URBAN FOREST STRATEGY

November 2025

Land Acknowledgment Statement

The Town of Innisfil acknowledges that Innisfil is situated on Treaty land that is steeped in rich Indigenous history. The Town also acknowledges that this land is the Traditional Territories of the First Peoples of Turtle Island. It is shared between the Anishinaabe peoples of Beausoleil First Nation, Chippewas of Rama First Nation, and Chippewas of Georgina Island First Nation, and we thank them for generations of stewardship.

This meeting place is still the home to many Indigenous people, and (as settlers) we are grateful to have the opportunity to work on this land.

The Town acknowledges the forced sacrifices that are the foundation of Canadian society today. We are dedicated to honoring Indigenous history and culture and committed to moving forward in the spirit of reconciliation and respect with all First Nation, Métis, and Inuit.

CONTENTS

EXCUTIVE SUMMARY

The presence of trees in urban environments can only occur by design. The Town of Innisfil (the Town) recognizes the need for a comprehensive, long-term vision, and strategic direction for protecting, preserving and improving forests within its settlements. Without a plan for Innisfil's urban forests, the Town cannot effectively monitor, protect, and strengthen municipal forest assets, leading to incremental degradation of forest features through accidental tree loss, inconsistent protection, and inefficient use of resources.

Currently, the protection of trees on public and private lands is governed by various policies and regulations, including the County of Simcoe Forest Conservation By-law (By-law #6894), the Town of Innisfil's Site Alteration By-law, the Town of Innisfil's Tree Policy for Development Approvals (CP.09-08), and the *Our Shore* community planning permit system. However, a general tree-cutting By-law is needed to ensure consistent regulation of tree removal and injury within Innisfil's settlements.

The Town of Innisfil's mission is to manage the urban forest in a long-term, sustainable manner. To achieve this, several strategic goals and objectives are highlighted within the Urban Forest Strategy that need to be actioned.

Action Items included in this strategy support one of the following objectives:

1. Tree Inventory and Risk Assessment
2. Management of Town-owned Forests
3. Establishing a Level of Service
4. Customer Service / Service Delivery
5. Tree Protection and Management, and
6. Forest Health and Pest Management

This Urban Forest Strategy will provide clear guidelines, fostering proactive management and enabling the Town to address urban forest challenges more effectively. By shifting from reactive problem-solving to strategic, forward-thinking planning, the Town will be better equipped to prevent issues before they arise, ensuring the long-term health and sustainability of Innisfil's urban forests.

To deliver on the objectives in this strategy, a Comprehensive Urban Forest Management Plan is essential. This plan will align the Town's efforts to maintain and expand its urban forest while offering a clear and structured framework for managing the landscape.

The development of a Comprehensive Forest Management Plan is targeted for completion by 2030. This timeline allows for the completion of a detailed tree inventory and other components of the Urban Forest Strategy, which will be integral to the Plan's creation and the long-term sustainability of Innisfil's urban forest.

INTRODUCTION

The urban forest has been defined in the Town of Innisfil's Official Plan as trees, forests, greenspaces and Natural Heritage systems within a settlement area in the Town of Innisfil. The urban forest is an essential part of Innisfil's identity, contributing to the well-being of our community, improving local biodiversity, and creating an important ecosystem for our settlement areas. For clarity, definitions of key terms used throughout this document are provided in **Appendix A – Definitions**.

The Urban Forest Strategy is a comprehensive framework designed to steer the overall direction of forest management, with a focus on ensuring long-term forest sustainability. Managing urban forest sustainably is inherently more complex than managing natural forests due to the diverse challenges presented in urban settings. These challenges include varied land uses, multiple ownership structures, differing environmental conditions (biotic & abiotic factors), and competing social and economic interests within urban areas. This strategy is crafted to navigate these complexities effectively, ensuring the long-term health and sustainability of urban forests.

By prioritizing the protection of natural heritage features, as set out in the Town's official plan, Council has demonstrated its commitment to improving urban forest management in the Town of Innisfil. The initiatives within the Urban Forest Strategy align with the broader goals outlined in the 2030 Strategic Plan, reinforcing the Town's dedication to sustainability and environmental stewardship. A comprehensive, long-term vision and strategic direction for protecting and enhancing the Town of Innisfil's urban forest is critical to fulfilling urban forest sustainability. The intent of this Urban Forest Strategy is that it will lead and provide direction to the development, protection and enhancement of the Town's of Innisfil's urban forest while addressing the social, environmental and economic goals and objectives that the urban forest can accommodate.

This Urban Forest Strategy provides direction in the development of:

- Initial guidance on all aspects of the urban forest program;
- Goals and objectives for the long-term sustainability of the urban forest;
- A Tree By-law
- A Comprehensive Urban Forest Management Corporate Policy; and
- A Urban Forest Management Plan

Some of the key documents currently used to manage the urban forest in the Town include the Town of Innisfil Engineering and Design Standards and Specifications Manual, the Clean Communities By-law, the Community Planning Permit By-Law, the Roads By-Law , and the Parks By-Law. Generally, the Town has been relying on the County of Simcoe's Forest Conservation By-law (By-law #6894) which regulates properties that are at least one hectare in size from removing and clearing forests. To bring synergy to these established documents and enhance the Town's enforcement ability, a Corporate Policy and Tree By-law that support the goals and objectives found in this strategy will be required.

The urban forest in the Town of Innisfil offers numerous benefits across social, environmental, and economic realms to its residents. These advantages are supported by extensive research and are linked to various measurable indicators that assess the health of the urban forest.
Urban forest managers aim to balance these benefits to improve the overall value of urban forest, rather than focusing on maximizing any single benefit for the community.

The diagram below (**Figure 1**) outlines the approach that is being followed for developing the Comprehensive Urban Forest Management Plan. It begins with a clear vision that guides current strategic goals, objectives, and actionable steps to address urban forest management priorities.

Tree inventory is a critical piece for providing the foundation that informs all other aspects of planning and decision-making. This process includes and assesses key areas like historical context, vegetation, management responsibilities, and community values. These findings identify issues, trends, and opportunities, forming the foundation of the Urban Forest Management Plan.

The Urban Forest Strategy will direct the creation of an Urban Forest Management Plan for the Town of Innisfil. By following this framework, the Town aims to create a data-driven and community-informed Urban Forest Management Plan that addresses current challenges, prepares for future needs, and supports sustainable urban forest management.

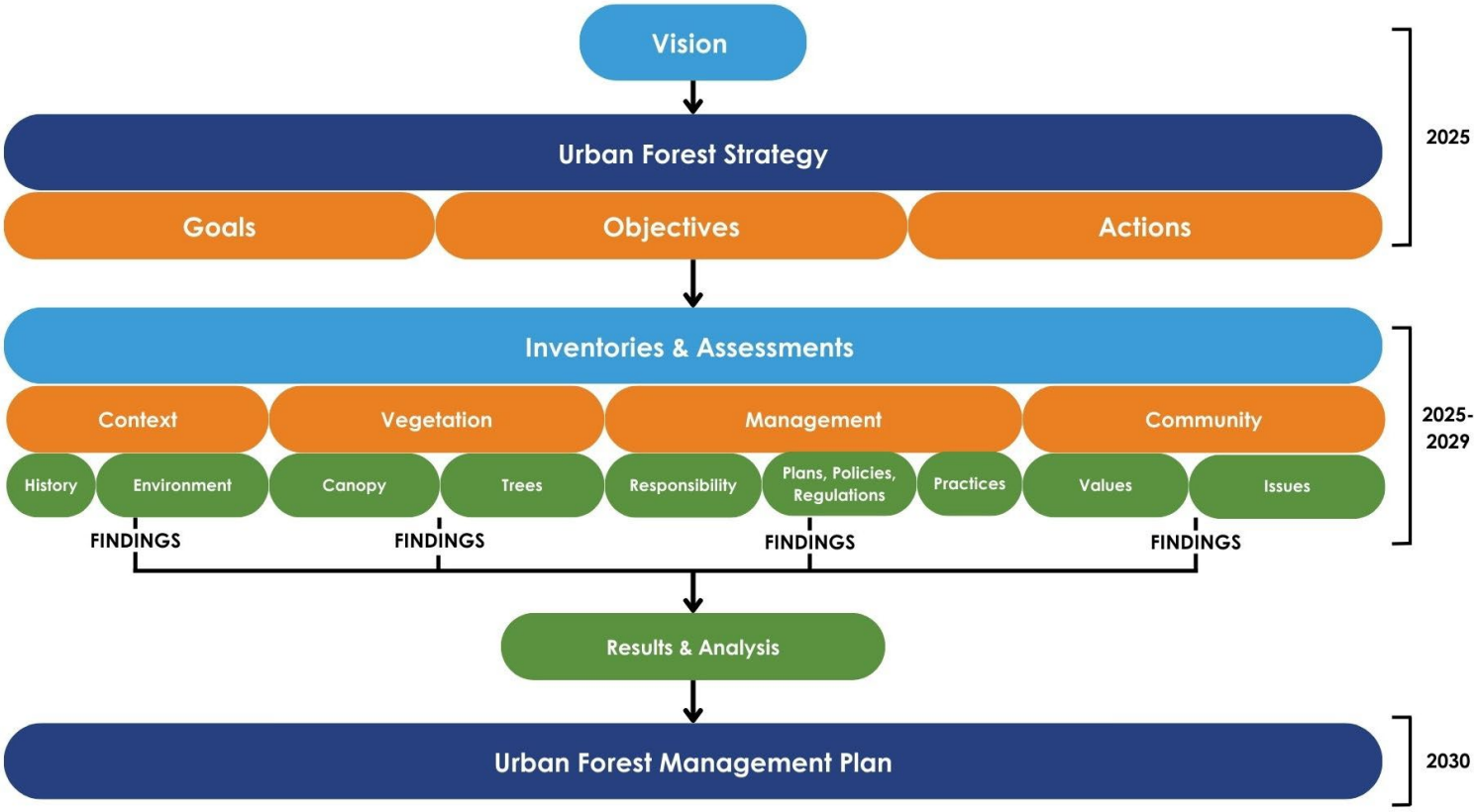


Figure 1: Process Mapping of Urban Forest Management Planning

CURRENT STATE OF THE URBAN FOREST

The condition of the Town owned forest resources, including street trees, trees in parks, open spaces, woodlots, and natural heritage areas, serves as the foundation for both short-term and long-term urban forest planning decisions.

Insights from the successful implementation of the Emerald Ash Borer program have provided valuable information about species composition, age classes, and tree health in some of Innisfil's settlement areas. While a complete dataset for these forested areas and individual trees is still being developed, the street tree inventory offers the most detailed in formation, using a geographic information system (GIS) for inventory collection. This section outlines the existing forest inventory data.

TOWN OWNED TREE INVENTORIES

The current street tree inventory was established through the implementation of the Emerald Ash Borer (EAB) program. Innisfil's EAB program accounted for the removal and replacement of hundreds of trees over a 5-year span. After trees were removed and replaced, an inventory log was recorded and uploaded to the Town's GIS system. Since 2018, the inventory has grown to include over 4,500 trees, which include Ash tree replacements and new trees planted within new settlement areas as part of subdivision agreements.

Due to the rapid expansion of new subdivisions, the age class of street trees is unbalanced, with a large portion of the trees being relatively young. While young trees provide promise for future canopy cover, the lack of mature trees highlights the importance of long-term management and age-class diversification. The inventory includes 93 species and cultivars, reflecting a wide variety of trees, and this number is expected to increase as more inventory work is completed.

The Town also maintains tree inventories in several parks, including Innisfil Beach Park, 12th Line Park, Previn Court Park, Crossroads and Oriole Park, Belle Ewart Park, Kidd's Lane Park, and Centennial Park. However, the inventory is incomplete and will require continual updates and maintenance. A comprehensive inspection of trees is not yet captured in detail within the GIS system but is necessary to ensure accurate records and informed tree management decisions.

The map below (**Figure 2**) shows the tree inventory for the Alcona settlement area in the Town of Innisfil, as of September 9, 2025. It highlights key features such as individual trees and wooded areas. Red areas indicate woodlots, showing their boundaries and whether they are public or private. Green areas represent tree coverage and canopy, giving a clear view of how trees are distributed across the community. This map provides a snapshot of Alcona's urban forest and street tree inventory that currently exists in our GIS systems and the need to expand our inventory.

