

Clause No. 4 in Report No. 6 of the Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on March 27, 2014.

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2013 GREENING STRATEGY ACHIEVEMENTS

Committee of the Whole recommends adoption of the recommendation contained in the following report dated, February 14, 2014 from the Commissioner of Environmental Services:

1. RECOMMENDATION

It is recommended that Council receive this report for information.

2. PURPOSE

This report provides Council with an update on the activities and achievements of the Greening Strategy in 2013.

3. BACKGROUND

Since 2001 the Greening Strategy has guided actions to enhance the natural environment including reforestation efforts towards achieving the Regional Official Plan target of 25 per cent forest cover

Since adoption of the Greening Strategy in 2001 it has been a requirement that achievements be reported to Council annually. Refined in 2012, the intent of the strategy is to achieve hands-on action consistent with forward-thinking environmental policies in the Regional Official Plan. A component of the Strategy includes maximizing opportunities to increase forest cover to 25 per cent of the Region's total land area as prescribed by Regional Official Plan. The four Action Areas of the Strategy are:

- Environmental land protection and preservation – acquisition of key conservation lands
- Enhancement and rehabilitation – tree, shrub, wetland and prairie planting
- Leadership, innovation and knowledge – facilitating research, science and technology transfer
- Stewardship and education – environmental education and landowner outreach

Greening Strategy programs include funds for both hands-on environmental projects and land protection and preservation activities.

4. ANALYSIS AND OPTIONS

Council has demonstrated a commitment to protecting, rehabilitating and creating natural areas through approval of the Greening Strategy. The intent of the Strategy includes action toward increasing York Region's forest cover to 25 per cent. Forest cover includes woodlands equal to or greater than 0.2 hectares as defined in the *Forestry Act*. In 2013, further progress was made to increase forest cover in York Region. A complete list of Greening Strategy initiatives, summarizing actions and deliverables, is appended as *Attachment 1*.

Significant achievements were made this past year, including leveraged funding, land protection and preservation, and environmental education.

79 partners contributed to Greening Strategy achievements and leveraged \$3.6 million in additional project funds

The Greening Strategy is delivered by the Natural Heritage and Forestry Services section of Environmental Services. In 2013, the total expenditure associated with Greening Strategy delivery, including leveraged funds through 79 partnerships, was \$6.2 million with partners contributing \$3.6 million (58 per cent) of these funds. Delivery through partnerships is a strategic and respected approach to leverage funds and make use of expertise and resources within our partner organizations. This approach allows the Region to achieve more results on the ground.

Leverage funding contribution ratios range from project to project. For example, the 2013 Backyard Tree Planting Program value was \$167,000 of which Local Enhancement and Appreciation of Forests contributed \$87,000. Under York Region's partnership agreement with the Nature Conservancy of Canada to deliver environmental land protection and preservation, total project costs of \$3 million included \$2.9 million leveraged funds.

One millionth tree planted on National Tree Day (September 25, 2013) at Maple Health Centre, City of Vaughan

A significant Greening Strategy milestone was achieved in 2013. The one millionth tree was planted and celebrated on National Tree Day at the Maple Health Centre. The Centre's residents joined York Region Public Health and Environmental Services staff to celebrate and plant a maple tree in celebration of 12 years of Greening Strategy achievements and to recognize the link between healthy communities and healthy trees.

Environmental land protection covered 120 hectares, three sites totalling \$4.8 million in land value

Three sites, two in the Township of King and one in the Town of Whitchurch-Stouffville totalling 120 hectares of land (\$4.8 million appraised value) were secured by the Region or through renewed partnership agreements. Table 1 shows 2013 achievements through the environmental land protection and preservation action area. The following describes characteristics of each property:

- Located on the Oak Ridges Moraine, the 55 hectare Drysdale Woods property acquired by York Region as a partial donation through Environment Canada’s Ecogift program will increase the York Regional Forest to 24 tracts spanning 2,365 hectares. Tree planting and recreational trail opportunities contribute to the value of this property.
- Supported through York Region’s partnership agreement, the Nature Conservancy of Canada worked with the Barnett family to purchase a 29 hectare property within the Happy Valley Area of Natural and Scientific Interest on the Oak Ridges Moraine. This property contributes to an assemblage of protected properties managed by Nature Conservancy of Canada, York Region and Toronto and Region Conservation Authority.
- Nature Conservancy of Canada celebrated the protection of 36 hectares of the Love property in the spring of 2013 with the donating family. Found within the Happy Valley Area of Natural and Scientific Interest this property connects to the Toronto and Region Conservation Authority property Humber Source Woods on the Oak Ridges Moraine.

