



# Tree Advisory Board Ad Hoc Committee

## Meeting #7

April 28, 2022 | 5-6:30 pm | Virtual

Please click this URL to join.

<https://us06web.zoom.us/j/81950802926?pwd=MHp2UHICamJqUlppRnFKWXJHT3p2dz09>

Passcode: 176363

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## Meeting Objectives

- Continue Consensus Motions on Committee Report

## Agenda

5:00-5:10 pm	Welcome and Introductions	Chair
▪	April 26, 2022	
5:10-5:15	Engagement Update	Jonathan/Lisa
▪	Share Interview and Survey Highlights	
5:15-6:20 pm	Code Evaluation Options	
▪	Draft Report: Consensus Motions on tree canopy goals, tree code exemptions (5:30-6:25)	Chair/All
6:25-6:30 pm	Next Steps	Lisa/Chair
▪	Report to City Council	

# Lakewood Tree Code Stakeholder Engagement

## Stakeholder Interviews

The Public Participation Plan for the Tree Code Update includes targeted outreach to supplement broader input like the surveys or written comment opportunities.

Over time the City has developed a contact list of agencies and organizations with a potential interest in tree protection, listed in the Public Participation Plan, November 2021. They were sent a fact sheet and the survey link, and one on one interviews were offered to cover the following questions:

1. Tell us about your organization/agency and its mission.
2. What are your goals for tree protection in Lakewood?
3. What are some ideas for incentives for retaining/preserving trees?
4. How can tree protection be balanced with City responsibilities to provide for affordable housing and job opportunities (e.g., meet targets), ensure availability of infrastructure, etc.?
5. Where are some locations where the city could prioritize adding or restoring tree canopy?
6. What are some ideas for helping property owners with tree health and safety education, maintenance, etc.?
7. What is the best way to reach out to community members to share information and hear ideas about tree protection?

Organizations and Agencies interviewed as of April 22, 2022 include:

- Asia Pacific Cultural Center
- Rainbow Center
- Habitat for Humanity – Pierce County
- Lakeview Light and Power
- Lakewood Operations & Maintenance
- Lakewood Parks & Recreation

## Themes from Stakeholder Interviews

Note: this is not an exhaustive overview of the interviews conducted but are meant to highlight some key themes.

### Street Trees & Public Right of Way

- Underground power lines could mitigate potential damage from fallen street trees.
- Have parameters in place about keeping clear of utility equipment.
- Green streets (referenced in Lakewood Comprehensive Plan) may be difficult to manage with utilities.

- Focused on vegetation maintenance in utility areas and ensuring a clear right of way.
- Capacity limitations with the city's street maintenance team, but keeping up with demand.

## Maintenance

- Concern about dangerous trees and the need to remove them.
- When there are storms, there's worry about trees in yards due to potential falling branches and damage.
- Deciduous trees are nice, but they have large root structures; pick species that are semi-dwarfs, etc.
- Ensure the right species is planted to avoid damage later on.
- Main goal should be maintenance of trees and protection of trees, only remove if they are unsafe.
- Importance of maintaining trees into maturity, so they have a full life – the city could do a better job.
- Important to know what trees to plant and which replacement species; do you plant the same species, or have a diverse/native canopy?

## Property Owners and Development

- Property owners (read: single family homeowners) should have a right to do what they will on their own property.
- Ensure that property owners know that they have resources to turn to for maintenance and educate on tree benefits.
- Offer opportunities for property owners to meet staff and learn about tree maintenance.
- Help property owners with maintaining their trees.
- Rationale as a developer is to try and protect trees when it makes sense. There should be a work around, understanding that trees don't grow in the best places, and impacts may occur if a tree cannot be relocated. Current lot size exemption level makes sense. Have saved most trees on property including most oaks.
- Commercial development seems to have the most impact to tree canopy loss; they pave acres of land, removing trees, and prioritizing parking.

## Incentives

- Find a way to offer new trees at no cost.
- Tax incentives or permitting incentives for developers to incentivize adding in trees to development projects or preserving existing trees.
- Provide vouchers to private property owners to clean gutters, in lieu of removing a tree (citing that oftentimes people want to remove trees due to nuisances such as leaves buildup in gutter).
- Ensure processes for older adults who have difficulty with mobility and cannot maintain trees on their property.

- Allow people to blow leaves onto public streets so that a street sweeper can take care of leaves.
  - Highlighted HODAs (High Organic Debris Areas); there are about 11 HODAs in Lakewood.
- If we suggest a permit fee, it should be a nominal fee that covers staff time.
- Have a fee-in-lieu as part of development proposals; the fee could cover a community benefit, such as landscape trees; tree mitigation fund (planting elsewhere).
- Incentives are situational, with the understanding that for a developer, it's about profits.
- Density bonus, expedited permit review, permit fee reduction could be incentives for developers.

## Equity

- Highest tree canopy is in higher income areas.
- Ensure that trees are planted (i.e., encourage tree canopy) in lower income communities.
- American Lake Gardens redevelopment (conversion of residential to industrial) led to greenspace loss (at 90%-95% lost).
- Engage youth and students at local schools.
- Plan for future generations; there used to be a practice of planting 100 trees per year, but this was stopped, as there were no plans in place for maintenance or replacement.
- Provide affordable options for maintain trees and mitigate consequences, especially for older adults and lower income.
  - Affluent areas can afford to maintain trees.

## Benefits of Trees and Education

- Trees are nice to have for shade.
- Important to provide education on tree benefits and tree canopy.
- Do something similar to Audubon Society by providing a map that highlights species of trees and their locations.
- Educate on concepts such as “what is an oak savannah?”
- Important to model behavior that values trees.
- Provide safety education.

## Locations for Adding/Restoring Tree Canopy

- Ponders Corner
- Tillicum
- Eastside of city
- Industrial areas
- Anything near I-5 corridor

- Springbrook and Oakbrook
- Area between Bridgeport and 112<sup>th</sup>, and Lakeview Avenue
- Along Pacific Highway and I-5
- 108<sup>th</sup> Street down to the train trestle
- Woodbrook/American Lake Gardens
- Northwest Lakewood – Fort Steilacoom Park (historically a farm, so lots of open space)
- Open spaces that are barren

## MEMORANDUM

**DATE:** April 18, 2022  
**TO:** Lakewood Tree Advisory Committee  
**FROM:** Lisa Grueter, AICP, MCP, Principal, BERK Consulting  
**RE:** Tree Code and Ad Hoc Committee Framework Report

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Dear Committee Members,

Your discussion on April 12, 2022 was productive, and progress was made on developing the Committee's Report. We have advanced the report to reflect your motion on April 12, 2022 regarding tree canopy. We have added options for incentives to further the Committee's discussion on exemptions and permitting. We have filled in a full range of code amendment topics for the Committee's review.

The report is organized by the structure of the Tree Preservation Code, available here and attached to the report: [https://lakewood.municipal.codes/LMC/18A.70\\_ArtIII](https://lakewood.municipal.codes/LMC/18A.70_ArtIII).

As noted previously, the Committee will be asked to provide recommendations on changes and themes found in the code to be forwarded to the Planning Commission and City Council. This will guide the Tree Code amendment recommendations and associated Comprehensive Plan policies and related code changes (e.g., critical areas) that will be shared with those bodies.



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# Tree Advisory Committee Report

## Introduction

The Ad Hoc Committee is charged with serving as a sounding board to the Planning Commission and City Council, and with developing a report that reviews the Tree Protection Code and that is based on a work plan approved last fall per the Resolution 2021-15 (see Attachment A Report Guidance):

- Section 1. The formation of a Tree Advisory Ad Hoc Committee for the purpose of reviewing the existing regulations found in Title 18A, Chapter 70, Article III of the Lakewood Municipal Code.
- Section 2. The work plan for the committee shall be consistent with the approved scope of work attached to the professional services agreement for BERK consulting approved on November 15, 2021 via Motion No. 2021-92 which states, “is anticipated that the committee would serve as a sounding board and provide advice and input to the Planning Commission and City Council.”

The work plan includes: a tree canopy situation assessment and a tree code evaluation. The situation assessment includes a tree canopy baseline, disaggregation by zoning, and historic analysis to assist with an equity analysis, tree canopy goals, and tree preservation code options. The tree code evaluation focuses on Title 18A, Chapter 70, Article III. It also includes best practices identification and benchmarking from example jurisdictions. The effort includes coordinating changes with Comprehensive Plan policies and with other city regulations such as critical areas; these may be addressed in the following docket as appropriate.