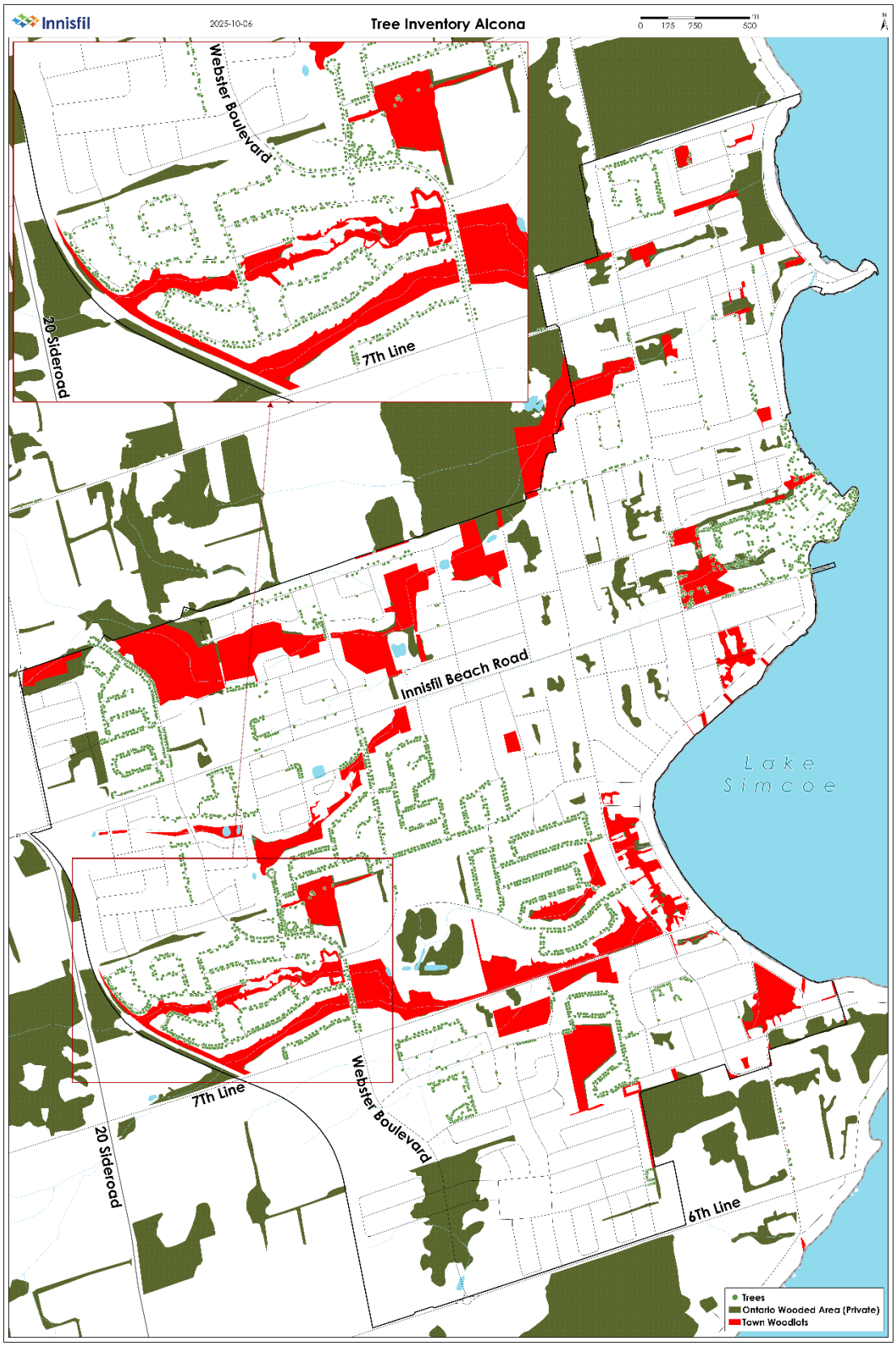


Figure 2. Forest Cover and Tree Inventory Map Example

As the tree inventory progresses, additional data—including tree health, DBH (diameter at breast height), species diversity, and risk assessments—will be collected by Town staff in environmental management studies. This detailed information will enable the Town to:

- Monitor tree health and detect early signs of disease or pest infestations.
- Evaluate species diversity to enhance biodiversity and support urban forest resilience.
- Assess risk levels to prioritize maintenance and mitigate potential hazards.
- Plan for long-term canopy growth and balance age distribution.

Future improvements to the tree inventory could include the integration of advanced technologies, such as drone mapping, LiDAR, and mobile applications for real-time updates. These tools can improve accuracy and efficiency while enabling public transparency by sharing selected data through interactive online platforms. This comprehensive approach to maintaining and updating the street tree inventory will support Innisfil's commitment to sustainable urban forest management and help achieve the Town's canopy and environmental goals.

URBAN FORESTED AREAS

The **Ontario Woodland Layer** (available through Ontario GeoHub) is a provincial GIS dataset that identifies and maps forested and treed areas across Ontario using aerial imagery and land classification data. While it is a broad-scale dataset, it provides a consistent baseline for municipalities to assess woodland distribution and canopy coverage.

Using the Ontario woodland layer data as an initial guiding dataset, Town GIS staff measured the total urban forest canopy coverage in the Town. "Wooded urban areas" refers to all trees, on both public and private land in settlement areas. The total mapped urban wooded area is estimated at 497 hectares, or 14.6% of the total land area within settlement areas in the Town of Innisfil (**Table 1**).

Table 1: Innisfil Canopy Coverage %

Innisfil Urban Area (Ha)	3,405
Wooded Urban Area Innisfil (Ha)	497
Innisfil Urban Tree Canopy Coverage % (UTC)	14.6%

The majority of privately owned forests are found along the Lake Simcoe shoreline and within smaller scattered woodlots across residential or undeveloped lands. Some of these privately owned forests overlap with residential properties, making them an integral part of the Town's overall forested areas. While detailed forest inventory data for private lands is currently limited, understanding the role these areas play is essential to gaining a more complete picture of the urban forest canopy.

Figure 3 illustrates a map of wooded areas in the Town of Innisfil, differentiating between private and public forests as well as key settlement areas.

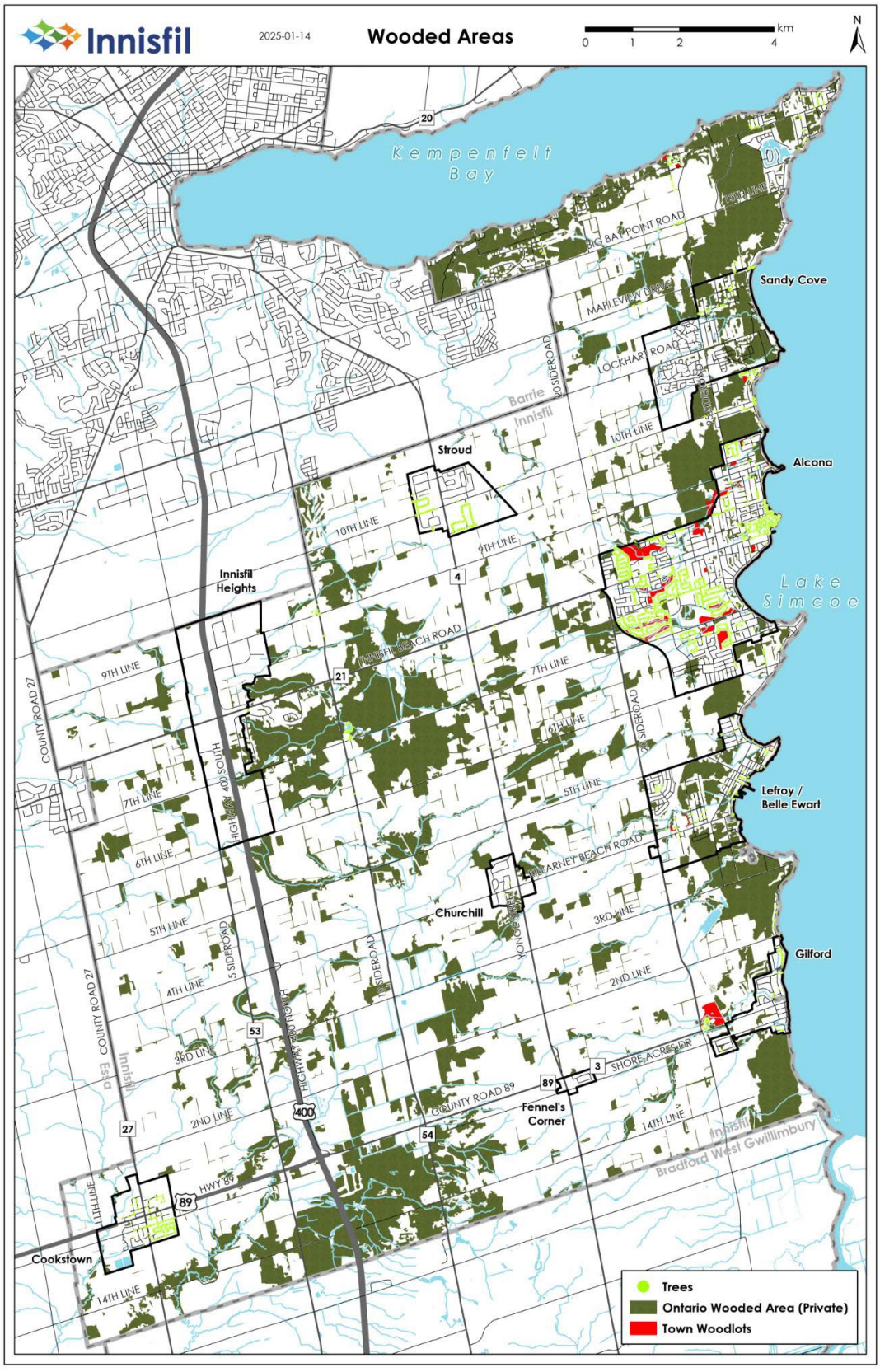


Figure 3: Town of Innisfil Wooded Areas

Table 2: Innisfil Canopy Coverage % by Settlement Area

Settlement Name	Settlement area HA	Wooded Area HA	Settlement Area Tree Canopy Coverage %
Alcona	1,073.72	125.31	11.67
Churchill	83.06	11.06	13.31
Cookstown	210.78	7.05	3.34
Fennel's Corner	24.16	0.00	0.00
Gilford	146.17	8.90	6.09
Innisfil Heights	651.93	46.13	7.08
Lefroy / Belle Ewart	479.27	147.18	30.71
Sandy Cove	501.21	148.35	29.60
Stroud	234.26	2.99	1.28
Totals	**3,405**	**497**	**14.6%**

Many surrounding municipalities have set targets for canopy areas in their long-term strategic goals. It is recognized that if a municipal land base has a 30% Urban Tree Canopy (UTC) then multiple benefits can be achieved such as stormwater reduction, improved air quality, increased urban cooling, and increased biodiversity. By using available GIS woodland data the Town of Innisfil has a total urban forest canopy cover of 14.6% of the total settlement land area (**Table 2**). It is expected that this number, with an accurate inventory, will increase significantly, reflecting a more comprehensive understanding of the Town's current canopy coverage. As part of this strategy's action items, staff will utilize the most up-to-date data, including lidar and aerial imagery, to continually update this dataset on the urban forested areas with findings captured through field inventories. This strategy seeks to move Innisfil from its current state (14.6%) to the target of 30% Urban Tree Canopy (UTC) coverage. Achieving these targets will require coordinated efforts across various departments, community engagement, and ongoing monitoring to ensure that the benefits of an expanded urban tree canopy are realized for all residents.

The Ontario Woodlot Association (OWA) is currently in year three of its five-year private forest inventory program, which will significantly enhance the accuracy of urban forest data across Ontario by utilizing LiDAR technology.

It should be noted that there are approximately 21 km of Town-owned forested areas bordering private property. These areas act as important transition zones between municipal and private lands, supporting the connection of green spaces and providing ecological benefits such as wildlife corridors, stormwater management, and buffers for urban development. Protecting and managing these shared boundaries will be a key part of the Town's efforts to grow its urban forest and reach its long-term canopy goals.

SURVEY (Public Engagement)

The first public survey on Get Involved Innisfil went live on February 16, 2021. The purpose of the survey is to provide a snapshot of resident's attitudes, priorities, and awareness of forest issues in the Town. As of March 14, 2021, a total of 206 residents have shared their views, providing a broad range of interests and levels of knowledge on forest issues.

The survey provides the following insights:

- Most respondents (75.7%) indicated they have lived in their neighborhood more than 5 years, with a majority (56.3%) who reported that the number of trees in their neighborhood had declined. Very few (7.3%) indicated they saw an increase in trees.

- 45.1% of respondents indicated they were unsatisfied (definitely or somewhat disagreed) with the number of trees along their street.

- Residents valued trees for providing natural habitat, a sense of calm, improving property and neighborhood aesthetics, and providing cooling effects (for those highlighted here, >89% identified experiencing a major or minor benefit).