Table 1
 Properties Secured in 2013

Property	Municipality	Size	York Region Contribution	Leveraged Funds	Total Project Cost
Drysdale	Whitchurch-Stouffville	55 ha	\$1,850,640	\$462,660	\$2,313,300
Barnett	King	29 ha	\$60,000*	\$908,000	\$968,000
Love	King	36 ha	\$60,000*	\$1,966,000	\$2,026,000
TOTAL		120 ha	\$1,970,640	\$3,336,660	\$5,307,300

*The Region has a land protection and preservation agreement with the Nature Conservancy of Canada with an annual contribution of \$120,000 in accordance with a Council approved three year partnership agreement (2013 to 2016).

The focus of environmental land protection and preservation is primarily on empowerment and support for partners already active in protecting conservation lands within the Region. Since adoption of the Strategy in 2001, properties totalling 1,108 hectares have been protected. Environmental lands are acquired for environmental protection purposes, based on Council endorsed criteria, with a priority on lands with opportunities to increase forest cover.

Community interest in environmental stewardship and education programs continues to increase

Participation in the Region's forest environmental education program, *Nature's Classroom*, continues to show an upward trend from 2010 as shown in Attachment 1. Community and school group programming included delivery of 48 guided hikes and in-class programming to a total of 1,142 participants. Nine public forest events and two seasonal forest festivals were held in 2013, with a total of 795 people attending. Collaboration on more than 36 partner-led events reached more than 6,000 people. In 2013, with the assistance of internal partnerships with Public Health, Forestry staff continued to cross promote active living and the benefits of trees to healthy and sustainable communities.

Through partnerships, agreements and contracts, more than 45,907 trees and shrubs were planted in 2013 – including 24 hectares of new forest

The following are some Greening Strategy program achievements which increased forest cover and urban canopy cover, and rehabilitated or established urban forests and natural areas:

- York Natural Planting Partnership subsidized large-scale private land reforestation in partnership with the Conservation Authorities (26,327 trees and shrubs)
- Adopt-a-Stream Crossing program delivered 17 Adopt-a- Stream Crossing events in six municipalities with 318 volunteers, planting more than 1,025 trees and shrubs around streams within Regional road rights-of-way
- York Regional Forest tree planting in the Bendor and Graves Tract, Town of East Gwillimbury, and Nobleton Tract, Township of King (5,201 trees and shrubs)
- York Region Property Naturalization includes Streetscaping and a community planting event at 90 Bales Drive Transportation Operations Centre, Town of East Gwillimbury (3,484 trees and shrubs)
- Backyard Tree Planting Program of urban residential trees delivered in partnership with Local Enhancement and Appreciation for Forests (LEAF) (468 trees and shrubs)
- Greening support for community and local municipal naturalization events funding support toward tree costs for community tree planting events hosted by municipalities and/or municipal partners (850 trees and shrubs)

In 2013, 45,907 trees and shrubs were planted through the initiatives mentioned above, along with other Green Strategy initiatives listed in Attachment 1 and \$269,945 in funds were leveraged through partnerships and agreements. This included creating 24 hectares of new forest. These planting numbers only include those delivered through Greening Strategy initiatives.

Assessment of the Region’s forest cover has indicated that there has been an increase of 569 hectares of forest since 2009

York Region’s Official Plan forest cover target is 25 per cent. This amounts to 44,388 hectares of forest (as measured by woodlands equal to or greater than 0.2 hectares). Based on 2009 air photography, the forest cover was previously assessed at 22.5 per cent (39,964 hectares) of York Region’s total land area. In 2013 staff conducted a re-assessment based on 2012 aerial photography. This current assessment indicates an overall increase in forest cover in eight of the nine local municipalities as shown in Table 2 comparing 2009 and 2012 data.

Table 2
 York Region Forest Cover

Local Municipality	Land Base (ha)	Forest Cover 2009		Forest Cover 2012		Gain/ Loss (ha)
		(ha)	(%)	(ha)	(%)	
King	33,665	8,127	24.1	8,326	24.7	199
Whitchurch-Stouffville	21,119	6,036	28.6	6,106	28.9	70
Richmond Hill	10,152	1,290	12.7	1,349	13.3	59
Markham	21,259	1,313	6.2	1,391	6.5	78
Aurora	4,943	859	17.4	882	17.8	23
Newmarket	3,819	327	8.6	333	8.7	6
East Gwillimbury	24,762	7,430	30.0	7,428	30.0	-2
Vaughan	27,432	3,057	11.1	3,132	11.4	75
Georgina	30,399	11,525	37.9	11,586	38.1	61
York Region	177,550	39,964	22.5	40,533	22.8	569

Current assessment indicates:

- forest cover has increased by 569 hectares (0.31 per cent) since 2009
- more than 67 per cent of the Region’s forest cover is located in three municipalities (Georgina, King and East Gwillimbury)
- greatest increases in forest cover were in the Township of King and Cities of Markham and Vaughan

The scientific community agrees that a ten year cycle of growing seasons is an appropriate timeframe to assess changes in forest cover. This interim assessment provides a snapshot of the current status. Over the next five years forestry staff will be collaborating with Conservation Authorities to harmonize forest cover assessment tools,

integrate monitoring and align implementation objectives as the 2019 assessment approaches.

