City of Vaughan
Ten-Year Operating &
Financial Plan for
Urban Forestry

March 2024

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Executive Summary

This ten-year Operating and Financial Plan (OFP) will support the implementation of Vaughan's Urban Forest Management Plan (UFMP) and Woodland Management Strategy (WMS). Forestry will require enhanced resources to support the implementation of the actions put forward through the UFMP and WMS. This document identifies four program pathways; Status Quo, Good, Better, and Best, to explore the program impacts of four levels of UFMP and WMS implementation, as well as the resources required to achieve them. The highlights of each program pathway include:

Status Quo

Highlights

- No significant changes to the existing scope of the program.
- Program not achieving its targeted seven-year grid pruning cycle.
- Will not achieve the City's canopy target.
- Program to adopt a lifecycle cost assessment approach to resourcing.

Resourcing

- $4.2 million combined operating and capital budget (2034)

Good

Highlights

- All of Status Quo, but in addition:
- Program achieving a seven-year grid pruning cycle.
- Planting rates in boulevards support 25% canopy cover by 2054.
- Tree inventory is updated as inspections and other work is carried out.
- Woodlot management plans (WMP) for each of the City's 27 woodlots.

Resourcing

- $5.8 million combined operating and capital budget (2034).
- One additional arborist FTE.

Better

Highlights

- All of Good, but in addition:
- Enhanced care for young trees to improve establishment success.
- Iterative updates to the City's street tree inventory.
- Iterative updates to the City's 27 WMP.
- Dedicated woodland management capacity to support enhanced program delivery.

Resourcing

- $6.4 million combined operating and capital budget (2034).
- Two additional arborist FTEs.
- One additional Forestry inspector FTE.

Best

Highlights

- All of Better, but in addition:
- Program achieving a targeted five-year grid pruning cycle.
- Dedicated resourcing to support woodland management activities (e.g., replanting, restoration), as informed by the WMS and WMPs.

Resourcing

- $6.7 million combined operating and capital budget (2034).
- Two additional arborist FTEs.
- One additional Forestry inspector FTE.

The purpose of identifying different pathways to UFMP and WMS implementation is to illuminate the varying degrees to which different levels of resourcing support priority outcomes identified in the UFMP. The pathways have been loosely framed to identify the resourcing associated with that of the current program (i.e., Status Quo), the resourcing associated with a modest degree of UFMP and WMS implementation (i.e., Good), the resourcing associated with substantial UFMP and WMS implementation (i.e., Better), and the resourcing associated with full UFMP and WMS implementation with some performance measures exceeding the specifications of those documents (i.e., a "stretch" goal, or Best). Resourcing under the Best pathway is of a level that would position Vaughan's Forestry Operations program as a leader amongst its peers in the Greater Toronto Area.

Lifecycle cost analyses presented in Section 6.0 underpin annual financial forecast tables (2024-2034) presented in Section 7.0.

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Frequently Used Acronyms

FTE	Full-time equivalent
ICI	Industrial, commercial, and institutional (land uses)
LEAF	Local Enhancement & Appreciation of Forests
LoS	Level of Service
MTO	Ministry of Transportation (Ontario)
OFP	Operating and Financial Plan
RoW	Right-of-Way
TRCA	Toronto and Region Conservation Authority
UFMP	Urban Forest Management Plan
VMC	Vaughan Metropolitan Centre
WMS	Woodland Management Strategy
WMP	Woodlot Management Plan

1.0   Introduction and Plan Structure

This is Vaughan's 2024-2034 Urban Forestry Operating and Financial Plan (OFP). The OFP identifies the resources necessary to support the successful implementation of the City's Urban Forest Management Plan (UFMP) and Woodland Management Strategy (WMS) over the coming decade. The OFP is set up as six sections:

Section 2.0: four "program pathways" are identified as well as the outcomes that can be expected from the resourcing entailed. The program pathways have been developed to help illuminate what compromises in resourcing mean in terms of implementation of the UFMP and WMS and program development outcomes.

Section 3.0: restates the priority actions put forward in the UFMP and WMS and identifies the resources that will be leveraged toward achieving them. New or enhanced resources are identified accordingly.

Section 4.0: provides descriptions of new and enhanced program resources as are identified through Section 3.0, and identifies differing outcomes based on the resourcing levels submitted under the program pathways.

Section 5.0: details a lifecycle (lifecycle) cost analysis which has been used to underpin the financial forecasting tree and woodland asset classes. The rationale behind a lifecycle costing approach, as it relates to urban forest asset management, is also discussed.

Section 6.0: identifies formal program service levels that would be targeted under each of the four program pathways. This section also introduces performance measures to track program effectiveness and the implementation of the UFMP and WMS.

Section 7.0: ten-year financial forecasting for each of the four program pathways is laid out in a tabular format.

2.0   Program Pathways

Full implementation of the UFMP will require the support of new and enhanced program resources. This plan leverages a tiered approach to frame different levels of implementation and identifies the fiscal costs associated with each pathway. Four pathways were considered: Status Quo, Good, Better, and Best. Section 3.0 identifies how new program elements align with each program pathway in detail; however, a high-level description of each program pathway (as realized in 2034) is outlined below. Key performance indicators and associated levels of service are provided in Section 6.0.

Status Quo

- No current inventory information.
- Operational budgets do not scale with the number of assets under the City's care.
- No approach for management of woodland areas beyond that which is reactive in nature.
- Proactive tree care not achieving a 7-year return interval (i.e., closer to 40 years).
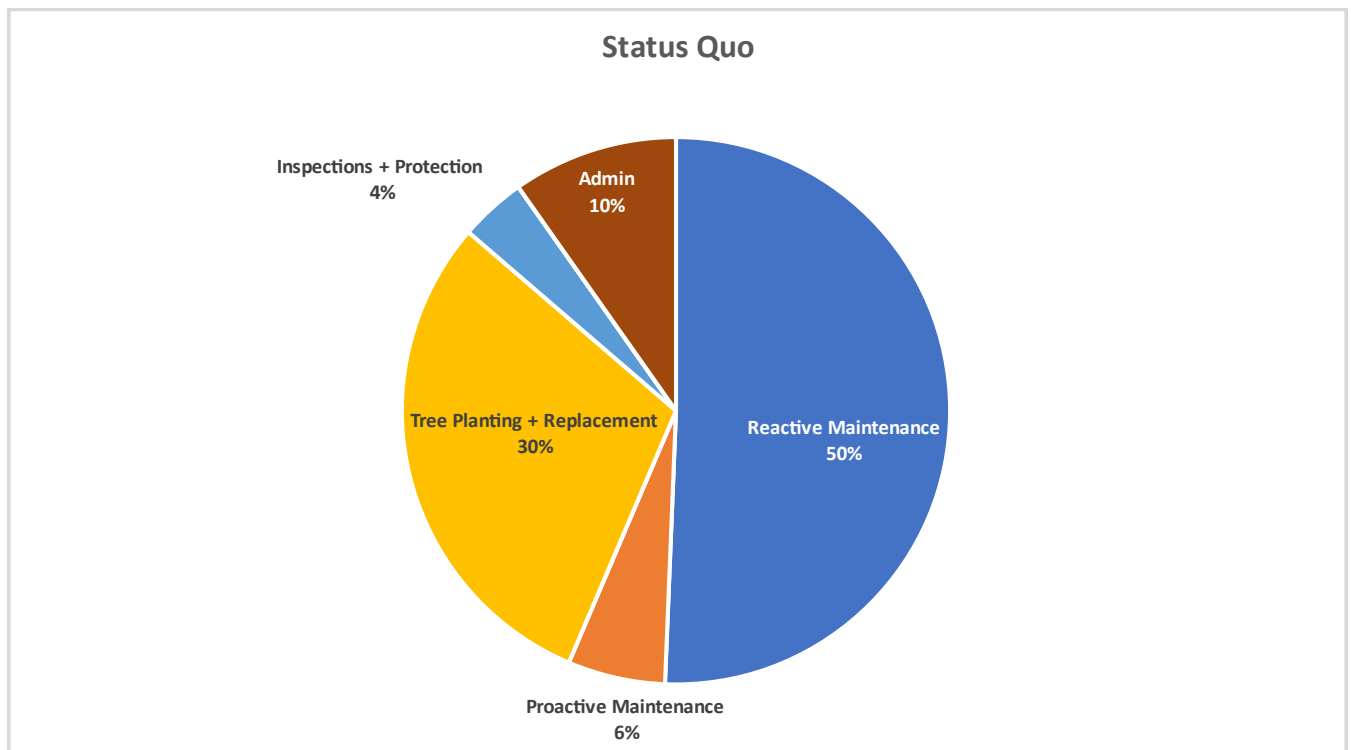
Figure 2-1. Operational spending: Status Quo program pathway forecast (2034).