The Ad Hoc Committee was seated in February 2022 and in March and April reviewed material from the consultant team (BERK and PlanIT GEO). The Committee also reviewed comments and information submitted by members of the committee and members of the public and other agencies (e.g., state, utilities, etc.). As engagement activities occurred in parallel (e.g., survey), results were shared.

This report summarizes the key issues and consensus votes made by the Committee. It is organized by the Tree Preservation Code sections (see Attachment B).

**[April 18, 2022: This version addresses Tree Canopy Goals and Tree Code Exemptions based on the progress of the Ad Hoc Committee on April 5 and 12, 2022.]**

## Policy

### *Key Issue #1: Tree canopy environmental quality and equity.*

Set a tree canopy goal to provide landscape level information about tree extent in public and private lands and by zoning district to assist with tree preservation code options (e.g., protection, permitting, and replanting) and to consider equity.

**Information:** Lakewood has a citywide tree canopy cover estimated at 26% as of 2019. About 72% is located on private land. Setting a tree canopy goal can help with identifying priorities for preservation, considering effect of code standards by zone, areas underserved where tree canopy can be added, etc.

Relevant plans, policies, and information include:

- **Lakewood Comprehensive Plan**
  - GOAL LU-60: Institute an urban forestry program to preserve significant trees, promote healthy and safe trees, and expand tree coverage throughout the City.
  - LU-60.2: Promote planting and maintenance of street trees.



- LU-60.3: Provide for the retention of significant tree stands and the restoration of tree stands within the City.
- LU-63.2: Ensure the retention and planting of trees and other vegetation to promote air quality.
- **Resolution 2021-05** commits the City to practices of equity including “Ensuring equity in municipal planning.”
- **Lakewood Tree Canopy Assessment** and potential goals, values, and phasing, shared in consultant presentations on March 15 and March 29, 2022
  - [3/15/2022](#)
  - [3/29/2022](#)
- **Literature**
  - Declining urban and community tree cover in the United States, 5 April 2018, by David J. Nowak\*, Eric J. Greenfield USDA Forest Service, Northern Research Station, 5 Moon Library, SUNY-ESF, Syracuse, NY 13210, United States.  
[https://www.fs.fed.us/nrs/pubs/jrnl/2018/nrs\\_2018\\_nowak\\_005.pdf](https://www.fs.fed.us/nrs/pubs/jrnl/2018/nrs_2018_nowak_005.pdf)
- **Community comments** showed interest in tree canopy goals for equity and environmental purposes and others thought that a focus should be on the code evaluation itself.

**Options:** Set Tree Canopy Goal and phasing to achieve it. Consider integrating or referencing it in the City Comprehensive Plan.

1. 40% - recommended by consultants as a long-term goal to strive for
2. 35%
3. Other (e.g., No Net Loss)

**Ad Hoc Committee Consensus Vote:** The Committee voted in favor (8-1) to recommend the City establish a 40% canopy goal by 2050.

The discussion included the benefit of setting interim goals ahead of 2050.

## Article III. Tree Preservation

### 18A.70.310 Tree removal applicability/exemptions.

#### **Key Issue #2: Residential lots exemption**

Lots of less than seventeen thousand (17,000) square feet in single-family residential zones are exempt. Residential zones have the greatest share of tree canopy cover in the city. A large portion of lots is below the exemption level and would not be subject to the code.

**Information:** The Committee reviewed information from the consultant, and community comments.

- **Lakewood Tree Code Evaluation**, shared in consultant presentations: [3/15/2022](#)
- **Community Comments** were concerned about the loss of canopy in Lakewood with some identifying residential areas

**Options:** The following options were presented with information or were based on Committee discussions.

1. Retain 17,000 square foot residential lot exemption.
2. Amend to set it at 10,000 square feet residential lot exemption to consider average lot sizes by zone and reduce the number of lots exempt.
3. Remove the lot-size based residential exemption. Alan, Jeanne - 1st/2nd Option 4
4. Remove the lot-size based residential exemption together with incentives to make it easier to retain trees. [See Key Issue #12]

**Ad Hoc Committee Consensus Vote:** [TBD]

### **Key Issue #3: Industrially zoned properties**

Since 2019, industrially zoned properties have been exempted from the tree protection code, except where specific tree preservation is required as a mitigation measure under SEPA.

**Information:** Industrial zoned properties contain about 3% of the citywide tree canopy. About 12.1% of the zoning district has tree canopy. Since 2010 this zone had a near 1% loss of tree canopy.

Consultant information – share of tree canopy in industrial zone:

- [3/15/2022](#)
- [3/29/2022](#)

There have been permit applications for industrial buildings that have been reviewed under SEPA regarding impacts to trees including Garry Oaks, a native tree considered part of fish and wildlife habitat conservation areas under the critical areas regulations. Permits reviewed have engendered public comments and appeals. Some permit appeal information and examples of the loss of trees have been shared with the Committee through public comment.

**Options:** Options under consideration include:

1. Retain the current industrial zoned property exemption and rely on SEPA.
2. Remove the industrial zoned property exemption.
3. Remove the industrial zoned property exemption together with incentives to make it easier to retain trees. [See Key Issue #12]

1st/2nd Jackson, Billingsley Option  
3

**Ad Hoc Committee Consensus Vote:** [TBD]

### **Key Issue #4: Easements and Rights of Way**

**Information:** The current code exempts tree removal in easements in rights of way for purposes of installing and maintaining infrastructure (e.g., power, gas, water, sewer, stormwater), provided there is notification to the City. The tree canopy assessment found a net loss over 10 years of trees in rights of way. Rights of way are an opportunity to add tree canopy in appropriate locations.

Consultant information – share of tree canopy in rights of way:

- [3/29/2022](#)

Stakeholder interviews with Lakewood Public Works and Lakeview Power and Light indicate:

- To maintain infrastructure tree maintenance (trimming, limbing) is needed. The utilities don't remove trees unless unhealthy/unsafe. The agencies obtain expertise to help determine health and safety (e.g., arborist). Selecting appropriate tree types can support appropriate maintenance for utility function and health and safety.

Set standards for trimming and pruning with permit, e.g. Oak Harbor  
 Education is important  
 Certification process, for bid (e.g. PC list of approved bidders/arborists in 10 ft of utility) vs each professional prove worth and make it equitable  
 All trees (inc Maple and Hemlock) v Garry Oaks only

**Options:** Options under consideration include:

1. Retain exemption with notification.
2. Remove exemption and meet similar standards as on private or public parcels, but provide for simple permit (e.g., affidavit or self-certification, meet code criteria).
3. Other [TBD]

or commercial

Refer to Key Issue 5

Redefine trimming and pruning

**Ad Hoc Committee Consensus Vote:** [TBD]

## 18A.70.320 Significant tree preservation.

### Key Issue #5: Set up tree permit process

**Information:** Section 18A.70.320.A refers to tree requirements being reviewed in association with land use permits. Currently, the City does not have a separate tree permit to implement the tree protection regulations. Thus, the City is not able to fully track the removal of trees especially of exempt activities. Some cities offer two levels of permits: 1) tree permits for non-exempt activities and 2) forms demonstrating compliance for exempt activities; these may include affidavits that required conditions are met (e.g., self-certification), notification or tree removal request form, or an over-the counter permit. See examples with the City of [Olympia](#), [Kirkland](#), [Sammamish](#). Costs for tree permits are relatively low compared to other types of land use permits. However, they could be disincentives to seek permits or a cost burden on individual property owners.

**Options:** Options for permit process improvements include:

#### Exhibit 1. Tree Permit Options

Option	Charge Fee: Recover Costs	No Fee or Sliding Scale
1. Review non-exempt activities for compliance with tree protection regulations in association with land use permits.		
2. Review non-exempt activities for compliance with tree protection regulations with a tree permit, regardless of whether there is a land use permit or not.		
3. Track exempt activities through self-certification, notification, or other simple process.		
4. Other:		

**Ad Hoc Committee Consensus Vote:** [TBD]

### Key Issue #6: Significant tree definition and critical areas – Garry Oaks

**Information:** Section 18A.70.320 sets for the significant tree preservation standards for any deciduous or evergreen tree at 9" diameter, or for Garry Oaks with a diameter of 6", measured at 4.5 feet above the ground. Garry oak stands are protected in LMC Chapter 14.154, Fish and Wildlife Habitat Conservation Areas.

The consultant team has shared state definitions and example codes, including: [4/12/2022](#) | [4/26/22](#).

