

COMMITTEE OF THE WHOLE (1) – FEBRUARY 7, 2023

STAFF COMMUNICATIONS

Distributed February 3, 2023

Subject

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Planning and Growth Management, dated January
31, 2023. | Annual Climate Emergency
Declaration Update 2022. |
| SC 2 | Memorandum from the Deputy City Manager,
Public Works, dated February 3, 2023 | Annual Water Quality Report |

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Please note there may be further Communications.

**Staff Communication : SC 1
Committee of the Whole (1)
February 7, 2023**

DATE: January 31, 2023

TO: Mayor and Members of Council

FROM: Haiqing Xu, Deputy City Manager, Planning & Growth Management

RE: **STAFF COMMUNICATION
Committee of the Whole (1) February 7, 2023**

Annual Climate Emergency Declaration Update 2022

1. Purpose

The purpose of this Staff Communication is to inform Mayor and Members of Council on the status and progress of the City's Climate Emergency Declaration issued in 2019.

2. Analysis

On June 4, 2019, after a deputation by students from Thornhill Woods Public School, Mayor and Members of Council unanimously passed a Members' Resolution to declare a climate emergency in the City of Vaughan. The school's EcoCommittee members delivered a presentation about the impacts of climate change, and then requested Mayor and Members of Council to declare a climate emergency.

At the time, the City of Vaughan, along with 31 other Canadian municipalities, joined a growing list of cities worldwide who have deepened their commitment to climate action by declaring a climate emergency. Currently, there are 649 Canadian governments (local and regional) that have declared a climate emergency.

Through the declaration, the City named and reaffirmed its commitment to climate action. The declaration also directs staff to report back to Mayor and Members of Council on eight related actions and initiatives, to ensure ongoing tracking of progress and impact of the City's declaration.

The information below outlines the progress made toward the eight climate actions since the declaration.

Action #1: Continue the revision of Green Directions Vaughan, the City's community sustainability plan, as a platform for public engagement and community collaboration to act on climate change and other sustainability initiatives and seek Council approval of Green Directions Vaughan by Q4 2019

Action #1 is complete. The revised Green Directions Vaughan 2019 was approved by Council in December 2019.

To advance this initiative, milestones are being tracked for the sustainability actions within the plan and data is being collected to update the 24 quantitative indicators. To date, nine actions are complete, 50 actions are in progress and 11 actions have not been started.

Action #2: Evaluate joining the Global Covenant of Mayors for Climate and Energy and bring forward a staff report to Council with more information

Action #2 has not been initiated. The Climate Change Adaptation and Resilience Framework and the revised Municipal Energy Plan intend to meet the four main actions of the Global Covenant of Mayors:

- Develop a greenhouse gas (GHG) emissions inventory
- Assess climate risks and vulnerabilities of the city
- Define ambitious climate mitigation, resilience and energy targets
- Create full climate action plans

The City's natural assets risk assessment was completed as part of the Municipal Natural Assets Initiative Preliminary Natural Asset Inventory. This work was provided to the consultants undertaking the Climate Change Adaptation and Resilience Framework for the Official Plan Review.

Once the City attains a Climate Change Specialist, they will lead this initiative.

Action #3: Report back to Council on the Climate Change Adaptation and Resilience Framework

Action #3 is complete. The Climate Change Adaptation and Resilience Framework (CCARF) is one of seven background papers supporting policy direction for the Official Plan Review. The background research is focused on adaptation to complement ongoing City-initiated mitigation strategies; however all recommendations support climate change mitigation and adaptation strategies.

The first draft of the CCARF Background Paper was circulated to Mayor and Members of Council, internal staff, agencies and Indigenous Communities for review and comment in September 2021.

The CCARF was made available to the public for review and discussed at the second Official Plan Review Community Working Group meeting on October 12th, 2022, as well as a topic-based webinar for Climate Change Resilience and Adaptation on April 20th, 2022. The CCARF background paper was finalized in August 2022.

