City of London Urban Forest Strategy:
Implementation Plan

June 2014

www.london.ca

B.A. Blackwell
& Associates Ltd.

London
CANADA

TABLE OF CONTENTS

1   OVERVIEW

The Implementation Plan is a companion document to the City of London Urban Forest Strategy (B.A. Blackwell and Associates Ltd. 2014). The purpose of Strategy is to set the vision and strategic direction, including required actions, for managing London's urban forest. The purpose of the Implementation Plan is to set out how the actions identified in the Strategy will be carried out and the resources required to do so.

Implementation of the Strategy requires a serious commitment to both human and financial resources if the goals and targets are to be met. Additionally, the Plan will require a commitment from all City departments to consider the urban forest as a unique and valuable asset that requires a higher level of priority in City programs than in the past. Fully implementing the Plan will also require participation from citizens, private organizations, and other public agencies.

To achieve success, the focus of short term implementation work must be aimed at stabilizing and rebuilding the recent loss of canopy cover through enhancement of forest health and protection of the existing tree inventory from both human development and environmental disturbance (insects, disease and catastrophic weather events). This can only be achieved with strong support for canopy cover targets and stronger protection, through by-law and enforcement, of the existing canopy. Policies that incent developers to incorporate more trees into new developments are important elements. A key emphasis is on raising the importance of the urban forest among City staff, businesses, institutions, and citizens so trees are recognized as a valuable infrastructure asset.

Over the medium and long term, the City must work diligently to expand its planting programs, and the associated maintenance. Effort should also be directed to restoring and managing natural areas which is more than just planting large numbers of trees, but more careful consideration of the species, shape, stature, and quality of planting stock. In addition to ensuring the right tree is selected for the site, it is critical that planting space is of sufficient volume and quality so healthy mature trees can grow. Proper planning is required to maximize success of City and community planting programs. This includes improving control of planting stock through multi-year growing contracts.

Fundamental to successful implementation of the strategy is taking an adaptive management approach based on a foundation of comprehensive and up-to-date inventory data and on-going research on tree performance for the range of species and growing conditions found in London.

2 RESPONSIBILITY

The City's senior leadership team will be responsible for establishing and guiding a corporate philosophy where trees are managed as infrastructure assets using consistent concepts of "green infrastructure" and related terminology. Trees will no longer be the last consideration in any phase of planning and development in the City. The Implementation Plan has not specifically allocated responsibilities to individuals or departments at this time. Civic Administration will establish an implementation team that is chaired by the Urban Forestry Section and will include individuals across all divisions. This team will be mandated to provide consistent policy approaches that encourage landowners to retain and increase the number of trees through enhanced tree planting in landscape plans at the site planning stage. This approach will be consensus-based, focusing on mutual agreement between and with departments.

To create accountability, the implementation team will designate someone responsible for specific strategies. This will include administrative responsibilities as well as the specific work requirements. Within Planning Services, the Urban Forestry Section will provide leadership in policy and protection, planting, maintenance and monitoring, and engagement of the public (including education and communication).

3 TIMELINE

The timeframe for implementation has been divided into:

1) Short Term 1-2 years: 2015-2016;
2) Medium Term 3-5 years: 2017-2020; and
3) Long Term >5 years: 2021-2035.

Budgets and staff resources will affect the implementation of specific actions. Some activities may also need to be completed in a specific order. Additionally, specific issues like the emerald ash borer and/or damage from a catastrophic storm may cause a shift in budgets and/or timelines which may require adjustments to the implementation schedule. Progress will be reported in annual performance reviews and "state of the forest" reports every four years. Performance measures should be developed by the implementation team to facilitate progress monitoring.

Many of the proposed actions are one-time costs to develop specific policies, guidelines, details and specifications for the protection and planting of trees in urban areas. Ongoing annual

investments are required to expand the staff compliment to adequately manage the City's forestry assets, closer to what major cities are currently doing.

4   BUDGETS

As part of the Implementation Plan, City staff have identified specific actions that can be implemented with no additional funding support and those actions where additional funding will be required for implementation. Funding allocations have been split into operational and policy funding categories and each action funding requirement is classified as either a one-time budget item or requiring continued budgets at annual or other intervals. It may be important to consider outside funding sources to address one time funding requirements or to move forward quickly on those phases of the strategy that are high priority. This may include establishing a fee in lieu for development-approval tree removals that can be used by the City to fund specialized projects on a one time basis. During the 2014 budget process, City Council provided funding for community based leveraged tree planting efforts as identified in Action Items 9.1 and 9.3.

