

July 14, 2010

City of Seattle Proposed Tree Regulations



City of Seattle
Department of Planning and Development

A Comprehensive Approach to Enhancing Seattle's Urban Forest: Seattle's Urban Forest Management Plan and the Tree Regulations Proposal

In 2007, the City developed the Urban Forest Management Plan (UFMP) to articulate the important role that trees play in the social, economic, and environmental health of our city; establish goals for improving the health of this resource; and identify key steps in implementing this vision. The UFMP set in motion a comprehensive city-wide review of policy, programs, and regulations. The UFMP is intended to:

- **INSPIRE AND INFORM** the community through the Seattle ReLeaf community outreach campaign including such elements as website brochures, posters, bus ads, radio promos, media outreach, community events, and strategic partnerships.
- **PRESERVE** existing trees, including street trees, through education, incentives, and regulations.
- **PLANT** new trees for future canopy cover on public and private property.
- **MAINTAIN** existing trees to be healthy and safe and avoid conflicts with wires and other infrastructure.
- **RESTORE** forested parkland through the Green Seattle Partnership.

The attached proposal would revise regulations governing trees on private property as a key element in implementing the Urban Forest Management Plan. Through a comprehensive strategy of regulations, education, incentives, and proper management of City-maintained trees, it is our hope that we can enhance the health of our urban forest for people and nature.

For more information about this Tree Regulations Update process, go to www.seattle.gov/dpd/planning/SeattlesTreeRegulationUpdate/.

For more information on city-wide tree efforts and the Urban Forest Management Plan, go to: www.seattle.gov/trees/.

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Introduction

The Department of Planning and Development (DPD) is proposing to revise Seattle's regulations governing trees on private property. The update is intended to advance the goals of the City's Urban Forest Management Plan (UFMP), established in April 2007 to maintain and enhance a thriving and diverse urban forest. The plan recognizes the environmental, economic, and social benefits of trees to the City, while acknowledging other citywide policies for sustainability and growth management and a property owner's need for solar access, the ability to accommodate accessory structures, and property access. This proposal represents the first comprehensive update of the Tree Protection Code, adopted in 2001.

DPD's proposed amendments to regulations governing trees on private property seek to implement lessons learned from administering existing regulations, align regulations with city-wide canopy cover goals contained in the UFMP, and implement measures to expand the city's tree canopy. This approach proposes to enhance the health of the city's urban forest by applying more rigorous landscaping standards during construction and expanding the scope of existing regulations to institutions and street trees in Single-Family zones as well as retail and commercial uses in industrial zones. Additionally, DPD is proposing to eliminate provisions that are not achieving their intent and streamline others supporting voluntary retention in order to make the development process more consistent and equitable and to ensure that trees are not seen as a burden to property owners. Together with education and enhanced incentives, DPD believe that these changes will help to enhance and expand the urban forest in Seattle and advance goals for a more livable and sustainable community.

DPD is seeking public review and comment until October 31, 2010, prior to submitting a proposal to the Mayor to prepare his recommendations and submit them to the City Council in 2011.

Background

Trees are viewed as a critical infrastructure element within the City of Seattle due to their role in promoting social, economic, and environmental health. In particular, trees manage stormwater by capturing and slowing rain; filter air pollution; provide food and habitat; and contribute to the character and aesthetic beauty of our neighborhoods and business districts. Recognizing the value of the urban forest, policies and regulations addressing trees have been developed in order to protect and enhance Seattle's trees.

Seattle has required landscaping on properties in multifamily and commercial zones since the early 1980s. Concerned that Seattle's tree canopy was being diminished due to the pace of growth and development, Seattle adopted tree protection regulations in 2001. These regulations, addressing exceptional trees on private property, represented a pioneering effort in the region and were part of a wave of early adopters implementing a variety of innovative approaches to tree retention and planting. In 2002, Seattle created the Urban Forest Coalition (later renamed the Urban Forest Interdepartmental Team or Urban Forest IDT) to begin the process of coordinating responsibilities for trees across City departments and developed a strategic plan for managing Seattle's urban forest. This collaboration culminated in the completion of the Urban Forest Management Plan (UFMP) in April 2007 (available at www.seattle.gov/trees/management.htm). The UFMP established city-wide goals and actions for implementing a vision of Seattle's



Dense canopy cover provides important stormwater, habitat, air quality, and aesthetic benefits.

