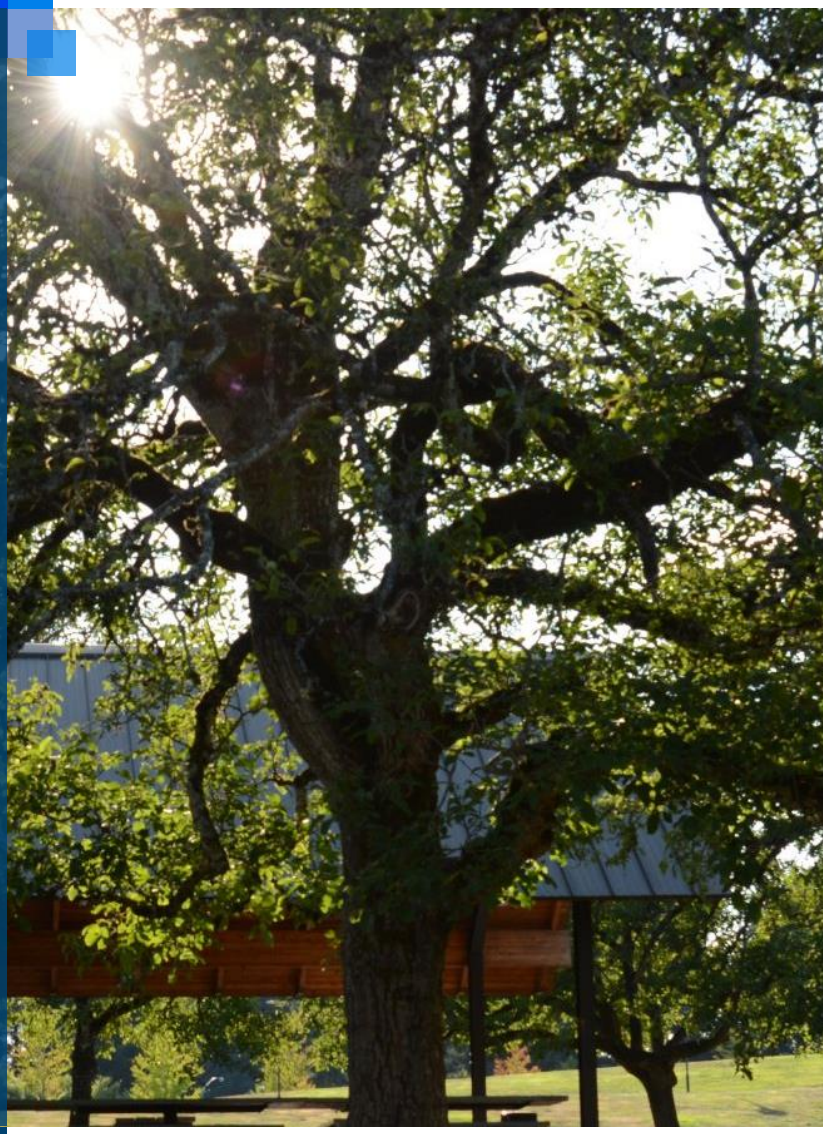
TREE MANUAL

For City Staff, Residents, Property Owners, Landscape Managers, and Professional Tree Care Companies

WILSONVILLE, OREGON

JULY | 2024



WILSONVILLE OREGON

Prepared by:

PlanIT Geo™
developers of TreePlotter

Acknowledgments

CITY OF WILSONVILLE, OREGON

Natural Resources Program

Planning Division

TECHNICAL ADVISORS

PlanIT Geo, Inc.

Urban Forestry Contacts

For questions regarding information about public trees not found in this manual, contact the City of Wilsonville Planning Division.

Email: *planning@ci.wilsonville.or.us*
Phone: *(503) 682-4960*
Website: *www.ci.wilsonville.or.us/planning/page/trees*

For questions about trees growing on private property that are not addressed in this manual, consider contacting a qualified arborist:

International Society of Arboriculture and the Trees Are Good "Find an Arborist" Tool: *https://www.treesaregood.org/findanarborist/findanarborist*

Friends of Trees Arborist Partners: *https://friendsoftrees.org/news-resources/arborist-partners/*

Source of Cover Photos: City of Wilsonville, OR (Front); Oregon Metro, Bruce Forster Photography (Back)

All other photos and images are from the City of Wilsonville, PlanIT Geo, Adobe Photo Stock, and Microsoft Office Online unless otherwise indicated.

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The Wilsonville Tree Manual

What is the Manual?

This manual is an overview of tree regulations in the City of Wilsonville and was developed for use by Wilsonville residents, property owners, homeowners' associations, landscape managers, and professional tree care companies in the planting and care of both public and private trees.

PURPOSE

The City of Wilsonville Tree Manual serves as a comprehensive resource designed to offer guidance on tree care and management for trees situated within the City of Wilsonville. Within this manual, you'll find an overview of tree regulations, along with valuable guidelines and the latest industry Best Management Practices (BMPs) pertaining to tree care. Additionally, it can be a valuable tool for City staff, aiding them in the planning, design, installation, and maintenance of City projects.

INTENT

The Tree Manual is designed to complement Wilsonville's Code of Ordinances, specifically Chapter 4 – Planning and Land Development, Section 4.6, "Tree Preservation and Protection," as well as other pertinent chapters and sections within the City's code. Its purpose is to provide additional guidance in alignment with the City's Urban Forest Management Plan ("UFMP" or "Plan"), which was officially adopted by the City Council in November 2021.

How to Use the Manual

The manual is designed to help you better understand and navigate the rules and regulations related to trees in Wilsonville, whether they are on public or private property. Think of this manual as a valuable companion to the Wilsonville Municipal Code.

Each section of the manual is dedicated to a specific aspect of tree-related topics, and you can easily locate these sections in the Table of Contents. At the end of the manual, you'll find appendices with additional information and useful resources to support your knowledge and interest of proper tree care.

To effectively use this manual, start by identifying the section that likely contains the information you're seeking. If necessary, consult the provided resources or refer to the Wilsonville municipal code for further clarification.

Should you require further assistance in understanding the content or the municipal code, please reach out to the City of Wilsonville Planning Division staff.

For matters related to tree health, risk assessment, maintenance like pruning or root care, or protecting trees during construction projects, reach out to a qualified arborist who can provide expert guidance and support.

The Importance of Urban Trees to Wilsonville

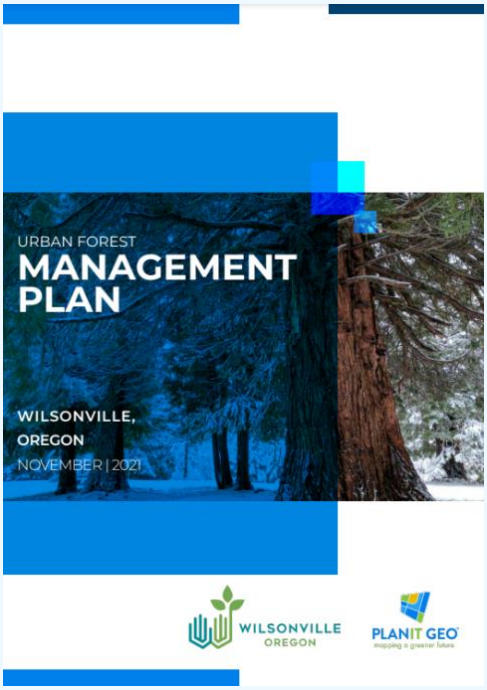
Since 1997, the City of Wilsonville has been recognized as a Tree City USA, reflecting our commitment to maintaining and enhancing our urban trees, which contribute to the character of our city for residents and visitors alike. Our city has a canopy cover of 30%, with a goal to reach 36% by 2046.

These trees provide a range of benefits across social, environmental, and economic dimensions, benefiting our community and economy. Therefore, caring for our trees is a collective responsibility.

To ensure the long-term health of our urban forest, it's important to maintain a diverse array of tree species of all ages. While planting new trees is essential, preserving existing ones is equally vital for the well-being of our community and the surrounding ecosystems in Wilsonville.

Wilsonville 2021 Urban Forest Management Plan

In 2021, Wilsonville released a comprehensive Urban Forest Management Plan (UFMP) that assessed the current condition of our urban forest, as well as identified potential threats facing our trees. A key recommendation of the UFMP was the creation of a tree manual, to outline Wilsonville's tree rules and regulations, as well as provide current guidance on tree care best practices spanning from planting, to pruning, and removal.



Wilsonville's 2021 Urban Forest Management Plan Vision:

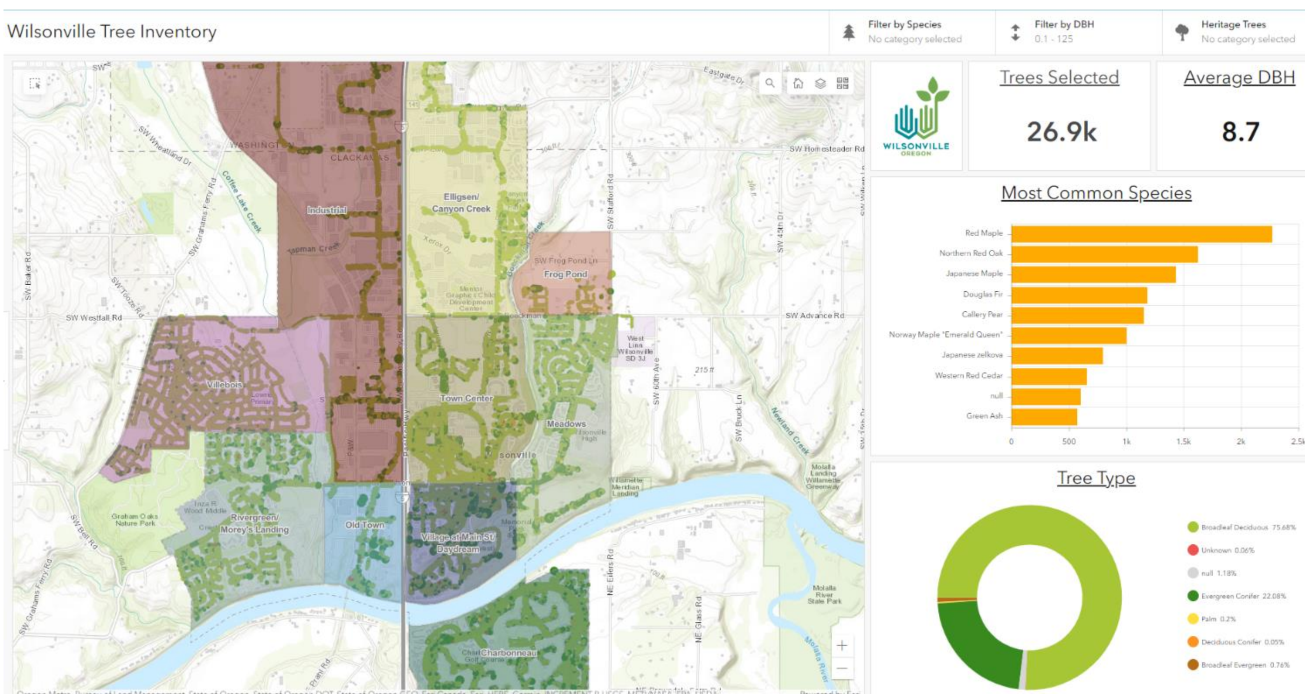
Healthy Trees, Healthy Wilsonville. Wilsonville's urban forest is a thriving and sustainable mix of tree and understory species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all residents as an essential environmental, economic, and shared community asset that reinforces Wilsonville's identity and legacy as a forested, livable city.

Wilsonville's Public Tree Inventory

Recently, a comprehensive analysis of Wilsonville's public tree population was conducted, and in 2021, portions of these trees were re-inventoried. This effort aimed to gather more up-to-date data about the public tree population so that the City could better understand the benefits and services provided by our urban forest.

Nearly 27 thousand trees make up Wilsonville's public tree population. These trees grow along streets and in our parks, playing a vital role in our urban forest. Additionally, there are numerous trees in public natural areas and open spaces whose exact count remains unknown, but they are integral to the urban forest's vitality and associated environmental services.

This manual offers planning and tree care guidance, allowing us to care for and therefore maximize these benefits at the community level. By doing so, we can nurture the growth of thriving, sustainable urban forest.



Trees Benefit People, the Environment, and the Economy

Supports Public Health

Cleans the Air

Reduces Stress & Improves Quality of Life

Diminishes Urban Heat Islands

Slows Traffic

Lowers Energy Costs for Buildings

Shaded Trees Require Less Pavement Maintenance

Provides Wildlife Habitat

Stabilizes Slopes

Trees Benefit People, the Environment, and the Economy

Bolster Property Values

Provides a Sense of Place

Reduces Recovery Time

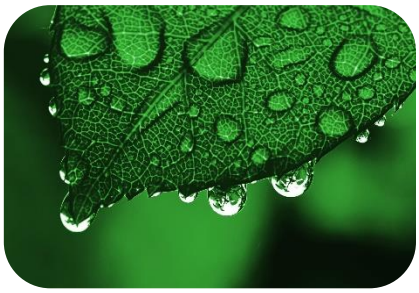
Improves Performance

Stores Carbon

Increases Retail Revenue

Creates Quieter Neighborhoods

Supports Pollinators & Biodiversity

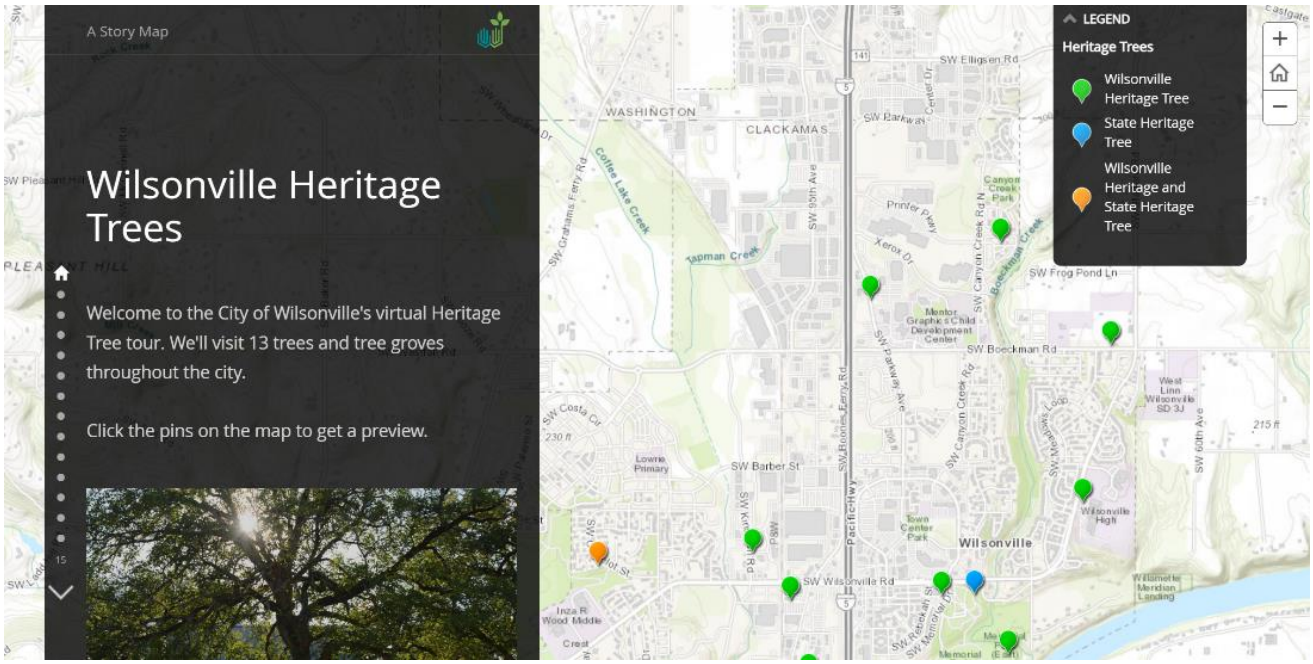


Manages Stormwater

Heritage Trees

The City of Wilsonville has a program to recognize our large specimen and culturally important trees. At the time this manual was written, Wilsonville recognized 19 Heritage Trees or Tree Groves. A Heritage Tree or Heritage Tree Grove is a tree or group of trees that has been nominated for special recognition based on its cultural or historical value.

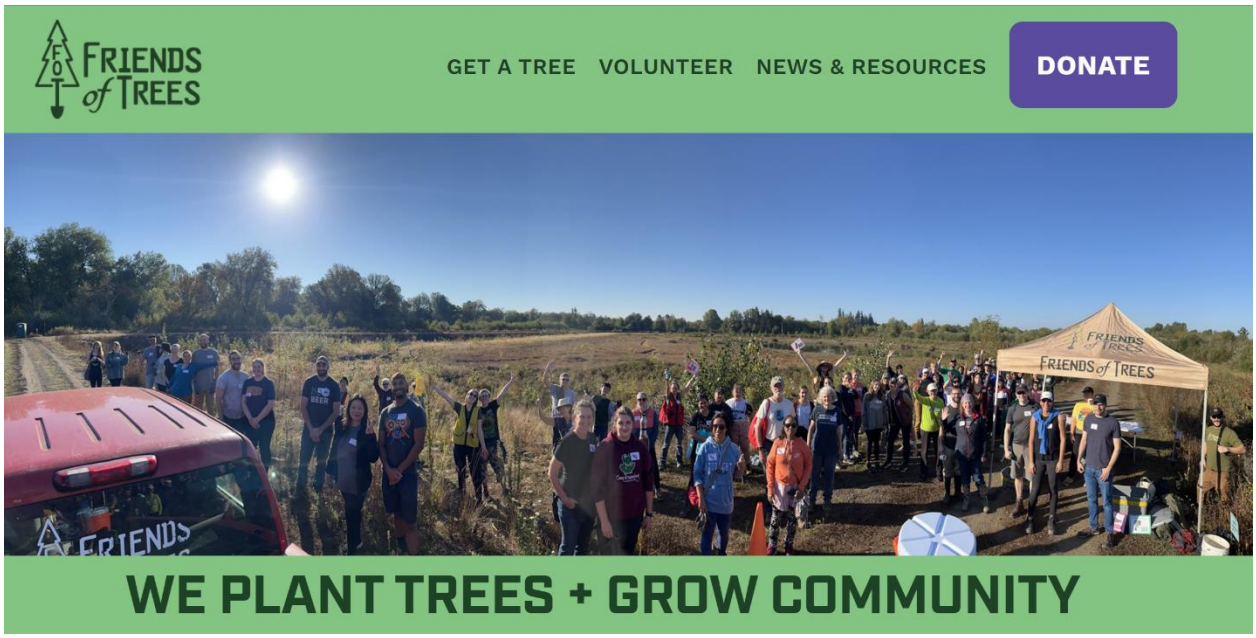
To learn more about the Heritage Tree Program, or to nominate a heritage tree, visit the City of Wilsonville's Heritage Tree Program website, or the Heritage Tree Interactive Map.



Description 1. Map of Wilsonville's Heritage Trees (top), a photo courtesy of Zach Herrmann, submitted a photo at Graham Oaks Nature Park as part of the City of Wilsonville's 2021 Urban Forest Management Plan photo contest (bottom left), and the Three Sisters Oaks (Oregon white oaks) designated as Heritage Trees in 2017 (bottom right)

Get Involved!

Interested in learning more about caring for trees in our community, or joining efforts to plant, preserve or monitor trees here in Wilsonville? Consider joining a volunteer event with the local non-profit Friends of Trees or getting involved with one of our City-sponsored programs. More opportunities for involvement and education are provided in Appendix I and Appendix II located at the end of this manual.



Greenspace and Neighborhood Programs

The Natural Resources Program is an excellent resource for additional programming. Check out the following calendars for information about tree planting and other stewardship events:

City calendar: https://www.ci.wilsonville.or.us/calendar

City's Parks & Recreation event calendar: https://www.wilsonvilleparksandrec.com/parksrec/page/events

Trees in Wilsonville – FAQs and Common Challenges

Common Tree Challenges in Wilsonville

Trees growing in the urban environment face many pressures from environmental stress and can suffer from both over- and under-management. Some common issues with trees in Wilsonville are:

Sidewalk Conflicts

Utility Conflicts

Sightline Challenges (safety and views)

Risk of Failure

Pests and Diseases

Fire Risks

Construction Conflict

Wildlife Conflict

Maintenance Challenges, Costs

Wilsonville Tree Frequently Asked Questions

Are there recommended trees in the development code for landscaping?

Yes. Wilsonville Code section 4.176, titled Landscaping, Screening, and Buffering, regulates materials, placement, layout, and timing of installation of all landscape.

Can I be reimbursed for trees I buy to replace the trees I cut down?

The City of Wilsonville Tree Replacement Reimbursement Program offers reimbursement for a replacement tree to any Type A tree removal permit grantee who buys and plants a tree and provides the appropriate documentation. Applicants can receive up to $100 per person per year from the City's tree fund.

Can I cut down a street tree?

Approvals to cut down street trees are given by the Planning Division through the tree permitting process. Permits to cut down street trees are only granted under exceptional circumstances, such as when a tree is presenting an imminent hazard to person or property. Staff may give authorization to remove a tree after performing a site visit and/or require an arborist's report be submitted with the application to offer an ISA (International Society of Arboriculture) Certified Arborist's professional opinion on the tree's health. All street trees permitted to be removed require mitigation (replanting) by the property owner.

Can trees be cut down on property along the Willamette River?

All properties in Wilsonville that border the Willamette River are affected by the Willamette River Greenway (WRG) overlay zone. Generally, the WRG is 150 feet from the ordinary low water line up the bank on either side of the river. Because the intent of the WRG overlay zone is to enhance and protect the scenic view of the river, tree cutting in this zone requires a conditional use permit (CUP) which is granted by the Development Review Board. See Wilsonville Code section 4.514 for more information.

Can trees be cut down on property in the Significant Resource Overlay Zone (SROZ)?

The SROZ protects the most important natural resources in the City of Wilsonville. Prior to tree cutting activities in the SROZ, property owners will need to coordinate with staff of the Planning Division and Natural Resources Program. The creation of snags and woody debris will be required for most tree removal activities in the SROZ. See Wilsonville Code section 4.139.00.

If there is imminent danger to the public's health, safety, and welfare, one may initiate measures to remove or abate a hazard under the emergency exemptions provision of the Wilsonville Code. An imminent hazard must be documented and submitted to City staff after the emergency has been eliminated. View the SROZ Map.

Frequently Asked Questions

Do I need a permit to cut down a tree?

Yes, any tree in the City, six (6) inches or more in diameter at standard height (DSH, previously referred to as “diameter at breast height” or “DBH”), measured at four and one-half feet above grade, requires a permit prior to cutting it down.

Do I need a permit to prune a tree on my property?

No. The Tree Code requires pruning to be performed according to the most current version of the American National Standards Institute’s (ANSI) A300 standards for tree, shrub, and other woody plant maintenance. Topping of trees is prohibited (view the Do Not Top Trees! section for information)

Does the City have information on naturescaping?

Yes. Periodically, the City in conjunction with other agencies offers workshops on naturescaping. Naturescaping is landscaping that allows people and nature to coexist. By incorporating native plants into your yard, you can attract insects, birds, and other creatures and help keep Wilsonville’s wetlands and streams healthy. Visit the Oregon Department of Fish and Wildlife website for more information.

Does the City have information on xeriscaping?

Yes, the Guidelines for a Water Wise Landscape Manual explains what xeriscaping is and how you can implement a water efficient landscape.

Does the City of Wilsonville have an ordinance regulating trees?

Yes. It is found in Wilsonville City Code Section 4.600.

How many trees can I cut down at once?

A Type A Tree Removal Permit allows a property owner to remove three trees per property, per calendar year, per permit.

How much does a Type A Tree permit cost?

The Type A Tree Permit costs $24 (as of July 2024).

How much does a Type B Tree Removal cost?

The cost depends on the number of trees being proposed for removal. See the Planning Fee Schedule.

I am proposing to develop property and may have to remove trees. What do I have to do?

A Type C Tree Removal Plan must be applied for if a property owner is proposing to remove trees as part of a site development application. To start this process, an application needs to be submitted via the City's Online Permitting Portal, as well as paying the fee. When applying for a Type C Tree Removal Plan online, you must submit a "DRB Master Plan application."

Frequently Asked Questions

Is there a list of recommended street trees for development projects?

The City does not have an official street tree list. Please see the Recommended Street Tree List or contact the Planning Division for the latest resources on street trees.

Is there a standard drawing for planting street trees?

Yes. The Engineering Division's Public Works Standards Drawing R-1157 demonstrates how street trees should be planted in relation to other infrastructure. This drawing also demonstrates minimum vertical clearances for streets and sidewalks, root barrier requirements, and site planning relating to trees and parking requirements.

What are heritage trees?

Heritage trees are trees that have been classified as unique and/or significant by a volunteer citizen committee. If you would like to nominate a tree to be designated a Heritage tree, or, be on the committee, please call the Planning Division at 503-682-4960.

What are street trees?

Street trees are trees that have been required to be planted as part of a land use approval for entire residential subdivisions, commercial, and industrial developments. Street trees can be found in the public right-of-way, as well as on private property. Older subdivisions often have street trees planted in front yards, on private property. Call the Planning Division to discuss questions related to street trees or the status of a tree at 503-682-4960.

What if a windstorm or other natural phenomenon has damaged or partially damaged a tree on my property?

If a tree has been damaged or is likely to cause imminent injury or damage to person or property, tree removal is allowed without a permit. However, the property owner must take a photograph, or still image of the tree, which will clearly demonstrate the hazard(s) that are to be mitigated by removing the tree. The property owner must still apply for a retroactive Type A tree removal permit within 30 days following the emergency removal and include proof of hazard.

What if I want to cut down 4 trees or more?

A Type B Tree removal permit is required. An applicant will need to apply for a Type B Tree Removal via the City's Online Permitting Portal, and upload all required documentation for staff to review. Once staff has confirmed the application type, fees will be invoice for payment. An application is not considered officially submitted until all documents have been received and fees have been paid.

Frequently Asked Questions

What is a Type C Tree Removal permit? How much does it cost?

