

PRIORITIES AND KEY INITIATIVES COMMITTEE – NOVEMBER 26, 2012

GREEN DIRECTIONS VAUGHAN COMMUNITY SUSTAINABILITY AND ENVIRONMENTAL INDICATORS

Recommendation

The Commissioner of Strategic and Corporate Services in consultation with Manager of Environmental Sustainability recommend:

1. That a report and presentation on community sustainability and environmental indicators be received in response to a request of Priorities and Key Initiatives Committee on June 11, 2012; and,
2. That the Environmental Sustainability Office prepare 2011 baseline indicators and report back on these indicators annually along with the *Green Directions Vaughan* implementation update beginning with the 2012 update in Q2/2013.

Contribution to Sustainability

Objective 6.1 of *Green Directions Vaughan*, “To fully support the implementation of *Green Directions* at all levels of City operations”, is expanded on further in subsection 4.2 Monitoring and Reporting on Progress. Reporting back to the community should involve reporting on changes in sustainability/environmental indicators. Indicator reporting would not replace the annual status update on implementation of the community sustainability and environmental master plan but compliment it.

Economic Impact

All activities related to establishing, tracking and communicating of indicators can be supported through existing budget allocations. Staff from various departments will collect indicator information relevant to the actions they are working on and provide the information to the Environmental Sustainability Office. For those indicators not being tracked by a specific department, the Environmental Sustainability Office will use existing staff time to obtain the indicator information.

Communications Plan

The Environmental Sustainability Office, in consultation with Corporate Communications, would develop an indicators page under the Environmental Sustainability area of the external website. The indicators page would provide background on the indicator and briefly describe actions that the City is taking to address the specific indicator. Indicators would be released simultaneously with the annual implementation update for *Green Directions Vaughan*. As with previous implementation updates, it would be appropriate to issue a News Release highlighting the update and indicators. This is consistent with Goal 5 of *Green Directions Vaughan*, “To be leaders in advocacy and education on sustainability issues”, where “Vaughan is committed to sharing its successes with the community. . .”. The Environmental Sustainability Office will work with Strategic Planning to ensure that *Green Directions Vaughan* indicators are also linked to the corporate performance measures dashboard.

Purpose

The purpose of this report is to provide the Priorities and Key Initiatives Committee with sustainability/environmental baseline indicators to assist with monitoring the implementation of the *Green Directions Vaughan*.

Background - Analysis and Options

Background

In April 2009 Council approved the *Green Directions Vaughan*, our Community Sustainability and Environmental Master Plan. *Green Directions Vaughan* contains a set of recommended actions that address the range of municipal responsibilities including both operational and regulatory functions. It also serves as the City's Integrated Community Sustainability Plan (ICSP). The ICSP is a long-term plan designed to guide the community toward a more sustainable future by addressing environmental, cultural, social and economic issues.

Green Directions Vaughan identifies six categories that classify Vaughan's functions. These are further broken down into goals, objectives and a series of actions, which describe how each of the goals can be achieved. The categories and goals include:

What We Use:

Goal 1: To significantly reduce our use of natural resources and the amount of waste we generate.

How and Where we Grow:

Goal 2: To ensure sustainable development and redevelopment.

How We Get Around:

Goal 3: To ensure that Vaughan is a city that is easy to get around with low environmental impact.

How We Live:

Goal 4: To create a vibrant community where citizens, businesses and visitors thrive.

How we Lead:

Goal 5: To be leaders in advocacy and education on sustainability issues.

How we Operate:

Goal 6: To ensure a supportive system for the implementation of *Green Directions*.

The objectives are more specific statements that describe how the goals will be achieved. Each of the goals has multiple objectives. The actions refer to tasks that need to be undertaken to achieve the prescribed objective. There can be multiple actions attached to each objective. Actions are assigned to a Commission for implementation within a specific timeframe.

On May 25, 2010, April 5, 2011 and June 26, 2012, reports were ratified by Council on the implementation of *Green Directions Vaughan* following the first, second and third anniversaries, respectively of its approval. Media releases and web based reports highlighting specific actions under each of the six goal areas were generated as a result of the report recommendations.

Indicators

Core indicators assist in measuring the impact of the outcomes and outputs of *Green Directions Vaughan*. In section 4.2 of *Green Directions Vaughan*, reference is made to reporting on changes in sustainability/environmental indicators for the purposes of reporting on implementation progress. Sustainability Indicators are also referenced in Appendix C of

the Community Sustainability and Environmental Master Plan as the City of Vaughan's funding agreement with the Association of Municipalities of Ontario on Federal Gas Tax Revenues noted that indicators related to cleaner air, cleaner water and lower greenhouse gas emissions should be established. With implementation of *Green Directions Vaughan* well underway, it is important to establish indicators in order to monitor the changes that have occurred as a result of implementing the Master Plan.

