



City of Takoma Park

Urban Forest Master Plan

Department of Public Works

Urban Forestry Division

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Urban Forest Master Plan

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I. Introduction

The City of Takoma Park takes pride in its robust urban forest. The urban forest canopy provides substantial environmental services to City residents in the form of cooler and cleaner air, reduced stormwater runoff through rainwater interception and absorption, improved resident mental health, traffic noise suppression, and more. The urban forest also provides an aesthetically pleasing and desirable setting to live, work, and play in. The urban forest provides benefits to non-humans, including wildlife and local ecological communities. Takoma Park's well-treed landscape is a testament to its commitment to these values and services.

However, the urban environment requires special management considerations to maximize the health of trees and the benefits they provide. Urban soils can be challenging for trees to grow in and extra awareness about improving soil quality and tending to the health of trees is important. Urban activities, particularly construction, can pose threats to tree roots and health. The urban heat island effect and anthropic soils, along with a changing climate, require special considerations for what species may be most appropriate to plant. Natural regeneration of the urban forest may not occur in urban areas as it would in the forest so tree planting and retention of what trees we have are vitally important. And, while trees in the natural forest may be able to live, age, die, and fall without much concern for their risk, trees in the urban environment often grow close to people and property, and special attention to tree risk is necessary. Good urban forest management must account for all of these factors.

This Urban Forest Master Plan provides the areas of work and techniques that the City employs to promote the health of its urban forest. It recognizes that there are many important stakeholders at work in the urban landscape and that good management is only achieved through good partnerships. It prioritizes tree planting and good tree care across the City to replace trees lost to attrition. It recognizes the importance of good public relations, informative outreach and education campaigns, and easy-to-use City resources and permit application processes to ensure public buy-in. The City works to optimize the implementation of this strategy and will periodically review and update the Urban Forest Master Plan as needed.



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II. Urban Forest Master Plan Elements

1. Public Space Tree Planting

Tree planting is essential to restoring and maintaining the urban forest and to providing the benefits of trees to areas where they are lacking. The City owns and manages substantial land area that is suitable for tree planting, including street-side planting areas, City right-of-way locations, City parks, and other City properties. While the City directly owns and manages a relatively small proportion of land area compared to land owned privately, planting trees in public space is one of the most direct ways the City can work to expand and maintain the urban forest. A diverse array of native tree species from the Approved Tree Species List are used for these plantings. Long-lived large canopy species are planted wherever possible and appropriate. Tree plantings are conducted through an experienced contractor and follow ANSI A300 standards.

Tree Planting Location Prioritization Factors

Given the large number of locations available for tree planting in public space across Takoma Park, the City has established a rubric for prioritizing which locations to plant. The following factors are used when determining both the suitability and priority level of a potential planting location. A location can rank low in one factor but high in the others and still be considered a comparatively high priority on the balance.

- **Areas with low canopy cover** – Blocks and neighborhoods that have lower canopy cover than the City as a whole will be prioritized. Data from the City’s tri-annual canopy assessment and supplemental field assessments are used in determining low-canopy priority areas.
- **Locations with soil best suited for canopy trees** – Soil quality and volume are key determinants of a tree surviving, thriving, and providing a return on the City’s investment. Locations with a larger growing space for tree roots and with less compaction will be prioritized. Options for restoring soil quality at impacted sites will be considered as well.
- **Locations without overhead conflicts** – A tree serves the community best when it has ample sunlight and space to grow without conflicting with important infrastructure. Branch and trunk growth into overhead utility wires can lead to service reliability and safety concerns. Existing tree canopy and branches directly overtop a planting location can limit the ability of a new tree to grow and can lead to undesirable growth patterns. The City also considers the potential obstruction of streetlights when locating trees. With this in mind, planting locations with open sky to grow into without overhead conflicts will be prioritized.
- **Locations without vehicle traffic and sightline conflicts** – Sightlines to intersections, stop signs, traffic lights, crosswalks, and other important infrastructure cannot be obstructed. Additionally, tree branches should not be allowed to conflict with vehicle or pedestrian traffic. Large canopy trees can typically have their crowns elevated above these conflicts as they grow, making them a better option than small trees for many street-side locations. However, some locations with a combination of overhead conflicts and traffic or sightline concerns can be a challenge and it may be that no tree is suitable for the location.
- **Locations without other site use conflicts** – There are several reasons that the use of a particular site may require that trees not be planted. These include fields used for sports and garden sites requiring full sun.



