

Clause 8 in Report No. 6 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on April 19, 2018.

8 2017 Greening Strategy Achievements

Committee of the Whole recommends:

- 1. Receipt of the presentation by Ian Buchanan, Manager, Natural Heritage and Forestry Services, Environmental Services.
- Adoption of the following recommendation contained in the report dated March 23, 2018 from the Commissioner of Environmental Services:
 - The Regional Clerk forward a copy of this report to the local municipalities in York Region, Environment and Climate Change Canada, Natural Resources Canada, Ontario Ministry of Natural Resources and Forestry, and Ontario Ministry of the Environment and Climate Change.

Report dated March 23, 2018 from the Commissioner of Environmental Services now follows:

1. Recommendation

It is recommended that:

1. The Regional Clerk forward a copy of this report to the local municipalities in York Region, Environment and Climate Change Canada, Natural Resources Canada, Ontario Ministry of Natural Resources and Forestry, and Ontario Ministry of the Environment and Climate Change.

2. Purpose

This report provides Council with an update on activities, partnerships and significant 2017 Greening Strategy achievements.

2017 Greening Strategy Achievements

3. Background and Previous Council Direction

Working with residents and partners since 2001, Greening Strategy innovation protects, restores and enhances the natural environment

Since adoption of the Greening Strategy in 2001, achievements are reported to Council annually. Resident engagement, partnerships and focused implementation deliver hands-on action consistent with environmental policies in the Regional Official Plan. Greening Strategy accomplishments contribute to indicators tracking success towards the Regional Official Plan target of 25 per cent woodland cover including trees and shrubs planted and environmental lands protected. Significant achievements have been made over time since 2001 and are highlighted in Figure 1. Greening projects and other Forestry programs are aligned to protect, restore and enhance the natural environment. Investment in green infrastructure, including tree planting and forest management, has multiple benefits ranging from climate change mitigation to public health improvements.

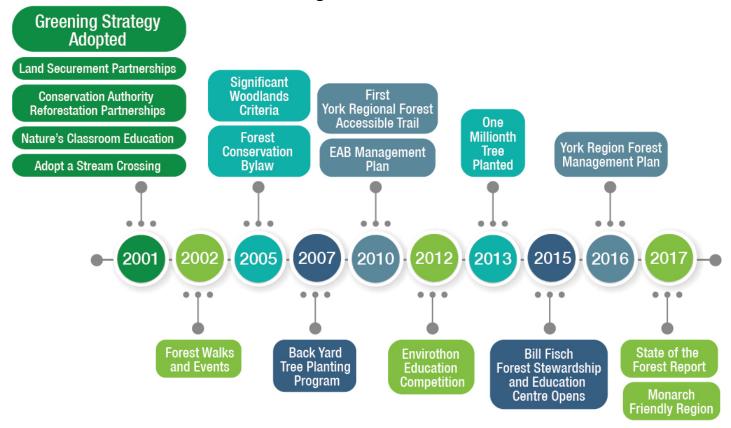
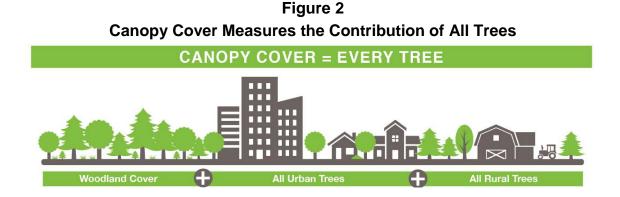


Figure 1 Greening Achievements Since 2001

Greening Strategy achievements support York Region Forest Management Plan goals to increase tree canopy and woodland cover

Complimentary to each other, Regional Greening Strategy achievements contribute to the York Region Forest Management Plan's five goals and actions. Greening Strategy projects and programs provide a platform to both educate residents on the benefits of trees and deliver subsidized tree planting opportunities, which result in increased canopy and woodland cover. Woodlands are heavily treed areas that are at least 0.2 hectares in size. Canopy cover includes all woodlands, individual trees and small treed areas as shown in Figure 2.