5   SUMMARY

The Implementation Plan is illustrated by timeframe and priority in order to fully implement the Urban Forest Strategy over a 20-year period. A synopsis of the Plan is provided below which includes the budget estimates for each timeframe and for each guiding principle category from the Strategy.

The City of London's urban forest is a $1.5 billion asset, providing social, environmental, and economic benefits to Londoners. The additional funds required to implement the Urban Forest Strategy are an investment to maintain and enhance the benefits of this asset.

Table 1 shows an overview of the implementation budget with a breakdown by time period and Guiding Principle, as well as overall totals. Following Table 1, are summary budgets for each time period showing specific actions which require new funding. The following term applies to these summaries:

- *Carry over*: repeating expenses initiated in previous period(s) that are incurred through the duration of the current period. For example, a $10,000 annual expense initiated in the Medium Term would represent a $140,000 carry over expense for the 14 years of the Long Term period.

Table 1. Overall budget summary.

Time Frame	Guiding Principle				TOTAL
	Plant More	Protect More	Maintain Better	Engage the Community	
Short Term	$117,000	$425,000	$252,000	$47,000	$841,000
Medium Term	$2,320,000	$2,345,000	$1,659,000	$158,000	$6,482,000
Long Term	$5,070,000	$8,030,000	$4,994,000	$601,000	$18,695,000
TOTAL:	**$7,507,000**	**$10,800,000**	**$6,905,000**	**$806,000**	**$26,018,000**

Detailed implementation tables are provided in Sections 6 - 11.

SHORT TERM: 2015 - 2016

New:	$841,000
Carry over:	$0
Total:	$841,00

Plant More: $117,000

1.1 establish canopy targets
1.2 increase parking lot shade trees
1.3 prepare a planting strategy
1.4 implement no net loss policy
2.1 identify plantable space opportunities
2.2 develop planting standards
2.4 prepare 5 year community planting plan
3.9 ensure suitable species for harsh conditions

Protect More: $425,000

4.7 review buffers between developments
4.8 benefits of controlled access for woodlands
5.1 enforce penalties for Tree Conservation By-law
5.2 strengthen Parks By-law 5.3 increase By-law enforcement staffing
6.1 revise policy to better use topsoil for planting sites
6.2 hire dedicated forest health staff

Maintain Better: $252,000

7.1 undertake interdepartmental staff workshops
7.2 implement tree retention policy
10.1 prioritize CMMS and complete tree inventory
10.2 integrate London Hydro maintenance in CMMS
10.3 monitor species performance over time
11.1 conduct plantable space analysis
11.2 monitor canopy cover change over time

Engage the Community: $47,000

13.1 initiate developer discussion forums
15.1 develop incentives for private tee planting
15.2 distribute public tree information cards
17.2 promote London's urban forest
17.3 inform the public re: tree maintenance issues
17.5 develop a comprehensive communications strategy

MEDIUM TERM: 2017 - 2020

New:	$5,580,000
Carry over:	$902,000
Total:	$6,482,000

Plant More: $2,320,000

1.5 provide development incentives to protect trees
1.6 develop creative design solutions to include trees
2.5 improve plantable space in City infrastructures
2.6 enhance plantable space in urban hot spots
2.7 increase tree planting to meet targets
3.1 move to multi-year tree growing contracts
3.3 develop a native tree seed project
3.4 encourage food bearing trees in community gardens

Carry over initiated in previous term: $0

Protect More: $1,555,000

4.2 manage natural areas to enhance biodiversity
4.3 collate and synthesize natural area data
5.4 inspect developments through all phases
5.5 create policies around new subdivision tree retention
5.6 develop a heritage tree By-law
6.3 better protect trees from salt/snow dumping
6.4 develop an integrated pest management plan

Carry over initiated in previous term: $790,000

(actions 4.8, 5.1, 5.3, 6.2)

Maintain Better: $1,575,000

7.5 fund a second urban forest technician
7.6 deliver a "state of the forest" report every 4 years
9.3 provide annual funds for community plantings
9.4 reduce turf grass with more trees and less mowing
9.5 increase maintenance budget to match plantings
9.6 build a contingency disaster funds for tree damage
10.1 re-inventory City trees
10.4 analyze tree inventory for age and projected life span
10.5 estimate mortality rates and project losses
11.3 monitor urban forest benefits over time
11.4 model canopy growth to refine planting goals