A Vulnerability and Risk Assessment was completed as a component of the CCARF which helped inform the findings of the paper. Extreme weather events are predicted to increase through to and beyond 2050 in Vaughan which include:

- Increases in temperature in all seasons and on average across the year,
- Increase in extreme temperatures,
- Increase in extreme heat events,
- Decrease in extreme cold events, and
- Change in precipitation patterns.

The CCARF evaluated synergies between both mitigation and adaptation interventions through land use planning. The key recommendations of the paper are the following:

- The Official Plan should include co-beneficial policies that address climate change mitigation and adaptation,
- Climate change policies should be integrated across the Official Plan, and
- The effects of climate change will be costly to the City if no action is taken, but funding can support actions to build resiliency now.

Action #4: Continue the planned update of the Municipal Energy Plan through approved capital project PL-9576-19 with the aim to identify strategies to reduce per capita GHG emissions from the 2013 level of 5 tonnes CO₂e per person to between 2 to 3 tonnes CO₂e per person by 2030

Action #4 is underway. The Request for Proposals for the contract to revise the Municipal Energy Plan was awarded to Sustainability Solutions Group (SSG) in June 2021.

Data collection was completed in December 2021 and City staff have received an Actions Catalogue that outlines best practices from other jurisdictions. The Actions Catalogue and collected data have been reviewed and actions have been discussed that may build on Vaughan's current GHG emission reduction strategy. Actions relate to buildings, transportation, energy supply and business processes.

A draft Municipal Energy Plan was circulated to staff for review and comment in October 2022. Additionally, an implementation guide is being developed by SSG and will be further refined, collaboratively with City staff, in 2023. The revised Municipal Energy

Plan and implementation guide will outline and recommend actions and how they are to be implemented to meet Council's climate change goals. Project completion is expected in 2023 and the final report is anticipated to be brought to Council in Q1 2023.

Action #5: Report back to Council by Q2 2020 with results of the study on the use of Local Improvement Charges to enable energy efficiency retrofits in private buildings as a key action to reduce energy use, save money, and reduce GHG emissions

Action #5 is complete. Council approved the Local Improvement Charges Study and endorsed a draft implementing by-law on April 21, 2020.

To advance this action, staff submitted an application to the Community Efficiency Financing initiative in 2020 to capitalize a home energy retrofit program and an award letter was sent to the City in January 2021. Staff are exploring implementation options.

Action #6: Through the update to the Sustainability Metrics Program, report back to Council on possible incentives to encourage new construction to be more energy efficient than the Ontario Building Code

Action #6 is underway. Staff are building on prior work conducted to provide a review of possible financial and non-financial incentives. Prior work on incentives includes recommendations developed by Richmond Hill's consultant Morrison Hershfield and research undertaken by Vaughan staff.

In May 2022, Council approved the updated Sustainability Metrics Program, 2022 (SMP) which include associated threshold scores and minimum performance levels. The SMP and threshold performance levels are aligned with partner municipalities to have a level playing field for all development across the cities of Richmond Hill, Markham, Brampton, and Vaughan. In January 2022, development proponents in Vaughan began transitioning to the SMP 2022. All applications submitted as part of a complete application to Vaughan on or after January 1, 2023, must use the updated version of the Sustainability Metrics.

The SMP 2022 guidebook is a key implementation tool that contains program requirements for applicability and implementation for both external applicants and internal evaluators. Each metric intent is clearly stated and is aligned with the categories of Built Environment, Mobility, Natural Environment and Parks, Infrastructure and Building, and Innovation.

The threshold levels are Bronze, Silver, and Gold. In Vaughan, all new development applications located within the VMC achieves a minimum performance level of Silver,

and a minimum performance level of Bronze for all new development outside the VMC. The SMP contains metrics that have associated points and applied as a choose-your-own to ensure flexibility for associated development scenarios.

Vaughan's online assessment tool, known as Sustainability Assessment Tool (SAT), is integrated in Vaughan's new online development application portal through Service Vaughan. The SAT allows for version control, auto-calculates overall threshold scores live, auto-filters metrics dependent on application scenario, and auto-summarizes all inputs.