A Type C Tree Removal Plan must be applied for if a property owner is proposing to remove trees as part of a site development application. The cost depends on the number of trees being proposed for removal. See the Planning Fee Schedule.

Where can I find more information on trees?

You can find additional information on trees at the following websites:

National Arbor Day and Tree City USA programs
Urban Forestry and the Department of Oregon Forestry
Oregon Community Trees

Where can I get information on requirements for a tree protection plan, related to a Type C Tree Removal permit?

The tree code provides a detailed list of requirements for tree protection plans. See Wilsonville Code subsection 4.610.40(.02) and section 4.620.10 The Public Works standards provides a drawing that demonstrates the minimum requirements for tree protection fencing on site. See the Public Works Standards Drawing R-1155.

Additional Assistance

For additional information related to these questions and other topics regarding trees, review the contents of this manual.

For questions regarding information about public trees not found in this manual, contact the Planning Division.

Email: planning@ci.wilsonville.or.us

Phone: (503) 682-4960 or visit www.ci.wilsonville.or.us/planning/page/trees.

For questions about trees growing on private property that are not addressed in this manual, consider contacting a qualified arborist.

Find an Arborist

For help with or questions about a tree on your property, consider working with an arborist. To find a qualified arborist suited for your tree project, consider searching for an ISA Certified Arborist using the find an arborist or Verify a Credential tools courtesy of Trees Are Good. org or choosing from the list of trusted partners of Friends of Trees.

Tree Regulations Overview

The City of Wilsonville regulates private and publicly owned trees to ensure the preservation and stewardship of a sustainable urban forest. To do so, the City has implemented regulations that guide the management of trees on private property (where most of our urban forest is located) and on public property such as street trees and in parks.

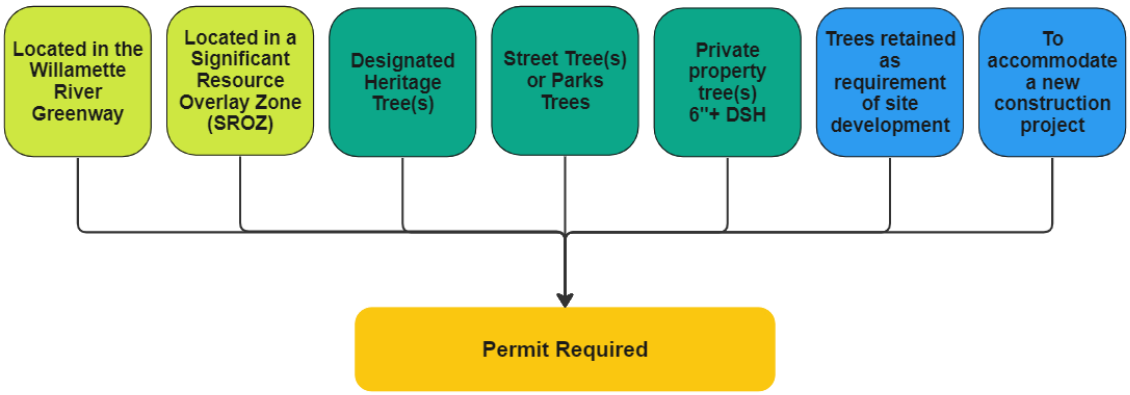
Pruning trees on private property does not require a permit, though you should always follow the most current best practices and no *tree topping* is allowed. See the Tree Care section of this manual for information about pruning and general tree care.

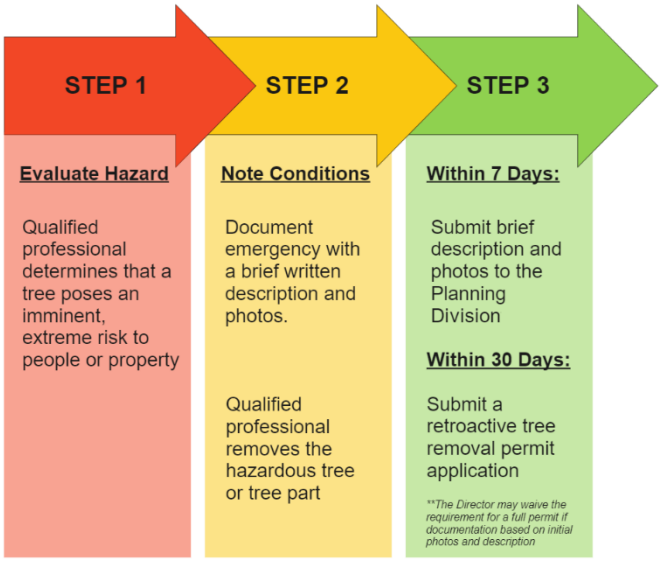
Planting a new tree on private property does not require a permit, but keep in mind the expected height and width of the tree at its maturity and plan the location of your new tree accordingly. See best practices for *tree planting* in the Tree Care section of this manual.

Tree removal, however, likely does require a permit, even on private property if your tree is larger than 6-inches (6") *diameter at standard height (DSH).*

Tree Removal Permits

If you hope to remove a tree that fits any of the below criteria, you must have an approved tree removal permit from the City of Wilsonville prior to removing the tree(s). Wilsonville has several types of tree removal permits





Emergency Tree Removal

In emergency situations, the City of Wilsonville allows residents to take actions necessary to prevent imminent risk of injury or damage to people or property. Examples of these situations include a tree that is in the process of falling or breaking apart or a tree that is assessed as an extreme risk by a qualified tree risk assessor. In these and other situations, you may take necessary action to mitigate the risk, up to and including removal of the tree. A permit application must then be submitted within 30 days of the removal.

Tree Removal Violations

To better protect and preserve the trees in Wilsonville, the City is authorized to issue violations if work that would require a permit is performed without one. Violations may include financial penalties such as fines, fees and/or withholding of certificate of occupancy. The City may also require mitigation measures such as replanting on or off-site.

Tree Removal Prior to Annexation

It is not uncommon for property owners to try to increase the development potential of their property by preemptively clearing their trees. However, in 2007 Wilsonville's City Council passed Resolution No. 2025 to discourage this practice. Wilsonville strongly encourages property owners to retain the trees on their property prior to annexation, and to comply with Wilsonville's tree regulations once joining the City.

Residents and Trees

Private or Public Trees?

The trees that make up our urban canopy are both a private and public asset and are managed in different ways depending on who owns the trees. The trees in the Wilsonville community fall under three categories:

- Publicly owned and privately managed (most street trees)
- Publicly owned and publicly managed (park and natural area trees)
- Privately owned and privately managed (most private property trees)

Public Trees

These trees are usually located in clearly identifiable public spaces such as parks, natural areas, along streets, or within government-owned properties. They are considered part of the urban or community forest and contribute to the overall well-being of our community. A tree that grows across a property line, with part of the trunk on private property and part of the trunk on public property, will typically be considered a public tree.

STREET TREES

Street trees are public trees (owned by the City) but maintained by the adjacent property owner. In some cases, Wilsonville's street trees are located well into the front yard of a property. To confirm whether your tree is a privately owned tree or a street tree check out the Wilsonville Street Tree Inventory Map.

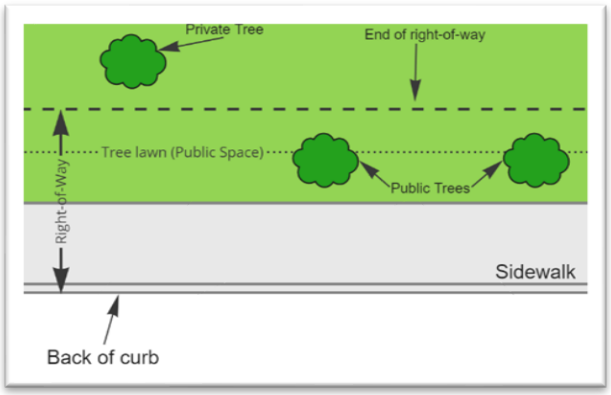


Illustration of a common tree lawn in Wilsonville. Though these trees may appear to be private property trees, they are within the 10' public Right-of-Way as measured from the back of the curb.

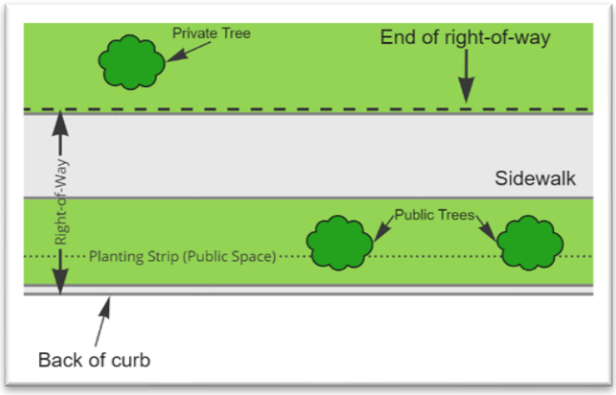


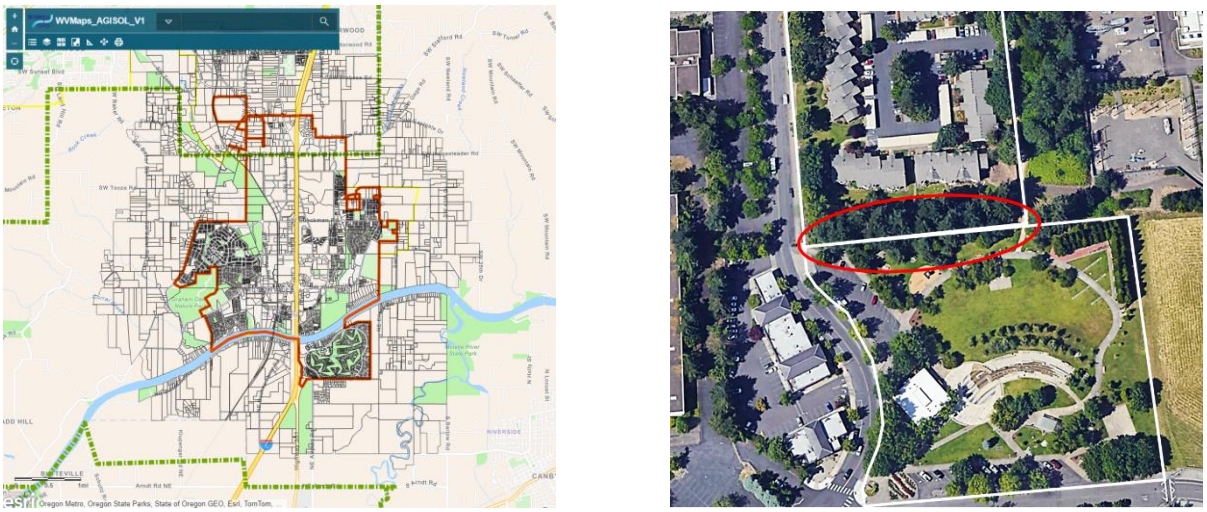
Illustration showing a more common street tree layout, where publicly owned trees are located on the street side of the sidewalk, rather than the private property side.

PARKS AND NATURAL AREA TREES

Trees on Wilsonville park and natural area property are owned and maintained by the City of Wilsonville. Should a parks-owned tree overhang your property, you may prune it according to current best practices. Before doing so, confirm the tree's location and ownership, and get in touch with the City of Wilsonville staff to determine whether or not a permit might be required.

If you live near a park or natural area, confirm whether or not the tree is on your property or on City property by looking up your parcel on the Wilsonville GIS Map.

TIP: Use the most recent 'Wilsonville Aerial Photo' under 'Baselayer' to get a better idea of where the trees might be located in relation to the property lines.



Description 2. Left: Wilsonville's GIS maps (www.wilsonvillemaps.com). Right: An example of where trees planted in Town Center Park may have limbs overhanging private property (shown in the red circle)

Removing Trees on Public Property

To remove a public tree— a street tree or park tree— a permit is always required.

If you are not sure if the tree in question is a public tree, contact the Wilsonville Planning Division for assistance.

Private Property Trees

A private property tree is one that is located entirely on private property. Private trees are owned and managed by the property owner where they grow. However, if a tree's trunk is completely located on private property and there are branches that overhang public property, it is a privately owned tree. Maintaining private trees that overhang public property is the responsibility of the tree owner but, if necessary, the City has the right to prune or maintain private trees to protect public property.

Wilsonville does not require a permit to prune trees on private property, however no topping is allowed, and pruning should conform to current arboricultural best practices. See the Tree Care section of this manual for more information.

Wilsonville's Tree Removal Permit Types

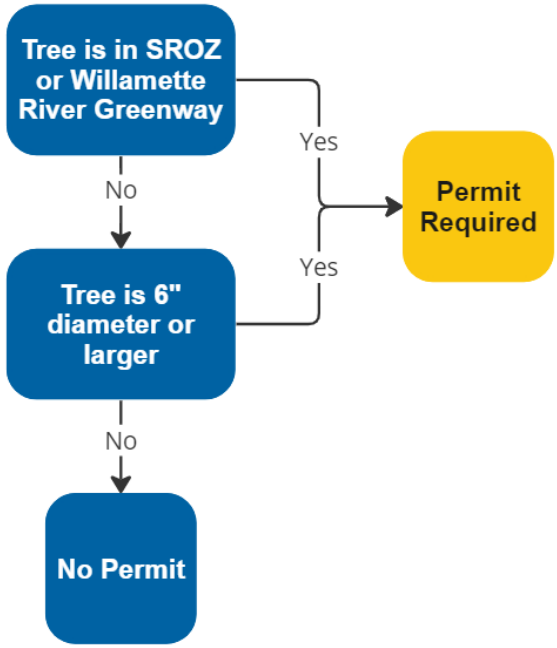
TYPE A - ONE TO THREE TREES

To remove one to three trees, each greater than 6" DSH on private property, you must have an approved Type A Tree Permit prior to removal.

TYPE B - MULTIPLE TREES / SPECIAL CIRCUMSTANCES

Remove 4 or more trees, a Heritage Tree, a tree retained as part of development, or trees located within the Significant Resource Overlay Zone (SROZ), or within the Willamette River Greenway.

To remove a tree that fits any of the above categories, you will need an approved Type B tree removal permit prior to removing the tree(s).



TYPE C - CONSTRUCTION RELATED

For tree removal associated with development or construction projects, you will need an approved Type C tree removal permit prior to removing any trees or working within the tree protection areas of trees onsite and on adjacent property.

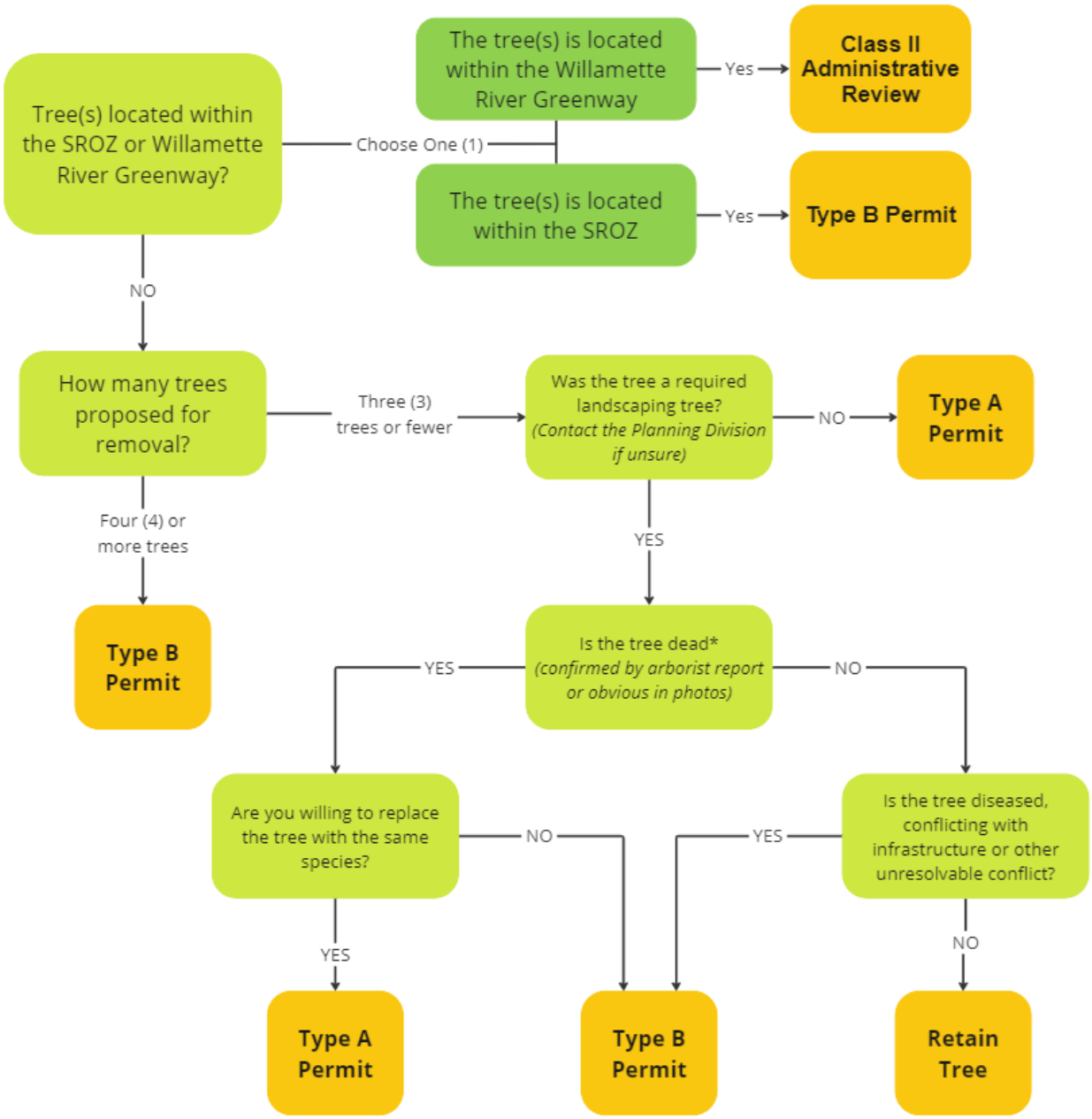
TYPE D - TIMBER HARVEST

If trees are removed as part of a Timber Harvest or similar situation, you will need a Type D Tree Permit. This is an uncommon permit type. Please contact the Planning Division for more information.

Removing Trees on Private Property

If you wish to remove a tree, identify the permit type needed by using the flowchart below and apply via the Planning Division Online Portal.

IF A TREE IS LOCATED IN THE WILLAMETTE RIVER GREENWAY OR IN THE SIGNIFICANT RESOURCE OVERLAY ZONE, A TREE REMOVAL PERMIT IS REQUIRED IN ALL CASES.



Permit Conditions

Trees on private property require a permit for removal if they meet or exceed 6" diameter at standard height (DSH) or fall into specific categories. Tree removal permit applications are reviewed by City staff and approved based on conditions like tree health, expected remaining safe and useful life expectancy, and social or environmental services provided by the tree.

HAZARD TREES

Trees that pose an imminent, or high risk as evaluated by a qualified arborist are typically approved for removal to mitigate risk to people or property. See the section "When Trees Pose a Risk" (page 71) and the resources provided in Appendix II for more information about tree risk and management options.

DEBRIS CLEANUP OR MAINTENANCE

Private property trees are generally not approved for removal if the reasons for removal are related to debris management such as leaf, fruit, needle or cone cleanup, or pest issues that cause aesthetic or minor additional maintenance needs, such as aphids.

PESTS AND DISEASE

Serious pests or diseases that result in tree decline or death, such as emerald ash borer present a serious risk to public safety and the overall health of Wilsonville's tree population. Trees infested with this type of destructive pest or disease may be approved for removal, but tree replacement may be required. Contact the Planning Division for the most current pest and disease management guidelines.

OVERMATURE OR DECLINING TREES

If a tree is overmature or overall in decline, it is possible that removal and replacement is the best option for the property and the health and vitality of our urban forest as a whole. If you believe this may be the case for your tree, consider having your tree evaluated by a qualified arborist who can help determine if your tree is still providing environmental services, or if planting a new tree would be a better option.

TREES RETAINED DURING DEVELOPMENT

If a tree was retained as a condition of a development permit, and remains structurally sound and healthy, removal is not permitted. Trees that are in severe decline that are not expected to recover, dead trees, or trees that pose an imminent or high hazard to people or property nearby may be approved, however, these conditions will have to be documented in an arborist report from a qualified arborist trained in the most current risk assessment methodologies.

Trees and Neighbors

Trees offer the most significant benefits to urban residents when they are in close proximity to their homes. Many times, trees are intentionally planted or preserved near property lines to offer property owners advantages like privacy or increased open space in their yards.

However, trees growing along property lines can sometimes lead to disputes between neighbors. Understanding your responsibilities as a tree owner or a neighbor is essential. This knowledge can mitigate disagreements and ensure the continued well-being of our community's trees.

Engaging in open communication with your neighbors is always a wise approach. They may be willing to share costs or find mutually agreeable solutions to any conflicts that arise.

LEGAL CONSIDERATIONS

"Timber trespass" is the act of over pruning, topping, removing a tree or damaging the root system of a tree owned by another party.

Should you cause harm to a tree owned by a neighbor, or the City, you may be liable for any mitigation, up to and including removing and replacing the tree.,

Remember it is always illegal to enter another person's property and perform work on their tree(s) without their permission.

MAINTENANCE RESPONSIBILITIES

It is legal to prune any portion of the canopy that overhangs your property if the pruning is aligned with best management practices and will not risk the health or safety of the tree.

The same is true for root pruning, but keep in mind that root pruning can have serious consequences. If done poorly, root pruning can increase the risk of a tree falling and causing serious harm.

If you have roots growing into your property from your neighbor's tree(s), consult with your neighbor and an arborist before taking any action to cut or otherwise manage them.

If a neighboring tree drops leaves on your home or property, you are responsible for the normal and routine maintenance of keeping those leaves tidy – it is not the tree owner's responsibility.

However, should a neighbor's tree pose a high risk to your property because of its health or structural condition, it is the tree owner's responsibility to mitigate that risk. Any concerns about tree risk should be discussed with your neighbor as soon as possible.

For assistance with managing trees along property lines, contact a qualified arborist familiar with the City of Wilsonville's tree regulations.

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BUILDERS AND TREES

TREE PROTECTION

This section provides an overview of how to best manage trees before, during, and after site work or construction such as residential or commercial development, utility installation or landscape improvements.

Builders and Trees

Why Preserve Trees on Site?

The City of Wilsonville has a vision of “Healthy Trees, Healthy Wilsonville”, where our urban forest is a shared community asset that reinforces Wilsonville’s identity and legacy as a forested, livable city. As part of this vision, retaining and protecting trees during site construction ensures that we are preserving the resources that serve our entire community.

Research shows that trees are critical to human health and safety and contribute to economic vitality. For residents to enjoy the full range of benefits trees provide, trees should be located near homes rather than only in public spaces. Preserving trees on site can improve “curb appeal”, may help reduce utility costs (shade reduces heating costs; trees take up water, reducing stormwater or drainage problems), support wildlife and retain environmental benefits. Finally, but certainly not least, trees provide a sense of place as recognizable landmarks that may easily become memorable parts of community and family life.

Whenever possible, retaining trees on site during a development project is strongly encouraged. Wilsonville considers tree preservation as important as other design principles in project planning. Buildings, in particular residential dwellings, should blend into the natural setting of the existing landscape; trees should not be removed unless necessary for construction.

Project Planning

To ensure that existing trees both on and off site are adequately preserved during and after a construction project, consider involving a qualified arborist throughout every phase of the project, from the site assessment and pre-design phase all the way through the landscaping and post-construction phase.

Development Phase	Arborist Involvement
Planning	Resource evaluation Permitting needs Suitability for preservation Tree inventory
Design	Tree Impact assessment Tree protection plan Tree Protection Zones (TPZ) Landscape plan review
Preconstruction	Contractor communication TPZ barrier installation Aboricultural treatments
Construction	Site monitoring Assessing impacts Maintaining TPZ Arboricultural treatments
Landscaping	Site monitoring TPZ barrier adjustments Mitigate tree impacts
Postconstruction	Site monitoring TPZ barrier removal Mitigate tree impacts Plan for maintenance

Description 3. Arborist involvement in different phases of a construction project. Source ISA's Best Management Practices Guide "Managing Trees During Construction," 2023

TREES ON SITE

Wilsonville requires that all trees above 6" Diameter at Standard Height (DSH, measured at 4.5-feet above natural grade, previously referred to as "Diameter at Breast Height" or "DBH") be inventoried as part of every construction project.

TREES ON ADJACENT PROPERTIES

While Wilsonville's Development Code does not require off-site trees to be protected during site development, the City encourages builders to follow current best practices and strongly recommends protecting off-site trees through every stage of the project.

TREE GROUPS AND GROVES

Avoid removing trees growing at the natural edge of a group – typically, trees growing in a forested or grove condition have adapted to wind and other exposure as a group. When edge trees are removed it exposes remaining trees to changes in conditions and may increase the risk of whole tree or branch failure. If you have questions about how best to retain trees as part of a forest remnant or other tree grove environment, contact a qualified arborist.

TREES IN THE PUBLIC RIGHT-OF-WAY

In Wilsonville, street trees are planted in both the public right-of-way, and in the front yards of private property. During development, builders must retain street trees regardless of where they grow.

Site Design

When designing buildings and other project features consider the entire project and the coordination required to complete it. Often, sites are designed with good intentions but fail to consider how the construction process will impact retained trees. Some questions to consider while designing the site plan:

- ☐ How will the site be accessed to demolish existing structures (if applicable)?
- ☐ Where will materials be stored during site work?
- ☐ Where will utilities be installed?
- ☐ What over excavation or layback will be needed to install foundations?
- ☐ What over excavation is needed to install forms or subbases for hardscape?
- ☐ What is the extent of excavation needed to install drainage infrastructure?
- ☐ What is the method of installation, and will the equipment that is needed for these activities interfere with the tree protection areas?
- ☐ What clearance will the contractor need to install building facing, windows, etc.?

To ensure adequate preservation of trees on site, it is important to consider the true extent of site work. Once you have considered the above, work with your project arborist to explore site-specific solutions that can reduce or mitigate the expected impacts to retained trees.