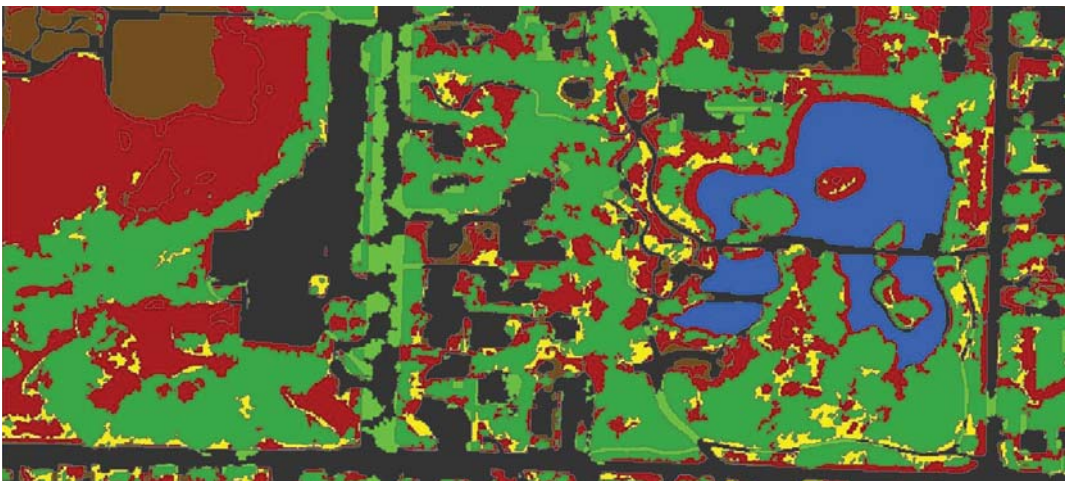
urban forest as “a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic, and community asset.” The UFMP set a goal of increasing Seattle’s tree canopy from 18% to 30% by 2037 and established general strategies for accomplishing this goal.

One of the actions recommended by the UFMP was to update Seattle’s tree regulations. To begin this process, DPD convened the Emerald City Task Force (ECTF), a ten-member group representing the development, architecture, landscape architecture, real estate, and tree care professions (meeting notes and recommendations available at www.seattle.gov/dpd/planning/trees/). This group met throughout the second half of 2007 and their recommendations helped to inform this proposal to amend tree protection regulations. DPD also met with tree advocates and their organizations in 2008 to better understand their perspectives (meeting notes and recommendations available at www.seattle.gov/dpd/planning/trees/). An urban forest workshop facilitated by the Urban Forest IDT and attended by urban forest stakeholders from throughout the region was held in July 2009 and contributed greatly to DPD’s proposal (notes available at www.seattle.gov/trees/peerreview.htm).

In 2008, the City took the first steps to address shortcomings in the City’s tree regulations by implementing interim tree protection measures (discussed in the Summary of Existing Regulations section) that were designed to prevent tree removal outside of or prior to the property development process. These interim regulations became effective

in April 2009. Following the interim tree regulations, the City commissioned a canopy cover study to gain a better and more reliable understanding of the extent of Seattle’s tree canopy. Overall, the canopy cover study (available at www.seattle.gov/trees/canopycover.htm) found that Seattle’s tree canopy was approximately 23%, substantially higher than previously believed based on earlier analysis. The canopy cover study looked at 2002/3 and 2007 data points and found that the tree canopy had actually increased slightly over this period with gains in some areas balancing losses in other areas. Additional analysis of these results found that the majority of these gains occurred in the right-of-way rather than on private property and that the recorded yearly increase would still need to double to meet the UFMP goal of 30% by 2037. Redeveloped parcels, which only represented about 1.8% of the city during this 3 year period, showed a substantial loss of trees with an average canopy reduction from 30% to 17.7% in single-family areas, 17.7% to 5.4% in multifamily areas, and 6.5% to 4.3% in commercial areas. While existing regulations in each of these zones require new planting that will grow over time, it is unknown to what extent this decline on redeveloped parcels represents a loss of tree canopy potential over time or the replacement of mature trees with new plantings.

In 2009, the Council, in anticipation of the pending review of tree regulations, passed Resolution 31138 to provide additional guidance on the review, and adopted Ordinance 123052 that created an Urban Forestry Commission to advise the City on urban forestry issues, including amendments to tree regulations. The records of the Commission are available at www.seattle.gov/trees/UFcommission.htm.



An image from the canopy cover analysis noting area of trees, shrubs, impervious surface, grass, bare soil and water.

Summary of Existing Regulations

Regulations governing trees on private property are contained primarily in two City codes:

1. The Tree Protection regulations, Seattle Municipal Code (SMC) Chapter 25.11, which regulates tree removal both outside of and during the development process; and
2. The Land Use Code, SMC Title 23, which requires the planting of trees and vegetation as part of standards governing new development throughout the city.

Trees on private property within the city are also addressed in a variety of other regulations summarized below:

- **Environmentally Critical Areas (ECA) (SMC Chapter 25.09):** regulations for environmentally critical areas include wetlands, streams, shorelines, landslide-prone areas and associated buffers. ECA tree regulations are summarized in Client Assistance Memo (CAM) 331.
- **Platting requirements (SMC Chapter 23.24):** incorporates standards for the subdivision of land including a requirement to “maximize the retention of trees” as criteria for approval.
- **State Environmental Policy Act (SEPA) (SMC Chapter 25.05):** contains procedures for review and assessment of the environmental impacts of development to limit and mitigate significant impacts not sufficiently addressed by existing codes.
- **Weeds and Vegetation Ordinance (SMC Chapter 10.52):** regulations pertaining to designation and enforcement of vegetation constituting a nuisance.

Trees located in the right-of-way as well as trees on public property, such as parks, are regulated separately.