- Residents most valued parkland trees, environmental area trees/forests, culturally significant trees/forests, and shoreline trees (>92% somewhat or very important). Trees on private lots or around private businesses received the lowest support (though still a large portion of respondents identified those areas as "very important" or "somewhat important").

- Residents prioritized programs such as development guidelines to improve tree protection, more consistent replacement, online mapping, and educational/outreach events.

- 31.6% fully supported a permit system for tree removals in settlement areas, while 44.2% said they could support such an initiative if their concerns could be addressed. A tree removal permit system is not a predetermined conclusion of the Urban Forest Management Plan development process; however, Staff prioritized it to collect more qualitative feedback.

- 59.7% of respondents indicated they would be interested in being actively involved in outreach, and educational programming.

The findings from this initial survey are presented in **Appendix B** (UFMP Survey Taking Care of our Trees Final Results) and have been carefully considered. These insights will guide future discussions and inform the development of this strategy.

BENEFITS OF TREES

Trees are a vital component of the urban landscape in the Town of Innisfil, offering a wide range of essential benefits that help the environment, economy, and quality of life for residents. Some of these benefits can be seen below (**Figure 4**):

Figure 4. Benefits of trees in the Urban Landscape.

By integrating trees into the urban fabric, the Town of Innisfil can maximize these benefits, creating a healthier, more sustainable, and vibrant community for its residents.

TREE MAINTENANCE PROGRAM

Operations staff are trained for and tasked with maintaining trees along streets, in parks, and in environmentally protected areas. Each year, Town staff handle roughly 200 service requests for tree maintenance from residents, other staff, businesses, and more. The Town utilizes contracted services for removals of trees that are too complex or require technical equipment and specialist skill sets. This number has increased significantly over the last several years due to Emerald Ash Borer (EAB) and is shown below that it is continuing to increase as new lands are proposed to be developed and new invasive species work their way to our area. Note, so far in 2025 we have had a large influx of cases due to the Ice storm that occurred in April 2025.

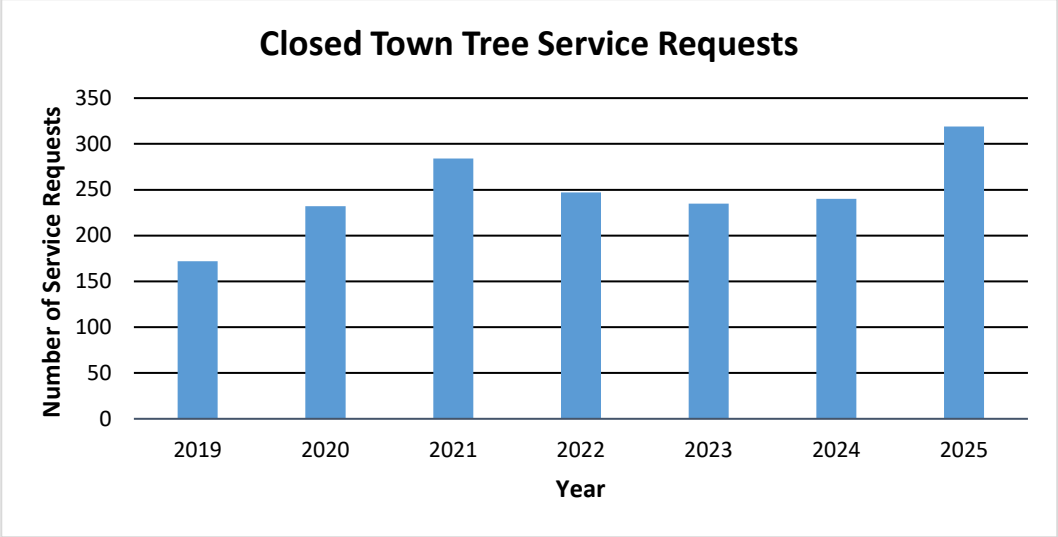


Figure 5. Closed Town tree service requests over the last 7 years

A proactive tree maintenance program can significantly reduce the volume of service requests received by the Town each year. Additionally, trees that are more structurally sound are less likely to incur storm damage or cause harm to municipal and private properties, thereby reducing liability to the Town. A proactive tree maintenance program will include inspecting trees based on their age and condition, recommending inspection intervals that vary from 1-10 years, depending on the age and lifespan of the tree.

There are situations in which public trees are required to be removed, including unavoidable conflicts with infrastructure, storm damage, and development changes. A common practice is to remove and replace trees when work is taking place, however, the value of mature trees may not be fully factored into the decision.

Policies and procedures should be reviewed and updated to guide decisions around public tree removals, to better recognize and protect the environmental and cultural value of public trees, and the financial implications of replanting a public tree. Such procedures will demand cross-departmental input. A transparent approach to tree removals, expressed by a policy and By-law, will further serve to bolster the Town's relationship with the public.

TREE PLANTING PROGRAMS

The tree planting program in the Town of Innisfil has developed significantly to broaden its environmental and community impact. Initially, the program followed a straightforward 1:1 ratio for street tree replacement, meaning for every street tree removed, another was planted in its place in a reactive approach.

However, recognizing the broader benefits of a more expansive and ecologically focused approach, the planting program is evolving, and was strengthened in 2024 with the acceptance of the new capital program, PKS408 (Urban Forestry Canopy Program). This program now includes, not just replacements, but also infill planting, which aims to increase the number of trees on streets, stormwater management areas, municipally owned vacant lands, opens spaces, and parks. The Town's tree planting program aims to increase and utilize the urban canopy more effectively so that the urban canopy contributes to the aesthetic and ecological quality of public spaces.

Innisfil's current work to increase the urban forest projects also includes partnerships with community-based organizations, such as the South Simcoe Streams Network. These partnership projects focus on planting trees in open spaces and lands designated for environmental protection. Such efforts are crucial for restoring native habitats, improving biodiversity, and enhancing the resilience of local ecosystems against climate change and urbanization pressures. These partnerships are a win-win for both sides and allow the Town and community to advance shared goals for environmental conservation and enhancements of the Urban Canopy.

The composition target for Innisfil's urban forest is not more than: 10% of a single species, 20% of a single genius, and 30% of a single family. The idea behind this is to avoid dominance in any single species. This proactive approach to tree planting/management will ensure resilience in the urban forest towards invasive species and climate change factors that are currently a threat. Without intervention, this composition target is not achievable but through required tree replacement, steps toward this target will be made.

Additionally, the Town of Innisfil is committed to leveraging grant opportunities to expand its tree-planting initiatives. To support the current planting of trees in Town-owned parks and open spaces, staff are actively pursuing funding from relevant programs, including federal and provincial grants aimed at urban forestry and environmental sustainability. This commitment goes beyond the current planting project, focusing on finding and applying for more funding opportunities to support the growth of Innisfil's urban forest and other environmental initiatives.

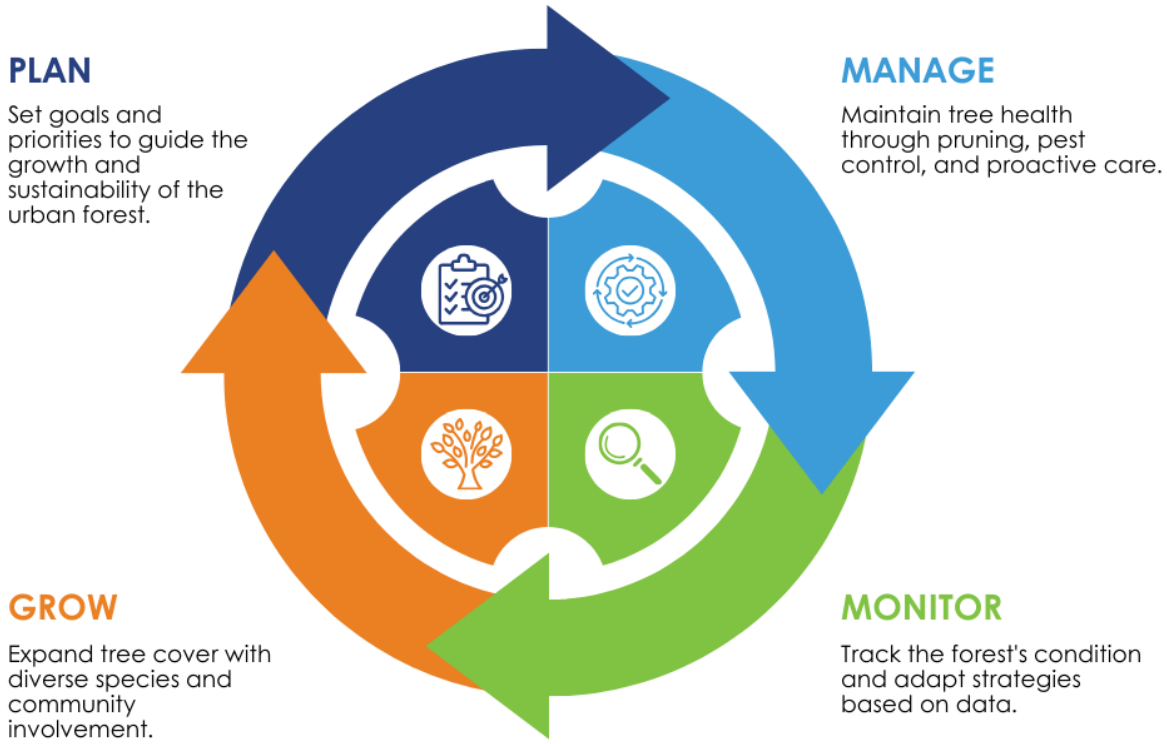
LONG-TERM VISION OF THE URBAN FOREST

The Town has created a vision for the urban forest and worked with the community to ensure it reflects their goals. The proposed long-term vision of the forest can be seen below in accordance with the Town of Innisfil's Official Plan (Section 15). While the Town is currently in need of a comprehensive tree inventory, this Urban Forest Strategy provides a foundational framework to guide efforts in planning, managing, and growing the Urban Forest. By addressing key priorities such as biodiversity, climate resilience, and sustainable urban growth, the strategy sets the stage for long-term success while paving the way for more detailed management tools in the future, such as a tree inventory and Urban Forest Management Plan.

THE VISION

The Town of Innisfil greatly values its Urban Forest and the numerous benefits it brings to the community. Committed to sustainability, the Town is dedicated to nurturing an urban forest canopy that promotes biodiversity, benefits human health, supports recreation, and is resilient to climate change, ensuring the Urban Forest thrives for future generations.

This strategy is built on a foundation of collaboration and a cyclical approach. Coordination between key Town teams—Operations, Capitol Engineering & Development Engineering, and Municipal Law Enforcement —ensures continuous progress to **Plan, Manage, Monitor, and Grow** the Urban Forest. This iterative process allows for ongoing evaluation and adaptation, ensuring the strategy remains effective and responsive to emerging needs and opportunities.



STRATEGIC GOALS

Each color used throughout this document corresponds to a specific goal within the Town of Innisfil's Urban Forest Strategy. This alignment allows readers to easily associate sections of the document with their respective goals, aiming to provide a clear and organized structure.

INCREASE CANOPY COVER

Innisfil is dedicated to expanding its tree canopy, aiming to balance development with natural growth. A target of 30% **Urban Tree Canopy (UTC)** has been set to provide greater environmental, economic, and community benefits for residents across the Town.

ENSURE FAIR CANOPY DISTRIBUTION

Green spaces contribute to community health and vitality. Innisfil strives to prioritize tree planting in areas with limited canopy, promoting fair access to urban forest resources and maximizing benefits across all neighborhoods.

INCREASE BIODIVERSITY

Innisfil will promote native biodiversity and increase species diversity in its urban landscape, bolstering resilience to climate change and pests. By diversifying park and street trees, the Town strengthens its natural systems and supports the ecosystems that rely on them.

INCREASE AWARENESS

Educating residents on the environmental, economic, social, and community benefits of Innisfil's urban forest is crucial. Building community knowledge fosters appreciation and encourages participation in forest stewardship.

PROMOTE STEWARDSHIP

Much of Innisfil's urban forest exists on private property. Engaging residents, neighborhoods, and community groups in tree and forest care is essential. Collaboration across Innisfil's Parks, Recreation, and other departments, as well as partnerships with community groups, will also support this effort.

IMPROVE MONITORING

Effective forest management requires an ongoing understanding of Innisfil's urban forest's health and structure. Routine assessment and improvement of data management systems will allow for better tracking and adaptation over time, ensuring a dynamic and resilient urban forest.

REACTIVE PLANNING TO PROACTIVE MANAGEMENT

Shift the Town of Innisfil's approach from reacting to issues when they occur, to proactively managing trees. This involves developing strong policies and practices to protect existing trees and promote the planting of new ones on both public and private lands.