Methods to Reduce Tree Impacts

There are many effective methods for working around trees that allow new developments to co-exist with existing trees. Some of these methods include:

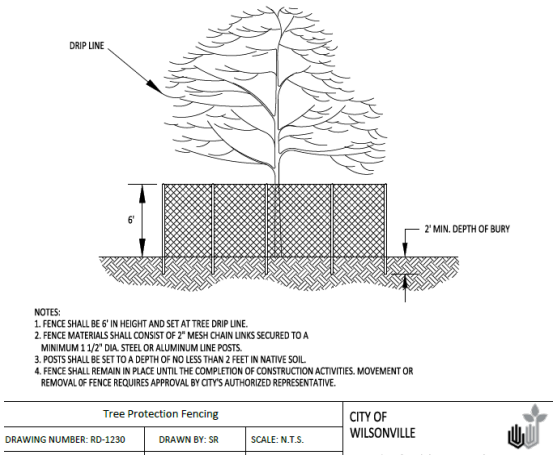
- Alternative excavation methods using air tools (pneumatic excavation), water tools (hydro-excavation), hand digging/trenching.
- Directional boring or tunneling below roots when installing utilities.
- Stacking utilities in the same trench where feasible.
- Surface mounting infrastructure that would otherwise be underground (ex: irrigation, or supplemental lighting).
    - It is not uncommon for trees to be well preserved during a project and then damaged by irrigation trenching.
- Changing the type of subbase material or reducing the overall depth of subbase required for hardscape installation.
- Installing small-sized plants during the landscape phase to minimize disruption to roots of existing trees.

Tree Protection Measures

While trees are resilient, their tolerance to soil disturbance or construction stress can vary widely by species, age, and health condition. Always consult with a qualified arborist to determine the site and tree-specific protection measures appropriate for your trees. Tree protection may include any or all of the following, depending on the site conditions and project plans:

- Sturdy fencing that is not easily moved.
- Clear signage with arborist's contact information.
- Soil protection such as wood chip mulch, composite mats or plywood to prevent compaction caused by foot traffic or construction equipment.
- Proactive clearance pruning of branches that may otherwise be damaged.
    - Limit pruning to a minimum and only remove the amount of live canopy needed to achieve clearance requirements.
    - Where feasible, plan to tie back flexible branches temporarily rather than pruning them.
- Vegetation management, such as clearing away invasive or noxious plants.
- Supplemental irrigation to provide water during the summer months.
    - Watering should be done by hand or using a temporary surface-mounted irrigation system that can be adjusted as needed.
- Wildlife or nesting bird protection as mandated by state and federal regulations, particularly during early spring and summer months.

Install tree protection fencing, signage and soil protection methods early in the project according to Wilsonville's Development Code. Ideally, protection measures should be in place before any demolition of existing structures.



Permitting – Type C Tree Removal Permit

For most building projects that propose tree removals, a Type C Tree Removal Permit will be required. No tree cutting associated with development or pre-development site work may occur before receiving an approved tree removal permit. For more information about the permit requirements that apply to your project, contact the Wilsonville Planning Division at 503-682-4960.

TREE MAINTENANCE AND PROTECTION PLAN

As part of a Type C Tree Removal Permit application, applicants will usually have to provide a Tree Maintenance and Protection Plan completed by a qualified arborist. The following is a list of the general components required for this type of plan.

SITE PLAN

- Site dimensions and the location of existing and proposed structures or improvements.
- Proposed or existing easements and setbacks.
- Any proposed grade changes that may impact trees on or off-site.

TREE SURVEY

Show all trees 6" DSH and larger on the project site, and all trees on public property next to the site. For each tree, provide the following:

- Tree location, common and botanical name, canopy spread.
- Description of the tree's health and structural condition.
    - For trees in poor health located on public property, provide arborist recommended actions to restore the tree's health.
- Arborist's determination if the tree is likely to be impacted by the project.
- Proposed action for the tree, either "Retain", "Transplant", or "Remove".

Note that all Oregon white oaks, native yews, and rare or endangered species must be shown on the tree survey, regardless of size.

FOR TREES PROPOSED TO BE RETAINED

- Provide a description of the tree protection measures including barrier type and location, to ensure trees are protected.
    - Note that plastic fencing, tape or other easily moved markers are not acceptable forms of tree protection barriers.
- Tag the trees with numbered, metal tags and provide a statement that retained trees will be identified, tagged and shown clearly on construction documents.

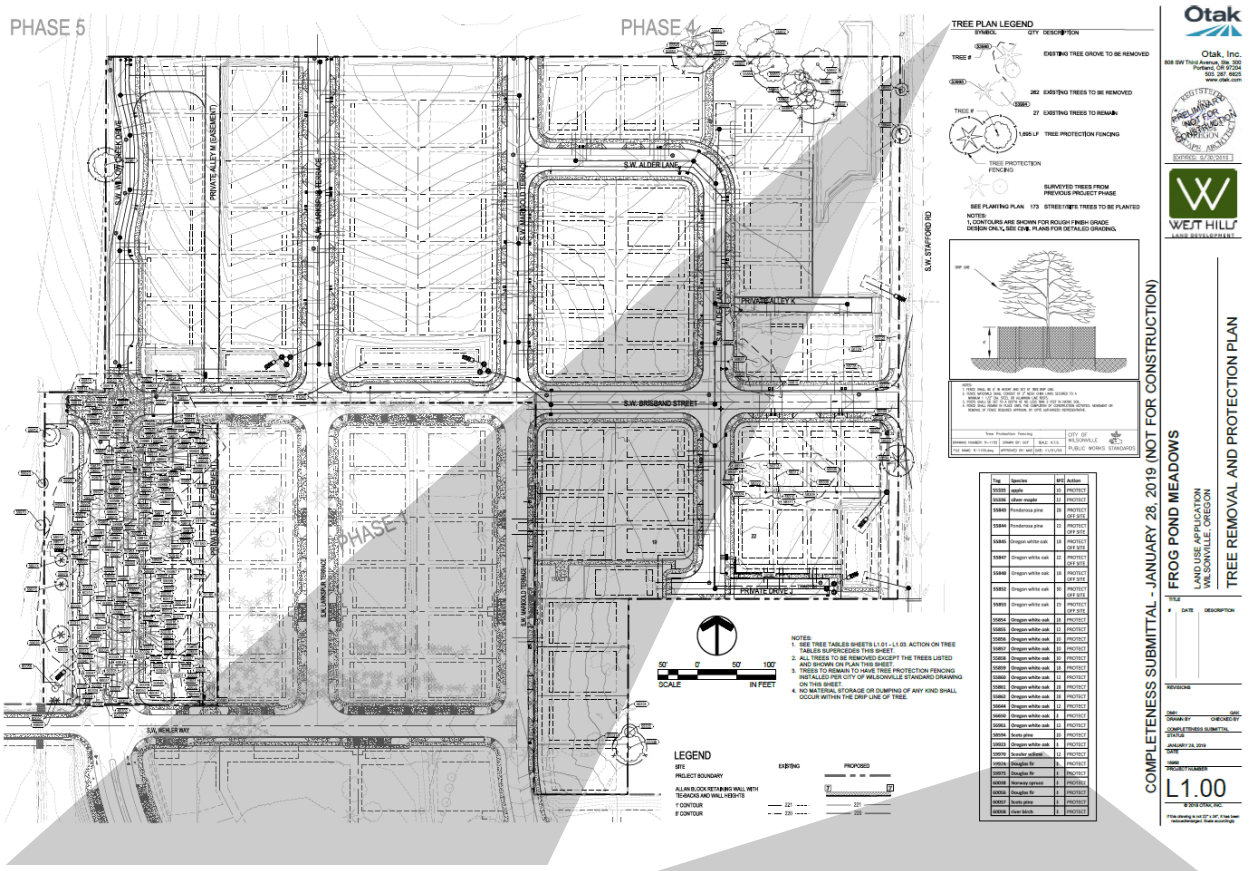
FOR TREES PROPOSED FOR REMOVAL

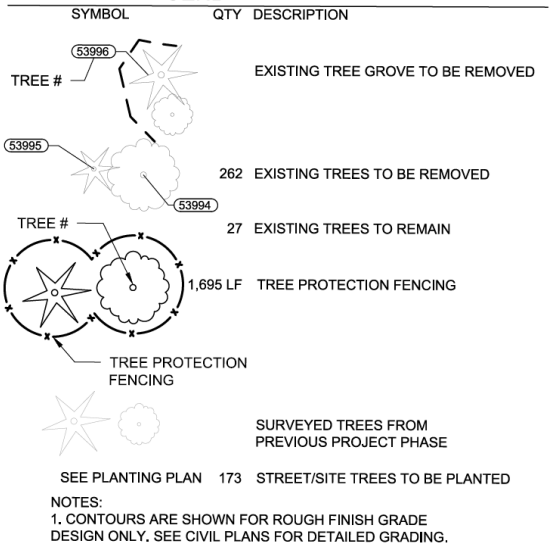
- Provide a cost estimate for the tree replacement program with a detailed explanation, including the number, size, and species of removed trees.

Builders and Trees

For detailed requirements see Chapter 4.600 “Tree Preservation and Protection” and/or contact the Planning Division.

Example Tree Removal and Protection Plan

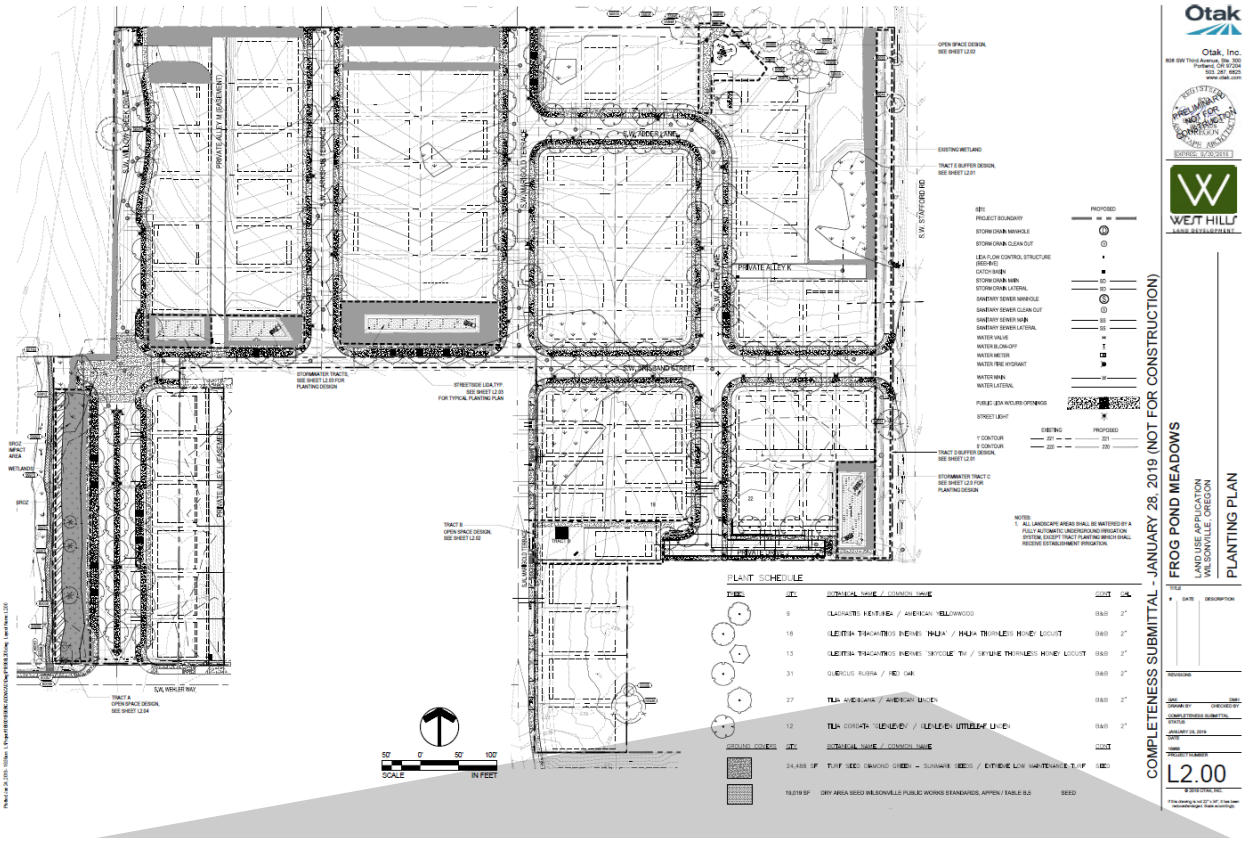




Tag	Species	DBH	Rating	Cr. D	Remarks	RPZ	Action
55415	silver maple	36	1	40	root crown damage	24	REMOVE
55416	gone	0	0	0	stump dug out	0	REMOVE
55417	Scouler willow	6	1	16	trunk decay; dead top	8	REMOVE
55418	Douglas fir	7	1	16	low vigor; hedgerow	8	REMOVE
55419	Douglas fir	14	2	16	viable; hedgerow	10	REMOVE
55420	Douglas fir	10	2	12	viable; hedgerow	10	REMOVE
55421	Douglas fir	9	2	10	viable; hedgerow	10	REMOVE
55422	Douglas fir	12	2	16	viable; hedgerow	10	REMOVE
55423	Douglas fir	19	2	20	viable; hedgerow	10	REMOVE
55843	Ponderosa pine	35	2	36	viable; western gall rust	28	PROTECT OFF SITE
55844	Ponderosa pine	33	2	28	viable	22	PROTECT OFF SITE
55845	Oregon white oak	23	2	32	viable	18	PROTECT OFF SITE

Description 4. Example of a tree removal and protection plan for Frog Pond Meadows in Wilsonville, OR. Graphics courtesy of Otak, Inc. Note, the status (e.g., approved, denied, amended) was not considered as a factor in this demonstration. This graphic serves as an example only

Example Tree Planting Plan



PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
	9	CLADRASTIS KENTUKEA / AMERICAN YELLOWWOOD	B&B	2"
	18	GLEDITSIA TRIACANTHOS INERMIS 'HALKA' / HALKA THORNLESS HONEY LOCUST	B&B	2"
	13	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' TM / SKYLINE THORNLESS HONEY LOCUST	B&B	2"
	31	QUERCUS RUBRA / RED OAK	B&B	2"
	27	TILIA AMERICANA / AMERICAN LINDEN	B&B	2"
	12	TILIA CORDATA 'GLENLEVEN' / GLENLEVEN LITTLELEAF LINDEN	B&B	2"
GROUND COVERS	QTY	BOTANICAL NAME / COMMON NAME	CONT	
	24,488 SF	TURF SEED DIAMOND GREEN – SUNMARK SEEDS / EXTREME LOW MAINTENANCE TURF	SEED	
	19,019 SF	DRY AREA SEED WILSONVILLE PUBLIC WORKS STANDARDS, APPEN / TABLE B.5	SEED	

Description 5. Example of a tree planting plan for Frog Pond Meadows in Wilsonville, OR. Graphics courtesy of Otak, Inc. Note, the status (e.g., approved, denied, amended) was not considered as a factor in this demonstration. This graphic serves as an example only

Replacement Trees

When removing trees is unavoidable, plan their removal carefully and think through the replacements that will be planted.

TREE REMOVAL

Trees that are permitted for removal should be removed by experienced tree care providers. Removing trees without consideration for retained trees can irreparably compromise their structural stability, as their branches or root systems are often intertwined.

In some cases, it may be appropriate for the clearing and grading contractor to remove trees; however, trees should only be removed with heavy equipment if retained trees will not be damaged. Lastly, consider the soil on site. If these areas are part of future landscaping, take care not to compact the soil during site development so that trees and other plants may thrive.

REPLACEMENT TREES

For every tree 6" DSH and larger removed, at least one replacement tree will be required. New trees should be selected to replicate the environmental services and benefits that the removed trees provided. Vital benefits like oxygen production, carbon sequestration, wildlife habitat, etc. are directly related to the size and canopy spread of individual trees. Large species of trees will nearly always result in better services for our community than small stature trees.

RIGHT TREE RIGHT PLACE

Choosing the right tree for the right place is essential for the long-term health and vitality of both the tree and its environment. By matching the tree species to specific site conditions, you can ensure optimal growth, reduced maintenance, and the preservation of ecosystem benefits. For more information and help choosing trees appropriate for your site, see the City of Wilsonville Recommended Street Tree List and review the Tree Planting section of this manual.

Approved Tree List / Recommended Street Tree List

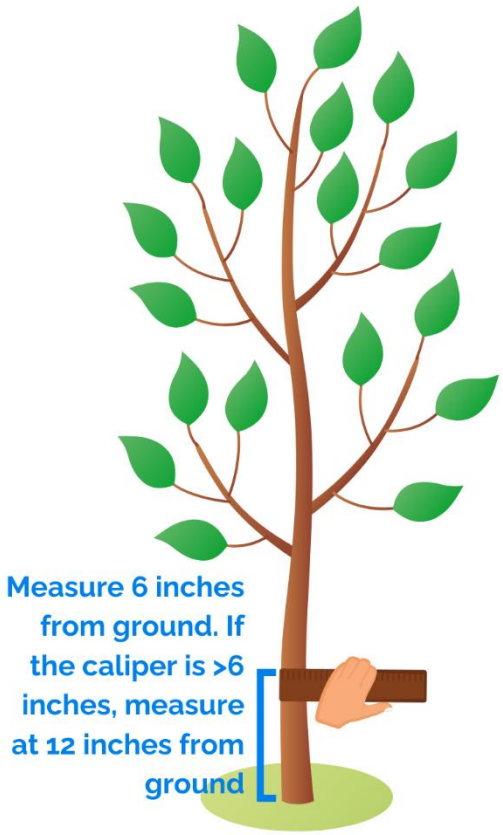
As part of the Urban Forest Management Plan released in 2021, Wilsonville keeps an up-to-date list of recommended tree species suitable for use as street trees. To review the current list, follow this link:
https://www.ci.wilsonville.or.us/sites/default/files/fileattachments/planning/page/2241/editted_for_recommended_list_09.2022.pdf

Tree Requirements and Maintenance

Wilsonville encourages a range of planting approaches to ensure our urban forest has a healthy variety of tree species throughout our community. Varying our tree species helps ensure that our forests are more resilient to unexpected pests, diseases or changing climate conditions. In most cases, replacement trees should meet the following requirements. For additional details see the Wilsonville Development Code, Chapter 4.620.00 or contact the Planning Division at 503-682-4960.

ALL REPLACEMENT TREES SHOULD:

- Provide shade and/or provide similar environmental benefits compared to the tree(s) removed.
- Be appropriate for the site, following the principles of "Right Tree, Right Place" principles.
    - Ensure there is enough soil space and above-ground space for the tree to grow to maturity.
- Be a species from the approved species list.
- Meet the following size/quality requirements:
    - Deciduous trees: 2" caliper or larger
    - Coniferous trees: 6' tall or larger
        - State Department of Agriculture Nursery Grade No. 1 or better or top grade defined by the American Association of Nurserymen American Standards for Nursery Stock Planted within 1 year of tree removal.
- Be planted during the planting season, not the summer months (June – September).
- Be staked, fertilized and mulched.



TWO-YEAR MAINTENANCE AND GUARANTEE REQUIREMENT

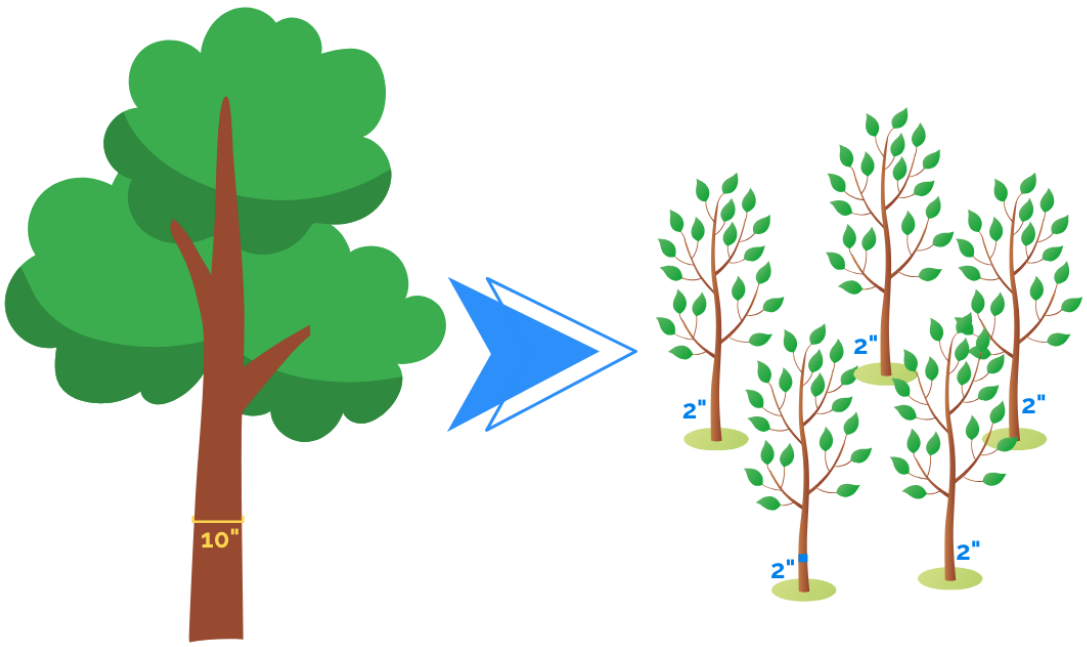
If a replacement tree dies or becomes diseased within two years, the tree must be replaced. The newly replaced tree must then be maintained for two years. To properly maintain newly planted trees, implement a maintenance program that provides appropriate irrigation and plans to adjust and remove any tree staking.

For more guidance about caring for newly planted and young trees, see the Tree Planting section of this manual.

Mitigation and Restoration

Trees designated for retention during site development must be protected. Should these trees suffer damage due to a failure of tree protection or site contractor negligence, a qualified arborist must evaluate the condition, risk status and retention potential of the tree. If an arborist determines the tree is unlikely to recover from the damage, the tree will need to be replaced.

To mitigate damaged or illegally removed trees, replacement tree(s) are required on an inch-for-inch basis, meaning if a 10” tree is removed a minimum of 10” caliper inches of new trees will need to be planted. Replacement trees are required to be a minimum of two (2) caliper inches, so five (5) new trees would be required. If the number of replacement trees needed to mitigate the removed trees cannot reasonably fit on the site, the City may require these trees to be planted on another approved site or may require a fee to be paid into the City Tree Fund instead.

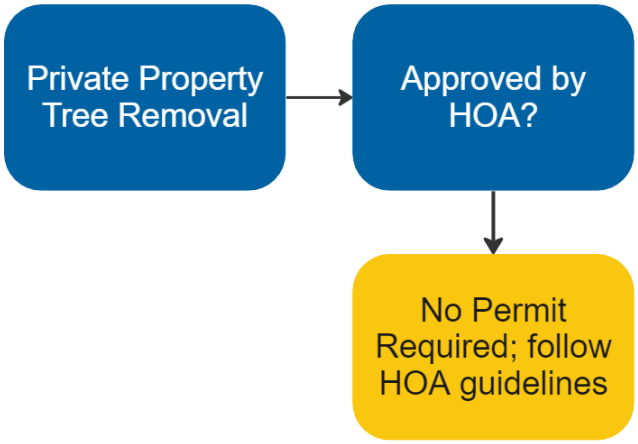


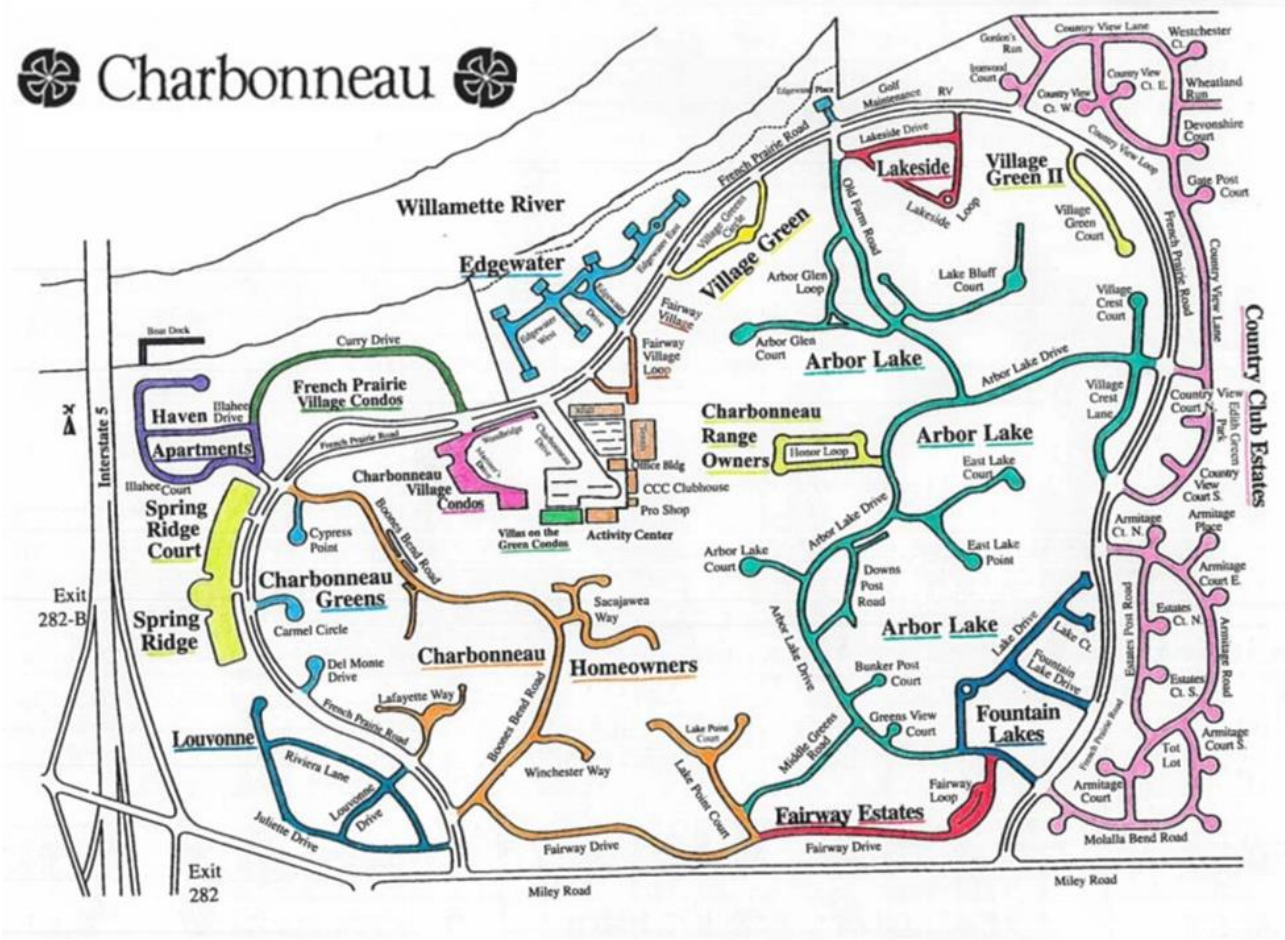
One 10-inch tree removed requires new trees to be planted whose calipers add up to 10 inches. Wilsonville requires new trees to be 2 inches in caliper, at minimum, therefore, 5 replacement trees are required

Homeowners Associations (HOAs)

CHARBONNEAU DISTRICT

Homeowners Associations (HOAs) in the Charbonneau District have some more flexibility in managing the trees that grow there. For trees that are privately owned, the City allows management per the Tree Maintenance and Protection Plan agreement submitted by the Charbonneau Country Club and approved by the Planning Director. Charbonneau residents may perform tree removals without first acquiring a permit, though tree replacement requirements still apply.