Woodland cover was last reported to Council on <u>March 23, 2017</u> to be 23.2 per cent or 41,244 hectares. This is an increase of 725 hectares from the previous assessment in 2014 (based on 2012 data). Through Greening Strategy tree planting programs progress continues towards the 25 per cent woodland cover by 2031 Regional Official Plan target. Tree planting efforts also support work towards increasing the Region's canopy cover from current 31 per cent to 35 per cent by 2031. The York Region Forest Management Plan will achieve the Region's requirements under amendments to the *Municipal Act, 2001* to adopt a policy with respect to the manner in which the municipality will protect and enhance tree canopy and natural vegetation in the municipality. This requirement will be in force effective March 1, 2019.

4. Analysis and Implications

2017 achievements delivered through Greening Strategy projects and programs continue to surpass all targets

Great progress continues to be made towards a greener York Region with targets exceeded in all Greening Strategy action areas (Table 1). As a key delivery mechanism, the Regional Greening Strategy continues to support the 2015-2019 Strategic plan objective to preserve green spaces.

Action Area	Goal	Target (minimum)	2017 Achievement
Stewardship and public education	Educate residents about the value of green infrastructure and	100 outreach events	274 outreach events ¹
	provide opportunities to connect with nature and inspire action	Reach 50,000 residents ²	Over 50,000 residents reached ²
Enhancement and rehabilitation	Enhance and rehabilitate the natural environment on both public and private lands	Plant 70,000 trees and shrubs	85,464 trees and shrubs planted
Environmental land protection and preservation	Protect core natural areas and restore linkages	Protect a five year annual rolling average of 65 hectares of land	69.2 hectare five year annual rolling average ³
Leadership, innovation and knowledge	Share knowledge, demonstrate leadership and be innovative in	Host four technical regional forums	14 forums hosted ⁴
	the protection of the natural environment	Present at two science and technology forums	11 presentations at science and technology forums

Table 1Greening Strategy Action Areas, Goals, Annual Targets and Achievements

¹172 of these events are organized and hosted by partners.

² Includes 16,561 participants engaged in outreach events and residents reached through media (social, print, television, etc.).

³ 69.2 ha reflects a five year rolling average with 346 hectares protected over the last five years (2013-2017). This metric reflects the fluctuating nature of opportunities based on donations and landowner goodwill.

⁴ Forums include different meetings with agency and municipal staff across a broad range of disciplines participating in biannual forums such as invasive species, street trees, local Environmental Advisory Committees (EAC's) etc.

Investments in green infrastructure provide public health benefits and contribute to climate change mitigation

In response to receiving the 2016 Greening Strategy Achievements report, the Federal Minister of Natural Resources shared his appreciation for the Region's innovation and efforts towards green infrastructure improvements. Council's investment in the Greening Strategy, including tree planting and the protection of forests, contributes multiple benefits for residents. Scientific evidence demonstrates the link between human health and the presence of green infrastructure, including trees and shrubs. Increased canopy and woodland cover also contributes to climate change mitigation by reducing energy needed to cool and heat buildings, slowing storm water run-off, and sequestering carbon.

Greening Strategy programs are designed to increase awareness of the benefits of green infrastructure, inspire action, and provide opportunities that support community action. Attachment 1 showcases some of the 2017 Greening Strategy achievements, including funding that was leveraged across all action areas.

Through partnerships 85,464 trees and shrubs were planted, contributing to 40 hectares of new forest

Last year was another exceptional year with 85,464 trees and shrubs planted through a variety of Greening Strategy initiatives (Figure 3). Through collaboration and funding grants the Region's investment of \$213,000 leveraged an additional \$678,446 (up from \$588,956 in 2016 and \$306,065 in 2015) from partner contributions towards planting initiatives. Partners are able to use the Region's contributions to leverage additional funds through programs e.g. access to the provincial 50 Million Tree fund through Forests Ontario.

