Gresham	Hillside Physical Constraint Overlay District; Habitat Conservation (HCA) Overlay District; Pleasant Valley Environmental Sensitive Restoration Area (ESRA) District; Springwater Environmental Sensitive Resource Area (ESRA) District.	Yes	Habitat Conservation (HCA) Overlay District; Pleasant Valley Environmental Sensitive Restoration Area (ESRA) District; Springwater Environmental Sensitive Resource Area (ESRA) District.	Yes
Oregon City	flood management areas (17.42); geologic hazards (17.44); water quality (17.49)	Yes		Yes
Beaverton	Trees within mapped areas in 1984	No	Can remove up to 100%; however if greater than 50% must mitigate; except in mixed land use which must mitigate after 25% removal	Yes
Forest Grove	Habitat Conservation Areas and CWS vegetated corridors	Yes		Yes
Fairview	SEC and Riparian - Title 13 pending	Yes		Yes
Lake Oswego		Yes		Yes
Washington		No	Significant Natural Resource Areas have discretionary standards for protection and mitigation. CWS's vegetated corridor standards do apply a clear and objective standard.	Yes
Tualatin		Yes		No
Sherwood	managed by CWS	Yes		Yes
Troutdale		Yes	restrictions to development noso much related to specific trees	Yes
Happy Valley	25' buffers in riparian areas	Yes		
Vancouver		Yes		Yes
King City		No		No
Durham		Yes	must remain undisturbed	No
Wilsonville		Yes		Yes
Tigard	upland areas	Yes		No
Milwaukie		Yes		Yes
Portland		Yes		Yes
West Linn		Yes		Yes

Jurisdiction	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : parking lots	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : street trees	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : in yards or landscaping around buildings	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : environmentally sensitive areas	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : None of the above	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : Other	Are new tree plantings required for redevelopment; separate from mitigation; in the following: (please select all that apply) : OtherText	Is there public review for tree removal in any of the following: Land divisions	Is there public review for tree removal in any of the following: Commercial / industrial zones
Clackamas County	Yes	Yes	No	No	No	No		Yes	Yes
Gresham	Yes	Yes	Yes	No	No	No	Yard tree planting associated with the requirement to plant "street" tree in the front yard where planting strips do not exist.	Yes	Yes
Oregon City	Yes	Yes	No	No	No	Yes	planter strip for all development	Yes	Yes
Beaverton	Yes	Yes	Yes	No	No	No		Yes	Yes
Forest Grove	Yes	Yes	Yes	No	No	No		Yes	Yes
Fairview	Yes	Yes	No	No	No	No		Yes	Yes
Lake Oswego	Yes	Yes	Yes	No	No	No		No	Yes
Washington	No	Yes	No	No	No	No		Yes	Yes
Tualatin	Yes	Yes	Yes	No	No	No		No	Yes
Shenwood	No	Yes	No	No	No	No		No	No
Troutdale	Yes	Yes	Yes	No	No	No		Yes	Yes
Happy Valley	Yes	Yes	No	No	No	No		Yes	Yes
Vancouver	Yes	Yes	No	No	No	No	One tree per 10 parking stalls. On street tree per 20' of street frontage on public and private streets with adjustments for access points.	Yes	Yes
King City	Yes	Yes	Yes	No	No	No		No	Yes
Durham	No	No	No	No	Yes	No		Yes	Yes
Wilsonville	Yes	Yes	Yes	Yes	No	No		Yes	Yes
Tigard	Yes	Yes	Yes	No	No	Yes	buffer between incompatible land uses	Yes	Yes
Milwaukie	Yes	Yes	Yes	No	No	No		No	No
Portland	Yes	Yes	Yes	No	No	No		Yes	Yes
West Linn	Yes	Yes	Yes	No	No	No		No	Yes

Jurisdiction	Is there public review for tree removal in any of the following: Single-family residential	Is there public review for tree removal in any of the following: Multi-family residential	Is there public review for tree removal in any of the following: Significant natural resource areas	Is there public review for tree removal in any of the following: Outside development process	Is there public review for tree removal in any of the following: CommentText	Is a tree inventory required before development activities begin?	Is a tree inventory required before development activities begin? CommentText	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply): hazardous trees	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply): invasive species	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply): diseased
Clackamas County	Yes	Yes	Yes	No	Where tree regulations apply.	No	But can be required in some situations. Exemptions for large forested lots where trees may be set aside as an open space or steep slope dedication.	No	No	No
Gresham	Yes	Yes	Yes	Yes		Yes		Yes	No	No
Oregon City	Yes	Yes	Yes	No		Yes		Yes	No	Yes
Beverton	Yes	Yes	Yes	No	Applies to community trees; outside the 4 annual allowed removal and in significant areas	Yes		Yes	Yes	Yes
Forest Grove		Yes	Yes			Yes		Yes	No	Yes
Fairview	Yes	Yes	Yes	No		Yes		Yes	Yes	No
Lake Oswego	Yes	Yes	No	Yes		Yes		Yes	No	No
Washington	Yes	Yes	Yes	No		No	Yes if a Planned Development.	Yes	No	No
Tualatin	Yes	Yes	Yes	No		Yes		Yes	Yes	Yes
Sherwood	No	No	No	No		Yes		Yes	No	Yes
Troutdale	Yes	Yes	Yes	No		Yes	only for undeveloped or underdeveloped lands	Yes	No	Yes
Happy Valley	Yes	Yes	Yes	Yes		Yes		Yes	No	Yes
Vancouver	Yes	Yes		Yes		Yes		Yes	Yes	Yes
King City	Yes	Yes	No	No		Yes		Yes	No	Yes
Durham	Yes	Yes	No	Yes		Yes		Yes	No	Yes
Wilsonville	Yes	Yes	Yes	Yes		Yes		Yes	No	Yes
Tigard	Yes	Yes	Yes	No		Yes		Yes	No	No
Milwaukie	No	No	Yes	No		No		No	No	No
Portland			Yes	Yes	Varies from public hearing to simply notice to adjacent property owners.	Yes	For land division or in environmental zones.	Yes	Yes	Yes
West Linn	Yes	Yes	Yes	Yes	Signage and notification of adjacent landowners required	Yes		Yes	No	No

Jurisdiction	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply) : damaged	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply) : dead tree	Does tree preservation regulation have special provisions or allowance for removing (please select all that apply) :	Are there specific criteria and validation for danger/hazard tree removal? Which?	Are there specific criteria and validation for danger/hazard tree removal? Which?	Are trees to be removed or retained marked and verified before clearing or construction activities begin?
Clackamas County	No	No	No explicit provisions but discretionary authority exists	No		No
Gresham	No	No		Yes		No
Oregon City	No	Yes	required to be replace by 1:1 ratio	Yes	need letter from certified arborist	Yes
Beverton	Yes	Yes		Yes	defined by planner or arborist	Yes
Forest Grove	No	Yes	Arborist inspections needed for diseased; dead; or hazardous trees.	No	Arborist ons staff will do inspections.	Yes
Fairview	No	No	windthrow issues; removed trees under these condition do not have to be mitigated	No	depends on arborist hazard assessment and visual confirmation	Yes
Lake Oswego	No	Yes		Yes	must be certified as hazardous	Yes
Washington	No	No		No	An arborist report is required	Yes
Tualatin	Yes	Yes		Yes		Yes
Sherwood	Yes	Yes		No		Yes
Troutdale	No	Yes		Yes	arborist report	No
Happy Valley	Yes	Yes		Yes		Yes
Vancouver	No	Yes	Level III Tree plan.	Yes		No
King City	Yes	Yes	need arborist report	No		Yes
Durham	Yes	Yes		Yes	based on planner's discretions and concur with arborist	Yes
Wilsonville	Yes	Yes		Yes		Yes
Tigard	No	Yes		Yes		Yes
Milwaukie	No	No				Yes
Portland	Yes	Yes		Yes	Tree must be an immediate danger in an environmental overlay zone (ezone). Arborist consultation is required for land divisions or if not an immediate danger in an ezone. Urban Forestry division consults.	No
West Linn	Yes	Yes	Dead or dying.	No	Subject to Arborist report.	Yes