Carry over initiated in previous term: $84,000

(actions 7.1, 10.3)

Engage the Community: $130,000

14.1 establish a nursery growing contract for tree supply
14.2 facilitate education workshops
15.3 develop neighbourhood tree plans
15.4 expand the adopt-a-park program
16.1 facilitate workshops with local businesses

Carry over initiated in previous term: $28,000

(actions 17.2, 17.3)

LONG TERM: 2021 - 2035

New:	$4,323,000
Carry over:	$14,372,000
Total:	$18,695,000

Plant More: $2,850,000

1.9 develop a woodland canopy target
3.5 manage woodlands to improve species diversity
3.7 develop a more balanced age distribution over time

Carry over initiated in previous term: $2,220,000

(actions 1.6, 2.5, 2.7, 3.3)

Protect More: $120,000

4.4 develop a woodland restoration master plan
4.6 reintroduce lost or rare native species in natural areas

Carry over initiated in previous term: $7,910,000

(actions 4.2, 4.8, 5.1, 5.3, 5.4, 6.2, 6.4)

Maintain Better: $1,270,000

8.2 create a life cycle and area based maintenance cycle
10.1 re-inventory City trees
11.5 establish long term woodland monitoring plots
12.2 form research partnerships with local institutions

Carry over initiated in previous term: $3,724,000

(actions 7.1, 7.5, 9.3, 9.4, 9.5, 10.3)

Engage the Community: $83,000

13.2 initiate stewardship forums with large land owners
13.3 provide support for rural stewardship planning
16.3 provide public recognition for good urban forestry
18.1 cooperate with neighbouring communities

Carry over initiated in previous term: $518,000

(actions 14.2, 15.3, 15.4, 16.1, 17.2, 17.3)

6 SHORT TERM – HIGH PRIORITY ACTIONS

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Establish canopy cover targets by place type and implement them through a framework of planting strategy, Planning District, Site Plan Control Area By-law and other policies, guidelines or regulations to be developed, and with community engagement (see Table 1).	1.1	P	$25,000 (one time)
Increase the requirement for parking lot shade trees in industrial and commercial areas (using canopy cover targets as a percentage of parking surface, or target tree densities).	1.2	P	$25,000 (one time)
Following the adoption of the new Official Plan, prepare a planting strategy for the City.	1.3	O	$10,000 (one time)
Identify plantable space opportunities that are currently underutilized such as the edges of sports facilities, passive use of turf grass (including City parks), public walkways, transportation corridors, vacant City lands, pumphouses, City owned farmland outside the UGB, cul-de-sac bulbs and make these areas available for volunteer planting projects.	2.1	O	$25,000 (one time)

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Develop standards and include species-appropriate minimum soil volumes, planting medium (mixture), and watering in all tree planting specifications.	2.2	P	$10,000 (one time)
Apply "right tree, right place" best practices to select trees most suitable for the site, emphasizing large stature trees and native species where possible. The goal is to grow high quality, healthy trees.	2.3	O	$0
Prepare a 5-year planting plan that identifies areas and objectives for community planting projects on City-owned property.	2.4	O	$10,000 (one time)
Analyze the tree inventory to identify those species that have required a high level of maintenance over their life cycle to determine whether those trees should be removed from the species list. Identify tree species that have not required a high level of maintenance and consider whether they could be more widely-used.	3.8	O	$0
Ensure that a range of species that are capable of withstanding harsh environmental conditions (wind, asphalt, snow dumping and salt) are available for selection for planting in tree-unfriendly locations such as downtown, industrial areas and busy transportation routes. In some circumstances non-native plantings may be required to address harsh environmental conditions (e.g. Veterans Memorial Parkway only two native species are suitable).	3.9	O	$2,000 (one time)