Planting efforts created 40 hectares of new woodlands, primarily located in the Regional Greenlands System. Sixty-six per cent of the trees were planted through our subsidized large scale planting program, Grow Your Legacy, delivered through Conservation Authorities. The largest individual program increases were realized through the Green Action Partnership Fund program with an 18 per cent increase in tree planting from the previous year.



Implementation on track with 32 of 34 York Region Forest Management Plan short term actions initiated, on-going or complete

The York Region Forest Management Plan identified 34 short term actions to be completed by the end of 2019. A significant number of short term actions were advanced in all five goal areas during 2017 (Figure 4). Completed actions include report on urban forest studies, updates to the Region's Street Tree and Forest Preservation Guidelines, release of State of the Forests report, documented use of agricultural easements and shared benefits with Ontario Farmland Trust and development of a Green Infrastructure Asset Management Plan.

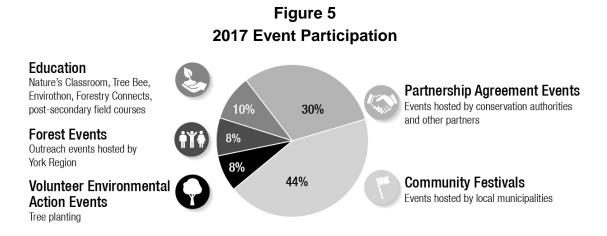


Figure 4 York Region Forest Management Plan Progress

Delivery of 21 on-going short term actions is realized through continued success of the Regional Greening Strategy, Forest Conservation Bylaw, invasive species management programs and management of the York Regional Forest. Progress made in 2017 on 32 of 34 short term objectives puts the plan on target to complete all short term actions by the end of 2019. Work plans are underway for two planned actions, including innovative low-impact development practices using green infrastructure and promotion of the functions and services provided by trees and woodlands. Attachment 2 provides progress highlights related to each York Region Forest Management Plan goal area.

Environmental awareness increased through residents participating in over 274 education and outreach events

Education and outreach programs include interpretive forest walks and public events, presence at local festivals, and a variety of outreach and engagement activities delivered through partnerships. In 2017, more than 16,561 residents participated in 274 environmental outreach and education events (up from 221 in 2016). Registration for all programs continues to be at or near capacity. Figure 5 summarizes the activities and public participation.



To meet the Region's commitments through the Monarch Pledge to promote the importance of the monarch butterfly and its habitat, key messaging was updated raising awareness of this sensitive species. Highlights include support for the Town of Richmond Hill's native plant sale, inclusion of monarch butterfly images and wording in promotional items, along with updates to our Nature's Classroom education programs.

Compared to 2016, nearly twice as many people are looking into our programs through social media with a focus on information about forest events and tree planting subsidies. In support of the Customer Experience Plan, Corporate Communications reached out to residents through focus groups to determine interest and priorities. Feedback clearly indicated a strong interest in information about trees and forests, and planting alternatives to invasive plants. In response to this feedback, our communication efforts were refined to focus on these areas, including articles in York Region Matters.

Forest Stewardship and Education Centre received two international awards and certification for six Living Building Challenge petals

Recognizing excellence in sustainable design and construction the American Public Works Association presented the Region with the Project of the Year Award for Structures. Additionally, the Forest Stewardship Council (FSC) Leadership Award was received for use of FSC certified wood in the Forestry Centre.

Of the seven Living Building Challenge certification petals (performance areas), six were awarded in 2017, including beauty, site, materials, equity, water and health. Work is progressing toward achieving the final petal, net zero energy use.

Twenty-three hectares of environmental land protected on four sites in the Regional Greenland's System with a total value of \$2.4 million

Permanent protection of 1,335 hectares of natural landscapes and features through ownership or conservation easements has been secured through the Environmental Land Protection and Preservation program since 2001. In the last five years 346 hectares have been protected including the addition of 64 hectares to the York Regional Forest. Projects are brought forward through partnership agreements, negotiations with private landowners and collaboration with conservation and municipal partners.