Literature referenced has included Management Recommendations for Washington's Priority Habitats: Oregon White Oak Woodlands, 1998, available: <https://wdfw.wa.gov/publications/00030>.

Public comments have referenced the importance of Garry Oaks to Lakewood's environment/wildlife habitat and community identity. Concerns have been raised about the loss of Garry Oaks due to exemptions and new residential or industrial development. Environment/habitat values were also referenced in general in survey results.

Example jurisdictions generally cite significant tree sizes for Garry Oaks ranging from 6-12 inches diameter breast height (DBH). Plan-IT GEO staff have noted that it is reasonable throughout the industry to protect trees starting at 4" when it is appropriate for the species characteristics (i.e., growth rate and significance).

**[Reserved for WDFW insights in response to Ad Hoc Committee questions]**

**Options:** Based on the information summarized, and Committee discussions, following are potential options for consideration.

1. Retain current tree protection threshold of a significant tree at 6" DBH threshold for Garry Oaks. Retain the current critical areas regulations that focus on state priority habitat definitions of oak tree stands. Use the SEPA process to require studies to determine fish and wildlife habitat quality and mitigation as needed for individual trees on a case by case basis.
2. Develop a tiered system of protection:
  - a. Retain 6" DBH threshold for Garry Oaks as significant trees. Require that any removal requires an arborist report with a certified plan, including 3:1 replacement ratio of Garry Oak Trees or in-lieu payment into the tree fund. Recommend that Lakewood create an off-site replacement strategy.<sup>1</sup>
  - b. Specify the size and quality of individual Garry Oaks that would qualify as heritage trees, e.g., 15" with greater tree protection standards. Additional standards would include that a request for removal or trimming must be accompanied by a certified arborist report with an arborist's certified plan demonstrating that alteration or removal is necessary for health and safety, or infrastructure operation, or protection of existing buildings, or necessary to accomplish reasonable use of property per state law.<sup>2</sup> If such trees qualify as critical areas per "c" additional procedures or mitigation may be identified.
  - c. Specify criteria that any single Garry Oak tree 20"+ or white oak stands in which the oak trees have an average diameter at breast height of 15 inches or more regardless of stand size qualify as a fish and wildlife habitat conservation area **[LMC Chapter 14.154]** to provide clarity and consistency. This would mean review under critical area rules and would require a reasonable use exception. These standards are similar to Pierce County standards and informed by WDFW management criteria for Oregon White Oak Woodlands.<sup>3</sup>
3. **Similar to Option #2 but the threshold for significant trees would be 4" DBH threshold.**

1st/2nd Billingsley,  
Neff

<sup>1</sup> Based on discussions with Pierce Conservation District staff, some locations for oak tree enhancement or restoration are located in Lakewood and Tacoma.

<sup>2</sup> This is similar to Oak Harbor regulations.

<sup>3</sup> Pierce County: Critical area regulations recognize single oaks or stands of oaks smaller than one acre in size when any of the following criteria are met: (1) Individual trees having a diameter at breast height of 20 inches or more; or (2) Oregon white oak stands in which the oak trees have an average diameter at breast height of 15 inches or more regardless of stand size. This appears similar to WDFW guidance on oak restoration. See [1998 Management Recommendations for Washington's Priority Habitats: Oregon White Oak Woodlands](#), Page 23: Recommendation. Large oaks (>50 cm dbh [20 in]), medium oaks (>30 cm dbh [12 in]), older oaks, and oaks with well formed, dominant crowns, should be retained wherever oak enhancement activities occur. Very large oaks are rare and should be retained at the cost of efficient oak regeneration directly under their canopies.

**Ad Hoc Committee Consensus Vote:** [TBD]

**Key Issue #7: Heritage Tree/ Historical Tree**

**Information:** To recognize longstanding trees in the community and their cultural and environmental importance, the City could develop a heritage tree program. Other cities in the region that have such programs include [Puyallup](#), [Lacey](#), [Tumwater](#), [Poulsbo](#). The example programs apply higher protection standards (e.g., stricter avoidance or replacement ratios) or offer recognition, incentives, or education to exceptionally large or old trees.

**Options:** Options under consideration by the Committee include:

1. **Develop a Heritage Tree/Historical Tree Program to recognize valuable and irreplaceable trees and offer incentives to property owners that participate.**
2. Do not set up such a program. Rely on regulations of significant trees and critical functions and values of trees.

Need education that someone has heritage tree Plaques

1st, 2nd: Billingsley, Ehlers

**Ad Hoc Committee Consensus Vote:** [TBD]

**Key Issue #8: Maximum Tree Removal on Developed Single Family Properties.**

**Information:** Based on a review of example jurisdictions, a maximum limit of trees may be allowed. However, with no residential exemption and a permit requirement, the permitting process will be greatly improved and will move the emphasis towards protection of healthy trees rather than allowance of a certain number of trees per year.

Some states provide guidance or specific requirements for tree removal in municipalities:

- <https://www.treeremoval.com/tree-removal-regulations-by-state/#.YInKhOjMK5c>

Considering jurisdictions that have been reviewed to date based on population size, square miles, or location, following are a range of standards.

**Lacey**

- A residential property owner can remove up to five trees during a three-year period provided the required minimum ratio of four trees per each 5,000 square feet. This exemption does not apply to historical/heritage trees or in critical areas.

**Olympia** (OMC Chapter 16.60)

- Developed Single-Family <2 acres: Removal of trees and other vegetation allowed as long as the minimum required tree density is maintained and provided in all situations trees to be preserved include: landmark/specimen trees, trees in buffer, significant wildlife habitat.
- Developed Single-Family 2+ acres. On developed single-family and multifamily (up to 4 units), can remove trees and other vegetation within 125' of the residence or other buildings, provided in all situations trees to be preserved include: landmark/specimen trees, trees in buffer, significant wildlife habitat.

**Renton**

- Except within critical areas, a certain number of trees are allowed to be removed annually with a maximum set within 5 years before a routine vegetation management permit is required. The number depends on lot sizes. Up to 10,000 SF (2 per year up to max of 4 in 5 years); 10,001-20,000 SF (3 per year up to max. of 6 in 5 years); 20,001 SF+ (6 per year up to 12 max. in 5 years).
  - Note: This is similar to Lakewood's current regulations except that Lakewood exempts all tree removal on lots less than 17,000 SF. From 17,001-30,000 SF 2 significant trees may be

removed per year up to 4 max. in 5 years. 30,001 SF+ 4 may be removed per year up to 8 in 5 years. These exemptions do not apply in critical area buffers.

Sammamish

- A permit to remove a healthy significant tree is required. A significant tree is defined as a coniferous tree with a diameter of eight (8) inches or more DBH1 or a deciduous tree with a diameter of twelve (12) inches or more DBH that is noninvasive and in a healthy condition.

**Options:** Consider the following options for non-Garry Oak trees. Garry oaks would be regulated per #6.

**Exhibit 2. Tree Replacement Options**

Option	Non-Garry Oak	Recommended (Yes, No)
1	Allow a specific (maximum) number of trees to be removed per year per property. Relate the number of significant trees that can be removed to lot size annually and over 5 years: Up to 30,000 SF, 2 per year max. 4 in 5 years; over 30,000 SF, 4 per year up to 8 max. in 5 years. No significant trees may be removed in critical areas/buffers or if a heritage tree. Require a permit.	
2	Property owner must provide justification for removal of any significant tree. No significant trees may be removed in critical areas/buffers or if a heritage tree. Require a permit.	
3	Maintain a specific (minimum) number or percentage of trees per property. No significant trees may be removed in critical areas/buffers or if a heritage tree. Require a permit.	

**Ad Hoc Committee Consensus Vote:** [TBD]

**Key Issue #9: Replacement**

**Information:** Replacement ratios can help achieve mitigation, but it is also important to ensure there is the “right tree right place” so they live long healthy lives.

It is recommended that mitigation requirements prioritize protection of existing trees first, then on-site mitigation, then off-site mitigation, then in-lieu of fees. See memo provided with Ad Hoc Committee information with ISA Guidelines and other examples provided with the April 26, 2022 packet. In summary,

ISA Guidelines for Developing and Evaluating Tree Ordinances: Mitigating for tree loss  
<https://ufmptoolkit.net/two/inventories-assessments/isa-guidelines-for-developing-and-evaluating-tree-ordinances/>

Overview of mitigation tactics (Page 171)

Provisions that seek to protect either individual trees (provisions 30, 31) or stands of trees (provision 32) normally require mitigation as a condition for approving destruction of, or damage to, tree or woodland/forest resources.