PROTECT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Investigate the potential to expand the Upper Thames River Conservation Authority management contract to include city owned woodlands as well as ESAs. Alternatively, establish a Natural Areas Crew that manages naturalization and ecosystem restoration in woodlands and has by-law enforcement powers.	4.1	O	$0
Review the buffer required between developments and retained woodlands to assess whether current buffers are adequate.	4.7	O	$10,000 (one time)
Educate the public about the benefits of controlled access and require controlled access be established at the time of woodland acquisitions.	4.8	O	$5,000 (periodic)
Enforce the penalties for cutting trees in woodlands without a permit as required by the Tree Conservation By-law.	5.1	O	$5,000 (annual)
Strengthen the Parks By-law by linking encroachment to the Ontario Trespassing Act and enabling the City to charge for the restoration of encroachment, including planting.	5.2	P	$10,000 (one time)
Increase staff and resources for enforcement of tree protection related by-laws and site plan implementation to protect City assets.	5.3	O	$95,000 (annual)
Review and revise the current Boulevard Tree Protection By-law to set fines consistent with other by-laws, and to strengthen tree protection.	5.7	O	$0

PROTECT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Revise policies to support opportunities to either retain native topsoil or redistribute more topsoil on-site post development to improve the quality of tree planting sites.	6.1	P	$10,000 (one time)
Hire dedicated forest health staff to monitor and manage insect and disease outbreaks and support the Forestry program and urban forest education.	6.2	O	$95,000 (annual)

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Undertake inter-departmental staff workshops to promote trees and tree-friendly design concepts, solve tree issues, and demonstrate new technology and techniques.	7.1	O	$1,000 (annual)
Establish an inter-divisional implementation team for the urban forest strategy that includes individuals from across departments.	7.2	O	$0
Establish a corporate philosophy whereby trees are managed as infrastructure assets using consistent concepts of "green infrastructure" and related terminology.	7.7	P	$0

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Identify pruning dependant and high failure potential species within the street tree population, and consider for phased replacement with more reliable species.	8.3	O	$0
Raise public awareness of the SPARKS Neighbourhood Matching Fund for neighbourhood initiated projects and community project funds.	9.1	O	$0
Prioritize the new Computerized Maintenance Management System (CMMS) and complete the tree inventory as currently planned.	10.1	O	$30,000 (periodic)
Develop procedures/approach to include London Hydro maintenance activities in the CMMS to minimize redundancies.	10.2	O	$30,000 (one time)
Conduct an analysis of plantable space across different land use types within London in order to estimate canopy potential.	11.1	O	$30,000 (one time)
Monitor canopy cover change over time by land use types to measure strategy performance. An inexpensive, accurate and repeatable method such as the USFS iTree Canopy[i] program is recommended. This should be based on up-to-date summer aerial photography, and repeated at 5 year intervals, prior to or in conjunction with Official Plan reviews.	11.2	O	$100,000 (periodic)
Expand the testing and use of innovative methods of accommodating trees in locations with limited rooting capacity that will allow air and water to reach the roots and prevent soil compaction (i.e., Silva cells, structural soil, etc.).	12.1	O	$0

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Initiate discussion forums with stakeholders to promote the benefits of mature tree retention, provision of suitable plantable space and build recognition that trees will make a project better.	13.1	O	$20,000 (one time)

*Additional funding required for studies, research and contract work in support of the Action item.

7   SHORT TERM – MEDIUM PRIORITY ACTIONS

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Implement a policy of no net loss of tree canopy cover as a fundamental principle or baseline from which to determine and project tree canopy cover targets.	1.4	P	$10,000 (one time)
Apply existing guidelines to plant new subdivisions in phases prior to assumption so that tree planting can occur in a timelier manner before the last phase of development is finished.	2.8	O	$0
Focus on species selection for long-lived, climatically adapted and low maintenance species in manicured parks and boulevards to reduce the cumulative maintenance burden from new plantings over time.	3.10	O	$0

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Establish a city-wide, consistent, inter-departmental policy approach that encourages landowners to retain trees or include enhanced tree planting in landscape plans at the site planning stage.	7.3	P	$20,000 (one time)
Establish quality specifications for London Hydro tree maintenance crews to use.	8.1	O	$0
Monitor the performance of newly planted species and assess their performance. Adaptively manage future species selection based on monitoring outcomes.	10.3	O	$20,000 (annual)

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Develop incentive programs such as an annual tree voucher or tree giveaway program, to promote tree planting on private property.	15.1	O	$5,000 (one time)
Prepare tree care or tree information cards for specific practices like tree watering and species and identify their locations using the tree inventory. Send cards out at seasonally appropriate times to residents who have those trees on the boulevard in front of their house.	15.2	O	$3,000 (one time)
Maintain an urban forestry website that provides more focus on customer service, is updated with seasonally appropriate information about the urban forest, provides information about upcoming urban forestry events and provides updates related to urban forest strategy objectives.	17.1	O	$0
Continue to use opportunities such as National Forest Week, World Forestry Day, Earth Day and National Tree Day to promote urban forestry and raise the profile of London's urban forest.	17.2	O	$5,000 (annual)
Develop and fund an education campaign for stakeholder groups about the benefits of trees, to encourage tree planting, and to foster proper tree care.	17.3	O	$2,000 (annual)
Provide a synopsis of legislation, policy, and By-laws that apply to tree removals. This can be included in educational materials on urban forest management in London.	17.4	P	$0

