
TREE CANOPY CODE ANALYSIS AND RECOMMENDATIONS REPORT CITY OF BELLEVUE

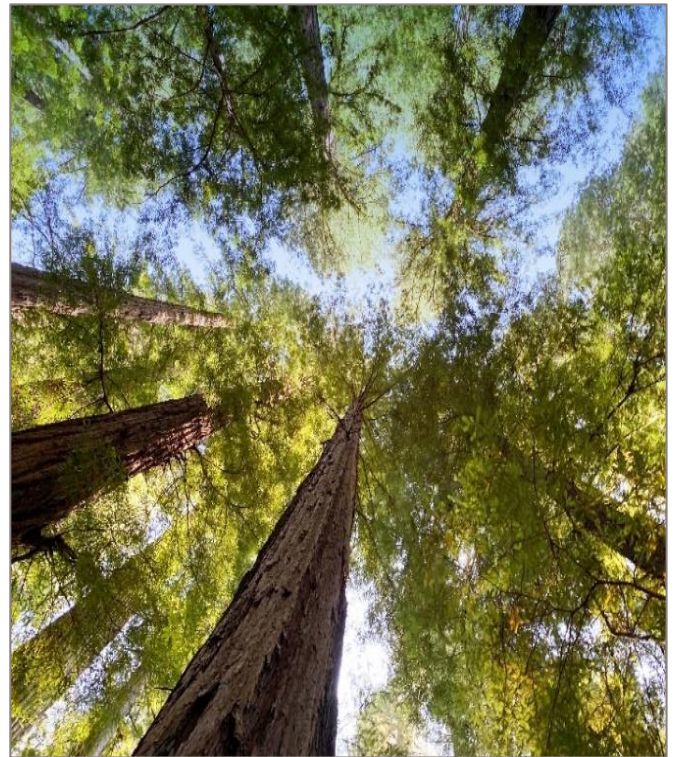
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Title-page image: Tree canopy taken by Il Kern.

The information contained in this report is based on the application of technical guidelines currently accepted as the best available science. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state, and federal regulatory authorities. No other warranty, expressed or implied, is made.



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Current tree retention requirements by land use zoning, average lot size,
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1 Introduction

The City of Bellevue’s urban and community forest is home to an estimated 1.4 million trees. This includes nearly 10,000 street trees, 2,800 acres of forested parks and open spaces, as well as trees on private residential, commercial, and industrial properties. Two-thirds of the trees that comprise Bellevue’s tree canopy are located on private property within its residential neighborhoods. Collectively, these urban trees provide health and economic benefits (Wolf et al 2020), increase property values (Wolf 2007), remove air pollution (Nowak et al 2006), reduce urban heat island effects (Makido et al 2019), limit stormwater runoff (Kuehler et al 2016), and improve water quality (Nowak et al 2000). In December of 2020, the City adopted the Sustainable Bellevue Environmental Stewardship Plan 2021-2025 that included increasing tree canopy coverage citywide to achieve a goal of 40 percent, ensuring sufficient tree code provisions, and incentivizing the “right tree in the right place.” To preserve existing trees and encourage development within the City, the City is updating existing tree code regulations found in both the Land Use Code (LUC) and the clearing and grading regulations within the Bellevue City Code (BCC).

The challenge of municipal code updates for urban forest management lies in the fact that urban forests are complex regional and watershed scale natural systems that are governed independently across local jurisdictions. Tree protection ordinances are established at the local level and are not regulated by the Growth Management Act as are critical areas ordinances. As a result, there are several approaches for regulating retention and replacement of trees within urban settings, as well as varying thresholds for significant and landmark trees, and code enforcement practices. Along with community values, the priorities and resources of the City have been used to guide the best approach for the City of Bellevue. This Tree Canopy Code Analysis and Recommendations Report draws from industry best practices informed by best arboriculture¹ and silviculture best practices, urban tree canopy science, critical areas, stormwater management, climate change impacts and adaptation, and sustainable landscape strategies. Additionally, recommendations reflect trends in local urban forest management and regulatory approaches from jurisdictions within the Puget Sound region. This report builds upon a preliminary memorandum of recommendations prepared by DCG/Watershed in October 2023 and incorporates discussions with City staff about previously identified topics. Topics include

¹ Best practices for arboriculture include but are not limited to the American National Standards Institute (ANSI) which are industry consensus standards developed by the Tree Care Industry Association written by the Accredited Standards Committee. ANSI standards cover everything from specific tree care specifications such as pruning and planting to worker safety.

significant tree threshold, quantifying tree retention, tree replacement, code enforcement, and landmark trees. Other topics include definitions and professional qualifications.

1.1 Methodology

The DCG/Watershed project team met with City Staff to discuss the current tree related regulations and priority issues to be addressed in the upcoming code update. Priorities identified during stakeholder meetings and public comment include protection of larger trees, enhancing the overall health of Bellevue's tree canopy, and preserving Bellevue's character, livability, and neighborhood identity. Based on initial discussions, a memorandum of Preliminary Draft Tree Canopy Code Recommendations was prepared and presented to the City for review. Following review, the City and DCG/Watershed met for two external work sessions to discuss different methodologies and implementation issues, to further narrow down potential opportunities for amendments to tree code regulations.

This report provides a synthesis of the analysis, work sessions, and public engagement accomplished to date. Section 2 provides a synopsis of the existing code regulations followed by recommendations for updating the City's existing tree retention and replacement regulations and is organized by topic. Section 3 addresses additional regulatory considerations not addressed within the analysis of the existing regulations. Municipal code sections where the current tree regulations are found are linked in the references section of this report.

1.2 Plan and Policy Review

DCG/Watershed reviewed LUC 20.20.900 Tree Retention and Replacement, BCC 23.76 Clearing and Grading, LUC 20.20.520 Landscape Development, LUC 20.25D.110 (BelRed landscape development regulations), and Landmark Tree Ordinance 6665. Additionally, DCG/Watershed completed a jurisdictional code comparison of other cities within the Puget Sound region with similar land use and urban interfaces that have updated their municipal codes within the past three years. These jurisdictions are referenced throughout this document. See Appendix A for a table of findings.

1.3 Stakeholder Engagement

The City is following a public engagement plan with six modes of outreach to provide the public, stakeholders, and interested parties with opportunities to be informed and provide comments on the project.

- **Process IV Requirements.** Consistent with Chapter 20.35 LUC procedural requirements, public input will be solicited by a notice of application, notice of public hearing and the

required public hearing. The required public hearing is anticipated to take place during the first quarter of 2024.

- **Public Information Sessions.** At least two public information sessions will be held to provide information on the project and solicit feedback from the general public. The first public information session was held on June 8, 2023, with thirty-five people in attendance. The second public information session took place on January 11, 2024, with forty-seven people in attendance.
- **Listening Sessions.** Focused listening sessions with representatives from community members, tree service providers, developers, environmental advocacy organizations, and Bellevue departments working with tree regulations.
- **Online Questionnaire.** Online questionnaire translated into multiple languages was available May 19-June 12 to gather broad perspectives on project priorities, ideas, and concerns. The questionnaire received 687 complete responses.
- **Direct Engagement and Feedback.** Dialogue with environmental advocates, residents, developers, and neighbor and peer cities. Staff sent an invitation to all Bellevue neighborhood associations offering to present at their meetings on the project and answer questions, but interest to date has been limited. Staff engaged with the Bellevue Development Committee in January 2024.
- **Online Presence.** Engaging Bellevue and City webpages to provide the public information about the project, who to direct questions to, and how to submit comments.

2 Analysis of Existing Regulations and Recommendations

Tree-related regulations are contained in Landmark Tree Ordinance 6665, Land Use Code, and Clearing and Grading Code. Specifically, the following code sections have tree related provisions:

- LUC 20.20.520 *Landscape development*;
- LUC 20.20.900 *Tree retention and replacement* (which establishes tree retention requirements applicable to development proposals);
- LUC 20.25D *Special and Overlay Districts – BelRed* (which outlines landscaping and design criteria, significant tree retention and pruning specific to BelRed);
- Title 23, Construction Codes within BCC 23.76.035 (which establishes permit requirements to remove trees outside the development process);

- Title 23, Construction Codes within BCC 23.76.060 *Clearing – Vegetation preservation and replacement* (which includes tree protection measures during development projects).

Additional provisions for trees within the shoreline and critical areas are located in LUC 20.25E *Shoreline Overlay District* and LUC 20.25H *Critical Areas Overlay District*, respectively. While these regulations are not the focus of this review, amendments to these sections may be necessary based on updates to the other tree canopy regulations. Any amendments will be addressed in future, separate updates to these sections.

2.1 Significant Tree Threshold

A significant tree refers to any tree that is subject to the City's tree regulations. The significant tree threshold is intended to promote the retention of the City's tree canopy and the many ecosystem service benefits it provides to the community. Because it can take years or decades for a tree to reach maturity and the rate of maturity varies by tree species and growing conditions, the significant tree size threshold should be set to capture trees that are already established in the landscape. Size thresholds are typically measured by the diameter at standard height (DBH) or diameter at breast height (DBH). The City of Bellevue currently uses DBH as a metric to measure trunk size.

2.1.1 Existing Regulations

The City currently defines a significant tree in LUC 20.50.046 as:

"A healthy evergreen or deciduous tree, eight inches in diameter or greater, measured four feet above existing grade. The Director of the Development Services Department may authorize the exclusion of any tree which for reasons of health, age or site development is not desirable to retain."

2.1.2 Recommendations

Significant Tree Size – Jurisdictional Trends

The City has requested data to assess whether to change the threshold of significant trees from 8 inches to 6 inches. To date, there has not been a statistically significant evaluation of impacts on canopy protection that differentiates between a six- and eight- inch DBH regulated threshold. However, the most common significant tree threshold across Puget Sound cities is six inches DBH, (see Appendix A, Jurisdictional Comparison Table). Seven of the eight cities evaluated had significant trees defined as six inches, with two cities setting alders and cottonwoods at eight inches or greater². At eight inches, Bellevue's current size threshold for

² Alders (*Alnus sp.*) and cottonwood (*Populus sp.*) species are fast growing early successional species, maturing at about 60 to 70 years. Both are important species ecologically but can cause infrastructure conflicts in the urban

regulated significant trees is slightly higher than other jurisdictions except for the City of Sammamish, which regulates conifers at eight inches and deciduous trees at 12 inches. The justification for setting a lower threshold would be based on current trends in urban forest management both regionally and across the county, development standards, and the opportunity to protect, retain, and replace a greater number of trees in the urban landscape. This would also potentially capture more recently planted trees from development within the past 5 to 10 years, protect trees of varying ages, and provide a standard consistent with other local jurisdictions.