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Good

- Resources are sufficient to update the tree inventory as inspections and other work are performed.
- Operational budgets scale with the number of assets under the City's care.
- Resourcing will support an increased pruning cycle, though may not achieve a 7-year return interval for intensively maintained street trees.
- A risk management program inclusive of public woodland assets is formalized and implemented.
- The City has completed an WMP for each of its 27 woodlots, but no regular funding is in place to support iterative updates.
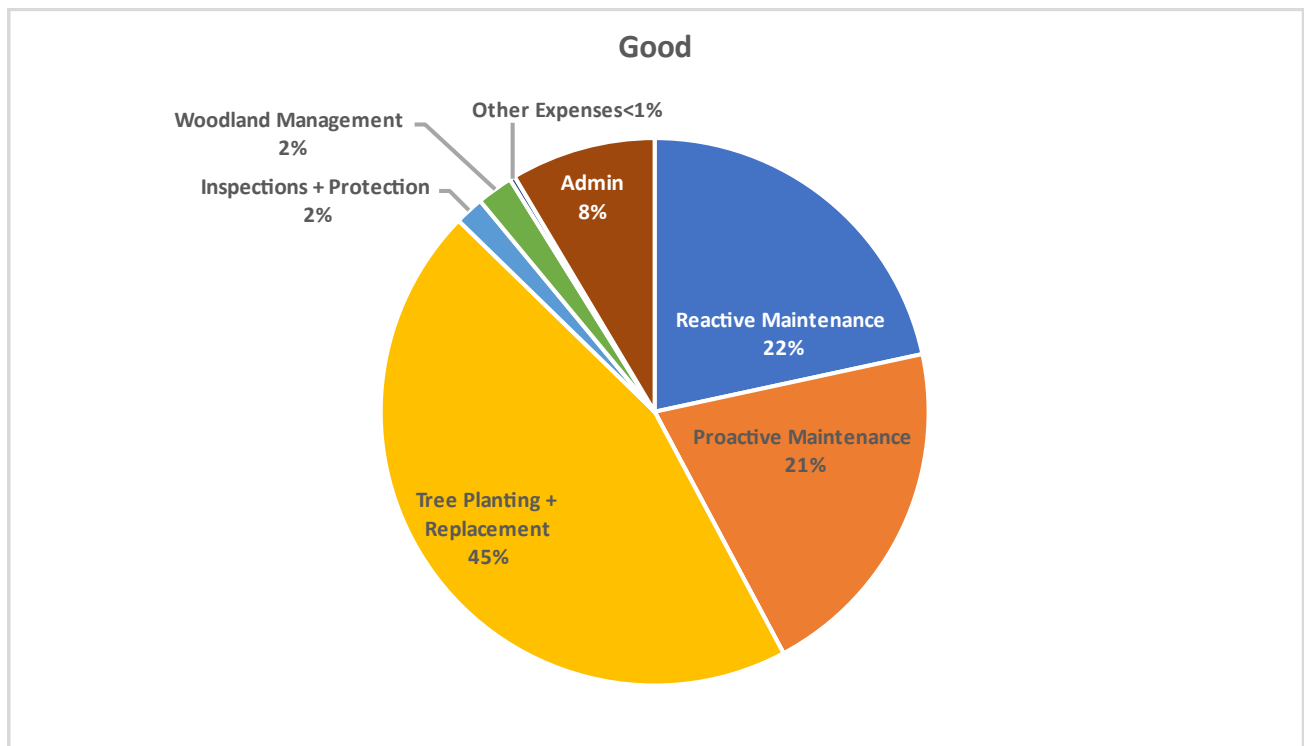
Figure 2-2. Operational spending: Good program pathway forecast (2034).

Better

- The inventory is updated on an iterative cycle, one year in advance of grid pruning work to inform tree care activities within the grid the subsequent year.
- Operational budgets scale with the number of assets under the City's care.
- Resourcing is generally adequate to achieve a 7-year return interval for intensively maintained street trees.
- Additional lifecycle activities (i.e., watering, mulching, structural training) are resourced and can be expected to further extend the service lives of ornamental tree assets.
- A risk management program inclusive of public woodland assets is formalized and implemented.
- One FTE tasked with woodland management supports the coordination and implementation of a significantly expanded woodland management program.
- The City's Woodlot Management Plans are updated on an iterative 5-year cycle and support an evidence-based approach to woodland management.
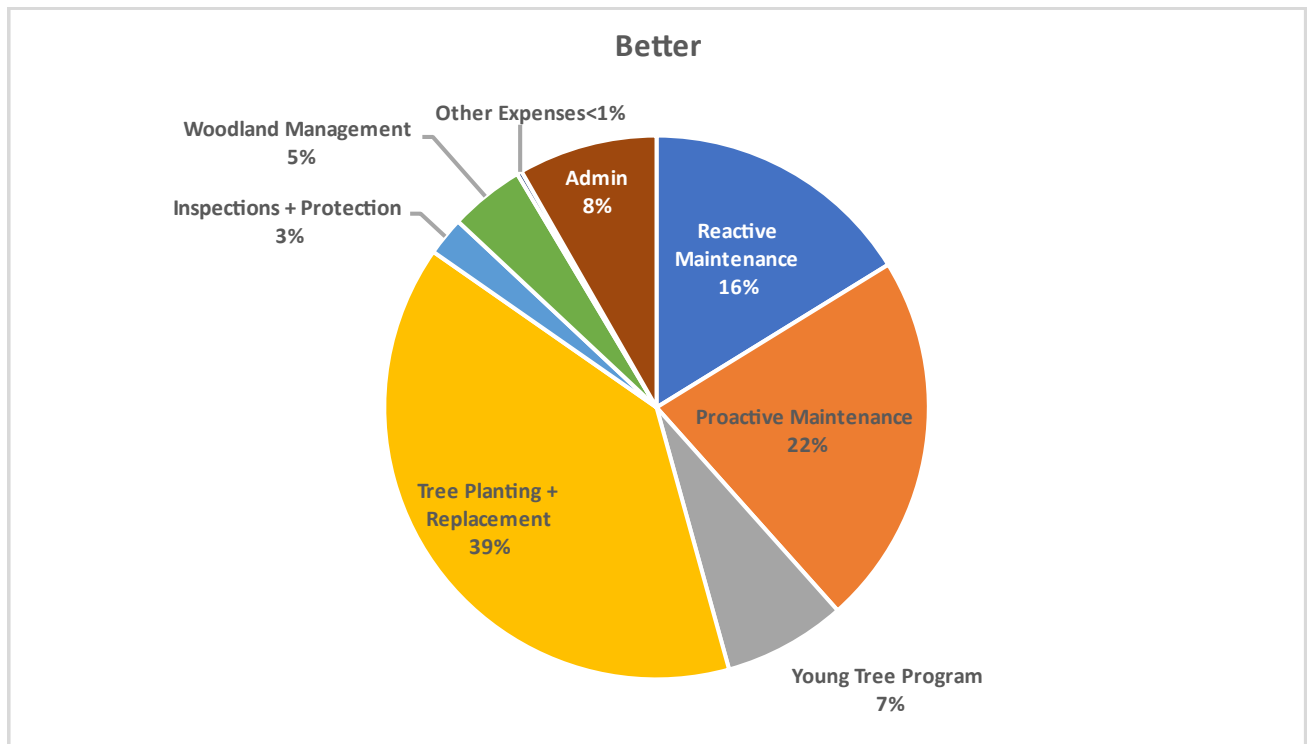
Figure 2-3. Operational spending: Better program pathway forecast (2034).

Best

- The Best program pathway generally outlines a program design that would position the City as a leader in urban forest management.
- The inventory is updated on an iterative five-year cycle, one year in advance of grid pruning work to inform tree care activities within the grid the subsequent year.
- Operational budgets scale with the number of assets under the City's care.
- Resourcing is adequate to achieve a 5-year return interval for intensively maintained street trees.
- Additional lifecycle activities (i.e., watering, mulching, structural training) are resourced and can be expected to further extend the service lives of ornamental tree assets.
- A risk management program inclusive of public woodland assets is formalized and implemented.
- One FTE tasked with woodland management supports the coordination and implementation of a significantly expanded woodland management program.
- The City's Woodlot Management Plans are updated on an iterative 5-year cycle and support an evidence-based approach to woodland management.
- Dedicated resources are put toward woodland management, restoration, and planning on an annual basis and informed by current direction in the relevant Woodlot Management Plan.

Best

- Reactive Maintenance 13%
- Proactive Maintenance 29%
- Young Tree Program 7%
- Tree Planting + Replacement 35%
- Inspections + Protection 2%
- Woodland Management 6%
- Other Expenses <1%
- Admin 8%
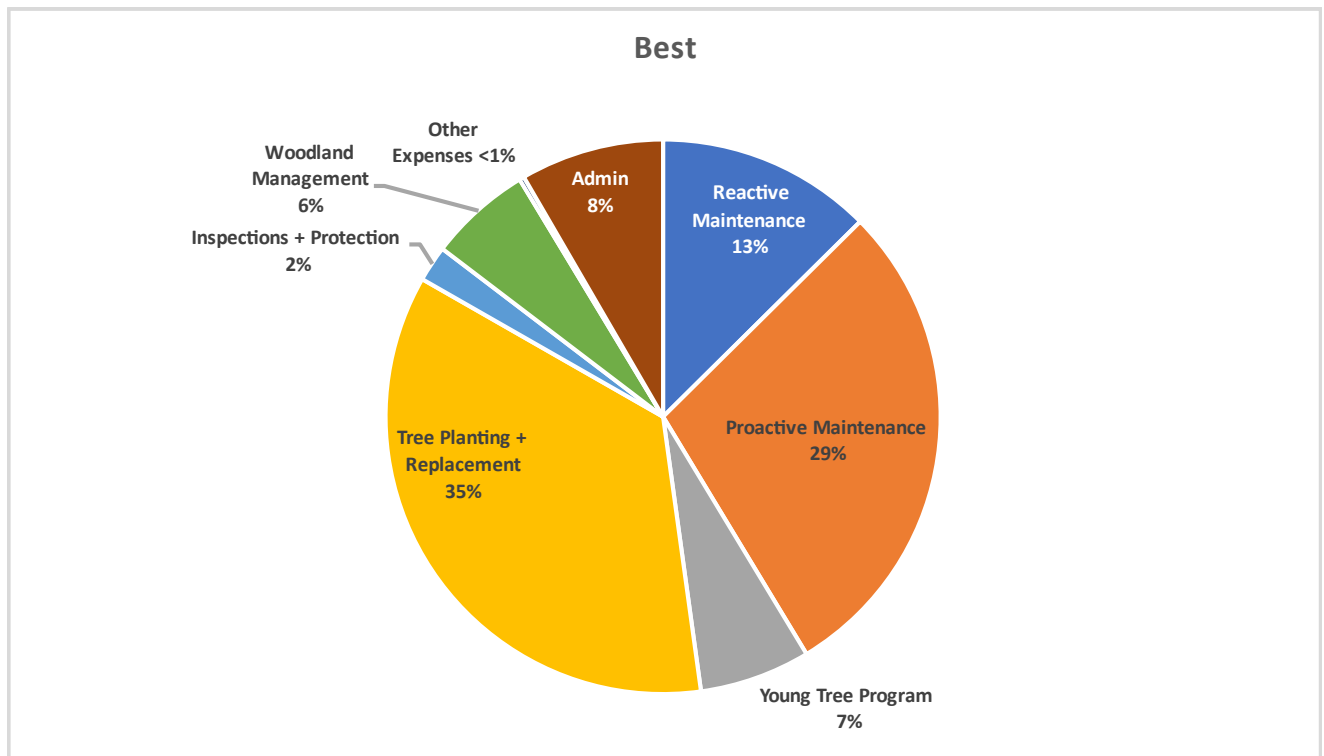
Figure 2-4. Operational spending: Best program pathway forecast (2034).

