



Staff Report for Committee of the Whole Meeting

Date of Meeting: February 20, 2018

Report Number: SRPRS.18.047

Department: Planning and Regulatory Services

Division: Policy Planning

Subject: 2017 Greening the Hill Report (Environment Strategy Update)

Purpose:

The purpose of this report is to provide Council with the *2017 Greening the Hill Report*, an annual progress update on implementation of the Environment Strategy.

Recommendation(s):

- a) That staff report SRPRS.18.047 be received for information.

Contact Person:

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Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Regulatory Services
Italo Brutto, Commissioner of Environment and Infrastructure Services

Approved by: Neil Garbe, Chief Administrative Officer

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), Town Solicitor (as required), Commissioner, and Chief Administrative Officer. Details of the reports approval are attached.

Background:

2017 Greening the Hill Report - A Progress Update on Implementation of Richmond Hill's Environment Strategy: Introduction

The Town of Richmond Hill and its community are strongly committed to protecting their local environment. In light of expanding provincial and federal attention to climate change and sustainability, the front-line role of municipalities is more important than ever – as corporate stewards, public policy makers and providers of community programming, education and outreach. Richmond Hill's Environment Strategy, *Greening the Hill: Our Community, Our Future*, outlines how the Town will continue to protect, restore and enhance our natural environment over the short, medium and long term.

The purpose of this staff report is to provide an annual update to Council on the progress of short-term initiatives throughout 2017 that were identified for Phase 1 implementation.

Environment Strategy

Greening the Hill – A Strategy for Environmental Action

Richmond Hill's Environment Strategy, *Greening the Hill: Our Community, Our Future*, is a corporate document that outlines both policy direction and specific actions designed to reduce our community's impacts on the environment and make improvements for a more resilient and sustainable community. Based on extensive community and stakeholder consultation, the Environment Strategy was approved by Council on April 28, 2014 and is being implemented over a 15+ year time period.

The Environment Strategy focuses on areas of responsibility within the municipal mandate that impact air quality, water resources and land resources at the local level. It directs environmental management approaches for activities under our jurisdiction. The scope of the Environment Strategy is defined by the following areas for which goals, objectives and actions have been established:

Air Quality:

- Sustainable energy; and
- Sustainable transportation.

Water Resources:

- Watershed management;
- Surface/stormwater quality and quantity;
- Groundwater protection, recharge and discharge; and
- Water conservation.

Land Resources:

- Sustainable land development;
- Natural environment management;

- Invasive species management;
- Wildlife management;
- Sustainable urban agriculture and local food production; and
- Solid waste management.

The actions outlined in the Environment Strategy are further categorized under the Town's three primary areas of municipal influence: regulatory powers; municipal services and operations; and community programming.

Implementing Richmond Hill's Strategy – Our Actions and Leadership

The Environment Strategy is paired with an Implementation Plan that puts our ideas into action by defining roles and responsibilities across all Town departments. Initiatives outlined in the Plan are reviewed by a cross-department steering committee of directors and managers who select priorities on a yearly basis, share information and updates, and collaborate on strategic actions.

In order to achieve common goals outlined in the Environment Strategy, Town departments work in partnership with one another, and with residents, businesses and other stakeholders in the community. To support the Environment Strategy, an Environmental Communications Strategy was designed to inform the community and involve partners in reaching our goals. Reflecting some of those goals, an Environmental Scorecard framework was established to share our progress with the community and inform future decision-making.

To correspond with the Town's Official Plan, the Environment Strategy has a planning horizon to the year 2031. Both the Strategy and Implementation Plan will receive updates and reprioritization at five-year intervals, and staff will provide annual updates to Council. The purpose of this report is to provide the 2017 update, as outlined below.

2017 Highlights – What Richmond Hill Has Done to Become a More Sustainable Community

2017 was the third full year of the Environment Strategy's implementation, which is being carried out in three phases (short, medium and long-term actions).

Highlights of the Town's progress in 2017 are described below and showcased in the attached "Environment Strategy 2017 Accomplishments" leaflet (Attachment 1).

A detailed progress chart (Attachment 2) for Phase 1 actions identifies milestone achievements in the past year and the status of actions underway or completed in 2017.