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- **Locations where adjacent properties express a desire for trees** – Adjacent property support for tree planting is advantageous towards overall tree survival and vigor. This is because the resident is more likely to take care to avoid trunk damage when mowing the grass and is more likely to provide supplemental water and mulch to the tree. For this reason, some degree of preference will be given to locations where a resident requests a tree.
- **Highly populated areas** – Areas where more people live or visit will be given higher priority. This helps tree plantings serve the most people. Locations near apartment buildings, condominium buildings, commercial areas, and high-use walking routes will all be given higher priority for tree planting. These often happen to be areas that currently have lower tree canopy and lower-income denser housing, making them doubly important for planting trees.

Property Owner and Resident Engagement

The City recognizes the importance of engaging with the community to ensure buy-in to its tree-planting efforts. Property owner and resident engagement efforts regarding public space planting include the following:

- For locations that the City selects for an upcoming tree planting, a letter is mailed to the adjacent property owner to invite a response on which of three tree species they prefer or if they prefer a tree not be planted. The City will make all efforts to accommodate the species preference indicated. To maximize the diversity of plantings, provide flexibility in allocating the right tree for each unique location, and increase the ability of each resident to get their preferred tree, the City no longer allocates single species on a block-by-block basis and different species will be allowed for each planting location.
- Tree planting requests may be submitted by an adjacent property owner through the City's website. Requests are considered along with other planting locations the City identifies and are selected based on the prioritization factors mentioned above.
- The City responds to resident inquiries about trees that are planted. The goal is that residents will be enthusiastic about trees being planted in public space and will take it upon themselves to aid in caring for trees the City plants. Good customer service and public relations are essential to creating this buy-in.
- A list and map of upcoming public space tree plantings is published on the City's website each season so City residents can be informed of the City's tree planting activities.

2. Private Property Tree Planting

The vast majority of land area in the City is owned privately. Therefore, private property owners are the primary land managers for a substantial portion of the potential urban forest and are essential partners in implementing this Urban Forest Master Plan. Private property locations often have substantially more open soil area for trees to grow into as compared to street-side planting strips, and are often significantly superior locations for trees to be planted. The City recognizes that property owners and residents do not always have the financial resources to plant canopy trees on their property and that the City's support can go a long way toward empowering tree planting. The City also recognizes that residents are often not familiar with the benefits that canopy trees can provide or how they can be elegantly designed into their home landscapes. To account for this, the City implements the Tree Takoma program to provide free trees and free tree planting



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consultations to any interested private property. A diverse array of native canopy tree species from the City's Approved Tree Species List are available for these plantings. Long-lived large canopy species are emphasized.

The Tree Takoma program is accompanied by an outreach campaign to encourage participation. This includes the maintenance of useful web resources, social media content, newsletter articles, and other uses of City outreach platforms. Additionally, direct outreach efforts are conducted to low-canopy property types, including multi-family residential, commercial, and institutional properties, and low-canopy neighborhoods in the City to encourage participation. Tree plantings are conducted through a high-quality contractor and are installed according to ANSI A300 standards.

3. Public Space Tree Management

Once trees are planted and growing in public space, the City's responsibility shifts to monitoring and maintenance. Trees in public space must be managed to minimize risk to public safety and negative impacts on other uses of public space. Additionally, the City must carefully consider the many ways in which projects and activities in the urban environment may pose risk to trees and find ways to minimize those impacts. The following are the key ways the City manages trees in public space:

- **Mitigate hazardous tree situations:** Trees that become hazardous require mitigation pruning or removal. The City responds promptly to mitigate hazardous situations to maintain public safety. The City's Urban Forest Manager (UFM) uses a well-reasoned professional arboricultural approach when weighing the risk a public tree may pose before approving any removals. The City works with experienced and qualified contractors to provide high-quality tree work that maximizes tree health and minimizes negative impacts on the landscape and the community.
- **Maintain adequate tree branch clearance:** Tree branches can conflict with sidewalk and roadway traffic. Pedestrians can experience an impasse or inconvenience due to branch blockage and vehicles can experience dangerous collisions. The City works to address any sidewalk or roadway clearance issues and aims to maintain 8 feet of clearance over sidewalks and 14 feet over roads. Additionally, tree branches can obstruct the view of traffic signals and road signs. Trees will be pruned back to eliminate such obstructions. Streets will be reviewed and trees pruned for adequate clearance on a four-year cycle and as needed in urgent cases.
- **Manage tree health:** Trees in public space require certain management activities to ensure optimal health. Newly planted trees are watered for the first growing season by the tree planting contractor and in the following season on an as-needed basis by separate contract or by Public Works staff. The Urban Forest Manager monitors street trees for undesirable tree management practices adjacent property owners may conduct on a public space tree, which may include volcano mulching or other landscaping activities that damage tree roots, trunks, or branches. When undesirable practices are discovered, the Urban Forest Manager works to engage with property owners or contractors to make them aware of the concern, using the Code Enforcement process if necessary. Vine growth can smother and kill canopy trees. Certain noxious plants can smother the understory of a naturalized area and inhibit the regeneration of a more diverse palette of native species. The Urban Forest Manager works with Vegetation Maintenance and Right-of-Way staff to identify and treat locations where vines or noxious plant growth are a concern to public space trees and urban forest health.



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- **Coordinate with other agencies and utility companies:** Urban forest management in public space is a responsibility shared across many stakeholders. The City works to maintain strong relationships and channels of communication with all entities that operate in public space to maximize tree protection across a variety of projects. These entities include the Potomac Electric Power Company (PEPCO), Washington Gas, the Washington Suburban Sanitary Commission (WSSC), Maryland National Capital Parks and Planning Commission (MNCPPC), Montgomery College, Montgomery County Public Schools (MCPS), and the State Highway Administration (SHA). The City maintains avenues for input on project design, decisions to remove trees, and tree protection planning for various projects conducted by these stakeholders. Special attention is applied to working with PEPCO to ensure no unnecessary tree removals occur and that electric line clearance pruning is done in a way that best preserves the health of the urban forest.
- **Oversee City projects:** In addition to projects conducted by outside entities, the urban forest management program conducts oversight of construction activities carried out by the City itself. The same standards of tree protection are considered when reviewing and implementing City projects.

4. Private Property Tree Regulations

The Takoma Park City Code has established robust regulations on how trees are to be managed on private property. The Urban Forestry Program works to implement these regulations with clear policies and easy-to-use processes for compliance. The City maintains a digital permit application platform to facilitate a smooth and expedient user experience through the permitting process, as well as paper options when needed. The enforcement programs the City administers include the following:

- **Tree Removal Permit** - A Tree Removal Permit is required before a private property owner removes a tree. The UFM conducts inspections and applies an informed arboricultural approach when weighing the canopy benefits and the hazardous conditions that a tree may pose, per City Code. The City conducts enforcement actions as needed to ensure that properties come into compliance with the Code regarding tree removals. Removal permits for trees that are determined to not be dead or hazardous come with a requirement to replace the lost canopy of the removed tree or to pay an equivalent fee-in-lieu into the City's Tree Fund. Tree Fund dollars are allocated towards City tree planting programs.
- **Tree Impact Assessment/Tree Protection Plan Permit** - A Tree Impact Assessment is required for any project that meets the Code-defined criteria for when a tree may be impacted by a project. Projects that pass the threshold for heightened risk to tree roots, trunks, branches, or overall health are required to submit a Tree Protection Plan Permit Application. The City maintains a robust set of documents to guide property owners smoothly through the creation of a Tree Protection Plan that will maximize tree health through their projects and minimize the likelihood of tree failure or decline. The City conducts enforcement actions as needed to ensure that properties come into compliance with the Code regarding tree protection.
- **Hazardous Trees** - The City Code makes it clear that hazardous tree conditions shall not be permitted to remain on a property. The City engages with private property owners to ensure that hazardous



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conditions are addressed swiftly, using the code enforcement process when necessary. The City's Hazard Tree Assistance Fund is made available to property owners who qualify for financial aid to address a hazardous tree.

- **Vines on Trees** - Vine growth can smother and kill a tree. City Code requires that vines not be allowed to grow up to a tree's branches. The City engages with private property owners to ensure that vine growth that surpasses Code allowance is cut back, using the code enforcement process when necessary.

5. Tree Care Education and Outreach

Urban forest management is a shared responsibility and a public that is well-informed on tree care best practices is most likely to manage their properties in ways that will improve urban forest health outcomes across the City. While resources are limited and a full-scale education program is not included in this plan, the City provides educational materials and tree care recommendations for use by the public and works to disseminate them.