Viable Trees

Specifying that a significant tree must be healthy or viable by definition is good practice for ensuring long-term tree retention. The intent behind retaining trees and receiving credit for them (as opposed to replanting) is to maintain existing mature tree canopy and avoid the temporal loss of mature tree canopy caused by tree removal. If unhealthy or non-viable trees are retained and allowed to count towards tree credits, but do not survive more than a few years due to disease or damage, the intent of retention is not achieved as a result. Some municipalities have gone so far as to provide a viability chart with specific information required as part of the tree inventory and arborist report such as the City of Kirkland (KZC 95.30). Should the City revise the definition of significant tree, we recommend maintaining the inclusion of “healthy” or “viable” within the definition. Objective criteria on what constitutes a “viable” tree can be provided within a separate section of the code dedicated to establishing Arborist Report standards (see Section 2.7 of this report). In practice, these criteria will be used to assess existing trees and determine whether they meet the City’s definition of a significant tree. Alternatively, the definition could include more specific viability criteria and reference the Tree Condition Rating table directly, such as in the following example:

“Healthy tree” means a significant tree on a proposed development that is rated as excellent, good, or fair based on the tree condition ratings in Table XX - Tree Condition Rating.

Defining Exemptions

Lastly, the City could consider removing the following from the significant tree definition: *“The Director of the Development Services Department may authorize the exclusion of any tree which for reasons of health, age or site development is not desirable to retain.”* Instead of including this within the definition, we recommend providing a more specific list of criteria or exemptions within the code, so it is clear under which circumstances a tree is not considered significant, and thereby regulated, under the tree code.

environment due to their robust root systems. Aging cottonwoods are also prone to limb failure and cause maintenance issues in the built environment (Dirr et al. 2019; Zobrist 2014).

2.2 Quantifying Tree Retention

To determine the level of tree retention and replacement requirements, cities, and counties throughout the Pacific Northwest use different methodologies. Commonly used strategies for quantifying tree retention and replacement include the tree density credit approach, canopy cover approach, percent of total tree diameter inches, and percent of total significant trees. Within these methodologies, there is variation in application and implementation based on other development and landscaping codes, community priorities, and programmatic and staffing resources. Each of these methodologies has cost implications to both the jurisdiction and the applicant, which vary based on the level of in-house urban forestry expertise and the rigor of review requirements established. The Project Team discussed the above methodologies in the earlier drafted memorandum. Following discussion with the Planning Commission and further internal analysis, the City has decided to pursue a tree density credit approach. Therefore, Section 2.2.2 focuses on the implementation of a tree density credit method for tree retention and replacement.

2.2.1 Existing Regulations

City review of tree retention is required for any permit, approval, or review that includes land alteration or development. Currently, tree retention is governed by both land use type and neighborhood and is further divided at the site level by perimeter landscape areas and interior areas. The City's approach to tree retention is based on retaining a percentage of "diameter inches of significant trees" located on the site. Outside of a development proposal, tree removal is reviewed as a minor clearing and grading permit under limited circumstances. This is an effective method that the City could choose to maintain, with some modifications to expand and ensure consistent application of the code across land use zones and neighborhoods and addition of requirements and incentives for preserving and protecting high value trees (e.g., large diameter trees, Landmark Trees etc.).

Perimeter landscape areas are established in LUC 20.20.520.F.1 and apply to multi-family, commercial, office, and light industrial land use districts. All significant trees not deemed to be hazardous shall be retained in perimeter landscaping areas. Properties within the BelRed land use district must conform with perimeter landscape development requirements outlined in LUC 20.25.D.110. For subdivisions, short subdivisions, planned unit development, change in lot coverage, or change in area devoted to parking and circulation, areas of the site other than required perimeter landscaping must retain at least 15 percent of the diameter of significant trees existing in this area. For subdivisions, short subdivisions, and planned unit developments, applicants shall retain a minimum of 30 percent of the diameter inches of significant trees existing on the total site area. For new or expanding single-family structures with a 20 percent or

greater increase in impervious surface area, the applicant shall retain a minimum of 30 percent of the total diameter inches.

LUC 20.20.900.E establishes retention requirements for significant trees in the R-1 Land Use District (Bridle Trails Subarea). All non-hazardous significant trees within the first 20 feet adjacent to property lines and at least 25 percent of the cumulative diameter inches of existing significant trees shall be retained. The retention provisions within LUC 20.20.900 do not apply to any Downtown or East Main Land Use District (LUC 20.20.900.D.4). Appendix B identifies current land use zoning districts, the average lot size, and any tree-related development requirements specific to the site zoning or district.

When calculating retention requirements, alder and cottonwood trees are discounted by a factor of 0.5. In applying the requirement for retention of significant trees, preservation shall prioritize healthy significant trees over 60 feet in height as the highest priority, significant trees that form a continuous canopy, significant trees which contribute to the character of the environment, significant trees which provide winter wind protection or summer shade, groups of significant trees which create a distinctive skyline feature, and significant trees in areas of steep slopes or adjacent to watercourses or wetlands.

2.2.2 Recommendations

Quantifying Tree Retention

The City would like to pursue a more comprehensive and consistent approach to structuring tree retention and replacement requirements, while acknowledging the unique development scenarios and requirements within each land use zone. The tree density credit methodology is an effective method to uniformly achieve tree retention requirements across various districts within the same zone. Tree density consists of existing trees, replacement trees, or a combination of both, and is similar to a timber stocking level³ that quantifies density based on the trunk diameter (DBH) of existing trees. This is considered a general indicator of tree size and canopy cover over time.

Some benefits to using tree credit systems include:

- The relative ease of data collection, regardless of expertise;
- Does not require access to aerial imagery or online data sources;
- Trunk diameter is generally more easily and accurately quantified; and

³ Timber stocking level is a quantitative description of the number of trees, basal area, or volume per acre in a forest stand compared with the optimum level for health and growth, typically for timber production. The same concept can be applied to measure existing trees in the urban environment to assess retention of existing trees and the space available for replacement trees in a development setting.

- Collection of tree diameter by species can be used as a correlation for canopy, age, and expected size at maturity when assessing retention values for specific species.

One of the challenges of using a tree credit system is that without clear instructions or a “user guide,” code language can be difficult to interpret and understand for the layperson, whether that individual is a member of City staff or an applicant. Instructions for implementing this method and how it applies to permit review should be provided to planning staff and published on the City website. We also recommend educational materials be developed and provided to the public for additional guidance.

Other Puget Sound jurisdictions that use variations of the tree density credit approach include Renton, Burien, Kirkland, Olympia, and Woodinville (See Appendix A and References section for link to City codes). The Cities of Burien and Kirkland are two local cities that have implemented this approach and could serve as models for the City of Bellevue.

Burien (BMC 19.26) requires a minimum tree density credit be maintained on each lot regardless of development status. For single-family and multi-family developments, one tree credit per 1,000 square feet of developable area is required, while 0.15 tree credits per 1,000 square feet is required for commercial, industrial, or non-residential lots. For example, if a single-family lot has a developable area of 6,600 square feet, the minimum required tree credits would be seven (7) [$6,600/1,000 = 6.6$ rounded up to 7].

The City of Kirkland (KZC 95.30) distinguishes between tree removal on private property not associated with development activity and tree replacement standards associated with development activity. The required minimum tree density is 50 tree credits per acre (43,560 square feet) for single-family dwellings, short plats, subdivisions, two/three-unit homes, cottage/carriage dwellings, and/or accessory structures and associated demolition and land surface modification. Other landscaping requirements are based on zoning district. For example, a 7,500 square foot sized lot would require nine (9) tree density credits [$7,500/43,560 * 50 = 8.6$, rounded up to 9 credits].

Implementation in Bellevue

The residential districts in Bellevue are home to the majority of existing significant trees within the City; therefore, development within these districts has the largest impact on tree retention. The City could consider establishing a minimum tree credit value for each zone, with higher tree credit values required for residential districts. Using the lot size, parcels within specific land use zones will have a specific minimum tree density that must be met. During the permit review process, the existing tree credits are calculated based on trees proposed for retention versus those proposed for removal.

Exemptions

As mentioned previously, any Downtown Land Use District is currently exempt from the tree retention requirements of LUC 20.20.900. However, elements of the landscaping code (LUC 20.20.520) that do not conflict apply to the Downtown Land Use District, including LUC 20.20.520.F and 20.20.520.J.

Establishing Required Tree Density Credits

The number of tree credits required for a site are determined based on the lot size of a parcel. Lot size should be calculated to include the area under development, which typically excludes the square footage of any area within the shoreline or critical area overlays due to overarching vegetation management policies. The City has expressed interest in excluding critical areas and associated buffers from counting toward a lot's tree density credits or requirements. Given that the City's SMP (LUC 20.25E) establishes shoreline vegetation conservation areas and includes replacement standards for significant trees, the portion of a lot designated as shoreline vegetation conservation areas could also be excluded from tree density requirements. To provide clarity, the City will establish a definition of "tree canopy lot area" to be used for calculating tree density credits.

The City has expressed interest in developing tree retention and replacement requirements that would be administered consistently by land use types rather than by neighborhoods. As mentioned previously, there are two common alternatives for establishing minimum tree density credits: 1) assigning tree credits per 1,000 square feet of buildable area and 2) assigning tree credits per acre. Table 1 provides examples of the two approaches for establishing required tree densities using Bellevue's land use districts. The specific values to be used in the code will be informed by staff and stakeholder review and testing based on typical Bellevue developments.

Table 1. Potential Minimum Tree Credits Requirements

Land Use District	Required Minimum Tree Credits per 1,000 Square Feet of Buildable Area	Required Minimum Tree Credits per Acre*
Single Family Residential (R-1, R1.8, R-2.5, R-3.5, R-4, R-5, R-7.5)	1	50
Multi-family Residential (R-10, R-15, R-20, R-30)	.75	30
Commercial/Office/Light Industrial	.50	20
BelRed	.50	20
Downtown	Exempt	Exempt
East Main	Exempt	Exempt

*Lot size used in calculation is the buildable area of a lot that excludes critical areas.

Minimum tree credit values were established by reviewing average lot sizes within the various districts of the City (see Appendix B). With two-thirds of the City's total trees located in residential neighborhoods, the residential districts provide the greatest opportunity for tree retention and increasing canopy coverage. These districts are also the areas within the City that are under increasing development demands. However, retention criteria can be adjusted as needed.