Air Quality Initiatives

Our health and quality of life depend on the air we breathe. Pollutants released into the air – particularly greenhouse gas (GHG) emissions from fuel combustion – contribute to smog and climate change. Richmond Hill can influence local air quality through policies and actions related to energy and transportation. Staff are pursuing opportunities for

energy conservation and efficiency within Town facilities, infrastructure and operations, and are using municipal planning tools to encourage and enable more active transportation.

Sustainable Energy

Energy Efficient Projects for Town Facilities

Richmond Hill's inter-departmental Energy Team continues to work with staff, consultants and utility companies to lower energy consumption and costs by retrofitting facilities with energy efficient equipment and technology that yields short payback (2 – 3 years). Examples of projects recently completed include:

- Elgin Barrow Arena's refrigeration plant was upgraded with energy efficient equipment that also recovers waste heat from the ice making process to pre-heat domestic hot water. Estimated annual savings are close to 110,000 kilowatt hours (kWh) and over \$17,000 in annual cost reductions.
 - Incentive from utility company received for this project = \$18,900
- Lights at Lois Hancey Aquatic Centre were retrofitted with light-emitting diodes (LEDs). Estimated annual savings over 80,000 kWh and over \$13,000 in annual cost reduction.
 - Incentive from utility company received for this project = \$6,600
- Lights at the Richmond Green Sports Centre were retrofitted with LEDs. Estimated annual savings over 127,000 kWh and over \$21,000 in annual cost reductions.
 - Incentive from utility company received for this project = \$10,700

Detailed Energy Audits for Town Facilities

Under the Town's Energy Conservation and Demand Management Plan (also known as the Corporate Energy Plan), staff conducted energy audits for Richmond Hill's top 13 energy consuming facilities. The audits identified 64 energy conservation measures which were batched into 13 energy efficiency projects. These projects were prioritized for implementation based on payback, reliability of technology, GHG reduction potential, and ease of implementation and operation. A capital business case was submitted in the 2018 capital budget to implement the 13 projects over 4 years in 3 phases.

Mayor's Megawatt Challenge Award

Richmond Hill's energy-saving efforts earned a Living City Energy Efficiency Leadership Award (Gold) through the Toronto and Region Conservation Authority's (TRCA) Mayor's Megawatt Challenge Program. This award recognizes leadership in achieving energy targets in municipal buildings. In 2016, consumption at our main Municipal Offices dropped below 20 kWh per square foot of building space, exceeding the conservation target by 13%. This reduction was largely due to energy efficiency projects implemented over the last few years, including a lighting retrofit, replacement of heat pumps and

make-up air units, as well as pump optimization and installation of aerators in all washrooms.

Outdoor Lighting Network Conversion to LED

Over 9,100 of the Town's outdoor lights (streets, parking lots, and trails) were converted to LEDs in 2017; installation is expected to be completed in 2018. LED lights consume 50 to 60% less energy and last five times longer than high-pressure sodium (HPS) bulbs. As a result of this conversion, the Town is expected to significantly reduce annual energy and maintenance costs and cut greenhouse gas emissions by 300 tonnes – the equivalent of taking 64 cars off the road. In addition, the Town is installing a Smart Lighting Control system that will improve maintenance capabilities and service levels.

Sustainable Transportation

Pedestrian and Cycling Master Plan (PCMP)

One of the key projects under Richmond Hill's PCMP is the local portion of the Lake-to-Lake Cycling Route and Walking Trail which connects Lake Ontario to Lake Simcoe. This initiative has moved forward with a funding partnership between the Town and York Region.

- Phase 1 of Richmond Hill's Lake-to-Lake Trail was completed in 2017. This 2.26 kilometre portion runs along the Leslie Street boulevard, connecting bike lanes on Highway 7 to the Beaver Greenway Trail north of Sixteenth Avenue.
- Phase 2 funding applications and design work have been initiated to continue the route further north.
- A cycling monitoring program is underway to collect data on how our cycling network is being used (for example, distinguishing between recreational and commuter use). Analysis of trends and patterns will inform cycling policy and programming, confirm the impacts of recent trail improvements, and support the prioritization of future capital projects to expand our cycling network.