Tree protection regulations and the Land Use Code contain limitations on tree removal during the development process as well as tree removal on undeveloped lots outside of the development

process. Additionally, the City’s interim tree protection measures, approved in 2009, provided a degree of enhanced tree protection until a proposal for improving the regulation of trees on private property could be enacted. In addition to regulations governing the retention or replacement of trees during the development process, the interim regulations implemented measures for developed lots not subject to development. The following sections outline current regulations:

Regulations Outside of Development

Prior to the interim regulations, tree removal regulations were limited to undeveloped lots. These regulations prohibited the removal of any tree 6 inches or greater in diameter on undeveloped lots in all zones. This broadly applicable limitation was intended to maintain existing conditions on a lot until a development proposal is submitted. The interim tree protection provisions affected lots in Lowrise, Midrise, and Commercial zones and on lots in Single-Family zones that are 5,000 sq. ft. or larger. Specifically, the interim regulations prohibit removal of exceptional trees and limit removal of non-exceptional trees to three per year. Exceptional trees are defined in Director’s Rule 16-2008. In general, exceptional trees include all trees above a specified diameter threshold based on the species of tree. Individual trees may be disqualified as exceptional if a tree risk assessment determines them to be hazardous based on conditions set out in the director’s rule. No permits are required for tree cutting outside of development, but property owners can call DPD if they have questions about how the limitations apply to their property.

Lots Undergoing Development

During the development process, exceptional trees in Single-Family, Lowrise, Midrise, and Commercial zones must be protected unless doing so would prevent the property owner from realizing the full development potential of their lot. The concept of full development potential varies by zone but is generally based on lot coverage in Single-Family zones, and floor area or dwelling units in other zones. In order to satisfy this standard, applicants must take advantage of any development standard modifications allowed by the code or through the design review process. Development standard

modifications vary by zone but are generally limited to front and rear setbacks in Single-Family zones and include front and rear setbacks, parking requirements, and height in other zones. Sites are not considered to be undergoing development until a permit application is submitted.

In addition to tree retention requirements contained in the Tree Protection code (SMC 25.11), the Land Use Code (SMC Title 23) requires landscaping according to specific standards regarding amount of trees, vegetation, and other green infrastructure elements that must be provided as part of a development. These standards vary substantially by zone and address street trees and screening of parking and industrial uses as well as general requirements for landscaped open space. In general, landscaping in Single-Family zones is limited to the provision of trees through retention or planting, while Commercial, Seattle Mixed, and Multifamily zones contain standards for landscaping or Green Factor as well as screening and street trees. Green Factor is a flexible alternative to traditional landscaping standards that allows applicants to meet an overall environmental services goal by choosing from a menu of options including tree retention, new planting, green roofs,



Trees and landscaping provided as part of a new multifamily development.

green walls, and permeable pavement. Green Factor has generally replaced landscaping standards in all Commercial zones and in Midrise and Highrise multifamily zones. Lowrise multifamily zones are under review and are anticipated to be subject to the Green Factor soon. Due to freight mobility, industrial infrastructure, and the need for flexible spaces, Industrial zones have limited requirements for landscaping other than the screening of certain uses and the provision of street trees on certain arterials. Below is a summary of existing landscaping code requirements.

Zone	Regulation Type and Code Reference
Single-Family	Tree Requirements (23.44.008.I)
Lowrise	Landscaping, Tree Requirements, and Street Trees (23.45.015) Screening of Parking (23.45.018)
Midrise	Screening, Green Factor, and Street Trees (23.45.524)
Highrise	Screening, Green Factor, and Street Trees (23.45.524)
Seattle Mixed	Screening, Landscaping, and Street Trees (23.48.024)
Commercial	Screening, Green Factor, Street Trees and Trees in Parking Lots (23.47A.016)
Downtown	Screening, Landscaping, and Street Trees (23.49.019, 23.49.046, 23.49.056, 23.49.106, 23.49.162, 23.49.332)
Industrial	Landscaping on Designated Streets (23.50.016), Landscaping and Screening in Industrial Buffer and Industrial Commercial Areas (23.50.034, 23.50.036, 23.50.038)

Lessons Learned

Implementation and administration of existing tree regulations has highlighted a number of important lessons that have informed DPD's proposed amendments, including:

1. Regulations that apply to a site undergoing development must be consistent with regulations outside of development to avoid gaps and conflicts;
2. Focusing on the preservation of the largest trees in denser areas, such as urban centers and villages where growth is anticipated, can be problematic;
3. Enforcement outside of development is challenging and costly; and
4. Minimal tree requirements in Single-Family zones are not achieving our tree canopy goals.

Consistency of Regulations

The consistency among regulations affecting sites during development and when development is not proposed is a simple but important lesson. Originally, the City's regulations governing trees mandated the retention of certain trees during development while allowing property owners the flexibility to manage and remove trees on their property outside of development. This approach responded directly to concerns about tree loss during the development process, but was ultimately ineffective because it created a substantial incentive to remove larger or inconveniently located trees prior to development, in order to avoid limits on removal of trees after submitting an application for a permit to develop the lot. Interim tree protection measures were adopted to prohibit the removal of exceptional trees in certain zones whether part of a development process or not. However, life-long protection of individual trees after they reach a certain size allows little flexibility for property owners and is a substantial disincentive for planting large tree species or allowing a tree to attain maturity. Therefore, it is necessary to align specific goals during and outside of development to create regulations that are appropriate in both situations.

