

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 11, 2018

Item 2, Report No.16, of the Committee of the Whole (Working Session), which was adopted without amendment by the Council of the City of Vaughan on April 11, 2018.

2 GREEN DIRECTIONS VAUGHAN ANNUAL UPDATE – REPORT ON QUANTITATIVE INDICATORS FILE 22.31.1

The Committee of the Whole (Working Session) recommends:

- 1) That the recommendation contained in the following report of the Deputy City Manager, Planning and Growth Management, dated April 9, 2018, be approved; and**
- 2) That the presentation and Communication C2, presentation material entitled, “*Green Directions Vaughan Annual Update Report – Indicator Trends 2011 to 2016*”, be received.**

Purpose

To provide Council with an annual update on Green Directions Vaughan, the City’s Community Sustainability and Environmental Master Plan. Objective 6.1 of Green Directions Vaughan outlines the City’s commitment “to fully support the implementation of Green Directions at all levels of City operations”, and under Action 6.1.6 provides that an annual report to Council be prepared on the status of existing programs and accomplishments “for the purpose of monitoring the implementation of the Community Sustainability and Environmental Master plan.”

Report Highlights

- Thirteen of the 24 quantitative indicators that are used to measure progress on Green Directions Vaughan demonstrate modest improving trends.
- One indicator (per capita residential electricity consumption) shows an upward trend despite energy conservation programs and points to the need for action under the City’s Municipal Energy Plan.
- The proposed revision to the current Green Directions Vaughan sustainability plan provides an opportunity to replace or augment several indicators with a more meaningful measure of sustainability progress.

Recommendations

- 1. THAT the Green Directions Vaughan Annual Update – Report on Quantitative Indicators BE RECEIVED.**

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Background

In April 2009, Council approved Green Directions Vaughan, the City's Community Sustainability and Environmental Master Plan. As the City's sustainability 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) and allows the City to be eligible for funding from the Federation of Canadian Municipalities.

Green Directions Vaughan (GDV) establishes a definition of "sustainability", an "environmental ethic" and a set of "principles" to guide the implementation of the plan. The definition of sustainability reflects the breadth of municipal responsibilities, where, "Sustainability means we make decisions and take actions that ensure a healthy environment, vibrant communities and economic vitality for current and future generations."

The plan 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 Vaughan.

The over 80 sustainability actions in GDV are under review to fulfill a Service Excellence Strategy initiative to revise GDV and, hence, are not reported on in this annual update. In this transition, the annual GDV implementation update to Council is scoped to the 24 quantitative indicators approved by Council in 2012. City staff continue to work to integrate the findings of the departmental consultations and community engagement effort into the revision of GDV objectives and actions.

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GDV indicators are aligned with global and regional efforts to measure progress on sustainability.

The ability to measure progress on key indicators is critical to improving environmental outcomes and quality of life. High quality data informs effective decision-making in cities. Making such information available to the public in a meaningful way and using the findings to modify City programs in an adaptive management approach also supports participatory democracy. GDV indicators are aligned with global and regional efforts to measure progress on sustainability.

World Council on City Data

The World Council on City Data (WCCD), of which the City of Vaughan is a member, is leading the implementation of ISO 37120: Sustainable Development of Communities – Indicators for City Services and Quality of Life. The standard is a set of 100 globally comparative indicators designed to aid City officials and City managers in tracking performance and benchmarking data across 17 quality of life themes. ISO 37120 is expanding to measure elements of resilience and “smart” Cities.

The Living City Report Card

The Toronto and Region Conservation Authority recently published an update of the Living City Report Card for 2016 to track progress of the following goals: reduced carbon; clean air; clean water; reduction of waste; sustainable land use and expanded greenspace; and healthy biodiversity. The Living City Report Card provides an opportunity to join a regional alliance for collective action. Aligning the GDV indicators to the Living City Report Card and World Council on City Data provides for benchmarking with other municipalities, understanding where the City of Vaughan can inform other municipalities, and recognizing areas of improvement for the City to contribute to regional sustainability performance.

Indicator Update

In November 2012, Council adopted 24 quantitative indicators to measure the progress and impact of the outcomes of GDV. Tracking core environmental indicators helps the City to measure our progress towards achieving a sustainable environment, vibrant communities and a strong economy, thereby meeting the reporting commitments outlined in Section 4.2 and Appendix C of GDV. The 24 indicators are grouped into 14 categories shown below (Figure 1) in relation to the Goals in Green Directions Vaughan.