An example scenario for each method using the average lot size (12,991 square feet) for a parcel in the R-5 Single Family Residential zoning district is shown below:

- **Example 1 – Per Square Feet of Buildable Area**
 - Retention Criteria: One (1) tree credit per 1,000 square feet of buildable area.
 - $((12,991 \text{ SF} / 1,000 \text{ SF}) * 1) = 12.99$ credits, rounded up to 13.
 - The required minimum tree density is 13 credits.

- **Example 2 – Per Acre of Buildable Area**
 - Retention Criteria: 50 tree credits per Acre.
 - $(12,991 \text{ SF} / 43,560 \text{ SF}) * 50 = 14.9$ credits, rounded up to 15.

- The required tree density is 15 credits.

Calculating Existing Tree Credits

Once the required tree density is established, any existing credits for that parcel are calculated through an inventory of on-site, significant trees. In both scenarios above, existing significant trees are assigned a credit value based on the diameter at standard height as outlined in Table 2, below. Note that the exact tree credit value can be adjusted.

Table 2. Tree credit values (Adapted from Kirkland Zoning Code 95)

Significant Trees									
DBH	6"-10"	Larger than 10" and up to 12"	Larger than 12" and up to 14"	Larger than 14" and up to 16"	Larger than 16" and up to 18"	Larger than 18" and up to 20"	Larger than 20" and up to 22"	Larger than 22" and less than 24"	24" or greater and all Landmark
Tree Credits	1	2	3	4	5	6	7	8	9

Figure 1 demonstrates a single-family home in the R-5 Land Use district that is going to be remodeled and expanded. The buildable area of the site is 12,991 square feet and therefore the site will require 13 tree credits. Based on the tree inventory, the site currently has 20 tree credits. In the example below, the permit applicant could meet the required tree credits by retaining a combination of existing trees.

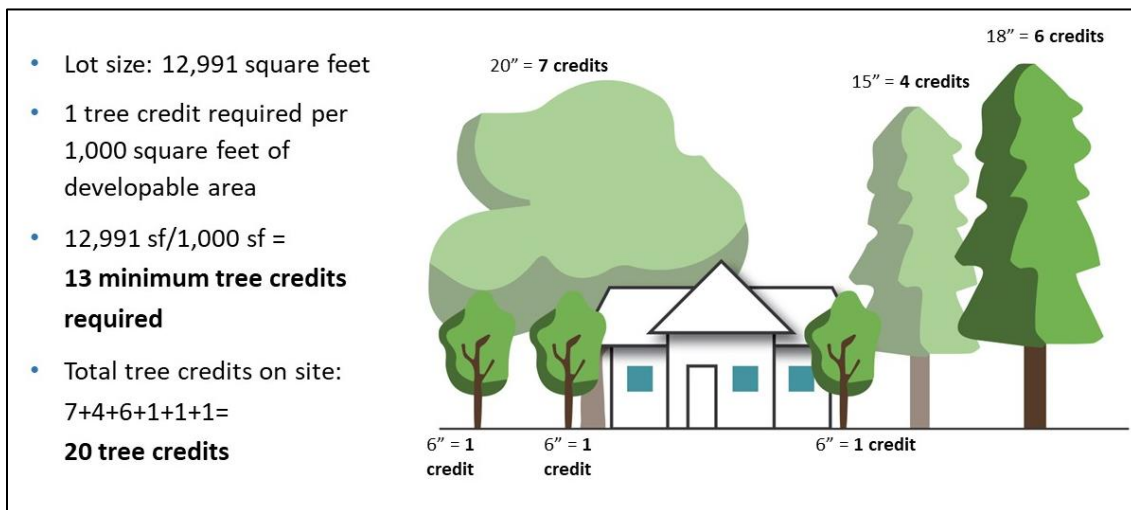


Figure 1. Tree Retention using Tree Density Credit Method

2.3 Tree Retention Priorities

2.3.1 Existing Regulations

LUC 20.20.900 currently contains the following priority list for preservation of significant tree types:

1. Healthy significant trees over 60 feet in height;
2. Significant trees which form a continuous canopy;
3. Significant trees which contribute to the character of the environment, and do not constitute a safety hazard;
4. Significant trees which provide winter and wind protection or summer shade;
5. Groups of significant trees which create a distinctive skyline feature;
6. Significant trees in areas of steep slopes or adjacent to watercourses or wetlands;
and
7. Significant trees located within the first 20 feet adjacent to a property line.

While these preservation priorities are beneficial, some are subjective and/or could be modified to better achieve desired retention outcomes.

2.3.2 Recommendations

The City could choose to maintain the current priority list and make modifications that would provide clarity and remove ambiguity.

The first retention priority listed (healthy significant trees over 60 feet in height) does not fully capture the intent of prioritizing the retention of larger sized trees as height is not the only indicator of tree size. Some tree species grow taller than others and at faster rates. A better metric to capture larger sized trees that are ecologically significant is by diameter at standard height (DBH). This could be done by either establishing a threshold for what constitutes a larger sized tree and/or could be accomplished by establishing landmark trees based on species and DBH as a priority for retention.

The second retention priority listed -*significant trees which form a continuous canopy* describes a grove of trees and could be simplified by stating "grove trees," which would be defined explicitly in LUC 20.50. For example:

"A group of three or more healthy significant trees with overlapping or touching crowns."

Additionally, the City could consider outlining certain criteria that must be met for a tree to be included in a grove. For example, some jurisdictions do not allow non-native deciduous trees to be included in a grove and some solely include coniferous trees.

The idea behind setting tree retention priorities is to further strengthen retention of desired and ecologically significant trees that will benefit the urban forest in the long-term. Both larger diameter trees and grove trees provide more ecological benefits to the urban forest than a single, smaller sized tree. In conclusion, the City could consider updating its retention priority order to specifically include groves and landmark trees, as well as significant trees in perimeter landscaping areas. This would require providing clear definitions for both landmark trees and grove trees.

2.4 Tree Replacement

2.4.1 Existing Regulations

Currently, Bellevue's tree code only requires tree replacement within the R-1 Land Use District in the Bridle Trails Subarea for any type of development. For any lot with eight or less significant trees, a planting plan showing a 1:1 ratio is required. The code requires that replacement trees be locally adapted to the Pacific Northwest climate and be a minimum of six feet in height at time of planting. LUC 20.20.900.G also specifies that a reduction in tree retention may be allowed by the Director if the modification proposal includes the replacement of significant trees in equivalent diameter inches to those removed. Modifications may also include the replacement of other natural vegetation to promote the natural vegetated character of a site.

2.4.2 Recommendations

In the interest of establishing a future canopy and mitigating the loss of removed trees, we recommend that the City consider requiring tree replacement across all land use districts. The approach to tree replacement standards will be partially driven by the tree density credit requirements. Ideally, tree retention and replacement standards would be structured based on the size (DBH) and species of the trees removed rather than simply a 1:1 ratio. For example, a 24-inch diameter western redcedar that is removed would ideally not be replaced on a one-to-one ratio with a deciduous dwarf ornamental cherry. At maturity, the cherry would not replace the ecological values provided by the conifer. Many jurisdictions we reviewed required a 1:1 ratio for significant trees but had additional provisions for larger diameter trees of either 3:1 or 2:1 replacement ratio (See Appendix A, Jurisdictional Comparison Summary for more information).

To ensure that the trees being removed, and long-term canopy benefits are adequately replaced, there are several key factors the City could consider adding specifications for, including size, species, and location.

Species and Size

The retention and replacement of native conifers (and other conifer species as approved by the City) should be prioritized. Conifer species such as Douglas fir, western redcedar, and western hemlock would ideally be retained or replaced in kind. Although they provide valuable canopy cover, native deciduous trees (e.g., black cottonwood and red alder), small ornamental trees, and fruit trees do not offer the same level of year-round ecosystem service benefits that conifers provide in Western Washington. In other circumstances, it can be helpful for applicants to choose replacement trees from a list of approved species. Jurisdictions such as Kirkland provide a native tree list, as well as a landmark tree replacement list. The City could consider adding a provision that specifies conifer trees approved for removal shall be replaced in-kind, where feasible. We also recommend adding a provision stating that trees planted to form a hedge and Thuja/Arborvitae (or other slow-growing conifer) species do not count toward tree density credits. In other jurisdictions, not explicitly prohibiting hedges from counting toward tree density requirements led to an excess of hedges of Thuja/Arborvitae as replacement trees. These do not provide habitat functions equivalent to mature native trees.

The City could take it one step further and develop a prohibited tree list to include trees known to be invasive in urban areas such as tree of heaven and English holly, or trees that may be undesirable in urban settings, such as red alder and black cottonwood. The minimum size for replacement trees is typically 1.5 to 2-inch caliper for deciduous trees and 6 to 7 feet in height for conifer trees. We recommend that to count toward tree credits, a replacement tree must be a minimum of 2-inch caliper for deciduous trees and 6-feet tall for conifer trees. Such replacement sizes could be worth one tree credit.

Location

To ensure that the intent of replacement trees is met, the City could consider establishing a priority list of replanting locations. Ideally, replacement trees are planted on-site to maintain tree canopy within that land use area. Priorities for on-site tree planting could include within setbacks or transition zones, near areas adjacent to existing tree groves, and trees within critical area buffers. Regardless, the City should specify that the selected location must be suitable for the replacement tree to reach maturity.

If replacing in-kind and on-site is not feasible due to design or development constraints, then a combination of on- and off-site planting should be required, using species appropriate to the conditions for on-site planting and planting larger canopy trees off-site at another location. Replacement tree planting locations should include developments with high rates of impervious

surface coverage to reduce the heat-island effect in these areas. Although there would still be a temporal loss in canopy cover, the goal is that eventually the canopy and the ecological value will at some point be replaced. To minimize future canopy losses in any specific land use district, the City should prioritize, whenever feasible, that replacement trees be planted in the same district in which they were removed. The City should also clarify that trees planted in the public right-of-way as part of a development project do not count toward tree density credits.

2.5 Landmark Trees

2.5.1 Existing Regulations

While landmark tree regulations are not set forth in the City's tree code, an interim ordinance (ordinance no. 6665) was adopted in June 2022 that establishes basic permit requirements for removal of landmark trees throughout all Bellevue neighborhoods and Land Use Districts. Landmark trees are defined as any tree 20 feet or more in height with a diameter at breast height of 24-inches or greater. The ordinance requires that prior to permit issuance, the applicant must provide the City with the contact information and valid Washington State contractor registration number of the licensed contractor to conduct tree removal. It further states requirements under the ordinance do not apply to any tree removal associated with any application subject to the requirements of LUC 20.20.900. On December 4, 2023, ordinance no. 6665 was extended through 2024 or until a permanent code is adopted.