Challenges Related To Exceptional Trees

Focusing on exceptional trees is more challenging in more densely developed multifamily and commercial areas of the city. These areas are con-

strained by higher planned development densities and additional requirements related to light, air, open space, access and parking. In retaining the largest trees on lots in densely developed areas, this approach may preclude the preservation or planting of new smaller trees that may be more appropriate for the site. This circumstance is particularly true for townhouses where much of the internal lot area is often needed for vehicular circulation and where residents may prefer smaller, private open spaces rather than communal areas that might be more suitable for planting trees. In Commercial zones, regulations generally encourage development to the lot line in order to support a vibrant streetscape and a pedestrian-oriented street front with retail businesses. Also, large trees may present difficulties with small businesses that fear their advertising and business identification signs may be obscured by vegetation or whose customer parking may be reduced by large plantings. The retention of large trees on small lots has also resulted in design issues where large trees crowd structures or are not given adequate room to grow.

Enforcement on Sites Not Undergoing Development

Enforcement of tree removal limits outside of the development process presents challenges due to the difficulty of reconstructing the scene after tree removal and regulating living plant life generally. Tree removal violations are fundamentally different from other violations enforced by DPD because they can occur quickly, leave little evidence, involve risk assessment, and cause irreplaceable loss. These differences are summarized as follows:

- **Monitoring and preventing tree removal:** Similar to most land use regulations, tree removal requirements rely on citizen complaints to identify violations. It may not be obvious when tree removal is a violation and people may not be familiar with any restrictions. Because removal can take place relatively quickly and outside of regular business hours, it may be difficult for citizens and the City to verify whether removing a tree was illegal before the tree is removed.
- **Determining the size, species, timing, and location of removal:** Tree removal complaints are typically made after a tree has been removed and little evidence about its original

size, species, and health remains except, perhaps, a stump. City staff cannot access private property to inspect tree violations without the consent of a property owner or tenant. Aerial photos may allow subjective estimate of tree size, but can be difficult to interpret where there are multiple trees.

- **Assessing tree risk after removal:** In situations where a property owner may claim a tree was in a hazardous condition, it is difficult to determine the validity of removal. Since hazard tree assessment generally cannot be completed after the fact, applicants might be subject to maximum penalties simply for lack of documentation, even in emergency situations.
- **Indirect removal:** An additional challenge is determining the cause of death where outright removal does not occur. Poisoning, root damage, and other causes can result in death as easily as cutting a tree down.
- **Determining the responsible party:** While a housing infraction is always the responsibility of the property owner, tree removal or damage on larger lots or on property lines may be caused by adjacent property owners. In these cases, it may be impossible to prove who actually caused the violation without a photo of the removal in process or an eye witness.
- **Assessing fines:** Establishing an effective and reasonable form of restitution, such as a fine, is difficult because they need to be consistent across a variety of situations. Fines should be sufficient to dissuade a developer from removing a tree that might cost \$20,000-\$50,000 to retain during construction while being appropriate for a person who may have been unaware of the regulations. Since a large existing tree cannot be repaired or replaced, compliance would have to rely primarily, on the threat of fines or replacement.



Small trees can provide aesthetic contribution, but don't necessarily provide substantial environmental benefits.

per 1,000 sq. ft. of lot area through preservation of existing trees or new planting. This standard has resulted in substantial variation in the amount of canopy cover achieved post-development. For example, on a 5,000 sq ft lot, this goal could be achieved through

1. the preservation of one 10" tree,
2. the planting of five small ornamental trees, or
3. the planting of five Douglas fir trees.

The resulting canopy created by these three landscaping alternatives when grown to maturity could range from 2% (one preserved cherry tree) to 100% (five Douglas fir trees). An analysis of 16 single-family parcels that underwent redevelopment between 2003 and 2007, including a review of site plans and aerial photos, demonstrated that, on average, these plans would result in a mature canopy cover of 17%. Of the 16 selected, only two were found to have resulted in tree retention and planting that would result in a mature canopy cover of 30% or greater. While the current approach allows for significant flexibility for homeowners, it does not appear to be sufficient for meeting current City tree canopy goals.

Key Principles and Considerations

Based on lessons learned from existing regulations, feedback from the ECTF, Tree Advocates, and Urban Forest

Minimal Regulations in Single-Family Zones

Single-Family zones occupy more than 50% of the city's land area. As such, they represent a significant resource in the City's efforts to increase Seattle's tree canopy. Under existing code requirements, applicants in Single-Family zones are required to provide two diameter inches of tree

workshop, and experience, key principles have emerged to inform the proposed amendments. They include:

1. Trees are a critical infrastructure element with social, economic, and environmental benefits including storm water mitigation, climate protection, air quality improvement, reduced energy costs, carbon sequestration, improved aesthetics, better business environments, and increased land value.
2. Regulations and incentives should ensure trees are perceived as a benefit, not a burden.
3. Measures to achieve tree canopy goals must also take into account other city-wide goals for sustainability, growth management, transportation, housing affordability, and urban design as well as a property owner’s interest in solar energy, gardening, light and air, accessory structures, access, and property maintenance, etc.
4. Regulations during development must be coordinated and consistent with regulations applicable when a property is not anticipated to be redeveloped, to avoid regulatory redundancy, gaps, and conflicts.