In 2017, four sites (Attachment 3) including lands within King Township and the Town of East Gwillimbury totalling 23 hectares (\$2.4M appraised value), were protected through donation and acquisition projects with our partners (Table 2).

Strategic partnerships with local municipalities, Conservation Authorities, Nature Conservancy of Canada (NCC), and Oak Ridges Moraine Land Trust (ORMLT) continue to leverage resources and deliver results. The following describes characteristics of each property:

- Rose property is a 10.5 hectare site located within the Happy Valley Forest Area of Natural and Scientific Interest (ANSI) and was acquired by NCC. This property provides an important connection between existing forests owned and managed by NCC in King Township.
- King Township surplus land was a 2.4 hectare project within the Happy Valley Forest. Protection through acquisition by NCC secured a natural area adjacent to lands already owned and managed by NCC. In addition to the annual agreement funding the Region provided \$30,000 from the Greenlands Property Securement Reserve in support of this project.
- Private donation of 6.1 hectares of the provincially significant Black River Wetland Complex was received by the ORMLT and is now protected. ORMLT collaborated with the land owner using Environment Canada's Ecological Gifts program to attain ownership of these environmentally sensitive lands in the Town of East Gwillimbury.
- A conservation easement for a 4.1 hectare property identified as Natural Core Area in the Oak Ridges Moraine Plan was attained by the ORMLT in King Township.

Property	Municipality	Size (ha)	Partner and Project Cost*	York Region Contribution***	Property Value		
Rose purchase	King	10.5	\$790,000** (NCC)	Agreement funds	\$600,000		
King Township purchase	King	2.4	\$136,000** (NCC)	Agreement Funds plus \$30,000	\$90,000		
Private donation (ORMLT)	East Gwillimbury	6.1	\$41,000 (ORMLT)	Agreement funds	\$75,000		
Conservation Easement (ORMLT)	King	4.1	\$51,000 (ORMLT,NCC)	Agreement funds	\$1,650,000		
Total		23.1	\$1,018,000	\$30,000	\$2,415,000		

Table 2Properties Protected in 2017

*Project cost can include property purchase, legal, survey and NCC stewardship. **Project cost appears high due to federal funding requirement to establish a stewardship endowment fund of 15 per cent of the property value. Regional funds are not used towards the endowment fund.

***Region has agreements with NCC and ORMLT with annual contributions of \$120,000 and \$50,000 respectively in accordance with Council approved partnership agreements.

York Region recognized leader in asset management with an innovative approach to Green Infrastructure Asset Management

In 2017 the Region prepared its first Green Infrastructure Asset Management Plan. The plan is one of the first asset management plans in Canada to include both green assets (street trees and York Regional Forest) and supporting built infrastructure (irrigation systems, trails, etc.). The Region's green infrastructure assets have been valued at \$488 million, which is expected to increase in the future as trees and forests grow in size. The asset value is determined using the depreciated replacement cost for built infrastructure and valuation of trees and forests that accounts for the increasing value as they grow in size.

Applying the principles of asset management to green infrastructure ensures that the right investments are being made to optimize environmental and health benefits to residents over the long term, and that the assets are managed sustainably over their life cycle.

5. Financial Considerations

\$1.7 million invested to deliver Greening Strategy actions in 2017

Through partnerships, the Greening Strategy leverages significant resources and funds for projects in each program area. For example, Environmental Land Protection and Preservation projects target a minimum of 2:1 of leveraged dollars to the Region's contributions. Funding contributions leveraged through partnerships vary with each project, and often exceed the 2:1 ratio. Greening Strategy programs are reviewed annually to ensure alignment with Regional objectives.

In 2017, \$1.7 million was allocated to Greening Strategy delivery. \$790,000 was contributed to the Environmental Land Protection and Preservation reserve account for future land protection initiatives, and \$910,000 supported projects and programs such as Back Yard Tree Planting, outdoor education, land protection partnership agreements and tree planting. From partner fundraising an additional \$1.8 million were leveraged in 2017 meeting the expected ratio of leveraged funding to Regional contribution of 2:1.