2.5.2 Recommendations

It is our understanding that the City would like to establish and expand permanent regulations regarding landmark trees. This should first include establishing clear criteria for a landmark tree. While 24-inches is a common size threshold among other jurisdictions, the requirement for the same tree to also be 20 feet in height is not necessarily a good metric, as diameter and height are not always directly proportionate, and the height and diameter of a tree are influenced by species and environmental factors. In addition to permitting and contractor requirements, the City could also consider establishing increased levels of protection, removal, and replacement standards.

Definition

Options for defining landmark trees include providing a table organized by species, (Table 3), establishing a single diameter threshold, or a combination of both. For example, the City of Burien regulates any tree 30 inches or greater as an exceptional tree, but also has an Exceptional Tree Table with smaller threshold sizes for common tree species of the Pacific Northwest whose maximum size at maturity is smaller. In other jurisdictions, commonly used landmark or exceptional tree thresholds are 24, 26, 30, and 32-inch DBH (See Appendix A). Setting thresholds

based on both size and species would qualify more trees as landmark status and combined with increased protections, could allow for the retention of significant tree canopy coverage. The City is considering maintaining the current threshold of 24-inches and removing the 20-foot height stipulation, as well as including a list of native species with smaller DBH sizes at maturity.

Table 3. Recommended Landmark Tree Thresholds based on Species and Size

Common Name	Scientific Name	Diameter at Standard Height (DBH)
Grand fir	<i>Abies grandis</i>	24 inches
Bigleaf maple	<i>Acer macrophyllum</i>	24 inches
Pacific madrone	<i>Arbutus menziesii</i>	8 inches
Port Orford cedar	<i>Chamaecyparis lawsoniana</i>	24 inches
Cascara	<i>Frangula purshiana</i>	8 inches
Sitka spruce	<i>Picea sitchensis</i>	24 inches
Lodgepole or shore pine	<i>Pinus contorta</i>	12 inches
Western white pine	<i>Pinus monticola</i>	24 inches
Douglas-fir	<i>Pseudotsuga menziesii</i>	24 inches
Pacific yew	<i>Taxus brevifolia</i>	8 inches
Western redcedar	<i>Thuja plicata</i>	24 inches
Western hemlock	<i>Tsuga heterophylla</i>	24 inches
Tree not listed in this table	Not applicable	24 inches or greater

Protection

Removal of landmark trees results in an immediate loss of ecologically significant canopy and associated functions and values. As such, landmark trees should ideally have higher levels of protection. The City could consider adding higher levels of protection, such as establishing landmark trees as high retention priority prohibiting removal of landmark trees with certain exceptions, and/or offering incentives for retention of landmark trees. Incentives for retention of landmark trees could include reducing a site’s total tree density credit requirement or assigning extra credit for the landmark tree to be retained but could also include deviations from dimensional standards. For usability, these regulations could be directly integrated into the revised tree retention and replacement regulations as a stand-alone landmark tree subsection.

Authorized Removal and Replacement

Removal of landmark trees is often only allowed under limited circumstances and generally requires a demonstration of need. This is the case in the Cities of Seattle, Kirkland, Issaquah, Renton, and Burien. Exceptions that grant the removal of landmark trees may include the following scenarios:

- The tree is determined by a qualified tree professional to meet the criteria of a hazard tree or nuisance tree;
- The tree is unhealthy prior to development, as determined by a qualified professional; and
- Retention of the tree will limit construction within the buildable area of a site or prohibit reasonable development.

If approved for removal, conifer species such as Douglas fir, western redcedar, and western hemlock should be replaced in-kind and on-site, if feasible. Further, we recommend setting increased replacement requirements to offset the ecological loss. A 3:1 or 2:1 replacement ratio is commonly used by other jurisdictions. These landmark replacement trees could be in addition to tree density credit requirements or counted toward a site's tree credits.

2.6 Fee in-lieu

The City does not currently offer a fee-in-lieu option in its existing tree retention and replacement regulations but has expressed an interest in doing so. The City could consider offering fee-in-lieu for applicants if replacement trees cannot be planted on a site due to inadequate spacing, existing conditions, or other extenuating circumstances. However, this should be prefaced with a statement that clearly specifies the priority for on-site replacement trees to prevent applicants from excessively and unnecessarily "buying" tree credits rather than replanting. The City could also consider establishing a maximum percent of replacement tree credits allowed to be purchased through the fee-in-lieu option. Typically, funds collected go toward a city tree account generated for planting trees at designated sites within the City or toward other urban forestry related expenses. The Cities of Issaquah, Renton, Redmond, and Burien allow fee-in-lieu if neither on-site nor off-site tree planting is feasible. Funds collected go into a City tree account/fund and fees per tree are established based on the cost of the tree (based on a tree appraisal), market rate installation costs, maintenance for three years, and fund administration. Specific examples from other jurisdictions include:

- The City of Kirkland offers a fee-in-lieu option for applicants if all replacement trees cannot be planted on-site, at a cost of \$450 per tree credit that goes into the City Forestry account.
- The City of Edmonds requires clear documentation that all replacement options have been considered and are infeasible before allowing tree replacement fee-in-lieu. The amount of the fee is \$1,000 per tree, except for significant trees greater than 24 inches DBH. Fees for trees 24 inches DBH or greater are based on an appraisal of the tree value. Fee-in-lieu payments shall not exceed \$2.00 per square foot of the lot area.

- The City of Seattle allows a combination of planting trees on-site, planting trees off-site, and/or payment in lieu. Payments are made to the Seattle Department of Construction and Inspections.

Ultimately, the City will need to set a price per tree credit and decide what the collected funds will go toward.

2.7 Code Enforcement

2.7.1 Existing Regulations

The City of Bellevue currently regulates code violations for tree related issues through Chapter 1.18 BCC and monetary penalties for violations are imposed under BCC 1.18.045. For tree-related code violations, the current code requires that the City first seek voluntary compliance with the requirements of the code. If that is not possible, the City may then issue a notice of civil violation. Where a notice of civil violation is issued, a hearing before the Hearing Examiner is automatically scheduled. Following the hearing, the Hearing Examiner issues a decision as to whether a violation occurred, what corrective action is required, and what monetary penalties shall be imposed.

2.7.2 Recommendations

Code enforcement could include both civil (monetary) penalties, which the City currently enforces, and a comprehensive monitoring and inspection program.

Construction Monitoring

Impacts from construction activities can include damage to roots and trunks, and soil compaction, which reduces oxygen and water availability. Evidence of construction impacts is often not visible for several years after the impact occurred, and retained trees may eventually fail as a result (Matheny et al 1998). Ensuring proper tree protection measures are in place can prevent construction activities from detrimentally impacting retained trees.

Preconstruction monitoring would ensure that no significant trees are removed prior to construction activities and that the proper significant trees are retained and adequately protected, as depicted on the submitted plans. The City already has tree protection requirements outlined in the City's Clearing and Grading Best Management Practices. The monitoring program would ensure these BMPs are applied accordingly. Alternatively, post construction monitoring would allow the City to confirm that approved plans were followed, including retention of significant trees and installation of replacement trees.

Maintenance Agreements

A maintenance agreement could be required prior to permit issuance that legally requires the

applicant to adhere to the approved plans and code requirements. This document could be recorded with the County. The City would collect the appropriate recording fees from the applicant.

2.8 Staffing and Program Considerations

The City is interested in outlining specific qualifications and credentials for professionals engaged in the tree permitting process. There are two components related to professional requirements pertinent to this process that could be considered: (1) the qualifications of the arborist conducting the tree inventory and tree protection reports and (2) the expertise of the planning professional evaluating the permit application.

2.8.1 Staffing

In many jurisdictions across Western Washington, development permit applications are being evaluated by city land use planners as well as various department specialists related to critical areas, engineering, public works, etc. The ability to understand and interpret site plans is critical, especially as they pertain to the construction impacts on retained trees. Ideally, the planners that are evaluating urban forestry related permit applications should have some background in arboriculture or horticulture, understand the impacts of construction activities (excavation, trenching etc.) on tree roots and tree health, and determine if plant protection and replacement trees are suitable to the proposed location. Some local cities have ISA certified arborists or urban foresters that support permit review (e.g., Kirkland, Edmonds, Seattle, Mercer Island). Other cities hire third-party consulting arborists to conduct urban forestry reviews of development permits. However, not all municipalities have the funding for such a position and rely on land use planners to evaluate tree requirements.

The City has indicated it is interested in evaluating the benefit of hiring an Urban Forester or certified Arborist to assist in development permit reviews and urban forestry related matters. While this would be ideal, Planning staff would still likely conduct urban forestry reviews to some extent and should understand urban forestry concepts. Having a sound Arborist Report prepared by a qualified professional that provides accurate information and an overall assessment of the trees on-site would greatly reduce the burden placed on Planning staff during reviews.

2.8.2 Professional Credentials

Various jurisdictions have added more detailed requirements for the arborists conducting tree inventories, evaluating tree health and risk, and developing tree protection plans. The City of Bellevue already regulates that tree protection plans must be prepared by a certified arborist or registered landscape architect (BCC 23.76.060). The City could consider expanding this

requirement to include more specific criteria. Example requirements can be found in the City of Mercer Island City Code *MICC 19.16.010* or the City of Burien *BMC 19.10.432*. One example from the City of Burien's recent tree preservation code update (*BMC 19.10.432*) reads as follows:

"Qualified Tree Professional": A qualified tree professional is: An individual with relevant education and training in arboriculture or urban forestry, having the International Society of Arboriculture (ISA) Tree Risk Assessment Qualification (TRAQ) and one of the following credentials:

- 1. ISA certified arborist;*
- 2. ISA certified arborist municipal specialist;*
- 3. ISA board certified master arborist;*
- 4. American Society of Consulting Arborists (ASCA) registered consulting arborist (RCA);*
- 5. Society of American Foresters (SAF) certified forester for forest management plans.*

A qualified arborist must also be able to prescribe appropriate measures for the preservation of trees during land development. Any provision in this title referring to using an arborist or qualified arborist or tree professional or qualified professional shall be interpreted to require using a qualified tree professional."

2.9 Permitting Documentation: Arborist Reports

The City could also consider the requirement that applications for development permits be accompanied by an Arborist Report completed by a certified professional arborist or forester and include components such as a tree inventory, tree protection plan, and tree replacement plan, a timeline for implementing protection and/or replacement.