OBJECTIVES

The Town of Innisfil's primary goal is to manage its urban forest in a long-term, sustainable manner. To achieve this, several strategic objectives must be addressed to guide the urban forest towards a sustainable management model. These objectives are grouped into six key focus areas, each with measurable outcomes to track progress and ensure accountability:

1. **TREE INVENTORY AND RISK ASSESSMENT**
   Conducting a comprehensive inventory and risk assessment ensures the Town has accurate data on its tree assets. This information supports informed decision-making and proactive risk management, enhancing public safety and protecting infrastructure.

   Measurable Outcome: Complete a full inventory of trees on Town-owned lands within the short-term (see implementation schedule section for definition), identifying high-risk trees and creating a risk mitigation plan.

2. **MANAGEMENT OF TOWN-OWNED FORESTS**
   Effectively managing Town-owned forests will help preserve these green spaces while maximizing their ecological, social, and economic benefits for the community.

   Measurable Outcome: Develop and implement operational plans for at least 80% of Town-owned forests within the mid-term.

3. **ESTABLISHING A LEVEL OF SERVICE**
   Establishing clear service standards for urban forest management ensures consistency, efficiency, and high-quality outcomes across all forestry operations and programs.

   Measurable Outcome: Achieve 90% resolution of tree-related service requests within defined timelines and conduct annual compliance reviews to maintain service quality.

4. **BUILDING A SUSTAINABLE URBAN FORESTRY PORTFOLIO**
   Providing responsive customer service and efficient delivery of forestry services fosters community trust and engagement, encouraging collaboration in urban forest stewardship.

   Measurable Outcome: Complete an annual Urban Forestry Portfolio report documenting planting, removals, protection, and maintenance activities.

5. **TREE PROTECTION AND MANAGEMENT**
   Protecting existing trees and promoting strategic planting ensures a balance between development and environmental conservation, contributing to canopy growth and ecosystem health.

   Measurable Outcome: Increase urban canopy cover within five years through the annual planting of at least 200 new trees per year and develop a tree By-law to preserve and retain trees in the Town.

6. **FOREST HEALTH AND PEST MANAGEMENT**
   Monitoring and managing forest health proactively guards against pests, diseases, and environmental stressors, ensuring the urban forest remains resilient and thriving over the long term.

   Measurable Outcome: Implement a pest management plan to reduce pest-related tree losses and conduct bi-annual health assessments of the urban forest.

By focusing on these six areas and integrating measurable outcomes, the Town of Innisfil can be readily prepared to build a comprehensive and sustainable Urban Forest Management Plan. This approach improves the quality of life for residents, supports environmental and climate goals, and ensures the resilience of the urban forest for generations to come.

OBJECTIVE 1: TREE INVENTORY AND RISK ASSESSMENT

1.1 TREE INVENTORY AND FOREST CANOPY ASSESSMENT

The tree inventory forms the foundation for all long-term planning and decision-making in forest management. Staff and summer students in environmental studies will undertake completing the street tree inventory and allocate resources to conduct inventories of individual trees along our boulevards, in parks, as well as to gather data on forest cover in forested Environmentally Protected (EP) areas and parklands owned by the Town. While collecting tree inventory data, staff will also note areas where tree planting can occur on our boulevards, parks and open spaces in alignment with future planning activities. The Town should focus efforts on collecting the tree inventory in the short term to establish baseline data, kickstart proactive management, and aid in future forest management.

Additionally, Staff will explore partnership opportunities with universities, interest groups, and private landowners to gather data on the quantity and quality of trees and forests on private properties. This will involve utilizing satellite imagery, volunteer data collection, and other methods of data acquisition. Portions of the inventory may be tendered out to consultants to acquire and prepare due to staffing and timeline constraints.

Strategic Goal: Increase Canopy Cover
Outcome: Complete Tree Inventory

1.2 FOREST COVER AND CANOPY AREA ENHANCEMENTS

Through the use of the Private Forest Inventory conducted by the Ontario Woodlot Association, staff will conduct an evaluation of the existing urban forest canopy cover using LiDAR information. This inventory is expected to be released to the public in 2027. Moreover, an analysis will be carried out on future projected developments, potential reforestation projects, and the expected growth rates and potential of trees in recently developed subdivisions. This analysis will serve as the foundation for establishing realistic targets for future canopy coverage in the urban forest.

In alignment with our strategic goals, the Town is to achieve and maintain a minimal tree canopy cover of thirty percent (30%) within the Town of Innisfil.

Strategic Goal: Increase Canopy Cover
Outcome: Increase Canopy Cover

1.3 STREET AND PARK TREE DIVERSITY RATIO

Introducing a variety of tree species in parks and along boulevards fosters a more resilient and vigorous collection of trees, which promotes overall health and reduces susceptibility to significant pest-related problems, such as insect infestations and diseases.

Over the last decade, primarily throughout the replanting completed during the Emerald Ash Borer (EAB) program, staff have been diversifying the street tree inventory. The overall objective for street trees is to have a canopy that reflects the 10, 20, 30 rule of species diversity. This rule advocates that no more than 10% of the trees should belong to a single species, no more than 20% should represent a single genus, and no more than 30% should be from the same family. This diversity ensures ecological resilience by providing a safeguard against widespread disease or pest outbreaks that can decimate monocultures, and it is also a strategic measure to adapt to a changing climate.

By following this principle, we aim to create a robust and healthy urban forest that can withstand various environmental stresses, contribute to biodiversity, and elevate the aesthetic appeal of urban landscapes. Implementing this rule will require careful planning, the selection of a wide array of species, and thoughtful management practices to maintain the desired overall tree diversity over time.

Strategic Goal: Increase Biodiversity
Outcome: Increase the Number of Tree Species

1.4 AGE CLASS DISTRIBUTION

Having trees of different ages in parks and along streets helps prevent a large-scale deterioration in forest health at the same time due to old age. Due to new development and future proposed development, there is potential for problems down the line when these trees age at the same rate. A completed tree inventory would allow staff to study and predict tree growth, planting, and care as part of our tree inventory assessment. This will help us figure out how to gradually create a mix of young, middle-aged, and old trees for the future.

Strategic Goal: Ensure Fair Canopy Distribution
Outcome: Develop an Age-Class Diversification Plan

OBJECTIVE 2: MANAGEMENT OF TOWN OWNED FORESTS

2.1 FOREST SUCCESSION PLANS

The Forest Succession Plan will be tailored to each Town owned woodlot and will encompass specific goals and strategies for forests within Town-owned parks and Environmentally Protected (EP) zones. In particular, several forested regions, such as those in the early stages of succession and those affected by the Emerald Ash Borer, will necessitate active forest management practices to guarantee their enduring health and sustainability.

Strategic Goal: Increase Biodiversity
Outcome: Develop Forest Succession Plans

2.2 NON-NATIVE INVASIVE SPECIES MANAGEMENT

Invasive species like Norway Maple, Dog-strangling vine, Garlic Mustard, European Buckthorn, Emerald Ash Borer and Phragmites are spreading in the Town's natural areas, as well as in the neighboring County. These plants are a major concern and could harm the long-term health of our forests. Town staff are committed to exploring partnerships and looking into funding options from provincial and federal programs to help us detect, map out, and tackle the issues these invasive species are causing.

To address this, our approach for invasive species management will involve:

1. **Prevention and Early Detection**: Stopping new invasions before they start by monitoring high-risk areas, educating the public, and promoting the use of native plants in local landscaping.

2. **Mapping and Prioritization**: Systematically identifying and mapping the locations of invasive species to prioritize areas for management based on the severity of infestation and the value of the threatened ecosystem.

3. **Integrated Pest Management**: Employing a variety of control methods, including mechanical removal, targeted herbicide application, and the introduction of natural predators to control non-native invasive species

4. **Restoration and Replanting**: Following removal efforts with the restoration of affected areas using native species that support local wildlife and provide ecological benefits.

5. **Long-term Monitoring**: Establishing a regular monitoring schedule to ensure that invasive species do not return and that the ecosystem remains healthy and resilient.

6. **Collaboration and Funding**: Seeking partnerships with environmental organizations, government agencies, and community groups to pool resources, share expertise, and access larger funding streams for a more significant impact.

Strategic Goal: Increase Biodiversity
Outcome: Develop a Non-native Invasive Species Protocol With the Urban Forest Management Plan

OBJECTIVE 3: ESTABLISHING A LEVEL OF SERVICE

3.1 INSPECTION PROGRAM

Implementing a thorough tree inspection routine, in line with the International Society of Arboriculture (ISA) guidelines, is a top-tier approach for any tree care initiative. Staff will develop a formal protocol for reviewing and prioritizing work resulting from tree inspections. Urgent concerns that pose a high risk to people and/or property will receive immediate attention and be given top priority. Issues that are less critical will be categorized as lower priority and addressed accordingly.

Catching tree problems early and consistently following up with proper maintenance can greatly extend a tree's life, sharply decrease the chance of damage from tree falls or breaks and cut down on the overall expenses tied to managing tree populations. It is recommended to put together a consistent schedule for checking and documenting the health of trees in Town streets and parks, which will be a key component of an all-encompassing inventory for the Urban Forest Management Plan.

Strategic Goal: Improve Monitoring
Outcome: Establish a Tree Inspection Program

3.2 MAINTENANCE (PRUNING & REMOVAL) CYCLE

Regular pruning of trees increases their health, longevity and significantly reduces risk of damage caused by tree structural failures. It also acts to reduce the number of service requests made by residents to report tree problems that would not exist if the tree had been pruned regularly.

Routine tree maintenance refers to planned and scheduled assessment and maintenance of urban forest resources. With the support of trained forestry professionals, the operations department will work towards developing a routine maintenance plan with the following elements:

Proactive Assessment and Maintenance Program

A proactive approach is one that systematically schedules assessment and maintenance. This is in contrast to a reactive maintenance program whereby staff respond at the time that requests and complaints on tree matters are supplied by the public. Proactive approaches are associated with improved customer relations as well as reduced cost, liability, and damage to trees.

A reactive maintenance approach has generally been taken by the Town, with elements of proactive maintenance work taking place through hired consultants in response to recommendations from a Master Plan, such as the Land and Lake Plan. A fully proactive maintenance program may be an aspirational development for Innisfil at this time, due to a potentially significant shift in staff resourcing. However, by preparing plans for a proactive maintenance program the Town can be prepared to progressively transition towards a more systematic and maintenance routine as resources become available.

Staff will create a Block Pruning Program and allocate existing resources towards the goal of achieving a regular maintenance cycle of 5-10 years. Allocating block pruning to contractors will be required as the Town does not currently have the resources to complete its own.

The specifications for clearance pruning are seen below.

Town trees shall be pruned to maintain height clearances over roads, sidewalks, and grassed areas (where needed).

- Roads require 4.9 to 6.1 meters (16-20 feet) of clearance.
- Sidewalks require 2.4 to 3.7 meters (8 to 12 feet).
- Grassed areas require clearances as required.
- When trees are pruned for clearance, the canopy does not need to be balanced on all sides.

The Innisfil Block Pruning Program sometimes referred to as block pruning, is designed to group work on Town trees together to maximize efficiencies. Trees on entire streets or parks in need of pruning will be scheduled on a priority basis. Each tree on each street is different and may fall into different pruning cycles, needs, or requirements.

Strategic Goal: Reactive Planning to Proactive Management
Outcome: Implement A Target Maintenance Pruning Cycle

3.3 URBAN FOREST MANAGEMENT PLAN

Developing a comprehensive Urban Forest Management Plan (UFMP) is a critical step toward achieving a sustainable and resilient urban forest. This plan will provide a structured framework for managing and growing the Town's tree canopy, addressing key areas such as tree planting, maintenance, species diversity, and long-term resilience.

The UFMP will align with the Town's Urban Forest Strategy, building upon its goals and objectives to deliver actionable, measurable steps. It will incorporate best practices in urban forestry, community engagement, and climate adaptation while addressing specific challenges such as invasive species, urban development, and limited resources.

Key benefits of establishing a UFMP include:

- **Strategic Direction:** Setting clear priorities and timelines for urban forestry initiatives.
- **Resource Management:** Ensuring efficient use of staff, funding, and equipment to maintain tree health and expand canopy cover.
- **Accountability:** Providing a transparent framework for monitoring progress and achieving urban forestry goals.
- **Resilience:** Enhancing the urban forest's ability to withstand climate impacts, pests, and other stressors.

While the Town of Innisfil is in the early stages of data collection and does not yet have a comprehensive tree inventory, the UFMP will proactively integrate future data efforts. This will enable more targeted and effective management as the Town builds its urban forestry program. By taking these steps now, the Town can position itself for long-term success in protecting its urban forest.