3.0   Priorities and Plan Implementation

Vaughan's UFMP and WMS propose a variety of program actions and processes that require resources to implement. In alignment with the UFMP and WMS, priority actions are those which the City will look to achieve over the life of this Operating Plan and Financial Strategy. Several priority actions will require additional resources to implement, while others can be implemented through existing city resources. The highest priority actions in the UFMP/WMS are shown in **bold**. Actions not identified as a priority will be implemented opportunistically, as capacity permits, or will otherwise be prioritized following the review of the UFMP and WMS in 2034. Priority actions are listed in this section, in addition to the new or existing resources that will be leveraged in achieving them. Priority actions are listed here relative to the five central goals of the City's UFMP and WMS:

- *Align urban forest management with best practices* (UFMP) and *Align woodland management with best practices* (WMS)
- *Maintain a healthy and safe urban forest* (UFMP) and *Maintain healthy and safe woodland environments* (WMS)
- *Expand the urban forest canopy and associated benefits* (UFMP) and *Expand the City's woodlands and the associated provision benefits* (WMS)
- *Protect trees and woodlands for future generations* (UFMP and WMS)
- *Partner in urban forest stewardship* (UFMP) and *Partner in woodland stewardship* (WMS)

Table 3-1. Priority actions and proposed resources to support implementation: Align urban forest management with best practices (UFMP) and Align woodland management with best practices (WMS)

Priority Actions	
Action	**Resources to Implement**
Pursue Forest Stewardship Council (FSC) certification for the management of city woodlots.	Existing Staff Resources.
Aim to meet the Sustainable Forestry Initiative (SFI) Urban Forest Certification standard by 2030 and consider certification if costs and staff resources permit.	Existing Staff Resources.
Develop urban tree asset condition assessment protocols consistent with the industry tree care standards such as the ANSI A300 standards.	**Existing Staff Resources.**
Establish an interdepartmental working group on urban forestry to meet twice a year at minimum to share updates of the UFMP implementation and identify and address barriers and challenges in implementation.	**Existing Staff Resources.**

Priority Actions	
Action	**Resources to Implement**
Examine current staffing levels and consider hiring new role(s) within Forestry Operations to address the capacity gaps and provide additional support for the UFMP implementation.	**Achieved by carrying out additional actions specified in this strategy.**
Examine current resources, staffing levels, and growth/lifecycle costing models to inform future budgets.	Some suggested through this Plan, others absorbed through existing staff resources.
Establish a lifecycle costing approach for street tree assets, aligned with level of service commitments, to inform budget planning for maintenance and renewal.	Framework proposed through this Plan, full implementation and ongoing work absorbed through existing staff resources.
Continue to integrate urban trees and add woodlands and other green infrastructure into the City's asset management framework.	**Existing Staff Resources** **Annual technology expense for software subscriptions and API development for enterprise integration.**

Table 3-2. Priority actions and proposed resources to support implementation: Maintain a healthy and safe urban forest (UFMP) and Maintain healthy and safe woodland environments (WMS)

Priority Actions	
Action	**Resources to Implement**
Shift to proactive a seven-year pruning cycle for urban trees including trees by rural roads and parks.	**R5. Enhanced Tree Care Regimen.**
Extend the watering of public trees from the first two years (as is warrantied) to five years after planting.	**R5. Enhanced Tree Care Regimen.**
Document operational procedures for risk inspection, frequency, resolution timeframes, qualifications, and documentation to reflect the industry best practices such as the Best Management Practices (BMPs) by the International Society of Arboriculture and Tree Care Industry Association's A300 standards.	Existing Staff Resources.
Formalize the City's approach to pest management through an integrated pest manage (IPM) policy.	Existing Staff Resources. Initial work is an output from the UFMP project.

Priority Actions	
Action	**Resources to Implement**
Update the City's street tree inventory on an iterative seven-year cycle (15% of inventory, per year), aligned with the grid pruning program.	**R2. Street Tree & Woodland Plot Inventories.**
Establish and maintain plot-based inventory program within the City's woodlots in-step and supporting iterative updates to the City's WMPs.	R2. Street Tree & Woodland Plot Inventories. Dedicated Woodland Management Capacity.
Prepare a State of the Urban Forest report every five years to provide the latest information about the conditions of Vaughan's urban forest and its management program.	The City will use the combination of city-led State of the Urban Forest Reports and the TRCA's Forest Studies Reports to provide one monitoring study on the urban forest every five years. R1. Capital Funds: Monitoring, Reporting.
Review the UFMP and WMS after ten years and update the actions informed by the recurring State of the Urban Forest reports. Renew the UFMP and WMS (update or new version) as applicable.	R1. Capital Funds: Monitoring, Reporting.
Update the City's forest management plan(s) on a five-year iterative cycle to ensure content and short-term prescriptions remain current and relevant.	R4. WMP Documents. The City will undertake its first round of WMPs through capital expenditure in 2026 and may look to update those through an iterative process dependent on the program pathway chosen.
Assess urban forest canopy cover at least every five years using LiDAR or other high-resolution methods of canopy estimation.	Canopy analyses will underpin State of the Urban Forest Reporting. Opportunities for cost-sharing on the acquisition with York Region and TRCA exist and are leveraged currently.
Formalize and implement a tree risk management policy that applies to all urban forestry asset classes.	**R3. Woodland Risk Monitoring & Abatement (Woodlands) AND Existing Staff Capacity (Street Trees)**
Formalize funding for woodland management lifecycle activities which seek to improve the condition of woodland assets (e.g., restoration).	R7. Capital Funds: Woodland Restoration and Afforestation Activities.

Table 3-3. Priority actions and proposed resources to support implementation: Expand the urban forest canopy and associated benefits (UFMP) and Expand the City's woodlands and the associated provision benefits (WMS)

Priority Actions	
Action	**Resources to Implement**
Increase tree planting in the public RoW toward the achievement of the City's canopy cover target.	**R6. Capital Funds:** Expanded Planting Program**.**
Prioritize planting in low tree equity areas and hotspots in the City.	**Existing Staff Resources.**
Establish a Tree Canopy Reserve Fund through by-law, direct cash-in-lieu fees collected through the tree by-law or through other development processes to that fund and establish guidelines for use of the fund.	Existing Staff Resources.
In collaboration with strategic partners such as LEAF and the TRCA, leverage external funding toward increased tree planting on public and private land.	**Existing Staff Resources.**
Review and update the City's Tree Protection Protocol.	Existing Staff Resources.
Explore opportunities/programs to support the greening of Industrial, Commercial, and Institutional (ICI) land uses and campuses.	Existing Staff Resources.
Work with the Ministry of Transportation (MTO) to encourage tree planting along provincial highway corridors.	Existing Staff Resources.
Require applications for development to identify the mature canopy area that will be supported within a development if approved. Track the proposed mature canopy in a city-wide dataset to provide a means of assessing whether the proposed canopy area is being met over time.	Process in place in locations such as the VMC. Continue to develop and formalize the requirement.
Update the City's zoning by-law to include provisions that are broadly tree supportive.	**Existing Staff Resources.**
Re-evaluate and update the current planting list for public and private trees to ensure that these recommended species are non-invasive and climate-adapted (e.g., have high tolerance for drought and heat)	Existing Staff Resources.
Partner with the TRCA to pilot the planting, monitoring, and maintenance of a Miyawaki forest.	**R8. Dedicated Woodland Management Capacity.**
Revisit and enhance the position of urban trees and green infrastructure through future updates to the City's Sustainability Metrics Program.	Existing Staff Resources.

Table 3-4. Priority actions and proposed resources to support implementation: Protect trees and woodlands for future generations (UFMP and WMS)

Priority Actions	
Action	**Resources to Implement**
Review and update the City's Tree Protection By-Law (052-2018).	Existing Staff Resources.
Update Tree Protection and Encroachment by-laws to include Administrative Monetary Penalties (AMP).	**Existing Staff Resources.**
Explore establishing formal enforcement capacity within the Forestry division, including the ability to issue citations under the Tree By-Law and Encroachment By-Law.	**Existing Staff Resources.**
Continue to support opportunities for the integration of Forestry Operations' perspectives in the various development processes that exist within the City.	Existing Staff Resources.
Review and update tree-related language used in the City's subdivision agreements.	Existing Staff Resources.
Review and update the City's Tree Protection Protocol.	Existing Staff Resources.

Table 3-5. Priority actions and proposed resources to support implementation: Partner in urban forest stewardship (UFMP) and Partner in woodland stewardship (WMS)

Priority Actions	
Action	**Resources to Implement**
Share the urban forest inventory online (e.g., through a web map).	Existing Staff Resources.
Establish a woodland steward program, where interested members of the public can act as the community representative of each of Vaughan's 27 woodlands.	**R8. Dedicated Woodland Management Capacity.**
Develop and implement programs that leverage community capacity to support urban forest monitoring, invasives removal, and planting. Work with the TRCA and other levels of government where possible.	**Existing Staff Resources.**
Explore strategic partnerships with LEAF toward enhancing canopy cover on private land.	Existing Staff Resources.

Priority Actions	
Action	**Resources to Implement**
Develop a webpage that clearly and simply describes the tree permit process, requirements, and conditions for private residents.	Existing Staff Resources.
Offer urban forest walks to improve people's access to and understanding of Vaughan's urban woodlands.	R8. Dedicated Woodland Management Capacity.

4.0 Resourcing Requirements

R1. Capital Funds: Monitoring, Reporting, and Plan Reviews

Division: Forestry Operations

Scope: Resources allocated to support preparation of recurring State of the Urban Forest Reports, and to support review of the UFMP and WMS at the ten-year mark.