Jurisdiction	Are trees to be removed or retained marked and verified before clearing or construction activities begin? CommentText	Are best management practices required to protect trees during construction from the following? : Grading	Are best management practices required to protect trees during construction from the following? : Excavation	Are best management practices required to protect trees during construction from the following? : Topping	Are best management practices required to protect trees during construction from the following? : Pruning	Are best management practices required to protect trees during construction from the following? : Root damage	Are best management practices required to protect trees during construction from the following? : Stem damage	Are best management practices required to protect trees during construction from the following? : Other
Clackamas County	Yes, if a tree inventory is required	No	No	No	No	No	No	No
Gresham		Yes	Yes	Yes	Yes	Yes	Yes	No
Oregon City	fencing	Yes	No	No	No	Yes	Yes	No
Beaverton		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Forest Grove	New requirement	Yes	Yes	No	No	Yes	Yes	No
Fairview		Yes	Yes	No	No	Yes	Yes	No
Lake Oswego	use of fencing and yellow flagging tape	Yes	Yes	No	Yes	Yes	Yes	No
Washington		Yes	Yes	No	No	Yes	No	No
Tualatin		Yes	Yes	No	No	Yes	Yes	No
Sherwood	done by developer	Yes	Yes	No	No	No	No	No
Troutdale	discretionary; not in code; but may be required in development permit	No	No	No	No	Yes	No	No
Happy Valley		Yes	Yes	No	No	Yes	Yes	No
Vancouver	Trees retained are fenced. Marking would be an improvement.	Yes	Yes	No	No	Yes	No	No
King City	fencing	Yes	Yes	Yes	Yes	Yes	Yes	No
Durham	fencing	Yes	Yes	No	Yes	Yes	Yes	No
Wilsonville		Yes	Yes	No	No	Yes	Yes	No
Tigard		No	No	No	No	No	No	Yes
Milwaukie	only for flag lots	No	No	No	No	No	No	Yes
Portland	Size of root protection zone proportional to tree diameter (one foot for every inch of DBH) or an arborist recommendation. Chainlink fence buried in the ground required.	Yes	Yes	Yes	No	Yes	Yes	No
West Linn		Yes	Yes	No	No	No	No	No

Jurisdiction	Are best management practices required to protect trees during construction from the following? OtherText	Does jurisdiction require measures to protect trees or tree groves at or beyond driplines from disturbance and/or heavy equipment operation?	Can jurisdiction require construction design modifications to protect trees?	Can jurisdiction require construction design modifications to protect trees?
Clackamas County	Grading; excavation; root damage; and topping	No	Yes	Consulting arborist can require
Gresham	Field inspection minimal	Yes	Yes	But rarely required or enforced.
Oregon City		Yes	Yes	such as combined drivewayas
Beaverton	project arborist is responsible for tree protection	Yes	No	only in Type III
Forest Grove	6 foot chain link fence in concrete footings.	Yes	Yes	
Fairview	will allow topping at last resort	Yes	Yes	
Lake Oswego		Yes	Yes	as a condition of tree cutting permit
Washington	Sometimes a chain link fence is required.	No	Yes	
Tualatin		Yes		
Sherwood		No	No	can only recommend changes
Troutdale	as determined by arborist; not in code	Yes	No	but may be put into condition for tree protection
Happy Valley		Yes	Yes	
Vancouver	Topping not prohibited. Removal is defined as any action that leads to death in 3 years.	Yes	Yes	No qualified professional required for tree plans.
King City	rely on arborist report and follow -up report	Yes	Yes	
Durham		Yes	Yes	
Wilsonville		Yes	Yes	
Tigard	determined by arborist; not set in code	No	Yes	
Milwaukie	has been imposed as condition of approval; but not within code	Yes	Yes	only where they have authority
Portland		Yes	Yes	
West Linn		Yes	Yes	

Jurisdiction	Is the developer or the jurisdiction responsible for the maintenance and survival of preserved or mitigated trees after development? And if so; for how long?	Does the jurisdiction regulate heritage/historic trees? (If not; skip to question 28)	Is there criteria for delisting heritage/significant trees?	Is there criteria for delisting heritage/significant trees? : CommentText	What is the level of regulatory review for removal or pruning of heritage/significant trees?
Clackamas County	The code does not specify responsibilities for survival of protected trees or mitigation trees.	No	Yes	Heritage tree program is voluntary... started in 2007	n/a
Gresham	No developers must sign covenant; but the jurisdiction does not keep track of trees. After sale; landowners are responsible	Yes	Yes	this will be under new policy adopted this year	Type II
Oregon City	They are responsible as long as they on the property or come in for another tree removal permit	Yes	Yes	Type III pain for removal	Type III
Beaverton	The landowner is responsible.	Yes	Yes	"Registered trees" must go before the forestry commission to be delisted. Criteria exist to make the decision.	Type 3
Forest Grove	Developer is responsible till property is sold; then land owner is responsible	No	Yes	if it dies or it is removed	Type II
Fairview Lake Oswego	No	No	No		
Washington	Landowner is responsible. That could be a homeowners association or a public agency if they took over the land. In most cases, THPRD and Clean Water Services.	No	No		
Tualatin	Landowner. In perpetuity.	Yes	Yes	Arborist Report Required	
Sherwood	Developer	No	No		public hearing for removal
Troutdale Happy Valley	Developer is responsible for 2 years; must replace dead trees	Yes No	Yes No	public hearing with city council	none
Vancouver King City	Developer is responsible for three years? yes; 3 years must provide ground cover	Yes No	Yes No	Heritage trees require urban forestry commission approval. The decision is largely discretionary.	
Durham	up to five years; requires a bond for development larger than single-family residential	No	No		
Wilsonville	2 years by the developer	No	No		
Tigard	protected by deed; transfer from developer to HOA	Yes	Yes		
Milwaukie	no	No	No		
Portland	Property owner and all future owners responsible for the life of the tree to maturity.	Yes	Yes	Heritage can be removed by the City Council with the unanimous recommendation of the Urban Forestry Commission.	See above.
West Linn		Yes	No		n/a

Jurisdiction	Is a certified arborist required for oversight of heritage tree pruning and hazard abatement?	Are new landowners notified of tree protection plans that were a condition of past development?	Are new landowners notified of tree protection plans that were a condition of past development? Comment/Text	How are new landowners notified of tree protection plans? (please specify)	Does the jurisdiction require mitigation of tree removal on private land outside environmental overlay zones/districts? (If not skip to question 40)
Clackamas County	No	No			No
Gresham	No	No			No
Oregon City	No	Sometimes	covenant is recorded in title; only applies for mitigated trees		Sometimes
Beaverton	No	No			Yes
Forest Grove	Yes	Sometimes	Letters are sent annually to owners of registered trees.		Yes
Fairview		No	considering a new system		Yes
Lake Oswego	No	No			Yes
Washington		No	If a dedicated and deed restricted tract; preservation run with the land.		No
Tualatin	No	No	Notification of Heritage Trees		Sometimes
Sherwood	No	Sometimes		developer's responsibility	Yes
Troutdale	No	Sometimes	only if notification of tree removal by landowner	n/a	No
Happy Valley	No	No			Yes
Vancouver	No	No			Sometimes
King City	No	No			No
Durham	No	No			Yes
Wilsonville	No	No			Yes
Tigard	No	Yes		in property deed	Yes
Milwaukie	No	No			Sometimes
Portland	Yes	No	This is a big area of review by the ongoing Citywide Tree Project. Trees protected as a condition of development must be dedicated to the City or conserved by a conservation easement. Heritage Trees are recorded on the deed.	Heritage Trees recorded on deed.&CR:&LF:&CR:&LF:Several options are being considered including title recording and notification on water bills.	Sometimes
West Linn	No	Sometimes		Title Search for heritage trees or trees preserved as a condition of development.	No