ENGAGE THE COMMUNITY			
Action	Strategy Table Reference	Policy (P)/ Operational (O)	Amount of Additional Funding Required Over and Above Existing Budgets ($)*
Develop and implement a comprehensive communication strategy. Ensure that the strategy is coordinated by Corporate Communications and all City departments participate in its development so that initiatives are coordinated and can be rolled out smoothly in the appropriate season (e.g., green-waste recycling in the fall, water conservation during the summer months, tree cutting permit to avoid the bird nesting season, etc.).	17.5	O	$5,000 (one time)

*Additional funding required for studies, research and contract work in support of the Action item.

8 MEDIUM TERM – HIGH PRIORITY ACTIONS

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Revise existing policies so there are incentives for developments to protect treed areas (including tree plantings, enhanced landscaping, or other "green infrastructure" features).	1.5	P	$20,000 (one time)
Develop creative design solutions to better accommodate trees with cooperation of planners, developers, and engineers. Some examples include: • In new subdivisions, place services under double driveways to leave more plantable space for boulevard trees • Consider designs for some situations with sidewalks on one side of the street only. • Establish prototypical right-of-way specifications that accommodate trees, utilities and road widths (considering both above and below ground).	1.6	O	$25,000 (annual)
Identify and create improved plantable space through City infrastructure projects.	2.5	O	$25,000 (annual)
Prioritize the enhancement of plantable space in areas that are "hot spots" where tree planting could mitigate the urban heat island effect.	2.6	O	$20,000 (one time)

PLANT MORE			
Action	Strategy Table Reference	Policy (P)/ Operational (O)	Amount of Additional Funding Required Over and Above Existing Budgets ($)*
Increase tree planting to meet canopy cover targets.	2.7	O	$500,000 (annual to 2020) ($100,000 annually after 2020)
Improve control over planting stock through a multi-year tree growing contract with specifications for shape, size, and provenance. This will lower costs and improve quality.	3.1	O	$15,000 (one time)
Take an adaptive management approach to species selection to help diversify the species profile.	3.2	O	$0

PROTECT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Manage natural areas to enhance biodiversity (i.e., enrichment planting, retention of wildlife trees and coarse woody debris, uneven distribution of plantings, proactive management of invasive species to enhance native species, etc.	4.2	O	$200,000 (annual)
Collate and synthesize data from existing reports and studies on natural areas and link it to a standardized spatial database.	4.3	O	$40,000 (one time)
Inspect development sites throughout all phases to ensure objectives and standards are met in the protection of urban forest assets.	5.4	O	$95,000 (annual)
Consider new policies and review/enhance existing policies around tree retention for subdivision developments, including the retention of shelterbelts and hedgerows as desirable features between developments.	5.5	P	$10,000 (one time)
To improve tree health along transportation corridors, consider implementing road, median and boulevard designs that will protect trees and their root zones from salt inputs and snow dumping.	6.3	O	$20,000 (one time)
Develop and implement an integrated pest management plan encompassing insects, disease, and invasive species. The plan should address prevention, control and restoration within City-owned natural areas, and identify budgets and measurable targets for implementation. The plan should address pests on private property and provide the authority and empower the City to control pests on private property as required to ensure the overall health of the urban forest.	6.4	O	$75,000 (annual)

MAINTAIN BETTER			
Action	Strategy Table Reference	Policy (P)/ Operational (O)	Amount of Additional Funding Required Over and Above Existing Budgets ($)*
Increase the City's emphasis on using trees for place making such as creating neighbourhood "themes", using seasonal colours, canopy shapes, etc.	7.4	O	$0
Fund a second urban forest technician/forest health coordinator position to help with specific implementation projects, management of insect and diseases, and enforcement of site plans.	7.5	O	$95,000 (annual)
Deliver a state of the forest report to Council on a 4 year cycle and an annual departmental performance review on the urban forest program.	7.6	O	$40,000 (periodic)
Develop a business case analysis to support a "tree infrastructure budget" for designing and building trees into selected capital projects. For example, the addition of trees and medians to the Horton Street project involved approximately 10% of the total project budget.	9.2	O	$0
Provide annual funding to support Community/not-for-profit planting initiatives. These organizations are currently able to leverage additional funding at approximately 5:1.	9.3	O	$25,000 (annual)
Reduce the area of turf grass in the City through tree planting, with more selective mowing, to reduce costs. Areas with modified mowing require monitoring for invasive plants.	9.4	O	$25,000 (annual)