6. Local Municipal Impact

Local municipalities are important partners for Greening Strategy implementation

Local municipalities are consulted or involved in many of the programs and projects, including outreach, tree planting projects and environmental land protection and preservation initiatives. Local municipal staff are active on many Greening Strategy working groups including the Land Securement Working Group, Invasive Species Working Group and Urban Forestry Forum. Collaborative forums provide an opportunity for communication, engagement and alignment.

Greening Strategy programs provide local municipalities and residents with opportunities to enhance the natural environment. Greening initiatives support protection of Regional and local natural heritage systems, which in turn support sustainable communities. All nine local municipalities have a strong history of involvement in environmental projects and programs, and have benefited directly from the Greening Strategy.

7. Conclusion

Greening Strategy programs continue to be an effective mechanism to support the Region's environmental policies and combat climate change

The Region continues to be recognized for its innovative leadership through delivery of the Greening Strategy. Residents are provided with opportunities to engage in environmental education and action. Achievements contribute to the health and well-being of the Region's residents, help mitigate the impacts of climate change, and represent a sound investment in green infrastructure. Programs with measurable results continue to help realize the Region's environmental policies and objectives as articulated in the 2010 Regional Official Plan, 2015 to 2019 Strategic Plan and Vision 2051.

For more information on this report, please contact Laura McDowell, Director of Environmental Promotion and Protection at 1-877-464-9675 ext. 75077 or Ian Buchanan, Manager of Natural Heritage and Forestry at ext. 75204.

The Senior Management Group has reviewed this report.

March 23, 2018

Attachments (3)

#8324622

Accessible formats or communication supports are available upon request



FORESTRY

1-877-464-9675 Try 1-888-512-6228 accessyork@york.ca

york.ca/forestry





YORK REGION FORESTRY Healthy Trees, Healthy Communities



2017 GREENING STRATEGY ACHIEVEMENTS

The Greening Strategy promotes on the ground action that supports healthy natural environments. It plants the seeds of inspiration for people of all ages to cultivate sustainable communities, now and for the future.



ENHANCEMENT AND REHABILITATION

Enhance and rehabilitate the natural environment on both public and private lands.

STEWARDSHIP AND EDUCATION

Educate residents about the value of green infrastructure and provide opportunities to connect with nature and inspire action.

PROTECTION AND PRESERVATION

Protect core natural areas and restore linkages.

LEADERSHIP AND INNOVATION

Share knowledge, demonstrate leadership and be innovative in the protection of the natural environment.

> Forest Stewardship Centre is **PETAL CERTIFIED** with 6 of 7 Living Building Challenge

Protected a five year

.2 HECTARES

in 2017

f. *X*

of Greenlands System including

23 HECTARES

rolling average of

69

16,561

residents engaged through

274 EVENTS

Planted

petals achieved.