Rationale: Monitoring is critical in tracking the ongoing implementation of the UFMP and WMS. Ensuring resources are available to support monitoring efforts furthers the broader implementation of both strategic documents.

Options:

Status Quo

- No funding earmarked to support monitoring or plan reviews.

Good

- Monitoring absorbed through the TRCA's decadal Forest Reports.
- Capital funding to support plan review at the ten-year mark.

Better/Best

- Dedicated funds to support the production of State of the Urban Forest reports on a ten-year cycle in addition to the ten-year Forest Reports led by the TRCA.
- Capital funding to support plan review at the ten-year mark.

R2. Street Tree & Woodland Plot Inventories

Division: Forestry Operations

Scope: Resources allocated to the upkeep of the City's urban inventory datasets.

Rationale: Current datasets supporting insights into the urban forestry assets are critical to monitoring efforts and are foundational to a proactive maintenance regimen. As with an enhanced tree care regimen, inventory budgets would scale with the number of assets under Forestry's care.

Options:

Status Quo

- Continue using out-of-date street tree inventory information. No formalized resources toward supporting ongoing urban forest planning or monitoring.

Good

- Tree inventory is updated as inspections and other work is carried out. No formalized resources toward supporting ongoing urban forest planning or monitoring.
- Subscription to an inventory management software.
- Woodland inventory completed in 2026 toward supporting the development of the City's remaining 26 Woodlot Management Plans. No formalized resources toward supporting ongoing urban forest planning or monitoring.

Better/Best

- Subscription to an inventory management software.
- The City's street tree inventory is updated in-step with the grid-pruning cycle. Inventory updates for a grid occur in advance and inform next year's work within that grid.
- Ongoing funding to support staff, work agreements (e.g., the TRCA), or contractors to undertake woodland inventory on a repeat interval. Inventory informs ongoing updates to the City's woodlot management plans and supports the monitoring of woodland health on an ongoing basis.

R3. Woodland Risk Monitoring & Abatement

Division: Forestry Operations

Scope: Ongoing capital program scoped around the monitoring and management of tree-related risk in woodland areas.

Rationale: Vaughan needs a program in place to monitor and respond to tree-related risk along woodland interface settings. The City currently manages tree-related risk on a reactive basis, only.

Options:

Status Quo

- No funding to support risk management in woodland areas. The City will continue to manage risk on a reactive basis, and the City may face increased liabilities as a result.

Good/Better/Best

- Dedicated funding to support risk management in woodland areas. Woodland risk will be captured within the City's broader approach to tree risk management. Woodland risk will be managed on a proactive basis.

R4. WMP Documents

Division: Forestry Operations

Scope: Resources allocated to the development and iterative update of the City's 27 woodlot management plans (WMPs).

Rationale: The City's WMPs are the documents through which the condition of individual woodlots is evaluated and through which management programming (lifecycle activities) are planned and scheduled. Iterative updates to these documents based on the most current inventory datasets available ensure they reflect current woodlot conditions, and that planned lifecycle activities are consistent with long-term management objectives for the woodlot given current condition. These documents also serve as an important public record to demonstrate the City's woodlot management efforts and the progress made toward improving woodlot conditions.

Options:

Status Quo

- The remaining 26 WMPs are not developed, and no funding is dedicated to the upkeep of the one (i.e., Baker's Sugar Bush) the City has developed.

Good

- The remaining 26 WMPs are developed (2026 capital expenditure), however, no funding is dedicated to their upkeep.

Better/Best

- The remaining 26 WMPs are developed (2026 capital expenditure), and dedicated funding is set aside for iterative updates and supporting inventory works.

R5. Enhanced Tree Care Regimen

Division: Forestry Operations

Scope: While the City has committed to a standard 7-year grid-pruning cycle, current resourcing levels do not support the achievement of this target. Enhanced resources would support the maintenance of street trees in alignment with a standard grid-pruning cycle and could enable additional lifecycle activities (i.e., mulching, watering, structural training) which support elongated asset service lives.

Rationale: Vaughan's current grid pruning cycle is well beyond the City's minimum LoS commitment for its grid pruning cycle and is out of alignment with industry best practices. An injection of resources into the maintenance budget would support:

- Achieving the City's 25% canopy cover target by minimizing premature tree mortality in the public RoW
- Optimizing the lifecycle costs of public tree maintenance in terms of the public benefits derived from mature trees
- Reduced costs associated with storm cleanup and extreme weather
- Reduced mortality of young trees before establishment
- Improvements in planting and re-establishment lag times following removal and stumping (owed to elongated tree lifecycles and reduction in mortality and removals)
- Reduced CRM volumes as compared to an elongated grid pruning cycle

Resources to support the enhanced maintenance regimen, whatever the specific design, would be phased in across five years (i.e., 2024-2029). The City's operating budget would continue to scale with changes in the number of street tree assets under Forestry's care on an ongoing basis consistent with lifecycle costing estimates.

Options:

Status Quo

- Funding remains consistent with current levels but scales with the number of assets under Forestry's care. This will maintain shorter average lifecycles for tree assets, and a greater share of public investment into costlier lifecycle activities like planting, removal, and reactive care.

Good

- Funding is adequate to achieve the targeted seven-year grid pruning cycle. This will improve the serviceable life of tree assets beyond current and reduce public investment into costlier lifecycle activities like planting, removal, and reactive care.
- One additional arborist FTE.

Better

- Funding is adequate to achieve the targeted seven-year grid pruning cycle. This will improve the serviceable life of tree assets beyond current and reduce public investment into costlier lifecycle activities like planting, removal, and reactive care.

- Additional resources are allocated to tree establishment and young tree care. This ensures more investment is earmarked for a critical stage in the asset lifecycle, improving rates of establishment, significantly reducing young tree mortality, and ensuring trees have optimal structure for long-term growth and success.
- Two additional arborist FTEs.

Best

- Funding is adequate to achieve a five-year grid pruning cycle. This will vastly improve the serviceable life of tree assets beyond current and reduce public investment into costlier lifecycle activities like planting, removal, and reactive care.
- Additional resources are allocated to tree establishment and young tree care. This ensures more investment is earmarked for a critical stage in the asset lifecycle, improving rates of establishment, significantly reducing young tree mortality, and ensuring trees have optimal structure for long-term growth and success.
- Two additional arborist FTEs.

R6. Capital Funds: Expanded Planting Program

Division: Forestry Operations

Scope: Enhanced boulevard tree planting toward the achievement of the City's 25% canopy target by 2053.

Rationale: Canopy modelling has identified that achieving 25% canopy cover by 2053 will require planting 1400 <u>net new</u> trees on City-owned property per year,[1] over the next 30 years. This planting rate is the City's direct contribution to increasing canopy cover, and will need to be complemented with accelerated net new planting on private property to meet the UFMP canopy cover target.

Options:
Status Quo

- No funding to support an enhanced tree planting program and the 25% canopy cover target will not be achieved.

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[1] Net new refers to the total number of trees planted within the city, every year, above and beyond the complete offsetting of any trees and canopy removed within that same window. If other land uses do not hit their planting targets within that window, it may be that additional tree planting on public land and boulevards would be necessary to achieve 25% by 2053. Once 25% canopy is achieved, the city will need to maintain rates of replacement at a level that offsets any canopy removal on an ongoing basis to sustain 25% canopy cover.

Good/Better/Best

- Enhanced tree planting funding, including increased efforts to leverage grants, to support the necessary expansion of the tree planting program to support the achievement of the City's planting target as part of meeting the overall 25% canopy cover target city-wide.

R7. Capital Funds: Woodland Restoration and Afforestation Activities

Division: Forestry Operations

Scope: Ongoing woodland restoration and enhancement projects toward supporting biodiversity conservation and environmental quality within the City.

Rationale: Vaughan's woodland management strategy and woodlot management plans have established a framework for woodland assets to be integrated into the City's AMP, using a two-stepped approach to scoring asset condition: (i) condition assessment through the lens of safe and enjoyable human use, and (ii) condition assessment through the lens of biodiversity conservation. Capital resources supporting regular restoration and afforestation activities directly contribute to the improvement of woodland biodiversity conservation indicators and improve the relative condition of woodland assets as such. In addition, targeted afforestation activities on public lands can present a significant contribution toward the achievement of the 25% canopy cover target. As a result, this type of capital project can be considered as a lifecycle activity within the City's broader approach to asset management.

Options:

Status Quo/Good/Better

- No funding to support woodland management activities. Woodland conditions can be expected to continue to decline given the joint pressures of increasing urbanization and climate change. Note this resource does not encompass WMP updates or woodland risk management (R3), which are considered separately by this Financial Plan.

Best

- Dedicated funding to support restoration and planting activities as informed by the City's WMPs. Proactive maintenance ensures underlying woodland health issues are managed as resources permit and builds the urban forests' broader resilience to contemporary threats.

R8. Dedicated Woodland Management Capacity

Division: Forestry Operations

Duties: contract administration of woodland prescriptions, woodland inventory, support stewardship/educational activities in woodland areas, coordination with other levels of government on woodland management, implementation of the WMS, implementation of the WMPs, ongoing updates to both the WMPs and WMS, risk monitoring in woodland areas.

Rationale: The Forestry Section has no dedicated woodland management capacity at present. Meaningful expansion of Forestry's scope of work within woodland areas will require dedicated staff resources.

Options:

Status Quo

- No proactive management of woodland areas and no dedicated resourcing to support any formalized management outcomes.

Good

- No FTE supporting woodland management. Incorporating new considerations for woodland management into program involves trade-offs within current departmental capacity. Otherwise, implementation can be supported through contracted labour.

Better/Best

- One FTE supporting woodland management, achieved through additional staff allocation and increased budgets for contracted work as required.

R9. Forest Protection and Planning

Division: Forestry Operations

Duties: issuance of citations under tree-related by-laws, development review, policy development, long-term planning, development inspection.