Jurisdiction	Are the same standards for mitigating tree removal applied across the entire jurisdiction and on developed and developing properties?	Are the same standards for mitigating tree removal applied across the entire jurisdiction and on developed and developing properties? : CommentText	Does the jurisdiction require onsite mitigation fund, in lieu payment to a mitigation fund, or a combination? (Please specify)
Clackamas County	No	No mitigation required outside environmentally sensitive lands.	
Gresham	No	The manager 'may' require mitigation. GCDC 9.1012(A)(6)	onsite and in lieu
Oregon City	Yes		there are 3 options:&CR:&LF:1) onsite mitigation&CR:&LF:2) offsite (determined by city)&CR:&LF:3) payment into tree bank
Beaverton	Yes	applies to significant trees only (60,25,8)	both
Forest Grove	Yes		Onsite
Fairview	No	discretionary standard	Just has onsite mitigation
Lake Oswego	Yes	1:1 tree with 2" deciduous and 6 feet conifer	Jurisdiction requires mitigation of trees on-site; but if this is not possible; must pay into the tree fund (\$256 per tree).
Washington			
Tualatin	No		Mitigation can be required by an arborist report or if a tree protection plan is not adhered to an preserved trees end up being removed.
Sherwood	Yes		mitigation or fee-in-lieu is accepted
Troutdale	No	none	N/A
Happy Valley	Yes	commonly 1:1 landowner, 2:1 developer	Both; fees are deposited in tree bank
Vancouver	Yes	Trees must only be replaced if required to meet the minimum tree density requirement.	Onsite; offsite; and in lieu payments to City Tree Fund.
King City	No		
Durham	Yes		both; if can't mitigate within property must pay into fund
Wilsonville	Yes		both; payment goes into city fund \$200
Tigard	Yes		both; \$125 per caliper inch; can also pay bond for payments >\$100,000
Milwaukie	No	N/A	onsite for flag lots
Portland	No	Mitigation applies only in land divisions; environmental zones; and instances where Title 20 applies.	
West Linn	No		Only for land divisions.

Jurisdiction	If the jurisdiction collects fee in lieu of mitigation from a developer, does the jurisdiction ensure mitigation is equivalent to what would have been required of the developer?	Do mitigation fund payments cover the cost of maintenance and monitoring?	How does the jurisdiction ensure that mitigation is functionally equivalent to trees removed (species, size, location)?	What is the mitigation requirement for removing a 24" dbh tree?
Clackamas County				
Gresham		No	They don't. Mitigation is one to one tree. Small trees of at least 1 3/4 inches replace large trees.	One 1 3/4 inch tree
Oregon City	\$350 per tree	No	see table in 16.12.310-1	8 trees
Beaverton	haven't used the fund yet	No	1 : 1 inch dbh	24 inches
Forest Grove			Trees replaced one to one with 2" caliper trees.	2" caliper tree
Fairview	no	No	determined by size of tree and species	at least 1 to 1 tree; 1/2 inch deciduous and 6" conifer
Lake Oswego	no; payment goes into a general fund not used to plant trees	No	no ornamental trees allowed; native trees in protected areas;	one tree
Washington				
Tualatin				
Sherwood	collect \$75 per caliper inch. If not in compliance with mitigation; there is an additional fee of \$55 per inspection visit till full mitigation is accomplished.	No	1:1 caliper inch is required	24"
Troutdale	N/A	No	N/A	N/A
Happy Valley	use tree fund to plant street trees or in parks	No	No; only require similar trees to the ones removed	1 tree
Vancouver	City Tree Fund uses are defined in the code and include almost anything related to urban forestry.	No	Mitigation is only required if necessary to meet the minimum tree density requirement.	7 trees of minimum caliper if mitigation is required. If less than a level three plan mitigation is one for one.
King City	In-lieu fee based on cost of replacing CR&LF; caliper inches removed inch-for-inch by planting trees of 2.5" minimum CR&LF; caliper.	No	Trees must be replaced based on inch-for-inch caliper.	24" of tree caliper. Each tree planted must be 2.5" minimum caliper.
Durham	fund only goes for tree related issues	No	Trees must be replaced based on inch-for-inch caliper.	1 tree
Wilsonville	no	No	m of 2". Planning Director can require higher mitigation ratio for exceptionally large trees or unique s	24"
Tigard		No	2 inch tree for mitigation; 1:1 caliper:inch ratio	1 tree
Milwaukie		No		
Portland	\$150 per inch of DBH. Plans call for increasing this to \$300.	No		8 caliper inches of trees
West Linn				n/a

Jurisdiction	Are performance bonds required for tree mitigation?	If so: please specify the amount in notes	How long must mitigation trees be maintained and monitored?	Are the majority of inspectors for trees during the development process initiated by citizen complaints or staff inspections?	Does jurisdiction have a inspection staff specifically dedicated to verifying compliance with rules relating to tree preservation, protection, or planting?	If so: how many FTE?	Is this inspector a certified arborist or does he or she have natural resource expertise?
Clackamas County				Citizens	No	To the extent inspection and compliance enforcement happens it is part of general code compliance staffing.	No
Gresham	No		0	Citizens	No		
Oregon City	No		forever	Staff	Yes	0.25	one on staff has nat. resource experience
Beaverton	Yes	depends on landscape architect and cot of material	2 years	Staff	No		
Forest Grove				Staff	No	To the extent inspection and compliance enforcement happens it is part of general code compliance staffing.	No
Fairview	No		2 yrs; but not well enforced	Citizens	Yes	0	1 certified arborist
Lake Oswego	No		always	Citizens	Yes	0.5	no
Washington				Staff	No		
Tualatin				Citizens	No		
Sherwood	No		24	Citizens	Yes	At final site plan	No
Troutdale	No			Citizens	No		N/A
Happy Valley	Yes		24	Citizens	Yes	0.5	No
Vancouver	No			Staff	Yes		No but some training is provided to zoning inspectors
King City	No		3 years.	Citizens	Yes	1	sometimes
Durham	Yes		60	Staff	Yes		certified
Wilsonville	No			Staff	Yes		No
Tigard	Yes			Staff	Yes	1	yes
Milwaukie	No			Staff	Yes	0.002	no
Portland	No		Title 20. 36 months.	Citizens	Yes		
West Linn				Citizens	Yes	1	1

Jurisdiction	Has the jurisdiction taken any enforcement action relating to the private land in the last year?	Has the jurisdiction taken any enforcement action relating to the tree preservation or protection on private land in the last year? : CommentText	Are there fines for illegal tree cutting; pruning; or topping of regulated trees? (if not, skip questions 48-51) : Minimum Fines	Are there fines for illegal tree cutting; pruning; or topping of regulated trees? (if not, skip questions 48-51) : Discretionary fines	Are there fines for illegal tree cutting; pruning; or topping of regulated trees? (if not, skip questions 48-51) : No fines	What are the minimum fines?	Are there penalties for non-compliance with tree preservation or protection measures during construction?
Clackamas County	Yes	Jennifer Hughes is double checking	Yes	Yes	No	tree removed associated with development is a priority two violation and citations can be up to \$400 per day.	Yes
Gresham	No	No record of enforcement action in the last year could be identified.	Yes	Yes	No	\$50 per damage point. Discretionary fines up to 3 times the arbicultural value of the tree	Yes
Oregon City	Yes		No	No	Yes		
Beaverton	No		No	No	Yes	must just apply for permit	Yes
Forest Grove	No	Some compliance follow-up.	No	Yes	No	Up to \$1000.	Yes
Fairview	No		No	Yes	No	none; but can be charged up to \$1000 per day	Yes
Lake Oswego	Yes		Yes	Yes	No	\$500 per tree; plus additional fines per caliper inch	Yes
Washington	No		No	Yes	No	Determined by municipal court as a civil violation.	
Tualatin	No		No	Yes	No	\$500 per Tree	Yes
Sherwood	No		No	No	Yes		Yes
Troutdale	No		No	Yes	No	ACCORDING TO JUDGE	Yes
Happy Valley	Yes	several cases a year	Yes	Yes	No	\$2,500 per tree	Yes
Vancouver	No		Yes	Yes	No	50	Yes
King City	No		No	Yes	No		No
Durham	No		No	Yes	No		Yes
Wilsonville	Yes		No	Yes	No	Up to \$500 fine per violation per day as determined by municipal court, plus costs of mitigation.	Yes
Tigard	Yes		No	Yes	No		Yes
Milwaukie	Yes		Yes	No	No	\$500	Yes
Portland	Yes		No	Yes	No	Civil penalties up to \$1000 outside of development process. Fines for violations associated with development are highly variable.	No
West Linn	No		No	Yes	No	\$500	Yes