Partnerships across all action areas leveraged \$1.8M ····

Continue to meet pledge commitments as the first

MONARCH BUTTERFLY

FRIENDLY REGION

85,464 TREES AND SHRUBS



YORK REGIONAL FOREST MANAGEMENT PLAN

update underway

1,943 TREES planted on urban streetscapes

Take A Walk new user participation **UP 13%**



.12,000

Forests of York Region calendars to residents and community centres

More than

50,000 residents reached through a variety of media



Attachment 2

YORK REGION FOREST MANAGEMENT PLAN

Short Term Actions (2017 to 2019) 2017 STATUS

	ACTION STATUS ✓ → ○ ACTION STATUS BY GOAL ✓ Complete 5 → In Progress 6 ○ Ongoing 2	P 34
GOAL 1 Canopy Cover and Woodland Cover		STATUS
Develop a prioritized planting plan by analyzing current planting oppo	rtunities.	
Continue to assess tree planting opportunities on Regional-owned pro	perties.	C
Prepare a summary report of urban forest studies, including results of	ntegrated monitoring.	\checkmark
Continue to optimize existing tree planting partnerships (e.g. school be	pards).	C
Implement 'Grow Your Legacy' large-scale private land tree planting ca	impaign.	
Continue to actively support others in the development of urban Fores	t Management Plans.	Ċ
Continue to collaborate with York Region departments, local municipa information and exchange ideas.	lities, agencies and partners to share	Ċ
Monitor to ensure that the York Region Forest Management Plan is fol and activities achieve desired results.	lowed, reports on results are prepared	Ċ
Complete the update of York Region's Street Tree and Forest Preservat	on and Compensation Guidelines.	\checkmark
Update York Region's Street Tree Planting Design Guidelines and share	e with local municipalities.	
Assess the alignment of the Forest Management Plan with Provincial F	Plans and York Region's Official Plan.	
GOAL 2 Climate Change and Sustainability		STATUS
Continue to undertake assisted migration trial plantings to adapt to cli	mate change.	Ċ
Continue to collaborate with organizations including the Invasive Spec Agency and the Canadian Forest Service to quickly detect and respond	•	Ċ
Continue to collaborate with partners to explore science-based biologi	cal control opportunities.	Ċ
Look into innovative low-impact development practices that emphasiz infrastructure to manage storm water quantity and quality.	e conservation and use of green	Р