5. Regulations and incentives should be understandable, enforceable and financially feasible.

Given the limitations of existing regulations and the fact that a majority of trees are removed prior to development or when no development is contemplated, substantial time and consideration was devoted to whether the City should regulate tree removal on sites when no development is proposed. Measures evaluated to regulate trees on properties not subject to development included a tree removal permit. Without such a permit to monitor and enforce regulations, any long-term non-development tree regulations would likely be ineffective and inequitable due to the limited ability to verify whether tree removal was legal.

Though a tree removal permit would allow more control in limiting the removal of trees when no development is contemplated, it raises its own set of questions about effectiveness, enforceability, and cost. The following comparison was developed to compare and summarize the issue to fairly estimate the value of a tree removal permit versus not requiring a permit.

Pros	Cons
<ul style="list-style-type: none"> ■ Allows greater control of tree removal ■ Opportunity for education about benefits of trees, alternatives to removal, or replanting ■ Opportunity to slow tree removal through removal restrictions ■ Opportunity to require new planting ■ Opportunity to track tree removal ■ Impediment may force some applicants to “think twice” about tree removal ■ Would support implementation of existing Environmentally Critical Area regulations 	<ul style="list-style-type: none"> ■ Limits property owner ability to manage property and flexibility to consider solar access, solar energy, gardens, aesthetics, accessory structures, views, access, maintenance, root damage, risk, etc. ■ Disincentive to new planting ■ Difficult to communicate regulations to everybody ■ Difficult to enforce ■ Cost of permits (permit plus time) ■ Cost of enforcement (enforcement staff plus arborist plus court cases) ■ Cost of penalties for failure to get permit ■ Equity issue – difficulty for immigrants or poor to understand regulations and pay fines

A key consideration is the number of permits that might be required and potential cost of implementing a tree removal permit. The UMFP estimated that the City contains one million trees on private property and about 900,000 trees on single-family, multifamily and commercially zoned lots. Assuming that 25% of these trees are removed before they achieve a 6" diameter (a potential permit threshold) and that the average life span of these trees is 30 years, it is estimated that there would be about 22,500 applicable trees removed on private property every year. If it is further assumed that 5% of trees will be removed during development and another 20% are located in an ECA, it is estimated that 17,100 tree removals per year would be subject to the new permit requirement. Given the number of potential permits, it is very difficult to estimate how many people contemplating tree removal would actually apply for a permit. Based on information garnered from the experience of other local jurisdictions, it is estimated that, where permits are required, about 60% of property owners get permits before removing trees, although this number will be substantially less at first and will gradually increase over time. If it is assumed 1.5 trees will be removed per permit and that only 60% of people will get permits to remove their trees, it is estimated that a tree permit requirement would result in 6,800 new permits per year. To put this in perspective, the number of construction permits that DPD reviewed from 2006 through 2009 averaged a total of 5,700 per year.

It is further estimated that an unsubsidized tree removal permit with basic review and approval

Tree Permit Assumptions

900,000 trees on private property
 times 75% (above 6" threshold)
 divided by 30 (average life span)
 = 22,500 trees removed per year

times 95% (outside development)
 times 80% (outside of ECAs)
 = 17,100 applicable trees per year

divided by 1.5 trees per permit
 times 60% likely to get permit
 = 6,800 new tree permits per year

would cost about \$100 without inspection or about \$200 with an inspection. Given these estimates, the total cost of administering the tree permit process would equal at least \$680,000 per year (6,800 permits x \$100 per permit). Permit fees cover review of the permit application; however they do not cover enforcement. It is estimated that the cost of pursuing compliance, issuing notices of violation, and suing for penalties could increase costs substantially.

It is also important to understand the purpose of a permit process. Overall, potential goals for tree removal permits can be summarized as follows:

1. Education – to provide an opportunity to educate applicants about the impacts of tree removal and the importance of planting.
2. Slow removal – to prevent large land clearing, particularly for commercial harvest or clearing prior to the submission of a development permit.
3. Ensure minimum canopy cover or mitigation – to enforce a minimum number of trees or canopy cover on each property; this approach differs from the other approaches in that it might allow total flexibility on tree removal decisions, provided the combination of retained and newly planted trees meets a certain standard; the focus on this approach is more about overall tree canopy as opposed to preserving large trees.
4. Prohibit removal of certain trees – to make a determination on whether any tree can be removed based on explicit criteria; standard criteria often include hazard or nuisance conditions or size thresholds; some cities have tried to add additional criteria regarding the potential impact or “necessity” of removal, however, these criteria are generally too subjective to enforce.

The decision regarding whether to implement a permit for tree removal also has implications for the type for development regulations that may be feasible since regulations that allow removal of certain trees prior to development could impair the effectiveness of development regulations. Options for instituting a tree removal permit are summarized and compared in Table 1.