Jurisdiction	Are there penalties for non-compliance with tree preservation or protection measures during construction? : CommentText	If there are fines; what is the minimum?	Are restitution or mitigation penalties required for illegal tree cutting or violations of tree protection measures?	Are restitution or mitigation penalties required for illegal tree cutting or violations of tree protection measures? : CommentText
Clackamas County	If referred to the Compliance Hearings Officer, civil penalties may be imposed.	Penalties can be from \$500 - \$2500 for a priority two violation.	Sometimes	Violators can be required to remedy violation but this will depend on the situation. Administrative compliance cost of \$75 per month may be ordered or; the actual cost of enforcement may be charged.
Gresham	City can issue a stop work order.	none	Yes	up to 3 time s the arbicultural value of the tree
Oregon City	must replant		Yes	
Beaverton	must go back to the planning process		Sometimes	if cutting occurs in significant areas
Forest Grove	Fines determined by a municipal court.	Up to \$1000.	Yes	Tree must be replaced at appraised value. Land-use permit processing can be suspended. Higher mitigation penalties for non-compliance.
Fairview	stop work order		Yes	tree would be mitigated
Lake Oswego		\$500; plus work-stop orders	Yes	
Washington	Sometimes		Sometimes	
Tualatin	Replacement could be required		Yes	Replacement could be required
Sherwood		\$500; but has not been applied; but are required to mitigate	Sometimes	Replace the tree or documented and can't cut X amount of inches for the rest of the year in private property
Troutdale		stop work order	No	
Happy Valley	turn them over to code enforcement	\$2500; stop work order	Sometimes	go through tree removal permit system and may require mitigation
Vancouver			Sometimes	Tree replacement in accordance to the tree plan is required. Tree replacement is based on the appraised value using latest edition of Guide for Plant Appraisal (International Society of Arboriculture; Council. Stop work orders are also possible.
King City	never happened		Sometimes	
Durham		Civil penalties determined by Municipal Court	Yes	
Wilsonville	stop-work orders		Yes	retro-active permit
Tigard		stop work order; \$250 per day	Yes	number of inches removed or \$250 per inch into fund
Milwaukie	stop-work orders		Sometimes	discretion of planner and situation
Portland			Yes	Mitigation standards apply in addition to fine.
West Linn	Yes but enforcement not very effective.	\$500	Sometimes	



Jurisdiction	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : Leaf or fruit mess	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : Development	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : Invasive species	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : Storm damage	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : Other	Which of the following reasons would permit the removal of trees on public land owned or managed by the jurisdiction? : OtherText	When city or county public employees propose to remove trees from parks which of the following steps apply? : Permit required	When city or county public employees propose to remove trees from parks which of the following steps apply? : Waiting period before removal	When city or county public employees propose to remove trees from parks which of the following steps apply? : Public notice	When city or county public employees propose to remove trees from parks which of the following steps apply? : Public hearing	When city or county public employees propose to remove trees from parks which of the following steps apply? : Minimum BMP for protected tree	When city or county public employees propose to remove trees from parks which of the following steps apply? : Tree replacement required	When city or county public employees propose to remove trees from parks which of the following steps apply? : Other	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Does the jurisdiction have policies relating to the removal of downed trees in publically owned nature areas?
Gresham Oregon City	No	Yes	No	Yes	No		No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Beaverton	No	Yes	Yes	Yes	No		Yes	No	No	No	No	Yes	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
Forest Grove	Yes	Yes	Yes	Yes	Yes	Same as regulations applying to private land.	No	No	No	No	No	No	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
fairview	No	Yes	Yes	Yes	No		No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
King City	No	Yes	No	No	No		No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
Lake Oswego	No	Yes	No	No	No		Yes	Yes	Yes	No	Yes	Yes	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Tualatin	No	No	No	No	No	No Permits required	No	No	No	No	No	No	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Sherwood	No	Yes	No	Yes	Yes	interfering or damaging public/private utilities	No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
Troutdale	No	No	No	No	No		No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
Happy Valley	No	Yes	No	Yes	No		Yes	No	No	No	No	Yes	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
Durham	No	Yes	No	No	No		No	No	No	No	No	Yes	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Tigard	No	No	No	No	Yes	all	No	No	No	No	No	No	Yes	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Milwaukie	No	Yes	No	No	No		No	No	No	No	No	No	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	No
West Linn	No	Yes	Yes	Yes	No		Yes	No	No	No	No	No	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Portland	Yes	Yes	Yes	Yes	Yes		Yes	No	No	No	No	No	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	Yes
Clackamas County														When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	
Vancouver	No	Yes	Yes	Yes	Yes	Only in Title 13 Ha	Yes	No	Yes	Maybe	Yes	Yes	No	When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	
Washington County														When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	
Wilsonville														When city or county public employees propose to remove trees from parks which of the following steps apply? : OtherText	

Jurisdiction	Does the jurisdiction have policies relating to the removal of downed trees in publically owned nature areas? : CommentText	Does the jurisdiction police illegal cutting or vandalism of trees on public parks or open space?	Does the jurisdiction police illegal cutting or vandalism of trees on public parks or open space? : CommentText
Gresham	See Kathy Majidi	No	
Oregon City		Yes	must mitigate
Beaverton	must leave trees in significant areas	No	
Forest Grove		Yes	Never an issue. they conduct weekly inspections
fairview		Yes	
King City		No	
Lake Oswego	leave it, unles it's a hazard	Yes	park ranger
Tualatin		Yes	
Sherwood		No	
Troutdale		Yes	
Happy Valley		Yes	take to court system
Durham	leave as is unless it's hazardous	No	
Tigard	leave as habitat unless hazardous	No	
Milwaukie		No	county maintains parks
West Linn	Leave downed trees in nature		Has not been a problem
Portland	parks	Yes	
Clackamas County	Yes	Yes	
Vancouver	No	No	
Washington County	No	Yes	
Wilsonville			