Rationale: There is currently no authority to issue citations under any of the City's By-laws within the Forestry Operations team. Currently, tree-related infractions rely on the By-law department to issue citations, notwithstanding that Forestry Operations is the City's tree care subject matter expert. Growing enforcement capacity within Forestry Operations could result in improved enforcement of the by-law and greater efficiencies in terms of the overall use of staff time between the Forestry Operations and Enforcement Divisions.

Forestry's capacity to serve as a party in the various development processes ongoing within the City is presently limited between 1 and 2 FTE. Split roles mean three staff are partially responsible for different aspects of plan or permit review, with actual time spent fluctuating with the demand for review. Given the magnitude of growth expected within the City over the coming decade and given there are existing opportunities to improve development outcomes as they relate to urban trees, building Forestry's capacity to participate in those processes would support a range of development-related actions under the UFMP.

Options:

Status Quo

- Enforcement of infractions under the Tree Protection or Encroachment By-Laws remains out of scope for the Forestry Operations team.
- Capacity to comment and consult in development discussions and processes remains at a level consistent with current staff resourcing and is likely insufficient for the projected growth anticipated within Vaughan over the coming decade.

Good

- Enforcement of infractions under the Tree Protection or Encroachment By-Laws remains out of scope for the Forestry Operations team.
- One additional Forestry Inspector (one FTE) is added to Forestry's ranks to build capacity for participation in development processes.

Better/Best

- Capacity to issue citations for infractions under the Tree and Encroachment By-Law is developed within the Forestry Operations division.
- One additional Forestry Inspector (one FTE) is added to Forestry's ranks to build capacity for participation in development processes and various other plan review tasks associated with other permit types, including pool, building, demolition, and site alteration permits.

5.0 Life-cycle Cost Analyses

The purpose of a lifecycle cost assessment exercise is to identify the full costs of an asset's installation, maintenance, and renewal, to inform lifecycle planning activities. With urban trees, the cost associated with lifecycle activities are often annualized, which identifies a value that can be used to inform operating budgets that scale with the number or area of the urban forest asset under the City's care. Lifecycle analyses have been prepared for Vaughan's management program to identify program costs associated with the Status Quo, Good, Better and Best program pathways identified under Section 2.0.

5.1 Street Tree Maintenance

Applying a lifecycle cost assessment approach to the City's inventoried street tree population allows for the full cost of maintenance and renewal activities to be considered as part of operational planning or that class of asset. Further, the use of a lifecycle cost scheme better positions the City to scale operating funds both with the number of street tree assets under Forestry's care and in alignment with level of service (LoS) commitments. The first approach, referred to as the Status Quo pathway (Table 5-1), provides insight into baseline program resourcing and helps to inform the relative fiscal cost of changes in program design owed to actions coming from the UFMP:

Table 5-1. Vaughan lifecycle costing analysis for the City's street tree management program under the Status Quo program pathway.

	Activity cost ($) [Per Tree]	Status quo					
Asset Renewal		50					
Pruning cycle (years)		40					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	100-Year Cost
Inspection inventory and update	$3.25	-	$0.00	$0.00	0.0%	$0.00	$0.00
Planned pruning	$50.00	1.3	$62.50	$1.25	5.0%	$168,750.00	$125.00
Reactive pruning	$500.00	0.6	$300.00	$6.00	24.0%	$810,000.00	$600.00
Watering	$30.00	-	$0.00	$0.00	0.0%	$0.00	$0.00
Young Tree "Training"	$30.00	-	$0.00	$0.00	0.0%	$0.00	$0.00
Removal	$500.00	1.0	$500.00	$10.00	39.9%	$1,350,000.00	$1,000.00
Replacement Program (incl. Stump Grind)	$650.00	0.5	$325.00	$6.50	26.0%	$877,500.00	$650.00
Sub-Totals			$1,187.50	$23.75	94.9%	$3,206,250.00	$2,375.00
Administrative Costs (per asset)				$0.44			
Equivalent Expenditure				$3,206,250.00			

Vaughan currently spends approximately $24 per street tree, per year, on the maintenance of street tree assets. The Forestry Operations programming operated on approximately $3.2 million in expenditures in 2023 (from combined operating and capital sources). The Status Quo program pathway is intended to reflect program resources and demands as they exist in 2023, approximated through the use of a life-cycle approach to costing.

The level of resourcing associated with the Status Quo pathway is insufficient to implement the UFMP, would result in reduced service lives for street tree assets, and would result in the City not achieving its 25% canopy target. The purpose of the Status Quo program pathway is more to provide a baseline for comparison to the Good, Better, and Best program pathways. The Status Quo program is in large part reactive in nature as a result of resourcing constraints. However, staff have tried to shift to a proactive management regimen in recent years.

Table 5-2. Vaughan lifecycle costing analysis for the City's street tree management program under the Good program pathway.

	Activity cost ($) [Per Tree]	Good					
Asset Renewal		60					
Pruning cycle (years)		7					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	% 100-Year Avg.
Inspection inventory and update	$3.25	-	$0.00	$0.00	0.0%	$0.00	$0.00
Planned pruning	$50.00	8.6	$428.57	$7.14	17.9%	$964,285.71	$714.29
Reactive pruning	$500.00	0.4	$200.00	$3.33	8.3%	$450,000.00	$333.33
Watering	$30.00	-	$0.00	$0.00	0.0%	$0.00	$0.00
Young Tree "Training"	$30.00	-	$0.00	$0.00	0.0%	$0.00	$0.00
Removal	$500.00	1.0	$500.00	$8.33	20.8%	$1,125,000.00	$833.33
Replacement Program (incl. Stump Grind)	$650.00	1.0	$650.00	$10.83	27.1%	$1,462,500.00	$1,083.33
Sub-Totals			$1,778.57	$29.64	74.1%	$4,001,785.71	$2,964.29
Administrative Costs				$0.54			
Equivalent Expenditure				$4,075,216.46			

Under the Good program pathway, resourcing supporting Vaughan's Forestry Operations program would grow expend approximately $29.60 per street tree, per year, on the maintenance of street tree assets. The Good program pathway could potentially achieve the City's pre-existing seven-year grid pruning target for intensively maintained trees. This proactive investment would be expected to result in an extended asset renewal cycle, which reduces lifecycle costs associated with planting and removal, and reactive forms of tree maintenance.

In addition, planting funding under the Good program pathway is sufficient to achieve a rate of planting on City property supportive of the City's canopy cover target. The urban forest program for the current inventoried tree population would operate on an estimated $4.1 million budget under the Good program pathway, but the budget would continue to grow in-step with the number of tree assets under Forestry Operations' care.

Table 5-3. Vaughan lifecycle costing analysis for the City's street tree management program under the Better program pathway.

	Activity cost ($) [Per Tree]	Better					
Asset Renewal		65					
Pruning cycle (years)		7					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	% 100-Year Avg.
Inspection inventory and update	$3.25	9.3	$30.18	$0.46	1.1%	$62,678.57	$46.43
Planned pruning	$50.00	9.3	$464.29	$7.14	16.5%	$964,285.71	$714.29
Reactive pruning	$500.00	0.3	$150.00	$2.31	5.3%	$311,538.46	$230.77
Watering	$30.00	3.0	$90.00	$1.38	3.2%	$186,923.08	$138.46
Young Tree "Training"	$30.00	3.0	$90.00	$1.38	3.2%	$186,923.08	$138.46
Removal	$500.00	1.0	$500.00	$7.69	17.8%	$1,038,461.54	$769.23
Replacement Program (incl. Stump Grind)	$650.00	1.0	$650.00	$10.00	23.1%	$1,350,000.00	$1,000.00
Sub-Totals			$1,974.46	$30.38	70.3%	$4,100,810.44	$3,037.64
Administrative Costs				$0.56			
Equivalent Expenditure				$4,176,058.24			

Under the Better program pathway resourcing supporting street tree maintenance would grow to approximately $30.40 per street tree, per year. The Better program pathway achieves the City's pre-existing seven-year grid pruning target. The Better program pathway improves on the Good pathway by supporting robust young tree care and establishment (i.e., watering and training). Further investment into young tree care can be expected to further extend the asset renewal cycle of established trees and would significantly reduce rates of young tree mortality from those observed at present.

Planting funding under the Better program pathway is again sufficient to achieve a rate of boulevard planting supportive of the City's canopy cover target. The urban forest program for the current inventoried tree population would operate on an estimated $4.2 million budget under the Better program, and the program budget would continue to grow in step with the number of tree assets under Forestry's care.

Table 5-4. Vaughan lifecycle costing analysis for the City's street tree management program under the Best program pathway.

	Activity cost ($) [Per Tree]	Best					
Asset Renewal		70					
Pruning cycle (years)		5					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	% 100-Year Avg.
Inspection inventory and update	$3.25	14.0	$45.50	$0.65	1.5%	$87,750.00	$65.00
Planned pruning	$50.00	14.0	$700.00	$10.00	22.4%	$1,350,000.00	$1,000.00
Reactive pruning	$500.00	0.2	$100.00	$1.43	3.2%	$192,857.14	$142.86
Watering	$30.00	3.0	$90.00	$1.29	2.9%	$173,571.43	$128.57
Young Tree "Training"	$30.00	3.0	$90.00	$1.29	2.9%	$173,571.43	$128.57
Removal	$500.00	1.0	$250.00	$7.14	16.0%	$964,285.71	$714.29
Replacement Program (incl. Stump Grind)	$650.00	1.0	$650.00	$9.29	20.8%	$1,253,571.43	$928.57
Sub-Totals			$1,925.50	$31.08	69.6%	$4,195,607.14	$3,107.86
Administrative Costs				$0.57			
Equivalent Expenditure				$4,272,594.41			

Under the Best program pathway, resourcing supporting street tree maintenance would grow to approximately $31.10 per street tree, per year. The Best program pathway would meet or exceed a seven-year grid pruning target and support the establishment of robust practices supporting young tree care and establishment (i.e., watering and training). Increasing the frequency of the grid pruning cycle beyond the seven-year mark to a five-year iterative cycle would further extend the renewal cycle of street tree assets, and again reduce investment into more costly lifecycle activities and the beginning and end of the asset lifecycle.