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Increase the annual maintenance budget proportionally to new boulevard tree plantings. The selection of site appropriate tree species, improved soil quality and control of nursery stock should mean that new trees have a lower maintenance requirement than the current street tree population over the long-term. Allocate a portion of the new planting budget toward future maintenance.	9.5	O	$100,000 (annual)
The City should develop a mechanism to build a contingency disaster fund for responding to significant damaging events to the urban forest.	9.6	P	$5,000 (one time)
Re-inventory City trees.	10.1	O	$250,000 (periodic)
Monitor urban forest structure, function, and values over time using the USFS iTree Eco program. This should be repeated at 10 year intervals. The 2012 UFORE study can be used as a baseline and results updated with new iTree Eco local inputs. The iTree Eco re-analysis is to be completed and reported no later than 2018. iTree Eco is a new adaptation of the UFORE model.	11.3	P	$130,000 (periodic)

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Establish a nursery growing contract to supply trees for city plantings and trees used in public planting initiatives. Investigate the potential for a partnership or knowledge sharing with other agencies that already have growing contracts with two nurseries in the region.	14.1	O	$10,000 (one time)
Facilitate training and education workshops to communicate and obtain feedback on regulatory changes, professional report standards, canopy cover goals, tree retention techniques, best management practices and City expectations for supervision and tree management plans on development sites.	14.2	O	$5,000 (annual)
Facilitate stakeholder workshops with the local business community, coordinated with the London Chamber of Commerce and the London Development Institute, to discuss with business representatives the implementation of practices that will alter the canopy cover around commercial developments (i.e., malls, sidewalk cafes, car parks). Presentations to the Chamber of Commerce about the value of trees and opportunities for businesses to participate in new plantings through sponsorship or volunteerism will build a greater understanding of the value of the urban forest and reduce potential conflicts now and in the future.	16.1	O	$10,000 (annual)
Build on partnerships with business owners to increase tree cover and improve tree health and tree care in commercial and industrial zones.	16.2	O	$0

*Additional funding required for studies, research and contract work in support of the Action item.

9 MEDIUM TERM – MEDIUM PRIORITY ACTIONS

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Consider the creation of policies that support a system where it would provide greater flexibility for creativity in site planning to meet urban forest and other city objectives including stormwater management. Develop a range of specifications for different types of site plans and different planning districts that would diversify the currently uniform outcomes seen due to specifications such as "zero set-back" and "3 m planting strip".	1.7	P	$0
Consider using zoning bonuses as incentives for developments to protect treed areas (including tree plantings, enhanced landscaping, or other "green infrastructure" features).	1.8	P	$0
Develop a native tree seed project to promote use of locally adapted seed of native species for new tree plantings.	3.3	O	$30,000 (periodic)
Encourage community gardens to consider the use of food producing tree species (e.g., fruit and nut bearing trees) and provide education on the required maintenance and management of food producing tree species.	3.4	P	$5000 (one time)

PROTECT MORE			
Action	Strategy Table Reference	Policy (P)/ Operational (O)	Amount of Additional Funding Required Over and Above Existing Budgets ($)*
Develop and enforce a Heritage Tree By-law that protects trees identified as heritage trees due to their size, age, rarity, cultural value or other significant feature.	5.6	O*	$5,000 (one time)

*If Council approves by-law for protecting trees on private property.