Strategic Goal: Reactive Planning to Proactive Management
Outcome: Publish an Urban Forest Management Plan

OBJECTIVE 4: BUILDING A SUSTAINABLE URBAN FORESTRY PORTFOLIO

4.1 URBAN FORESTRY STAFF IN OPERATIONS

As the Urban Forestry portfolio is newly established in the Town of Innisfil, organizing and structuring its staff is essential to ensure that the Urban Forest Strategy and its recommendations are implemented effectively and efficiently. The addition of a qualified urban forester and a dedicated team within the Operations Department will provide the expertise needed to oversee tree planting, maintenance, inspections, and long-term planning for the Town's urban forest.

Establishing this portfolio will help centralize urban forestry responsibilities, ensuring a cohesive approach to managing the urban forest. This will address the growing demands associated with new development, climate resilience, and the need for proactive management of tree health and canopy cover. It will also provide a clear framework for prioritizing tasks, assigning responsibilities, and leveraging resources to meet the Town's urban forestry goals.

Investing in the organization of urban forestry staff will enable the Town to:

- Deliver a structured approach to implementing the Urban Forest Strategy.
- Ensure that urban forestry management aligns with best practices and Town policies.
- Meet the increasing challenges of urban growth, pest infestations, and environmental sustainability.
- Provide a single point of accountability for urban forestry operations, enhancing transparency and efficiency.

This increase in staffing is vital for building a robust urban forestry program capable of supporting the current and future needs of the Town's urban forest.

Strategic Goal: Improve Monitoring
Outcome: Establish a Dedicated Urban Forestry Portfolio and Team within the Operations Department

4.2 PUBLIC EDUCATION AND INFORMATION

Foster public education and engagement by collaborating with local organizations, libraries, and local schools hosting volunteer tree planting events, and participating in environmental activities and committees. Sharing knowledge with community partners and academic institutions can provide valuable insights through the exchange of research, ecological data, and information on invasive species and private tree inventories. Additionally, educating businesses and community stakeholders about the benefits of native species and the risks of invasive plants can encourage sustainable landscaping practices, prevent the introduction of invasive species, and promote participation in removal and restoration efforts. These actions collectively help protect local ecosystems and reduce long-term environmental impacts.

Strategic Goal: Increase Awareness
Outcome: Establish Partnerships to support volunteer events and share knowledge about urban forestry.

4.3 WEBSITE UPDATES

Develop a dedicated Urban Forestry webpage on the Town's website to serve as a centralized resource for municipal tree programs, policies, and maintenance schedules. This section will also act as an essential educational tool for residents, offering guidelines for community involvement in urban forestry initiatives and access to information such as Tree By-law and specification details.

The webpage should include interactive features like maps of local tree species, a calendar of environmental events, and a platform for citizen feedback to encourage engagement. Multimedia elements, such as video tutorials on tree care, and a frequently asked questions section will provide a user-friendly and engaging experience while reducing the need for direct inquiries to staff.

By developing this resource, the Town can demonstrate its commitment to urban forestry management, transparency, and environmental stewardship while creating a valuable tool to educate and engage the community.

Strategic Goal: Increase Awareness
Outcome: Develop a dedicated Urban Forestry webpage on the Town's website

4.4 PUBLIC EDUCATION FOR TREES ON PRIVATE PROPERTY.

To maximize the ecological, economic, and social benefits provided by trees on private properties, the Town should prioritize public education initiatives focused on sustainable tree management. Private landowners play a crucial role in supporting the overall health and resilience of the Town's urban forest. Staff should allocate time in their annual schedules to engage with the community and provide resources that highlight the importance of preserving and managing private trees.

Here are some benefits that trees on private lands provide:

1. **Biodiversity Conservation**: Municipally managed private forests can implement biodiversity conservation measures, protecting diverse ecosystems and habitats for various plant and animal species. This is especially important due to the changing climate and invasive species that we will likely have to deal with in the future.

2. **Carbon Sequestration**: Trees absorb carbon dioxide, helping to mitigate climate change by acting as carbon sinks. Proper management of private forests can boost carbon sequestration efforts, contributing to local and global climate resilience.

3. **Water Quality and Watershed Protection**: Forests play a crucial role in maintaining water quality and regulating hydrological cycles. Municipal management can ensure sustainable forestry practices that protect water sources and reduce the risk of soil erosion and sedimentation in rivers and streams.

4. **Recreation and Tourism**: Well-managed private forests provide opportunities for recreational activities such as hiking, birdwatching, and camping, which can boost local tourism and improve community well-being.

5. **Economic Benefits**: Sustainable forest management can generate income through timber harvesting, agroforestry, and eco-tourism ventures, providing economic incentives for private landowners while preserving the long-term health and productivity of forest ecosystems.

6. **Community Engagement and Education**: Involving local residents in forest management decisions fosters a sense of ownership and stewardship, promoting environmental awareness and education within the community. Advertising and implementing already established private plans (Managed Forest Tax Incentive Plans MFTIP) can be used as a tool to establish the connection in this regard.

7. **Wildlife Habitat Improvement**: By implementing habitat restoration and improvement projects, municipal management can create corridors for wildlife movement and increase the availability of food and shelter for native species.

8. **Natural Disaster Mitigation**: Forests serve as natural buffers against floods, landslides, and other natural disasters. Properly managed private forests can help mitigate the impact of such events, enhancing community resilience and safety.

9. **Cultural and Historical Preservation**: Many private forests hold cultural and historical significance for local communities. Municipal management can ensure the preservation of heritage sites, traditional land uses, and Indigenous cultural practices associated with these forests.

Potential Actions to Promote Education and Engagement:

- **Community Outreach**: Develop educational materials, workshops, and open discussions to inform landowners about sustainable tree care practices.

- **Resource Sharing**: Find opportunities to share resources like the Managed Forest Tax Incentive Plan (MFTIP) to encourage sustainable private land management.

- **Promote the Proposed Tree By-law**: Inform landowners about the Town's upcoming Tree By-law, including ecological offsetting requirements for development and private-land tree removals.

- **Interactive Digital Resources**: Use the Town's website to host videos, guides, and FAQs about managing private trees effectively.

- **Invasive Species Awareness:** Provide guidance on identifying, reporting, and managing invasive tree and plant species (e.g., Emerald Ash Borer, Phragmites, Buckthorn), and promote community-led stewardship programs to reduce their spread.

With the majority of the Town's trees located on private properties, educating property owners on sustainable tree management is as crucial as the Town's tree maintenance practices.

The County's Forest Conservation By-law regulates private lands that are at least one (1) hectare in size from clearing forests and will continue to apply for private-land tree removals. The Town will implement a Tree By-law which will define ecological offsetting requirements through new development applications in the Town in order to regulate the removal of the existing canopy.

Strategic Goal: Promote Stewardship
Outcome: Engage Private Property Owners in Sustainable Tree Management

OBJECTIVE 5: TREE PROTECTION AND MANAGEMENT

5.1 WOODLOT DESIGNATION

Upon completion of tree inventory updates and assessments, Town staff will assess the woodlots for their ecological importance and connectivity to explore the identification of "Significant Woodlots" across both public and private lands. This process will align with the Natural Heritage designations established within the Official Plan.

Strategic Goal: Increase Canopy Cover
Outcome: Woodlot Designations

5.2 DEVELOPMENT PROJECTS: ENHANCED REQUIREMENTS

Staff will assess the existing process for Town capital projects, spanning from pre-design stages through construction completion, including any mandated warranty periods. Regular inspections during construction help maintain tree health by addressing stress factors like soil compaction or water shortages and adapting protection plans to evolving conditions. Post-construction monitoring ensures the long-term survivability of trees while minimizing costs associated with damage, removals, or replacements.

Enhanced inspection protocols build public trust, retain urban canopy cover, and contribute to environmental sustainability, supporting the Town's commitment to preserving its natural assets. Recommendations will ensure that a structured review process for landscape, tree protection plans, and arborist reports is implemented and adhered to, strengthening the Town's commitment to preserving its natural assets.

Strategic Goal: Increase Canopy Cover
Outcome: Create a Structured Review Process for Landscape, Tree Protection Plans and Arborist Reports.

5.3 INCREASE STAFF CAPABILTIES

Ensuring the proper implementation of tree protection measures, such as following Innisfil Standard Details, Town of Innisfil Engineering Design Standards and Specifications Manual, and employing mitigation techniques, is crucial for safeguarding trees during construction activities. Providing training and additional resources to Town and contract inspectors will support the effective implementation of these standards and practices. Staff will begin developing a system to work with the Planning and Engineering departments to establish or evaluate a process for Urban Forestry staff to review tree protection requirements for sites requiring an assessment by an Arborist or Registered Professional Forester. This initiative aims to equip inspection personnel with the necessary knowledge for effectively enforcing tree protection measures on construction sites.

Strategic Goal: Increase Canopy Cover
Outcome: Increase Staff Capabilities to Inspect Tree Protection Measures During Construction Projects

5.4 INCREASE STAFF EXPERTISE

The Planning Department holds a pivotal role in the Town of Innisfil's development process. As the initial point of review for all development applications, planning staff have the foremost opportunity to guide developers on their planning submissions and the inclusion/integration of urban forestry and sustainability concepts.

Staff will advocate for the ongoing provision of opportunities enabling Town staff to participate in workshops and training sessions focusing on the environmental aspects of municipal development, including urban forestry.

Strategic Goal: Increase Canopy Cover
Outcome: Develop Environmental Planning Expertise in the Planning Department

5.5 URBAN FOREST MANAGEMENT POLICY

The Urban Forest Management Policy establishes a basic framework for the preservation, protection, and enhancement of trees and the urban tree canopy across the Town of Innisfil. This policy aligns with Section 270 (1) 7. of the Municipal Act, 2001, as amended, and reinforces the Town's commitment to environmental sustainability, biodiversity, and climate resilience.

Designed to guide tree-related practices on all municipal lands (private and public), the policy integrates best practices in tree preservation, planting, and maintenance. It emphasizes a "No Net Loss" principle, ensuring that canopy cover is maintained or enhanced in the face of urban development. Through collaboration between municipal departments, the Town Arborist, and the Urban Forest Strategy, the policy aims to provide consistency and accountability in urban forestry operations.

Key benefits of the Urban Forest Management Corporate Policy include:

- **Tree Protection and Enhancement:** Safeguarding existing trees and the tree canopy while promoting new plantings to achieve a 30% canopy cover within settlement areas.
- **Guidance and Compliance:** Providing broad standards for tree preservation, maintenance, compensation, and ecological offsetting.
- **Community Engagement:** Encouraging public participation in tree stewardship and fostering a shared commitment to protecting the urban forest.
- **Sustainability Goals:** Supporting the Town's long-term environmental objectives, including climate resilience, biodiversity, and urban livability.

This policy, supported by the Urban Forest Strategy and the Town's Tree By-law, aims to bring a unified corporate approach to urban forest management. It reflects the Town's dedication to fostering a thriving urban forest that benefits both the environment and the community for generations to come.

Strategic Goal: Reactive Planning to Proactive Management
Outcome: Urban Forest Management Policy

5.6 TREE BY-LAW

The Town of Innisfil's Tree By-law will be a foundational regulatory framework that governs the protection, preservation, and enhancement of trees and the urban forest canopy. The by-law will establish clear standards and enforcement mechanisms for managing tree-related activities on public and private lands within the Town. It ensures a balanced approach to urban growth, environmental stewardship, and sustainability.

The Tree By-law is designed to address the removal, injury, and compensation of protected trees, aligning with the Town's Official Plan and Urban Forest Strategy. It provides clarity on roles, responsibilities, and processes, offering mechanisms for tree preservation and enforcement.

Key highlights of the Tree By-law include:

- **Tree Protection:** Safeguards protected trees, including Town trees, Significant trees, and Heritage trees, by regulating their removal and injury.
- **Compensation Framework:** Introduces a detailed compensation formula to follow a "No Net Loss" principle, where tree removal is offset by replanting or financial contributions for canopy restoration.
- **Development Alignment:** Establishes guidelines for tree protection during development projects, including compensation for tree loss and requirements for tree protection zones (TPZ).
- **Enforcement and Penalties:** Provides enforcement tools to address violations, including fines and orders to mitigate or correct contraventions.
- **Sustainability Goals:** Supports the Town's commitment to achieving a minimum 30% tree canopy cover within the urban forest.

By regulating tree-related activities, the Tree By-law ensures that Innisfil's urban forest remains a vital community resource, contributing to biodiversity, climate resilience, and improved quality of life. The By-law is a critical tool for protecting the urban tree canopy while balancing the needs of development and environmental sustainability.