The high-priority topics of the City's education and outreach efforts include the following:

- **The importance of tree planting:** Much of the urban forest would fade away if trees were not replaced. Resident awareness of how and why to plant trees is essential.
- **How to maintain and improve soil health:** Tree planting is not enough when the soil present is inadequate to support a tree's needs. Resident awareness of soil health preservation and restoration best practices will pay the biggest dividend in long-term urban forest health.
- **Tree protection during construction and landscaping:** Construction, landscaping, and other projects can result in tree impacts that wipe out decades of tree growth. All too often a resident does not learn about these concerns until after an impact has occurred so spreading awareness to avoid impacts before they happen is important.
- Other topics include, but are not limited to: tree risk management, young tree care, tree pest and disease management, and managing vines on trees.

The following are the techniques the City employs to educate the public on these topics.

- The City works to maintain robust educational resources on its website to give the public a dependable source for accurate and locally relevant tree care guidance. Resources include information on tree planting and design, young tree care, mature tree care, tree protection awareness, and other topics.
- The UFM is available to respond to resident inquiries that cannot be answered through web resources.
- Through the Tree Takoma tree planting program, the City provides on-site consultations to educate residents about tree species options, planting site selection best practices, and tree care best practices.
- The City hosts an annual Arbor Day event to celebrate the urban forest canopy and educate the public about trees. Other events and classes are hosted occasionally as staff time allows and partnership opportunities present themselves.
- The City periodically publishes newsletter articles and other media content to promote urban forest health topics.



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6. Urban Forest Monitoring and Evaluation

Good data and insightful analysis are essential to urban forest management. The City employs strategies to collect good data in its day-to-day work as well as periodic in-depth studies to inform its decision-making.

- The City works to maintain detailed records of tree inspections, tree plantings, and tree removals. This data is used to track the City's work and to respond to trends over time.
- The City periodically inventories empty street-side planting locations. This inventory is used in determining the available planting locations across the City and for prioritizing locations for street tree planting.
- The City contracts for an urban tree canopy analysis and report every three years to benchmark changes in its canopy and to inform management decisions. This work is conducted by geospatial analysis experts using the latest remote sensing technology to provide detailed information about the City's urban forest. This report helps the City communicate about the urban forest to the public, applaud successes in maintaining a vigorous canopy when appropriate, and direct resources to areas and property types that may benefit most from targeted canopy cover expansion.
- The Urban Forest Manager monitors research and bulletins concerning emerging tree pest and disease concerns and works to disperse relevant information to the public and adjust City programs and maintenance activities accordingly.



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III. Closing Comments

This plan is a road map for City action to maintain and improve the urban forest of the City of Takoma Park. This plan aims to be ambitious in the goal of sustaining and improving the City's urban forest while establishing achievable targets and a reasonable scope of work given staffing, budgetary, and jurisdictional constraints.

As discussed in this plan, urban forest management is a shared responsibility and the City's programming by itself cannot achieve the desired outcome of a healthy and robust urban forest. Private property owners and other public agencies have key roles to play in managing trees on their properties. This plan highlights how the City partners with these stakeholders to improve urban forest outcomes, but ultimately all land-holding stakeholders must take a responsibility for the ecological health of their land.

Positive community perception of the value of trees and understanding of the science of arboriculture and urban forestry contribute to better urban tree canopy outcomes. The City has a limited capacity towards effecting this sort of social change, which may be better served by public advocacy groups, volunteer groups, and professional trade associations. Organizations like the International Society of Arboriculture work to elevate the standard of care and scientific understanding for tree management guidance provided by tree care professionals. Community groups and local mission-focused groups can play a role in engaging other community members to carry out tree-positive land management strategies on their properties in ways that the City cannot. Grassroots action from the community to manage private land in the manner best for canopy trees is the most preferable source of motivation. It is important to highlight the value of social change and voluntary action toward positive urban forest outcomes. The City of Takoma Park government does not have the capacity to partner closely with most of these organizations and groups, but it is important to acknowledge the essential work they are conducting in parallel to City programming. The City whole-heartedly encourages all efforts to expand social awareness of the value of trees and to motivate pro-tree actions.

Together, we work towards a healthy, functional, safe, and beautiful urban forest that serves the entire community.