MAINTAIN BETTER			
Action	Strategy Table Reference	Policy (P)/ Operational (O)	Amount of Additional Funding Required Over and Above Existing Budgets ($)*
Identify the age distribution and projected life expectancy of trees within the current inventory.	10.4	O	$20,000 (one time)
Estimate mortality rates within the current tree population and model the projected effects of natural mortality and losses due to pests and disease.	10.5	O	$20,000 (one time)
Model the projected canopy gain from the current and planned urban forest in order to refine estimates for the number of new plantings required and time to reach canopy cover targets.	11.4	O	$10,000 (one time)

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Work with neighbourhoods to develop neighbourhood tree plans that will guide implementation of this strategy; neighbourhood plans should define prototypical street tree applications and canopy cover targets for different land use types within that neighbourhood. Plans should also build a sense of shared responsibility for achieving canopy cover targets.	15.3	O	$10,000 (annual)
Continue/expand the adopt-a-park program and partner with UTRCA and/or Community and neighbourhood organizations to facilitate neighbourhood workshops to encourage stewardship activities in these parks.	15.4	O	$5,000 (annual)
Make the City website and staff directory more accessible/navigable to make it easier for the public to contact staff with questions or concerns about the urban forest.	17.6	O	$0

*Additional funding required for studies, research and contract work in support of the Action item.

10 LONG TERM – HIGH PRIORITY ACTIONS

PROTECT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Develop a city owned woodland restoration and expansion master plan that prioritizes restoration activities across woodlands and includes required budgets and measurable targets for implementation.	4.4	O	$50,000 (one time)
Require a water balance study to be completed where warranted when developments are planned adjacent to vulnerable Natural Heritage System features to identify potential impacts from altered hydrology, and identify mitigation requirements. The Toronto and Region Conservation Authority has recently drafted stormwater management criteria for protection of natural features that could serve as a model.	4.5	O	$0

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Establish a scheduled life cycle and area based tree maintenance cycle that includes rural areas.	8.2	O	$30,000 (one time)
Investigate options for funding restoration and maintenance of new woodlands.	9.7	O	$0
Re-inventory City trees.	10.1	O	$250,000 (periodic)
Form research partnerships with local institutions to study different aspects of the urban forest such as forest health, the urban heat island effect and rain water interception as the canopy changes over time.	12.2	O	$25,000 (annual)

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Initiate discussion forums with large land owners or managers to encourage stewardship and to ensure understanding and buy-in to strategic objectives. Consider partnering with other agencies to coordinate this initiative.	13.2	O	$10,000 (one time)
Provide education and support for stewardship management planning in rural areas and publicly acknowledge rural stewardship efforts. Consider partnering with other agencies to coordinate this initiative.	13.3	O	$5,000 (annual)
Establish and facilitate an inter-jurisdictional working group to identify common objectives, build collaborative working relationships, explore greening opportunities, and address funding challenges across the region. A range of regional issues are relevant to implementation and the focus of this working group including canopy cover targets, forest health management, biodiversity management, tree waste management and watershed management and conservation.	18.1	O	$2,000 (one time)

*Additional funding required for studies, research and contract work in support of the Action item.

11 LONG TERM – MEDIUM PRIORITY ACTIONS

PLANT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Conduct research, and measure woodland canopy, with the aim of developing a woodland canopy target for the City which integrates with the regional Natural Heritage System.	1.9	O	$40,000 (one time)
Manage woodlands to improve opportunities for species diversity (thinning and enrichment planting).	3.5	O	$100,000 (annual)
Encourage the planting of more tree species that rank low on the OPALS scale (Ogren Plant Allergy Scale) and reducing reliance on species that have a high OPALS rating.	3.6	O	$0
Support phased tree planting/replacement initiatives to develop a more balanced age distribution in the long-term. Once the baseline urban forest population has been established and the canopy cover goals are on track, more emphasis can then be placed on phased timing for new plantings to help diversify the overall age class distribution in the long-term.	3.7	O	$10,000 (one time)

PROTECT MORE			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Reintroduce, where appropriate, "lost" or rare native species in natural areas.	4.6	O	$5,000 (annual)

MAINTAIN BETTER			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Monitor budgets over time to refine the cost per tree establishment estimates and actual costs associated with the strategy in order to improve the accuracy of estimates to achieve the canopy cover targets.	10.6	O	$0
Establish long term monitoring plots in forest woodlands.	11.5	O	$150,000 (one time)

ENGAGE THE COMMUNITY			
Action	**Strategy Table Reference**	**Policy (P)/ Operational (O)**	**Amount of Additional Funding Required Over and Above Existing Budgets ($)***
Provide an avenue for public recognition of outstanding contributions by businesses or institutions to urban forestry in London. The Veterans Memorial Parkway project is a successful model that could be duplicated in other areas of the city.	16.3	O	$1,000 (one time)

*Additional funding required for studies, research and contract work in support of the Action item.