Planting funding under the Best program pathway is again sufficient to achieve a rate of boulevard planting supportive of the City's canopy cover target. The urban forest program for the current inventoried tree population would operate on an estimated $4.3 million budget under the Best program pathway, and the program budget would again scale with the number of assets under Forestry Operations' care.

5.2   Woodland Assets

Woodland assets differ from street tree assets because woodlands do not follow a typical asset lifecycle. Unlike street trees, which will reach the end of their useful life and need replacement, woodlands are dynamic systems, containing populations of trees that individually die and regenerate without human intervention. As a result, woodlands do not experience the typical curve associated with the useful service life of a municipal asset. However, there are still lifecycle activities that can enhance the condition of these assets, such as risk assessment, hazard abatement, invasive species removal and restoration.

Vaughan's WMS prescribes a Woodlot Management Planning framework which leverages a criteria and indicators method to establish condition score for each of the City's 27 woodlots. This approach is described in greater detail through the City's Woodland Management Strategy (WMS). The Woodlot Management Plans establish two main scores (i.e., from zero to five, "very poor" to "very good") for each of the 27 woodlots in the city. One score evaluates the Safe and Enjoyable Human Use of the asset and the other Biodiversity Conservation.

This approach to asset management enables us to consider treatment activities (i.e., management prescriptions) in terms of activities that will benefit one score, the other, or both. Scores are designed to be readily integrated into the City's asset management portfolio, through the same five-tiered condition scheme that is typical to other classes of municipal asset (i.e., "very poor" to "very good").

The Status Quo pathway, reflecting current practices, offers no formal resourcing toward the City's woodland management program. The Good pathway supports completing the City's remaining Woodlot Management Plans as a one-time capital expense in 2026 (± $85,000 between inventory and production of 26 plans), and then ongoing funding from 2029 on at a rate of $80,000 annually. This operational funding would support a risk management program within woodland areas, but no other woodland management outcomes, including no funding toward iterative updates to the City's WMPs.

Table 5-5. Vaughan lifecycle costing analysis for the City's woodland management program under the Better program pathway.

	Activity cost ($) [Per Hectare]	Better					
Asset Renewal		50					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	100-Year Cost
Woodland inventory	$500	10.0	$5,000	$100.00	0%	$20,000.00	$10,000.00
Risk monitoring (i.e., edge and interface monitoring)	$250	10.0	$2,500	$50.00	0%	$10,000.00	$5,000.00
Risk abatement	$700	25.0	$17,500	$350.00	1%	$70,000.00	$35,000.00
Planting and site prep	$67,300	0.1	$6,730	$134.60	0%	$26,920.00	$13,460.00
Forest health and restoration	$24,000	-	-	$0.00	0%	$0.00	$0.00
WMP Updates	$1,000	10.0	$10,000	$200.00	1%	$40,000.00	$20,000.00
Sub-Totals			$41,730	$834.60	2%	$166,920	$63,460
Administrative Costs				$94.33			
Equivalent Expenditure				$166,920.00			

Under the Better program pathway, resourcing supporting Vaughan's woodland management program would spend approximately $830 per hectare of managed woodland, per year. The Better program pathway would require dedicated woodland management capacity (one FTE), to support a range of woodland management outcomes, including woodland inventory, WMP updates, and varied community engagement and outreach (as well as resources to support each of those initiatives).

Under the Better pathway, the woodland management program would operate on an estimated $170,000 budget, less staff time for coordination of the new service levels. Establishment of formalized woodland management capacity within Forestry Operations would go some way toward ensuring the quality and condition of the City's woodlands are managed at an acceptable level moving forward.

Table 5-6. Vaughan lifecycle costing analysis for the City's woodland management program under the Best program pathway.

	Activity cost ($) [Per Hectare]	Best					
Asset Renewal		50					
Life cycle activities		Frequency	Life-cycle cost ($)	Annualized Cost ($)	% of Net Operating Costs	Net Operating Costs	100-Year Cost
Woodland inventory	$500	10.0	$5,000	$100.00	0%	$20,000.00	$10,000.00
Risk monitoring (i.e., edge and interface monitoring)	$250	10.0	$2,500	$50.00	0%	$10,000.00	$5,000.00
Risk abatement	$700	25.0	$17,500	$350.00	1%	$70,000.00	$35,000.00
Planting and site prep	$67,300	0.1	$6,730	$134.60	0%	$26,920.00	$13,460.00
Forest health and restoration	$24,000	1.0	$24,000	$480.00	2%	$96,000.00	$48,000.00
WMP Updates	$1,000	10.0	$10,000	$200.00	1%	$40,000.00	$20,000.00
Sub-Totals			$65,730	$1,314.60	4%	$262,920	$111,460
Administrative Costs				$148.59			
Equivalent Expenditure				$262,920.00			

Under the Best program pathway, resourcing supporting Vaughan's woodland management program would grow expend approximately $1,350 per hectare of managed woodland, per year. The Best program pathway again supports dedicated woodland management capacity within Forestry Operations, however differing from the Better pathway, goes further to resource that capacity to implement targeted woodlot management lifecycle activities (e.g., restoration) to support proactive management of that asset class on an ongoing basis.

Under the Best pathway, the woodland management program would operate on an estimated $260,000 budget, less the staff time for coordination of the new service levels. The Best pathway identifies the resourcing required to position Vaughan as a leader in the management of its urban woodlots.

Each of the preceding tables identifies lifecycle activities, their associated cost, the frequency at which each activity occurs over an asset's useful life (i.e., number of occurrences), the full lifecycle cost, an annualized lifecycle cost (and its proportion), and a 100-year lifecycle cost are detailed. The latter reflects the maintenance costs of the associated lifecycle activities over a standardized period. Asset renewal is hypothetically set to occur on a 50-year cycle. To conduct lifecycle costing, a hypothetical service life must be established. While urban woodlands can persist well beyond 50 years without any intervention, in many cases their condition would be significantly degraded from what would be observed in a natural woodland state. Treatment activities in woodland areas are intended to improve the safe and enjoyable human use of the City's woodlands and/or support sustainable woodland management.

Without the support of ongoing lifecycle activities, urban woodlands tend to harbour elevated levels of tree-related risk, as well as concentrated populations of negative environmental factors such as pests and invasive plants. The gradual erosion of woodland quality significantly degrades the ecosystem services provided by the City's woodlands.

For the first time, the City's woodland management strategy and woodlot management plans advocate an informed, sustainable, and coordinated approach to improving lifecycle management of the City's woodland assets. Currently, the City lacks dedicated capacity to implement woodland management activities. The continuous administration of a woodland management program, along with supporting initiatives such as third-party (e.g., SFI) certification, would benefit greatly from dedicated forestry resources and staffing.

6.0   Program Levels of Service

The UFMP and WMS recommend the establishment of new or renewed program levels of service (LoS). The UFMP and WMS both recommend updating the City's Urban Forestry Asset Management Plan to formalize LoS consistent with the actions put forward in those respective documents. LoS should reflect program design that the City is reasonably resourced and positioned to achieve, and therefore differ based on the program pathway considered. Table 6-1 identifies performance measures by asset class, a baseline condition, and a series of relevant LoS sensitive to the design of the program pathway considered:

Table 6-1. Vaughan recommended performance measures and associated level of service (LoS).

Performance Measure	Suggested Level of Service Target by Program Pathway			
	Status Quo (i.e., Baseline)	Good	Better	Best
All Asset Classes				
City-wide Canopy Cover Target **Method of Monitoring:** Canopy Analyses (i.e., LiDAR + Aerial Imagery)	20% (2019)	25% (Target, 2053)	25% (Target, 2053)	25% (Target, 2053)
Canopy Cover in the Municipal RoW and in (Non-Forested) Parks **Method of Monitoring:** Canopy Analyses (i.e., LiDAR + Aerial Imagery)	13% and 19%, respectively (2019	17% and 26%, respectively (Target, 2053)	17% and 26%, respectively (Target, 2053)	17% and 26%, respectively (Target, 2053)
Resident satisfaction with urban forestry educational and stewardship offerings and program outreach **Method of Monitoring:** Survey	12% (2022)	60%	60%	60%
Resident literacy across urban forestry program areas (i.e., % of the population with awareness of pruning cycle, pest management, protection processes, educational offerings, etc.) **Method of Monitoring:** Survey	60-90%, all program areas (2022)	75%+, all program areas	75%+, all program areas	75%+, all program areas
Street & (Ornamental) Park Tree Assets				
Grid Pruning Cycle **Method of Monitoring:** Inventory	~40 Year (2022)	Seven-Year	Seven-Year	Five-Year
Inventory Cycle **Method of Monitoring:** Inventory	NA (2023)	NA	Seven-Year	Five-Year

Performance Measure	Suggested Level of Service Target by Program Pathway			
	Status Quo (i.e., Baseline)	Good	Better	Best
Trees in "Poor" or Worse Condition **Method of Monitoring:** Inventory	Unknown (2023)	2.5%	2.5%	2.0%
Average Time to Service Completion (i.e., Call to Closure- non-emergency) **Method of Monitoring:** CRM	~6 months (2022)	3 months	2 months	1 month
Number of CRM Calls for Tree Inspection/Obstruction/Risk **Method of Monitoring:** CRM	~5,100 annually (2022)	3,100 annually	2,500 annually	1,500 annually
Resident Satisfaction: Removal, Stumping & Replacement Timelines **Method of Monitoring:** Survey	34% (2022)	60%	70%	80%
Street Tree Annual Maintenance Budget Per Unit **Method of Monitoring:** Financials	$16.00 (2023)	$29.60	$30.50	$31.10
Woodland Assets				
Inventory (Plot) Cycle **Method of Monitoring:** Survey	NA (2023)	NA	Seven-Year	Five-Year
% of Safe and Enjoyable Human Use Scores "Poor" or Worse **Method of Monitoring:** WMPs	Unknown (2023)	< 30%	< 20%	< 10%
% of Woodland Biodiversity Conservation Scores "Poor" or Worse **Method of Monitoring:** WMPs	Unknown (2023)	NA	NA	< 30%
Woodland Budget Per Hectare **Method of Monitoring:** Financials	NA (2023)	$410	$850	$1,340

7.0   Financial Forecasts

Table 7-1. 2024-2034 operating forecast toward the achievement of a Status Quo program pathway.

