

HALIFAX

P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 3

Halifax Regional Council
March 5, 2019

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY:

Original Signed by 

Brad Anguish, Director, Transportation and Public Works

Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: December 28, 2018

SUBJECT: Urban Forest Master Plan 5-Year Update

INFORMATION REPORT

ORIGIN

On September 25, 2012, the Urban Forest Master Plan (UFMP) was approved in principle by Regional Council. At that time Administration committed to return to council at the 5-year mark to provide an update on the progress of the plan.

LEGISLATIVE AUTHORITY

The Halifax Regional Municipality Charter (Halifax Charter) Section 77 gives municipal powers respecting trees, including the following:

- 77 The Municipality may
- (a) remove dead, dying or diseased trees on public...property;
 - (b) recommend and encourage
 - (i) the proper pruning, protection and repair of privately owned trees in the Municipality,
 - (ii) the planting of trees of suitable species at desirable sites within the Municipality.

The Halifax Charter subclause 35(2)(d)(i) states the CAO may

(d) subject to policies adopted by the Council, may make or authorize expenditures, and enter into contracts on behalf of the Municipality for anything required for the Municipality where the amount of the expenditure is budgeted or within the amount determined by the Council by policy, and may delegate this authority to employees of the Municipality.

BACKGROUND

In 2012, Halifax Regional Municipality (HRM) approved a comprehensive plan, the Urban Forest Master Plan (UFMP), which provides direction for planning, programming and regulatory activities related to managing and enhancing the urban forest cover in HRM. The goal was to ensure the ongoing sustainability of HRM's urban forest for its multiple environmental, social, cultural and economic benefits.

Through public consultation at various stages in the development of the UFMP, the following three priorities were identified:

- Increase funding, plant more trees on HRM land and improve urban forest maintenance;
- Adopt new regulations and standards to conserve urban forest canopy cover; and
- Promote citizen urban forest stewardship and develop educational programs.

The responsibility for UFMP implementation was assigned to TPW and has been coordinated by the Urban Forestry section, with support from Parks and Recreation and Planning and Development. The vast majority of the funding for the UFMP is derived from the TPW operational budget.

DISCUSSION

The Urban Forest Management Plan falls under the Council Priority Areas of **Healthy, Livable Communities** and **Economic Development**, with the specific outcomes of environmental resilience; an increase in environmental benefits received by residents through tree planting, protection and maintenance programs; supporting community recreation, leisure, health and mental health through access to safe and sustainable green infrastructure; as well as making Halifax a better place to live and work by way of livable green communities where green infrastructure supports economic development.

The Urban Forest Management Plan supports green house gas reduction by way of its priorities of canopy protection and urban tree canopy growth. An iTree study conducted on HRM's urban forest in 2010 estimated that trees across the City hold more than 2 million metric tonnes of carbon, and sequester more than 100,000 tonnes of carbon per year.

There are 32 priority actions defined in the UFMP. Appendix A details the priority actions and current progress. Progress is summarized as follows:

Successes

Since the adoption of the plan, over 6500 trees have been planted along roadways in the HRM, an almost 4% increase in the total number of street trees. With a focus on species diversity, these 6500 trees will serve to provide millions of dollars in social environmental, economic and health benefits over their lifespan, as well as buffer the municipality from the impacts of such issues as Climate Change & invasive species.

The Cyclical Pruning program began in earnest in 2016 with a focus on neighborhoods with mature trees (those more prone to tree failures causing damage in windstorms). In the last 3 years, an estimated 8000 mature street trees have been pruned under this program for form, structure and health. HRM is also currently in negotiations with Nova Scotia Power about a cost sharing arrangement for this program to assist with the maintenance of trees in and around overhead utilities.

Challenges

Several of the implementation priority actions of the UFMP were never fully funded. In particular, the street tree planting targets and cyclical pruning targets recommended in the UFMP have not been achieved due to significant inflation (tree stock has tripled in cost in some cases) and due to TPW funding being directed to other operational priorities over the past few years.