Any set of indicators established for *Green Directions Vaughan* must be aligned with the strategic framework of the City. Discussions between the Environmental Sustainability Office and the Senior Manager of Strategic Planning have, and will continue to occur, to ensure the alignment of indicators. Any *Green Direction Vaughan* indicators must be able to be rolled up into broader strategic indicators known as the corporate performance measures dashboard. Some indicators will be unique and separated from the dashboard as per reporting requirements i.e.) Partners for Climate Protection Program and Global City Indicators. The core indicators should be easily tracked, meaningful to the departments responsible for tracking the indicator and compatible with existing benchmarks.

Benchmarks

As highlighted in the June 2012 Priorities and Key Initiatives Committee report, there are several benchmarking initiatives such as the Global City Indicators, the Living City Report Card and the Green Cities Index, which could provide useful comparators for *Green Directions Vaughan* indicators.

The City of Vaughan is a member of the Global City Indicators which provides an established set of city indicators with a globally standardized methodology that allows for global comparability of city performance and knowledge sharing. A few of the indicator categories resonate with the goal areas within *Green Directions Vaughan* and have been incorporated into the initial sample of indicators. These include particulate matter as a measure of air quality and residential electricity use as a measure of energy.

The Living City Report Card is an assessment of the Greater Toronto Area environmental performance. The area of interest comprises the geographic area covered by the Toronto Region Conservation Authority. Although many of the indicators were tracked on a regional basis, several of the areas of interest of within the Living City report card correspond to similar areas within *Green Directions Vaughan*. These areas include air quality, water, waste, transportation and land use.

The Green Cities Index, which was released in September 2011, measures and rates the environmental performance of 27 cities in the US and Canada. The Index scores cities across nine categories – carbon dioxide, energy, land use, buildings, transport, water, waste, air quality and environmental governance – and is composed of 31 indicators. Sixteen of the Index's 31 indicators are derived from quantitative measurements and the remaining 15 indicators are qualitative assessments of cities' environmental policies, aspirations and ambitions – e.g., a city's commitment to consuming energy produced from green and local sources, the extent to which it promotes the usage of public transport and makes efforts to reduce road traffic, the ambitiousness of its waste reduction and water management policies, and the stringency of its environmental strategy.

All of the benchmarking initiatives noted in previous paragraphs have been considered as the indicators for *Green Directions Vaughan* were established. These programs have topical indicators of interest and would enable the City of Vaughan to compare its progress in addressing key areas of interest with other jurisdictions.

Indicator considerations

At the June 11, 2012 Priorities and Key Initiatives Committee, Council reiterated the need to establish indicators to measure the success of implementation of the Community and Environmental Master Plan. A concern was raised regarding measuring items that the City of Vaughan could not have control over. In developing our indicators, while some are specific, clear and in our control others are broader, not in our control but dictated by other organizations (i.e. Global City Indicators, FCM- Partners for Climate Protection). Although some of these indicators are not fully within our control, they pose an opportunity to demonstrate leadership in an area of increased public interest.

Consultations were held with Planning, Engineering and Public Works, Community Services and Economic Development over the summer and early part of the fall of 2012. These Commissions and/or Departments expressed a need to develop simple or meaningful indicators that resonate with the public and are readily tracked. Indicators for specific projects such as the Sustainability Guidelines for Development Projects should be aligned with those being developed for *Green Directions Vaughan*. The objective of tracking indicators must be clearly defined and communicated to stakeholders. The indicators should be reported on either annually or biannually. Another point that was stressed was the need to have ready access to the information that comprises the indicator. If there is limited capacity to collect indicator information then it isn't worthwhile promoting it as a reliable indicator.

The Municipal Performance Measurement Program is performance measurement and reporting system administered by the Ministry of Municipal Affairs and Housing that promotes local government transparency and accountability. Municipal performance measures are authorized under the *Municipal Act 2001*. There is an environmental sub category which contains measures related to wastewater, storm water, drinking water and solid waste. Although many of the measures are focused on costs there maybe a few worthwhile of consideration as indicators of the Community Sustainability and Environmental Master Plan.

The main criteria used in establishing the Community Sustainability and Environmental Master Plan indicators was to source objective information that is readily and inexpensively available or is already collected. A secondary approach was to establish indicators of an objective nature where information is not readily available and where one or more departments would be required to do the data collection.

Other Ontario municipalities such as the City of Oakville and the Town of Pickering have established community sustainability and environmental indicators and have reported back on them. Others such as the City of Markham and City of Mississauga are in the process of establishing community sustainability and environmental indicators.

One of the main objectives of establishing indicators is to determine quantitatively if the actions undertaken under the Community Sustainability and Environmental Master Plan are leading to positive changes. By illustrating to stakeholders what is being measured, why it is being measured, where are we now and what is being done, raises the profile of the issue being addressed. It also encourages actions by stakeholders to help address the measure. The greater the stakeholder interest in addressing the measure the greater the likelihood that progress will be made in improving it.