Table 1: Tree Removal Permit Approaches

Approach	Pros	Cons	Implications for Development Regulations
No permit (incentives only)	<ul style="list-style-type: none"> ■ Maximum flexibility for homeowner ■ Trees are benefit rather than burden 	<ul style="list-style-type: none"> ■ No direct control of private property trees ■ No tracking of removal 	<p>This approach substantially limits potential for mandatory retention of trees during development since removal prior to the process would be allowed. This approach would still allow flexible, incentive based approaches such as Green Factor, a minimum tree credit requirement and development bonuses.</p>
Tree Clearing Permit only (Permit required only for removal above allowed annual removal limit)	<ul style="list-style-type: none"> ■ High flexibility for owner ■ Limits clearing prior to development or for commercial harvest ■ Allows tracking 	<ul style="list-style-type: none"> ■ Basic cost – \$100 per permit ■ Allows gradual removal ■ Difficult to monitor number of trees removed over time ■ Penalizes people with lots of trees 	<p>This approach could still allow for mandatory retention of certain trees, but would limit the effectiveness of this approach on small lots where it would be easy to remove all trees or where owners could selectively remove certain trees that could be preserved during development. Additionally, this approach would not allow for protection of exceptional trees during development since these trees could be removed as part of the annual limit.</p>
Comprehensive Tree Permit w/ replacement requirement (tree permit required, but removal is allowed if mitigated or if a planting & retention standard is met)	<ul style="list-style-type: none"> ■ Moderate flexibility for owner ■ Maintains basic canopy cover ■ More equitable for heavily forested lots ■ Allows tracking 	<ul style="list-style-type: none"> ■ Substantial cost - \$200 per permit + replacement ■ May require site plan to determine existing conditions ■ Allows gradual removal of large trees ■ Replacement trees require maintenance to establish 	<p>This approach substantially limits potential for mandatory retention of trees during development since removal prior to the process would be allowed. This approach would still allow flexible, incentive based approaches or a fee-in-lieu payment system.</p>
Comprehensive Tree Permit w/ removal criteria (tree permit required and removal is only allowed if specified tree removal criteria are met)	<ul style="list-style-type: none"> ■ Maximum control over private property tree removal ■ Allows tracking 	<ul style="list-style-type: none"> ■ Substantial cost = \$100-200 per permit ■ Difficult to balance trees with light access, gardens, aesthetics, views, etc. ■ Strong disincentive to new planting ■ Enforcement of cut trees is very difficult ■ Substantial fines is only way to enforce if removal with replacement is not allowed; fines require court process 	<p>This approach would allow the most control of tree removal during development as it would be easier to align restrictions before and during development.</p>

Based on consideration of the pros and cons of these options, DPD has chosen not to recommend a tree removal permit requirement. While a tree removal permit would appear to allow a greater level of control over tree removal outside of development, the costs of such a requirement are believed to outweigh the benefits. In summary, a tree removal permit is not recommended for the following reasons:

1. **Limited effectiveness:** A tree removal permit process allows few options for practical management of trees. A prohibition on removal of certain trees creates a substantial burden on property owners and could build a resentment of trees. Requiring replacement does not ultimately slow the removal of trees and can be ineffective if property owners do not maintain their trees during establishment. Both options create a disincentive to the voluntary preservation or planting of trees if property owners understand that they will be subjected to costs if they believe that they may wish to remove them in the future. Based on the experience of other municipalities, it is likely that a substantial number of people (estimated by staff in other cities as 20% - 40%) will not apply for permits due to the overall burden, costs, and lack of knowledge about permit requirements.
2. **Limited enforcement potential:** Enforcement relies on complaints and requires assessment of situations based on the absence of a tree rather than a visible infraction.
3. **Inflexibility and burden on property owners:** A regulatory approach must rely on simple, prescriptive rules that consider trees to the exclusion of other factors. Property owners must consider and balance personal and community values and goals in managing their property. A permit system would limit property owner's options for managing their property and add time and cost to maintaining and improving their property.
4. **Cost:** It is estimated that the cost of permit fees alone would be more than \$680,000 per year (6,800 permits times \$100 per permit),

excluding any replacement requirement or fines. This amount is about two thirds of what that the City estimates it would need to meet tree canopy goals through direct planting. The cost of this requirement would disproportionately impact low-income communities and further discourage tree planting in these areas.

5. **Effective alternatives:** Canopy cover analysis between 2002/3 and 2007 demonstrates that canopy cover has been increasing without a tree removal permit. Existing trends indicate that the City may be able to achieve canopy cover goals without a permit system while maintaining flexibility for citizens to manage their property, particularly if other educational and incentive opportunities are explored.

Overall, while a permit system may appear to produce benefits in monitoring, tracking, and mitigating tree removal outside development and supporting more effective regulations during development, these perceived benefits do not outweigh the overall burden and costs of such a system.

PROPOSAL

DPD proposes amending tree regulations applicable to private property in order to increase the effectiveness of development regulations by shifting focus to a more flexible, canopy-cover-based approach from a more punitive, exceptional-tree-based approach, while expanding opportunities for new tree planting along streets and around institutions in Single-Family zones and certain uses in industrial areas.