Additionally, on November 29, 2022, Council endorsed five quick wins to address a member's resolution on global warming. One of the quick wins was to set a building performance minimum requirement for all new development applications through making metric IB-12 Energy Efficiency "good" level in the SPM mandatory. A second quick win was to set a requirement of five (5) percent on-site energy generation for all Industrial, Commercial, Institutional and Multi-Unit Residential Building developments through making metric IB-10 Solar Readiness in the SMP mandatory. Staff will work on integrating these requirements through the future implementation of the SMP 2022.

Bill 23, *More Homes Built Faster Act, 2022* received Royal Assent on November 28, 2022. Staff are analyzing the implication of the policies in support of strengthening the protection or conservation of the environment through developing complete and resilient communities and structures.

Work continues in developing a monitoring strategy which include alignment and development of key performance indicators. Staff will report back to Council on possible incentives and other necessary actions to successfully transition to SMP 2022.

Action #7: Work with the ClimateWise Business Network and other partners to improve compliance to Ontario Regulation 506/18, Energy and Water Reporting and Benchmarking (EWRB) in the commercial sector

Action #7 is ongoing. The ClimateWise Business Network (CWBN) completed a contract for the City in 2020. CWBN engaged the owners of commercial floor space in Vaughan via a survey to understand energy retrofit and sustainability drivers. In 2021 and 2022, the City of Vaughan participated in the ClimateWise Building Challenge, a York Region wide recognition competition created to reduce GHG emissions and improve energy efficiency through collaboration, education, and innovation.

In 2022, the City was presented with the Mayor's Energy Challenge Advocate Award for demonstrating leadership by implementing the following two innovative initiatives:

1. Conducting the above-mentioned survey with commercial building owners, developing intelligence on the sector as well as awareness of the EWRB program.
2. Including participation in the EWRB as a reporting metric in Vaughan's Climate Emergency Declaration.

The Mayors' Energy Challenge is a CWBN initiative used to create awareness on the opportunity to understand building energy performance through participation in the Provincial EWRB program, geared to local businesses and commercial building owners. The initiative will also raise awareness on how to aid in the reduction of GHG emissions generated by York Region commercial buildings that are over 50,000 square feet.

On November 29, 2022, Council endorsed five quick wins to address a member's resolution on global warming. One of the quick wins was to continue partnering with CWBN. Staff will renew membership with CWBN in 2023, to align with the fiscal year, and explore opportunities to benchmark energy and water consumption. The renewed membership will also include assistance on reporting corporate energy and natural gas consumption under Ontario Regulation 507/18, Broader Public Sector Energy Reporting and Conservation and Demand Management Plan.

Action #8: Continue to pursue the Sustainable Neighborhood Action Program (SNAP) in the Thornhill area in partnership with the Toronto and Region Conservation Authority (TRCA) and local resident groups

Action #8 is underway. Council endorsed the Thornhill SNAP Action Plan on September 27, 2021 and directed staff to seek external funding to implement unfunded projects identified in the Action Plan.

In 2022, the following projects were implemented:

- In January 2022, ten community members attended a workshop focused on air-source heat pumps, delivered by staff from the TRCA's Sustainable Technologies Evaluation Program.
- On September 26, 2022, six community members attended a webinar focused on cycling safety and how to use the new cycle tracks on Clark Avenue.
- On September 29, 2022, IKEA Canada staff helped to plant 165 trees and shrubs at York Hill District Park through a grant by Tree Canada. Interpretive signage was installed at the site to inform park users of the benefits of trees.
- In October 2022, with support from the Ontario Heritage Trust and Thornhill Historical Society, the J.E.H MacDonald heritage plaque was relocated from Oakbank Pond Park to the J.E.H MacDonald House property (121 Centre Street).

- In November 2022, vegetation clearing and tree safety work, soil testing and site visits were conducted at J.E.H MacDonald House property in preparation for a community tree planting event in spring 2023.
- In December 2022, design and construction of a rain garden in York Hill District Park, at the site of a future Environmental Learning Zone, was completed. In spring 2023, a community planting event will be held to plant the rain garden. The rain garden project was funded by Arbour Day Foundation and TD Bank.
- Throughout the year, private property owners were engaged to advance green infrastructure in the neighbourhood. Two multi-unit residential buildings received raised garden beds for residents' use, two organizations received plants to support the planting of pollinator gardens, and one homeowner received support to plant a tree.
- Throughout the year, the SNAP team collaborated with Parks Infrastructure Planning and Development to inform the revitalization of Gallanough Park.

