Urban Forest Master Plan – 2022 DRAFT

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 rain water interception and absorption, improved psychological health, traffic noise suppression, and more. The urban forest also provides an aesthetically pleasing and desirable setting to live, work, and play in. And, 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 is 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 stake holders 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 implementation of this strategy and will periodically review and update the Urban Forest Master Plan as needed.

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, other 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. The City targets to plant 100 trees per year in public space. 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 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. The lower the percentage covered by tree canopy, the higher the priority. 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 in a tree surviving, thriving, and providing a return on the City's investment. Locations with wider planting areas and with less compaction will be prioritized. Options for restoring soil quality at impacted sites will be considered as well.
- **Locations with overhead conflicts –** A tree serves the community best when it has ample sunlight and space to grow into 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 that lean into the street. The City also considers 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 sight-line conflicts** – Sight lines 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 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.
- **Locations other site use conflicts –** There are a number of 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.

- **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, making them doubly important.
- **Locations that can be included in a geographically efficient batch of plantings –** To deploy our tree planting resources more efficiently, some extra priority is given to locations that can be planted as a batch with other nearby high-priority locations.

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 on public space planting includes 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 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. Requests will be considered along with the planting locations the City identifies on its own. A formal system for requesting a public space tree planting will be implemented by the end of FY23.
- 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.

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 existing and potential urban forest and are essential partners in implementing this Urban Forest Master Plan. 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 towards empowering tree planting. The City also recognizes that residents are often not familiar with the benefits that canopy trees can provide or the ways in which they can be elegantly designed into their home landscapes. To account for this, the City is implementing a program to provide free trees and free tree planting consultations to any interested private property. The City aims to plant 150 trees per year through its program. A diverse array of native tree species from the Approved Tree Species List are available for these plantings. Long-lived large canopy species are emphasized.

The tree planting program is accompanied by an outreach campaign to encourage participation. This includes 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. This program is expected to be implemented in FY23 with first plantings to occur in Fall 2022.

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 to 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 some of the ways in which 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 to 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 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.
- ***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 stake holders. 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 establishes 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, in accordance with City Code. The City conducts enforcement actions as needed to ensure that properties come into compliance with the Code regarding tree removals.
- ***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 a property owner smoothly through the creation of a Tree Protection Plan that will maximize tree health through their project 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 condition shall not be permitted to remain on a property. The City engages with private property owners to ensure that hazardous conditions are addressed swiftly, using the code enforcement process when necessary. The City's Emergency Tree Fund is made available to property owners who qualify for the 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 are not replaced and 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 needed. 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 essential.
- 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 the web resources.
- Through its private property tree planting program, the City provides on-site consultations to educate 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.

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 plans to conduct an inventory of all empty street-side planting locations by the end of FY2023. This inventory will be essential in determining the available planting locations across the City, prioritizing locations for street tree planting, and developing a long-term forecast for the activities of the public space tree planting program. Once complete, the inventory of empty planting locations will be updated on an on-going basis.
- 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.