The UFMP committed HRM to planting approximately 75,000 vacant street-side sites over a 35 year period. At this 5 year milestone, staff had anticipated having approximately 11,000 trees planted; however, due to inflation and funding shortfalls, only 6,684 trees have been planted to date. To get back on track with the UFMP tree planting and pruning objectives, Urban Forestry staff has identified that an annual funding increase of approximately \$1,313,000 would be required, bringing the total annual budget relating to UFMP deliverables to \$2,648,000. See table 1 for details:

Table 1: UFMP Five-Year Updated Financial Estimates

ITEM	Committed to in UFMP (2012)	Projected to Achieve Targets	Currently Funded	Diff. Between Projected and Current
Planting	\$650,000	\$1,238,600	\$650,000	\$588,600
Pruning	\$650,000	\$1,250,000	\$650,000	\$600,000
Education	\$50,000	\$50,000	\$0	\$50,000
Research	\$35,000	\$35,000	\$35,000	\$0
Parks	\$75,000	\$75,000	\$0	\$75,000
TOTALS:	\$1,460,000	\$2,648,600	\$1,335,000	\$1,313,600

Ongoing Actions

HRM is continuing to work on updates to the Tree Protection Bylaw T-600; specifically, to ensure adequate protection and preservation of mature trees in older neighborhoods. Work is ongoing with Planning and Development's Energy and Environment section to develop tree protection guidelines along with web and print material for use in guiding tree protection initiatives for infill development.

Material is currently under development to support education on the Urban Forest and its benefits. This material includes work on a promotional video for HRMs Urban Forest, and updates to the HRM Urban Forestry website to include additional information on the benefits of trees in the urban environment, as well as information of the various Urban Forestry programs of the City.

The recent introduction of Emerald Ash Borer to the urban forest of HRM will result in an estimated loss of 5% of the street and park tree inventory over the next 5 to 10 years. Tree removal, treatment and replacement costs could exceed \$10 million over that period, which will place further pressure on existing tree maintenance and planting budgets. Staff is currently committed to developing an Ash Borer management plan in 2019/20 which will provide the recommended approach and funding to help mitigate the anticipated negative and widespread impacts.

FINANCIAL IMPLICATIONS

There are no direct financial impacts arising from this report. Staff will continue to bring UFMP funding recommendations for Council's consideration as part of the annual business plan and budget process.

COMMUNITY ENGAGEMENT

No community engagement was undertaken for this report; however, significant public participation did occur throughout the development of the UFMP, and continue to guide the actions of administration in its implementation.

ATTACHMENTS

Appendix A: UFMP Priority Actions

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Crispin Wood – Superintendent of Urban Forestry

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
A1	Establish an average of 40% canopy cover in HRM parks in the UFMP Study Area.	Update
		Never funded over the five-year period. Tree planting initiatives have happened in park areas by volunteer groups such as Clean, Ecology Action Centre, Rotary Club, Boy Scouts and Girl Guides.
		Next Steps
		Develop a canopy plan specific to parks.
A2	Apply neighbourhood planting treatments for street trees.	Update
		This item has been fully funded since 2013/14 fiscal year. Trees are a commodity, and cost is based on demand. The city of Toronto has initiated a million-tree planting program. This, along with the Emerald Ash Borer, is placing a higher demand on tree stock, meaning cost per unit has tripled in most cases, resulting in fewer trees being planted for the same budget.
		Next Steps / Recommendation
		HRM has committed to planting the roughly 75,000 vacant street-side sites over a 35-year period. Five years after the inception of this program, HRM should have almost 11,000 trees planted. Due to inflation, HRM was only able to fill 6,684 vacant sites. As only 6,684 of the vacant street-side spots were filled, this leaves 68,316 vacant spots. Assuming the price per unit remains at around \$500, HRM would have to increase the budget for this item to \$1,238,600 annually to successfully plant the remaining vacant spots in the next 30 years. This increase includes the inflation in cost per unit, the additional units required to make up for the discrepancy generated in the last 5 years, and natural tree mortality averaging out to roughly 200 units lost annually.
A3	Employ neighbourhood native species treatments.	Update
		Over 50% of the trees being planted are native species.
		Next Steps Continue planting native species when possible.
A4	Utilize neighbourhood species control treatments.	Update
		List of appropriate tree species per neighbourhood is utilized when laying out planting plans.
		Next Steps Continue to follow prescriptive community species choice.
A5	Deploy neighbourhood Acadian old-growth species treatments.	Update
		This is considered while selecting tree species.