In Progress

✓ Complete

P Planned

() Ongoing





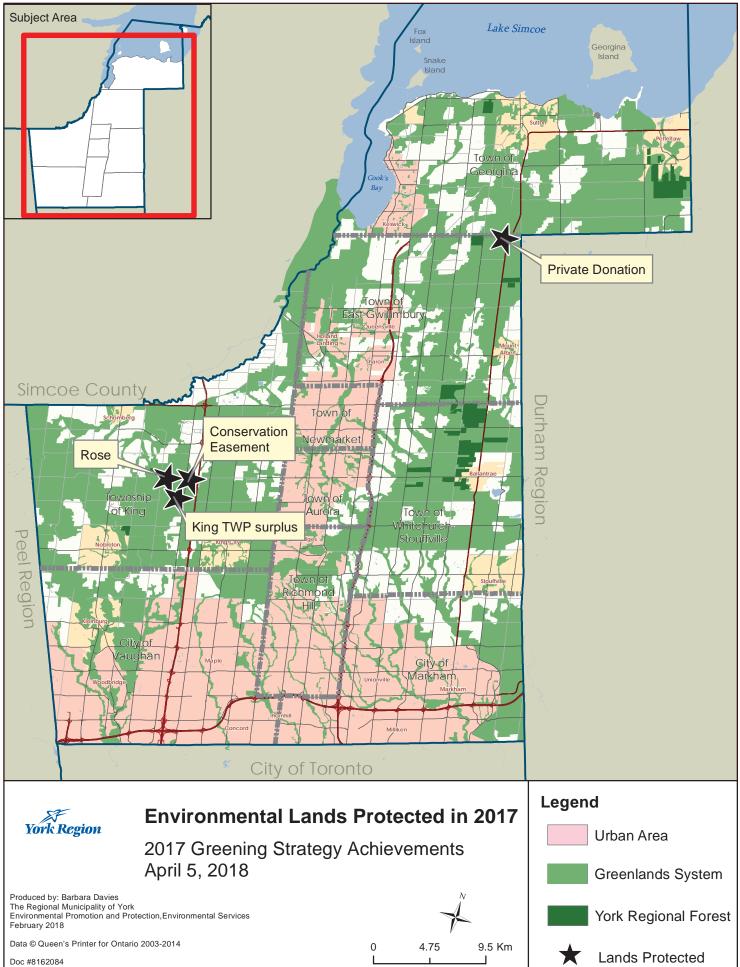






GOAL 3 Awareness and Education	STATUS
Produce and distribute a 'State of the Forest" report summarizing the results of urban forest studies.	\checkmark
Educate York Region residents about the ecosystem functions and services provided by trees and woodlands.	Р
Continue to deliver York Region forest festivals and events and education programs.	Ċ
Continue to expand partnerships with York Region Public Health.	\bigcirc
Participate in and contribute to legislation and policy reviews that recognize connections of trees and public health.	C
Support and participate in local community events that promote the benefits of trees.	C
Jpdate website to post educational materials; promote events and solicit public feedback.	C
GOAL 4 Stewardship and Taking Action	STATUS
Continue to explore environmental partnerships with the agricultural community to protect farmland and improve canopy cover.	C
Document use of agricultural easements and shared benefits, practices in collaboration with the Ontario Farmland Trust.	\checkmark
Continue to coordinate the Emerald Ash Borer Technical Working Group.	C
Continue to manage the York Regional Forest to meet the Forest Stewardship Council certification requirements.	Ċ
NEW! Prepare York Regional Forest 20 Year Forest Management Plan for 2019-2038 period.	
Share best practices on urban tree planting and maintenance through forums and events.	C
Strengthen relationships among the Region, local municipalities, Ontario Woodlot Association, Forests Ontario and others to encourage good forestry practices on private land.	C
GOAL 5 Governance, Innovation, Research and Development	STATUS
Continue to review emerging science-based arboriculture practices and integrate into tree planting and maintenance specifications.	Ċ
Continue to review science-based silvicultural practices to inform management of the York Regional Forest and implementation of the Forest Conservation Bylaw.	C
Complete a green infrastructure asset management plan for Regional assets, including street trees.	\checkmark
Promote green infrastructure asset management as a best practice to the province, municipalities and other organizations.	→
Continue to provide input to provincial and federal legislation through coordinated reviews within and between departments.	C

Attachment 3



Path: H:\Environmental Services\E16 Greening Strategy Initiatives\E16 - SEC - Securement\ES 1(2) Greening Strategy Achievements 2017d.mxd



ENVIRONMENTAL SERVICES Greening Achievements2017

Ian Buchanan April 5, 2018



eDOCS#8146489 york.ca

Presentation Outline

- Context
- Benefits of Green Infrastructure
- 2017 Greening Strategy achievements
 - stewardship and education
 - enhancement and rehabilitation
 - environmental land protection
 - leadership, innovation and knowledge
- Working with our municipal partners
- Next steps...



Greening Strategy Context

- Adopted in 2001 to deliver environmental action
- 4 Action Areas
 - Stewardship and education
 - Enhancement and rehabilitation
 - Environmental land protection
 - Leadership, innovation and knowledge
- Links to
 - York Region Official Plan
 - Vision 2051
 - 2015 2019 Strategic Plan
 - York Region Forest Management Plan



Green infrastructure advances multiple Council goals ...

3

Multiple Benefits of Green Infrastructure Including ...



MITIGATE CLIMATE CHANGE

Forests in York Region remove and store 77,000 tonnes of carbon each year - that's equivalent to taking 60,000 cars off the roads annually.



IMPROVE HEALTH Spending time near trees improves physical, emotional and mental health.



REDUCE FLOODING

Trees and woodlands intercept and absorb rainwater which helps reduce flooding.