Water Quality Initiatives

Richmond Hill's kettle lakes, streams and rivers support a wide variety of plants, animals and fish. During large rainstorms, our stormwater systems and natural waterways move runoff away from developed communities, helping reduce the risk of flooding. However, pollution from human activities, as well as rising temperatures and changing weather patterns, all impact the health of local water supplies. We can preserve Richmond Hill's water resources by protecting our lakes, rivers, and streams and by using water wisely.

Stormwater Management, Water Quality Protection, Water Conservation

Valleyland Restoration Projects

In 2015, Council approved a 10-Year Capital Plan for Valleyland Restoration. This plan is based on background studies that determined threats (such as erosion and flooding)

to Richmond Hill infrastructure and property within our many watercourses. Restoration projects aim to protect public safety as well as the Town's investments.

Several projects under the Valleyland Restoration Plan were pursued through 2017:

- Elgin Mills Greenway (detailed design complete);
- Morgan Boyle Park/Pomona Creek (feasibility study complete, detailed design initiated); and
- Richvale Greenway (Environmental Assessment study initiated).

Land Resources Initiatives

The Environment Strategy tells us that building healthy communities means managing growth and development while respecting our natural resources. With increasing development pressure, it is important that our municipal practices consider the conservation, stewardship and restoration of natural areas. In Richmond Hill, we are exploring opportunities to enhance and restore our land-based features through sustainable land development, natural environment management, sustainable urban agriculture and solid waste management.

Natural Environment

Urban Forest Management

Richmond Hill's first Urban Forest Management Plan was initiated in 2017 starting with the development of background studies. These studies highlight the importance of trees for human and environmental well-being and the need to manage threats such as invasive species and climate-related events such as ice storms.

- Monitoring of our canopy cover (total land area covered by trees and shrubs) suggests that management efforts are working. Since 2010 Richmond Hill's canopy has increased by almost 5% (from under 25% to over 29%, meeting Regional targets), despite tree loss from the Emerald Ash Borer, the 2013 ice storm, and ongoing land development.

Community Stewardship Program

For almost 20 years the Community Stewardship Program has brought together staff, partner agencies, and residents to support natural environment goals through hands-on stewardship, educational workshops, and awareness campaigns.

- Together with Town partners and volunteers, over 10,000 trees and shrubs were planted at more than 60 events throughout Richmond Hill in 2017. Since the inception of the program in 1998, close to 200,000 trees have been planted.

Healthy Yards Program

The Healthy Yards Program promotes native tree planting on private property, primarily through an annual spring sale of subsidized trees and shrubs, as well as rain barrels and composters sold at cost.

- New partnership and funding through York Region supported the continuation of this successful public program; in 2017, the Town sold approximately 6,000 wildflowers, 1,750 trees and shrubs, 70 rain barrels and 200 backyard composters to Richmond Hill residents. Since the start of the Healthy Yards Program, Richmond Hill residents have taken home and planted in their yards a total of 11,655 trees and shrubs.

Sustainable Urban Agriculture and Local Food Production

Community Garden Policy Approval & Implementation

The Environment Strategy identifies 'sustainable urban agriculture and local food production' as holistic ways to heighten community health and resilience while lessening our environmental footprint. Council approved the Town's first Community Garden Policy in 2017. Building on the success of the existing garden at Phyllis Rawlinson Park, the Policy allows staff to establish new collective gardens with community groups when interest arises, and provides for the creation of a second allotment garden in Richmond Hill.

- Staff are currently considering multiple applications from garden groups who would like to establish collective community gardens on Town land.

Communicating the Strategy to the Public

The Town's Environment Strategy calls for an environmental communications plan to provide information to the community and involve partners in reaching the Town's goals. It also supports the creation of an Environmental Scorecard to share progress and inform future decision-making.

Public Outreach

In 2017, education and engagement initiatives continued to promote environmental awareness within the community and provide opportunities for citizens to get involved. The Town's popular 'Greening the Hill' booth provided an opportunity to connect with residents directly at key public events, including the Mill Pond Splash and the Canada 150 SESQUI installation. Staff created a new 'Lunchbox Footprint' game for a local school ecofair and a children's activity book about water in Richmond Hill, as an educational complement to the Town's 'Fill It Up' water trailer and the interactive stormwater management display board. Staff also participated in environmental liaison and speaking functions to community groups (e.g. Blue Dot, Scouts) and schools, and expanded volunteer opportunities for residents of all ages.