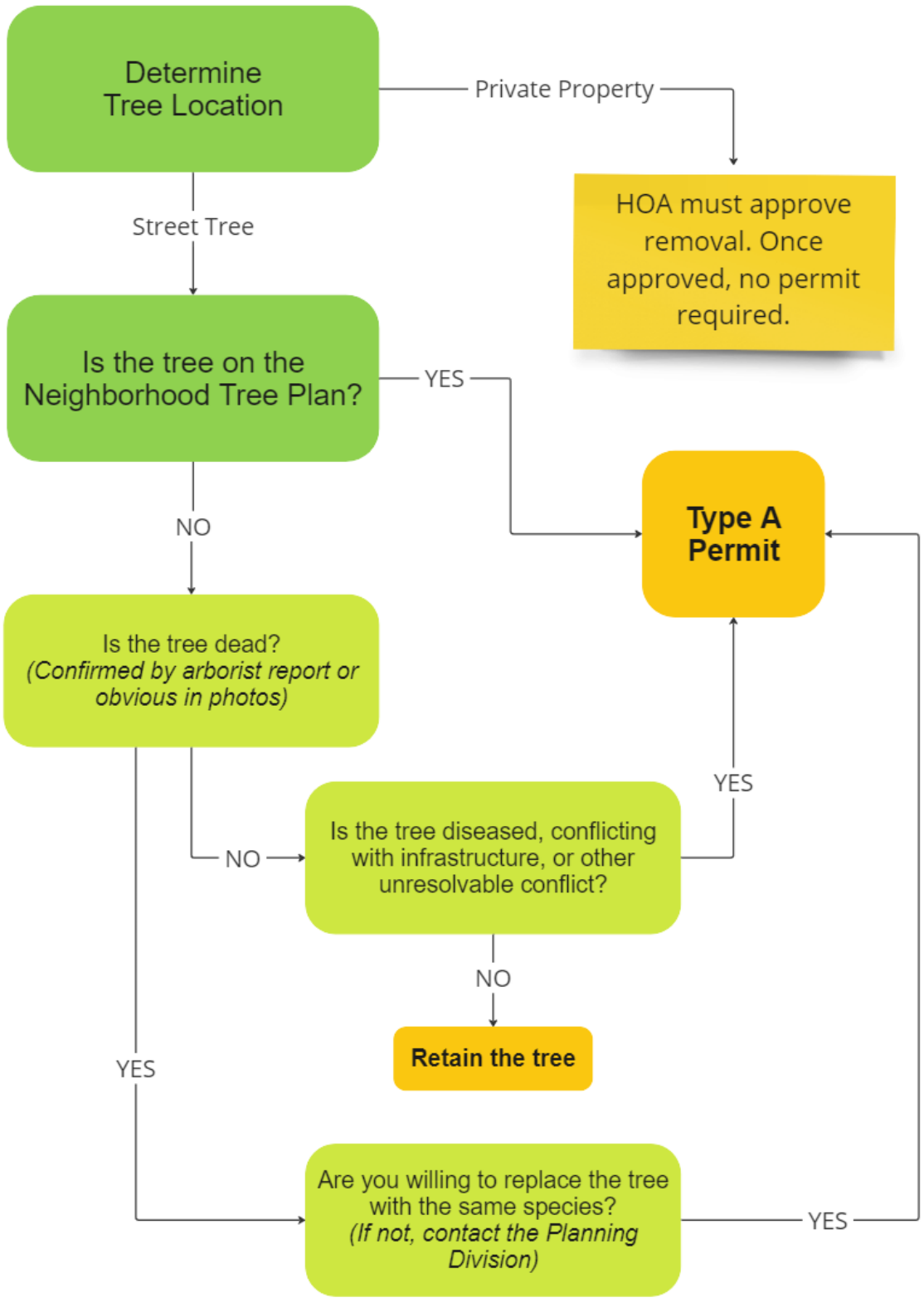


Description 6. Map courtesy of Charbonneau Country Club

Homeowners Associations

ARBOR CROSSING, CANYON CREEK MEADOWS, MORLEY'S LANDING

If you are managing trees in neighborhoods with a Neighborhood Tree Plan on record with the Wilsonvlle Planning Division, and wish to remove a private or public tree follow the flowchart below when applying for a Tree Removal Permit. **Note, this process is different than other tree removal permits.**



TREE CARE

BEST PRACTICES

This section provides detailed information about tree care best practices and how to best apply them in Wilsonville.

Tree Care

In the urban environment, most trees need care throughout their life to ensure their benefits are enjoyed by our community, and that risks are appropriately managed. This section discusses Wilsonville's code requirements regarding planting, pruning and removing trees when no development is planned. Industry best practices and recommendations are also included.

Community Impact

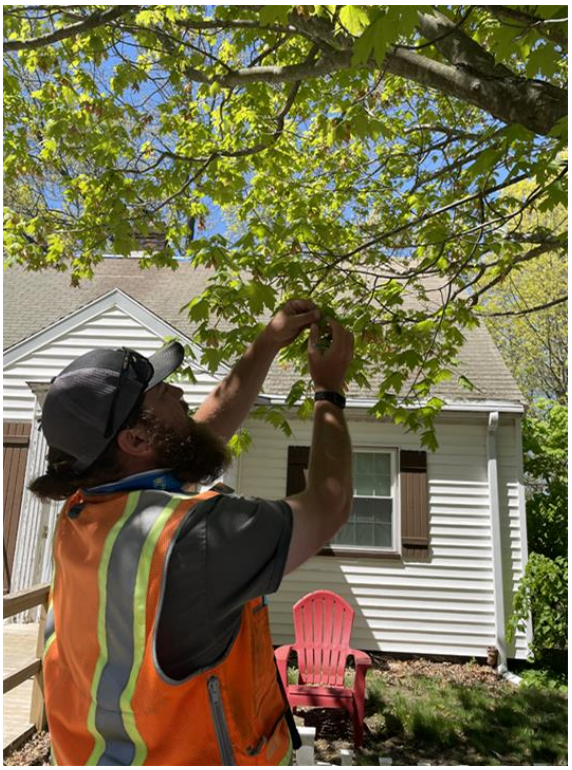
As a resident or property owner in the City of Wilsonville, the types of trees you plant, and the quality of the tree care performed directly impacts Wilsonville's urban forest. Properly maintaining trees by adhering to industry standards and best practices ensures this vital resource to the City of Wilsonville can achieve its maximum benefit and potential.

Important Precautions

WARNING: To reduce the risk of personal injury or permanent damage to your tree, read and follow these important precautions:

- ☐ Do not dig until you are sure there are no buried utilities. Call the Oregon Public Utility Commission at 811 or toll free 1-800-332-2344 at least two business days before starting any digging project.
- ☐ If you cannot prune your tree with both feet on the ground, hire an arborist.
- ☐ When hiring an arborist, select someone who has general liability insurance of at least $1 million per occurrence and $2 million aggregate.
- ☐ Do not top your tree! This can increase the risk of your tree and possibly kill it.
- ☐ Do not let children climb trees that have broken branches or are within 25 feet of a power line.
- ☐ Keep lawn mowers and weed whips away from the base of your tree.
- ☐ Do not tie string, ribbon, wire, or pet leashes around the trunk or branches; if you must do so, set a calendar alarm to remind yourself to remove them. Ties left on trees can girdle and permanently damage tree health and structure.
- ☐ Do not allow construction activities (digging, repaving, grading, building) within the Tree Protection Zone. See the Builders and Trees section for more information.
- ☐ Adhere to the City's regulations regarding planting and pruning.
- ☐ Do not nail or screw anything into your tree.

When to Call an Arborist



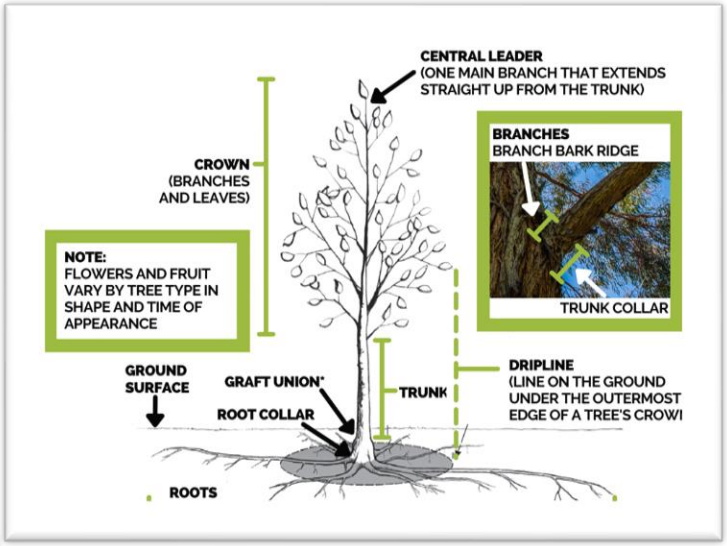
- When you notice dead or dying branches on your trees.
- If your trees have an unusual or unexplained decline in health, such as yellowing leaves, stunted growth, or early leaf drop.
- When you want to assess the overall health and structural integrity of your trees, especially after severe weather events like wind or ice storms.
- If you observe signs of disease or infestations on your trees, such as unusual growths, peeling or shedding bark, increased bird or beetle activity.
- When you plan to undertake major landscaping projects that involve any ground disturbance around existing trees.
- When you plan to remove, prune or transplant a tree.
- If you're concerned about the proximity of trees to structures like your home, utility lines, or other valuable assets.
- When you need assistance with tree preservation, especially for older or heritage trees.
- If you suspect that a tree on your property poses a safety hazard to people or property due to its condition or location.
- When you want professional advice on tree selection and planting for landscaping purposes.
- When you're looking to establish a regular maintenance or plant health care schedule for your trees to ensure their long-term health and vitality.

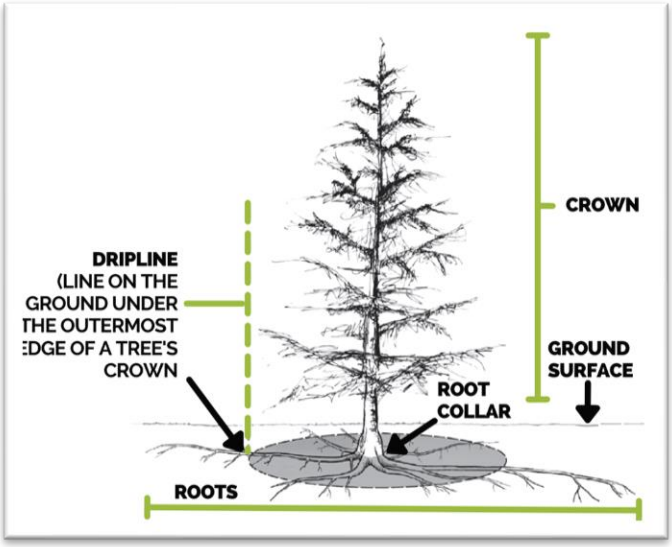
Tree Facts

LEAVES (BROADLEAF) VS NEEDLES (CONIFEROUS)

Broadleaf trees are trees that typically lose their leaves in the fall. Often times broadleaved trees are deciduous, meaning they lose their leaves in the fall though there are a few exceptions, such as evergreen magnolia and Pacific madrone which are evergreen broadleaf trees, meaning they keep their leaves year-round.

Coniferous trees are trees with needles, often referred to broadly as 'pine' or 'fir' trees. In Wilsonville, we have several native conifers that thrive here. Typically, conifers keep their leaves (or needles) year-round. An unusual exception is the dawn redwood, which is a deciduous conifer!





Illustrations showing the form for deciduous trees (top) and coniferous trees (bottom)

Tree Species Spotlight

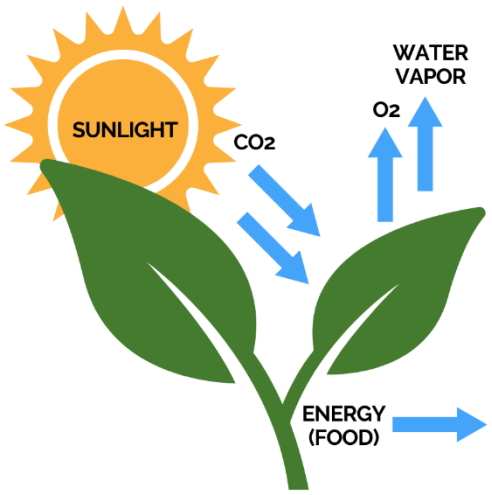
Tree or Shrub?

Trees and shrubs differ primarily in size, growth habit, and the presence of a dominant central trunk. While both are woody plants, their distinct characteristics make them suitable for different roles in landscaping and ecosystems. If you have a large open space, consider planting large tree(s) and understory shrubs to create an inviting space that provides multiple environmental and wildlife benefits.

Tree Biology

A tree is a perennial woody plant often characterized by a single main stem or trunk which supports branches and leaves, and typically reaches a significant height above the ground.

Trees are organisms with a complex biology that enables them to thrive in diverse environments. At their core, trees are made up of cells, tissues, and organs, much like other living organisms. The vascular system of a tree, composed of xylem and phloem, transports water, nutrients, and sugars throughout the tree, ensuring its growth and survival. The roots of a tree anchor it into the soil and absorb water and minerals necessary for its growth, while also forming symbiotic relationships with fungi to enhance nutrient uptake. Above ground, the trunk provides structural support, housing the vascular system and supporting the weight of the tree's branches and foliage.



In addition to their structural components, trees play crucial roles in ecosystems. They act as carbon sinks, absorbing carbon dioxide from the atmosphere during photosynthesis and storing it in their biomass. This process not only helps mitigate climate change but also produces oxygen as a byproduct, contributing to the oxygen supply.

Wilsonville's Common Trees

The next section highlights a few of our most recognizable – and common – trees in Wilsonville. See each tree species highlight for a quick description, information about size and preferred growing conditions, as well as a list of common issues and maintenance needs.

Wilsonville has many more tree species that grow throughout the City. If your tree is not listed here, check out the Tree Care section and the supporting resources listed in Appendix II at the end of this manual.

(The following information about common trees in Wilsonville is adapted from the Oregon State University – Department of Horticulture Landscape Plants)

Oregon White Oak (*Quercus garryana*)

Oregon white oak trees are stately, deciduous trees native to Oregon.

These majestic trees are known for their distinctive, lobed leaves and can reach heights of up to 80 feet. Oregon white oaks play a vital role in the region's ecosystems, providing habitat and food for a variety of wildlife species, including deer, squirrels, and numerous bird species.

Unfortunately, habitat loss and urban development have led to a decline in Oregon white oak populations, making conservation efforts crucial for preserving these iconic trees and the ecosystems they support.

NATIVE TO OREGON: Yes

PREFERRED HABITAT: Full sun, well drained soils – likes dry soils in the summer.

MATURE HEIGHT: 40-90 feet

IDENTIFYING FEATURES: Rounded lobed, green leaves. Broad spreading canopy. Slow growing but strong wooded and provides many environmental

COMMON ISSUES & MAINTENANCE NEEDS

- Overwatering –
    - Oregon white oak is well adapted to drought conditions once established. Too much water can cause rot problems.
- Oak decline
- Boring beetles
    - Mediterranean oak borer is a pest of concern
- Insect-induced galls
- Urban development

Douglas-fir (*Pseudotsuga menziesii*)

The state tree of Oregon, is a native evergreen conifer, known especially for their height and distinctive cones.

Many Douglas-firs present in our area are native forest remnants. Another identifiable feature of Douglas-firs is their bark, which gets craggier as they age.

These evergreen giants are known for their remarkable height. Douglas-firs have distinctive needles, usually ranging from dark green to blue-green. One unique feature is their cone scales, which bear a small, three-pointed bract that protrudes beyond each scale. This distinct bract resembles a tiny mouse tail and serves as a helpful way to identify Douglas-fir cones.

Douglas-fir forests are an essential part of the region's ecosystems, and they are a symbol of the Pacific Northwest's natural beauty.

NATIVE TO OREGON: Yes

PREFERRED HABITAT: Sun. Prefers neutral or slightly acid, well-drained, moist soils.

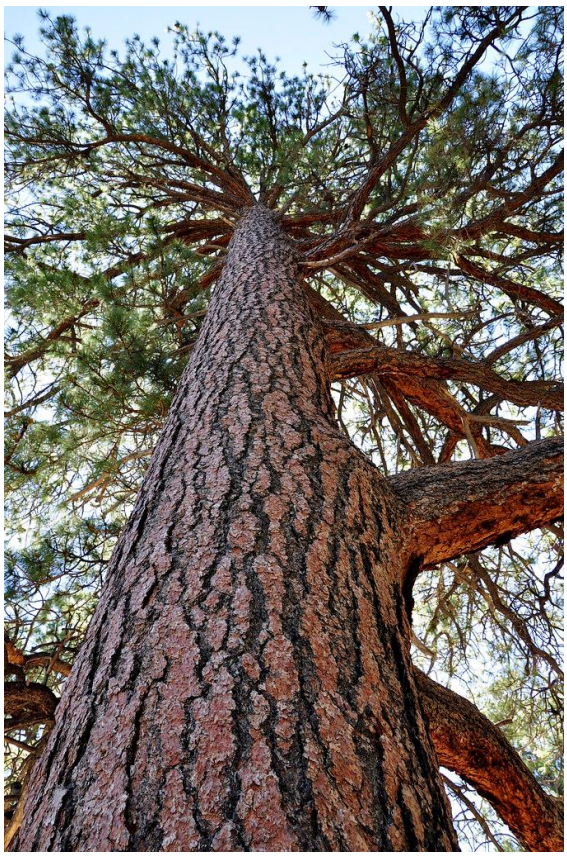
MATURE HEIGHT: 80-200 feet

IDENTIFYING FEATURES: Cones have unique ‘mouse tail’ shaped bracts.

COMMON ISSUES & MAINTENANCE NEEDS:

- Shedding branches
- Dropping of cones, needles
- Urban development
- Climate stress

Ponderosa Pine (*Pinus ponderosa*)



The Ponderosa pine is an imposing coniferous tree most common in drier Oregon climates. It boasts a straight and sturdy trunk with distinctive, reddish-brown to cinnamon-colored bark that is divided into large, puzzle-like plates. Its needles are long, narrow, and slightly twisted, arranged in bundles of three, which is a key feature for identification. The cones are large and have small points at each scale tip, this feature has gained Ponderosa cones the nickname of “Prickly ponderosa”.

NATIVE TO OREGON: Yes

PREFERRED HABITAT: Sun. Prefers neutral or slightly acid, well-drained, moist soils.

MATURE HEIGHT: 60-100 feet

IDENTIFYING FEATURES: Reddish, platy bark, long needles and prickly cones.

COMMON ISSUES & MAINTENANCE NEEDS:

- Sequioa pitch moth
- Urban development
- Climate stress

Tulip Trees (*Liriodendron tulipifera*)

The tulip poplar also known as the tulip tree or yellow poplar, is a large deciduous tree native to the eastern United States but also grows well in Wilsonville.

In its natural habitat, the tulip poplar can reach heights of 80-100 feet or more, featuring distinctive, tulip-shaped flowers with yellow-green petals and leaves.

Soil Suitability: Tulip poplars prefer well-drained, slightly acidic soils. In Oregon, where soil types can vary widely, ensuring the tree is planted in suitable soil conditions is essential for its health and growth.

Watering: Adequate watering is crucial, particularly during the dry summer months in parts of Oregon. Drought stress can weaken the tree and make it more susceptible to pests and diseases.

NATIVE TO OREGON: No

PREFERRED HABITAT: Sun. Slightly acidic soil.

MATURE HEIGHT: 70-100+ feet

IDENTIFYING FEATURES: Rapid grower and has tulip-shaped flowers, and broad green leaves.

COMMON ISSUES & MAINTENANCE NEEDS:

- Aphids and honeydew from aphids
- Grows rapidly, may require more frequent pruning to maintain clearances
- Urban development

Oregon Ash and Other Ash Trees (*Fraxinus* spp.)

Oregon ash trees are native deciduous trees that can be found throughout the Pacific Northwest. These trees are typically medium-sized and known for their leaves, made up of multiple leaflets, which give them a lush, fern-like appearance during the growing season.

Oregon ash trees are often found in riparian areas, along riverbanks, streams, and wetlands, where they play a vital ecological role. They provide habitat and food for various wildlife species, including birds, insects, and beavers. Additionally, their root systems help stabilize soil along waterways, preventing erosion.

Unfortunately, Oregon ash trees, as well as other ash tree species such as green ash (*Fraxinus pennsylvanica*) have faced challenges due to climate stress and threats from introduced pests, such as the emerald ash borer.

To learn more about emerald ash borer and prevention strategies, visit Oregon State University's website for the most up-to-date information for our region.

NATIVE TO OREGON: Yes

PREFERRED HABITAT: Sun or part shade, survives standing water in the winter months.

MATURE HEIGHT: 40-80 feet

IDENTIFYING FEATURES: Leaves are made of 5-7 oval leaflets, giving the canopy a soft overall appearance.

COMMON ISSUES & MAINTENANCE NEEDS:

- Ash decline
- Emerald ash borer

Grand Fir (*Abies grandis*)

These impressively tall-growing trees are characterized by their height. They are known for their symmetrical shape with dense, conical crowns and have long been grown as Christmas trees.

Grand firs thrive in the region's moderate climate and are often used as shade trees in residential yards and along streets.

NATIVE TO OREGON: Yes

PREFERRED HABITAT: Sun or part shade, generally adaptable to different soil conditions.

MATURE HEIGHT: 100-250 feet

IDENTIFYING FEATURES: Flat, very fragrant needles and upright cones

COMMON ISSUES & MAINTENANCE NEEDS:

- Urban development
- Bark beetles, Western spruce budworms, balsam woolly adelgids, Douglas-fir tussock moths
- Needle rust, twig blight, root rot
- Frost cracks, drought intolerance

Tree Planting

Why Plant Trees?

Trees play vital roles in ecosystems, providing oxygen, shade, habitat for wildlife, and various environmental benefits, while also serving aesthetic, functional, and economic purposes for humans. It is important to the overall health and vitality of our urban forest to have trees of varying size, age and species. By planting trees now, we can support the future resiliency of this shared asset.

Unlike the forest, where trees naturally self-seed, trees in the urban environment usually have to be planted and cared for until they are established. Trees in cities face harsher environmental stresses than those in the forest, but by choosing the right tree for the right place and implementing a tree care plan, we can minimize tree stress while maximizing the benefits they provide our community.

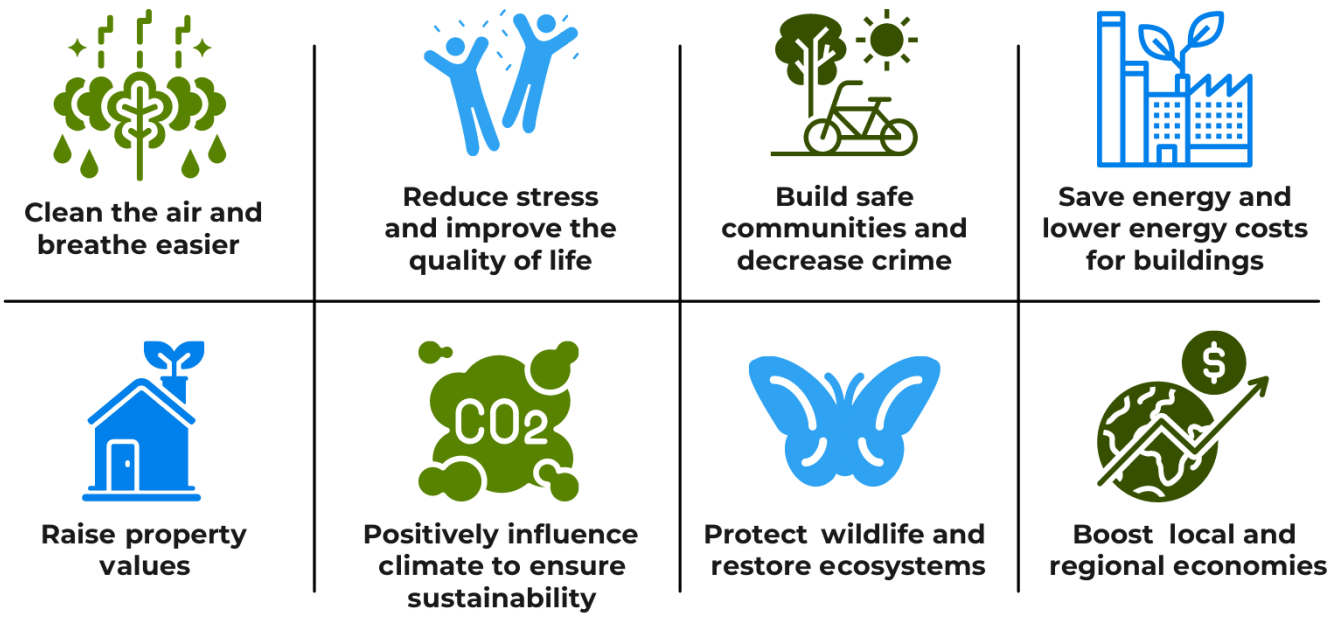
Community Impact

By choosing the right tree for the site along with considering water-wise species and trees that reduce surface temperatures and mitigate the effects of climate change, you are supporting the City's vision for a healthy, sustainable, and thriving urban forest that benefits current and future generations.