Strategic Goal: Reactive Planning to Proactive Management
Outcome: Create a Tree-Bylaw

OBJECTIVE 6: FOREST HEALTH AND PEST MANAGEMENT

6.1 PEST PREPAREDNESS PROGRAM

This program will involve monitoring both current and potential future forest pests, encompassing insects and diseases. Any emergence of new pests or changes in the behavior of existing ones will trigger updates to the Pest Preparedness Program. These updates will ensure that proactive measures are implemented promptly, enabling the municipality to address impending challenges and uphold the health and vitality of Innisfil's green spaces.

The program may include:

1. **Pest Identification and Risk Assessment**: The Pest Preparedness Program begins with the identification of current and potential future pests that pose a threat to the urban forest. This involves assessing the likelihood and potential impact of pest infestations and diseases. Risk assessments help prioritize resources and efforts toward addressing the most significant threats.

2. **Monitoring and Surveillance**: The Pest Preparedness Program establishes protocols for ongoing monitoring and surveillance of pests. This may involve regular inspections, surveys, and the use of monitoring tools such as traps and pheromone lures. Monitoring efforts aim to detect pests early and track their population dynamics to inform management decisions.

3. **Early Detection and Rapid Response**: Early detection is crucial for preventing the establishment and spread of pests. The Pest Preparedness Program includes procedures for early detection through improved surveillance and citizen reporting mechanisms. Rapid response protocols outline actions to be taken in the event of a pest outbreak, such as containment measures and deployment of control strategies.

4. **Integrated Pest Management (IPM) Strategies**: The Pest Preparedness Program incorporates the development of integrated pest management strategies tailored to the specific pests identified in the area. IPM emphasizes a holistic approach that integrates multiple control methods, including cultural, biological, and chemical strategies, to minimize pest damage while reducing reliance on pesticides.

5. **Community Engagement and Education**: Engaging the community is vital for pest management success. The Pest Preparedness Program includes outreach and educational initiatives to raise awareness about pest threats, prevention measures, and proper tree care practices. Community involvement can improve surveillance efforts, promote early detection, and foster a sense of shared responsibility for urban forest health.

6. **Stakeholder Collaboration**: Collaboration with other stakeholders, including government agencies (Canadian Food Inspection Agency, Ministry of Environment, Conservation and Parks), industry partners, conservation authorities, researchers, and neighboring municipalities, strengthens pest management efforts. Information sharing, coordinated response plans, and joint research projects amplify the effectiveness of pest prevention and control measures.

7. **Regulatory Compliance and Reporting**: The Pest Preparedness Program ensures compliance with relevant regulations and reporting requirements related to pest management. This may include adherence to pesticide use regulations, reporting of pest outbreaks to regulatory agencies, and documentation of management activities for accountability and evaluation purposes.

8. **Program Evaluation and Adaptation**: Regular evaluation of the Pest Preparedness Program is essential to assess its effectiveness in addressing pest threats. Feedback from monitoring efforts, community engagement, and stakeholder collaboration is used to refine and adapt the program as needed to address emerging challenges and changing pest dynamics.

Strategic Goal: Increase Biodiversity
Outcome: Develop a Pest Preparedness Program

6.2 EXPAND THE EMERALD ASH BORER PROGRAM

Staff will persist in executing the multi-year initiative aimed at mitigating the impact of Emerald Ash Borer (EAB) on our inventory of ash trees, ensuring any remaining ash specimens are thoroughly accounted for and inspected to support their long-term survival and resilience. Additionally, given the recent designation of Black Ash as an Endangered species under the Endangered Species Act 2007, particular attention will be paid to its preservation.

Emerald Ash Borer Mitigation Plan

The Town will be creating a scheduled plan to address the residual ash trees along our roadways and Town lines that have succumbed to the effects of the Emerald Ash Borer (EAB). This plan will focus on systematically identifying and removing ash trees that have been adversely affected by the EAB infestation as part of the 5–10-year maintenance cycle. The primary objectives of this plan will include:

- **Identification**: Conduct thorough assessments along each Town road to identify ash trees that have been affected by the Emerald Ash Borer.

- **Prioritized Removal**: Update the schedule for the removal of identified ash trees, prioritizing those that pose the highest risk to public safety, such as those located near roadways, sidewalks, those exposed to fungal and insect deterioration and property values. The goal is to mitigate potential hazards posed by dead or dying trees that could fall and cause injury or property damage.

- **Resource Allocation**: Allocate necessary resources, including manpower and equipment, to efficiently and safely remove the affected ash trees. This may involve contracting external arborists or tree removal services to supplement Town resources.

- **Replanting and Restoration**: After the removal of the affected ash trees, implement replanting to restore and build the urban canopy where appropriate. This will involve selecting diverse species that are resistant to pests and diseases, in line with the Town's target of achieving an urban forest composition that contains no more than 10% of a single species, 20% of a single genus, and 30% of a single family. This diversity will help ensure the resilience of the urban forest against future threats.

By implementing this mitigation plan, the Town of Innisfil aims to not only address the immediate threat posed by the Emerald Ash Borer but also to improve the long-term health, safety, and resilience of its urban canopy.

Moreover, the EAB program is anticipated to extend its scope to encompass trees in Town-owned woodlots and environmentally protected areas, identifying and addressing those that potentially pose risks to public safety thereby reducing liability to the Town.

Strategic Goal: Increase Biodiversity
Outcome: Further expand the EAB Program in Areas of Parks, Open Spaces, Roadsides and EP Lands that Present Hazardous Conditions

6.3 A PROGRAM FOR NEWLY PLANTED TREES

Establishing and implementing a program for newly planted trees is essential for ensuring their successful establishment and long-term health. This comprehensive program encompasses various components, from watering schedules to pest management strategies, aimed at supporting the growth and vitality of newly planted trees in urban environments.

The program may include:

1. **Watering Schedules**: Establish a watering schedule based on the specific needs of the tree species, soil type, weather conditions, and time of year. Determine the frequency and duration of watering sessions to ensure adequate moisture levels for root establishment and growth.

2. **Watering Techniques**: Specify appropriate watering techniques, such as deep watering to encourage deep root growth and minimize surface evaporation. Consider using soaker hoses, drip irrigation systems, or watering bags to deliver water directly to the root zone while minimizing water loss.

3. **Monitoring and Adjustments**: Implement a monitoring plan to assess soil moisture levels, tree health, and environmental conditions regularly. Adjust the watering schedule as needed based on observed changes in weather patterns or soil moisture content to prevent under or overwatering.

4. **Mulching**: Include guidelines for applying mulch around newly planted trees to conserve soil moisture, regulate soil temperature, suppress weed growth, and reduce competition from grass and other plants. Ensure proper mulch application depth and distance from the tree trunk to prevent issues such as stem rot.

5. **Fertilization**: Determine if and when fertilization is necessary for newly planted trees based on soil nutrient levels and tree species requirements. If fertilization is recommended, specify appropriate fertilizer types, application rates, and timing to promote healthy root development and overall tree growth.

6. **Pruning and Training**: Address any necessary pruning or training activities to shape the tree's growth and structure during its early years. Include guidelines for removing dead or damaged branches, correcting structural defects, and promoting desirable growth habits.

7. **Protection from Pests and Diseases**: Develop strategies for monitoring and managing pests and diseases that may affect newly planted trees. Implement preventive measures such as selecting pest-resistant tree species, applying pest barriers or repellents, and conducting regular inspections for signs of pest infestations or disease symptoms.

8. **Stake and Guy Wire Removal**: Determine the appropriate timing for removing stakes and guy wires used to support newly planted trees. Include guidelines for assessing the tree's stability and strength before removing support structures to prevent damage to the tree trunk or root system.

9. **Community Engagement and Education**: Develop outreach materials and educational resources to inform residents, property owners, and maintenance personnel about the importance of properly caring for newly planted trees. Encourage community involvement in tree care activities and promote responsible stewardship of urban forests.

Strategic Goal: Increase Canopy Cover
Outcome: Develop a Program to Ensure Long-Term Health of Newly Planted Trees.

6.4 CLIMATE CHANGE RESILIENCE

Staff decisions regarding tree species selection and placement today will resonate for generations to come, influencing the landscape for decades. Staff will remain vigilant in monitoring and staying current with available research and information pertaining to anticipated forest health issues, particularly those influenced by climate change.

Strategic Goal: Improve Monitoring
Outcome: Develop a Strategy to Address Forest Health Challenges & Climate Change

IMPLEMENTATION SCHEDULE

The Urban Forest Strategy will form the basis of a comprehensive Urban Forest Management Plan. Certain components of this strategy, such as completing the tree inventory, must precede the initiation of the Forest Management Plan. However, some aspects of the strategy will commence immediately upon approval, while others will be gradually addressed leading up to the development of the Urban Forest Management Plan and into the future.

The objectives in this strategy focus on improving efficiency, lowering long-term municipal costs, and maximizing the benefits of the urban forest. Staff anticipate forging partnerships with educational institutions, external interest groups, and volunteers, as well as pursuing available funding opportunities to support the Urban Forest Strategy's implementation. The implementation schedule outlines the target year for completion or implementation of each objective, any quantifiable financial details, and the projected financial impacts or proposed funding sources required.

The Implementation Schedule is presented in the following format, with subsequent pages elaborating on the details of each component:

Objective	Objective item #	Action	Priority	Estimated Timing	Estimated Costs	Description
Name and Description	Objective Number	Action to complete	High, Medium, or Low	Short, Medium, or Long-Term	Capital Estimates & Operating Implications	Description & Funding Source(s), where applicable

Priority and Timing
Timing generally aligns with priority—the earlier a recommendation is required, the higher its priority. However, implementation timelines are subject to additional factors, such as resource availability and interdependencies with other objectives. Recommendations are categorized into the following timeframes:

- **Short-Term (2026 to 2029):** Immediate actions critical to establishing foundational elements of the strategy.
- **Medium-Term (2030 to 2034):** Actions requiring strategic alignment and resource development.
- **Long-Term (2035 to 2050):** Long-range goals focusing on sustainability and ongoing improvement.
- **Annual:** Reviews and operational activities that will ensure the urban forest's sustainable management.

The capacity of staff to complete these reviews and activity schedule remains responsive to changes in funding, staffing, partnerships, and municipal priorities. These reviews will consider factors such as:

- Capital lifecycle and safety considerations.
- Legislative and mandated requirements.
- Changes to service standards or best practices.
- Public input and community interests.
- Emerging trends and urban forestry innovations.
- Participation of partners, grants, and other funding opportunities.
- Socio-demographic shifts and growth forecasts, including development impacts.

Cost Implications

The **Urban Forest Strategy** has cost implications over its implementation period, encompassing planting, maintenance, and monitoring efforts. High-level estimates are provided in 2025 dollars and adjusted for inflation at 5% annually. Costs typically include:

- **Capital Costs:** Tree planting, infrastructure, and equipment.
- **Operating Costs:** Maintenance, inspection programs, and community engagement.

Cost estimates focus on direct expenditures and exclude land acquisition, large-scale design fees, or unexpected contingencies. Potential funding sources include (but are not limited to):

- **Development Charges**: Contributions from new developments.
- **Municipal Reserves**: Funds allocated for urban forestry projects.
- **Partnerships**: Collaboration with community groups, schools, and businesses.
- **Grants**: Provincial, federal, and non-profit funding opportunities.
- **Sponsorships and Fundraising**: Public and corporate contributions.
- **Parkland Cash-in-lieu**: Contributions as part of development agreements.
- **User Fees & Surcharges**: Charges associated with tree permits or other urban forest initiatives.
- **Long-Term Debt Financing**: Borrowing for major projects.
- **Tax Base**: Municipal operational budgets for long-term urban forestry programs.

Operating Costs

The operating costs associated with the strategy will be refined by Town Staff during annual budget cycles. These include detailed design, staffing requirements, and operational plans, ensuring that objectives are feasible and aligned with available resources. By addressing these components, the **Implementation Schedule** ensures a transparent and actionable framework for realizing the Town's urban forest objectives.

Symbol	Estimated Cost
$	$0-$10,000
$$	$10,000-$100,000
$$$	$100,000+

High Priority Action Items

Objective	Objective Item	Action(s)	Priority	Estimated Timing	Estimated Costs	Description
Tree Inventory and Risk Assessment	**1.1**	Tree Inventory and Forest Canopy Assessment	High	Short-term	$$	Assessments Include: Tree Inventory and Forest Canopy Assessment LiDAR Assessment Street Tree Inventory Forested Area Inventory Private Land Tree Inventory
Forest Health and Pest Management	**6.2**	Expand the Emerald Ash Borer Program	High	Short-term	$$$	The process of further implementing the EAB program in the urban forest in Town owned woodlots serves to ensure its sustainability, resilience, and optimized functionality within urban environments in accordance with the Town's Official Plan.
Tree Protection and Management	**5.5**	Urban Forest Management Policy	High	Short-term	$$ In House	The Policy establishes a framework for managing the urban forest, aligning operations with the Town's Official Plan, and ensuring consistent practices for tree preservation, planting, and maintenance.
	5.6	Tree By-law	High	Short-term	$$ In House	The Tree By-law protects trees, aligns with the Town's Official Plan, and directs compensation funds toward tree planting, maintenance, and restoration.