DPD's proposal is summarized as follows:

- Implement a tree credit requirement in Single-Family zones, rather than exceptional tree provisions.
- Implement landscaping standards for institutions in Single-Family zones.
- Require street trees during development in Single-Family zones.
- Use Green Factor as an incentive-based approach to tree retention during develop-

ment and remove exceptional tree regulations in Lowrise, Midrise, and Commercial zones; revisit Green Factor scoring methodology to consider further incentives for the retention of large trees.

- Simplify the process for allowing departures to height, setbacks, and parking to preserve large trees during development by creating an alternative to the design review process.
- Apply Green Factor requirement for principal commercial and retail uses in Industrial areas.
- Integrate tree regulations into SMC Title 23.
- Discontinue interim tree regulations.

Additionally, DPD is considering and seeking additional input on the following:

- A requirement for a maintenance bond to ensure establishment of new plantings for multifamily and commercial zones.
- Allowing payment in lieu of planting in Single-Family zones.

As an alternative to current exceptional tree regulations and planting standards, DPD proposes implementing a flexible landscaping requirement that allows owners to meet overall canopy and environmental goals through tree planting or retention. For Single-Family zones, this proposal would implement a minimum tree credit standard for new or replaced homes. A tree credit standard would require applicants to meet a specified tree credit number per lot area (one credit per 200 sq. ft. after the first 1500 sq. ft.) that could be met through retention or planting. The tree credit allowed per tree retained or planted would be based on the diameter of the tree with additional credit for larger trees. The proposed tree credits were calculated based on the goal that each lot should reach a canopy cover of 30% in 15 years after development, assuming that each retained tree is, at a minimum, a medium sized tree. The exception for the first 1,500 sq. ft. would minimize the burden on small lots where it would be considerably more difficult to meet these standards. Additionally, a 25% bonus would be given to trees that are native or evergreen. Small, small/medium, medium/large, and large trees are categorized in the Green Factor tree list.

Proposed Tree Credit Table

Minimum of one credit per 200 sq. ft. excluding first 1500 sq. ft. ; 25% bonus for evergreen or native trees.

Tree Provided	Tree Credits
New small species tree	1
New small/medium species tree	2
New medium/large species tree	3
New large species tree	4
Preserved tree 6-9"	6
Preserved tree 9-12"	7
Preserved tree 12-15"	8
Preserved tree 15-18"	9
Preserved tree 18-21"	10
Preserved tree 21-24"	11
Preserved tree 24-28"	12
Preserved tree 28-32"	13
Preserved tree 32-36"	14
Preserved tree 36" and greater	15

The tree credit system is designed to result in more canopy cover than existing landscaping and exceptional tree retention standards by requiring retention or planting linked to meeting the City’s canopy cover goal. Additionally, enacting a tree credit system will allow flexibility about decisions to preserve trees to ensure that trees are of an appropriate size and location considering the site and the design of new buildings.

Example Case

Lot size = 6000 sq. ft.
 Minimum Tree Credit =
 $(6000-1500)/200 = 23$

Sample Planting Plan

Preserve one 23" tree = 11 credits
 Preserve one 6" tree = 6 credits
 Plant one native large tree = 5 credits
 Plant one small tree = 1 credit



Recent street tree plantings.

The single-family tree credit requirement would also be extended to include institutions in Single-Family zones. A provision is also proposed that would clarify the scope of area that would be considered for small developments within a campus setting, similar to a provision that is currently in place for Green Factor requirements. This provision would ensure that small developments within a large campus would not be required to meet the tree credit requirement for the entire campus, just the area around the redevelopment. Major institutions in single-family areas would also be required to meet this standard unless their major institution master plan contained specific alternative standards approved by the City.

DPD also proposes to implement a new street tree requirement for developing lots in Single-Family zones. Modeled on existing requirements in multifamily and commercial zones, applicants would be required to plant street trees “according to Seattle Department of Transportation (SDOT) Tree Planting Standards, unless it is not possible to meet the standards” when lots are developed or homes are rebuilt or replaced. Existing street trees may count toward meeting the street tree requirement. SDOT, which is responsible for the review of all street tree actions, would also be responsible for

determining size, species, and locations of street trees based on the Right-of-Way Improvement Manual standards, location of utilities, and site access requirements.

For Multifamily and Commercial zones, standards for tree planting or retention would be achieved through the Green Factor requirement. DPD updated the Green Factor requirement in 2009 to further encourage retention of existing trees and continues to monitor this requirement to consider additional opportunities to prioritize tree retention. Additional information on Green Factor requirements is available at www.seattle.gov/dpd/permits/greenfactor/.

The process for allowing departures to height, setbacks, and parking in order to preserve a large tree is also proposed to be modified in order to make it easier for applicants to use. Currently, departure requests in Lowrise, Midrise, and Commercial zones can only be authorized through the administrative design review process. Undertaking administrative design review for projects that are not already required to go through design review can add three to six months to the length of a permit process which is a disincentive to using this provision. To reduce this disincentive, the proposal would allow DPD to make this determination without going through administrative design review where design review is not otherwise required.



A recent project meeting Green Factor requirements.