Jurisdiction	Does the jurisdiction regulate street trees outside the development review process?	What is the minimum size of regulated street trees?(in inches) : Caliper/DBH	What is the minimum size of regulated street trees?(in inches) : Tree height	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Tree is hazardous	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Dead tree	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Disease/insects	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Sidewalk damage	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Owner request	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Leaf or fruit mess	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Development	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Invasive species	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Storm damage	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : Other	Which of the following reasons would permit the removal of trees in Public Right of Way? (please select all that apply) : OtherText	Is street tree pruning regulated?	Is street tree topping regulated?	Does the jurisdiction have policies, regulations, or standards that require planting street trees in association with new development, separate from mitigation?	Does the jurisdiction have policies, regulations, or standards that require planting street trees in association with new development, separate from mitigation? : CommentText
King City	No	6		Yes	Yes	Yes	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes	
Milwaukie	Yes			Yes	Yes	No	No	No	No	No	No	No	Yes	damage to personal/ public property, lost value as a street tree	Yes	No	No	
Gresham	Yes	8		Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No		Yes	Yes	Yes	In Planned Developments
Clackamas County	No			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	no limitations on reason	No	No	Yes	in limited cases
Oregon City	Yes	0		Yes	Yes	Yes	Yes	No	No	Yes	No	No	Yes		Yes	Yes	Yes	
Beverton	Yes	0		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	Yes	tree planting and placement policy located in public works
Forest Grove	Yes			Yes	Yes	No	No	No	No	Yes	No	No	Yes	Nuisance tree, public purpose	Yes	Yes	Yes	
Fairview	Yes	0		Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	blocking access	No	No	Yes	
Lake Oswego	Yes	5		Yes	Yes	No	No	No	No	Yes	No	No	No		No	Yes	Yes	
Washington County	No			No	No	No	No	Yes	No	No	No	No	No	Not frequently requested.	No	No	Yes	1 and 1/2 inch caliper trees
Tualatin	Yes	0		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		No	No	Yes	
Sherwood	Yes	2	6	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No		No	No	Yes	
Troutdale	Yes	0		Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No		Yes	Yes	Yes	
Happy Valley	Yes	0		Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No		No	Yes	Yes	
Vancouver	Yes			Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	utility conflicts, conflict with other trees	Yes	Yes	Yes	Yes
Durham	Yes	0		Yes	Yes	Yes	No	No	No	Yes	No	No	Yes		Yes	Yes	Yes	
Tigard	Yes	2		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		No	Yes	Yes	
	Yes	0		Yes	Yes	No	No	No	No	No	No	No	Yes	lost its relative value due to damage	Yes	Yes	Yes	Yes
Portland	Yes	0		Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	All the above would be contributing factors to allow removal.	Yes	Yes	Yes	
West Linn	Yes	0		Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Redevelopment and utility damage	Yes	Yes	Yes	Yes



Jurisdiction	Do any street tree regulations apply to public work projects to the Public ROW? : CommentText	Are landowners responsible for maintenance of street trees?	Are landowners responsible for maintenance of street trees? : CommentText	Are landowners responsible for damage to sidewalks caused by street trees?	Are landowners responsible for damage to sidewalks caused by street trees? : CommentText	Does the jurisdiction fund maintenance programs for street trees?&nbsp;:	How frequent are street tree maintenance inspections?	Select maintenance responsibilities of jurisdiction (please select all that apply): Tree pruning	Select maintenance responsibilities of jurisdiction (please select all that apply): Leaf removal	Select maintenance responsibilities of jurisdiction (please select all that apply): Sidewalk damage	Select maintenance responsibilities of jurisdiction (please select all that apply): Utility trimming	Select maintenance responsibilities of jurisdiction (please select all that apply): Street tree removal	Select maintenance responsibilities of jurisdiction (please select all that apply): Other
King City	street renovations	Yes		No		No	never	No	No	No	No	No	Yes
Milwaukie	same standards apply	Yes		Partial		No		No	No	No	No	No	Yes
Gresham	Maybe	Yes	not required, but no public maintenance	Yes		Yes	No systematic	Yes	Yes	No	No	No	Yes
Clackamas County		Yes		Yes		No		No	No	No	No	No	No
Oregon City		Yes		Yes		No	never	No	No	No	No	No	No
Beaverton		Yes		Yes		Yes	annually, just for city street streets	Yes	Yes	No	No	No	Yes
Forest Grove		No		Partial		No		No	No	No	No	No	No
Fairview		Yes		Yes		No		No	No	No	No	No	No
Lake Oswego		Yes		Partial	city repairs	No	none	No	No	No	No	No	No
Washington County		Yes		Yes		No		No	No	No	No	No	No
Tualatin		Yes		Yes		Yes	City prunes trees every three years for vehicular and pedestrian clearance.	Yes	No	Yes	No	Yes	No
Sherwood	when conditioned in a land use approval	Yes		Yes		No		Yes	No	No	No	No	No
Troutdale		Yes		Yes		No		No	No	No	No	No	Yes
Happy Valley		Yes		Yes		Yes	at the end of maintenance bond period	No	No	No	No	No	No
Vancouver		Yes		Yes		No		No	No	No	No	No	No
Durham	city is exempt, but must mitigate	Yes		Yes		Yes		Yes	Yes	No	Yes	Yes	No
Tigard	under review	Yes		Yes		No		No	No	No	No	No	No
	request tree mitigation	Yes		Yes				No	No	No	No	No	Yes
Portland		Yes		Yes		Yes	Very little street tree maintenance funded. For example the City funds tree maintenance and removal to manage Dutch Elm Tree disease.	No	Yes	No	No	No	Yes
West Linn		Yes		Partial		Yes	Annual Maintenance	Yes	No	Yes	No	Yes	Yes

Jurisdiction	Select maintenance responsibilities of jurisdiction (please select all that apply): OtherText	Does the jurisdiction require mitigation of street tree removal?	How does the jurisdiction ensure that mitigation is functionally equivalent to trees removed (species, size, location)?	Does the jurisdiction allow payment in lieu of mitigation?	What is the mitigation requirements for removing a 24" dbh street tree?
King City	none	Yes	within development code it specifies that mitigation must be done with similar trees to those removed. Location and species are specified by arborist in master plan.	No	same as in question 20
Milwaukie	occasional hazardous tree removal	No		No	
Gresham	PGE does Utility trimming	Yes	1 to 1 tree in same location.	No	1 to 1 tree
Clackamas County		No		No	
Oregon City		Yes	hazardous, dead or diseased must mitigate 1:1, otherwise mitigation table applies, normally 1:1 1/2	Yes	4 trees
Beverton	strom or damage from car accident	Yes	normally 1:1, but code specifies 1:1 inch, so gives planners leeway	No	1 tree - 2 inches
Forest Grove		Yes	2" caliper trees planted to replace a street tree if it is removed. However, if the original tree in the wrong location than street removal might not be mitigated.	No	2" caliper tree.
Fairview		No	1:1 tree	No	1/2 inch deciduous or 6 feet conifer
Lake Oswego		Yes	1:01	Yes	1 tree
Washington County		Yes	1 to 1 mitigation	No	1 tree 1 and 1/2 inch caliper
Tualatin	The city often takes responsibility for these maintenance problems even though the landowner is responsible.	No	Replacement is required in cases of sidewalk damage at a 1 to 1 ratio. City will pay landowners to plant street trees.	No	1 tree
Sherwood		Yes	must be same species and minimum size of 2" dbh	No	one tree
Troutdale	none	No		No	
Happy Valley		Yes	1:01	No	one tree
Vancouver		Yes	Tree replacement is one for one.	No	One for one
Durham	just on the medians	Yes	case by case	No	
Tigard		Yes	1:1, but only for those trees retained as condition of approval, otherwise trees do not need to be mitigated	Yes	1 tree
	hazardous tree removal	No		No	0
Portland	Emergency Clean-Up	Yes	Mitigation is inch for inch but staff can modify or reduce this requirement. Minimum tree caliper depends on species planted.	No	One to one tree.
West Linn	Storm damage removal	Yes	1 to 1 tree	No	1 to 1 tree