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
		Next Steps
		Continue selecting species when and where possible.
A6	Diversify cultivars of tree species.	Update
		This is considered while selecting tree species.
		Next Steps
		Continue considering when selecting species.
A7	Apply neighbourhood treatments to meet canopy targets for neighbourhoods, communities, and the UFMP Study Area.	Update
		During the first five years, five communities were recipients of the majority of tree planting as per the UFMP. Moving forward, staff will be planting across UFMP neighbourhoods with lessons learned from the communities planted in the first five years. This will be on an as-needed basis (areas that have fewer street trees will be given priority).
		Next Steps
		HRM Staff is no longer tied to the five community planting sites laid out in the initial UFMP. Staff will now plant across entire UFMP area, priority given to areas that have less street canopy.
A8	Employ seven-year pruning cycles for all street trees and establish cooperative pruning programs with utility companies.	Update
		To bring street trees into a 7-year pruning cycle will likely take up to 13 years. The reason for this is that the trees will have to be “trained” to be compliant with such a cycle. This is typically accomplished by pruning a tree more than once in the initial “training” period.
		Next Steps
		Legal Services is in discussion with Nova Scotia Power to develop a cost-sharing agreement. In order to have all trees compliant to a 7-year cycle, staff would have to prune over 25,000 units annually. Most recent cost estimates for pruning is \$50 per unit. To meet objectives laid out in this plan, this item will require an annual budget of 1,250,000.
A9	Establish an average of 80% canopy cover in HRM-owned riparian buffers.	Update
		Very little planting has been undertaken in riparian buffer areas.
		Next Steps / Recommendation
		Investigate current canopy cover in riparian areas and consult across business units to understand current activities within the buffer.

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
A10	Educate land owners on the benefits of trees in riparian zones.	Update
		No action has been taken at this point.
		Next Step / Recommendation
		See item A16
A11	Give priority to neighbourhood tree planting treatments in HRM parks and on school grounds without shade trees.	Update
		School grounds are generally maintained by the province, however HRM may be responsible for tree planting on municipal property directly abutting school grounds. Currently there is no program in place to plant these types of lands. Every year HRM plants two trees, in cooperation with an individual school for Arbor Day.
		Next Steps
		As a part of the playground rehabilitation program, administered by Parks and Recreation, consideration is being given to tree planting.
A12	Give priority to street tree plantings in neighbourhoods lacking privately- owned trees.	Update
		This is currently a consideration while laying out planting plans.
		Next Steps
		Continue to give priority to streets with less canopy.
A13	Educate landowners, realtors, and developers on the benefits of trees.	Update
		Video created and released on the benefits of trees in the urban environment.
		Next Steps
		Develop a communication strategy concerning the UFMP to include priorities for educating developers and builders on tree protection and requirements under By-law T-600. Develop standard details for tree protection, tree planting and trees in urban hardscapes for incorporation in the updated Red Book.
A14	Conduct regular public surveys.	Update
		No surveys have been conducted since the adoption of the UFMP.
		Next Steps
		In conjunction with the public educational strategy, develop survey schedule.

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
A15	Establish innovative interpretive programs for the public.	Update
		No programs have been developed to date.
		Next Steps
		Interpretive programs for the public will be reviewed as part of a more comprehensive communications strategy. This item will be linked to item A13.
A16	Support citizen-led urban forest stewardship initiatives.	Update
		No actions to date
		Next Steps / Recommendations
		Research mechanisms for supporting citizen-led forest stewardship initiatives as well as lessons learned from experiences of other municipalities
A17	Promote benefits of the urban forest.	Update
		The Urban Forestry section, in conjunction with Dalhousie University, hold numerous neighbourhood tree walks annually. The Urban Forestry section regularly responds to public media requests regarding HRM's urban forest.
		Next Steps
		See item A16
A18	Conduct urban forest research and project monitoring required to ensure the effectiveness of UFMP adaptive management processes.	Update
		This has been undertaken by Dalhousie University.
		Next Steps
		Continue to work with our partners in academia on urban forest research in HRM.
A19	Characterize and prioritize target areas for traffic calming for strategic planting in HRM rights of way.	Update
		The recently adopted IMP has traffic calming as one of its outcomes. Urban Forestry will be involved in supporting this outcome.
		Next Steps
		Support implementation of IMP standards.

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
A20	Establish fundraising partnerships with private sector, institutional and non-governmental sector organizations to support urban forest stewardship projects.	Over the last several years, HRM has been the successful recipient of CN Eco Grants. These grants funded the planting of trees in the North End of Halifax. HRM has also worked with TD Canada Trust who have funded and undertaken many planting projects. Ikea will also be planting 150 trees on HRM property in the spring of 2018.
		Next Steps
		See item A16
A21	Invest in human capital with urban forest staff training and development.	Comments
		This item is ongoing. The Urban Forestry staff has completed additional safety and skill enhancement training.
		Next Steps
		Continue to promote skill upgrading and training for the Urban Forest staff.
A22	Provide incentives to homeowners to plant trees on their properties.	Comments
		This program cannot be accommodated under the present HRM Charter. As outlined in a previous information report to Regional Council, HRM is not allowed to fund improvement or enhancement to private property.
		Next Steps
		If Regional Council decides this is an initiative worth supporting, a legislative change to the HRM Charter would be required. Funding would be included in item A16.
A23	Use trees to decrease storm water in highly impervious areas, with priority given to conifers where conditions permit.	Comments
		This is presently accomplished by planting trees abutting streets. Trees that best serve this purpose are typically broadleaf deciduous species. Moving forward, focus will be shifted from conifers to broadleaf species. In addition to providing fewer benefits, studies have also indicated that the presence of conifers in a city setting may amplify the effects of global warming.
		Next Steps