Medium Priority Action Items						
Objective	**Objective Item**	**Action(s)**	**Priority**	**Estimated Timing**	**Estimated Costs**	**Description**
Tree Inventory and Risk Assessment	**1.2**	Forest Cover and Canopy Area Enhancements	Medium	Annual	$$	Through of the use of LiDAR, staff will conduct an evaluation of the existing and projected urban forest canopy cover.
	1.3	Street and Park Tree Diversity Ratio	Medium	Annual	$$$	Diversification of the tree species within parks and on boulevards provides a healthier, more robust urban forest that is less prone to serious pest issues (i.e. insects and diseases). Work towards 10:20:30 regime.
	1.4	Age Class Distribution	Medium	Long-Term	$$$	As we work towards establishing an uneven-aged structure for our tree inventory, we anticipate a stabilization of annual maintenance and operating costs. This stabilization arises as the rates of tree mortality, removal, and replacement become more balanced over time.
Management of Town Owned Forests	**2.1**	Forest Succession Plans	Medium	Mid-term	$ In House	Managing the Towns forests inherently provides a cost benefit to the town. Additionally, we expect to save on future maintenance costs by reducing the number of dead or deteriorating trees in Town owned forest.
	2.2	Non-native invasive species management	Medium	Mid-term	$$ In House	Partnerships, external funding sources (e.g. South Simcoe Streams Network, forests Ontario), federal and provincial grants.

Medium Priority Action Items						
Objective	**Objective Item**	**Action(s)**	**Priority**	**Estimated Timing**	**Estimated Costs**	**Description**
Establishing a Level of service	**3.1**	Inspection Program	Medium	Annual	$	The implementation of a proactive inspection program aids in staff efficiency by reducing the number of future service requests and the associated response efforts. Additionally, addressing issues before they lead to tree failures significantly decreases liabilities.
	3.2	Maintenance (Pruning & Removal) Cycle	Medium	Annual	$$	Proactive pruning programs are time-efficient for staff by tailoring the volume of upcoming service inquiries and the need for reactive measures. Pruning blocks may be contracted out in a bidding system to maximize efficiency.
Customer Service and Service Delivery	**4.1**	Urban Forestry Staff in Operations	Medium	Mid-term	$$$	Staff time becomes more efficient when overlapping tasks are reduced and maintenance contracts are consolidated into larger projects, which typically attract lower per-unit costs.
	4.2	Public Education and Information Availability	Medium	Mid-term	$ In House	Making more information readily available and improving transparency can lead to a decrease in the amount of staff time spent on responding to public inquiries and can monitor how many residents are requiring tree management purposes.

Medium Priority Action Items						
Objective	**Objective Item**	**Action(s)**	**Priority**	**Estimated Timing**	**Estimated Costs**	**Description**
Forest Health and Pest Management	**6.1**	Pest Preparedness Program	Medium	Mid-term	$$$	Pest Preparedness Programs can potentially benefit the Town financially by mitigating tree damage and associated costs of pest outbreaks, while also reducing long-term expenditures on pest management and tree replacement.
	6.3	A Program for Newly Planted Trees	Medium	Annual	$$$	Effective implementation of new tree programs leads to decreased long-term expenditures on tree planting budgets.
	6.4	Climate Change Resilience	Medium	Mid-term	$	Strategizing for upcoming forest health challenges, including those linked to climate change, can benefit the Town financially by minimizing potential costs associated with tree damage, loss, and mitigation efforts in the future.
Tree Protection and Management	**3.3**	Work towards the creation of a Urban Forest Management Plan	Medium	Mid-term	$$ In House	This plan will provide a structured framework for managing and growing the Town's tree canopy, addressing key areas such as tree planting, maintenance, species diversity, and long-term resilience.

Low Priority Action Items

Objective	Objective Item	Action(s)	Priority	Estimated Timing	Estimated Costs	Description
Customer Service and Service Delivery	**4.3**	Website Updates	Low	Short-term	$	Expand and improve the urban forestry information on the Town's website to offer more information and resources. Streamlining information about Town programs and urban forestry on the Towns website can lead to a reduction in staff time spent on public inquiries.
	4.4	Public Education Program for Trees on Private Property	Low	Short-term	$	Increase opportunities for public education on the benefits of protecting and managing trees on private property. Anticipated overall improvement in the quality and quantity of urban forests on private lands is expected with the increased knowledge base of the general public, thus resulting in lower future maintenance costs to the taxpayer.

Low Priority Action Items

Objective	Objective Item	Action(s)	Priority	Estimated Timing	Estimated Costs	Description
Tree Protection and Management	**5.1**	Woodlot Designation	Low	Mid-term	$	Investigate Significant Woodlot Designation for Forests on Private and Public Lands. The process of identifying and planning for the future management of the urban forest serves to ensure its sustainability, resilience, and optimized functionality within urban environments in accordance with the Town's Official Plan.
	5.2	Development Projects: Enhanced Requirements	Low	Short-term	$	Establish a structured review procedure for all Town capital projects involving tree impacts and conduct regular, documented site inspections. Clarifying the review process streamlines the time required for project assessments and design revisions.
	5.3	Increase Staff Capacity	Low	Short-term	$ In house	Increase the capacity for staff to enforce proper tree protection measures following Innisfil Standard Details, Town of Innisfil Engineering Design Standards and Specifications Manual.
	5.4	Increase Staff Expertise	Low	Mid-term	$	Planning Department's staff composition is anticipated to improve decision-making, streamline processes, and potentially yield long-term cost savings through improved environmental management and sustainable development practices.

CONCLUSION

The urban forest in the Town of Innisfil is a vital element of the area's green infrastructure, enhancing residents' well-being, supporting biodiversity, and delivering substantial economic and social value. The Urban Forest Strategy seeks to build upon these benefits, promoting long-term sustainability while minimizing financial impacts on taxpayers. This strategy reflects the Town's commitment to collaborative partnerships, forward-thinking policies, and innovative approaches.

Successful implementation of the strategy relies on active collaboration with local communities, interest groups, organizations, and post-secondary institutions. Adaptive management will be critical to the forest's longevity, ensuring the plan evolves through regular reviews and adjustments to maintain a healthy and resilient urban forest.

This strategy lays the foundation for a comprehensive Urban Forest Management Plan, designed to adapt to emerging challenges, integrate the latest data, and reflect ongoing community engagement. By fostering proactive management and incorporating scientific research, the Town aims to secure a thriving urban forest that meets both current and future environmental, economic, and social needs.

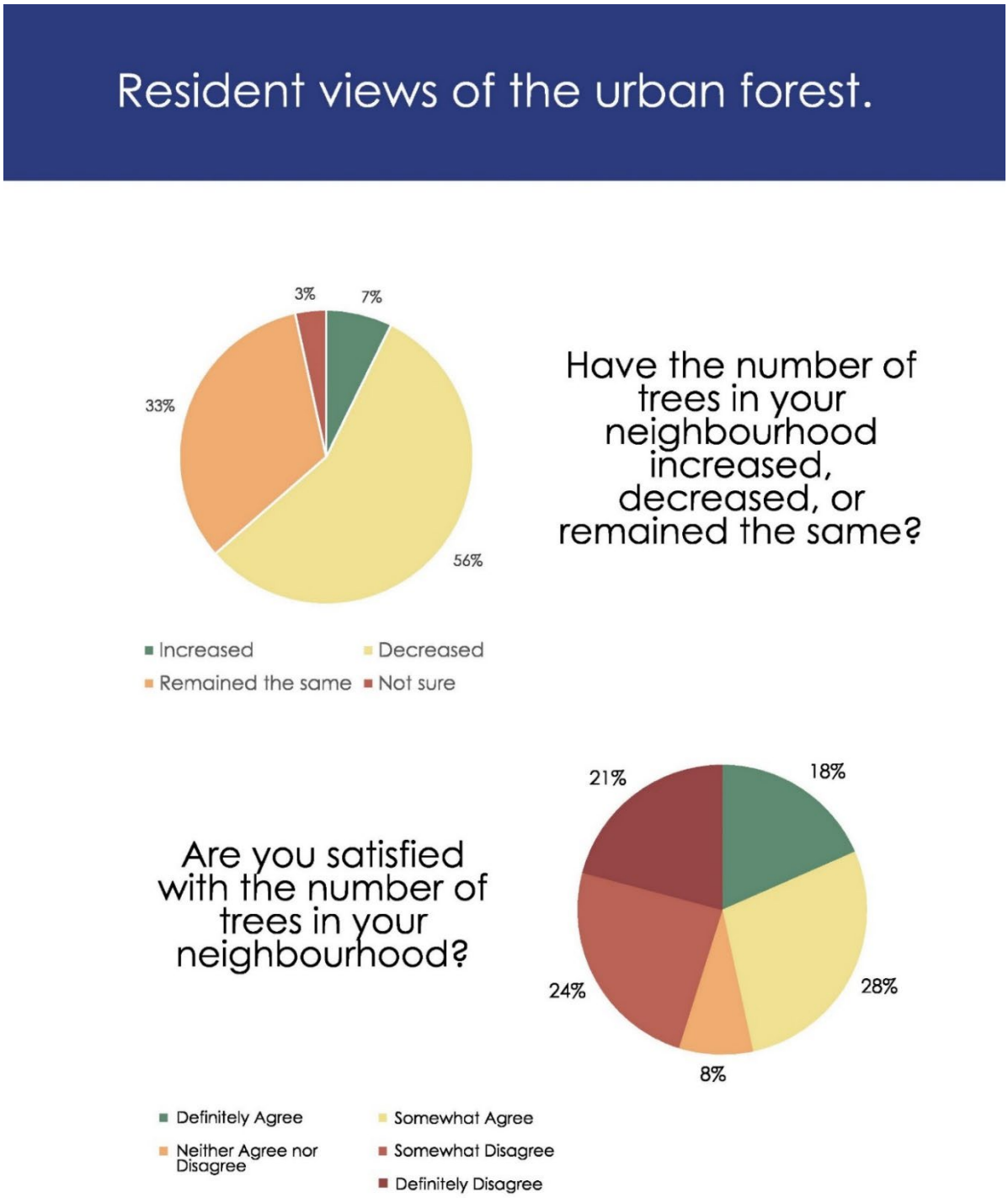
APPENDIX A: DEFINITIONS

Age Class Distribution:	The proportion of trees at different stages of maturity (young, middle-aged, and old) within a forest or urban tree population. Balanced age distribution ensures stability and long-term canopy health.
Biodiversity:	The variety of life within an ecosystem, including plants, animals, and microorganisms. High biodiversity strengthens ecosystem resilience and functionality.
Block Pruning Program:	A maintenance strategy in which tree pruning is scheduled and conducted in designated blocks or areas to maximize efficiency and reduce costs.
Canopy Cover Objective:	A targeted percentage of land area that should be covered by tree canopy, often set to improve environmental and community benefits.
Canopy Distribution:	The equitable allocation of tree canopy cover across different neighborhoods or areas within a municipality, ensuring fair access to the benefits of urban forestry.
Carbon Sequestration	The process by which trees and other vegetation absorb carbon dioxide (CO_2) from the atmosphere and store it in their biomass (trunks, branches, leaves, and roots) and the soil. This natural mechanism helps mitigate climate change by reducing greenhouse gas concentrations.
Climate Resilience:	The capacity of ecosystems and communities to adapt to and recover from the impacts of climate change, such as extreme weather events and shifting ecological conditions.
Community Engagement:	Involving residents and stakeholders in urban forestry initiatives to raise awareness, encourage participation, and foster a shared sense of responsibility for local green spaces.
Diameter at Breast Height (DBH):	A standard method of measuring the diameter of a tree trunk at 1.4 meters (4.5 feet) above the ground. It is a key metric for evaluating tree growth, health, and value.
Ecological Offsetting:	A conservation practice where ecological losses (e.g., tree removal) are compensated by equivalent gains (e.g., planting new trees or enhancing other natural areas).
Emerald Ash Borer (EAB) Program:	A targeted initiative to address the damage caused by EAB infestations, including tree removal, replacement, and monitoring to protect urban forests.
Emerald Ash Borer (EAB):	An invasive beetle that attacks and kills ash trees. Management includes monitoring, removal, and replacement of affected trees.
Endangered Species Act (ESA):	Legislation designed to protect species at risk of extinction and their habitats. In urban forestry, this includes efforts to preserve and support species like Black Ash and Butternut.
Environmental Planning Expertise:	Specialized knowledge and skills related to integrating environmental considerations, such as biodiversity and sustainability, into urban development and planning processes.
Forest Health:	The condition of a forest, reflecting its resilience, biodiversity, and ability to provide ecological services such as clean air, water, and habitat.