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Labour: Admin.	$ 57,809	$ 59,941	$ 60,241	$ 60,542	$ 60,842	$ 61,142	$ 61,442	$ 61,743	$ 62,043	$ 62,343	$ 62,643	$ 62,944
Labour: Forestry supervisors	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Administration CC	**$ 57,809**	**$ 59,941**	**$ 60,241**	**$ 60,542**	**$ 60,842**	**$ 61,142**	**$ 61,442**	**$ 61,743**	**$ 62,043**	**$ 62,343**	**$ 62,643**	**$ 62,944**
Inspection, inventory, and update **[R2.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Planned pruning **[R5.]**	$ 168,750	$ 168,750	$ 170,000	$ 171,250	$ 172,500	$ 173,750	$ 175,000	$ 176,250	$ 177,500	$ 178,750	$ 180,000	$ 181,250
Reactive pruning	$ 810,000	$ 810,000	$ 816,000	$ 822,000	$ 828,000	$ 834,000	$ 840,000	$ 846,000	$ 852,000	$ 858,000	$ 864,000	$ 870,000
Watering **[R5.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
YT "Training" **[R5.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	YT "R5.]	$ -
Removal	$ 1,350,000	$ 1,350,000	$ 1,360,000	$ 1,370,000	$ 1,380,000	$ 1,390,000	$ 1,400,000	$ 1,410,000	$ 1,420,000	$ 1,430,000	$ 1,440,000	$ 1,450,000
Capital Projects: (i.e., SOUFR, plan reviews) **[R1.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Labour: Additional arboricultural staff **[R5.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance & Monitoring CC	**$ 2,328,750**	**$ 2,328,750**	**$ 2,346,000**	**$ 2,363,250**	**$ 2,380,500**	**$ 2,397,750**	**$ 2,415,000**	**$ 2,432,250**	**$ 2,449,500**	**$ 2,466,750**	**$ 2,484,000**	**$ 2,501,250**
Capital Projects: replacement program (incl. stump grind)	$ 877,500	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
Capital Projects: enhanced tree planting budget **[R6.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Planting & Re-establishment CC	**$ 877,500**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 1,000,000**
Labour: Forest protection program (i.e., inspectors) **[R9.]**	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000
Labour: Forestry ops. enforcement capacity **[R9.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tree Protection CC	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**
Labour: Woodland management FTE **[R8.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Woodland inventory **[R2.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WMP documents **[R4.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Risk monitoring and abatement **[R3.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Capital Projects: (i.e., restoration and afforestation) **[R7.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Woodlot Management CC	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sub-total	**$ 3,379,059**	**$ 3,503,691**	**$ 3,521,241**	**$ 3,538,792**	**$ 3,556,342**	**$ 3,573,892**	**$ 3,591,442**	**$ 3,608,993**	**$ 3,626,543**	**$ 3,644,093**	**$ 3,661,643**	**$ 3,679,194**
Annual Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 87,592**	**$ 88,031**	**$ 88,470**	**$ 88,909**	**$ 89,347**	**$ 89,786**	**$ 90,225**	**$ 90,664**	**$ 91,102**	**$ 91,541**	**$ 91,980**
Cumulative Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 87,592**	**$ 175,623**	**$ 264,093**	**$ 353,002**	**$ 442,349**	**$ 532,135**	**$ 622,360**	**$ 713,023**	**$ 804,126**	**$ 895,667**	**$ 987,647**
Revenues & Recoveries	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**
Total	**$ 2,979,059**	**$ 3,191,284**	**$ 3,296,865**	**$ 3,402,885**	**$ 3,509,344**	**$ 3,616,241**	**$ 3,723,578**	**$ 3,831,353**	**$ 3,939,566**	**$ 4,048,219**	**$ 4,157,310**	**$ 4,266,840**

Table 7-2. 2024-2034 operating forecast toward the achievement of a Good program pathway.

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Labour: Admin.	$ 46,288	$ 52,037	$ 61,518	$ 64,693	$ 62,246	$ 62,824	$ 63,403	$ 63,981	$ 64,559	$ 65,138	$ 65,716	$ 67,410
Labour: Forestry supervisors	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Administration CC	**$ 46,288**	**$ 52,037**	**$ 61,518**	**$ 64,693**	**$ 64,693**	**$ 64,693**	**$ 64,693**	**$ 64,693**	**$ 64,693**	**$ 65,138**	**$ 65,716**	**$ 67,410**
Inspection, inventory, and update **[R2.]**	$ -	$ 150,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000
Planned pruning **[R5.]**	$ 168,750	$ 431,277	$ 709,036	$ 984,286	$ 994,286	$ 1,004,286	$ 1,014,286	$ 1,024,286	$ 1,034,286	$ 1,044,286	$ 1,054,286	$ 1,064,286
Reactive pruning	$ 810,000	$ 810,000	$ 698,368	$ 580,597	$ 464,000	$ 468,667	$ 473,333	$ 478,000	$ 482,667	$ 487,333	$ 492,000	$ 496,667
Watering **[R5.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
YT "Training" **[R5.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Removal	$ 1,350,000	$ 1,350,000	$ 1,288,980	$ 1,224,123	$ 1,160,000	$ 1,171,667	$ 1,183,333	$ 1,195,000	$ 1,206,667	$ 1,218,333	$ 1,230,000	$ 1,241,667
Capital Projects: (i.e., SOUFR, plan reviews) **[R1.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 80,000
Labour: Additional arboricultural staff **[R5.]**	$ -	$ -	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000
Maintenance & Monitoring CC	**$ 2,328,750**	**$ 2,741,277**	**$ 2,821,384**	**$ 2,914,006**	**$ 2,743,286**	**$ 2,769,619**	**$ 2,795,952**	**$ 2,822,286**	**$ 2,848,619**	**$ 2,874,952**	**$ 2,901,286**	**$ 3,007,619**
Capital Projects: replacement program (incl. stump grind)	$ 877,500	$ 877,500	$ 1,477,667	$ 1,492,833	$ 1,508,000	$ 1,523,167	$ 1,538,333	$ 1,553,500	$ 1,568,667	$ 1,583,833	$ 1,599,000	$ 1,614,167
Capital Projects: enhanced tree planting budget **[R6.]**	$ -	$ -	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000
Planting & Re-establishment CC	**$ 877,500**	**$ 877,500**	**$ 1,477,667**	**$ 1,492,833**	**$ 1,508,000**	**$ 1,523,167**	**$ 1,538,333**	**$ 1,553,500**	**$ 1,568,667**	**$ 1,583,833**	**$ 1,599,000**	**$ 1,614,167**
Labour: Forest protection program (i.e., inspectors) **[R9.]**	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 115,000
Labour: Forestry ops. enforcement capacity **[R9.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tree Protection CC	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**
Labour: Woodland management FTE **[R8.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Woodland inventory **[R2.]**	$ -	$ -	$ -	$ 60,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
WMP documents **[R4.]**	$ -	$ -	$ -	$ 60,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Risk monitoring and abatement **[R3.]**	$ -	$ -	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000
Capital Projects: (i.e., restoration and afforestation) **[R7.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Woodlot Management CC	**$ -**	**$ -**	**$ -**	**$ 120,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**
Sub-total	**$ 3,367,538**	**$ 3,785,814**	**$ 4,475,569**	**$ 4,706,532**	**$ 4,530,978**	**$ 4,572,478**	**$ 4,613,978**	**$ 4,655,478**	**$ 4,696,978**	**$ 4,738,924**	**$ 4,781,002**	**$ 4,904,195**
Annual Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 94,645**	**$ 111,889**	**$ 117,663**	**$ 113,274**	**$ 114,312**	**$ 115,349**	**$ 116,387**	**$ 117,424**	**$ 118,473**	**$ 119,525**	**$ 122,605**
Cumulative Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 94,645**	**$ 206,535**	**$ 324,198**	**$ 437,472**	**$ 551,784**	**$ 667,134**	**$ 783,521**	**$ 900,945**	**$ 1,019,418**	**$ 1,138,943**	**$ 1,261,548**
Revenues & Recoveries	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**
Total	**$ 2,967,538**	**$ 3,480,459**	**$ 4,282,104**	**$ 4,630,730**	**$ 4,568,451**	**$ 4,724,263**	**$ 4,881,112**	**$ 5,038,999**	**$ 5,197,923**	**$ 5,358,342**	**$ 5,519,945**	**$ 5,765,743**

Table 7-3. 2024-2034 operating forecast toward achievement of a Better program pathway.