SENSE OF PLACE

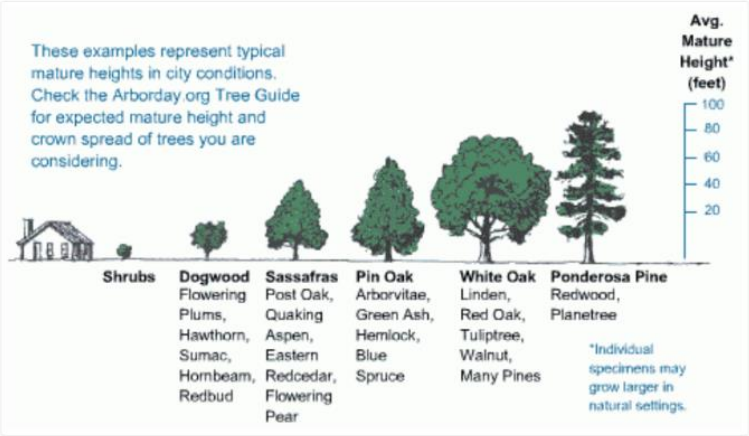
Trees are an integral part of life in Wilsonville. They line our streets, our parks and our private properties. They can serve as landmarks, memorials and meeting spaces and can hold important roles in our day to day lives.

To learn more about how trees are benefiting your property or your neighborhood, consider checking your NatureScore at https://planitgeo.com/naturescore-and-treeplotter/.



Right Tree Right Place

When planting trees, consider not only what the tree will need now – but also what it will need to mature and thrive in that space. Choosing a tree species that is appropriately sized for the available space is important, as is considering the attributes of the tree and how that will interact with or impact the space.



PLANTING PREPARATION

Inspect your planting location – note if any of the following are present, and keep in mind how your tree might interact with these features as it grows:

What is Overhead?

Underground Utilities

Infrastructure

Buildings

Driveway, Sidewalks

Other Trees

Tree Planting Cost Sharing Program

To support tree planting efforts in our community, Wilsonville implemented a tree planting cost share program that may reimburse residents up to $100 for the cost of a new tree. Learn more about the program and apply for reimbursement through the program application form.

Safety Notes

Always call 811 any time you are planning to break ground. It is critical to your and your community's safety that you avoid digging into a gas line, water line or underground electric line.

Timing / Season

In our area, the ideal planting season is in the fall and early spring. Planting trees during this period will allow them to adapt to their new site without added pressures of heat and drought stress.

Choosing a Tree

DETERMINE YOUR GOALS:
Determine why you want to plant a tree. These preferences will help guide the species you select. Is it for shade, aesthetics, privacy, wildlife habitat, or any other specific purpose?

CONSIDER YOUR PROPERTY:
Evaluate your property's size, soil type, and available space. Consider factors like sun exposure, drainage, and existing structures. New trees should ideally be planted a minimum of 3 feet from driveways and 15 feet from buildings.

For a street tree, apply for a permit to determine if the curbside strip adjacent to your property is appropriate for a tree. You need to provide enough room for the tree to grow to its mature size.

ASSESS ENVIRONMENTAL FACTORS:
Consider your property's climate conditions, including temperature, rainfall, and frost dates. Wilsonville is primarily in the 8b plant hardiness zone (USDA). Select a tree suitable for your zone. Evaluate wind patterns and potential threats like pests and diseases. *For example, a new ash tree will likely not be successful given the regional presence of emerald ash borer.*

CHOOSE TREE SPECIES:
Based on your goals and property assessment, select a suitable tree species that fits your needs and environmental conditions, such as full sun, partial sun, shade, etc. Keep in mind that sourcing trees locally may be a challenge, consider narrowing down your choice to a few species and contacting local nurseries to see what they have available.

SELECT SUITABLE VARIETIES:
Within the chosen species, research specific varieties or cultivars that match your preferences and property requirements (e.g., leaf color or flowering season for aesthetics).

VERIFY PROPERTY-LEVEL REGULATIONS:
Check with the Wilsonville Planning Division or your homeowner's association for any regulations or restrictions on planting trees. Ensure compliance with permits and codes.

PLAN FOR MAINTENANCE:
Have a plan in place for how you'll water the tree as it establishes. Will you water the tree by hand, using a tree-gaiter or drip-irrigation system? How often will you need to water the tree to ensure it thrives?

Selecting a High-Quality Tree

Choosing a healthy tree at the nursery or garden center is just as important as deciding on the species to plant. Nurseries and garden centers should be adhering to ANSI Z60.1 American Standard for Nursery Stock but you should also inspect the tree and root system for any signs of poor root system, poor condition, and pests or disease issues.

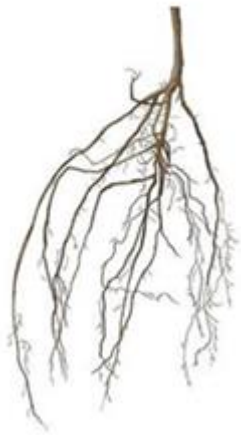
Selecting a healthy tree will increase the likelihood that it will grow to its full potential and maximize the associated benefits.

DID YOU KNOW?

Fall color can vary by individual trees even if they're the same species.

If you're looking forward to having a tree with bright fall foliage, consider purchasing the tree in the fall to find one that fits your aesthetic preferences.

Containerized	Ball & Burlap (B&B)	Bare Root
Complete root system. Look for girdling roots	Partial root system (field grown)	Complete root system, no soil. Look for kinked roots
Can be planted any time of year (avoid hot/dry periods)	Best planted during dormant season	Must be dormant, plant immediately after receipt
Small to medium caliper trees	Large caliper trees	Small trees or seedlings
More sensitive to drought or limited water after planting	Heavy material: takes more equipment to handle and plant	Good for reforestation projects and street tree volunteer events



RECOMMENDED STREET TREE LIST

Small Street Trees

Recommended strip width: 4-5 ft | Recommended distance between trees: 20 ft

Common Name	Botanical Name
Amur Maackia	*Maackia amurensis*
Boxleaf Azara	*Azara microphylla*
Cascara	*Rhamnus purshiana*
Chinese Pistache	*Pistacia chinensis*
Firestarter Black Tupelo	*Nyssa sylvatica* 'JFS-red'
Gum Drop Tupelo	*Nyssa sylvatica* 'JFS-PN Legacy1'
MaacNificent Amur Maackia	*Maackia amurensis* 'JFS-Schichtel1'
Merlot Redbud	*Cercis canadensis* 'Merlot'
Milky Way Dogwood	*Cornus kousa* 'Milky Way'
Paperbark Maple	*Acer griseum*
Pink Chimes Japanese Snowbell	*Styrax japonica* 'Pink Chimes'
Rocky Mtn Glow Maple	*Acer grandidentatum* 'Schmidt'
Ruby Vase Persian Ironwood	*Parrotia persica* 'Ruby Vase'

Medium Street Trees

Recommended strip width: 5-6 ft; Curb-no-sidewalk | Recommended distance between trees: 25 ft

Common Name	Botanical Name
American Hophornbeam	*Ostrya virginiana*
American Hornbeam	*Carpinus caroliniana*
Bamboo-Leaf Oak	*Quercus myrsinifolia*
Chinese Fringetree	*Chionanthus retusus*
Chinese Pistache	*Pistacia chinensis*
Eddies White Wonder Dogwood	*Corus* 'Eddie's White Wonder'
Elizabeth Magnolia	*Magnolia acuminata* 'Elizabeth'
Emerald Avenue European Hornbeam	*Carpinus betulus* 'JFS-KW1CB'
Firestarter Black Tupelo	*Nyssa sylvatica* 'JFS-red'
Forest Green Oak	*Quercus frainetto* 'Schmidt'
Forest Pansy Redbud	*Cercis canadensis* 'Forest Pansy'
Galaxy Magnolia	*Magnolia liliflora* x *M. sprengeri* 'Galaxy'
Golden Colonnade Ginkgo	*Ginkgo biloba* 'JFS-UGA2'
Persian Ironwood	*Parrotia persica*
Princeton Sentry Ginkgo	*Ginkgo biloba* 'Princeton Sentry'
Red Rage Black Tupelo	*Nyssa sylvatica* 'Haymanred' Red Rage
Rocky Mtn Glow Maple	*Acer grandidentatum* 'Schmidt'
Silverleaf Oak	*Quercus hypoleucoides*
Sterling Silver Linden	*Tilia tomentosa* 'Sterling'
White Shield Osage Orange	*Maclura pomifera* 'White Shield'

Large Street Trees Recommended strip width: 6 ft and greater | Recommended distance between trees: 30 ft	
Common Name	Botanical Name
Armstrong Red Maple	*Acer rubrum* 'Armstrong'
Autumn Blaze Maple	*Acer* x *freemanii* 'Jeffersred'
Autumn Gold Ginkgo	*Ginkgo biloba* 'Autumn Gold'
Bloodgood London Plane tree	*Platanus* x *acerifolia* 'Bloodgood'
Espresso Kentucky Coffeetree	*Gymnocladus dioicus* 'Espresso'
Frontier Elm	*Ulmus carpinifolia* x *U. parvofolia* 'Frontier'
Golden Colonnade Ginkgo	*Ginkgo biloba* 'JFS-UGA2'
Hedge Maple	*Acer campestre*
Jefferson Elm	*Ulmus americana* 'Jefferson'
Kentucky Coffeetree	*Gymnocladus dioicus*
Magyar Ginkgo	*Ginkgo biloba* 'Magyar'
Northern Catalpa	*Catalpa speciosa*
October Glory Red Maple	*Acer rubrum* 'October Glory '
Oregon White Oak	*Quercus garryana*
Presidential Gold Ginkgo	*Ginkgo biloba* 'The President'
Princeton Sentry Ginkgo	*Ginkgo biloba* 'Princeton Sentry'
Purple Catalpa	*Catalpa erubescens* 'Purpurea'
Queen Elizabeth Hedge Maple	*Acer campestre* 'Evelyn'
Rivers Purple Beech	*Fagus sylvatica* 'Riversii'
Sawtooth Oak	*Quercus acutissima*
Scarlet Oak	*Quercus coccinea*
Shumard Oak	*Quercus shumardii*
Swamp White Oak	*Quercus bicolor*
Tricolor Beech	*Fagus sylvatica* 'Roseomarginata'
Triumph Elm	*Ulmus* 'Morton Glossy'
Willow Oak	*Quercus phellos*

Note: The list above was recreated. For the original, view the City's Recommended Street Tree List.

Ask a Professional!

Check with the Wilsonville Planning Division for preferred tree species information. Your county extension agent, or a local qualified arborist, landscape architect or nursery professional can also help with selecting the right tree.

Planting A Tree

PREPARE YOUR SITE

After selecting the right tree for the right place, prepare the planting site by clearing debris, improving soil quality as needed, and addressing drainage issues if necessary. Plan for regular watering as the tree establishes.

PLANT THE TREE

Follow proper planting techniques, including digging an appropriate-sized hole, placing the tree at the correct depth, and managing any poorly formed roots.

For detailed information about proper tree planting, review some of the video resources from Friends of Trees, or check out ANSI A300 Part 6 – Planting and Transplanting Standards.

STAKING

Stake trees only when necessary and remember to remove the stakes at or before the end of the first year. If stakes are left in place, they can severely damage and even kill young trees.

MULCH

Wood mulch helps woody plants by protecting the roots that grow just under the soil surface, protecting them from rapid temperature change during the summer months, and by retaining moisture that would otherwise evaporate.

WATER THE TREE

Once your tree has been planted, water it deeply to saturate the soil. This ensures that the soil settles around the roots and dry soil does not dry out sensitive young roots. Plan to provide 10-15 gallons of water a week during the summer months for the first 3-5 years.

IMPLEMENT MAINTENANCE PLAN

Plan for regular maintenance that includes regular watering, appropriate pruning to develop good structure, and pest management.

Be sure to monitor the tree's growth and health over time, taking actions to mitigate problems as they become apparent.

Planting a Tree Visual Guide

Tree Planting Best Practices

Use this 5-Step Tree Planting guide when planting a new tree,

1 Measure the Root Ball

- The root ball contains the root system's core. It starts at the root collar and extends to the bottom of the root system.
- Measure the diameter and depth of the root ball.

2 Prepare the Space

- Dig a hole two and a half times wider than the root ball.
- For example, the hole for a tree with a root ball 20" across should be dug 50".
- The depth of this hole should be 1" less than the depth of the root ball. Thus, a 18" high root ball would be placed in a 1" deep hole.

3 Place the Tree

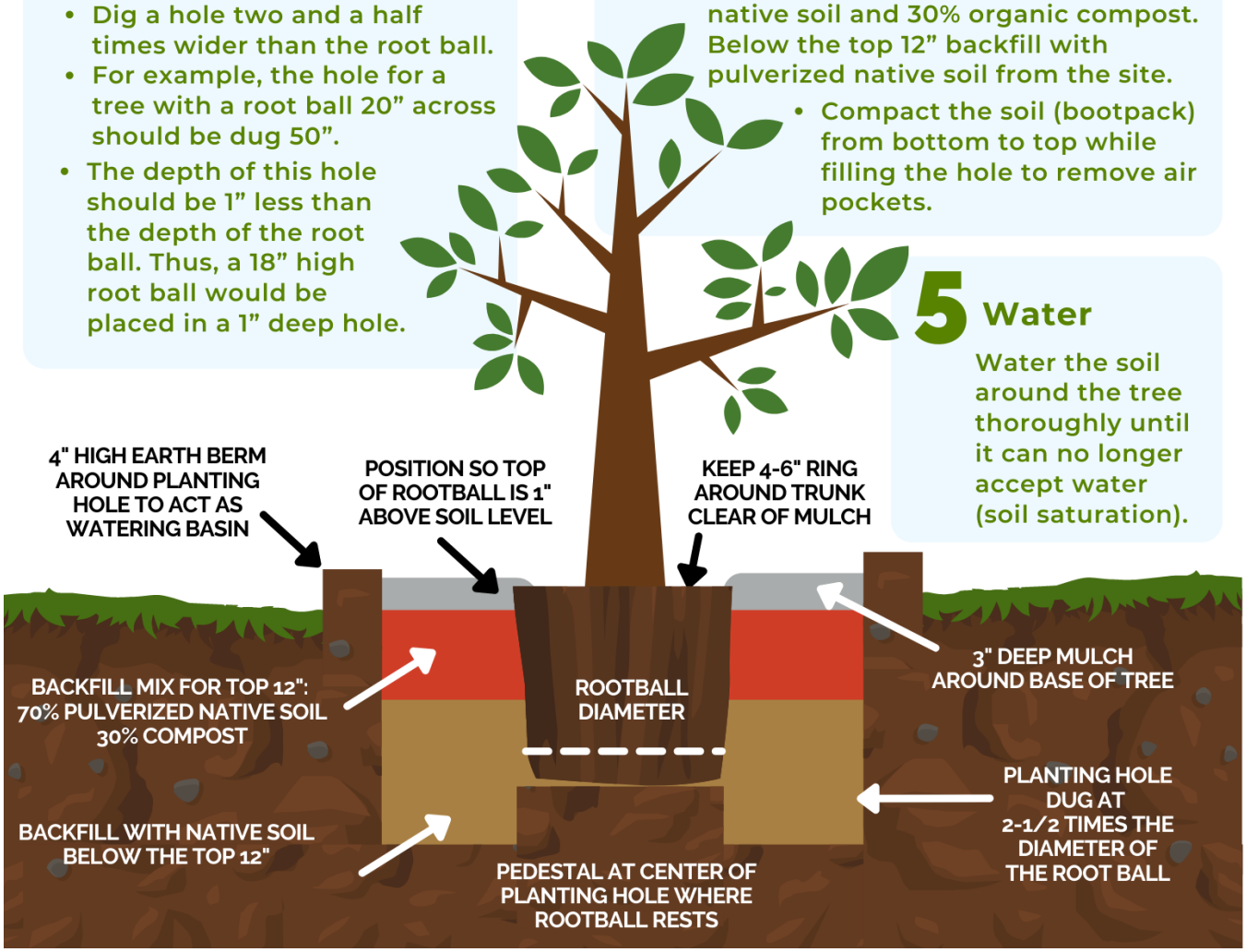
- Spread out the roots so that they are radiating out from the rootball and not circling or girdling each other.
- Gently lower the tree into the hole until the rootball comes to rest at the bottom.
- Support the rootball as it is lowered to prevent damage.

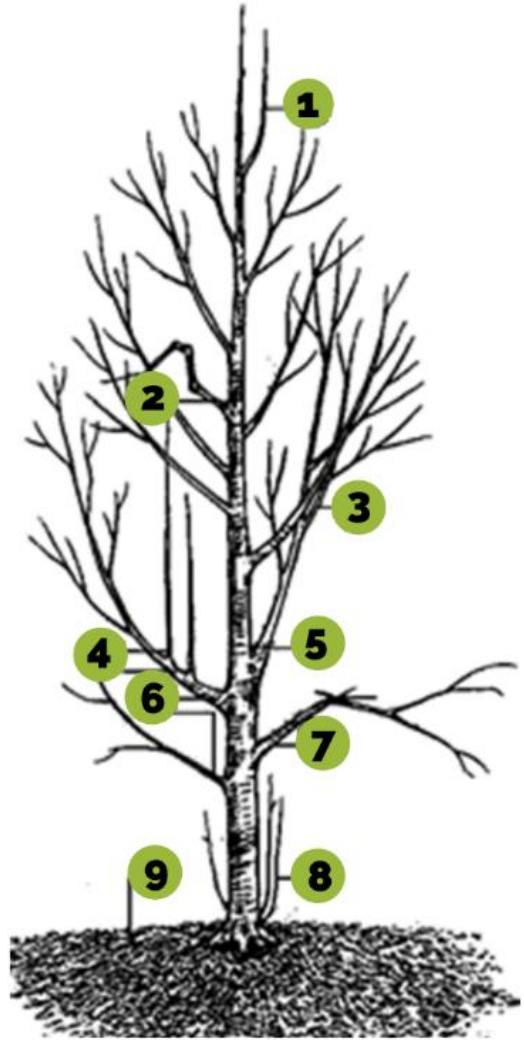
4 Backfill

- Backfill the top 12" of the planting hole with a mixture of 70% pulverized native soil and 30% organic compost. Below the top 12" backfill with pulverized native soil from the site.
- Compact the soil (bootpack) from bottom to top while filling the hole to remove air pockets.

5 Water

Water the soil around the tree thoroughly until it can no longer accept water (soil saturation).





Description 7. Example of pruning and mulch management to promote good health and structure. Source: Penn State University Extension

Young Tree Maintenance at Years 1-5

Trees that receive the appropriate pruning while they are young will require less corrective pruning as they mature. To set your new tree up for success, plan to prune it lightly but strategically over the first 1-5 years after planting.

CONSIDER THE NATURAL FORM

Research the type of tree to learn more about the typical canopy, trunk shape, and growth patterns. Accentuate the natural branching habit of a tree and correct any structural problems over time.

ALLOW FOR STRONG TRUNK TAPER DEVELOPMENT

At the time of planting, identify the branches that will remain as the *lowest permanent branches*. Branches below permanent branches are known as *temporary branches*, which are critical to the tree's ability to develop good *trunk taper,* a key component of a tree's overall structural stability.

AVOID EXCESS STRESS

Prune as little as possible after planting to ensure there are enough temporary branches to produce food for new growth of roots, trunk, and branches.

When possible, avoid pruning during periods of heat and drought and remove only the minimum amount of live canopy necessary to achieve your goals. Never top your trees, this leads to poor structure later in life.

BE PROACTIVE

Pruning for structure should be done as part of proactive management. Many problems can be avoided or mitigated through prevention. Keep in mind that trees handle small wounds much better than large wounds and try to keep pruning cuts to below 1" diameter early in a tree's life.

For more assistance in properly pruning a new or young tree, see Appendix II at the end of this manual for more resources.

Watering New Trees

After planting a new tree, it is critical to provide regular water so that it can establish on the site. Plan to provide 10-15 gallons of water a week during the summer months for newly installed trees during the first 3-5 years after planting.

If you are not able to provide water, consider asking friends and neighbors for help or reaching out to the City of Wilsonville to see what programs may be available to assist in the care of your newly planted tree(s).

Signs that your tree is not getting enough water include wilting or discolored leaves and dry or dusty soil. It is also worth noting if the surrounding vegetation, like grass or low growing plants seem drought stressed, as these can often act as early warning systems!

HOW TO WATER

It is important to apply water slowly so that it does not flow away before filtering into the soil. The pictured methods below help control the infiltration rate and avoid unnecessary water runoff. Note that applying water too fast increases the tendency for water to puddle or run off the soil surface, resulting in wasted water and little or no water reaching proper soil depth.

Tree gaitor or watering bag

Tree Diaper

5-gallon buckets

AVOID OVERWATERING!

To avoid suffocating your tree's roots and to avoid wasting water, make sure to only water your tree when it needs water.

A NOTE ON CLAY SOILS

When clay soil is overly dry it is often necessary to provide remedial irrigations to re-wet the soil. Extremely dry clay soil has a tendency to become *hydrophobic*. That is, it loses the ability to absorb water and may actively repel it.

To irrigate extremely dry clay soils, it is often necessary to re-wet the soil before turning on any automatic sprinklers. Dry soils can be most easily re-wet by applying water very slowly through a soaker hose or low-flow sprinkler.

Trees and Irrigation

Consider watering your very old trees more often if the trees are exhibiting other signs of stress. Watering bags, dripline tubing or hoses and hand watering are all great options!

Young and Newly Planted Trees

Newly planted trees need roughly 5-10 gallons of water a week to survive and establish on site (possibly 10-15 gallons in the summer months). After about three years, taper down the supplemental water provided and start watering the trees as established trees.

Established Trees

When watering trees consider using automated or surface-mounted irrigation methods to reduce soil disturbance and avoid accidental root damage. Dripline hoses or tubing, watering bags, or hand watering are all great options. Once established, trees in our area will still need occasional watering, but much less frequently than newly planted trees.

Mature Trees

Provide your established trees with water during periods of prolonged drought or unusual heat events to limit the environmental stressors. Older trees are more likely to be stressed by sudden changes in environmental or site conditions. Provide supplemental water during periods of prolonged heat or drought, and when soil disturbances occur on site.

Typical Drought Season

In Wilsonville, our summers can be dry and hot. Typically, this season will last from May through September, with the hottest driest weather occurring in August and September.

Water deeply and infrequently to establish and encourage deep roots for trees that will be more drought resistant once they are established. When plants are watered deeply the roots grow downward into the soil rather than stay near the surface. This helps trees and other woody plants to be more drought tolerant once established.

Permanent Wilting Point

Trees and other woody plants that are severely impacted by drought may start to experience canopy dieback after reaching permanent wilting point. Often, smaller low growing plants can act as an early warning mechanism to avoid this. If you notice smaller herbaceous plants experiencing dieback or leaf-scorch, it is time to water trees of all ages! Before it reaches that point, a hand shovel or spade dug into the soil to a depth of approximately 3” near the tree’s stem or trunk can serve as an indicator of soil moisture levels. Be careful not to damage any roots. If soil clings to the spade, it may indicate that no watering is needed at that time.

The Tree Canopy

Safety First

DO NOT UNDERESTIMATE THE POSSIBLE RISKS ASSOCIATED WITH TREE CARE. IF YOU CANNOT PRUNE A TREE WITH BOTH FEET ON THE GROUND, PLEASE WORK WITH A LICENSED, BONDED AND INSURED PROFESSIONAL.

Arboriculture, the management of trees and shrubs, involves inherently dangerous tasks such as working at heights, handling heavy equipment, and navigating unpredictable tree structures. Arborists require specialized skills and equipment to work safely in this hazardous environment.

Tree work has an annual fatality rate of 30.0 per 100,000 workers, which is significantly higher than the national average for all other industries. The National Institute for Occupational Safety and Health (NIOSH) reported that the most common cause for tree worker death is due to electrocutions and falls. Another analysis of the Census of Fatal Occupational Injuries (CFOI) found 1,285 fatalities among tree workers, where 44% were pruning a tree when fatally injured and the top three most common causes of death in tree work were being struck by or against an object (42%), falls to lower level (34%) and electrocutions (14%) (CDC[1]).

Safety standards have been established to mitigate these risks. Developed through industry consensus, these standards provide guidelines for safe practices and serve as benchmarks for professionalism. Compliance with standards like ANSI Z133 is often legally required and crucial for creating a safe work environment.

Although compliance with this standard is voluntary, Z133 carries the force of law in many instances in the U.S. When the Occupational Safety and Health Administration (OSHA) cannot find language in its own standards to guide safe work practices in a particular situation they will typically cite a section of Z133 as what the employer "should have known or done" to create a safe work environment for its employees.

The Arboriculture Safety Standard:

The American National Standard for Arboricultural Operations - Safety Requirements, also known as the ANSI Z133 or just Z133, was created in 1972 and updated throughout the years with the most recent update in 2017. The Z133 was developed by the Accredited Standards Committee ASC Z133. This version provides the most current and comprehensive safety guidance for arborists in the United States.

[1] Centers for Disease Control and Prevention, Work-Related Fatalities Associated with Tree Care Operations --- United States, 1992—2007. CDC.gov, accessed March 2022.