The tree credit and Green Factor requirements would replace the existing exceptional-tree-focused regulation as this regulation has proven to be an ineffective tool for preserving substantial canopy. Existing exceptional tree provisions necessitate inflexible long-term tree preservation requirements and tend to focus on preserving a few large trees on small urban lots. First, mandatory exceptional tree preservation requirements during development require permanent exceptional tree protections on lots not undergoing development. Programs that allow property owners to remove exceptional trees even in limited circumstances create a substantial incentive to remove exceptional trees prior to development. Permanent exceptional tree protection requirement would be extremely burdensome for the few people who actually have exceptional trees because it would allow no flexibility to manage trees that may outgrow their space or prevent light access, gardens, or other uses and would be a major incentive to cut trees before they grow to become exceptional. Current exceptional tree requirements have also been ineffective because they focus exclusively on large trees which may not be possible or appropriate to preserve on small lots. As discussed in the lessons learned section, this focus provides few opportunities for preservation and may result in the preservation of large trees that cause serious livability or structural issues or have a short life-span after construction.

Industrial areas pose particularly difficult challenges for tree planting due to the requirements of transportation infrastructure and the need for low-cost, flexible space that is able to accommodate a variety of storage, staging, and manufacturing uses. For example, many businesses accommodate heavy trucks and need open outdoor spaces that will not impede truck flow and can still be used for storage or other uses. Prescriptive tree requirements could substantially burden these properties by conflicting with the core needs of industrial users. One opportunity that has been identified within these areas are commercial or retail buildings that are not subject to the same requirements as industrial properties and already effectively accommodate trees when located in other zones. Consequently, DPD proposes to implement a Green Factor requirement for principal commercial and retail uses exceeding 4,000 sq. ft. of floor area in Industrial zones. A Green Factor requirement

would provide for substantially more environmental function in these areas while allowing flexibility to consider options that would not negatively impact adjacent industrial uses in the area.

Tree regulations in SMC Chapter 25.11, Tree Protection, are proposed to be moved to SMC Title 23, the Land Use Code, in order to better integrate regulations governing trees with development regulations. This reorganization will allow for a more consistent set of definitions, make it easier to find applicable tree regulations, and ensure that developers and non-developers alike are aware of the regulations.

As discussed previously, interim tree regulations were implemented “to limit tree loss outside of the development process and to prevent the clearing of trees prior to submission of a development proposal” while the City evaluated canopy cover trends and developed updated regulations. Although there remains a need to limit the loss of trees outside of development, the interim regulations were intended to address short-term losses that might jeopardize the long term goals of tree retention and preservation and are problematic as long-term strategies for a number of reasons. Given the positive results of new canopy cover data



A 32" dbh Ginkgo tree preserved during construction.

as well as potential canopy cover gains resulting from this tree regulation update proposal and city-wide education and incentive programs, it makes sense to discontinue these regulations in favor of a more comprehensive approach.

Additionally, DPD is considering the following requirements and will seeking further input before recommending these as elements of the proposal:

1. Consider requiring maintenance bonds to ensure establishment of new plantings in Multi-family and Commercial zones. A maintenance bond would require project applicants to set aside funds to ensure that trees and landscaping are maintained after initial planting. After a certain period (likely two to three years) applicants would be required to schedule an additional inspection to demonstrate that required landscaping has been established. Maintenance bonds would likely make tree and landscaping requirements more effective because lack of maintenance often results in substantial attrition after planting. Once established, it is much more likely that property owners will keep trees and that landscaping will survive beyond this period. Bonding might be especially difficult for mixed-use or multifamily developments where ownership and maintenance is generally divided among multiple owners as it would be more difficult to track responsibility.
2. Allow payment in lieu of planting in Single-Family zones. As an alternative to meeting a new tree credit requirement entirely through planting and retention, this option would allow homeowners to contribute to a fund to meet part or all of their obligation through off-site planting undertaken by the City. As part of such as system, the City would be required to set up explicit criteria for spending funds in order to meet state requirements about these programs. Administration of received funds and tracking compliance with required criteria would also require additional administrative resources. These safeguards would ensure geographic equity but would also involve additional expenses. This option would allow more flexibility for property owners; however, it raises issues about the equity of allowing some property owners to pay money to avoid planting trees on their property.



Retail and commercial projects in industrial areas provide opportunities for trees.

Conclusion

The proposed amendments to City regulations governing the planting and removal of trees on private property constitutes a comprehensive update of existing tree regulations in order to implement lessons learned from existing regulations, align existing development regulations with city-wide canopy cover goals, and implement new opportunities for expanding the city's tree canopy cover. Overall, the recommendations are likely to result in substantially greater canopy cover potential after development by applying more rigorous landscaping standards during construction and expanding the scope of existing regulations to institutions and street trees in Single-Family zones and retail and commercial uses in Industrial zones. At the same time, the proposed amendments remove less effective provisions and streamline others supporting voluntary retention in order to make the development process more consistent and equitable and to ensure that trees are not seen as a burden to property owners. DPD believes that this proposal represents a reasonable balance between canopy cover goals and other City goals related to the environment, growth management, transportation, housing affordability, and urban design. The proposal also balances citywide goals with personal property goals for solar access, solar energy, and other aspects of property management. DPD believes that in partnership with expanded education and incentives, these regulations will enhance and expand the urban forest in Seattle without compromising our overall goals for creating a more livable and sustainable community.