Essentially all mitigation is based on the following two measures:

1. Protect existing trees or woodland/forest resources
2. Plant new trees (this may include more general restoration of woodland/forest ecosystems)

Relative to the parcel or project area where tree removal occurs, mitigation measures can be implemented at one or both of the following locations:

- A. On site
- B. Off site

Recommendations (pages 176-177)

1. Allow for the full range of mitigation options (on and off site, protection and planting, in lieu fees) to provide flexibility to deal with a range of different permit situations.
2. Permitting authority should have the option to select and/or approve appropriate mitigation options (including a combination of tactics) based on the local government's management goals and priorities, and the particular circumstances of each project.
3. Trees or woodland/forest resources maintained by the applicant will need to be monitored by the local government to ensure and enforce compliance. The ordinance should expressly provide this authority.
4. Fees charged should be sufficient to provide for ongoing monitoring and maintenance, including eventual replanting. If direct mitigation by applicant is allowed, additional fees may be necessary to provide for monitoring, maintenance, and enforcement.

Mitigation ratios should be designed to ensure at least 1 successful new tree for each tree removed, with a replacement species that has a similar mature canopy spread and maintaining canopy in perpetuity. Currently, the City of Lakewood requires a ratio of 2:1 [replacement for significant trees](#) and any other existing healthy trees (not significant) to be replaced at a 1:1 ratio. There is no difference in replacement ratio for Garry Oak versus other tree types.

**Options:** Based on current standards and best practices following are options:

1. Mitigation for tree removal should be based on inches removed (caliper and number of trees required to be planted is based on number and size of trees removed) based on best management practices, and by tree type, e.g., native trees and species' need.
2. Mitigation should be based on no-net-loss (caliper and number of trees required to be planted is based on canopy % lost and/or ecosystem benefits lost). A certified arborist report must determine no-net loss conditions and mitigation to ensure this approach can be clearly regulated.

**Ad Hoc Committee Consensus Vote:** [TBD]

## 18A.70.330 City Tree Fund.

### **Key Issue #10: City Tree Fund Clarity.**

**Information:** Lakewood has identified a [City Tree Fund](#). Currently the City requires that restoration/settlements *in lieu of* penalties, as well as donations and grants go into the fund. Uses of the fund are varied and include acquiring/maintaining/preserving wooded areas, planting and maintaining trees, providing a public tree nursery, education, monitoring, research, or other purposes. Other cities with similar funds include: Lacey, Olympia, Tacoma, Renton.

An option would be to specify that permit fees for removal and violation enforcements go into the fund. Also, restoration or enhancement of native trees like Garry Oaks could be specifically added.

**Options:** The City Tree Fund could be further strengthened or clarified with one or more options:

3. Allow the City to use tree permit fees and penalties to go into the fund.



- Add an explicit funding purpose to include restoration or enhancement of native trees like Garry Oaks, such as on public lands, private tree tracts, critical area buffers, or lands with conservation easements.

**Ad Hoc Committee Consensus Vote:** [TBD]

## 18A.20.105 Violations and enforcement.

### Key Issue #11: Fines

**Information:** The City has collected fines and deposited it in its tree fund.<sup>4</sup> The City has found that fees and fines may be reduced through court reviews. The City is seeking improved compliance, voluntary compliance, and if there is no recourse, fines that cannot be deeply reduced. Ideas to improve enforcement are illustrated in the following table, principally shared in consultant presentations on [4/5/2022](#).

### Exhibit 3. Example Enforcement Features

City	Enforcement Features
<a href="#">Lacey</a>	Determine damage and appraised value. Appeal of fine goes to Hearing Examiner. Maximum fee reduction 30%.
<a href="#">Federal Way</a>	If removal was approved but if tree was removed before final tree retention plan approval: \$100 per tree. Removal of tree without permit/City approval/removal of significant tree: \$1000/tree or marketable value.
<a href="#">Seattle</a>	Seattle triples the penalty amount for willful or malicious cutting and cutting or damaging trees in critical areas is subject to additional penalties.
<a href="#">Sammamish</a>	\$1,500 per inch of diameter at breast height of tree removed or damaged. Environment damage/critical areas violations: Up to \$25,000 plus the cost of restoration
Other Ideas	Increased permit fees or denial of future permits.

**Options:** Potential options to improve enforcement include one or more:

### Exhibit 4. Enforcement Options

Option	Recommended (Yes, No)
1. Establish a free or low cost tree permit or affidavit/over the counter review to make compliance the easy path.	
2. Provide clear decision criteria on tree permits. This provides certainty in decision-making including the potential for denial.	
3. Increase penalties for non-compliance, e.g., triple penalties. Have an administrative appeal opportunity with a code-based percentage limit on reductions.	

<sup>4</sup> See: <https://cityoflakewood.us/city-of-lakewood-means-business-regarding-tree-preservation/>.



**Ad Hoc Committee Consensus Vote:** [TBD]

## Incentives for Tree Protection

### Key Issue #12: Incentives

**Information:** The City has multiple responsibilities under the Growth Management Act to provide for housing and employment space opportunities to meet regional growth targets while providing for critical area protection and providing for recreation/open space and public services and infrastructure. Recognizing these responsibilities, tree protection can be facilitated by making it easier to avoid trees and result in feasible developments. Consultant presentations shared city responsibilities and examples of incentives. See presentations:

- [4/5/2022](#)
- [4/12/2022](#)

Staff has identified code sections where amendments could be developed depending on the priority incentives recommended.

### Exhibit 5. Potential Code Sections where Incentives for Tree Protection Could be Considered

Lakewood Code Section	Potential Amendment
Chapter 18A.90 Housing Incentives Program 18A.60.030 Residential area and dimensions.	Allow for density bonus or development standard modifications that encourage significant tree preservation.
18A.60.040 Commercial area and dimensions.	Allow for alternative setbacks/height in development standard table to protect significant trees.
18A.60.050 Industrial area and dimensions.	Allow for alternative setbacks/height in development standard table to protect significant trees.
Chapter 18A.80 Parking	Allow for alternative standards to protect significant trees, e.g., alter parking dimensional standards or rates.
Downtown: 18B.200.230 District-Wide Development Standards.	Modify density if retaining significant trees or if adding trees to urban heat island.
Downtown: 18B.700.720 Master Planned Development – Town Center Incentive Overlay.	Allow flexibility in master plan for more tree protection or addition in urban heat island.
Lakewood Station District: 18C.700.720 Optional master planned development.	Add to D.3.c – master plan includes optimal tree preservation.
Chapter 12.11, Stormwater Management	Determine potential incentives for tree retention in stormwater standards

**Options:** The Committee discussed categories and example of incentives in the following table.

**Exhibit 6. Incentives for Tree Protection – Options**

Description	Recommended Incentive (Yes, No)
1. Allow for variable building setbacks, parking ratios or design standards, landscape width (e.g., in lot perimeter or parking area), and onsite open space (i.e., onsite recreation space in multifamily development) standards for Garry Oak Preservation	
2. Provide bonus density for greater significant tree protection, based on a graduated scale of preservation (more density for greater preservation)	
3. Provide bonus height if more significant trees or are preserved, based on a graduated scale of preservation	
4. Offer municipal stormwater credit programs	
5. Land Use Permit fee discount for Tree Preservation	
6. Develop a Tree City USA Program	

**Ad Hoc Committee Consensus Vote:** [TBD]

# Attachment A: Report Guidance

## ***Resolution 2021-15.***

- Areas of Focus and Role:
  - Section 1. The formation of a Tree Advisory Ad Hoc Committee for the purpose of reviewing the existing regulations found in Title 18A, Chapter 70, Article III of the Lakewood Municipal Code.
  - Section 2. The work plan for the committee shall be consistent with the approved scope of work attached to the professional services agreement for BERK consulting approved on November 15, 2021 via Motion No. 2021-92 which states, “is anticipated that the committee would serve as a sounding board and provide advice and input to the Planning Commission and City Council.”
- Consensus in Section 6.
  - ...The committee will attempt to reach a consensus on issues. If consensus is not possible, strong differing opinions, such as “minority” opinions, should be recorded and acknowledged in the committee’s report to the City Council.

## ***Chapter 2.67 Ad Hoc Committees.***

- LMC 2.67.060 Reporting. In addition to any reporting required in the work plan for an ad hoc committee, each committee shall be required to, upon completion of the work plan, provide a final report to the City Council as described in Chapter 2.68 LMC.