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
		Continue to plant species that hold canopy over impervious surfaces. Shifting focus to broadleaf species.
A24	Where possible, retain special habitat elements, such as snags, coarse woody debris, and understory vegetation in parks.	Comments
		This item, managed by Parks and Recreation, is currently in practice.
		Next Steps
		Continue the practice of stand management in consultation with Parks and Recreation.
A25	Identify and protect urban forest areas that support species at risk.	Comments
		At present there is no inventory for species at risk.
		Next Steps
		Develop an inventory of species at risk. Determine habitat within city limits, protect identified areas.
A26	Research the sale value of urban forest carbon credits.	Comments
		This has been looked at by Energy & Environment. As it stands currently, there is no ability to sell carbon credits.
		Next Steps
		Continue to monitor for future opportunities. Investigate options to value carbon sequestration under the HRM Community Energy and Climate Action Plan.
A27	Encourage citizens to plant food-producing trees on their properties.	Comments
		The first urban orchard was established on the Dillman property of the Dartmouth Commons. Urban Forestry funds fruit and nut trees through the Community Gardens program, overseen by Parks and Recreation.
		Next Steps
		See item A16
A28	Improve urban forest conditions around active transportation networks and use the urban forest to increase active transportation opportunities.	Comments
		This is currently being taken into consideration when selecting locations to plant. Urban Forestry is consulted during the development of active transportation trails in HRM. Trails coordinators seek advice and direction on the retention of trees.
		Next Steps
		Continue to be part of the selection process when trails are being developed. Funding for research included items in A16.

Appendix A: UFMP Priority Actions

Action Number	Action	Update & Next Steps
A29	Research best practices and develop amendments to Municipal Planning Strategies and Land Use By-Laws within the UFMP Study Area to improve urban forest canopy retention and replacement provisions	Comments
		The Urban Forestry section, in conjunction with Energy and Environment, has been investigating all regulatory and non-regulatory options including updates to Bylaw T-600 and RedBook standards.
		Project Planning and Design has funded designs for planting trees in “hard landscapes” – landscapes predominantly made up of man-made infrastructure
		Next Steps
		Continue to work in cooperation with our internal and external partners to determine the best approach for HRM.
A30	Research best practices and develop draft Urban Forest Canopy and Riparian Zone Conservation By-Laws for public review. Update the Tree By-Law (Respecting Trees on Public Lands: By-Law Number T-600).	Comments
		The Urban Forestry section, in conjunction with Energy and Environment, has been investigating all regulatory and non-regulatory options including updates to Bylaw T-600 and RedBook standards as well as educational material to increase awareness and understanding of current tree protection requirements under the Bylaw T-600
		Next Steps
		Continued work on updating standards and development of educational materials regarding tree protection
A31	Integrate UFMP policies with current and upcoming HRM functional plans and land use plans. (e.g., HRM By Design- Centre Plan, Open Space Functional Plan, Stormwater Management Functional Plan, Transportation Functional Plan).	Comments
		Discussions on how the UFMP relates to the Green Network Plan are underway. Impacts to the UFMP from the Centre Plan are now being reviewed. Impacts to the UFMP relating to the IMP are presently under review. The implications to the UFMP relating to the Halifax Commons Plan are not yet being reviewed.
		Next Steps
		Ongoing integration with recently adopted IMP and Halifax Green Network Plan. UFMP involved in input towards the Centre Plan and CECAP.
A32	Identify urban trees as “green infrastructure” in the HRM Municipal Service Standards “Red Book”. Adopt guidelines to maximize the environmental benefits of trees on HRM property.	Comments
		TPW, P&D and Legal continue to investigate the best path forward. Joint Stormwater Standards for HRM and Halifax Water are in development.
		Next Steps
		Ongoing work to determine the appropriate regulatory or non-regulatory approach for this initiative.