In addition, the report should include the following information:

- (1) A map showing the location of existing regulated trees on the subject property *and* trees on adjacent properties whose critical root zones⁴ extend into the subject property. When feasible/applicable, trees should be labeled by inventory number within the report that is consistent with the site plan so the arborist report can serve as a reference when evaluating permit applications.
- (2) A tree viability rating based on the overall health and structure of on-site regulated trees and estimated condition for off-site trees that may be impacted by construction or land clearing activities.⁵ Ratings should be based on the most recent edition of the *Guide for*

⁴ Critical root zones (CRZs) are typically defined as an imaginary circle on the ground that corresponds to the dripline of a tree and where important structural roots are located. However, because driplines vary by tree species, this is often calculated as a function of tree diameter where the CRZ is the product of tree diameter multiplied by 12 inches.

⁵ Assessment of plant condition considers health, structure, and form. Each may be described in rating categories that could be translated into a percent rating as shown in Table 2 or listed as 'viable' or 'nonviable'. Having clear documentation of assessment data will assist the City in urban forestry evaluations of permit applications.

Plant Appraisers written by the Council of Tree and Landscape Appraisers (CTLA) and published by ISA (CTLA 2020) (See Table 4).

- (3) Identification of groves or tracts of trees suitable for protection based on the topography, tree species, tree health, soil types, and project design limitations.
- (4) The feasibility of retaining regulated (aka significant) trees based on existing conditions and proposed development, including but not limited to new structures, additions to existing structures, appurtenances, accessory structures, utilities, and driveways.
- (5) Provide a summary of best practices and specifications for tree and soil protection measures. This includes the placement of construction fences, recommended on-site monitoring during construction activity (including areas of ingress/egress to the site), and tree protection measures based on ISA's current edition of *Managing Trees During Construction*.⁶

⁶ ISA's *Managing Trees During Construction* is a companion publication to the ANSI A300 Part 5: Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction).

Table 4. Tree Condition Rating Table.

Rating Category	Condition Components			Percent Rating
	Health	Structure	Form	
Excellent 1	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation.	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.	81% to 100%
Good 2	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.	61% to 80%
Fair 3	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may compromise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.	41% to 60%
Poor 4	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.	21% to 40%
Very Poor 5	Poor vigor. Appears dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.	6% to 20%
Dead 6				0% to 5%

The quality or health of a retained tree should be included as a criterion when developing a tree retention plan. Trees rated as fair, good, or excellent would be considered viable, whereas trees rated as poor, very poor, or dead would be considered non-viable. The City of Kirkland requires that an Arborist Report uses a condition rating for both tree health and structure of a tree, which together determine a tree's viability (KZC 95.30.3.c.1). Trees in severe decline or that have been deemed a hazard by a TRAQ arborist should not be included in the canopy cover calculation/tree credits of a specified development. The City should develop specific tree health/hazard thresholds based on the International Society of Arboriculture tree assessment standards.

As an example, a definition for hazard tree could look like the following:

"Hazard tree" means a significant tree that meets all of the following criteria as rated by a Tree Risk Assessment Qualification certified arborist:

- 1. A tree with a combination of structural defects and/or disease, which makes it subject to a high probability of failure;*
- 2. Is in proximity to moderate to high frequency targets such as persons or property that can be damaged by tree failure;*
- 3. The assessed tree has a high to extreme risk rating using the International Society of Arborists Tree Risk Assessment Qualification method in its most current form; and*
- 4. The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices, nor can the target be removed or restricted.*

3 Additional Recommendations and Considerations

3.1 Definitions

One goal of this code update is to ensure that the revised regulations are clear and easy to understand. To that end, revision or addition of terms may be necessary to ensure the regulations are accessible to City planners, industry professionals, and community members. Definitions should be crafted to reduce ambiguity and adhere to industry standards, best management practices established by the International Society of Arboriculture and the American National Standards Institute (ANSI). Some suggestions are discussed in previous sections of this report. The following is a list of terms that should be considered for revision as the Project Team moves forward with code development:

- Significant Tree
- Landmark Tree
- Hazard Tree
- Viable Tree or Viability
- Tree Risk Assessment Qualification
- Grove

3.2 Incentives

The City offers a reduced parking bonus of up to 10 percent of the required number of parking spaces for subdivisions, short subdivisions, and planned unit developments if the proposed landscape plan incorporates retention of significant trees above the minimum required. The City may also consider form-based design incentives such as cluster development and flexible setbacks, to encourage infill development and maximize tree retention. For example, the City of Shoreline allows the Director to grant reductions or adjustments to site development standards, including but not limited to variations of the area, width, or composition of required open space or landscaping, variations in parking lot design or access driveway requirements, variations in building setbacks, and variations of grading and stormwater requirements.

- Upon review of the City's general development requirements in [LUC 20.20.010](#), the City could offer the following incentives:
 - In districts that have a required front yard setback, reducing the required front yard setback by up to 10 feet in order to preserve a high retention value tree in the rear yard.
 - In districts that have a required rear yard setback, reducing the required rear yard setback by up to 10 feet in order to preserve a high retention value tree in the front yard.

- Increasing the allowed lot coverage by structures by an additional 5 percent.
- Increase in height allowances.
- For non-residential development, the minimum number of required parking spaces could be reduced by 0.5 per 1,000 square feet (LUC 20.20.590.F).

The city of Burien offers an additional 10 feet in height for all uses other than single-family residences as a development incentive for retention of high retention value trees (BMC 19.26.040.2.C). Another option is to offer a reduction in the required tree density credits if high retention value trees are retained. For example, the City could reduce the required tree credits by 25 percent if the applicant retains a grove or landmark tree. The City should consider further discussion with stakeholders and City departments to determine which incentives would work best with the jurisdiction's development standards and requirements.

3.3 Washington Wildland Urban Interface Code

The State Building Code Council (SBCC) adopted the Washington Wildland Urban Interface Code (WWUIC) amendments in 2021 and scheduled implementation in 2023. The timeline was delayed to March 2024 while the State Building Code Council considered several amendments during rulemaking and held public hearings in November 2023 and February 2024. In March 2024, the SBCC announced that the Wildland Urban Interface Code amendments would not be adopted as part of the current code update cycle. This was due to the passage of Engrossed Senate Bill (ESB) 6120 by the state legislature.

ESB 6120 includes the following provisions:

- Washington Department of Natural Resources (DNR) is required to develop a statewide wildfire hazard map and a base-level wildfire risk map for each county based on criteria established in coordination with the State Fire Marshal's Office.
- Once the maps have been completed, local jurisdictions will have an additional six months once the maps have been completed to adopt the code as adopted by the SBCC at the local level and will have the option to modify the maps based using data from their own assessments if they follow similar criteria used to develop the statewide map.
- Counties and municipalities that issue residential and commercial building permits for parcels in areas identified as high hazard and very high hazard will be subject to the WUI code provisions.

The WWUI is based on the 2021 International Wildland-Urban Interface Code (IWUIC) which establishes minimum requirements for building specifications, materials, and vegetation management in designated wildland-urban interface areas to reduce the potential loss of life and property due to wildfires. These requirements include specific fire-resistant materials for structures and limiting the amount and type of trees and vegetation in "defensible space" within

30 to 100 feet of structures. The WWUIC could limit the type, number, and density of trees and vegetation in the wildland-urban interface in the required “defensible space” and have an impact on a jurisdiction’s ability to regulate trees in critical areas, retain trees with development, and to support tree canopy cover goals.

Although the State Building Code Council is no longer adopting the Washington Wildland Urban Interface code amendments as originally proposed during this code update cycle, jurisdictions still have the local authority to adopt and administer the 2018 International Wildland Urban Interface Code adopted in the state statute.

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Appendix A

JURISDICTIONAL COMPARISON SUMMARY

Topic	Bellevue (current)	Kirkland (2022)	Issaquah (2023)	Sammamish (2022)	Renton (2022)	Redmond (2019)	Seattle (2023)	Edmonds (2021)	Burien (2022)
	LUC 20.20.900	KZC 95	IMC 18.812	SDC 21.03.060	RMC 4-4-130	RZC 21.72	SMC 25.11 & SDCI Director's Rule 7-2023	ECDC 23.10, ECDC 20.75.048	BMC 19.26
Development Tree Retention Standards	<p>Tree retention based on the percentage of diameter inches on the total site area by type of development.</p> <ul style="list-style-type: none"> At least 15 percent of the diameter of significant trees existing in site area for: subdivisions, short subdivisions, planned unit development, change in lot coverage, or change in area devoted to parking and circulation. A minimum of 30 percent of the diameter inches of significant trees existing on the total site area for subdivisions, short subdivisions, and planned unit development. R-1 Land Use District (Bridle Trails Subarea) requires retention of all non-hazardous significant trees within the first 20' adjacent to property lines and 25 percent of the cumulative diameter inches of existing significant trees. A minimum of 30 percent of the total diameter inches for new or expanding single-family structures with a 20 percent or greater increase in impervious surface area. Alders and cottonwoods are discounted by a factor of .5. 	<p>Tree retention based on condition/location of existing trees.</p> <ul style="list-style-type: none"> High Retention Value trees (fit landmark/grove criteria, located anywhere on site, or viable trees located in setbacks) require modifications to proposed improvements. Moderate Retention Value trees (viable trees located outside setbacks) are incentivized to retain but not required. Incentives allow reduced setbacks, greater lot coverage, etc. 	<p>Tree canopy percent coverage targets specific to subareas measured by tree survey method or aerial estimation method.</p> <ul style="list-style-type: none"> Proposed developments in residential zones must retain 35% of the total DBH of all significant trees in developable site area and all other zones must retain 25% of the total DBH. Between 28% to 91% canopy coverage required. Provides a tree retention priority order for significant trees to be retained. 	<p>Tree retention standards are based on zoning designations.</p> <ul style="list-style-type: none"> Residentially zoned lots are required to retain a minimum of 25 percent up to 50 percent of the significant trees. The SMP requires 80 percent retention of significant trees within shoreline jurisdiction. No minimum requirement for trees located in commercial business, office, or neighborhood business zones. City establishes an order of priority for retaining existing significant trees, with groves being the highest priority and individual significant trees being the lowest priority. 	<p>Tree density credit system of 30 credits per acre.</p> <ul style="list-style-type: none"> 30 tree credits per net acre required through retention or supplemental tree planting. List of priorities for tree retention, with landmark trees and groves being the highest priority, and alders and cottonwood being the lowest priority. Subdivisions have separate retention standards, with the highest priority being to retain trees within tracts or groves and the lowest priority being fee in lieu of planting. 	<p>Retain a percentage of all significant trees in development projects.</p> <ul style="list-style-type: none"> In all developments, a minimum of 35 percent of all significant trees shall be retained. Landmark trees to be retained unless an exception has been applied for and granted. 	<p>All trees greater than 6" diameter and exceptional trees on undeveloped lots shall be retained unless otherwise approved as part of an issued building or grading permit.</p>	<p>Retain varying percentages of significant viable trees, based on development type.</p> <ul style="list-style-type: none"> New Single Family, short subdivision, or subdivision development: retain 30% of all significant viable trees in the developable site. * Multi-family, unit lot short subdivision, or unit lot subdivision development: retain 25% of all significant viable trees in the developable site. * For developing properties with fewer than three significant trees, trees shall be retained and/or planted that will result in the site having at least three trees per 8,000 SF of lot area. <p>*Does not include critical areas</p>	<p>Minimum tree credit requirement.</p> <ul style="list-style-type: none"> The required minimum tree credits for single-family and multi-family developments are one tree credit per 1,000 SF of developable area. For commercial, industrial, or non-residential lots, the minimum tree credit is 0.15 per 1,000 SF. Tree credits are assessed by existing healthy trees, replacement trees, and fee-in-lieu.