## ***Welcome Letter Operating Principles.***

- The Ad Hoc Committee will operate by consensus per Resolution No. 2021-15.
  - All members’ positions will be respected and considered, and the group will work collaboratively to reach consensus on its advice.
  - Consensus is defined as majority opinion, with the objective of achieving unity rather than unanimity.
  - The Committee Report will record consensus opinions and minority opinions per Resolution No. 2021-15.

# Attachment B: Tree Preservation Code

Available at: [https://lakewood.municipal.codes/LMC/18A.70\\_ArtIII](https://lakewood.municipal.codes/LMC/18A.70_ArtIII)

## Article III. Tree Preservation

### 18A.70.300 Purpose.

This article promotes tree preservation by protecting the treed environment of the City of Lakewood by regulating the removal of significant trees and providing incentives to preserve trees that, because of their size, species, or location, provide special benefits. Tree preservation protects and enhances critical areas, facilitates aquifer recharge, reduces erosion and storm water runoff, and helps to define public and private open spaces. [Ord. 726 § 2 (Exh. B), 2019.]

### 18A.70.310 Tree removal applicability/exemptions.

The requirements for tree preservation shall be provided in accordance with the development standards of each individual zoning district and the provisions of this section, and are applicable to all zoning districts.

- A. Lots of less than seventeen thousand (17,000) square feet in single-family residential zones are exempt from this chapter, except where specific tree preservation is required as a mitigation measure under SEPA. In the event a permit is not required for the establishment of a use, the standards of this section shall still apply.
- B. Industrially zoned properties are exempt from this chapter, except where specific tree preservation is required as a mitigation measure under SEPA.
- C. Removal of nonsignificant trees that are not protected by any other means is exempt from this chapter.
- D. *Removal of Trees in Association with Right-of-Way and Easements.* Tree removal by a public agency or a franchised utility within a public right-of-way or upon an easement, for the purpose of installing and maintaining water, storm, sewer, power, gas or communication lines, or motorized or nonmotorized streets or paths is exempt from this chapter. Notification to the City by the public agency or franchised utility is required prior to tree maintenance or removal within City rights-of-way.

E. *Emergency Removal.* Any number of hazardous protected and nonprotected trees may be removed under emergency conditions. Emergency conditions include immediate danger to life or dwellings or similar stationary and valuable property, including the presence of a target. Emergency removal may occur and all the following conditions shall be met:

1. The City is notified the following business day of the unpermitted action;
2. Visual documentation (i.e., photographs, video, etc.) is made available; and
3. The felled tree remains on site for City inspection.
4. Replacement required.
  - a. Nonsingle-family use: The property owner will be required to provide replacement trees as established in LMC [18A.70.320\(G\)](#), Replacement.
  - b. Single-family use: The property owner will not be required to provide replacement trees.
5. Should the City determine that the tree(s) did not pose an emergency condition, the owner shall be cited for a violation of the terms of this chapter. [Ord. 726 § 2 (Exh. B), 2019.]

### **18A.70.320 Significant tree preservation.**

A. *Standards.* Significant tree preservation shall be required for any project permit.

1. A significant tree is an existing tree which:
  - a. When measured at four and one-half (4.5) feet above ground, has a minimum diameter of nine (9) inches for evergreen trees and deciduous trees;
  - b. When measured at four and one-half (4.5) feet above ground, has a minimum diameter of six (6) inches for Garry Oaks (also known as Oregon White Oaks); and
  - c. Regardless of the tree diameter, is determined to be significant by the Director due to the uniqueness of the species or provision of important wildlife habitat.
2. For the purposes of this section, existing trees are measured by diameter at four and one-half (4.5) feet above ground level, which is the usual and customary forest standard. Replacement trees are measured by diameter at six (6) inches above ground level, which is the usual and customary nursery standard.

3. *Damaged or Diseased Trees.* Trees will not be considered “significant” if, following inspection and a written report by a registered landscape architect, certified nursery professional or certified arborist, and upon review of the report and concurrence by the City, they are determined to be:

- a. Safety hazards due to root, trunk or primary limb failure;
- b. Damaged or diseased, and do not constitute an important wildlife habitat. At the discretion of the City, damaged or diseased or standing dead trees may be retained and counted toward the significant tree requirement, if demonstrated that such trees will provide important wildlife habitat and are not classified as a safety hazard.

4. *Preventive Measure Evaluation.* An evaluation of preventive measures by an arborist in lieu of removing the tree and potential impacts of tree removal may be required. If required, this evaluation shall include the following measures:

- a. Avoid disturbing tree: Avoid disturbing the tree at all unless it represents a hazard as determined by an arborist;
- b. Stabilize tree: Stabilize the tree, if possible, using approved arboricultural methods such as cable and bracing in conjunction with other practices to rejuvenate the tree such as repairing damaged bark and trunk wounds, mulching, application of fertilizer, and improving aeration of the tree root zones;
- c. Pruning: Remove limbs from the tree, such as removing dead or broken branches, or by reducing branch end weights. If needed, remove up to one-quarter (1/4) of the branches from the canopy and main trunk only in small amounts, unless greater pruning is needed by approval of the arborist;
- d. Wildlife tree: Create a wildlife tree or snag, or cut the tree down to a safe condition, without disturbing the roots, where the tree no longer poses a hazard. To create snags, remove all branches from the canopy, girdle deciduous trees, and leave the main trunk standing. Wildlife trees or snags are most appropriate in City parks, greenbelts, vacant property, and environmentally critical areas;
- e. Steep slopes: Removal of tree roots on steep slopes may require a geotechnical evaluation;
- f. Creeks and lakes: Trees fallen into creeks and lakes are to remain in place unless they create a hazard; and
- g. Provide professional recommendations on:

1. The necessity of removal, including alternative measures to removal;
2. The lowest-impact approach to removal;
3. A replacement tree plan, if required.

B. *Preservation Criteria.* All significant trees shall be preserved according to the following criteria:

1. *Perimeter Trees.* All significant trees within twenty (20) feet of the lot perimeter or required buffer, whichever is greater, shall be preserved; except that significant trees may be removed if required for the siting and placement of driveway and road access, buildings, vision clearance areas, utilities, sidewalks or pedestrian walkways, or storm drainage facilities and other similar required improvements, subject to the discretion of the Director.

This requirement shall not apply to single-family residential lots less than seventeen thousand (17,000) square feet in size, where no specific tree preservation is required.

2. *Interior Trees.* A percentage of all significant trees within the interior of a lot, excluding the perimeter area, shall be preserved within the applicable zoning district.

a. For new single-family residential development including a single-family dwelling on an individual lot, multifamily residential development, and public/quasi-public institutional development, fifty (50) percent of the significant trees located within the interior area of the lot shall be retained.

b. For new residential subdivisions where the proposed lot size is greater than seventeen thousand (17,000) square feet, all significant trees shall be retained and preserved except those required to be removed in order to construct streets, utilities, or other on-site improvements. Tree retention shall thereafter be provided on a lot-by-lot basis as the individual lots are developed. For subdivisions where the proposed lots are less than seventeen thousand (17,000) square feet, no specific tree preservation is required.

c. For commercial development, ten (10) percent of the significant trees located within the interior area of the lot, or individual lots in the case of subdivisions, shall be retained.

d. In Open Space and Recreation zones, ninety-five (95) percent of the significant trees located within the interior area of the lot shall be retained unless otherwise determined by the Director.

3. *Buffers and Sensitive/Critical Areas.* Tree preservation criteria listed above shall exclude sensitive/critical areas and their buffers, and open space areas and tracts. All trees within such

areas shall be retained except as may be specifically approved and indicated in the written findings of a discretionary land use permit or a tree removal permit.

4. *SEPA Requirements.* Additional or specific tree retention may be required as SEPA mitigation in addition to the requirements of this section.

C. *Tree Retention Plan Required.*

1. A significant tree retention plan shall be submitted to the Community Economic and Development Department for any project permit, except building permits that do not increase the footprint of a building. The plans shall be submitted according to the requirements of the application form provided by the Community Economic and Development Department.

2. The Director shall review and may approve, approve with modifications, or deny a tree retention plan subject to the provisions of this section.

3. A significant tree permit is required for the removal of any significant tree unless specifically exempted within this section.