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GOAL 1: WHAT WE USE <u>INDICATORS:</u> Energy Climate Change Stormwater & Water Solid Waste	GOAL 2: HOW WE GROW <u>INDICATORS:</u> Greenspace Urban Tree Canopy Sustainable Built Form	GOAL 3: HOW WE GET AROUND <u>INDICATORS:</u> Walking/Cycling Paths Transit Trips	GOAL 4: HOW WE LIVE <u>INDICATORS:</u> Active Community Creative Community Economic Activity
GOAL 5: HOW WE LEAD <u>INDICATOR:</u> Engagement			
GOAL 6: HOW WE OPERATE			

Figure 1 Categories of quantitative indicators in relation to the six Goal areas of Green Directions Vaughan. Goals #5 and #6 include actions that are more supportive of community and corporate outcomes.

Attachment 1 outlines the 24 indicators in tabular format and displays the progress over the past 5 years of reporting. Attachment 2 of this report illustrate trends for the 24 indicators where reliable data was available to identify trends.

Of the 24 indicators used to measure progress, 19 indicators demonstrate improving or stable trends

Based on current data, 19 indicators are generally trending in the right direction. Indicator tracking identifies reduced corporate energy use and greenhouse gas (GHG) emissions, modest reductions in residential potable water consumption, improved waste diversion from landfill, and growing resident participation in community activities. A high level assessment of the progress reveals the following status of the 24 indicators:

- 13 indicators demonstrate improving trends;
- 6 indicators are stable;
- 1 indicator shows a concerning trend (residential electricity use per capita is increasing);
- 2 indicators require evaluation to identify a more suitable measure of progress (corporate fleet emissions and stormwater management); and
- 2 indicators require data assessment (data was received late for the analysis in this report or data compilation is underway).

The following notable trends from 2011 and the year-over-year change between 2015 to 2016 are provided in more detail, as follows:

- City facility electricity consumption decreased (improved) by 4.7% from 2011 to 2016 and decreased (improved) 1.4% from 2015 to 2016.

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- Corporate GHG emissions per resident served decreased 27% from 2012 to 2016, with a 9% reduction from 2015 to 2016 (23% and 7% reductions in absolute GHG emissions measured in tonnes eCO₂).
- Residential waste diversion improved 11% from 2011 to 2016. Residential waste diversion improved 3% from 2015 to 2016 to 66%, meaning that only 34% of residential waste went to landfill.
- The number of total square feet certified “green” (BOMA ‘BEST’ or LEED certified) in Vaughan increased 192% from 2011 to 2016, and 20% from 2015 to 2016, with over 6 million square feet of Vaughan buildings certified.
- Number of jobs provided by Vaughan businesses increased by 23% from 2011 to 2016, with a 4% increase from 2015 to 2016. In 2016, over 200,000 jobs were provided by Vaughan businesses.
- From 2011 to 2016, the number of attendees at environmental events increased 45%. In 2016, over 19,000 residents participated in events like Earth Hour Vaughan, 20-Minute Makeover and Environmental Days and marked a 1% improvement from 2015.

Service Excellence - Improving indicator tracking improves decision-making and is a platform for communicating results about Vaughan’s sustainability journey

Staff have addressed issues such as consistent methodology and data availability to assess trends. With the development of the second iteration of Green Directions Vaughan underway, City Staff have identified some indicators that will require minor revision. These revisions will provide more accurate data tracking, consistent methodologies, and provide better context for shaping Vaughan’s sustainability and environmental journey. Proposed changes being considered include:

- Residential Electricity Consumption: Electricity use by residents is growing on a per capita basis, not simply as population increases, such that conservation efforts are not yet resulting in a de-coupling of electricity consumption from growth. However, direction in the Province’s Climate Change Action Plan places more emphasis on the relatively low-carbon electricity grid such that electricity consumption may continue to increase even with aggressive conservation efforts. In addition to electricity consumption, companion indicators include tracking total energy use (including natural gas and transportation fuels) and ensure decreased community GHG emissions and increased renewable energy generation in the community. The trend also points to the need for action under the City’s Municipal Energy Plan to enable further electricity conservation in the private sector.