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Development Tree Replacement Standards	<p>Replacement is only required in R-1 Land Use District in the Bridle Trails Subarea.</p> <ul style="list-style-type: none"> For any lot with 8 or less significant trees, a planting plan showing a 1:1 ratio if replacement trees are required. A general replacement option is provided at the end of the chapter and is presented as a modification to interior and perimeter tree retention requirements in which supplemental or replacement trees are proposed in lieu of retention. No required ratio is provided. 	<p>Replacements are based on a minimum tree density credit system.</p> <ul style="list-style-type: none"> Up to 11 credits correlate to retained tree's DBH. Retained tree credits for landmark and high retention value trees shall exceed the tree density required for lot. If existing retained trees do not meet the minimum tree density credit for lot, supplemental trees are required at a rate of 50 tree credits per acre. Existing conifer retention is incentivized by awarding 1.5 x credits. 	<p>Replacement Ratios per tree. Landmark tree provisions.</p> <ul style="list-style-type: none"> Tree replacement is required at a ratio not less than one tree for every tree removed and must provide canopy coverage equal to or greater than the tree(s) being removed. Landmark trees require a 2:1 replacement ratio. Inspection is required to confirm the approved replacement tree species, size, and installation standards. Species should be selected from the preferred tree list for the City. 	<p>Replacement Ratios per tree based on size.</p> <ul style="list-style-type: none"> Landmark trees to be replaced at a 3:1 ratio. Heritage trees to be replaced at a 2:1 ratio. Significant trees removed are to be replaced at a 1:1 ratio. Replacement conifers shall be at least 8' in height and deciduous trees shall be at least 2 1/2 DBH. Replacement standards are doubled for development proposals in commercial business, office, or neighborhood business zones where tree retention is less than 25 percent. 	<p>Replacement based on tree density requirements.</p> <ul style="list-style-type: none"> Replacement planting in lieu of minimum tree retention may be granted where there are special circumstances on the property or strict application of the code would prevent reasonable use or compliance with minimum density requirements for the zone. 	<p>Replacement Ratios based on size. Landmark tree provision.</p> <ul style="list-style-type: none"> Significant trees to be removed shall be replaced by one new tree. Replacement trees shall be primarily native species. Landmark trees shall be replaced with three new trees. Minimum size requirements are 2 1/2" caliper for deciduous trees and 6' in height for evergreen trees. 	<ul style="list-style-type: none"> Each exceptional tree or tree over 24" DBH that is removed shall be replaced by one or more new trees. 	<p>Replacement standards based on size of tree removed.</p> <ul style="list-style-type: none"> One replacement tree for each significant tree between 6 and 10" DBH removed. Two trees for each significant tree between 10.1 and 14" DBH removed. Three replacement trees for each significant tree greater than 14" but less than 24" DBH removed. Viable trees >24" DBH removed with development are mitigated through payment of appraised values (ECDC 23.10.080.E.3 The minimum size for replacement trees is 1.5" caliper for deciduous and 6' in height for evergreen. Replacement trees shall be primarily native species. 	<p>Replacement standards based on required tree credits.</p> <ul style="list-style-type: none"> Three trees for each tree removed and shall follow size and planting standards. This replacement is in addition to the minimum required tree credits in BMC 19.26.050-1. Two-inch caliper at the time of planting for deciduous or broadleaf trees and 6' in height for evergreen conifers.
Significant Tree Threshold	8" in diameter or greater Healthy evergreen or deciduous tree	"Regulated" defined as 6" DBH or greater	<ul style="list-style-type: none"> 6" DBH or greater for all trees, Except 8" or greater for cottonwood and alder 	<ul style="list-style-type: none"> 8" DBH for conifers and 12" DBH for deciduous trees 	<ul style="list-style-type: none"> 6" caliper or greater, Except 8" or greater for alder or cottonwood 	6" DBH or greater	6" or greater	6" DBH or greater	6" DBH or greater
Landmark Tree Thresholds and Protections	<p>Landmark trees defined in Ordinance 6665 as any tree 20' or more in height with a DBH of 24" or greater or a circumference of more than 75".</p> <ul style="list-style-type: none"> No definition for landmark or heritage trees in LUC 20.50.020. LUC 20.20.900 provides a retention priority list, with healthy significant trees over 60 feet in height as the highest priority and significant trees within the first 20 feet of a property line as the lowest priority. 	<p>Landmark trees are 26" DBH or greater.</p> <ul style="list-style-type: none"> landmark trees, which are considered high retention value trees. Applicants must pursue site plan alterations and variations to development standards and use prescribed arboricultural methods to allow for retention. Protected in perpetuity. 	<p>Landmark trees are 30" DBH or greater.</p> <ul style="list-style-type: none"> Removal of a heritage tree, as established by the Park Board, is prohibited, regardless of size, except if determined to be a hazard or nuisance. Removal of landmark trees may be considered if the tree meets the definition of a nuisance tree. 	<p>Landmark trees are defined as greater than 32" DBH and heritage trees are defined as 22" DBH.</p> <ul style="list-style-type: none"> Incentives provided for retention of landmark and heritage trees- see below. 	<p>Landmark trees are 24" caliper or greater.</p> <ul style="list-style-type: none"> Except for big leaf maples, cottonwoods, and alders which qualify as landmark trees with a caliper of 30" or greater. Landmark trees must be high-risk, causing physical damage, or interfering with solar access to be considered for removal. 	<p>Landmark trees - 30" or greater</p> <p>Protected tree is any tree designated on a Tree Preservation Plan or tree within a critical area</p>	<p>Director's Rule categorizes trees into 4 different Tier Groups:</p> <ul style="list-style-type: none"> Tier 1 – heritage tree Tier 2 – any tree 24 inches in diameter or greater, groves, or trees under 24 inches of specific species Tier 3 – any tree 12 inches in diameter, but less than 24 inches Tier 4 – any tree 6 inches or greater but less than 12 inches. 	<p>Landmark trees are not defined or afforded higher levels of protection in Edmonds.</p>	<p>Exceptional trees - trees greater than 30" DBH or based on diameter by species.</p> <ul style="list-style-type: none"> See Table 19.26.040-1 Exceptional Tree Table with Threshold Diameters at Standard Height. Heritage trees - Any tree identified by size and species specific.

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Groves Criteria and Protections	Code references “trees with overlapping canopies” but does not explicitly define groves or specific criteria.	<p>Groves are defined as three or more regulated viable trees with overlapping canopies; at least one tree must be in a setback. Applies only with development.</p> <ul style="list-style-type: none"> • Considered high retention value trees. • Protected in perpetuity. • Applicant must pursue site plan alterations and variations to development standards and use arboricultural methods to allow for retention. 	None specified	None specified	None specified	None specified	None specified outside of Director’s Rule.	<p>Three or more significant trees with overlapping or touching crowns.</p> <p>Although groves are defined in EDCD 23.10.020, they are not specified or prioritized for retention with development under 23.10.060.</p>	None specified
Tree Removals on Private Property (Not Associated with Development Activity)	<p>Allowed removals within a 3-year period.</p> <ul style="list-style-type: none"> • Removal of 5 significant trees allowed within a three-year period. 	<p>Allowed removals based on lot size within a 12-month period with notification, additional removals require a permit.</p> <ul style="list-style-type: none"> • Property owners may remove a certain number of regulated trees based on property size within a 12-month period with notification (no permit). Hazard/nuisance trees do not count towards allowance but require documentation verifying they meet criteria. • Lot sizes up to 10,000 SF can remove 2 trees per year but must have at least 2 remaining. • Lot sizes 10,0001 to 20,000 SF may remove up to 3 trees per year but must have 3 trees remaining. • Lot sizes greater than 20,001 may remove 4 trees per year but must have 4 trees remaining. • Replacement tree standards are based on the size of the last remaining trees being removed. • Only 1 landmark tree may be removed per 12 months regardless of property size. 	<p>Allows removals if the following criteria are met:</p> <ul style="list-style-type: none"> • Nuisance Tree • Dying tree • Thinning of heavily wooded area • To provide solar access to buildings. <p>Tree removal permits required for all removals unless exempt. Exemptions include:</p> <ul style="list-style-type: none"> • Removal of non-significant tree • Pruning • Tree removal by a public agency or franchised utility • Tree removal is associated with mineral resource extraction. 	<p>Allowed removals based on lot size within 10-year period.</p> <ul style="list-style-type: none"> • Tree removal permit required prior to removal of any significant tree. • The City establishes a percent of trees allowed to be removed within 10 years and number of trees allowed to be removed per year based on lot size. 	<p>Allowed removals based on two-year period.</p> <ul style="list-style-type: none"> • 2 significant trees may be removed within a calendar year, but no more than 5 trees within 5 years. • Removal of three high-risk trees within one year. • HOAs must comply with City regulations but also may have specific HOA rules. 	<p>Allowed removals based on lot size.</p> <ul style="list-style-type: none"> • A tree removal permit is required for the removal of a significant tree. • For developed lots, on a single-family residential lot, the maximum number of healthy significant trees allowed to be removed per calendar year is based upon the lot size. • Multi-family residential, commercial, and industrial properties are allowed to remove 5 trees per acre per calendar year. • For undeveloped lots not under land use permit review, a permit is required prior to removing any significant tree. • Removal of more than 11 significant trees requires a Clearing and Grading Permit. • When tree removal is planned in conjunction with the construction of a new or expanded site or building, no separate tree removal permit is required, but the tree protection and replacement standards apply. 	<p>Allowed removals within 12-month period.</p> <ul style="list-style-type: none"> • No more than 3 trees may be removed in any one-year period on lots in Low-rise, Mid-rise, commercial and neighborhood residential zones, except when the tree removal is required for construction that is part of an approved issued building or grading permit. 	<ul style="list-style-type: none"> • Unlimited removals unless protected by other means, such as trees located in critical areas, on vacant lots or subdividable properties or protected with prior development. 	<p>Allowed removals based on lot size.</p> <ul style="list-style-type: none"> • BMC 19.26.060-1 is a table of significant tree removal allowances. Private property owners can remove one tree per year on lots under 5,000 SF. • Up to five trees per year can be removed on lots greater than 20,001 SF.