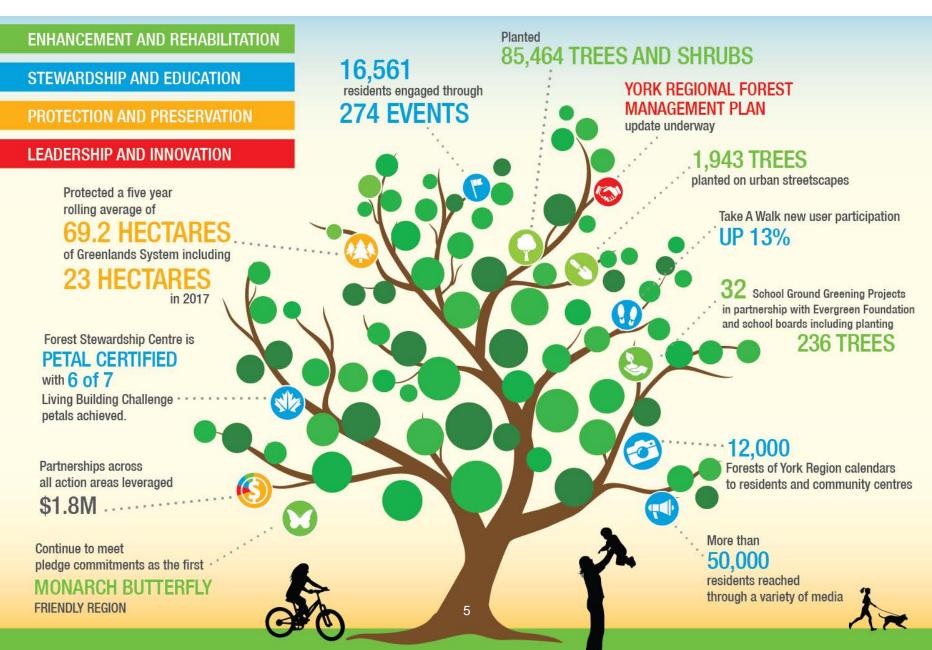


IMPROVE WATER QUALITY Trees and forests filter rainwater making it cleaner.



Healthy trees Healthy communities

2017 Another Successful Year — making a difference



Stewardship and Education

- Festivals, natures classroom education, community planting events, interpretive walks
- 16,561 residents engaged through 274 outreach events
- Monthly forest hikes attract 1,198 residents
- Special environmental events included:
 - Earth Week (April)
 - Children's Water Festival (May)
 - Envirothon (May)
 - TreeBee (Spring)
 - National Forest Week (September)



Engage and educate residents inspiring action

Canada's 1st Monarch Butterfly Friendly Region

- Registered with National Wildlife Federation
 as a monarch butterfly friendly Region
- Met pledge commitments:

BEAUTIFUL GARDER

L callealthy Yards

St Hogh

- revised messaging and delivery to promote pollinators including monarch butterflies
- support Richmond Hill native plant sale
- assessed Regional properties for habitat works in 2018 – administration building and Harry Walker Parkway

WILDFLOWERS



Enhancement and Rehabilitation



Plantings occur on public and private land in all nine municipalities.

Over 1.4M trees planted since 2001 ...

Environmental Land Protection and Preservation

- Nature Conservancy of Canada partnership protects 12.9 ha two acquisitions in Township of King
- Oak Ridges Moraine Land Trust receives
 6.1 ha donation and achieves 4.1 ha conservation easement
- 23 ha achieved with more projects on track for 2018
- Working with local municipalities, Conservation Authorities, non government organizations and residents



York Regional Forest Bendor & Graves Tract

1,335 ha protected since 2001...

ę

Leadership, Innovation & Knowledge

York Region Forest Management Plan

Progress made on 32 of 34 short term actions (2017-19) including completion of:

- ✓ State of the Forest report
- ✓ Street Tree and Forest Preservation Guideline
- ✓ Urban Forest Study summary
- Green Infrastructure Asset Management Plan



Leadership, Innovation & Knowledge

- Municipal information exchange forums
 - Invasive Species Management
 - Environmental Advisory Committees
 - Urban Forestry
- Regional Public Works Commissioners of Ontario - Chair Urban Forestry Subcommittee
- Ecohealth Ontario collaborative public health benefits of trees e.g. Youtube video



Greening Strategy

Working with our local municipal partners

Projects and collaboration in all nine local municipalities including:

- Environmental land protection and preservation projects
- Urban Forest Studies and Urban Forest Management planning
- Community tree planting events
- Local Environmental Advisory Committee
 coordination and support
- Technical Working Groups and Forums





Together we achieve more...

Next Steps

- Continue with partnership implementation
- Advance 'benefits of trees' campaign
- Promote subsidized tree planting programs
- Implement priority actions towards increasing canopy and woodland cover
- Complete consultation on the York Regional Forest Management Plan (2019 – 2039)