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- **Corporate Energy Use:** The City continually seeks to expand corporate energy conservation measures beyond a focus on electricity use for the mandatory update of the Energy Conservation Demand Management Plan in 2019. A future focus will include natural gas reductions in City facilities. “Green fleet” strategies could include right-sizing the fleet, integration of zero emission and/or low emission vehicles, alternative mobility options such as car-sharing and shuttle services, and improved efforts to reduce vehicle idling. Natural gas consumption in City facilities and fuel use by City vehicles are already tracked and reported annually as part of the City’s membership in Partners for Climate Protection. As such, fossil fuel consumption is an appropriate indicator to determine if City conservation efforts are effective in reducing fuel consumption.
- **Water Consumption:** If the City implements the Advanced Metering Infrastructure (i.e. smart water meter program), more detailed data for residential and business water consumption will be available for Vaughan that will complement the Region-wide data currently used.
- **Corporate Waste Diversion:** City Staff have identified waste diversion in corporate facilities as a “leading by example” initiative. A corporate waste diversion strategy is required to better facilitate “reduce, reuse, recycle” habits in facilities to decrease waste to landfill. This effort should foster cross-collaboration amongst City departments such as Facility Maintenance Services, Environmental Services, and Vaughan Public Libraries to ensure positive uptake of a comprehensive waste reduction program. The recent renewal of the corporate waste contract ensured that weights and waste diversion are tracked and can continue to be used as the main indicator. Any contract renewal with waste haulers should maintain or improve the data collection regarding waste streams.
- **Stormwater Controls:** Vaughan is a newer urban community and most of Vaughan has stormwater controls unlike parts of Toronto and older communities that have combined sewer systems. Installation of treatment train measures to manage stormwater, such as low impact development techniques, can be used as an indicator for stormwater management. This can also be tracked as a component of green infrastructure asset management.

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- **Urban Canopy:** Urban forest measurements are generally only undertaken every 5 years as this measure does not change dramatically unless there are severe disturbances such as extreme weather events or damage from invasive species. A related indicator is the annual number of trees that are planted as part of the City's urban forestry program. Street trees and other treed areas can be tracked as part of an integrated green infrastructure asset management inventory.
- **Recreation Hours:** Staff in the Policy Planning and Environmental Sustainability department will work with Recreation Services on appropriate indicators that may be recommended through the revision of the Active Together Master Plan.
- **Stakeholders Involved in Community Mechanisms:** Social media information is currently used to generate values for this indicator. This approach requires an improved assessment of meaningful stakeholder involvement so that these values can be used by staff in the Policy Planning and Environmental Sustainability department, who will work with the office of Strategic Planning to ensure consistent methodology is applied.

The City is revising Green Directions Vaughan and staff will provide a report to Council in 2019

Staff initiated the renewal of Green Directions Vaughan in late 2016. Revised sustainability actions are the result of departmental consultation, a policy review and municipal benchmarking. A consulting contract provided assistance to structure the City's community engagement effort in support of the revision of GDV. The digital content created for this effort will be used to improve ongoing communications of GDV. Internal departmental consultation and public feedback will continue through 2018 to finalize the sustainability actions for Council approval in 2019.

Staff provided a GDV update in September 2016 to Committee of the Whole. As identified at the time, a critical component of the revision of GDV will be the alignment of its actions with the changing policy landscape at the Provincial and Federal levels. Several key themes have been identified and need to be explored as part of the GDV revision and include the following: better alignment with the objectives of health agencies; more attention to climate change mitigation efforts; a new focus on climate change adaptation and resilient communities; and ensuring the ability to measure progress on GDV actions.

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Approval of the Growth Plan 2017 and changes to the *Municipal Act* continue to demonstrate Provincial policy alignment for integrated environmental sustainability, economic viability and vibrant communities. Additional themes have emerged requiring further exploration as part of the revision to GDV to reflect the Provincial policy direction and include the following:

- climate change as a matter of provincial interest;
- asset management and resilient infrastructure aligned with climate change adaptation;
- transit hierarchy to promote transit supportive developments;
- further emphasis on compact urban form and mixed use;
- complete communities including attention to housing diversity, housing affordability and community hubs;
- complete streets and active transportation;
- better integration of energy planning into land use planning;
- strengthening the role of watershed planning in land use planning, including through green infrastructure and low impact development techniques; and
- supporting the Agricultural System and Agri-Food Network.