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Labour: Admin.	$ 44,564	$ 48,288	$ 58,648	$ 62,684	$ 65,927	$ 67,035	$ 68,142	$ 68,176	$ 68,747	$ 69,317	$ 69,888	$ 71,532
Labour: Forestry supervisors	$ -	$ -	$ -	$ -	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
Administration CC	**$ 44,564**	**$ 48,288**	**$ 58,648**	**$ 62,684**	**$ 105,927**	**$ 107,035**	**$ 108,142**	**$ 108,176**	**$ 108,747**	**$ 109,317**	**$ 109,888**	**$ 111,532**
Inspection, inventory, and update [R2.]	$ -	$ 15,000	$ 35,898	$ 57,866	$ 79,629	$ 80,279	$ 80,929	$ 81,579	$ 82,229	$ 82,879	$ 83,529	$ 84,179
Planned pruning [R5.]	$ 168,750	$ 431,277	$ 709,036	$ 984,286	$ 994,286	$ 1,004,286	$ 1,014,286	$ 1,024,286	$ 1,034,286	$ 1,044,286	$ 1,054,286	$ 1,064,286
Reactive pruning	$ 810,000	$ 810,000	$ 652,202	$ 485,904	$ 321,231	$ 324,462	$ 327,692	$ 330,923	$ 334,154	$ 337,385	$ 340,615	$ 343,846
Watering [R5.]	$ -	$ -	$ 62,324	$ 127,836	$ 192,738	$ 194,677	$ 196,615	$ 198,554	$ 200,492	$ 202,431	$ 204,369	$ 206,308
YT "Training" [R5.]	$ -	$ -	$ 62,324	$ 127,836	$ 192,738	$ 194,677	$ 196,615	$ 198,554	$ 200,492	$ 202,431	$ 204,369	$ 206,308
Removal	$ 1,350,000	$ 1,350,000	$ 1,260,126	$ 1,164,940	$ 1,070,769	$ 1,081,538	$ 1,092,308	$ 1,103,077	$ 1,113,846	$ 1,124,615	$ 1,135,385	$ 1,146,154
Capital Projects: (i.e., SOUFR, plan reviews) [R1.]	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000	$ -	$ -	$ -	$ -	$ 80,000
Labour: Additional arboricultural staff [R5.]	$ -	$ -	$ 110,000	$ 110,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000
Maintenance & Monitoring CC	**$ 2,328,750**	**$ 2,606,277**	**$ 2,891,911**	**$ 3,058,667**	**$ 3,071,391**	**$ 3,099,918**	**$ 3,168,445**	**$ 3,156,972**	**$ 3,185,499**	**$ 3,214,026**	**$ 3,242,553**	**$ 3,351,080**
Capital Projects: replacement program (incl. stump grind)	$ 877,500	$ 877,500	$ 1,364,000	$ 1,378,000	$ 1,392,000	$ 1,406,000	$ 1,420,000	$ 1,434,000	$ 1,448,000	$ 1,462,000	$ 1,476,000	$ 1,490,000
Capital Projects: enhanced tree planting budget [R6.]	$ -	$ -	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000
Planting & Re-establishment CC	**$ 877,500**	**$ 877,500**	**$ 1,364,000**	**$ 1,378,000**	**$ 1,392,000**	**$ 1,406,000**	**$ 1,420,000**	**$ 1,434,000**	**$ 1,448,000**	**$ 1,462,000**	**$ 1,476,000**	**$ 1,490,000**
Labour: Forest protection program (i.e., inspectors) [R9.]	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000
Labour: Forestry ops. enforcement capacity [R9.]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tree Protection CC	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**
Labour: Woodland management FTE [R8.]	$ -	$ -	$ -	$ -	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000
Woodland inventory [R2.]	$ -	$ -	$ -	$ 60,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
WMP documents [R4.]	$ -	$ -	$ -	$ 60,000	$ -	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
Risk monitoring and abatement [R3.]	$ -	$ -	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000
Capital Projects: (i.e., restoration and afforestation) [R7.]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Woodlot Management CC	**$ -**	**$ -**	**$ -**	**$ 120,000**	**$ 220,000**	**$ 260,000**	**$ 260,000**	**$ 260,000**	**$ 260,000**	**$ 260,000**	**$ 260,000**	**$ 260,000**
Sub-total	**$ 3,365,814**	**$ 3,647,065**	**$ 4,429,560**	**$ 4,734,351**	**$ 5,019,319**	**$ 5,102,953**	**$ 5,186,587**	**$ 5,189,148**	**$ 5,232,245**	**$ 5,275,343**	**$ 5,318,441**	**$ 5,442,612**
Annual Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 91,177**	**$ 110,739**	**$ 118,359**	**$ 125,483**	**$ 127,574**	**$ 129,665**	**$ 129,729**	**$ 130,806**	**$ 131,884**	**$ 132,961**	**$ 136,065**
Cumulative Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 91,177**	**$ 201,916**	**$ 320,274**	**$ 445,757**	**$ 573,331**	**$ 702,996**	**$ 832,725**	**$ 963,531**	**$ 1,095,414**	**$ 1,228,375**	**$ 1,364,441**
Revenues & Recoveries	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**
Total	**$ 2,965,814**	**$ 3,338,241**	**$ 4,231,476**	**$ 4,654,626**	**$ 5,065,076**	**$ 5,276,284**	**$ 5,489,583**	**$ 5,621,872**	**$ 5,795,776**	**$ 5,970,757**	**$ 6,146,816**	**$ 6,407,052**

Table 7-4. 2024-2034 operating forecast toward the achievement of a Best program pathway.

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Labour: Admin.	$ 45,044	$ 50,534	$ 60,620	$ 65,559	$ 67,962	$ 69,095	$ 71,894	$ 71,942	$ 72,532	$ 73,122	$ 73,712	$ 75,387
Labour: Forestry supervisors	$ -	$ -	$ -	$ -	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
Administration CC	**$ 45,044**	**$ 50,534**	**$ 60,620**	**$ 65,559**	**$ 107,962**	**$ 109,095**	**$ 111,894**	**$ 111,942**	**$ 112,532**	**$ 113,122**	**$ 113,712**	**$ 115,387**
Inspection, inventory, and update **[R2.]**	$ -	$ 15,000	$ 44,258	$ 75,012	$ 105,480	$ 106,390	$ 107,300	$ 108,210	$ 109,120	$ 110,030	$ 110,940	$ 111,850
Planned pruning **[R5.]**	$ 168,750	$ 558,563	$ 970,145	$ 1,378,000	$ 1,392,000	$ 1,406,000	$ 1,420,000	$ 1,434,000	$ 1,448,000	$ 1,462,000	$ 1,476,000	$ 1,490,000
Reactive pruning	$ 810,000	$ 810,000	$ 612,631	$ 404,738	$ 198,857	$ 200,857	$ 202,857	$ 204,857	$ 206,857	$ 208,857	$ 210,857	$ 212,857
Watering **[R5.]**	$ -	$ -	$ 57,873	$ 118,705	$ 178,971	$ 180,771	$ 182,571	$ 184,371	$ 186,171	$ 187,971	$ 189,771	$ 191,571
YT "Training" **[R5.]**	$ -	$ -	$ 57,873	$ 118,705	$ 178,971	$ 180,771	$ 182,571	$ 184,371	$ 186,171	$ 187,971	$ 189,771	$ 191,571
Removal	$ 1,350,000	$ 1,350,000	$ 1,235,394	$ 1,114,211	$ 994,286	$ 1,004,286	$ 1,014,286	$ 1,024,286	$ 1,034,286	$ 1,044,286	$ 1,054,286	$ 1,064,286
Capital Projects: (i.e., SOUFR, plan reviews) **[R1.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000	$ -	$ -	$ -	$ -	$ 80,000
Labour: Additional arboricultural staff **[R5.]**	$ -	$ -	$ 110,000	$ 110,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000	$ 220,000
Maintenance & Monitoring CC	**$ 2,328,750**	**$ 2,733,563**	**$ 3,088,173**	**$ 3,319,371**	**$ 3,268,566**	**$ 3,299,076**	**$ 3,369,586**	**$ 3,360,096**	**$ 3,390,606**	**$ 3,421,116**	**$ 3,451,626**	**$ 3,562,136**
Capital Projects: replacement program (incl. stump grind)	$ 877,500	$ 877,500	$ 1,266,571	$ 1,279,571	$ 1,292,571	$ 1,305,571	$ 1,318,571	$ 1,331,571	$ 1,344,571	$ 1,357,571	$ 1,370,571	$ 1,383,571
Capital Projects: enhanced tree planting budget **[R6.]**	$ -	$ -	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000	$ 910,000
Planting & Re-establishment CC	**$ 877,500**	**$ 877,500**	**$ 1,266,571**	**$ 1,279,571**	**$ 1,292,571**	**$ 1,305,571**	**$ 1,318,571**	**$ 1,331,571**	**$ 1,344,571**	**$ 1,357,571**	**$ 1,370,571**	**$ 1,383,571**
Labour: Forest protection program (i.e., inspectors) **[R9.]**	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000	$ 230,000
Labour: Forestry ops. enforcement capacity **[R9.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tree Protection CC	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 115,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**	**$ 230,000**
Labour: Woodland management FTE **[R8.]**	$ -	$ -	$ -	$ -	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000	$ 120,000
Woodland inventory **[R2.]**	$ -	$ -	$ -	$ 60,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
WMP documents **[R4.]**	$ -	$ -	$ -	$ 60,000	$ -	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000
Risk monitoring and abatement **[R3.]**	$ -	$ -	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000
Capital Projects: (i.e., restoration and afforestation) **[R7.]**	$ -	$ -	$ -	$ -	$ -	$ -	$ 122,920	$ 122,920	$ 122,920	$ 122,920	$ 122,920	$ 122,920
Woodlot Management CC	**$ -**	**$ -**	**$ -**	**$ 120,000**	**$ 220,000**	**$ 260,000**	**$ 382,920**	**$ 382,920**	**$ 382,920**	**$ 382,920**	**$ 382,920**	**$ 382,920**
Sub-total	**$ 3,366,294**	**$ 3,776,596**	**$ 4,530,364**	**$ 4,899,502**	**$ 5,119,099**	**$ 5,203,742**	**$ 5,412,972**	**$ 5,416,529**	**$ 5,460,629**	**$ 5,504,729**	**$ 5,548,829**	**$ 5,674,014**
Annual Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 94,415**	**$ 113,259**	**$ 122,488**	**$ 127,977**	**$ 130,094**	**$ 135,324**	**$ 135,413**	**$ 136,516**	**$ 137,618**	**$ 138,721**	**$ 141,850**
Cumulative Inflation (CPI 2.5% - 10-year avg.)	**$ -**	**$ 94,415**	**$ 207,674**	**$ 330,162**	**$ 458,139**	**$ 588,233**	**$ 723,557**	**$ 858,970**	**$ 995,486**	**$ 1,133,104**	**$ 1,271,825**	**$ 1,413,675**
Revenues & Recoveries	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**	**-$ 400,000**
Total	**$ 2,966,294**	**$ 3,471,011**	**$ 4,338,038**	**$ 4,829,663**	**$ 5,177,238**	**$ 5,391,974**	**$ 5,736,528**	**$ 5,875,499**	**$ 6,056,115**	**$ 6,237,833**	**$ 6,420,654**	**$ 6,687,690**