Jurisdiction	Are the majority of inspections initiated by citizen complaints or routine staff inspections?	If the jurisdiction does have an arborist, please specify the following: # of FTE:	If the jurisdiction does have an arborist, please specify the following: How many square miles of jurisdiction do site inspectors cover?	If the jurisdiction does have an arborist, please specify the following: Is this inspector a certified arborist or does he or she have natural resource expertise?	Has the jurisdiction taken any enforcement or protection relating to the street tree preservation or protection in the last year?	Are there fines for illegal cutting, pruning, topping, or damage of street trees? (select all that apply) : Minimum fines	Are there fines for illegal cutting, pruning, topping, or damage of street trees? (select all that apply) : Discretionary fines	Are there fines for illegal cutting, pruning, topping, or damage of street trees? (select all that apply) : fines	Are there fines for illegal cutting, pruning, topping, or damage of street trees? (select all that apply) : Other	Are there fines for illegal cutting, pruning, topping, or damage of street trees? (select all that apply) : Other Text	What are the minimum fines, if any?	Are restitution or mitigation penalties required for illegal street tree cutting or violations of required street tree protection measures during construction activities?
King City	Routine				No	No	No	Yes	No			No
Milwaukie	Complaint-initiated				Yes	Yes	No	No	No		500	No
Gresham		0.25			No	Yes	No	Yes	Yes	\$50 per damage point.	50	Yes
Clackamas County	Complaint-initiated				No	No	No	Yes	Yes	Fines range from \$500 - \$2500	500	Yes
Oregon City	Complaint-initiated	0.5			Yes	No	Yes		Yes	mitigation		Yes
Beaverton	Complaint-initiated	2		yes	Yes	No	No	No	Yes	double tree permit or code enforcement (\$250 per day), car wrecks are charged appraisal value, plus replacement cost		Yes
Forest Grove	Complaint-initiated				Yes	No	No	No	No			Yes
Fairview	Complaint-initiated				Yes	No	No	No	No	same as private land		Yes
Lake Oswego	Complaint-initiated	3	11.2		Yes	Yes	No	No	No		500	Yes
Washington County	Complaint-initiated				No	No	No	No	No			
Tualatin	Complaint-initiated	0.3			No	No	No	No	No			Yes
Sherwood	Complaint-initiated				No	Yes	No	No	No		500	Yes
Troutdale	Complaint-initiated	0.2	6	yes	No	No	No	No	No			Sometimes
Happy Valley	Complaint-initiated				Yes	Yes	No	No	No		2500	Yes
Vancouver	Complaint-initiated	2			Yes	Yes	No	No	No		250	Yes
Durham	Complaint-initiated	1	7	yes	Yes	No	No	No	No	civil penalties		Yes
Tigard	Complaint-initiated	1		yes	No	No	No	No	No		500	No
	Complaint-initiated				Yes	Yes	No	No	No			Yes
Portland	Complaint-initiated	8			Yes	No	No	No	No	Apply to property owner and operator. Fines up to \$1000.	1000	Yes
West Linn	Complaint-initiated	1			No	No	No	No	No		500	No

Jurisdiction	Are restitution or mitigation penalties required for illegal street tree cutting or violations of required street tree protection measures during construction activities? : CommentText	What penalties exist? [specify]
King City		
Milwaukie		Permit removal submission. Stop work order possible.
Gresham		In addition to fines associated with citations and civil penalties, an administrative compliance cost of \$75 per month may be ordered or, the actual cost of enforcement may be charged.
Clackamas County		tree replacement
Oregon City		
Beaverton		mitigation
Forest Grove		Tree must be replaced at appraised value. Land-use permit processing can be suspended. Higher mitigation penalties for non-compliance.
Fairview		replace cut trees, plus civil penalty
Lake Oswego	replant	\$500
Washington County		None
Tualatin		The tree must be replaced at the owners cost
Sherwood		
Troutdale	depending on judge	
Happy Valley	always have to replace	\$2,500
Vancover		Tree replacement based on the appraised value of a tree. Planning department can issue a stop work order.
Durham		stop work orders
Tigard		
Portland	Penalties inch for inch mitigation in commercial and industrial zones.	tries to request mitigation, but not in code so it limits city's ability
West Linn		

Comparative analysis of local tree preservation regulations for private land

Jurisdiction	Tree preservation/removal ordinance? ** [yes, no]	Regulations apply across all land uses and development? [yes, no]	Tree removal permit required with development or land division? ** [yes, no, maybe]	Tree removal permit required w/o development? ** [yes, no, maybe]	Minimum size of regulated tree? [inches]	Regulations consider tree species? [yes, no]	Trees exempted from permit or tree preservation standards [specify]
<b>Preservation Emphasis: Jurisdictions that have specific tree preservation standards, criteria, or authority to require tree preservation.</b>							
Forest Grove	yes	yes	yes	maybe	6" and 3" for Oregon White Oaks	yes	Permits exempt regular maintenance involving removal of no more than 20% of the tree canopy or disturbance of no more than 10% of the root zone. Provisions allow removal of hazardous, diseased or dead trees.
Lake Oswego	yes	yes	yes	yes	5" at 4.5 feet	yes	Permits are granted for two trees less than 10" in diameter within a 12-month period within residential zones. Provisions allow for removal of hazardous, nuisance, or dead trees.
Portland & Urban Unincorporated Multnomah County	yes	no	maybe	maybe	6" but lower for some species. 12" for permits w/o development.	yes	Trees on developed single-family lots are not regulated. Trees that are a confirmed hazard, located on a property line, are on the nuisance or prohibited plant list, located within 10-feet of an existing structure are exempt under the land division regulations. Also trees are not regulated in situations involving lot confirmation (verification of an historic plat) and or some multi-dwelling developments where no land-division is required.
Rivergrove	yes	yes	yes	yes	11.5" at 4.5 feet	no	Permits are granted promptly for up to three trees within a 12-month period on lots located outside a Water Quality Resource Area.
West Linn	yes	yes	yes	yes	6"	yes	Only trees greater than 6" that are determined to be "significant" by the City Arborist are subject to the preservation criteria. Trees less than 12" or white oaks, madrone, and dogwood less than 6" are not regulated if development is not proposed. Provisions allow for removal of trees that are hazardous, diseased, dead, or dying.
Wilsonville	yes	yes	yes	yes	6" at 4.5 feet	yes	Approval to remove up to three trees within a 12-month period is granted if trees proposed for removal are not in a zoned natural resource area, are not a street or Heritage tree, and were not required to be retained as a condition of past development. Provisions allow for removal of trees that are hazardous, diseased, dead, or damaged.

Comparative analysis of local tree preservation regulations for private land

Jurisdiction	Tree preservation/ removal ordinance? ** [yes, no]	Regulations apply across all land uses and development? [yes, no]	Tree removal permit required with development or land division? ** [yes, no, maybe]	Tree removal permit required w/o development? ** [yes, no, maybe]	Minimum size of regulated tree? [inches]	Regulations consider tree species? [yes, no]	Trees exempted from permit or tree preservation standards [specify]
<b>Mitigation Emphasis: Jurisdictions that have general requirements for tree preservation but put greater relative emphasis on mitigating tree removal at greater than 1 to 1 trees.</b>							
Oregon City	yes	no	yes	no	6" at 4.5 feet	yes	Trees can be removed if they are located inside the building area or public utility easements.
Tigard	yes	yes	yes	yes	6"	no	Hazardous or dead trees.
Vancouver	yes	yes	yes	yes	6"	yes	Trees cut for emergency purpose (that must be verified retroactively); as part of commercial nurseries, Christmas tree farms, and some commercial forestry operations; on developed single-family lots less than 1-acre. Also six trees or less within a 3-year period can be removed from lots that will remain undeveloped for six years. Provisions allow for removal of trees that are hazardous, diseased, dead, or invasive.
Durham	yes	yes	yes	yes	5" at 4 feet	no	Provisions allow for removal of trees that are hazardous, diseased, dead, or damaged.
<b>Some Regulation: Jurisdictions without clear standards, criteria, and little or no discretionary authority to preserve trees, that allow extensive un-permitted tree removal through exemptions, and/or that do not require mitigation of tree removal greater than 1 to 1 trees.</b>							
Beaverton	yes	yes	yes	yes	10"	yes	Develop properties less than 1/2 acre entirely exempt. Four trees with 10" dbh or greater or 10% of trees greater than 10" dbh (whichever is greater) can be removed annually without a permit on developed properties larger than 1/2 acre. Special provisions allow for the removal of hazardous, diseased, damaged or dead trees.
Damascus	yes	n/a	no	yes	6"	no	Hazardous trees; fewer than 10 trees from a parcel or from adjoining parcels in common ownership, within any 12-month period; or the removal of less than five trees from a parcel that leaves more than an average of one tree per 1,000 square feet of lot area.
Fairview	yes	yes	yes	no	6" at 4 feet	yes	Hazardous or invasive trees.
Gresham	yes	yes	yes	maybe	8" at 4.5 feet	no	Three to six trees can be removed within a 12 month period depending on lot size.