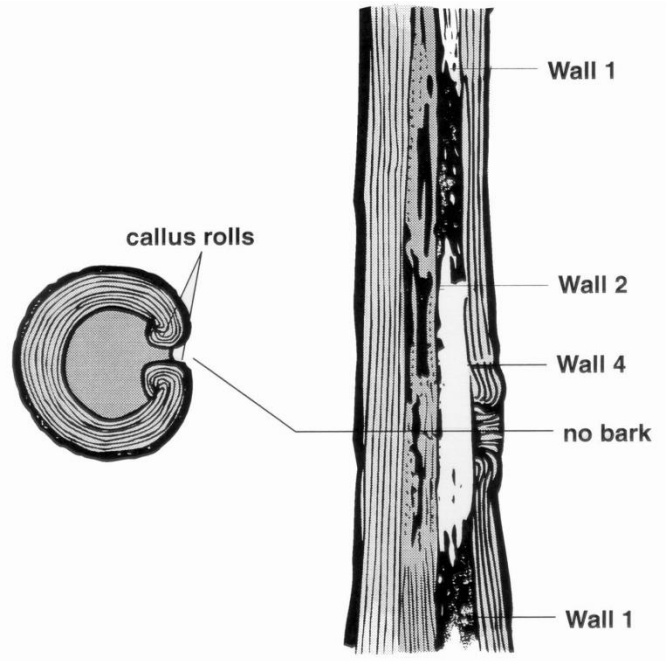
Pruning Trees

Typically, an ISA Certified Arborist should prune established and mature trees to ensure the health of the tree, and the safety of people and property. This section provides an overview of some common pruning situations and practices. All tree pruning should follow the most current standards outlined in the ANSI A300 Standards Part 1 – Pruning.

HOW TREES REACT 'SEAL VS. HEAL'

One critical concept in proper pruning is the understanding that trees "seal" rather than "heal" wounds. Trees do not regenerate damaged tissue, but instead, they 'seal off' or compartmentalize the wounded area through a process known as 'CODIT' (Compartmentalization of Decay in Trees).

Compartmentalization of Decay in Trees



Description 8. Compartmentalization of decay in trees (CODIT) describes how trees build walls around wounds to contain decay and keep other areas healthy (Source: International Society of Arboriculture)

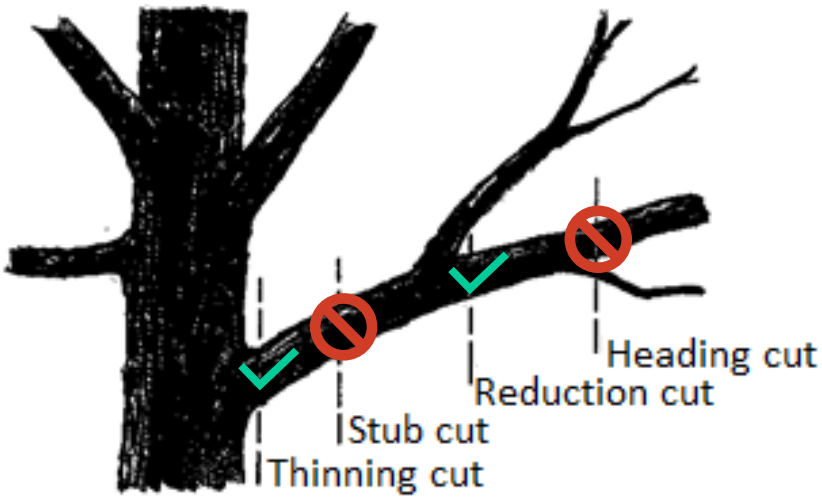
When planning to prune a tree, it is important to understand how that species may respond. For example, when they are healthy, oaks, firs and cedars are known for being strong compartmentalizers, meaning they are more adept at recovering well from pruning cuts. On the other hand, faster growing species such as willow, cottonwood, or alder, are considered poor compartmentalizers and are more prone to developing decay pockets or columns of decay after pruning events.

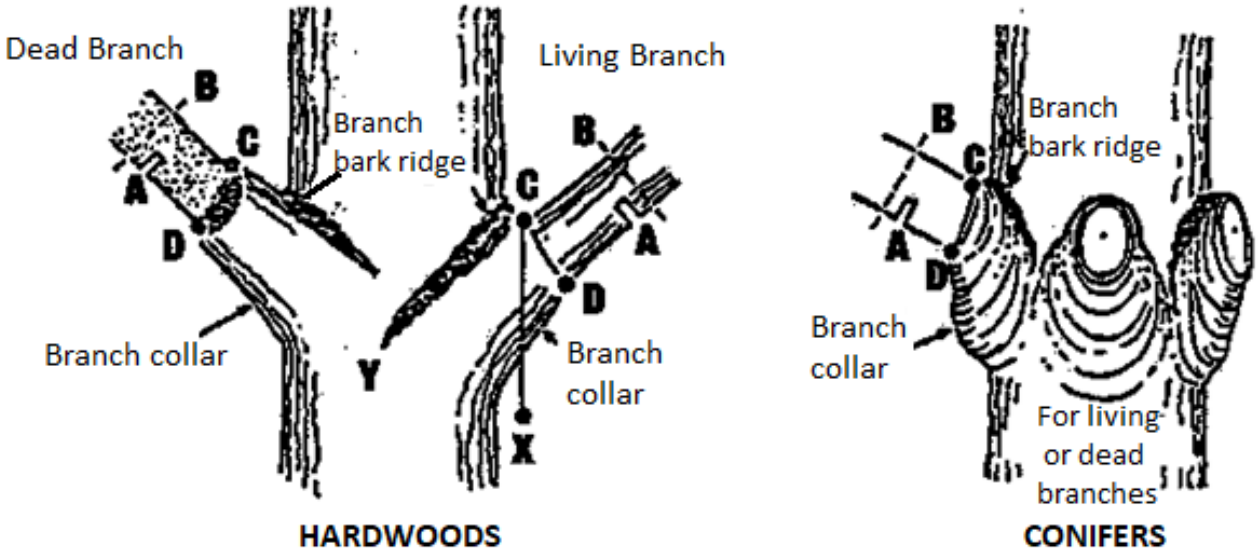
To minimize the size and impact of wounds, always use proper pruning cuts and remove only the minimum amount of live canopy necessary to achieve your management goal.

Proper Pruning Cuts

When pruning trees, always make proper pruning cuts to give the tree the best chance to seal over the wound and reduce the potential for decay or disease later. In the diagrams below, the first image displays the various types of cuts that could be made to a limb. Typically, a thinning cut or reduction cut is the proper pruning cut although there may be limited applications where a heading cut or stub cut is needed. The industry standards and best practices may describe in detail the conditions that would warrant a stub or heading cut.

The currently accepted best practice is a cut called the 3-cut method, shown in the bottom image below (cuts A through C-D), which is used to prevent bark tearing or peeling.





Natural target pruning properly removes a branch while protecting the branch collar, which is essential for wounds to heal. First cut A, second cut B, and third cut C-D.

Description 9. Types of pruning cuts (above) and proper branch cutting technique (below) (Source: Arbor Day Foundation)

Pruning a Tree

6 Tenants of Pruning

1 Never Top a Tree

Topping: inappropriate pruning technique to reduce tree size. Cutting back a tree to a predetermined crown limit, often at internodes.

Disadvantages of topping:

1. Creates weak branch attachments resulting in future hazards
2. Causes irreversible damage
3. Increases risk of deadly infections
4. Ruins aesthetic quality of trees
5. A topped tree will require more long term maintenance than a properly pruned tree

2 Establish & Maintain a Central Leader

Central Leader: the main stem of a tree.

A central leader directs growth and determines if the tree will be structurally sound long term.

3 Direct Growth Up and Out from Trunk

A tree should spread outward horizontally and vertically from the trunk. Avoid losing branches that promote this type of growth when pruning.

Pruning a Tree

6 Tenants of Pruning

4 Eliminate Crossing

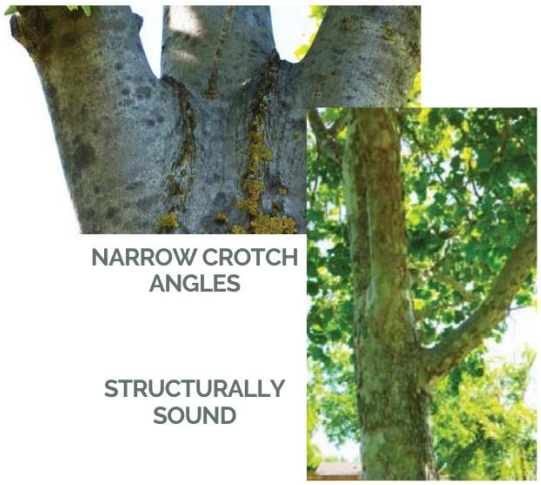
Crossing branches increase the risk of structural injury and waste a tree's energy supply.

If crossing branches are found determine which is more valuable to the tree and remove the other.

5 Eliminate Narrow Crotch Angles

Crotch: The angle at which two branches meet

The crotch at top left is far too narrow and is structurally unsound as illustrated by the excess included bark denoting very weak branch attachment. The crotch angle at right is structurally sound and is conducive to healthy growth.



6 Eliminate Waterspouts and Suckers

Watersprouts: Vigorous, upright shoot from an adventitious bud above the ground plane

Watersuckers: Vigorous, upright shoot from the roots or base of the trunk at or below grade

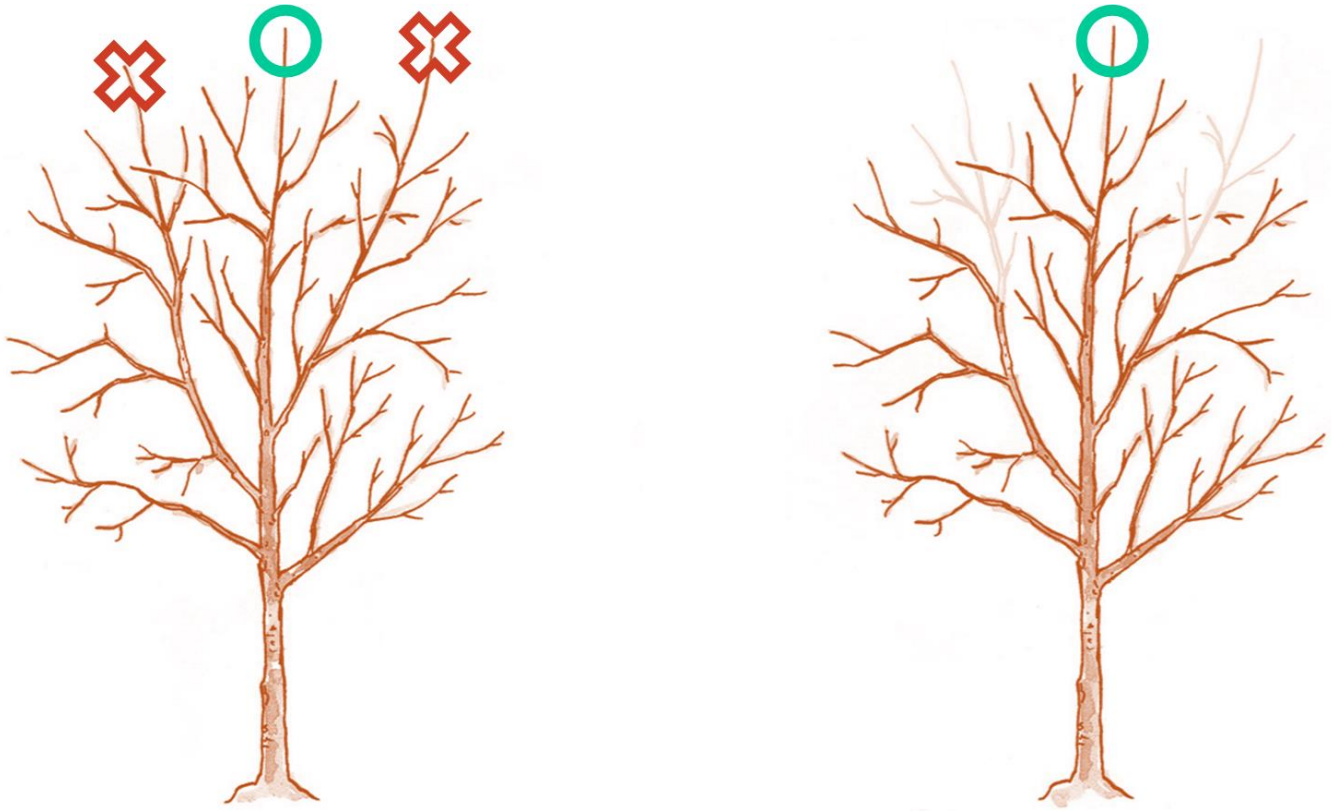
Pruning Dose

Proper pruning is essential for the health of trees because it can promote structural integrity, enhance aesthetics, and reduce the risk of disease and pest infestations. When branches are strategically pruned, it encourages the tree to allocate its resources effectively, fostering healthy growth and minimizing the potential for weak or overcrowded limbs. In order to ensure that pruning your tree is a net benefit to the tree, rather than causing harm, remove only the minimum amount of live canopy to meet the pruning goal.

In recent years, arborists considered 25% of live canopy removal the maximum “pruning dose”, but we now know that 25% may be much too much for many trees. Young trees are more tolerant of pruning events and are more likely to recover quickly than very old trees which will likely be the most sensitive to any degree of canopy loss.

In most scenarios, pruning 10-15% of live canopy during one pruning cycle should be adequate if trees have been well maintained. For instance, small dead limbs, sucker sprouts, damaged or diseased limbs, and crossing or conflicting branches (that do not serve as natural braces) may all be that is needed for a pruning cycle.

It should be noted that the growth rates of trees vary depending on species, site conditions, water availability, location, and other factors, therefore, consider what may be needed by revisiting the “6 Tenants of Pruning” on the previous pages and consult with a trusted Certified Arborist.



Description 10. Illustration of how a tree whose physiological form typically has one central leader or stem (green circles) and how only 10-15% of live canopy is removed (red x’s) to support its natural form

Pruning Objectives

COMMON PRUNING REASONS AND PRACTICES

Provide Clearance

- Minimize conflict with existing infrastructure.
- Provide building clearance for maintenance.
- Provide overhead clearance for pedestrians using sidewalks.
- Provide clearance for vehicles using the street.
- Ensure street signs and traffic signals are clearly visible.
- Provide a safe distance around power lines and streetlights.

Manage Risk

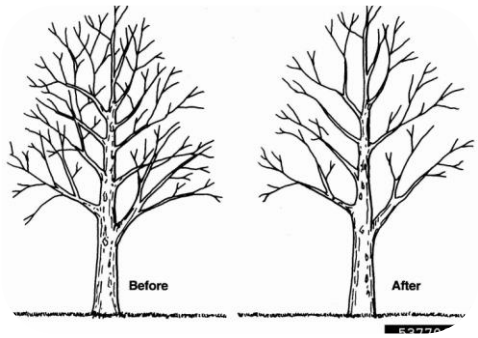
Trees may need to be pruned to reduce the risk of branches or large tree parts breaking and causing injury or property damage. An arborist can identify branches that might be diseased, poorly attached or poorly formed and prune them properly to reduce the chance that they break. To reduce the need for risk management pruning, it is important to plant trees appropriate to the location and to prune young trees so that they develop strong, healthy canopy structure. Proactively pruning trees in the urban environment can reduce the need for reactive pruning later.

Improve or Maintain Tree Health or Structure

- Train young trees to encourage strong, stable form.
- Provide clearance for trucks and vehicles using the street.
- Reduce canopy density to increased light and air flow through the tree canopy to minimize disease or pest pressure.

Improve Aesthetics or Landscape Function

- Ensure street signs and traffic signals are clearly visible.
- Reduce canopy density to allow more sunlight to landscape or property below.
- Encourage increased flower or fruit production.
- Maintain desired size, shape or density for hedges.



Establish Structure

Provide Clearance to Existing Infrastructure

Maximize Benefits: Fruit, Flower or Privacy

Mitigate Risk to People or Property

Cut Sucker Sprouts to Improve Tree Health

Prune to Meet Aesthetic or Needs

Pruning At All Stages

YOUNG OR NEWLY PLANTED TREES

- Prune young trees to train their form.
- Shorten lowest temporary branches rather than removing them to allow the tree to develop good trunk taper.
- Identify and train the lowest permanent branches.
- Prune any obvious girdling roots.

ESTABLISHED TREES

- Prune to maintain health and clearance.
- Trees should not need to be pruned more than every few years unless the trees are grown for fruit production or are sheared or shaped into a topiary or hedge.
- Proactively prune to minimize infrastructure interference later.

MATURE OR VETERAN TREES

As trees age, they are likely to experience storm damage, pest and disease issues or structural problems that may potentially increase risk to people, property, and other trees nearby. These risks are typically outweighed by the benefits mature trees provide, like increased shade, stormwater management and wildlife habitat, but aging trees should be managed carefully.

- Mature trees should be well established in their space and pruning should be primarily to improve tree health or mitigate risks present.
- Prune infrequently and remove only the minimum amount of live canopy required to meet the objective.

RETRENCHMENT PRUNING

In the context of pruning mature and veteran trees, "retrenchment" refers to a specialized pruning technique aimed at reducing the size and overall canopy of a mature tree, mimicking the natural aging process. A retrenchment pruning strategy can be a useful tool in retaining old or large trees of high value while reducing the risk of branch or whole tree failure, thus extending the life and value of the tree.

NATURAL BRACES

Previously accepted pruning practices prescribed removing all crossing and rubbing branches when pruning trees. Arboricultural research has since recognized the value of ‘natural braces’ which can actually contribute to a tree’s overall structural integrity, rather than compromise it.

Think carefully before removing interior branches that could be stabilizing a branch union lower in the canopy.

Do Not Top Trees!

Topping trees should be avoided because it results in the removal of a significant portion of the tree's canopy, causing stress, weakening the tree's structure, and making it more susceptible to disease and pest infestations. Additionally, topping promotes the growth of weak, fast-growing sprouts that are prone to breaking, further compromising the tree's health and safety.

In most cases “topping” a tree is strongly discouraged may even be prohibited. Topping street trees is not permissible and may result in fines or other penalties.

Topping trees increases the risk of large tree parts failing later. Often, reducing the height of a tree is a never-ending effort, damages tree health and increases the risk to property and people below.

Views

Trees are the view! Did you know that having trees near your home can increase your property value? Trees can help establish scale, giving the viewer a better sense of the overall distance of the views they are enjoying. If a tree is in conflict with your view, consider these alternatives to topping:

WINDOW PRUNING

Are you hoping to see a specific landmark? Maybe removing or shortening just a few branches from the tree in question will clear the view, and even provide a frame!

SELECTIVE THINNING

If your tree is particularly dense, selective thinning may be an option. Speak to a reputable tree service provider about options that might work. Avoid the practice of ‘wind sailing’ especially on our native conifers. These trees are more likely to lose large branches or break if they are overthinned or *wind-sailed*.

LIMITED CROWN RAISING

Occasionally, removing the lowest limbs of a tree will provide the view clearance desired. Be cautious when doing so, however, and remember that removing too many low limbs can change the overall stability of your tree.

SOLAR PANELS AND GARDENS

Trees and their canopy may come into conflict with other goals for your property such as solar panel energy generation and gardening. Consider a qualified arborist who may be able to prune your trees to provide more sunlight to the solar panels and/or garden. Consider this potential conflict before choosing a new tree and site for planting.

Special Pruning Situations

RISK MANAGEMENT

Proper tree pruning often plays a crucial role in mitigating potential risk posed by trees. By properly and proactively removing weak or dead branches, reducing the weight on structurally weak canopy areas, and improving the overall structural stability of the tree, potential risks can be reduced. Proactive pruning and inspections for risk also allows for the identification of potential issues, such as hidden decay or disease, enabling timely interventions to prevent catastrophic failures. Regular and thoughtful pruning practices can significantly enhance a tree's ability to withstand environmental stressors and reduce the likelihood of dangerous limb or tree collapses.

For more about tree risk assessment and managing potential tree-related risks, see the "When Trees Pose a Risk" section of this chapter.

TREE SUPPORT SYSTEMS

As an alternative to pruning, consider other methods that may meet the objective without removing a large amount of live canopy.

ADDRESSING STORM DAMAGE

After a tree has endured storm damage, pruning may be necessary to remove broken or hanging branches that pose an immediate safety hazard. Additionally, selective pruning can help restore the tree's structural integrity, promote proper healing of wounds, and encourage healthy regrowth to ensure the tree's long-term recovery.

WILDLIFE CONSIDERATIONS

Pruning can both harm and improve wildlife benefits provided by trees. Overzealous or poorly timed pruning may reduce shelter, nesting opportunities, and food sources for wildlife. Conversely, thoughtful pruning practices that maintain natural tree structures and encourage the growth of beneficial plant species can enhance wildlife habitat by providing a diverse range of resources and safe spaces for animals.

Tree Roots

Tree Roots and Stability

A very common myth is that “trees have tap roots”. While some tree species do have a genetic disposition toward a certain type of root structure, the biggest factor that influences root system growth is soil conditions on site. For example, if soils are very compacted, it is common to see large structural roots growing on the soil surface. A high water table can also encourage a shallow root system, as tree roots need oxygen to grow and thrive.

In our region, most tree roots that are responsible for tree stability will be located in the top 3-4 feet of the soil, whereas the fine roots (which are responsible for water and nutrient uptake) will be located in the top 6-12 inches of the soil.

Soil Management: Soil Health = Tree Health

Trees need soil, but not all soils are created equal. Soils— particularly in developed urban areas— can be degraded by activities such as construction, and soil health may need to be restored to promote tree health.

URBAN SOILS

Urban soils tend to be more compacted and contaminated compared to natural soils, which can restrict root growth and nutrient access for trees. This compromised soil structure and quality in urban areas often lead to decreased tree health and support compared to natural environments with healthier, less compacted soils.

SOIL CONSIDERATIONS IN URBAN ENVIRONMENTS

- *Compaction:* Urban soils are often compacted due to construction, foot traffic, and heavy machinery, which restricts root growth, water infiltration, and oxygen exchange, making it challenging for trees to establish and thrive.
- *Contamination:* Urban soils may contain pollutants like heavy metals, chemicals, and oil residues, which can negatively impact tree health and limit nutrient uptake, potentially leading to stunted growth and toxicity issues.
- *Nutrient Deficiency:* Urban soils are frequently deficient in essential nutrients required for tree growth. This deficiency can weaken trees and make them more susceptible to diseases and pests.
- *Poor Drainage:* In urban areas, impermeable surfaces such as pavement and buildings can lead to poor drainage, causing waterlogged soil conditions that may harm tree roots and foster root rot diseases.
- *Limited Space:* Urban trees often have restricted space for root expansion, making it challenging for them to acquire adequate water and nutrients. This limitation can result in reduced tree size, stability, and overall health.

PREVENTING COMPACTION

The best protection against degraded soil is prevention. Protect soil by:

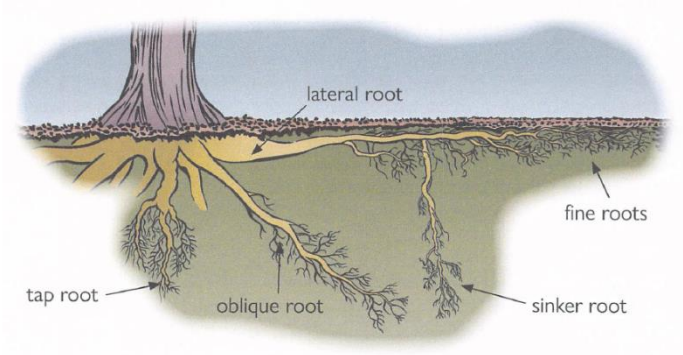
- Adhering to any tree protection zones during site work.
- Limit repeated foot or vehicle traffic across soils in wet conditions.
- Divert or capture water to reduce soil loss through runoff.

When protecting soil is not possible, soil restoration and decompaction methods are available. Soils can be restored through a variety of methods, including:

Description 11. Methods for remediating compacted soils

The soil in which trees grow is an ecosystem of micro- and macro-organisms sharing and transferring nutrients, elements, compounds, and space. A healthy soil grows a healthy tree if both are properly managed. Standards and best practices relating to soil management should adhere to ANSI Standards A300 Part 2 – Soil Management. For more information about soil management and ways to build healthy soil, see the resources included in Appendix II at the end of this manual.

Root Pruning



Description 12. Types of tree roots (Source: ISA Best Management Practices: Root Management Second Edition)

Sometimes, pruning roots from trees is the best option to retain an otherwise healthy tree. It is not uncommon to have tree root conflicts with infrastructure, such as sidewalks or driveways. Fortunately, there are many proven methods of mitigating these conflicts that

will allow a mature tree to remain on site and structurally sound. Root pruning can be a good solution if the number and size of roots that will be pruned are small enough to avoid compromising the stability of the tree.

Some alternatives to root pruning may be root shaving, using an alternative subbase material for hardscape, or working around a root completely. More details about root mitigation options with some specific examples are provided in Appendix III "Tree and Hardscape Conflicts – Alternative Solutions".

RULES FOR ROOT CUTTING OR SHAVING

- Never prune, tear or otherwise damage roots close to a tree's trunk.
- Never prune roots that are 2" in diameter or larger without first consulting an arborist experienced in managing tree roots.
- When roots are pruned, always provide supplemental irrigation and immediately cover any freshly cut roots with damp soil to prevent them from drying out.
- Ensure that pruning cuts are a straight, 90-degree angle to the root and cut cleanly with a sharp saw or pruners.
- Never tear, pull, or scrape roots to sever them.

IF YOU SEE SOMETHING – SAY SOMETHING!

Root pruning can have disastrous consequences for trees and the people that live near them. If a tree is subject to severe root cutting, it can be at risk of falling over and causing serious harm.

- Roots should not be cut during the installation of fences or fenceposts, sidewalks, walk ways, retaining walls, driveways, garden beds, utilities, patios, or other hardscape without first consulting an arborist.

WHAT TO DO IF YOUR TREE'S ROOTS HAVE BEEN DAMAGED OR CUT BY MISTAKE?

Thankfully trees are resilient! If your tree has sustained a small amount of root damage, it may be able to easily recover with a little extra care. If you're not sure how many or how large the root cuts were, it is always best to engage the help of an arborist to assess them. Generally speaking, consulting arborists who are familiar with managing trees during construction are the most experienced in evaluating root damage to trees.