D. *Permit/Plan Requirements.* Any project permit, except building permits that do not increase the footprint of a building shall identify, preserve, and replace significant trees in accordance with the following:

1. Submit a tree retention plan that consists of a tree survey that identifies the location, size and species of all significant trees on a site and any trees over three (3) inches in diameter at four and one-half (4.5) feet above ground level that will be retained on the site.

a. The tree survey may be conducted by a method that locates individual significant trees, or

b. Where site conditions prohibit physical survey of the property, standard timber cruising methods may be used to reflect general locations, numbers and groupings of significant trees.

2. The tree retention plan shall also show the location, species, and dripline of each significant tree that is intended to qualify for retention credit, and identify the significant trees that are proposed to be retained, and those that are designated to be removed.

3. The applicant shall demonstrate on the tree retention plan those tree protection techniques intended to be utilized during land alteration and construction in order to provide for the continued healthy life of retained significant trees.

4. If tree retention and/or landscape plans are required, no clearing, grading or disturbance of vegetation shall be allowed on the site until approval of such plans by the City.



E. *Construction Requirements.*

1. An area free of disturbance, corresponding to the dripline of the significant tree’s canopy, shall be identified and protected during the construction stage with a temporary three (3) foot high chain-link or plastic net fence. No impervious surfaces, fill, excavation, storage of construction materials, or parking of vehicles shall be permitted within the area defined by such fencing.
2. At Director’s sole discretion, a protective tree well may be required to be constructed if the grade level within ten (10) feet of the dripline around the tree is to be raised or lowered. The inside diameter of the well shall be at least equal to the diameter of the tree spread dripline, plus at least five (5) feet of additional diameter.
3. The Director may approve use of alternate tree protection techniques if the trees will be protected to an equal or greater degree than by the techniques listed above. Alternative techniques must be approved by a registered landscape architect, certified nursery professional or certified arborist, with review and concurrence by the City.
4. If any significant tree that has been specifically designated to be retained in the tree preservation plan dies or is removed within five (5) years of the development of the site, then the significant tree shall be replaced pursuant to subsection (G) of this section.

F. *Maximum Tree Removal on Developed Properties.* Existing single-family lots: Single-family homeowners may remove significant trees without a permit based on the following:

<b>Maximum Tree Removal on Existing Single-Family Lots without a Permit</b>		
Lot Size	Maximum number of significant trees allowed to be removed in 1 year without a permit	Maximum number of significant trees allowed to be removed in 5 years without a permit
Lots up to 17,000 sq. ft.	N/A	N/A
Lots 17,001 to 30,000 sq. ft.	2	4
Lots 30,001 sq. ft. or greater	4	8

G. *Replacement.* When a significant tree subject to this section cannot be retained, the tree shall be replaced as a condition for the removal of the significant tree, in accordance with the following:

1. *On-Site Replacement.*

- a. Significant trees shall be replaced at a ratio of two to one (2:1) of the total diameter inches of all replacement trees to the diameter inches of all the significant trees removed.
  - b. Replacement trees shall be no smaller than three (3) inches in diameter at six (6) inches above ground;
  - c. Existing healthy trees anywhere on the site which are retained to support the remaining significant trees can be counted against the on-site replacement requirements on a one to one (1:1) basis of the total diameter inches of all replacement trees removed, provided it meets the following criteria:
    - i. The tree does not present a safety hazard; and
    - ii. The tree is between three (3) and nine (9) inches in diameter at four and one-half (4.5) feet above ground.
2. Each significant tree that is located interior to the twenty (20) foot perimeter area, and which is in excess of the fifty (50) percent of significant trees that are required to be retained, may be credited towards replacement on a one and one-half to one (1.5:1) basis of the total diameter inches for any perimeter trees required to be removed for development, provided the interior tree is between nine (9) inches and twenty-four (24) inches in diameter for evergreen trees, or between nine (9) inches and thirty (30) inches in diameter for deciduous trees.
3. Each significant tree that is located interior to the twenty (20) foot perimeter area, and which is in excess of the fifty (50) percent of significant trees that are required to be retained, may be credited towards replacement on a two to one (2:1) basis of the total diameter inches for any perimeter trees required to be removed for development, provided it meets one of the following criteria:
- a. The tree exceeds sixty (60) feet in height, or twenty-four (24) inches in diameter for evergreen trees, or thirty (30) inches in diameter for deciduous trees.
  - b. The tree is located in a grouping of at least five (5) other significant trees with canopies that touch or overlap.
  - c. The tree provides energy savings, through wind protection or summer shading, as a result of its location relative to buildings.
  - d. The tree belongs to a unique or unusual species.

e. The tree is located within twenty-five (25) feet of any critical area or required critical area buffers.

f. The tree is eighteen (18) inches in diameter or greater and is identified as providing valuable wildlife habitat.

4. *Off-Site Replacement.* When the required number of significant trees cannot be physically retained or replaced on site, the applicant may have the option of:

a. The planting of the required replacement trees at locations approved by the Director throughout the City. Plantings shall be completed prior to completion of the project permit requiring tree replacement.

b. Payment in lieu of replacement may be made to the City Tree Fund for planting of trees in other areas of the City. The payment of an amount equivalent to the estimated cost of buying and planting the trees that would otherwise have been required to be planted on site, as determined by the City's Tree Replacement Cost Schedule. Payment in lieu of planting trees on site shall be made at the time of the issuance of any building permit for the property or completion of the project permit requiring the tree replacement, whichever occurs first.

H. *Trimming.* Trimming of tree limbs and branches for purposes of vegetation management is permitted, provided the trimming does not cause the tree to be a safety hazard. [Ord. 726 § 2 (Exh. B), 2019.]

### **18A.70.330 City Tree Fund.**

A. *Funding Sources.* All civil penalties received under this chapter and all money received pursuant to Chapter [14.02](#) LMC, Environmental Rules and Procedures, shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

1. Agreed-upon restoration payments or settlements in lieu of penalties;
2. Donations and grants for tree purposes;
3. Other moneys allocated by the City Council.

B. *Funding Purposes.* The City shall use money received pursuant to this section for the following purposes:

1. Acquiring, maintaining, and preserving wooded areas within the City;

2. Planting and maintaining trees within the City;
3. Establishment of a holding public tree nursery;
4. Urban forestry education;
5. Implementation of a tree canopy monitoring program;
6. Scientific research; or
7. Other purposes relating to trees as determined by the City Council. [Ord. 726 § 2 (Exh. B), 2019.]

**The Lakewood Municipal Code is current through Ordinance 767, passed December 20, 2021.**

Disclaimer: The city clerk's office has the official version of the Lakewood Municipal Code. Users should contact the city clerk's office for ordinances passed subsequent to the ordinance cited above.

**Note:** This site does not support Internet Explorer. To view this site, Code Publishing Company recommends using one of the following browsers: Google Chrome, Firefox, or Safari.

[City Website: www.cityoflakewood.us](http://www.cityoflakewood.us)

City Telephone: (253) 589-2489

[Code Publishing Company](#)

A. Garry Oak Material compiled by Plan-IT GEO 4/8/2022  
 (summarized in 4/12/22 slides to Ad Hoc Committee)  
 B. General Tree Mitigation/Replacement  
 Guidelines/Examples compiled by Plan-IT GEO 4/15/2022