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		<ul style="list-style-type: none"> Permit required to remove landmark trees, to exceed the number of allowed removals, to remove trees in critical areas, within Holmes Point zone, shoreline jurisdiction areas, or to remove "hedge" trees. Forest Stewardship Plan allows traditional stand management (greater # removals on larger properties). 							
Incentives for Higher Level of Tree Protection	<ul style="list-style-type: none"> If proposed landscape plan incorporates the retention of significant trees above the required minimum, the Director may approve up to 10 percent reduction in the required number of parking spaces if an adequate number will remain. 	<ul style="list-style-type: none"> Variations to development standards such as reduced setbacks, increased lot coverage, larger access/parking areas, increase in building height, etc. Retained conifers are awarded 1.5 times tree density credits. 	None specified	<ul style="list-style-type: none"> Additional credit is awarded for landmark trees and heritage trees to be preserved. For example, preservation of a landmark tree shall receive 200 percent retention credit. 	None specified	<ul style="list-style-type: none"> Developments that preserve 40 percent or more of the healthy significant trees shall be entitled to the Administrative Design Flexibility provisions for residential and commercial properties. 	<ul style="list-style-type: none"> Code modifications provided for preserving exceptional trees and trees greater than 24" DBH, including adjustments to development standards, increased height, and parking reductions. 	<p>All fees in lieu waived if at least 50% significant viable trees are retained site-wide (ECDC 23.10.060. G).</p> <p>Variances in development standards allowed (reduced setbacks, increased lot coverage, wider driveways, etc.) for greater/high priority tree retention (ECDC 20.75.048).</p>	<ul style="list-style-type: none"> None specified

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Code Enforcement/ Mitigation for Violations	<ul style="list-style-type: none"> None specified in LUC 20.20.900. BCC 23.76.190 establishes any violation of the Clearing and Grading code a civil violation. 	<ul style="list-style-type: none"> The City has a section dedicated to Special provisions relating to enforcement of tree regulations (KMC 1.12.100). Notice of civil violation, hearing and appeal process outlined in code. Civil penalty fines up to \$15,000 shall be assessed based on DBH of tree unlawfully removed or damaged. Additional fines for repeat offenses and treble damages may be assessed. A restoration plan will be required, including the number of trees to be replanted which shall be equal to the number of credits illegally removed. Restoration fees (separate from civil penalty) may be assessed based on ISA unit cost of tree replacements multiplied by illegally removed credits. 	<ul style="list-style-type: none"> Any person violating any of the tree preservation provisions of this chapter may be subject to civil penalties and will be required to restore damaged or removed protected trees to the extent possible. 	<ul style="list-style-type: none"> Violations or failure to comply with provisions are a gross misdemeanor and subject to penalties. The court should consider a maximum fine of no more than \$5,000 per occurrence and imprisonment not to exceed one year. 	<ul style="list-style-type: none"> Each tree removed or damaged constitutes a separate violation. Penalties include a tree mitigation fee for altering or removing trees, vegetation, or tree protection fencing. For each tree that is improperly cut or removed, replacement planting shall occur based on the credit value of the tree(s) removed. 	<ul style="list-style-type: none"> Any person who removes a tree in violation of the conditions of a tree removal permit shall be subject to remedial measures. Remedial measures shall be retroactively permit the unauthorized removal and replace the removed tree. Replacement standards are based on the size of the unauthorized tree removed: <ul style="list-style-type: none"> - 2 replacement trees for a 6" DBH tree - 3 replacement trees for a 6"-9" DBH tree - 4 replacement trees for 12"-16" DBH tree - 6 replacement trees for a 16" DBH tree or greater 	<ul style="list-style-type: none"> The Director is authorized to issue a Notice of Violation to the responsible party, and a stop work order for continuing violations. Civil penalties may be imposed up to \$500 per day, criminal penalties may be imposed up to \$1,000 per day or imprisonment for 90 days. Violators are responsible for restoring damaged areas in conformance with an approved plan. 	<ul style="list-style-type: none"> Penalty for illegal removal of trees shall be \$1,500 per tree less than 12 inches in diameter and the appraised value of trees twelve inches or more in diameter. Removal of existing 12-inch diameter or larger trees in violation of this chapter will require an appraisal of the tree value by the city tree protection professional using trunk formula method in the current edition of the Guide for Plant Appraisal. The cost of the appraisal shall be paid by the person(s) who removed existing trees in violation of this chapter. Penalties shall be paid into the city tree fund. If diameter of removed tree is unknown, determination of the diameter size shall be made by the city arborist by comparing size of stump and species to similar trees in similar growing conditions. 	<ul style="list-style-type: none"> Table 19.26.100-1 is a table containing number of required replacement trees for illegal removal of trees, based on DBH. Requires fines for illegal tree removal that range from \$700 to \$15,000. This allows for an education period prior to penalizing people who violate the code.
Tree Protection Requirements during Construction	<p>None specified.</p> <ul style="list-style-type: none"> LUC 20.20.900 states the applicant shall utilize tree protection techniques approved by the Director during land alteration and construction to provide for the continual healthy life of retained significant trees. 	<ul style="list-style-type: none"> 6' high chain link tree protection fencing with signage around the approved tree protection zone (TPZ) shown on site plans. KZC 95.32 outlines acceptable and prohibited activity to protect soil and trees during construction, including grade changes, excavations, dumping of substances, etc. 	<p>None specified.</p>	<ul style="list-style-type: none"> Tree protection barriers shall be installed 5' beyond the dripline of trees to be protected. Barriers shall be a minimum of 4' high and constructed of chain link or polyethylene laminar safety fencing. 	<ul style="list-style-type: none"> 6' high chainlike temporary construction fencing is required around the drip line of all retained trees prior to development activities. Tree protection signage to be placed on the tree fencing at intervals of 20' along the entirety of the fence line. 	<ul style="list-style-type: none"> Tree protection measures are required to be shown on the tree protection and replacement plan. Tree protection barriers shall be installed 5' beyond the dripline of significant trees to be protected. Barriers shall be a minimum of 4' high and constructed of chain link or polyethylene laminar fencing. 	<ul style="list-style-type: none"> Tree protection area established for exceptional trees is equivalent to the dripline of the tree but may be reduced to the outer 1/3. 	<ul style="list-style-type: none"> Requires minimum 3-foot-tall fencing and signage along LOD spaced no further than 15' apart stating: "Tree and Soil Protection Area, Entrance Prohibited". Orange polyethylene laminar fencing is acceptable. ECDC 23.10.070 outlines acceptable and prohibited activity to protect soil and trees during construction, including grade changes, excavations, dumping of substances, etc. 	<ul style="list-style-type: none"> Requires 6-foot-tall chain link fencing and sign stating, "Tree Protection Zone – Keep Out". Signage every twenty (20) feet around TPZ, fencing inspection.

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<p align="center">Tree Protection Plan (Permit) Requirements</p>	<ul style="list-style-type: none"> Tree protection plan requirements are outlined in BCC 23.76.060 and include defining spatial limits of tree protection and detailed drawings of tree protection and mitigation. The plan must be prepared by a certified arborist or a registered landscape architect. 	<p>Tree Retention plan requirements include a tree inventory, site plan, and an Arborist Report prepared by a qualified professional.</p>	<ul style="list-style-type: none"> Tree plans prepared by a qualified professional are required for any clearing and grading permit, subdivision, or other development permit and must include a plan identifying the removal, protection, and planting of trees. A tree inventory must be prepared and submitted in conjunction with the tree plan. 	<ul style="list-style-type: none"> A professional evaluation and/or tree protection plan prepared by a Certified Arborist may be required. 	<p>Arborist report is required for Routine Vegetation Management applications.</p> <ul style="list-style-type: none"> Must include a conceptual tree removal and retention plan and an inventory of all trees on-site to be retained and removed. A Tree Retention/Land Clearing plan is required when a land development permit is submitted. 	<p>A tree preservation plan prepared by a qualified professional is required.</p> <ul style="list-style-type: none"> To remove a healthy landmark tree, protected tree, or tree within a critical area, a Tree Removal Exception Request is required. No structures, utilities, or roadways closer than 5' outside of the dripline of a protected tree. For unhealthy trees, an Arborist Report and completed ISA Tree Evaluation Form is required. 	<ul style="list-style-type: none"> Not specified. 	<ul style="list-style-type: none"> Tree retention and protection plan required for short subdivision, subdivision, new multi-family, and new single-family development applications, as well as tree removal on vacant lots or lots that can be subdivided. Tree removal associated with building permit, subdivision, or other land use approval will be reviewed with the associated project and will not require a separate tree removal permit. Tree Retention Plan components include tree inventory (containing numbering system, size, proposed tree status, brief health rating, and tree species), site plan showing proposed location of tree protection, and an Arborist Report. 	<p>Permit categories include:</p> <ul style="list-style-type: none"> Minor tree permit (tree removal not associated with development) Major tree permit (tree removal associated with development) For Major Tree Removal permits, applicants shall submit a tree retention plan prepared by a qualified tree professional and development plan concurrent with a land use review application, grading permit, building permit, subdivision, or short subdivision application. The retention plan shall consist of a tree survey that identifies the location, size, and species of all significant trees on-site, labels any tree 18" or greater for the purpose of establishing wildlife habitat, and any tree designated as a Heritage tree.