Attachment 1 illustrates 24 indicators that cover 15 categories in all the relevant goal areas of *Green Directions Vaughan*.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the *Green Directions Vaughan* objective to lead and promote environmental sustainability and implement the Community Sustainability and Environmental Master Plan.

Regional Implications

York Region established sustainability indicators within Vision 2026, the strategic plan which is being updated to Vision 2051. Annual monitoring of these indicators will continue. Several regional indicators are being incorporated into our indicators to facilitate comparative benchmarking.

Conclusion

The tracking of quantitative indicators is required to measure the impact of the outcomes and outputs of *Green Directions Vaughan*. By profiling various indicators, the greater the stakeholder interest will be in addressing the measure which has the potential to increase the likelihood that progress will be made in improving it.

Indicators tracked should be aligned with the strategic framework of the City and correspond to the relevant core indicators being tracked in the Global City Indicators project that the City is involved in. The indicators should be easily tracked, meaningful to the departments responsible for tracking the indicator and compatible with existing benchmarks. Efforts will be made to connect Green Directions Vaughan indicators to the corporate performance measures dashboard. The 26 indicators being proposed cover 15 categories in the five goal areas of *Green Directions Vaughan* are in-line with indicators established by other leading municipalities.

Attachments

1. Proposed Indicators
Community Sustainability and Environmental Master Plan

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Respectfully submitted,

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Commissioner of Strategic and Corporate Services

**INDICATORS:
COMMUNITY SUSTAINABILITY AND ENVIRONMENTAL MASTER PLAN**

Goal Area	Category	Indicator (unit)	Source
Resource Use (What we use)	Energy	- *Total residential electric use per capita (kWH/pp) - City of Vaughan buildings - Energy use (kWH per 1000 sq ft ²)	- PowerStream - PowerStream, City of Vaughan Building & Facilities Dept.
	Air Quality	- *Particulate matter (PM2.5) (micrograms per m ³) - Percentage of Low emission vehicles within City Fleet (%) - Number of days when the Air Quality Index (AQI) is poor (AQI over 49)	- Ontario Ministry of the Environment- Air quality reports - City of Vaughan- Fleet Dept. - Ontario Ministry of the Environment- Air quality reports
	Climate Change	- Community Greenhouse gas emissions as a whole (eCO ₂ -equivalent carbon dioxide) - Corporate Greenhouse gas emissions per resident served (eCO ₂ -equivalent carbon dioxide/pp)	- City of Vaughan-Env. Sustainability Office - City of Vaughan-Building & Facilities Dept.
	Storm water Management	- Percentage of area with storm water controls (%)	- City of Vaughan-Dev & Transportation Eng. Dept.
	Solid Waste	- Residential Waste Diverted from Landfill- (%) - Waste Diverted from Landfill-City facilities (%)	- City of Vaughan- Public Works Dept. - City of Vaughan-Building & Facilities Dept.
	Water Use	- Daily volume of water used per person (L)	- Region of York- Environmental Services
	Growth (How we grow)	Land Use	- Greenspace ¹ (hectares per 1000 people)
Urban forest		-Tree Canopy cover as a percentage of urban area (%)	- City of Vaughan-Parks and Forestry Dept.

¹ Green space refers to publicly accessible lands, owned by conservation authorities, municipalities, the Governments of Ontario and Canada, and includes parks, ravines, nature reserves and hazard lands.

Goal Area	Category	Indicator (unit)	Source
	Sustainable Built Form	- Building floor area certified under recognized green building programs (ft ²)	- Canada Green Building Council, Building Owners and Managers Association (BOMA) of Canada
Transportation (How we get around)	Walking and Cycling Paths	- Length of walkways and cycling paths (km) - Percentage of walkways and paths which are linked (%)	- City of Vaughan-Dev. Transportation Eng. Dept. - City of Vaughan-Dev. Planning & Transportation Eng. Dept.
	Transit	- Passenger trips per person (#/pp)	- York Region Transit
Community (how we live)	Economic Activity	- Level of Construction Activity (\$ value of Building permits) - Ratio of Population to jobs - Number of jobs provided by Vaughan businesses (#)	- City of Vaughan-Building Standards/Ec. Development - York Region Employment Survey - York Region Employment Survey
	Active Community	- Total participant hours for recreation programs per 1000 persons (hours/1000 people) - Number of stakeholders in involved in different community mechanisms (community meetings, social media, on-line newsletter)	- Municipal Performance Measurement Program - City of Vaughan, Clerks and Corporate Communications Dept.
	Creative Community	- Number of cultural initiatives supported, endorsed by the City (#)	- City of Vaughan, Recreation and Culture Dept.
Leadership (How we lead)	Engagement	- Number of environmentally related public outreach events held by the City of Vaughan and number of attendees at these events (#)	- City of Vaughan-Environmental Sustainability Office

* Currently tracked as part of Global City Indicators