## EXAMPLE TREE SIZES – GARRY OAKS/OREGON WHITE OAK

Protection of Trees by Size (DBH)		
Muni	DBH Protected	Code language
Pierce County	8"	At a minimum, 30 percent of significant trees on site shall be retained, preferably reflective of the diversity of species and age within the stand, up to the minimum tree density requirements.  8" dbh Trees. For required perimeter landscape buffers, all trees exceeding 8 inch diameter at breast height (d.b.h.) at time of development shall be retained and incorporated into the buffer. If determined by a professional forester that retention of a tree will create a hazard or that the tree is not viable, then the tree may be removed. (Note: Additional requirements may apply when Oregon White Oak trees are present. See Chapter 18E.40 PCC <a href="#">Code link</a> )
Thurston County	12"	A tree protection area extending a minimum of five feet beyond the dripline of conifer trees twelve inches or greater in diameter (at four and one-half feet above the ground), stands of trees, and Oregon white oak, shall be established and protected from disturbance during site development. The approval authority may require that the protection area be extended for oak trees if necessary to ensure the trees' survival, based upon a recommendation of an arborist or urban forester. <a href="#">Code link</a>
Portland, OR	12"	You must preserve and protect at least 1/3 of the non-exempt trees that are 12 inches and larger in diameter located completely or partially on your site. Any tree at least 6 inches but less than 12 inches in diameter that is an Oregon white oak (Garry oak), Pacific madrone, Pacific yew, ponderosa pine or Western flowering dogwood doesn't add to the total number of trees. But this may be retained towards meeting the tree preservation requirement. <a href="#">Code link</a>
Lacey	n/a	Tree is defined as being 4" when considering a land clearing permit:  "Tree" means any living woody plant characterized by one main stem or trunk and many branches, and having a diameter of four inches or more measured at four and one-half feet above the ground level (DBH). <a href="https://lacey.municipal.codes/LMC/14.32">https://lacey.municipal.codes/LMC/14.32</a>
Federal Way	6"	(d) Trees with a diameter at breast height (dbh) of up to six inches and vegetation may be removed without city review and approval if criteria (9)(a) through (c) of this section are met.  (e) Trees with a dbh of six inches or greater may be removed subject to the minimum tree units per acre standard established by Table 19.120.130-1 and subject to criteria (9)(a) through (c) of this section.  (f) Removal of trees with a dbh of six inches or greater that will result in the subject property falling below the minimum tree units per acre standard per Table 19.120.130-1 shall require planting of replacement trees as necessary to meet the minimum tree units per acre standard, or the existing tree units per acre represented by the trees proposed for removal, whichever is less. <a href="https://www.codepublishing.com/WA/FederalWay/html/FederalWay19/FederalWay19120.html">https://www.codepublishing.com/WA/FederalWay/html/FederalWay19/FederalWay19120.html</a>

## DEFINITIONS AND GUIDELINES

### ISA INDUSTRY STANDARDS

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#### ISA Definitions

<https://www.isa-arbor.com/education/onlineresources/dictionary>

**tree:** woody perennial usually having one dominant trunk and a mature height greater than 5 meters (16 feet).

**ancient tree:** a tree that has passed beyond maturity and is old or aged in comparison with other trees of the same species (see champion tree and veteran tree).

**champion tree:** a tree of great age, size, or condition when compared to trees of the same species grown under the same conditions in the same time frame (see ancient tree and veteran tree).

**veteran tree:** a tree which, because of its condition, is of exceptional cultural, landscape, or nature conservation value (see ancient tree and champion tree).

#### ISA Guidelines for Developing and Evaluating Tree Ordinances

<https://www.isa-arbor.com/Portals/0/Assets/PDF/Certification/Tree-Ordinance-Guidelines.pdf>

Page 166, Defining special trees: heritage, historic, and landmark trees

As noted in our discussion of provision 31, individual trees may be considered important community resources because of unique or noteworthy characteristics or values. Such trees have been described in ordinances as heritage, historic, landmark, legacy, special interest, significant, or specimen trees or various permutations of these terms (e.g., heritage oak, exceptional specimen tree). In some ordinances, trees are simply labeled protected trees (i.e., trees afforded protection by the ordinance). Regardless of the term used, the concept is the same: trees with certain characteristics are singled out for special consideration in the ordinance. Most commonly, one or more of the following criteria are used to define a special status tree:

**Size** - Some component of tree size, most frequently trunk diameter, may be used to define a special status tree. Most commonly, a given diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is used as the size standard. Additional rules are typically needed to handle trees that are multi-trunked or branch below 4.5 ft. **Because the relationships between DBH and canopy spread or DBH and tree age vary by species, different tree diameter standards may be applied to different species.**

**Although a tree diameter standard is fairly objective, the threshold diameter is often set more or less arbitrarily. As such, management decisions based solely on a threshold diameter may not be particularly logical.** For example, if the threshold diameter for protecting a tree is 24 inches DBH, a tree with a diameter of 23.9 inches would be ignored, even though it might have a greater canopy spread than a tree with a larger DBH. Furthermore, the measurement of DBH with standard equipment such as diameter tapes or calipers is subject to errors related to trunk or bark irregularities and minor shifts in the location of the measuring device.

A tree with a DBH measured as 24.2 inches by one observer could be measured at 23.5 inches by another observer. These problems are minimized when small threshold diameters (e.g., 3 inches) are used. Other components of tree size, such as maximum canopy spread or height, may also be considered independently or in conjunction with tree diameter. The National Register of Big Trees, maintained by American Forests, uses a point system to rate tree size. Points for each tree are calculated by summing

trunk circumference (at 4.5 ft) in inches, tree height in feet, and one-quarter of the average crown spread in feet. This system is used to determine "champion" trees for each species. Some ordinances expressly confer special tree status on state or national champion trees. More local "champion" trees could be defined using the same methods.

## **WA STATE OREGON WHITE OAK WOODLAND HABITAT RECOMMENDATIONS**

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Larsen, E. M., and J. T. Morgan. 1998. Management recommendations for Washington's priority habitats: Oregon white oak woodlands. Wash. Dept. Fish and Wildl., Olympia. 37pp.

### **Retention of Valuable Trees**

**Recommendation.** Large oaks (>50 cm dbh [20 in]), medium oaks (>30 cm dbh [12 in]), older oaks, and oaks with well formed, dominant crowns, should be retained wherever oak enhancement activities occur. Very large oaks are rare and should be retained at the cost of efficient oak regeneration directly under their canopies.

**Rationale.** Stands of medium to large oaks provide more cavities for nesting than do stands of smaller oaks (Gumtow-Farrior 1991). Trees with well formed, dominant crowns may produce more acorns, and large live trees provide habitat for branch-nesting species. Large well-developed trees produce more mast for regeneration and wildlife consumption (Connel et al. 1973). Very large, old oaks are rare.

**Commented [AH1]:** This has likely guided many cities to specify a 12" protection measure. Small Oregon white oaks are not defined here. The emphasis of this document was for entire habitats, so grouping of trees. It specifically calls out individual tree size here for especially valuable and rare trees here, within oak stands.

## **MODEL BYLAWS FOR THE PROTECTION OF GARRY OAK & ASSOCIATED ECOSYSTEMS**

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Garry Oak Ecosystems Recovery Team. 2014. Model Bylaws for the Protection of Garry Oak and Associated Ecosystems. Victoria, B.C. 187 pages. (Version 1.0)

### **Page 124-125, 12.4 Challenges and Opportunities**

Tree bylaws typically allow the cutting of trees smaller than a certain diameter at breast height (dbh). This presents an immediate challenge to maintain Garry Oak ecosystems, as Garry Oak suffer from poor regeneration. In nature, very few acorns become mature trees. In order to germinate, acorns must be concealed or protected from acorn-loving consumers, have adequate soil moisture, and experience minimal competition from grasses and weeds. Early growth of oak seedlings is often very slow, less than 8 cm or three inches in height annually during the first year or two. They can take 10 or more years to grow 1 m in height.

Survival rates of both seedlings and saplings are low. Thus young oak benefit greatly from human care. (See GOERT's Garry Oak Gardener's Handbook at [www.goert.ca/handbook](http://www.goert.ca/handbook) for how to care for them.) In addition, growth rates differ widely among sites and even among seedlings on the same site (Devine and Harrington 2010). It is not uncommon to find a Garry Oak that is "small for its age". Even very old Garry Oak may be small in stature and dbh. Furthermore, in most cases Garry Oak become shade intolerant as they grow older. If they are overtopped by adjacent trees or shaded by a large building, their vigour will decline (*ibid*).

Along the coastline, Garry Oak sometimes have a krummholz form, with numerous crooked stems. Bylaw provisions that add the dbh of the main trunk and a percentage of the dbh of secondary stems are probably unsuitable for assessing and protecting even the oldest krummholz oak.

Another challenge for Garry Oak in many tree bylaws is in the definition of the absorptive rooting zone. “Wrist-sized” roots have been observed more than 15 m from the nearest Garry Oak tree. Tree bylaws often rely on the perimeter of the crown of the tree (i.e., the “drip zone”) in defining the rooting zone, which is insufficient for oak.

To help maintain what is left of Garry Oak ecosystems, it is important to protect all trees, including vulnerable seedlings and saplings and a tree’s root zone. **If specifying tree size, requiring that oak have reached a certain height is preferred over protecting trees that have attained a particular dbh.**

Even more importantly, tree bylaws for Garry Oak should expand to include more than just individual trees. Through rezoning or DPA, developers and purchasers can be required to plan developments in ways that minimize tree and habitat loss, and to maintain undisturbed natural or native plant zones through mandatory covenants with local land trusts and governments.