Environmental Scorecard

The Environment Strategy includes a commitment to publicly report on the progress of Richmond Hill's environmental performance through an Environmental Scorecard, to be released every five years. The scorecard framework and focused set of indicators was established in 2016 and consolidation of data from the first three years of

implementation is underway. The first scorecard – covering Phase 1 (2015-2019) of the Strategy's implementation – will be released in 2020.

Next Steps

The Environment Strategy outlines a series of actions envisioned to take approximately 15+ years to complete. At this stage, after approximately 3 years, implementation is proceeding on target. Almost half of the Phase 1 actions relate to ongoing processes or programs; these now form part of annual workplans. Among the remaining project-based Phase 1 actions, about 75% are now underway or, in some cases, complete.

In 2018, implementation of the Environment Strategy will continue with direction from the inter-departmental Steering Committee. Notable projects anticipated for 2018 include: completion of the LED conversion project for the Town's outdoor lighting; a proposal to advance climate change initiatives that include the Community Energy Plan; construction of the second phase of Richmond Hill's portion of the Lake-to-Lake route, continuing north along Leslie Street from Beaver Greenway to Major Mackenzie Drive; construction of Elgin Mills Greenway; initiation for updating and enhancing the Sustainability Metrics Program; development of new community gardens; and initiation of new pilot projects for energy conservation and waste diversion.

Financial/Staffing/Other Implications:

The works outlined in this report are incorporated in the various department budgets and workplans.

Relationship to the Strategic Plan:

The Environment Strategy is aligned with the Town's Strategic Plan by providing:

Stronger Connections in Richmond Hill: These initiatives support the improvement of connections in our built and natural environment (e.g. trails, bike lanes, natural corridors and greenspaces) and provide opportunities for people (within the corporation and within the community) to get involved and participate in making improvements for the environment.

Better Choice in Richmond Hill: These initiatives promote better options to move around, live, work and do business by implementing actions that support a more sustainable urban environment (e.g. infrastructure and facilities to support cycling, walking, carpooling and electric vehicles; low impact development techniques; sustainable design standards; pilot studies/demonstration projects).

A More Vibrant Richmond Hill: These initiatives contribute to a sense of identity and place by creating opportunities for people to experience the Town's natural environment (e.g. actions related to restoring, protecting or enhancing the Town's natural heritage and stewardship programs for people to get involved). They also help the Town look to the future by initiating environmental improvements through corporate leadership, collaboration, innovation and the exchange of ideas.

Wise Management of Resources: These initiatives result in less waste (e.g. energy and water efficiency improvements in facilities and vehicles, and waste diversion) and help to protect and enhance our environment (e.g. actions to improve the health of our natural heritage and water resource systems).

Conclusion:

Richmond Hill's Environment Strategy, *Greening the Hill: Our Community, Our Future* identifies actions to manage environmental impacts, enhance local ecosystems, and create a more sustainable community over a 15+ year timeframe. This staff report provides an update on how Phase 1 actions (2015-2019) progressed during 2017. The various projects moving forward in the past year demonstrate the Strategy's focus on areas where the Town can make the most difference: regulatory powers; municipal operations and services; and community programming. Progress in all areas is a positive reflection of the commitment and collaboration involved in moving Richmond Hill toward sustainability.

Attachments:

- Attachment 1 – Environment Strategy 2017 Accomplishments
- Attachment 2 – Environment Strategy Phase 1 Progress Chart (2017)

Report Approval Details

Document Title:	SRPRS.18.047 Greening the Hill.docx
Attachments:	- SRPRS.18.047 Attachment 2_EnvStrategy_Master Tracking Chart_2017 update.pdf - SRPRS.18.047 Attachment 1_Environmental Strategy 2017 Accomplishments FINAL_Jan30.pdf
Final Approval Date:	Feb 5, 2018

This report and all of its attachments were approved and signed as outlined below:

Terry Ricketts - Feb 2, 2018 - 11:23 AM

Patrick Lee - Feb 2, 2018 - 12:34 PM

Italo Brutto - Feb 2, 2018 - 2:37 PM

Kelvin Kwan - Feb 2, 2018 - 3:12 PM

Neil Garbe - Feb 5, 2018 - 8:56 AM