Comparative analysis of local tree preservation regulations for private land

Jurisdiction	Tree preservation/ removal ordinance? ** [yes, no]	Regulations apply across all land uses and development? ** [yes, no]	Tree removal permit required with development or land division? ** [yes, no, maybe]	Tree removal permit required w/o development? ** [yes, no, maybe]	Minimum size of regulated tree? [inches]	Regulations consider tree species? [yes, no]	Trees exempted from permit or tree preservation standards [specify]
Happy Valley	yes	yes	yes	no	6" at 4 feet	no	Trees on developed properties. Provisions allow for removal of trees that are hazardous, diseased, dead, or damaged.
King City	yes	yes	yes	no	6" at 4 feet	no	Landowners are allowed to remove two trees a year without a permit. Provisions allow for removal of trees that are hazardous, diseased, dead, or damaged.
Milwaukie	yes	no	yes	no	6"	no	Outside Water Quality Resource Areas, the only trees on flag lots are regulated.
Sherwood	yes	yes	yes	no	5"-10" Depending on species	yes	Douglas fir, ponderosa pine, red cedar, white oak, big leaf maple and American chestnuts less than 10". Provisions allow for removal of trees that are hazardous, diseased, dead, or damaged.
Troutdale	yes	yes	yes	no	6"	no	Regulations do not apply to developed properties. Provisions allow removal of hazardous, diseased or dead trees.
Tualatin	yes	yes	yes	yes	8"	yes	Up to four trees can be removed per calendar year. Additional exemptions apply for tree removal for commercial forestry or agriculture and in parks and golf courses. Also staff permits outright removal of trees within 10 feet of building footprints. Provisions allow for removal of trees that are hazardous, diseased, dead, invasive or damaged.
Urban Clackamas County*	yes	no	yes	no	Staff discretion.	no	Regulations only apply to new single-family subdivisions and development and no permit is required for tree removal outside the development review process.
Urban Washington County*	yes	yes	yes	maybe	Staff discretion.	no	Hazardous trees can be removed. Tree removal or preservation is entirely the discretion of staff.
Maywood Park	yes	yes	yes	yes	7" conifers, 12" deciduous	no	none
Hillsboro	yes	no	sometimes	no	none	no	Tree preservation standards apply in Station Community Planning Areas, to some trees in the City's Cultural Resource Inventory, and other limited circumstances.

Comparative analysis of local tree preservation regulations for private land

Jurisdiction	Tree preservation/removal ordinance? ** [yes, no]	Regulations apply across all land uses and development? [yes, no]	Tree removal permit required with development or land division? ** [yes, no, maybe]	Tree removal permit required w/o development? ** [yes, no, maybe]	Minimum size of regulated tree? [inches]	Regulations consider tree species? [yes, no]	Trees exempted from permit or tree preservation standards [specify]
<b>No Tree Ordinance: Jurisdictions that do not regulate tree removal on private land.</b>							
Cornelius	no	n/a	no	no	n/a	n/a	n/a
Gladstone	no	n/a	no	no	n/a	n/a	n/a
Johnson City	no	n/a	no	no	n/a	n/a	n/a
Wood Village	no	n/a	no	no	n/a	n/a	n/a
Unincorporated Clark County*	no	n/a	no	no	n/a	n/a	n/a

\* Unincorporated inside Metro UGB or Clark County Three Creeks Planning Area.

\*\* Excluding policies relating to heritage tree programs or tree removal on environmentally sensitive lands or natural hazard areas including policies applying to publicly-owned land regulated by the jurisdiction.

N/A – City lacks tree ordinance for private land.

unknown – Lack of response from jurisdiction and no verification available.

# Comparative analysis of local tree preservation and mitigation standards on private land

Jurisdiction	Tree inventory required? [yes, no, sometimes]	Clear and objective standards that limit development to preserve trees? [yes, no]	Discretionary tree preservation criteria? [yes, no, sometimes]	Authority to require alternative analysis to minimize tree removal? [yes, no]	Tree protection measures required? [yes, no]	Are regulated trees mitigated if approved for removal? [mostly, sometimes, possibly, never]	Mitigation ratio greater than 1:1 tree? [yes, no, sometimes]	Taken enforcement or compliance action within last 12 months? [yes, no]	Fine for violations or non-compliance? [yes, no, sometimes]
<b>Preservation Emphasis: Jurisdictions that have specific tree preservation standards, criteria, or authority to require tree preservation.</b>									
Forest Grove	yes	no	yes	yes	yes	mostly	no	no	Up to \$1000
Lake Oswego	yes	no	yes	no	yes	mostly	no	yes	\$500 per tree, plus additional fines per caliper inch
Portland & Urban Unincorporated Multnomah Co.	sometimes	yes	sometimes	yes	yes	sometimes	yes	yes	Highly variable. Standard fines up to \$1000.
Rivergrove	yes	no	yes	yes	unknown	possibly	no	unknown	unknown
West Linn	yes	yes	yes	yes	yes	possibly	yes	no	\$500 minimum
Wilsonville	yes	no	yes	yes	yes	mostly	no	yes	Up to \$500 per offense, per day determined by municipal court. Cost of inch-for-inch mitigation. Increased fines for multiple violations and violations with the intent of personal gain.
Durham	yes	no	no	no	yes	mostly	yes	yes	Fees determined by municipal court.
<b>Preservation Emphasis: Jurisdictions that have specific tree preservation standards, criteria, or authority to require tree preservation.</b>									
Oregon City	yes	yes	yes	no	yes	mostly	yes	yes	No fines, replanting required
Tigard	yes	no	no	no	yes	mostly	yes	yes	Stop work order and up to \$250 a day
Vancouver	yes	yes	yes	yes	yes	possibly	yes	yes	\$50-\$1000 per tree depending on circumstances. Minimum of \$500 per tree for unpermitted removal.
<b>Some Regulation: Jurisdictions without clear standards, criteria, and little or no discretionary authority to preserve trees, that allow extensive un-permitted tree removal through exemptions, and/or that do not require permits.</b>									
Beaverton	yes	no	no	no	yes	possibly	no	no	\$500 - \$2500 fines
Damascus	yes	no	no	no	no	never	n/a	unknown	Unknown
Fairview	no	no	no	no	yes	sometimes	no	no	Up to \$1000
Gresham	yes	no	no	no	yes	never	?	no	\$50 per damage point. Discretionary fines up to 3 times the arbicultural value of the tree.
Happy Valley	yes	no		no	yes	sometimes	yes	yes	\$2500 per tree
King City	yes	no	yes	no	yes	never	n/a	no	
Milwaukie	no	no	no	no	no	never	n/a	yes	\$500
Sherwood	yes	no	yes	no	yes	sometimes	yes	no	\$500 or required mitigation

**Comparative analysis of local tree preservation and mitigation standards on private land**

Jurisdiction	Tree inventory required? [yes, no, sometimes]	Clear and objective standards that limit development to preserve trees? [yes, no]	Discretionary tree preservation criteria? [yes, no, sometimes]	Authority to require alternative analysis to minimize tree removal? [yes, no]	Tree protection measures required? [yes, no]	Are regulated trees mitigated if approved for removal? [mostly, sometimes, possibly, never]	Mitigation ratio greater than 1:1 tree? [yes, no, sometimes]	Taken enforcement or compliance action within last 12 months? [yes, no]	Fine for violations or non-compliance? [yes, no, sometimes]
Troutdale	yes	no	yes	no	yes	never	n/a	no	Determined by municipal court
Urban Clackamas Co.	sometimes	no	yes	no	no	never	n/a	yes	Up to \$400 a day
Urban Washington Co.*	no	no	no	no	yes	possibly	n/a	no	Determined by municipal court
Maywood Park	Yes	No	Yes	No	Unknown	Sometimes	Sometimes	Unknown	Up to \$3000 per offense
Hillsboro	Sometimes	No	No	No	Sometimes	No	No	Unknown	Unknown

\*Unincorporated inside Metro UGB or Clark County Three Creeks Planning Area.

\*\*Excluding policies relating to heritage tree programs or tree removal on environmentally sensitive lands or natural hazard areas including policies applying to publicly-owned land.