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Maintenance Requirements	<ul style="list-style-type: none"> None specified in LUC 20.20.900. LUC 20.20.520.K Maintenance of Plant Materials states the property owner shall replace an unhealthy or dead plant materials in conformance with the approved landscape development proposal and the Director shall require a maintenance assurance device for a period of 1 year from the completion of planting. BCC 23.76.090.C.2 mentions maintenance of significant trees but references and relies on LUC 20.20520 and 20.20.900. 	<ul style="list-style-type: none"> A Tree Maintenance Agreement in effect for 5 years is required to be submitted prior to issuance of certificate of occupancy. A Preserved Grove Covenant is required to be recorded with the County for groves to be retained. Trees retained with development in addition to others on lot are protected in perpetuity in Holmes Point zone. 	<ul style="list-style-type: none"> For trees planted in association with a development permit, the City may require a bond worth 50 percent of the value of the trees, cost of labor, irrigation, and other materials, to ensure the survival of retained trees and replacement trees. The bond will remain in effect for a minimum of three years or until the Director determines in writing that performance and maintenance standards have been met. 	<ul style="list-style-type: none"> All required replacement trees shall be maintained in healthy condition throughout the life of the project. 	<ul style="list-style-type: none"> All retained and replacement trees shall be maintained in perpetuity from the date of the final land development permit issued for the project. A maintenance covenant is required to be recorded for sub developments. The relevant HOA, permit applicant, or other City approved entity shall have ownership and responsibility for maintaining tree tracts, easements, and protected trees. 	<ul style="list-style-type: none"> All required replacement trees and relocated trees shall be maintained in a healthy condition by the property owner throughout the life of the project. No enforcement measures specified. 	<ul style="list-style-type: none"> None specified. 	<ul style="list-style-type: none"> Protected Tree Notice is recorded on title for trees retained/planted with single-family development. Two-year maintenance bond required for multi-family, commercial development after installation of required site improvements and prior to issuance of a certificate of occupancy. The bond shall be for an amount of 15 percent of the performance bond or estimate. 	<ul style="list-style-type: none"> A significant tree and exceptional tree shall be maintained for the life of the project and for three years following issuance of the certificate of occupancy. A three-year tree maintenance agreement shall be recorded on the Burien City Attorney-approved document. Performance bonds or other appropriate security are required for three years after the planting or transplanting of vegetation to insure proper installation, establishment, and maintenance. Required replacement trees may not be removed during the three-year maintenance period. Following the maintenance period, all replacement trees shall be considered significant tree, even if below the size threshold.
Recommended City Trees List	<p>Green and Sustainability Factor Tree List from LUC 20.25A.120</p>	<p>Lists for Street Trees, Native species, Landmark Mitigation Tree List and Prohibited Tree and Plant List.</p>	<p>Preferred Tree List Master Street Tree List</p>	<p>None specified.</p>	<p>Approved Tree List and Spacing Guidelines</p>	<p>None specified.</p>	<p>Tree Selection Guidance Tool</p>	<p>None specified in code. Tree Board recommended Tree List for Homeowners on City website: Trees - City of Edmonds, WA (edmondswa.gov)</p>	<ul style="list-style-type: none"> BMC 19.65.340 contains an Invasive Plant List BMC 19.65.350 contains a Nuisance tree species list.

Topic	Bellevue (current)	Kirkland (2022)	Issaquah (2023)	Sammamish (2022)	Renton (2022)	Redmond (2019)	Seattle (2023)	Edmonds (2021)	Burien (2022)
City Tree Account, Fee in lieu, and Mitigation	<ul style="list-style-type: none"> None specified. 	<ul style="list-style-type: none"> City Forestry Account provisions (KZC 95.57) describe the source of funds allowed by code (fees in lieu of planting, restoration costs, etc.) and uses of funds (tree planting, acquiring park land, public education, etc.) When the Planning Official determines on-site and off-site locations are unavailable, the applicant shall pay an amount of money in lieu of planting set at \$450.00. The cost shall be multiplied by the number of required tree credits or mitigation trees and paid into the City forestry account. 	<p>Fee in lieu of tree replacement may be allowed, subject to approval of the Director, if trees cannot be planted on site or at an approved off-site location.</p> <p>Monies in city tree account not needed for immediate expenditure must be invested for the benefit of the account.</p>	None specified.	If the Administrator determines that it is infeasible to replace trees on site, payment into the City's Urban Forestry Program fund may be approved in an amount of money approximating the current market value of the replacement trees and labor to install them.	Fee in-lieu allowed instead of on-site tree replacement. Monies collected are expended solely for planting new trees in City owned parks, open spaces, or rights-of-way.	None specified.	<p>City Tree Fund</p> <ul style="list-style-type: none"> The developer may pay a fee-in-lieu for each replacement tree required but not replaced, with documentation. The amount of the fee shall be \$1,000 multiplied by the number of trees necessary to satisfy the tree replacement requirements of this section and shall be deposited into the city's tree fund. The fee shall be paid to the city prior to the issuance of a tree removal permit or associated development permit. For each significant tree greater than 24 inches in DBH removed, a fee based on an appraisal of the tree value by the city tree protection professional using trunk formula method in the current edition of the Guide for Plant Appraisal shall be required. 	<p>Fee-in-lieu</p> <ul style="list-style-type: none"> For tree credit standard, if on-site trees cannot be retained and/or if new replacement trees cannot be planted, there is a fee-in-lieu option per BMC 19.26.100(5), where each fee-in-lieu will count as one (1) credit. The fee-in-lieu amount shall cover the cost of a tree, installation (labor and equipment), maintenance for two (2) years, and fund administration. The applicant shall pay the fee-in-lieu amounts to Burien upon completion of a site inspection and confirmation. Fee-in-lieu monies may be used for Burien's urban forestry initiatives to achieve the objectives of the Green Burien Partnership Urban Forest Stewardship Plan and Climate Action Plan. See code for full reference.
Exemptions for Tree Removal Not Related to Development	Retention standards for significant trees does not apply within the Downtown Land Use District.	Emergency tree removal, utility maintenance, and commercial nurseries or tree farms are exempt.	Removal of nonsignificant trees, pruning, tree removal by a public agency or a franchised utility within a public ROW or easement, and removal in association with mineral resource extraction or processing are exempt from permit approval requirements.	Emergency removals and removals of any tree in public easements or ROWs are exempt from obtaining approval. Significant trees determined to be present danger or located in public utility easements or ROWs are exempt from retention calculations.		Emergency activities, routine maintenance, removal of trees in easements and ROWs for constructing public streets and utilities are exempt.	Normal pruning and maintenance, abatement of hazardous trees, emergency activities, tree removal undertaken as part of a tree and vegetation management and revegetation of public parkland and open spaces, tree removal as part of ECA tree and vegetation plan, tree removal as shown as part of an issued building or grading permit, removal street trees, and additions to existing structures are exempt.	List of exempt activities in EMC 23.10.040 .	List of exempt activities in BMC 19.26.030(2) .

Appendix B

CURRENT TREE RETENTION REQUIREMENTS BY LAND USE ZONING, AVERAGE LOT SIZE, AND DEVELOPMENT REQUIREMENTS BY DISTRICT

Land Use Zoning	District	Average Lot Size (SF)	Development Requirements
Single-Family Residential	R-1	77,804	<p><u>Interior:</u> At least 25 percent of the cumulative diameter inches of existing significant trees must be retained. 1:1 tree replacement ratio for lots with less than eight significant trees.</p> <p><u>Perimeter:</u> All significant trees not deemed hazardous within the first 20 feet adjacent to property lines shall be retained.</p>
	R-1.8	32,733	<p><u>Interior:</u> For new single-family structures or additions to impervious surface areas that exceed 20 percent, applicants shall retain a minimum of 30 percent of the diameter inches of significant trees in the site area.</p>
	R-2.5	24,024	
	R-3.5	16,205	
	R-4	14,610	
	R-5	12,991	
	R-7.5	18,995	
Multi-Family Residential	R-10	23,404	<p><u>Interior:</u> In areas of the site other than the required perimeter landscaping area, the applicant must retain at least 15 percent of the diameter inches of the significant trees existing in the interior area.</p> <p>For subdivisions, short subdivisions, and planned unit developments, the applicant shall retain a minimum of 30 percent of the diameter inches of significant trees existing on the total site area of the development.</p>
	R-15	124,952	
	R-20	95,675	
	R-30	80,133	<p><u>Perimeter:</u> All significant trees not deemed hazardous within perimeter landscaping areas to be retained. Perimeter landscaping requirements for street frontage include 10 feet of Type III landscaping and 8 feet of Type III landscaping for interior property lines.</p>

Land Use Zoning	District	Average Lot Size (SF)	Development Requirements
Commercial, Office, Light Industrial	PO	34,685	<p><u>Interior:</u> In areas of the site other than the required perimeter landscaping area, the applicant must retain at least 15 percent of the diameter inches of the significant trees existing in the interior area.</p> <p><u>Perimeter:</u> All significant trees not deemed hazardous within perimeter landscaping areas to be retained. Perimeter landscaping requirements for street frontage include 10 feet of Type III landscaping and 8-10 feet of Type III landscaping for interior property lines.</p>
	O	80,836	
	OLB	125,425	
	OLB2	164,081	
	OLB-OS	243,721	
	LI	87,788	
	GC	53,531	
	NB	36,003	
	NMU	83,894	
	CB	88,571	
	F-1	170,830	<p><u>Interior:</u> In areas of the site other than the required perimeter landscaping area, the applicant must retain at least 15 percent of the diameter inches of the significant trees existing in the interior area.</p>
	F-2	97,543	
	F-3	125,958	
Downtown	DT-MU	44,742	<p>Exempt from retention requirements established in LUC 20.20.900. LUC 20.25A.110 – Landscape Development regulates landscaping in downtown districts and references applicability of LUC 20.20.520 – Landscaping Development.</p>
	DT-MU-CC	51,167	
	DT-O-1	74,063	
	DT-O-2-E	122,071	
	DT-O-2-N	45,903	
	DT-O-2-S	44,047	
	DT-OB	24,124	
	DT-OLB-C	64,110	
	DT-OLB-N	163,193	
	DT-OLB-S	58,776	
	DT-R	33,395	
BelRed	BR-CR	56,880	<p><u>Interior:</u> For change in lot coverage or change in area devoted to parking and circulation, areas of the site other than required perimeter landscaping must retain at least 15 percent of the diameter of significant trees existing in this area.</p>
	BR-GC	63,311	
	BR-MO	28,382	
	BR-MO-1	48,554	
	BR-OR	142,986	
	BR-OR-1	27,020	
	BR-OR-2	206,671	
	BR-ORT	43,632	
	BR-R	151,685	
	BR-RC-1	50,048	
	BR-RC-2	43,532	
	BR-RC-3	82,176	

Land Use Zoning	District	Average Lot Size (SF)	Development Requirements
Other Districts	CCC	15,336	<u>Interior:</u> For change in lot coverage or change in area devoted to parking and circulation, areas of the site other than required perimeter landscaping must retain at least 15 percent of the diameter of significant trees existing in this area.
	EG-TOD	120,290	
	EH-D	57,013	
	EM-TOD-H	253,916	
	EM-TOD-L	368,483	
	MI	55,640	