#### **PROTECTING GARRY OAK AREAS DURING LAND DEVELOPMENT**

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Handout, Garry Oak Ecosystems Recovery Team [www.goert.ca](http://www.goert.ca) February 2007

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Ensure that your tree protection bylaws will protect Garry oaks and other trees. Remember that Garry oaks may take 20 or more years to reach a significant size, so bylaws should protect small Garry oak trees as well as larger, older ones. Ideally, tree protection bylaws should protect the whole ecosystem and not just the trees.



## **ISA's Advice on Mitigation Measures:**

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### **1. Prevent net loss of tree canopy or forest type**

If some trees are protected as a condition for removing other trees, net loss of canopy or forest type always occurs over the short term. If mitigation trees are mature, additional long term canopy loss is possible when the mitigation trees die. The degree of loss is a function of the mitigation ratio (e.g., 1 for 1 mitigation could lead to 50% loss). Over the short term, canopy is normally reduced. Planting or afforestation has the potential to prevent long-term net loss if:

- (a) mitigation ratio is at least 1 successful new tree for each tree removed;
- (b) replacement species have similar mature canopy spread;
- (c) replanting or natural regeneration maintains the mitigation planting in perpetuity

<https://ufmptoolkit.net/two/inventories-assessments/isa-guidelines-for-developing-and-evaluating-tree-ordinances/>

### **Redmond WA – Current Code**

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<https://www.redmond.gov/DocumentCenter/View/8037/Redmond-9-Arborist-Report-PDF>

Significant trees removed shall be replaced at a 1:1 ratio;  
Landmark trees removed shall be replaced at a 3:1 ratio.

### **Species of Interest – Example**

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Trees less than 12 inches diameter at breast height (DBH) be replaced at 4:1

Trees between 12 and 24 inches DBH be replaced at 5:1

Trees greater than 24 inches BDH be replaced at 10:1

### **Example of replacement based on caliper**

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- i. A tree 0-10" removed requires 1 (one) 24" box (1.25 – 2.0" caliper replacement)
- ii. A tree 11-14" removed requires 1 (one) 36" box (2.5 – 3.5" caliper replacement)
- iii. A tree 15-20" removed requires 1 (one) 48" box (3.5 – 5.0" caliper replacement)
- iv. A tree 21-24" removed requires 1 (one) 60" box (4.0 – 6.0" caliper replacement)
- v. A tree greater than 24" removed requires 1 (one) 72" box (4.0 – 8.0" caliper replacement)

### **Additional Examples**

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Throughout the urban forestry industry, cities, states, and regions create policies for "no net loss" to protect tree canopy (UTC%) and/or count of trees. See examples below:

- City of Seattle:  
<https://www.seattle.gov/Documents/Departments/UrbanForestryCommission/2018/2018docs/DraftTreeRegsLetter041118TomSteve.pdf>
- City of Chamblee:  
<https://www.chambleega.com/DocumentCenter/View/1789/051617-No-Net-Loss-of-Trees-Policy?bidId=>
- State of Maryland  
<https://dnr.maryland.gov/forests/Documents/nonetlossfinalreport.pdf>

- Montgomery County, MD:  
<https://montgomeryplanning.org/planning/environment/forest-conservation-and-trees/no-net-loss-of-forest-initiative/>

Additional resources from Friends of Urban Forests

<https://friends.urbanforests.org/2018/04/03/no-net-loss-of-trees-key-component-of-tree-ordinances/>

E. *Shoreline protection*- See Article III, Section 78, Town of Oakland, Code of Ordinances.

**Section 17.11 Duration of arbor permit.**

Each Arbor Permit shall remain in effect for one year from the date of issuance. If the action applied for is not completed within the permit's effective date, a new Arbor Permit must be obtained.

**Section 17.12 Tree replacement standards for non-residential development.**

- A. *General.* All trees that are removed or destroyed shall be replaced by a species of trees approved by the town. The cost of replacing trees shall be incurred by the applicant/developer. The specifications regulating the replacement of trees are cited below. These requirements may be waived by the town for replacement of trees impacted by death, disease, acts of God (e.g., fire, storm, lightning), and other injuries not related to development.
  - 1. Characteristics of replacement trees. The replacement trees shall have at least equal shade potential, screening properties, and other characteristics comparable to that of the trees removed.
  - 2. Quantity of replacement trees. Replacement trees shall be required according to a standard of one inch DBH total replacement for each one inch DBH removed. Any number of trees may be utilized to meet the inch-for-inch requirement provided acceptable spacings and design are maintained.
    - a. The number of required replacement trees, or a portion thereof, may be waived by the town if the town determines that the remaining number of trees preserved on site are of sufficient number and quality to substantially comply with the purpose and intent of this section.
    - b. The maximum tree stock the town may require on a particular property shall be 30 inches DBH plus five (5) inches DBH per 1,000 square feet of area over 5,000 square feet, for replacement of specimen trees.
    - c. The maximum tree stock the town may require on a particular property shall be 20 inches DBH plus three (3) inches DBH per 1,000 square feet of area over 6,000 square feet, for land clearing and replacement of protected trees other than specimen trees.
  - 3. Minimum standard for replacement trees.
    - a. The minimum size of a replacement tree shall have a caliper of four (4) inches with a minimum planted height of eight (15) feet and shall be Florida Department of Agriculture nursery grade standard (quality) of No. 1 or better.
- B. *Tree Fund alternative.* In the event that the replacement trees cannot be installed on subject property, a contribution shall be made to the Town of Oakland equivalent to the value of the replacement trees.
- C. *Relocation.* Trees which are relocated on site must be maintained in a healthy manner or, in case of death, replacement will be required as provided in this Section.

**Section 17.13 Tree replacement standards for residential lots and subdivisions.**

- A. *General.* All trees that are removed or destroyed shall be replaced by a species of trees approved by the town. The cost of replacing trees shall be incurred by the applicant/developer. The specifications regulating the replacement of trees are cited below. These requirements may be waived by the town for replacement of trees impacted by death, disease, acts of God (e.g., fire, storm, lightning), and other injuries not related to development.
  - 1. Characteristics of replacement trees. The replacement trees shall have at least equal shade potential, screening properties, and other characteristics comparable to that of the trees removed.

2. Quantity of replacement trees. Replacement trees shall be required according to a standard of one inch DBH total replacement for each one inch DBH removed. Any number of trees may be utilized to meet the inch-for-inch requirement provided acceptable spacings and design are maintained.
  - a. Replacement trees for each developed fee simple single-family or duplex lot shall be required only when the tree removal will result in the lot containing less than four (4) trees, each with a minimum of four (4) inch DBH.
  - b. The removal of trees on undeveloped residential property that does not meet the criteria for tree removal, shall require tree replacement in accordance with this Article. A minimum of 3 trees with a caliper of 2 inches shall be provided per lot; however, the caliper may be increased for all three trees to accommodate replacement trees or street trees shall be provided adjacent to the right-of way, meeting all requirements of this Article.
  - c. The number of required replacement trees, or a portion thereof, may be waived by the town if the town determines that the remaining number of trees preserved on site are of sufficient number and quality to substantially comply with the purpose and intent of this section.
  - d. The maximum tree stock the town may require on a particular property shall be 30 inches DBH plus five (5) inches DBH per 1,000 square feet of area over 5,000 square feet, for replacement of specimen trees.
  - e. The maximum tree stock the town may require on a particular property shall be 20 inches DBH plus three (3) inches DBH per 1,000 square feet of area over 6,000 square feet, for land clearing and replacement of protected trees other than specimen trees
3. Minimum standard for replacement trees. The minimum size of a replacement tree shall have a caliper of two (2) inches and shall be Florida Department of Agriculture nursery grade standard (quality) of No. 1 or better.

**B. Relocation.**

1. Trees which are relocated on the site must be maintained in a healthy manner or, in case of death, replacement will be required as provided in this section.

**Section 17.14 Required landscaping.**

The required trees, landscaping, and irrigation shall be installed prior to the final inspection by the town. Required landscaping shall be installed according to the plans and specifications as submitted and approved by the Town of Oakland before a certificate of occupancy (CO) will be issued. Required landscaping may not be removed at anytime, unless otherwise exempted by the regulations of this Article.

The town may prohibit issuance of additional permits on lands where violations of this section are determined by the town to exist, until such time action is agreed to by the town and completed by the developer/owner.

To accommodate large canopy trees and to encourage preservation of dense tree cover or clumps of native vegetation, allowances may be granted by the town to allow fewer trees with greater DBH or more trees with smaller DBH provided the cumulative DBH exceeds the minimum tree requirement. Said allowances shall not be made purely for cost efficiency.

**A. Residential**

1. All residential lots must have canopy trees and landscaping on site as follows: