MEDFORD
PARKS, RECREATION AND FACILITIES

Holmes Park

Urban Forestry
Park Tree Maintenance Plan

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Prepared By

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Executive Summary

The City of Medford has over 30 public parks and natural areas with an estimated 1 million trees providing important and necessary benefits to the community. Among the many benefits of trees are cleaner air, cooler temperatures, homes for wildlife, and places for people to play and enjoy nature.

The primary goal of the Park Tree Maintenance Plan is to protect, preserve, restore, and expand Medford's urban forest. The Plan supports the following objectives:

- Provide canopied areas around large open recreational spaces in developed parks.
- Maintain and enhance the city's street tree network to provide shade and cooling of the city's impervious transportation network.
- Maintain existing canopy while increasing it in strategic areas.
- Organize and coordinate tree maintenance.

The Plan details a standard for care for Park Maintenance Division urban forestry staff performing park tree maintenance for both public safety and park functionality.

This document and its overall goal of protecting, preserving, restoring, and expanding Medford's urban forest supports the following goals of the Department's 2024 Strategic Plan:

- Goal 1 - Serve the Entire Community
- Goal 2 - Protect Natural Areas
- Goal 4 - Manage and Maintain Our Parkland
- Goal 6 – Engage and Communicate

Policy 2-E states, "Recognize trees as valuable assets that contribute to the livability of our City."

Public safety is a top priority and is reinforced in this plan. Parks are systematically inspected to offer equitable service to park properties across the City. The intended

use of each area in a park, seasonal limitations, and site-specific needs are considered as tree maintenance work is scheduled and completed.

The trees covered under this Plan include all trees where the Department is the responsible party for care and maintenance. This includes trees on City Park property, right-of-way trees adjacent to City property and major arterials as defined in the municipal code, and trees on properties where there is a maintenance agreement in place making the City the responsible for tree care.

Each park is inspected to identify tree hazards, pruning needs, and tree health concerns. Inspections follow the guidance set forth in the ANSI A300 Tree Care Standards and/or Best Management Practices published by the International Society of Arboriculture. The frequency of inspections varies by park and are based on known or anticipated maintenance concerns. The goal is to inspect at least a portion of each park property every three years.

Street trees follow the same standard of care as park trees. However, street trees are also inspected to insure proper right-of-way clearance for public transportation and safety. Infrastructure surrounding the trees is also inspected to ensure the tree root system is not causing damages to the surround sidewalks, curbs, or roadway system. If damages are found, the City Arborist shall decide the best path forward to mitigate the safety concern.

A standard of care is laid out for the trees in Medford's parks. The ideal tree canopy in a park is low risk, healthy, and maintained to enhance other park and urban forest functions. The Department promotes tree longevity while following ANSI A300 Standards and International Society of Arboriculture Best Management Practices where they apply, including pruning, soil management, supplemental support systems, planting and transplanting, root management, tree risk assessment, and integrated pest management. Additional guidance is provided for how park trees should be maintained within the industry standards.

Public Safety

A key intention of the Plan is to improve public safety by reducing the number of hazardous situations, particularly those that are preventable through periodic inspection and maintenance of park trees.

A top priority is tree emergency response. Reported tree safety concerns that pose an immediate hazard are addressed and responded to at all hours of all days and addressed as quickly as possible by parks staff or by authorized contractors.

The next priority are trees likely to become dangerous but do not pose an immediate hazard. These could be trees with dead limbs near high-use areas; dead trees that have not yet declined to a state of being structurally unsound; or trees with undesirable structural defects. The intended use of the area around each tree will be a strong consideration for the urgency of completing tree care activities.

Another priority is to identify trees with a risk rating above "low" when evaluating for a timeframe of three years under normal weather conditions. Trees with a risk rating of moderate, high, or extreme will have action taken to mitigate the risk. Risk ratings of low, moderate, high, or extreme are determined by matrices in the Basic Tree Risk Assessment Form published by the International Society of Arboriculture.

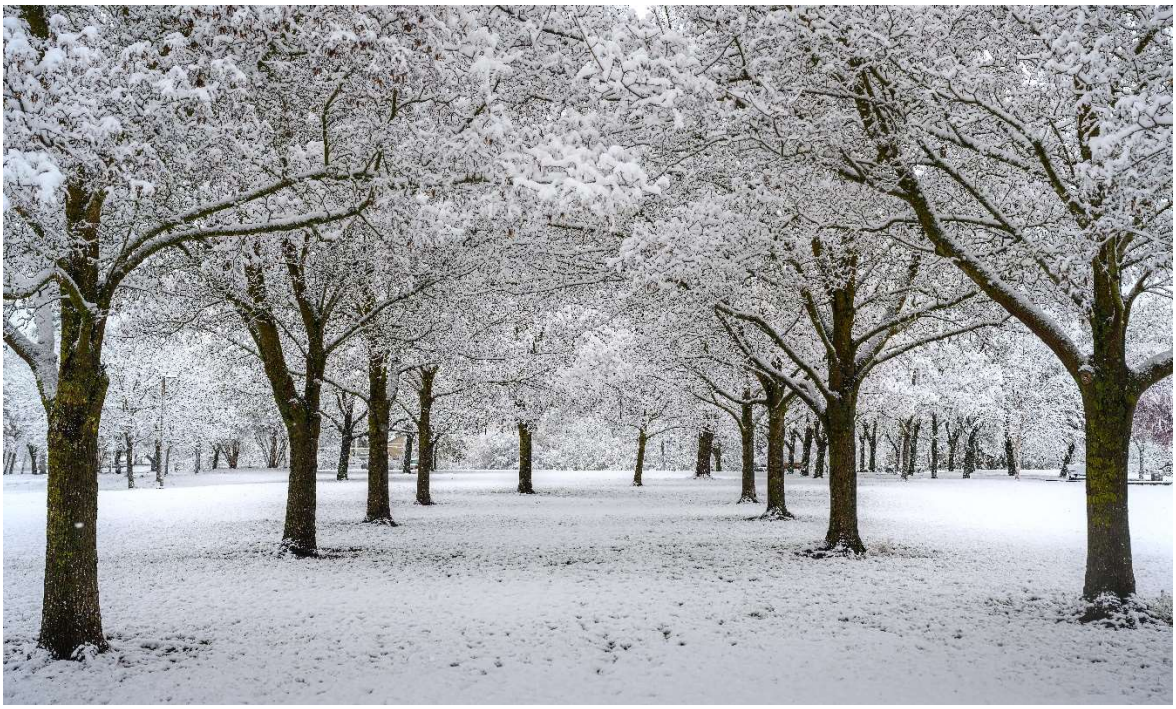
Olsrud Family Community Playground at Bear Creek Park

Priority Areas In Parks

High-use areas with tree canopies often require the greatest level of tree care to maintain safe and functional park spaces. Gathering areas, playgrounds, buildings, parking lots, sports facilities, picnic areas, and paved trails will have all trees within 50 feet, and trees of specific concern, prioritized for regular inspection and monitoring. Fully developed parks and developed portions of hybrid (partially developed and partially natural) parks will have all trees inspected, optimally annually.

Natural areas, such as Prescott Park, will have a reduced level of tree inspection. Specifically, trees in natural areas will have only the side adjacent to a path or developed portion of the park inspected unless a specific concern merits a more

thorough inspection. Trees that pose a significant safety or fire risk to shall be removed to reduce the likelihood of a catastrophic event.



Bear Creek Park

Seasonal Limitations

Medford parks contain some species of trees that should only be pruned during specific times of the year to avoid spreading disease or attracting insect pests. Parks also have locations that equipment can only reach during times of dry soil conditions. Scheduling will also consider wildlife impacts, scheduled events in the parks, and times with high volumes of use in places such as play areas adjacent to schools. Some parks may be partially completed in one season and finished in another season.

Species-Specific Needs

Different tree species have varying growth rates, growth patterns, water and nutrient requirements, and wood strengths. Some species may perform best with annual maintenance while other species may have many years that require little or no maintenance. In many parks, the species of trees will dictate the return time frame for inspection, and the next inspection will determine if additional work is needed.

Inspection Process

Each park property will be inspected by Urban Forestry staff to identify tree hazards, pruning needs, and tree health concerns. Inspections follow the guidance set forth in the ANSI A300 Tree Care Standards and/or Best Management Practices published by the International Society of Arboriculture. The frequency of inspections varies by park and will be based on known or anticipated maintenance concerns. The goal is to inspect at least a portion of each park property every five years.

Following each inspection, a work plan is created for needed tree removal, pruning, stump grinding, and pest management.

All trees within parks should be maintained to have a low-risk rating as determined by the risk rating matrix after going through the likelihood matrix. Trees noted as extreme, high, or moderate risk will have work recommended to mitigate the risk and reduce the rating to low. (See Matrix 1 and 2 below as found in the Tree Risk Assessment Best Management Practices published by the International Society of Arboriculture.)

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impacting Target			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Cycle Length

Park tree care work occurs in each park based on need and staff resources. Each park is inspected, the return cycle for the next inspection will be determined by the species of trees and type of use within a certain proximity of the trees. The standard return cycle for assessment is every five years for developed areas of parks. A portion of the park may have a shorter return cycle than the remainder of the park to ensure monitoring trees of concern and/or sensitive areas is completed. In some cases, a longer return interval is justified based on tree species, age, condition, or use of the area.

Prescott Park

Standard of Care

The ideal tree canopy in a park is low risk, healthy, and maintained to enhance other park and urban forest functions. The Department promotes tree longevity while following ANSI A300 Standards and International Society of Arboriculture Best Management Practices where they apply. This includes pruning, soil management, supplemental support systems, planting and transplanting, root management, tree risk assessment, and integrated pest management.

Risk Management

The Department aims to mitigate trees above low risk through pruning, adjustment to the use around the tree, tree removal, or installation of tree support hardware.

As potential tree hazards are discovered, Tree and Right-of-way staff consider the likelihood of failure, likelihood of impacting a target, and consequence of failure while determining if the tree risk rating is low, moderate, high, or extreme. Restricting access to an area may be the initial action while additional assessments and/or corrections are made. As per ANSI A300 13.3.2, “tree risk assessors shall have sufficient training and experience to provide the specified level and details of the tree risk assessment”.

The first consideration for reducing tree risk is pruning. When pruning is not sufficient mitigation to result in a residual risk rating of low, other measures will be taken.

Tree hazards that cannot be reasonably alleviated through pruning will likely result in tree removal.

For high value trees or other special circumstances, the tree hazard may be reduced by restricting access to the area around the tree and/or hardware may be installed for supplemental support to a portion of the tree. Trees may be considered high value for a variety of reasons, but may include heritage trees, rare species, or trees of significant canopy impact in that park and/or neighborhood. Tree support hardware may include cables, braces, props, etc.

Donahue-Frohnmayer Park

Pruning

Pruning of park trees follows the latest industry standards found in the ANSI A300 Standards and International Society of Arboriculture Best Management Practices. Most park trees are pruned using a natural pruning system to retain and promote the characteristic form of the species or cultivar. A small number of park trees are pruned differently if the tree has historically been pruned differently and the best course of action is to continue with that method and purpose.

Each tree has one or more clear pruning objectives. The most common objectives in parks will be to manage risk (reduce likelihood of failure), provide clearance, develop structure, manage health, and manage wildlife habitat. Other objectives could include the following: improve aesthetics, manage size or shape.

Deadwood Removal

Dead material in a tree impacts safety, aesthetics, tree health, and wildlife. In high-use areas around park trees, the general goal is to remove dead limbs two inches and greater to minimize the risk of harm to park users, amenities, or neighboring properties. In lower use areas, size threshold is increased based on the risk rating of that part. Remaining dead limbs are left in the tree to promote wildlife habitat. In the case dead material is a concern for the health of the tree, additional dead material may be removed.

Crown Reduction

Reducing the height and/or spread of a tree in our parks is reserved for two purposes: reducing risk of failure and maintaining a City-designated view. Reducing risk of failure is significantly more common than view clearance and will be almost entirely in developed portions of parks. Both height and spread reductions are completed with pruning cuts back to a branch or stem that can resume dominance for that portion of the tree. Pruning is completed in a manner not detrimental to the health or longevity of the tree while leaving the tree looking as close to its species natural form as possible.

Fichtner-Mainwaring Park

Infrastructure Clearance

Pruning for infrastructure occurs for a variety of reasons, including clearance for streets, sidewalks, park paths, sports courts, lawn mowers, buildings, and lights. In most cases, crowns are raised to 16 feet over streets and 10 feet over sidewalks (per municipal code), and eight feet over turf where mower access is required. Keeping three to six feet around and over buildings as well as five feet around lights allows better function and maintenance of the assets.

When limbs have developed within these limits that are critical to the health or development of the tree, these standards may not be met. The low limbs on a tree should be retained unless there is a specific need to remove them. Low limbs aid in the establishment of trees and the formation of a tapered stem and improved structure. In situations where the low limbs are necessary for the development or

health of the tree, they are to be retained. The areas with low limbs retained should be mulched to reduce the conflict between mowers and limbs.

Table 3: Infrastructure Clearances

Area of Concern	Target Clearance
Arterial Street	15 feet vertical Medford Municipal code 6.510
Residential Street	15 feet vertical
Sidewalk	10feet vertical MMC 6.510
Park Path	8 feet vertical, 12-14 feet vertical when the path is used for maintenance vehicle access
Mowed Lawn	8 feet vertical
Building Side	3 feet horizontal
Building Roof	6 feet vertical and horizontal
Permanent Lighting	5 feet in all directions

Structural Pruning

Many trees require pruning to remove or suppress parts of the tree likely to develop into a structural defect leading to failure. Structural pruning is easiest and most effective while the tree is young. At maturity, structural pruning is more likely to be for the purpose of suppressing a defect rather than fixing it. Young park trees are assessed for structural pruning needs and have them addressed as needed. Mature park trees are assessed for structural defects with measures taken to prevent defects from continuing to get worse.

Tree Removal, Stump Grinding, and Replacement

Park trees are removed when they are deemed dangerous after other methods to mitigate the risk are not feasible or recommended. Park trees are considered for removal when they are likely to become dangerous within the next five years. In developed portions of parks, this commonly includes trees that are dead, dying, or have suffered structural damage to a significant portion of the tree. Trees may also be removed to prevent the spread of insects or disease.

In most developed portions of parks, the stump is removed to allow planting in the same area. When feasible, Urban Forestry staff replants trees in the same area, but may plant trees in other areas optimally within five years of when the original tree is removed.

Pest Management

Insects and Pathogens

Insects and pathogens in the parks will be treated when doing so is in line with Urban Forestry objectives to promote and maintain a healthy urban forest. For example, treatments via trunk injection to prevent Dutch Elm Disease and Emerald Ash Borer may be necessary, subject to availability of funding.

Weeds and Turf

Controlling weeds and turf around established trees is an aspect of park maintenance and a benefit to trees. Keeping vegetation away from the trunk allows for more thorough inspections and reduces moisture retention against the tree trunk that could lead to decay. A variety of methods may be implemented to control this vegetation.

In turf areas regularly mowed there is concern for mechanical damage to the trunk and/or exposed roots of a tree. In these areas the first weed management tool is a wide mulch ring. Mulch should be applied around the trunk of the tree in a manner that suppresses weed growth, provides a good radius for the mowers, and keeps

the mulch out of direct contact with the tree trunk. Mulch areas around trees should have a minimum radius of three feet. If the tree has exposed surface roots, the mulch area should be increased enough to cover any exposed roots to avoid damage to mowing equipment and the tree roots. Larger mulched areas are encouraged, especially in areas where the mulched areas of multiple trees can be combined to be one larger area.

Mechanical vegetation control may be performed in a manner that avoids physical damage to the tree trunk or roots. Mowing and edging equipment should avoid contact with the tree trunk or exposed roots, and any digging or pulling must be done with care to protect any tree roots in the area.

Herbicides are not widely used in Medford's park system. However, if circumstances require herbicides to be used within the dripline area of any tree, the product shall be applied in a manner that does not harm the tree.

All herbicides are applied with strict adherence to label conditions and requirements. Post emergent herbicides shall target growing weed plant tissue for post-emergent control and may not be applied to the surface of any tree trunk, exposed roots, or shoots growing from the trunk or roots of the same tree. All herbicide applications must follow the Department's Integrated Pest Management policy.

Some tree health concerns are directly tied to conditions within the soil. These could include contaminants, compaction, soil structure, nutrient deficiencies, or soil temperatures.

Protecting the soil from contaminants and further compaction is a park maintenance consideration. For the Tree and Right-of-way team, this requires careful fueling of chainsaws and limiting equipment travel during times of high soil moisture. Additional soil protections measures may be necessary on a case-by-case basis.

Soil compaction, structure, temperature, and nutrients can all be tested. Any suspected issues with these items should be tested and verified prior to any remediation that has the potential of undesirable side effects. All fertilization is to be applied in a prescribed manner for a specific purpose.

Union Park

Wildlife Habitat

Promoting wildlife habitat is a priority in natural areas and a strong consideration in all other park areas. Maintenance activities are scheduled to reduce risk to nesting birds and bird surveys are scheduled with a qualified provider as needed. Wildlife habitat snags are retained in areas where it is safe to create them, and the portion of the tree retained will continue to be low risk for the life of the snag. Consideration will also be applied to protect and enhance pollinator food sources and habitat as well as cover for other species.

Public Input

Citizens are a great asset in identifying concerns about the urban forest. Fostering and promoting this collaboration will greatly improve the ability of the Department to reach the overall goal of maintaining a low-risk canopy in each of our parks. The public is invited to share concerns by calling (541) 774-2400 or emailing parks@cityofmedford.org.

The Department primarily utilizes social media and its website(s) to inform the public of tree-related news and procedures. Staff work with the City's Communications team using mixed methods to promote or makes citizens aware of major initiatives, such as Arbor Day events and the Heritage Tree program.

Park tree hazards reported through the Medford Police Department's emergency dispatch system, code enforcement division, or the Department's phone system are dispatched to the Urban Forestry crew for mitigation.

Residents adjacent to parks may be impacted by park tree care activities. Staff strive to schedule park tree maintenance around community activities, park rentals, and events when possible.

Shared Trees

Some trees grow on, or near, a property line and have branches and/or roots that extend onto more than one property. When a private property tree reaches over a park, Urban Forestry staff may prune those limbs for the purposes of safety and necessary clearances. For situations where a park tree is partially over a private property, staff strive to maintain the entire tree to the same safety and clearance standards as deemed appropriate for the park.

When adjacent property owners request maintenance of a shared tree that originates on park property, the situation of concern is reviewed by the City Arborist or qualified designee. Necessary work will either be completed by Parks Maintenance Division staff, or by an authorized City contractor. This decision is determined on a case-by-case basis with the intention of having Urban Forestry

staff completing all work that required access through the park, most work that can be seen from frequently used areas within the park, and some work that requires access through private property that cannot be easily seen from within the park.

Street Tree Permits and Planting Guidelines

Street Tree Permits are required when removing street trees per MMC 6.725. Permits are free of charge and require permit requestor to fully remove the tree and stump. All trees removed must be replaced with a new tree 1-3/4" in diameter from the approved City Street Tree list.

Exhibit A – Permit Form

Exhibit B – Approved Street Tree List

Exhibit C - Guideline for the Protection of Trees

Glossary of Terms

Advanced Assessment: An assessment performed to provide detailed information about specific tree parts, defects, or site conditions. Specialized equipment, data collection and analysis, and/or expertise are usually required.

Basic Assessment: Detailed visual inspection of a tree and surrounding site that may include the use of simple tools. It requires that a tree risk assessor walk completely around the tree trunk looking at the site, aboveground roots, trunks, and branches.

Best Management Practices (BMP): Best-available, industry-recognized courses of action, in consideration of the benefits and limitations, based on scientific research and current knowledge.

Canopy: Collective branches and foliage of a tree or group of trees' crowns. Aggregate or collective tree crowns.

Crown Reduction: Method of reducing the height and/or spread of a tree crown by making appropriate pruning cuts. Reduction.

Cycle: In utility and municipal arboriculture, the length of time between each maintenance pruning for a given circuit or geographic area.

Decline: Gradually diminishing health or condition of a tree.

Espalier: (1) (noun) Specialized technique of pruning and training plants to grow within a plane, such as along a wall or a fence. (2) (noun) A plant trained in that manner. (3) (verb) To train plants in that manner.

Hazard: A situation or condition that may result in personal injury, property damage, or disruption of human activities. (1) In tree management, a tree or tree part that has a high likelihood of failure and causing damage or injury. (2) In tree care or forestry operations, the presence of a condition or situation that may cause harm or injury to workers or others.

Limited Visual Inspection: A visual assessment from a specified perspective such as foot, vehicle, or aerial (airborne) patrol of an individual tree or a population of trees near specified targets to identify specified conditions or obvious defects.

Overextended Branch: A branch that has grown longer than the natural extent of the tree's canopy and can no longer be securely held before breaking under its own weight. A defect that can lead to failure of the branch.

Pruning: Removing branches (or occasionally roots) from a tree or other plant using approved practices, to achieve a specified objective.

Reduction: Pruning to decrease height and/or spread of a branch or crown.

Risk: Likelihood or probability that something will happen, usually associated with negative consequences. In tree management, the likelihood of a tree failure and severity of associated loss, personal injury, property damage or disruption of human activities.

Species: Taxonomic group of organisms composed of individuals of the same genus that can reproduce among themselves and have similar offspring.

Structural Defect: Feature, condition, or deformity of a tree that indicates a weak structure or instability that could contribute to tree failure.

Structural Pruning: Pruning to establish a strong arrangement or system of scaffold branches.

Target: People, property, or activities that could be injured, damaged, or disrupted by a tree failure.

Tree Failure: Uprooting or mechanical breakage of a tree, its parts, and/or associated soil.

Tree Inventory: Record of trees within a designated area that provides specified identification and condition information to be used for management decisions and actions.

Tree Risk Assessment: A systematic process used to identify, analyze, and evaluate the likelihood of tree failure and associated consequences.

Tree Support System: Mechanical system used to limit movement or proved supplemental support to leaders, branches, or entire trees.

References

International Dictionary Online. Retrieved from www.isa-arbor.com/education/onlineresources/dictionary

ANSI A300 Tree Care Standards for trees, shrubs, palms, and other woody landscape plants. 2023

ISA Basic Tree Risk Assessment Form:

BasicTreeRiskAssessmentForm_Fillable_FirstEdition.pdf (isa-arbor.com)