- Monitor the tree by taking a photo from a location that is easy to remember.
- Consider monitoring the tree's lean, especially before and after storm events.
- Contact an arborist for further inspection if you are unsure of the extent of the damage or root cutting.

Tree Risk Assessment

Trees and Risk Overview

Trees offer a wide variety of benefits to society. However, as living organisms that naturally lose branches or fall, trees may pose some level of risk to people or property in their vicinity. It's important to recognize that some level of risk is inherent when enjoying the advantages of having trees around.

The presence of risk from trees only becomes a concern when there are people or property nearby that could be affected in the event of a branch or tree failure. Tree owners bear the responsibility of maintaining their trees and taking reasonable precautions to prevent any harm to individuals or property.

Managing tree-related risks is a top priority for the City, although the primary responsibility for maintaining public street trees typically falls to adjacent property owners. The City of Wilsonville strongly recommends that any activities related to assessing, monitoring or mitigating tree risk be carried out by a certified professional, such as an ISA Certified Arborist with a current Tree Risk Assessment Qualification (TRAQ).

The following section provides a high-level overview of the considerations and common considerations in tree risk assessment and management.

What is a 'Hazard Tree'

When assessing trees for risk, a qualified assessor evaluates both the tree in question, and the site. First and foremost, if there are no targets (people or property) that would suffer harm or damage within striking distance of a tree, a tree poses low to no risk regardless of its condition.

NO TARGETS = NO RISK

When determining whether or not a tree is a risk, start first by asking "What is the 'target'?" before doing an in-depth assessment of the tree itself.

After identifying any potential targets, consider whether or not managing the target is a reasonable first step:

- Can the target be relocated, or restricted? For example, can access to that area be changed during period of inclement weather?

Some targets, such as houses, parked cars, and frequently used sidewalks are of course not easily moved and restricting access is not feasible. In these cases, ask:

- Can the likelihood of the tree or tree part failing be mitigated with management – such as pruning, or installing a cable or other support system?

Signs of Potential Risk

Trees may show advanced signs of potential for branch or whole-tree failure and should be inspected accordingly. Common signs may include:

- Dead or dying parts.
- Broken or hanging branches.
- Tight (V-shaped) branch unions where both tree parts are about the same diameter, and there is a seam of bark; this is especially concerning if cracks are visible, or sap is oozing from the union.
- Co-dominant or multiple stems (two or more stems of similar size originating from the same point).
- Individual branches that have outgrown the general shape of the crown, otherwise known as *over-extended branches.*
- Unbalanced or significantly asymmetrical crown.
- Cracks (vertical or horizontal); do not approach a tree with horizontal cracks.
- Cavities (holes) on the trunk or base.
- Flat spots on the trunk.
- Lean (if recent or with cracking or bulging soil).
- Fungi (mushrooms) on the trunk, branches, roots or near the base of the tree.
- Cut, decayed, or missing roots.

Some trees may not show any signs of potential risk, and even healthy trees can shed branches or fall down (especially in strong winds).

ADAPTIVE GROWTH

Trees can adapt to weaknesses, reinforcing themselves by growing new wood. Indicators of this adaptation may include localized wood growth, a broader trunk base, or lighter-colored, fast-growing bark. A tree risk assessment should note these signs of adaptive growth.

Assessing Risk

Tree owners should familiarize themselves with their tree(s) and regularly look for changes in health, condition, and overall appearance. Minor occurrences, such as small broken branches, may not always require a complete tree risk assessment. However, other signs of potential branch or whole-tree failure, as listed on the previous page, should be inspected by a qualified tree risk assessor to guide any further action.

HIRING A TREE RISK ASSESSOR

Tree risk should be assessed by a competent tree risk assessor. At minimum, the tree risk assessor should have the following credential(s).

- International Society of Arboriculture (ISA) Certified Arborist® or Board Certified Master Arborist® (BCMA),
- American Society of Consulting Arborists (ASCA) Member or Registered Consulting Arborist® (RCA), or
- Forester accredited by the Oregon Society of American Foresters.

If you will be seeking a tree removal permit based on tree risk, The City of Wilsonville requires that the tree risk assessor holds a current *ISA Tree Risk Assessment Qualification (TRAQ).*

This qualification demonstrates the assessor's proficiency in applying a the most current accepted standards and process for assessing tree risk. A risk assessor's role is to provide information to tree owners and risk managers, who are then responsible for making decisions to manage risk. Any risk assessment should include options for mitigation and management, ranging from "retain and monitor" up to recommending tree removal.

Any tree service contractor undertaking tree risk mitigation work, such as pruning, cabling, or tree removal, should possess a valid **Landscape Contractors Board license**, issued by the State of Oregon Landscape Contractors Board (1-503-967-6291, or www.oregon.gov/LCB). It is wise to check whether an individual or company has valid, current ISA qualifications as well, which you can confirm using the Trees Are Good 'Verify A Credential' tool.

CONTRACTS AND INSURANCE

To protect yourself, obtain the following information prior to engaging a tree risk assessor or arborist to mitigate potential tree hazards:

- A detailed written contract for any tree risk assessment or mitigation work.
- An insurance certificate, issued in the tree or property owner's name, for both General Liability and Workers Compensation coverage.

Hiring unlicensed, uninsured, or underinsured contractors puts you at risk of significant liability should something go wrong.

When Trees Pose a Risk

RISK ASSESSMENT STANDARDS AND METHODS

Tree risk assessment is guided by American National Standard *ANSI A300 (Part 9)-2017 Tree Risk Assessment a. Tree Failure*. Application of this standard is further guided in the International Society of Arboriculture (ISA) *Best Management Practices – Tree Risk Assessment, Second Edition (2017).*

Application of both the tree risk assessment standard and Best Management Practices (BMPs) by tree risk assessors is voluntary, but highly recommended. **Tree owners should only hire a tree risk assessor who is familiar with the most current tree risk assessment standards and best management practices.**

Depending upon the nature of the tree risk assessment required, in accordance with the tree risk assessment standard and best management practices, the tree risk assessor may employ assessment methods and tools according to one of three levels of tree risk assessment, including:

LEVEL 1 LIMITED VISUAL

Focusing on identifying trees with an imminent likelihood of failure due to obvious indicators of potential risk, a Level 1 assessment is usually undertaken visually from ground level and used for large groups of trees to identify trees for further assessment.

LEVEL 2 BASIC

A more detailed ground-based inspection of an entire tree and its surroundings, a Level 2 assessment is the most common type of tree risk assessment. This assessment may employ basic tools such as binoculars, a mallet (to investigate internal decay), a probe, or hand digging tools. This level of risk assessment combines the findings of the tree investigation with an assessment of potential targets and consequences of failure to derive a risk rating, which can be communicated to the tree owner verbally or in writing.

LEVEL 3 ADVANCED

Advanced assessments are undertaken to provide detailed information about specific tree parts, targets, or site conditions, and can provide additional information that may make the difference between recommending tree or branch retention or removal. Level 3 assessments may require specialized skills or equipment not available to many tree risk assessors and are therefore generally more time intensive and costly. They are typically reserved for high-value trees or where the management decisions may be highly scrutinized. Examples of Level 3 assessments include, among others, aerial inspection (climbing), internal decay assessment, tree stability testing, detailed target and site analysis, or root excavation.

Where possible, tree owners should obtain a written report that describes the tree risk assessment methods and levels, explains the assessment results, and provides recommendations for reducing risk, if necessary.

Managing Risk

In many cases, tree risk can be managed at an acceptable level without removing the tree. As part of a complete tree risk assessment, the assessor should recommend appropriate options to reduce tree risk (if available). Ultimately, it is up to the tree owner to decide what level of risk is tolerable to them, though Wilsonville typically only allows tree removal in cases of high risk. Contact the Planning Division directly if you have questions about removing trees below this pre-determined threshold.

Failure to properly implement risk mitigation may fail to reduce risk or may even increase risk. Actions to manage tree risk may include:

TARGET RELOCATION OR EXCLUSION: Before managing a tree through arboricultural methods, first determine if it is reasonable to relocate targets (persons or property) or to exclude people from the impact zone by installing signage or fencing.

Remember, no target = no risk.

KEEPING TREES HEALTHY: Healthy trees are better able to respond and adapt to structural weaknesses that might cause branch or whole-tree failure and can grow new wood more quickly where it is needed to strengthen weakened or compromised branches or trunks. Tree risk can be proactively managed by watering and mulching trees, proactively pruning to promote good structure, and regularly inspecting trees for signs of potential risk.

PRUNING: Regular, proactive pruning by a qualified arborist can help trees develop good, strong structure that will reduce the chance of branch breakage or stem failure. Pruning to mitigate risk should only be undertaken by a qualified arborist in accordance with industry standards and best management practices.

CABLING: Poorly-attached branches or stems can be strengthened by installing one or more cables that limit their motion and reduce the likelihood of failure. Cabling systems may be made of steel (wire) or high-strength synthetic materials. A qualified arborist can prescribe and install an appropriate system if needed.

BRACING (BOLTING): Bracing rods, also known as bolts, may be installed close to or though weak or split unions or sections of a branch or stem.

TREE REMOVAL: Sometimes, it may be necessary to remove a tree to effectively manage risk. Removing such trees may pose more danger than regular tree removals, and any such tree removal must be done by a qualified arborist. When a tree is removed, its stump should be removed or ground down to a minimum of 8” below grade (though deeper is better) to prevent re-sprouting.

Precautions

Some types of tree pruning may increase tree risk in the long-term and require costly maintenance in the long run. A qualified arborist should never recommend the following practices. If your tree service worker recommends the following or an approach that sounds similar to these, hire someone else.

TOPPING (sometimes called tipping, heading, or rounding-over):
Topping is the indiscriminate removal of branch ends. Topped trees will look awkward and will be cut back to branch stubs. These stubs will quickly resprout, and these sprouts may be poorly attached and start to fail, increasing risk. A topped tree will also regain its original height quickly, so it is not an effective way to control tree height.

LION'S TAILING:
Lion's tailing is the removal of all internal growth (branches, leaves) on the interior of a branch, leaving only a small part of the live canopy on the end. A branch pruned in this way resembles a lion's tail, with a tuft of "fur" (leaves) on the end. Branches pruned in this manner are more likely to break in strong winds, as they are more prone to swaying. It is common to see Japanese maples and other deciduous trees pruned in this way as an attempt to 'open up' the interior canopy and show off an attractive branch structure.

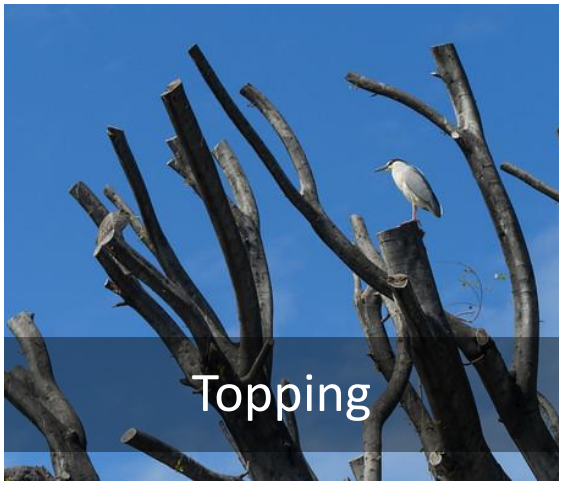
EXCESSIVE LIMBING ('skirting', 'lifting', 'raising'):
Removing too many low branches on a tree changes the overall biomechanical structure and can increase the chance that the tree breaks along the trunk or fails at the base.

Removing too many low branches when a tree is young also reduces the tree's ability to develop *trunk taper*, which is critical for future tree stability, especially when a tree is growing as an individual tree. Trees within a grove environment typically do not develop as much trunk taper, though these trees are adapted to environmental stressors and conditions as a group.

WIND-SAILING ('inter-limbing', or excessive thinning):
Previously a common practice which included removing branches to allow air to 'flow through' a tree's canopy. In our region this has no benefit to trees, but often increases the risk that they will fail or shed large branches in a storm.

"DIY" TREE RISK MANAGEMENT:
Tree risk management is a discipline that requires specialized training, knowledge, and experience. Many signs of potential branch or whole-tree failure may be difficult to observe with the untrained eye, and many factors must be considered in assessing tree risk. It may be tempting to approach tree risk management as a Do-It-Yourself homeowner project, or hire a friend or handyman, but tree owners should hire a qualified arborist to assess and manage tree risk due to the potential liability and risks to persons and property involved.

Poor Pruning May Increase Risk



Tree Work Safety

In addition to hiring someone qualified, licensed, bonded, insured, take steps to protect yourself and your community during tree work activities.

- Respect tree work zones! Tree work is one of the most dangerous jobs there is, be respectful of the risks your tree care provider is taking on and do not interfere with their worksite.
    - Be aware of falling debris, do not approach tree work zones and do not allow children or pets to approach them either.
- Discuss the workplan at the start of the day and ask questions. Ask what the best way is to get the crew's attention during work if something comes up.
    - If something occurs during the project that concerns you (e.g., a tree that is not being removed is being climbed, or a crew member is not wearing proper PPE (personal protective equipment), for your safety and the safety of the tree crews, stand OUTSIDE of the work zone and wave to get their attention.

Wood Salvage

When trees must be removed, consider looking at ways to reuse the wood either on site or locally. Urban wood reuse is environmentally sustainable, reducing landfill waste and supporting local economies. It also sequesters carbon, engages communities, and offers unique aesthetics in urban spaces while fostering educational opportunities for sustainable practices and responsible resource management. Some common ways to salvage removed trees include:

- Firewood.
- Milling slabs to use in reclaimed wood working projects.
- Chipping branches and smaller tree parts to use as part of a tree health or protection plan.
- Leaving standing tree parts as wildlife habitat, also called snags.
- Using logs as the basis for gardens, a gardening approach called Hügelkultur (pronounced "hyoo-gul-kulture" and is a German word that means mound culture or hill culture).
- Using logs or tree parts as landscape features, either modified seating, playscapes or natural sculptural elements.
- Artist sculpture through chainsaw sculpting.

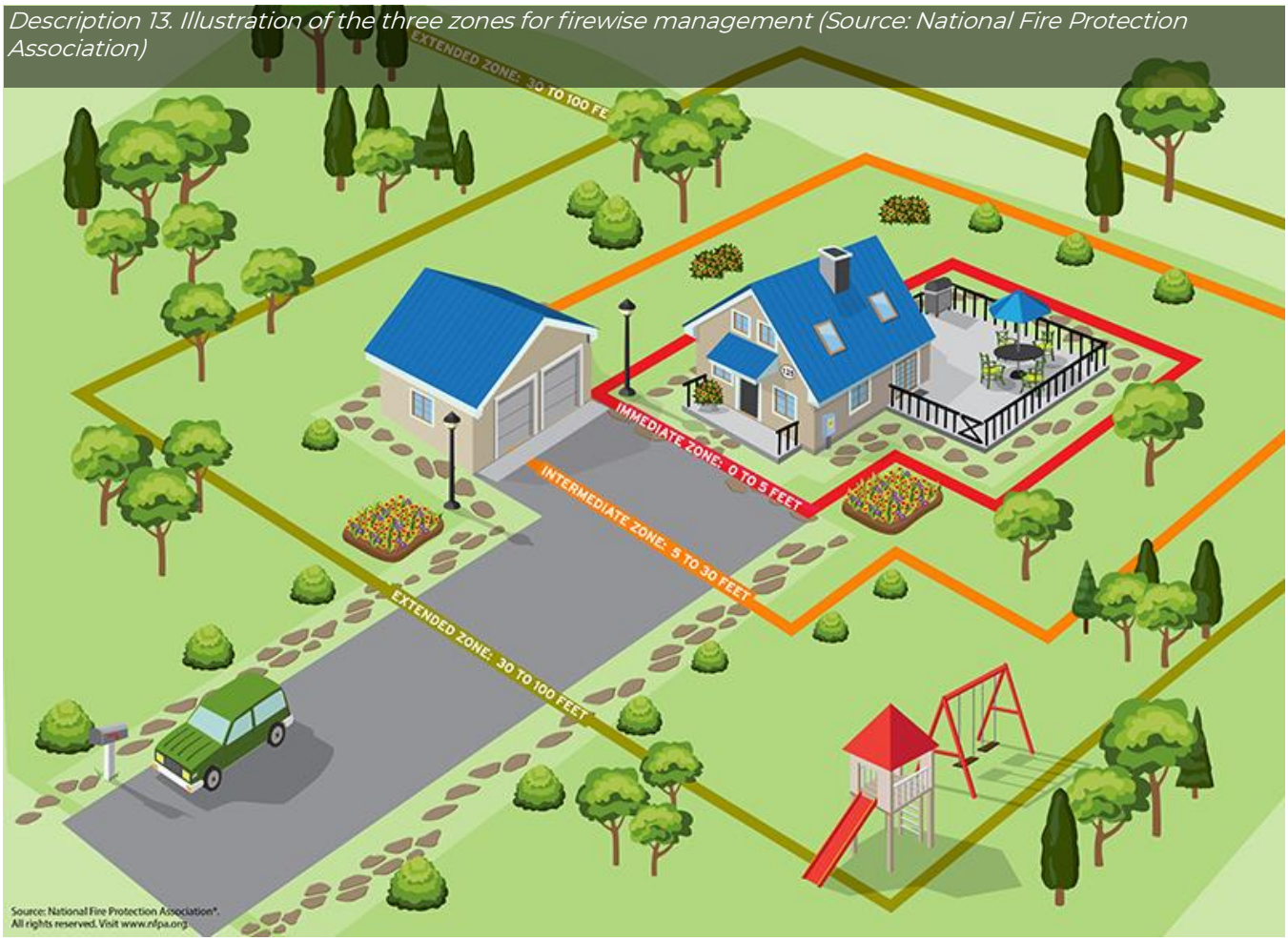
Fire and Defensible Space

Oregon's beauty is due in part to its trees, but wildfires are a growing threat. Having trees provides shade, saves energy, provides privacy, and helps the environment, but to live safely, you also need to be "firewise" by creating defensible space around your home and maintaining fire-resistant landscaping. It's about finding a balance between enjoying natural beauty and protecting yourself from wildfires.

The following was recreated from the National Fire Protection Association (NFPA) which is referenced on the State of Oregon's Wildfire Response & Recovery website (https://wildfire.oregon.gov/Pages/prepare.aspx). Additional illustrations and examples can be found within this OR Department of Forestry resource. The City of Wilsonville's guidance pertaining to wildfires should take precedence should they become available.

HOME IGNITION ZONE (HIZ)

Description 13. Illustration of the three zones for firewise management (Source: National Fire Protection Association)



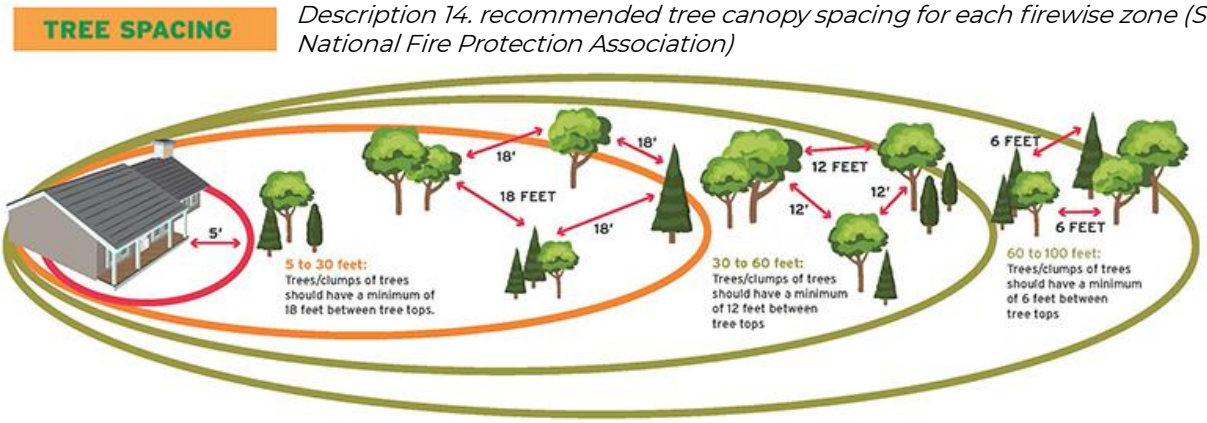
In the late 1990s, the Forest Service developed the home ignition zone (HIZ). This zone is broken down into three sections for wildfire preparedness— Immediate Zone, Intermediate Zone, and Extended Zone.

IMMEDIATE ZONE ("KEEP IT LEAN, CLEAN AND GREEN")

This zone is your home and the area 0-5 feet from the furthest attached exterior point of your home; defined as a non-combustible area. This is the most important zone to take immediate action on as it is the most vulnerable to embers. Start with the house itself then move into the landscaping section of the Immediate Zone. As it relates to the trees on your property, examples of what you can do include cleaning roof and gutters of dead leaves and needles and remove any flammable material away from wall exteriors such as mulch, flammable plants, leaves and needles, and firewood piles. Also, remove anything stored underneath decks or porches. View the NFPA webpage here for more information.

INTERMEDIATE ZONE ("THE FIRE BREAK")

This zone is 5-30 feet from the furthest exterior point of your home. Regarding trees and vegetation, in this zone you should be mindful of the landscaping and hardscaping that can be designed and managed to create breaks that better control or decrease fire behavior. For example, as it relates to trees you should clear vegetation from under large stationary propane tanks; create fuel breaks with driveways, walkways and paths, patios, and decks; keep lawns and native grasses mowed to a height of four inches; remove ladder fuels (vegetation under trees) to prevent fire from reaching tree crowns (and prune trees up to six to 10 feet from the ground but for shorter trees do not exceed one-third of the overall tree height); space trees so that their crowns are at least 18 feet apart (increase the distance as the slope of your property increases); and ensure new trees planted will not have canopies that grow within 10 feet of structures. View the illustration below from the NFPA (View the NFPA webpage here for more information):



Description 14. recommended tree canopy spacing for each firewise zone (Source: National Fire Protection Association)

EXTENDED ZONE ("THE FIRST ZONE OF DEFENSE")

This outermost zone is 30-100 feet, out to 200 feet from your home. The goal of landscaping in this zone is not to eliminate fire but to interrupt a fire's path and keep the flames smaller and on the ground. As it relates to trees and vegetation in this zone, dispose of heavy accumulations of ground litter and debris; remove dead plant and tree material; remove small conifers growing between mature trees; remove vegetation adjacent to outbuildings or sheds in this area; and maintain adequate spacing between tree canopy tops— trees 30-60 feet from the home should be spaced 12 feet and trees 60-100 feet from your home should be spaced at least 6 feet. View the NFPA webpage here for more information.

Tree Health, Pests and Diseases

Healthy Trees

The appearance of a healthy tree can differ based on the type of tree. However, some general signs of a healthy tree include:

FOLIAGE: The leaves or needles of a healthy tree are typically full, vibrant in color, and free from discoloration, browning, or spots. The specific color and shape of the leaves or needles may vary depending on the tree species.

GROWTH: A healthy tree should exhibit steady growth with new branches, leaves, and stems. The tree should also maintain a balanced and symmetrical canopy.

BARK: The bark of a healthy tree should be intact and free from cracks, splits, or peeling. The color and texture of the bark can vary widely between tree species.

ROOTS: While you can't see the roots directly, a healthy tree has a well-developed root system that anchors it securely in the ground. There should be no visible decay or damage to the roots. The root flare or widening of the base of the tree should be visible rather than buried below ground.

NO SIGNS OF DISEASE OR PESTS: Healthy trees are typically free from visible signs of disease, such as oozing sap, cankers, or fungal growth.

ADEQUATE WATER: A healthy tree receives an appropriate amount of water. Signs of overwatering (wilting, yellowing leaves) or underwatering (drooping, browning leaves) are both problematic for overall tree health.

STRUCTURE: The branches of a healthy tree should be well-attached and not show signs of weakness or instability. Dead or broken branches should be minimal.

SEASONAL CHANGES: Healthy deciduous trees should lose their leaves in the fall and regrow them in the spring. Evergreen trees should maintain their needles throughout the year, with only a gradual shedding of older needles, which are located on the inside of the branches.

RESILIENCE: Healthy trees can withstand normal environmental stresses, such as wind, rain, and temperature fluctuations, without significant damage.

FRUIT OR SEEDS: If the tree produces fruit or seeds, a healthy tree should produce them regularly, however an unusually heavy crop of seeds or cones can be an indication the tree is stressed.

Sign or Symptom?

In plant or tree health care, *signs* are objective, visible, and measurable indications of a problem or disease, such as physical damage or the presence of pests or fungi. *Symptoms*, on the other hand, are the tree's responses to the problem, like wilting leaves, yellowing foliage, or stunted growth, which may indicate an underlying issue. Both signs and symptoms can provide valuable diagnostic information.

Biotic Factors

Issues caused by living organisms that can adversely affect trees are called *biotic factors*. These commonly include:

PESTS: Insects, mites, and other arthropods that can damage leaves, stems, or roots, such as aphids, scales, borers, and caterpillars.

PATHOGENS: Microscopic organisms like fungi, bacteria, and viruses that can cause diseases in trees, leading to symptoms like leaf spots, cankers, wilting, or dieback.

WEEDS: Competitive plants that can outcompete trees for essential resources like water, nutrients, and sunlight, potentially stunting tree growth.

WILDLIFE: Animals such as deer, rodents, and certain bird species that can cause physical damage to trees through foraging, chewing, or nesting activities.

MICROORGANISMS: Soil-dwelling organisms like nematodes and mycorrhizal fungi that can have either beneficial or harmful interactions with tree roots and may affect nutrient uptake and overall tree health.

Abiotic Factors

Non-living environmental elements or conditions that may negatively impact trees are known as *abiotic factors*. Some common abiotic factors in the urban environment include:

SOIL COMPACTION: Degraded soils due to construction, traffic, or heavy machinery, which can limit root growth, water infiltration, and oxygen availability for trees. Heavily compacted soil can hinder water drainage and prevent water from reaching roots at all.

POLLUTION: Air and soil pollution can lead to nutrient imbalances and root damage. This is typically most apparent in street trees or trees located near frequent vehicle traffic.