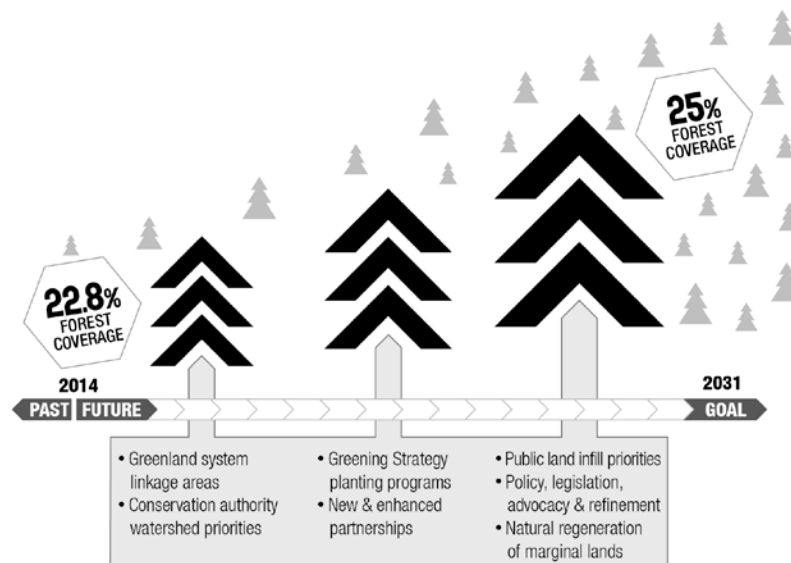
New forest cover can be attributed to natural regeneration and planting efforts through the Greening Strategy and by other organizations

Greening Strategy implementation partnerships achieve approximately 45 hectares of reforestation per year. Other new forests are planted each year by organizations (Forests Ontario, Trees Ontario, Tree Canada etc.), local municipalities, environmental associations and public initiatives. Natural succession and regeneration of forests on undisturbed lands also account for areas of new forest, particularly in wetland buffer areas, valley lands and old agricultural fields. York Region staff continues to work in collaboration with Conservation Authorities to both harmonize planting activities and ensure priorities are being addressed.

Focused efforts on reforestation, including identification of priority opportunities is required to meet forest cover target by 2031

To gain an understanding of the on-the-ground opportunities to achieve 25 per cent forest cover, staff conducted a preliminary review of available lands within York Region which have potential for reforestation and having regard for the Regional Official Plan land use designations. A series of potential implementation priorities and opportunities are integral to working towards achieving the forest cover target (Figure 1). It is important to recognize that success is dependent on both public land planting opportunities and private landowner's willingness to participate.

Figure 1
Opportunities to Achieve 25 per cent Forest Cover by 2031



Need to recognize challenges to increasing forest cover in advancing the approach to meet 25 per cent target by 2031

The forest faces environmental challenges on many fronts. Invasive species, including the Asian Long Horned Beetle or more recently the Emerald Ash Borer, will destroy thousands of trees in our urban areas and across the landscape. Losses to trees, canopy cover and forests from the recent ice storm may also be substantial. These and other impacts to forest cover have significant environmental, social and economic consequences and present an ongoing threat to the overall forest area and integrity of our forests. These and other factors that emerge over the coming years will be assessed and integrated into an approach to increase forest cover.

Current policies, plans and implementation tools to help mitigate impacts to forest cover include: implementation of the Emerald Ash Borer Management Plan, update of the Forest Conservation Bylaw, update of the Regional Official Plan and development of urban forest management plans.

Developing an approach to increase forest cover by 3,855 hectares requires exploration of challenges, opportunities and mechanisms to maximize results

To achieve 25 per cent forest cover in York Region requires a region wide net gain of 2.2 per cent or 3,855 hectares of forest. Using the Regional Official Plan target date of 2031, an increase of 203 hectares per year (since 2012) would be required to achieve the 25 per cent target. Staff will be taking a more direct role in harmonizing efforts to achieve the forest cover target. *Attachment 2* illustrates some of the key milestones over the next five years to help us achieve the forest cover target by 2031, including partnerships, integrated monitoring and focused planting projects.