N/A – City lacks tree ordinance for private land.

Unknown – Lack of response from jurisdiction and no verification available.

# Comparative analysis of local street tree policies

Jurisdiction	Permit required for street tree removal?	Permits street tree removal solely at owner's request	Minimum street tree size regulated?	Street tree replacement required with removal?	Street tree planting required with development?	Street tree species planting standards?	Is landowner responsible for tree maintenance?	Is landowner responsible for sidewalk damage?	Jurisdiction funds street tree maintenance?
	[yes, no, sometimes]	[yes, no]	[all, size in inches]	[yes, no, sometimes]	[yes, no, sometimes]	[yes, no]	[yes, no]	[yes, no, partial]	[routine, some, limited, none]
Vancouver	yes	yes	all	yes	yes	yes	yes	yes	limited
Wilsonville	yes	no	all	yes	yes	yes	yes	yes	limited
West Linn	yes	no	all	yes	yes	yes	partial	partial	routine
Tualatin	yes	yes	all	no	yes	yes	yes	yes	routine
Troutdale	yes	yes	all	no	yes	yes	yes	yes	none
Tigard	yes	yes	2"	yes	yes	yes	yes	yes	none
Rivergrove	yes	no	unknown	yes	no	yes	yes	yes	none
Portland	yes	no	all	yes	yes	yes	yes	yes	limited
Oregon City	yes	no	all	yes	yes	yes	yes	yes	none
Milwaukie	yes	no	all	no	no	yes	yes	yes	none
Lake Oswego	yes	no	5"	yes	yes	yes	partial	partial	none
Happy Valley	yes	no	all	yes	yes	yes	yes	yes	limited
Gresham	yes	yes	8"	yes	yes	yes	yes	yes	limited
Forest Grove	yes	no	all	yes	yes	yes	no	partial	none
Fairview	yes	no	all	no	yes	yes	yes	yes	limited
Durham	yes	no	5"	yes	yes	no	yes	yes	some
Beaverton	yes	yes	all	yes	yes	yes	yes	yes	routine
Urban Washington County*	yes	n/a	n/a	yes	yes	no	yes	yes	none
Maywood Park	yes	no	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Hillsboro	sometimes	n/a	n/a	sometimes	yes	no	yes	yes	none
Sherwood**	no	yes	2"	yes	yes	yes	yes	yes	none
Urban Clark County*	no	n/a	n/a	n/a	yes	unknown	yes	yes	none
Urban Clackamas County*	no	yes	1.5"	no	sometimes	yes	yes	yes	none
Urban Multnomah County*	no	n/a	n/a	no	no	yes	yes	unknown	none
King City	no	n/a	6"	yes	no	no	n/a	no	none
Johnson City	no	n/a	n/a	no	no	n/a	n/a	n/a	none
Gladstone	no	n/a	n/a	no	no	n/a	n/a	n/a	none
Damascus	no	n/a	n/a	no	no	n/a	n/a	n/a	none
Cornelius**	no	no	2"	yes	yes	yes	yes	yes	none
Wood Village	no	n/a	n/a	no	yes	n/a	n/a	n/a	none

\* Unincorporated areas inside Metro UBG or in Clark County's Three Creeks Planning Area

\*\* Due to its size and staffing levels, staff reported being able to police street tree removal without a permit.

Comparative analysis of urban forestry management

Jurisdiction	Adopted Urban Forestry Management Plan [yes, no, updating, in development]	Established urban tree committee/ board [yes, no]	Presence of guidance document to administer tree code? [yes, no]	Has targets for urban canopy cover? [yes, no, partial]	Engaged in partnerships to promote urban forestry? [yes, no]	Has local funding sources for urban forestry programs? [yes, no]	Has a dedicated tree fund from planting/mitigation fees or penalties? [yes, no]	Has an enforceable heritage tree program or equivalent? [yes, no]	Has at least one certified arborist on staff? [yes, no]	Has a preferred tree species list? [all, street only, preferred only, preferred only, no]	Has a nuisance or prohibited tree species list? [yes, no]	Currently developing new urban forestry policies and programs? [yes, no]	Summary [yes, no]	Have Tree City USA Status [yes, no]
Beaverton	No	yes	yes	no	yes	yes	yes	yes	yes	all	yes	no	no	yes
Cornelius	no	no	yes	no	yes	unknown	no	no	no	street only	no	no	no	no
Damascus	no	yes	no	no	no	no	no	no	no	no	no	yes	no	no
Durham	yes	no	yes	no	no	yes	yes	no	no	preferred only	no	no	no	no
Fairview	no	no	no	no	unknown	yes	no	no	no	all	yes	no	no	yes
Forest Grove	no	yes	no	no	no	yes	no	yes	yes	street only	yes	no	no	yes
Gladstone	no	no	no	no	yes	no	no	no	no	street only	no	no	no	no
Gresham	no	yes	no	no	yes	yes	no	yes	yes	all	no	yes	yes	yes
Happy Valley	no	yes	no	no	yes	yes	yes	no	no	street only	no	no	no	yes
Hillsboro	no	no	n/a	no	no	no	no	no	no	street only	yes	no	no	no
Johnson City	no	no	no	no	no	no	no	no	no	no	no	no	no	no
King City	no	no	no	no	yes	no	no	no	no	no	no	no	no	no
Lake Oswego	yes	yes	yes	no	no	yes	no	yes	yes	preferred only	yes	no	no	yes
Maywood Park	no	no	no	no	no	yes	no	no	no	no	no	no	no	no
Milwaukie	no	no	no	no	no	no	no	no	no	street only	no	no	no	no
Oregon City	no	no	yes	no	yes	unknown	yes	yes	yes	all	yes	yes	no	no
Portland	yes	yes	yes	yes	yes	yes	yes	yes	yes	street only	yes	yes	yes	yes
Rivergrove	no	yes	yes	no	no	no	no	no	no	no	no	no	no	no
Sherwood	no	yes	no	no	yes	yes	no	no	no	street only	yes	no	no	yes
Tigard	no	yes	yes	no	yes	yes	yes	yes	yes	street only	no	yes	yes	yes
Troutdale	no	yes	yes	no	no	yes	no	yes	yes	all	yes	no	yes	yes
Tualatin	yes	yes	yes	no	yes	yes	no	yes	yes	all	yes	yes	yes	yes
Urban Clackamas Co.*	no	yes	no	no	yes	yes	no	no	no	street only	yes	yes	yes	no
Urban Clark Co.*	no	no	yes	no	no	no	no	no	no	no	no	no	no	no
Urban Multnomah Co.*	no	no	unknown	no	no	no	no	no	no	preferred only	yes	no	no	no

## Comparative analysis of urban forestry management

Jurisdiction	Adopted Urban Forestry Management Plan [yes, no, updating, in development]	Established urban tree committee/ board [yes, no]	Engaged in partnerships to promote urban forestry? [yes, no]	Has local funding sources for urban forestry programs? [yes, no]	Has a dedicated tree fund from planting/mitigation fees or penalties? [yes, no]	Has an enforceable heritage tree program or equivalent? [yes, no]	Has at least one certified arborist on staff? [yes, no]	Has a preferred tree species list? [all, street only, preferred only, no]	Has a nuisance or prohibited tree species list? [yes, no]	Currently developing new urban forestry policies and programs? [See Narrative Summary] [yes, no]	Have Tree City USA Status [yes, no]
Urban Washington Co.*	no	no	yes	yes	no	no	no	street only	no	yes	no
Vancouver	yes	yes	yes	yes	yes	yes	no	all	yes	yes	yes
West Linn	no	no	no	yes	no	yes	no	street only	no		yes
Wilsonville	no	no	yes	yes	yes	no	yes	all	yes		yes
Wood Village	no	no	no	yes	no	no	no	street only	no	no	no

\* Unincorporated areas inside Metro UBG or in Clark County's Three Creeks Planning Area

\* Unknown corresponds to unanswered questions by Jurisdictions