Demonstrating progress on shared goals and actions in the community can help to create a culture of conservation

In general, GDV, which was approved in 2009, is more of a corporate implementation plan. A focus on shared goals and actions in the community is an important lens for interpreting proposed new actions in the revision of GDV. Attachment 3 provides a high level summary of the progress and a near-term outlook with reference to the six goal areas and 18 objectives of GDV.

Previous Reports/Authority

[Green Directions Vaughan Community Sustainability and Environmental Master Plan Implementation – Annual Update File #22.31](#) (September 7, 2016)

[Green Directions Vaughan Community Sustainability and Environmental Master Plan Implementation – Annual Update](#) (June 1, 2015)

[Green Directions Vaughan Implementation Update](#) (June 18, 2014)

[Green Directions Vaughan Implementation Update](#) (May 27, 2013)

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Analysis and Options.

The current indicators generally remain relevant to assist in measuring the progress of GDV, but several indicators require replacement or ongoing improvement in their respective assessment methodology. Measures of corporate fleet emissions and stormwater management require new indicators to represent meaningful outcomes. Accounting for social media interaction complicates the indicator for stakeholder involvement in community mechanisms and requires further effort to develop a consistent tracking methodology. The urban tree canopy is measured infrequently (e.g. about every 5 years), such that an indicator that can be reported annually (e.g. number of trees planted) will complement the broader metric.

Federal, Provincial and York Region targets that relate to these indicators will be examined as part of the revision to Green Directions Vaughan. Where appropriate, such targets can be interpreted at the local municipal scale.

Financial Impact

There are no economic impacts resulting from the adoption of this report. All activities related to the establishment, tracking and communication of the Green Directions Vaughan indicators are supported through existing budget allocations.

Broader Regional Impacts/Considerations

In 2007, York Region released its Sustainability Strategy, which outlined its commitment to creating a sustainable future for current and future residents of York Region. With the goal to balance a sustainable natural environment and a healthy community with economic vitality, the Regional plan aims to inform decision-making processes within the region. Of the nine municipalities in York Region, seven have drafted integrated community sustainability plans and/or sustainability development guidelines. The City of Vaughan was one of the first municipalities to draft and release an established plan with Green Directions Vaughan. The proposed revision to Green Directions Vaughan will incorporate other relevant Regional requirements and guidance through the Region's Official Plan, York Region Vision 2051, the Greening Strategy, and other operational and infrastructure master plans (e.g. Economic Development Action Plan, Integrated Waste Management Master Plan, Transportation Master Plan, Pedestrian and Cycling Master Plan, Water and Wastewater Master Plan, Long Term Water Conservation Strategy).

The continued progress and communication of the achievements and successes of this plan will work to establish the City of Vaughan as an environmental leader within the

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region. In addition, under the guidance of Green Directions Vaughan and its program progress, the City continues to contribute positively as a member of the Greater Toronto and Hamilton Area Clean Air Council.

Conclusion

The 24 quantitative indicators, approved by Council in November 2012, are working to measure the impact and outcomes of Green Directions Vaughan and to highlight successes and identify areas in need of continued focus and improvement. Modest changes in the tracked indicators are noted this reporting year, signifying the ongoing progress of Green Directions Vaughan actions and programs. The trend analysis can be used as input to the proposed revision to Green Directions Vaughan to seek community feedback, such as areas of interest for greater improvement or communication strategies.

The following indicators show an overall modest improving trend and positive change in the last year of data analysis:

- corporate facility electricity use;
- corporate GHG emissions;
- residential water consumption;
- residential waste diverted from landfill;
- waste diverted from City facilities;
- greenspace (publicly owned and publicly available open space);
- building floor space certified to a green standard;
- length of walkways and cycling paths;
- number of jobs provided by Vaughan businesses;
- participation hours for recreation programs;
- stakeholder involved in community mechanisms;
- cultural initiatives supported by the City; and
- attendees at environmental events.

Indicators requiring improved methodology or replacement with more pertinent measures of progress have been identified, namely, corporate fleet emissions, stormwater management, urban tree canopy, and stakeholder involvement.

An effort has been made to display the indicators in a “dashboard” style for ease of interpretation. Through the communication and engagement campaign, in support of the revision of Green Directions Vaughan, staff will seek feedback on a “sustainability dashboard” platform that has a public focus for ongoing community engagement.

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Attachments

1. Green Directions Vaughan Indicator Summary Table
2. Green Directions Vaughan Indicator Trends
3. Green Directions Vaughan Objectives - High Level Summary and Outlook

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(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)