POOR DRAINAGE: Impermeable surfaces like pavement, asphalt, or concrete.

LIMITED SPACE: Urban trees often have restricted space for root expansion, limiting both growth and nutrient uptake.

HUMAN-CAUSED DAMAGE: Trunk damage from lawn mowing equipment, nailing signs to trees or tying items to trees can all cause irreparable damage to trees young and old.

Common Pests and Pathogens

Biotic tree pests and pathogens can be categorized into groups based on their characteristics and the types of damage they cause to trees. Generally, these pests will fall into the following groups:

INSECTS
Including borers, defoliators, and sucking insects.

FUNGAL PATHOGENS
Including diseases like Dutch elm disease (DED) and certain types of root rot.

BACTERIAL PATHOGENS
Including diseases like fire blight, which typically impacts fruiting trees like apples and pears.

Community Impact

Treating and preventing tree pest and disease issues can help stem the potential for an outbreak and supports growing a healthy and sustainable urban forest.

Aphids

Boring Beetles

Chewing Insects

Drought

Damage (e.g., Frost Cracks)

Wilt / Leaf Disease

To learn more about the differences between common pests and pathogens, and identify the differences between friend or foe insects, visit the Oregon State University Extension Service's Pests, weeds and diseases webpage (https://extension.oregonstate.edu/pests-weeds-diseases).

High Priority Pests

- Emerald ash borer (EAB)
- Mediterranean oak borer (MOB)
- Asian longhorned beetle (ALB)
- Western spruce budworm
- Douglas-fir tussock moth (DFTM)
- Swiss needle cast (SNC)
- Laminated root rot

Tree Health

The following information and images were gathered from the webpages of the Oregon State Extension Service and the State of Oregon's Department of Forestry:

EMERALD ASH BORER

On June 30, 2022, emerald ash borer (EAB) was discovered in Forest Grove, Oregon, marking the first confirmation of the invasive pest on the west coast. In Oregon, the establishment of EAB could devastate whole habitat types that are dominated by Oregon ash, such as ash swales and sensitive riparian zones. It could also reduce urban forest cover as many street trees and residential trees are made up of ash. This pest has proven deadly to all ash species in North America and Europe, including the native Oregon ash (*Fraxinus latifolia*).

MEDITERRANEAN OAK BORER

Mediterranean oak borer (MOB) is a tiny brown woodboring insect called an "ambrosia" beetle. Female beetles tunnel into many species of oaks and have recently been found in Oregon infesting Oregon white oak (*Quercus garryana*). Despite being a woodboring beetle, they do not eat wood. These beetles carry fungi with which they inoculate their tunnels to feed their young. These fungi clog water-conducting tissues and cause a wilting disease in susceptible trees.

Visit the City's website to learn how Wilsonville is addressing this issue.

ASIAN LONGHORNED BEETLE

The Asian longhorned beetle (ALB) is an invasive insect from Asia that was first found in the United States in 1996. It has now established in several northeastern and midwestern states, killing thousands of trees. ALB is spread primarily by the transport of nursery stock and firewood. ALB has not been found in Oregon as of May 2024.

WESTERN SPRUCE BUDWORM

Western spruce budworm (*Choristoneura freemani*) is the most destructive defoliator of conifers in central and northeastern Oregon. Major outbreaks can last for more than a decade and impact millions of acres of forests. Host trees that survive major budworm outbreaks in a weakened condition are often killed later by bark beetles. Despite the name, Western spruce budworm found in Oregon primarily feeds on Douglas-fir, western larch, and also white, grand, and subalpine firs.

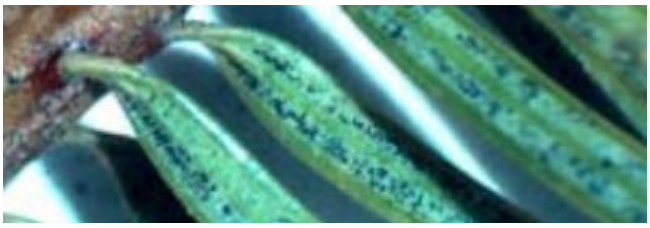
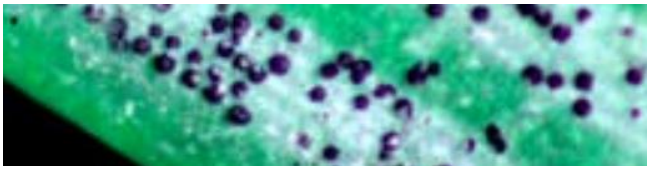



DOUGLAS-FIR TUSSOCK MOTH

The Douglas-fir tussock moth (DFTM; *Orgyia pseudotsugata*) is a major defoliator of Douglas-fir and true firs in the western United States. Tussock moths occur in most forests in Oregon, but episodes of severe defoliation have been mostly restricted to the Blue Mountains of northeastern Oregon as well as Klamath and Lake counties.


SWISS NEEDLE CAST

Swiss needle cast (SNC) is a foliage disease that is specific to Douglas-fir and is caused by a fungal pathogen. SNC symptoms include yellow needles and decreased needle retention, resulting in sparse crowns and reduced growth. It is known as a cast disease because it causes the tree to prematurely shed needles. Although it is called Swiss needle cast, the fungus is native to the western United States.

LAMINATED ROOT ROT

Laminated root rot— caused by a fungus— can be detrimental to Douglas-fir, grand fir, white fir, and mountain hemlock. It hinders trees' ability to take up water and essential nutrients. Once affected, trees are more susceptible to other health problems, like bark beetles. Once symptoms are visible, the infection has already spread considerably, making it difficult to control.

When to Call the City

Should you notice any signs or symptoms of pests and disease, or believe a public tree may be a hazard, contact the City of Wilsonville Planning Division as soon as possible.

TREES CAUSING PUBLIC SAFETY HAZARDS

- Sightline interference, such as roadway or critical signage is blocked like a stop sign or stop light.
- Accessibility or access are compromised, such as a tree part has fallen across the sidewalk or street.
- At risk of electrical interference, such as branches interfering with high-voltage powerlines, or a tree part is in contact with an electrical box.
- Tree or tree parts have fallen across parks facilities such as a restroom or drinking fountain, seating or walking trails.

Sidewalk Interference

Signage Blocked

Fallen Tree Parts

Electrical Hazards

Parks Infrastructure

Other?
www.ci.wilsonville.or.us/contact

Other

Need Additional Information or Have Questions?

Urban Forestry Contacts

For questions regarding information about public trees or the citywide urban forest not found in this manual, contact the Wilsonville Planning Division.

Email: planning@ci.wilsonville.or.us
Phone: (503) 682-4960
Website: www.ci.wilsonville.or.us/planning/page/trees

For questions about trees growing on private property that are not addressed in this manual, consider contacting a qualified arborist:

International Society of Arboriculture and the Trees Are Good "Find an Arborist" Tool: https://www.treesaregood.org/findanarborist/findanarborist

Friends of Trees Arborist Partners: https://friendsoftrees.org/news-resources/arborist-partners/

Wilsonville's 2021 Urban Forest Management Plan Vision:

Healthy Trees, Healthy Wilsonville. Wilsonville's urban forest is a thriving and sustainable mix of tree and understory species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all residents as an essential environmental, economic, and shared community asset that reinforces Wilsonville's identity and legacy as a forested, livable city.

Thank you for your interest, support, inquiries, and commitments to growing and maintaining a sustainable urban forest for current and future generations in Wilsonville!

APPENDICES

Appendices

Appendix I. City of Wilsonville Programs

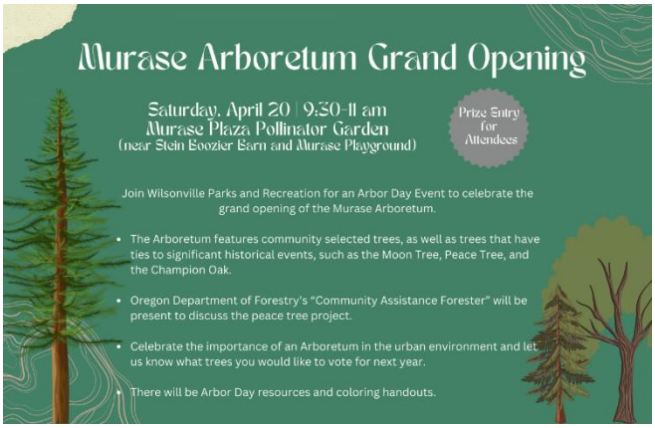
WILSONVILLE TREE PLANTINGS

Each winter the City partners with Friends of Trees in tree planting events that take place in Memorial Park or Tranquil Park. Friends of Trees is a nonprofit organization that organizes volunteers for tree planting and tree care projects along city streets, in urban natural areas, and on school grounds.

A brief instructional demonstration is conducted by the crew leaders at each planting event and tools, gloves, and warm beverages are provided as well.

Check the Friends of Trees calendar for planting dates in Wilsonville during the winter months.

The successful partnership, along with the hard work of many valuable volunteers, has helped create native plant communities and re-established native forested areas in Wilsonville's natural areas that are an essential part of a healthy ecosystem.



Tree plantings throughout the City also support Wilsonville in achieving Tree City USA status from the Arbor Day Foundation— a recognition the City has held each year since 1998. As part of this recognition, the City must host an Arbor Day celebration event. In April 2024, at the Murase Plaza, the City's Parks and Recreation Department celebrated the opening of the Memorial Park arboretum. The new arboretum features trees with ties to significant historical events, such as the Moon Tree, the Peace Tree, and the Champion Oak.

CITY TREE FUND

Ordinance No. 464, "Tree Preservation and Protection"

4.620.00 Tree Relocation, Mitigation, or Replacement

(6) City Tree Fund. Where it is not feasible to relocate or replace trees on site or at another approved location in the City, the Tree Removal Permit grantee shall pay into the City Tree Fund, which fund is hereby created, an amount of money approximately the value as defined by this subchapter, of the replacement trees that would otherwise be required by this subchapter. The City shall use the City Tree Fund for the purpose of producing, maintaining and preserving wooded areas and heritage trees, and for planting trees within the City.

(A) The City Tree Fund shall be used to offer trees at low cost on a first-come, first-serve basis to any Type A Permit grantee who requests a tree and registers with the City Tree Fund.

(B) In addition, and as funds allow, the City Tree Fund shall provide educational materials to assist with tree planting, mitigation, and relocation.

Click here to view the ordinance.

TREE REPLACEMENT REIMBURSEMENT PROGRAM

If you have received a Type 'A' Tree Removal Permit, you qualify for reimbursement from the City's Tree Fund for a replacement tree.

The City of Wilsonville offers reimbursement for a replacement tree to any Type 'A' Tree Removal Permit grantee who buys and plants a tree and provides the appropriate documentation. Applicants can receive up to $100 per person per year (as of July 2024) from the City's Tree Fund. In order to receive reimbursement, you must:

- Receive approval of a Type 'A' Tree Removal Permit from the City.
- Buy and plant a new tree of a similar nature (evergreen for evergreen, deciduous for deciduous) on the permit grantee's property.
- Submit a copy of the receipt for the new tree to the City's Planning Division. Include a photo, or identification of the species of tree, location where the tree was planted, and your name and mailing address.

The City will mail you a check for the reimbursement.

The City is interested in providing a diversity of tree species throughout the City that are healthy and the right size for the location where they are to be planted and has a list of recommended trees to choose from. The purpose of the tree fund replacement program is to encourage canopy and wildlife habitat citywide. The City will not reimburse for small ornamental trees (<20' mature height), shrubs (i.e. arborvitae, or rhododendron), or specialized plant material such as topiary or espaliered trees. All trees shall be well-branched and typical of their type. 1"-2" caliper deciduous trees or 5'-8' tall evergreens are preferred.

If there are any questions about the Tree Fund Replacement Program, please contact the Wilsonville Planning Division at 503-682-4960.

Click here to view the reimbursement form.

Appendices

HERITAGE TREE PROGRAM

The Heritage Tree Program includes trees / groves of trees that have a historical significance based on their age or that they were planted by or in honor of someone who advanced the interest of trees and plants in the community. To see where these locations are, visit the Heritage Trees static map here and the interactive map here.

Heritage Trees can also be recognized due to their involvement or inclusion in the development of landscape architecture, forestry, city planning, and culture. They are recognized due to their:

- Age
- Design placement
- Link to important events or activities
- Location
- Persons associated with them
- Setting
- Size
- Species
- Unique features

If you know of any trees that would be a good candidate for the designation of a Heritage Tree, please consider nominating the tree between January 1 and March 31 of each year. For more information regarding Heritage Tree Nominations, click here.

You may email your nomination form, or mail it to:

Planning Division
City of Wilsonville
29799 SW Town Center Loop E.
Wilsonville, OR 97070

Appendices

CITY OF WILSONVILLE NATURAL RESOURCES PROGRAM OPPORTUNITIES

POLICIES & CODE

PROJECTS

PARTNERSHIPS

NATURAL AREAS

WILDLIFE

STORMWATER

URBAN FORESTRY

CLIMATE ACTION

EDUCATION

Recreated from the City of Wilsonville's Natural Resources Program webpage: https://www.ci.wilsonville.or.us/natural

Appendices

Policies and Code includes the Natural Resources Annexation Policy by resolution (2007) and the Significant Resource Overlay Zone (SROZ) in Section 4.139 of the Development Code that regulates uses and activities that may impact locally significant areas (wetlands, riparian corridors, and upland wildlife habitat).

Projects include Integrated Pest Management (IPM), planting of hardy plants that survive frost, low impact development (LID) projects that integrate green stormwater management solutions into design, and the Bee Stewards project to support pollinators in the region, among others.

Partnerships include CREST (Center for Research in Environmental Sciences & Technology), Friends of Trees, Xerces Society, and the Backyard Habitat Certification Program.

Natural Areas (click here) in Wilsonville include the Willamette River Water Treatment Plant Park, Tranquil Park, Park at Merryfield, Memorial Park, Graham Oaks Nature Park, Engelman Park, Coffee Lake Wetlands, Canyon Creek Park, and Boeckman Creek Crossing Trail, among others.

Wildlife projects include the Wildlife Monitoring Project in cooperation with Portland State University and Samara Group that was created with support from a Community Enhancement Grant to monitor wildlife year-round.

Stormwater projects that pertain to trees in Wilsonville include the 2012 Stormwater Master Plan (and the 2024 Stormwater Master Plan update) that identifies areas of the City that currently experience erosion, flooding, and water quality problems and areas that are expected to experience these problems with future development; the Public Works Standards for design and construction requirements; and the City's Erosion Control Program to protect the environment before, during, and after a construction project.

Urban Forestry projects include sharing, implementing, and monitoring the City's Urban Forest Management Plan adopted in 2021.

Climate Action projects include the Climate Action Plan that is currently underway as of May 2024 that aims to help Wilsonville adapt to and lessen the impacts of climate change.

Environmental Education projects include information and activities about wildlife and habitat conservation, Tree City USA accreditation and Arbor Day events, recycling, and water quality.

Appendices

Appendix II. Supporting Resources (alphabetized)

- American Forests' "What is Urban Forestry? A Quick 101": www.americanforests.org/article/what-is-urban-forestry-a-quick-101
- American Forests' Tree Equity Score Tool: www.treeequityscore.org/
- Arbor Day Foundation: www.arborday.org
- Arbor Day Foundation's Alliance for Community Trees: www.arborday.org/programs/alliance-for-community-trees
- Available for purchase – International Society of Arboriculture Best Management Practices and the American National Standards Institute's Standards: www.isa-arbor.com/store/category/117/
- Choosing an urban forestry career path: www.vibrantcitieslab.com/guides/career-pathways-exploration-guide/
- City of Wilsonville, OR: www.ci.wilsonville.or.us
- City of Wilsonville's 2021 Urban Forest Management Plan: www.ci.wilsonville.or.us/sites/default/files/fileattachments/natural_resources/page/102641/wilsonville_or_ufmp_11-19-21.pdf
- Clackamas County, OR Forestry Department: www.clackamas.us/node/281
- Invasive plants, insects, and aquatic organisms: https://extension.oregonstate.edu/pests-weeds-diseases/invasive-species
- i-Tree: www.itreetools.org
- i-Tree's Glossary of urban forestry terms: https://glossary.itreetools.org/Urban%20Forestry
- Measure your time spent outside with NatureQuant's NatureDose®: www.naturequant.com/naturedose/
- Oregon Community Trees 501c3 non-profit organization: www.oregoncommunitytrees.org
- Oregon Department of Agriculture Noxious Weed Profiles: www.oregon.gov/oda/programs/weeds/oregonnoxiousweeds/pages/aboutoregonweeds.aspx
- Oregon Department of Forestry: www.oregon.gov/odf/pages/index.aspx
- Oregon State University Extension Service – Forestry and Natural Resources: https://extension.oregonstate.edu/clackamas/forestry-natural-resources
- Pacific Northwest International Society of Arboriculture (ISA) Chapter: https://pnwisa.org/
- Statewide TreePlotter INVENTORY tree map: www.pg-cloud.com/Oregon
- Storm mitigation planning: https://gicinc.org/projects/resiliency/storm-mitigation-planning/
- The Nature Conservancy: www.nature.org
- Trees as green infrastructure: www.epa.gov/green-infrastructure
- U.S. Department of Agriculture's Climate Change Resource Center: www.climatehubs.usda.gov/hubs/climate-change-resource-center

Appendices

- U.S. Forest Service's Alien Forest Pest Explorer: https://mapsweb.lib.purdue.edu/AFPE/?page=Pest-Detection-by-County
- Urban & Community Forestry Society: www.ucfsociety.org
- Urban Forestry Consultants who prepared this Tree Manual: www.planitgeo.com
- USDA Northern Forests Climate Hub and the Northern Institute of Applied Climate Science's Climate Change Response Framework: https://forestadaptation.org/
- Vibrant Cities Lab: www.vibrantcitieslab.com
- "What is a Tree Risk Assessment?" YouTube video: www.youtube.com/watch?v=R-wfo40LKwI
- Willamette Partnership: https://willamettepartnership.org/
- Additional Resources
    - Forests in Cities' Resource Library: www.fic.naturalareasnyc.org/
    - Vibrant Cities Lab's Resource Library: www.vibrantcitieslab.com/category/resource-library/
    - ISA's Trees Are Good "Tree Owner Information" Resource Library: www.treesaregood.org/treeowner
    - PlanIT Geo's Resource Library: www.planitgeo.com/urban-forestry-resource-library/

Appendix III. Tree and Hardscape Conflicts – Alternative Solutions

MATERIAL

Paving and Other Surface Materials

These materials can be used to create a walkable surface or to delineate space for people and/or the tree.

DESIGN

Infrastructure-Based Design Solutions

These design considerations can be employed to support a tree and/or sidewalk.

ROOT

Rootzone-Based Materials

These tools can support tree health and guide tree growth below ground.

TREE

Tree-Based Solutions

These solutions are focused on tree selection and tree maintenance.

Appendices

Description 15. Examples of possible alternative solutions for tree and construction conflicts

Asphalt

Joints

Pavers/Rubber

Pervious Concrete

Beveling

Porous Asphalt

Shims

Tree Guards/Rails

Decomposed Granite

Mudjacking

Bridging

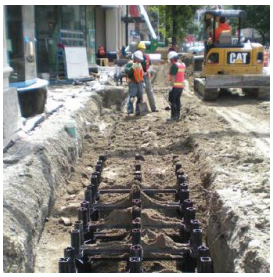
Bulbouts

Appendices

Curb Realignment

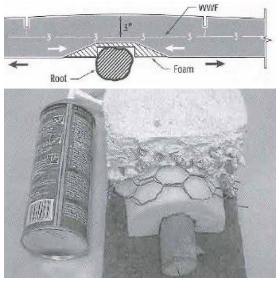
Easement

Suspended Pavement



Root Barriers

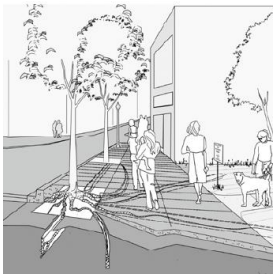
Foam Underlay



Mod. Gravel Layer

Structural Soils

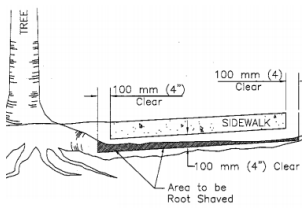
Root Paths



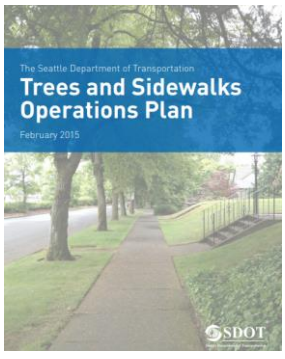
Corrective Pruning

Root Pruning

Root Shaving



Source of Material Examples & Images:



Appendix IV. City of Wilsonville's Heritage Tree Nomination Form

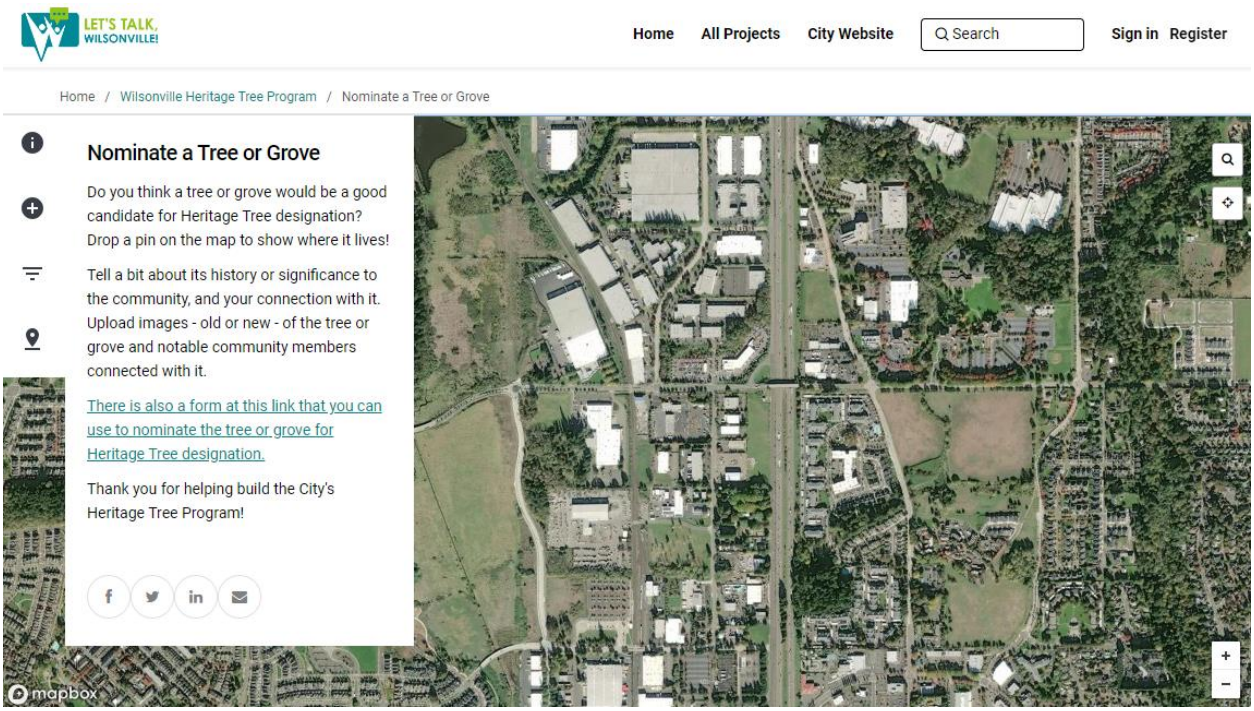
Since 2004, Wilsonville's Heritage Tree Committee has been accepting nominations and making recommendations to the City Council about the inclusion of trees or tree groves into the Heritage Tree Program.

Help celebrate the past and nominate a tree today! Complete the form on the following pages, print it, and mail/email your nominations by March 31st each year to:

Georgia McAlister, Associate Planner
City of Wilsonville
29799 SW Town Center Loop E
Wilsonville, OR 97070
gmcalister@ci.wilsonville.or.us

Visit www.ci.wilsonville.or.us/planning/page/heritage-tree-nominations for more details or to download the nomination form separately from this Tree Manual.

Alternatively, visit the interactive map—www.letstalkwilsonville.com/heritage_trees/maps/heritage-tree-map to locate a tree or grove you'd like to nominate and click to add the request to the map!



Heritage Tree Program Nomination Form

Name of Submitter: _____

Contact Information (phone or email): _____

Name of tree(s) *List the common and Latin name of the tree(s):*

_____

Location of tree(s):

1. *Tree(s) must be clearly visible from public view*
2. *Include a map and photo(s) of the tree(s)*
3. *List the County, street, cross-street, or rural route address and direction to the tree(s)*

Is the tree(s) visible from the public way? Y _____ N _____

Is the tree(s) accessible to the public? Y _____ N _____

Is the tree(s) located on: _____ Public property _____ Public right-of-way _____ Private property

Physical description of the tree(s):

Approximate age: _____ Date planted (if known): _____

Circumference: _____ Height: _____

Crown spread: _____ Health and condition: _____

History and Significance of the Tree(s):

Provide a brief factual account of the history of the tree(s). Include all-important dates, people, events, legends, and activities associated with the tree(s). List who planted the tree(s) and when (if known). Explain the historical or other significance of the tree(s) to the region, state or nation, or the tree(s) other distinguishing aspects. Describe any local recognition given to the tree(s) by neighbors or others. (Use additional sheets of paper if needed.)

Supporting Documentation:

Attach a site map showing the general location of the tree(s). Provide GPS coordinates (if known). Attach photographs of the tree(s) and surrounding area. Copies of historic photographs are encouraged. Please date identify the location of tree(s) on the photograph(s) and provide other descriptive information, if known.

Appendices

List any additional notes/comments:

Applications are due March 31

Send to Georgia McAlister at gmcalister@ci.wilsonville.or.us
or
Phone: (503) 570-1623

29799 SW Town Center Loop E
Wilsonville OR 97070

City of Wilsonville, OR

2024 Tree Manual

Email:
planning@ci.wilsonville.or.us

Phone:
(503) 682-4960

Website:
www.ci.wilsonville.or.us