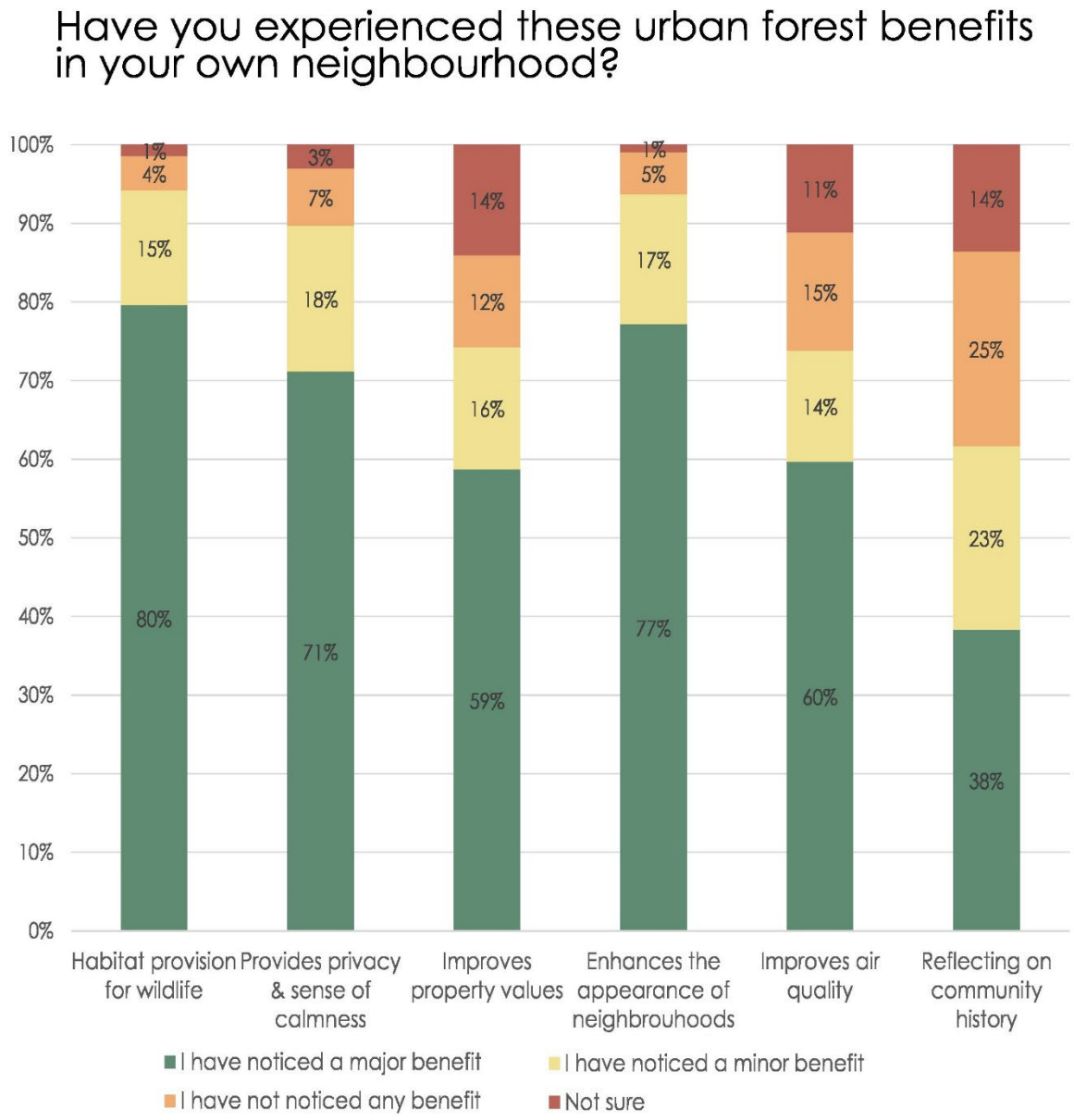
Forest Succession:	The natural process of change in forest composition and structure over time, progressing from pioneer species to a mature, stable forest ecosystem.
Geographic Information System (GIS):	A computer-based tool used for mapping and analyzing spatial data. In urban forestry, it supports tree inventories, canopy assessments, and planning.
Green Infrastructure:	Natural and semi-natural systems, such as urban forests, wetlands, and parks, that provide ecosystem services like air purification, stormwater management, and climate regulation.
Integrated Pest Management (IPM):	A sustainable approach to controlling pests through a combination of biological, cultural, mechanical, and chemical methods.
LiDAR (Light Detection and Ranging):	A remote sensing technology that uses laser light to create high-resolution maps of natural and built environments. In urban forestry, LiDAR is used for canopy analysis and tree inventory mapping.
Managed Forest Tax Incentive Program (MFTIP):	A provincial initiative offering tax reductions to landowners who sustainably manage forested areas on their property.
Natural Heritage System (NHS):	A network of natural areas, including forests, wetlands, and habitats, that provide ecological services and maintain biodiversity.
Non-Native Invasive Species (NNIS):	Species that are not native to a particular ecosystem and whose introduction causes or is likely to cause harm to the environment, economy, or human health.
Pest Preparedness Program:	A strategy for monitoring, detecting, and managing pests and diseases that threaten the urban forest.
Proactive Maintenance:	A planned approach to tree care that emphasizes regular inspections, pruning, and management to prevent problems rather than responding to them after they occur.
Reforestation:	The process of planting trees in areas where forests have been depleted, with the goal of restoring ecological functions and increasing canopy cover.
Significant Woodlot:	A forested area deemed ecologically, historically, or culturally valuable, warranting special protection and management.
Stake and Guy Wires:	Supports used to stabilize newly planted trees until they are strong enough to stand independently. These should be removed after establishment to prevent harm to the tree.
Stakeholder Collaboration:	Engaging various groups—such as residents, community organizations, businesses, and government agencies—in urban forest planning and management.
Tree By-law:	A municipal regulation governing the protection, removal, and management of trees to preserve the urban forest.
Tree Inventory:	A detailed record of trees in a specific area, including data such as species, health, size, and location. Used for effective management and planning.
Tree Maintenance Cycle:	A recurring schedule for pruning, inspecting, and maintaining trees to ensure health, safety, and aesthetic value.
Tree Mitigation Plan:	A strategy to compensate for tree loss, typically involving tree planting, restoration, or ecological offsetting measures.

Tree Planting Program:	An initiative aimed at increasing tree canopy by planting new trees in strategic locations, often guided by goals such as species diversity and canopy distribution.
Tree Protection Requirements:	Guidelines or regulations aimed at safeguarding trees during construction or development projects to minimize harm and preserve their ecological contributions.
Tree Removal Permit:	A regulatory document required to remove certain trees, often used to ensure that tree removals align with municipal policies and offsetting requirements.
Urban Biodiversity:	The variety of living organisms within an urban area, including trees, plants, animals, and microorganisms. Promoting urban biodiversity strengthens ecosystems and enhances resilience.
Urban Forest Assets:	All components of the urban forest, including street trees, park trees, woodlots, and private property trees, that collectively provide ecological, economic, and social benefits.
Urban Forest Management Plan (UFMP):	A comprehensive, long-term plan derived from the tree inventory and data gathering processes, providing detailed strategies, objectives, and actions to sustainably manage the urban forest. This plan uses collected data to guide informed decision-making, set measurable goals, and ensure the health and resilience of the urban forest over time.
Urban Forest Strategy:	A strategic framework aimed at managing, protecting, and enhancing urban trees and green spaces to support environmental, social, and economic benefits.
Urban Forestry:	The management of trees, forests, and green spaces within urban and suburban areas to improve environmental, economic, and social well-being.
Urban Green Spaces:	Parks, gardens, and other vegetated areas in urban settings that provide recreational, aesthetic, and ecological benefits.
Urban Tree Canopy (UTC):	The layer of tree leaves, branches, and stems that cover the ground when viewed from above. A higher UTC percentage indicates greater urban forest coverage.
Volunteer Planting Activities:	Community-driven events where residents and local organizations participate in planting trees to support urban forestry goals and foster environmental stewardship.
10-20-30 Rule:	A guideline for urban tree diversity that recommends no more than 10% of the urban forest be of a single species, 20% from the same genus, and 30% from the same family to increase resilience to pests and diseases.

APPENDIX B: UFMP SURVEY TAKING CARE OF OUR TREES FINAL RESULTS

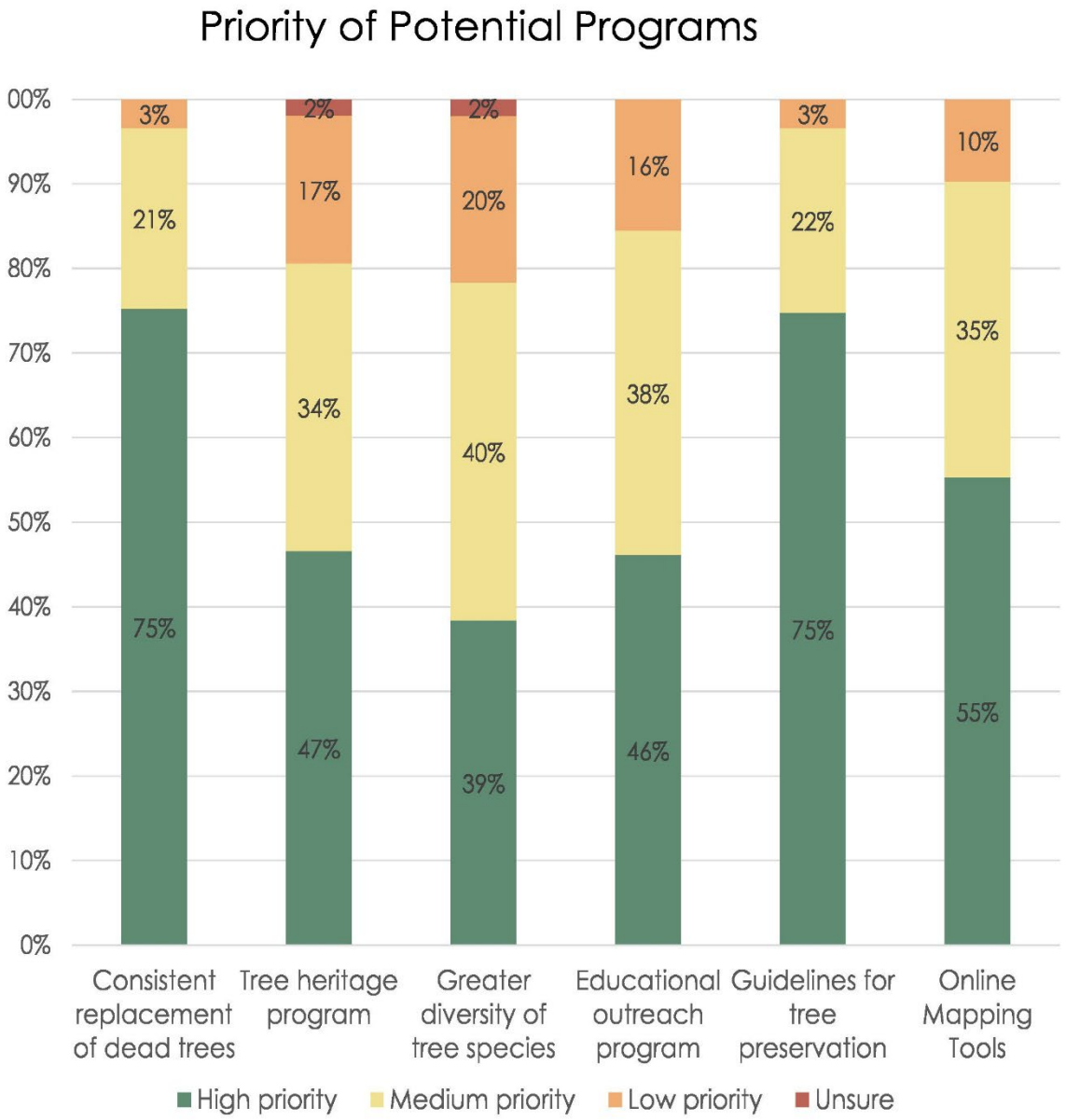


What benefits of urban forests have residents experienced?



What benefits of urban forests have residents experienced?

What program and services would you prioritize?



What program and services would you prioritize?

Would you support a tree removal permit system in the Town?