Urban forest canopy cover contributes to healthy sustainable communities

Although not entirely captured in a forest cover assessment, single isolated trees and smaller treed areas provide leaf area and canopy cover within urbanized areas, this contributes to healthy sustainable communities. Together with local municipalities, recent urban forest studies, supported in part through the Greening Strategy, have identified how urban forests provide benefits to communities. Some of these benefits include carbon sequestration, improved air quality, human health benefits, stormwater management and energy savings. For example, trees reduce the demand for heating and cooling in buildings by shading and cooling homes during summer months, and providing protection from cold winds in the winter. In the Cities of Markham and Vaughan and the Town of Richmond Hill, the estimated reduction in annual energy costs from the existing urban forest canopy cover has been modelled at more than \$5 million.

In addition to calculating the benefits of forests, these forest studies identify opportunities for rehabilitation and habitat enhancement, which support a targeted approach for on-the-

ground action. Our partnership planting programs (i.e. LEAF) continue to benefit canopy cover and the urban forest. Municipalities have already begun using the data in the development of Urban Forest Management Plans. These plans will help guide restoration initiatives, inform street tree programs and assist with park planning initiatives.

Town of Aurora initiated Urban Forest Study in 2013 to provide data on tree canopy cover and associated benefits

In 2013, the Town of Aurora partnered with York Region to undertake an Urban Forest Study using the iTree modeling program developed by the United States Department of Agriculture's Forestry Division. Toronto Region Conservation Authority provided the technical expertise for this study and collected data that will be used to assess urban forest canopy cover and priority planting areas. These studies will help inform the development of municipal Urban Forest Management Plans as required in the Regional Official Plan (policy 2.2.50). To date, York Region has worked with the Cities of Markham and Vaughan and the Town of Richmond Hill to complete Urban Forest Studies.

Link to key Council-approved plans

Delivery of the Greening Strategy, specifically through partnerships, agreements, incentives, community engagement and financial leveraging, is consistent with the Regional Official Plan and Strategic Plan fundamental principles of Economic Vitality and Good Government. The strategy protects and promotes a linked greenlands system, and provides for habitat creation and increased forest cover in the Region through partnerships and community engagement. Achievements of the Greening Strategy support the principles of Healthy Communities and Sustainable Environment from the 2011 to 2015 Strategic Plan. The Greening Strategy is recognized as an influential document for Vision 2051 and its delivery supports seven of the eight goal areas.

5. FINANCIAL IMPLICATIONS

Through partnerships, the Greening Strategy leverages funds for projects in each program area. In 2013, the total expenditure associated with Greening Strategy delivery, including leveraged funds through 79 partnerships, was \$6.2 million with partners contributing \$3.6 million (58 per cent) of these funds, resulting in a 1.4:1 ratio. Funding ratios vary with each project and often exceed this ratio through individual partnerships. Greening Strategy programs and funds are reviewed annually to ensure alignment with Regional objectives. In 2013, \$1.7 million was allocated to deliver the Greening Strategy, including land protection and preservation. The Greening Strategy reserve balance at 2013 year end was \$2.1 million.

6. LOCAL MUNICIPAL IMPACT

Local municipalities are important partners in the Greening and Securement Strategies. They are consulted or involved in a number of implementation programs and projects, including urban forest studies, local municipal tree planting projects and environmental land protection and preservation initiatives. Local municipal staff are active members at all Greening Strategy working groups and forums. These forums provide an opportunity for regular communication and engagement.

All nine local municipalities have benefited directly from the Greening Strategy and have a strong history of involvement in environmental projects and programs. The Greening Strategy clarifies the Regional interest and program delivery continues to provide local municipalities and residents with opportunities to enhance the natural environment.

7. CONCLUSION

For more than a decade, York Region has been recognized for its innovative leadership in the development and implementation of the Greening Strategy. The strategy has proven to be an effective and successful delivery mechanism, achieving significant results toward a sustainable natural environment. Continued emphasis on reforestation efforts toward achieving 25 per cent forest cover are a key deliverable through the Greening Strategy. Achievements also contribute to the health and wellbeing of the Region's residents and represent a sound investment in green infrastructure. Programs and achievements continue to help realize the Region's environmental policies and objectives as articulated in the Regional Official Plan, Strategic Plan and Vision 2051.

For more information on this report, please contact Laura McDowell, Director of Environmental Promotion and Protection at Ext. 75077 or Ian Buchanan, Manager of Natural Heritage and Forestry at Ext 75204.

The Senior Management Group has reviewed this report.

Attachments – 2