City staff are leading other climate change initiatives

The City has participated in the [Youth Challenge International's Innovate MY Future program](#) as a municipal partner for three years. Through the Innovate MY Future program, Canadian youth across the GTHA have the opportunity to take action on local climate issues and design youth-led projects to make a real difference in their communities.

The Innovate MY Future program will help the City of Vaughan engage young people in climate action directly through participation in the program, and indirectly through peer-to-peer interactions and engagement. The program also supports the City of Vaughan's shift to encourage local collective action to act on climate change and other sustainability initiatives.

Sustainability staff provide support to youth teams to advise them on local climate change priorities, issue challenge questions, and connect teams with local stakeholders. Based on municipal priorities, the teams will determine problem statements and work to develop a solution to their chosen problem statement.

The City has been a proud partner of the People Power Challenge for four years. The People Power Challenge is an employee engagement program offered by Partners in Project Green, of Toronto and Region Conservation Authority. It gives organizations a roadmap to drive sustainability into their practices and engage staff through educational webinars, action-oriented events and sustainability activities for home and the workplace. Each year the themes and activities are modified and help to build staff environmental knowledge to make tangible changes. Themes relate to both social and climate action, and activities are linked to the United Nations Sustainable Development

Goals. In 2022, the City of Vaughan demonstrated leadership in sustainability through the following:

- Finishing third place in the People Power Challenge
- Completing 197 activities
- Earning 25,100 points

The City completed 44 individual activities specifically related to Sustainable Development Goal 13: Climate Change.

For more information, contact Will Baigent, Sustainability Coordinator, ext. 8941

Approved by

A handwritten signature in black ink, appearing to read 'Haiqing Xu', written in a cursive style.

Haiqing Xu, Deputy City Manager,
Planning & Growth Management

**Staff Communication : SC 2
Committee of the Whole (1)
February 7, 2023**

DATE: February 3, 2023

TO: Mayor and Members of Council

FROM: Zoran Postic, Deputy City Manager, Public Works

RE: **Committee of the Whole (1), February 7, 2023**

Annual Water Quality Report

1. Purpose

To provide Mayor and Members of Council information that will be posted for public viewing to maintain compliance with the reporting requirements of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32 and Ontario Regulation 170/03 – Drinking Water Systems.

2. Analysis

The Ministry of the Environment, Conservation and Parks requires the City to post an Annual Water Quality Report for public viewing before the 28th of February each year.

The City's Annual Water Quality Report for the January 1, 2022, to December 31, 2022, reporting period (Attachment 1) will be posted on the City's website and made available to the public by February 28, 2023.

Attachment:

1. Annual Water Quality Report

For more information, please contact:
Emilie Alderman, Director, Environmental Services, ext. 6116

Approved by

Zoran Postic

Digitally signed by Zoran
Postic
Date: 2023.02.01
08:46:45 -05'00'

Zoran Postic, Deputy City Manager, Public Works

Attachment – 1

February 3, 2023

ANNUAL WATER QUALITY REPORT

Drinking-Water System Number: 260003097
Drinking-Water System Name: Vaughan Distribution System
Drinking-Water System Owner: The Corporation of the City of Vaughan
Drinking-Water System Category: Large Municipal - Residential
Period being reported: January 1, 2022 to December 31, 2022

Complete if your Category is Large Municipal Residential or Small Municipal Residential:

Does your Drinking-Water System serve more than 10,000 people? Yes ☒ No ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

www.vaughan.ca

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

None

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and whom you provide all of its drinking water?

- ☐ Yes
☐ No
☒ Not applicable

Indicate how you notified system users that your annual report is available, and is free of charge:

- ☒ Public access/notice via the web
☐ Public access/notice via Government Office
☐ Public access/notice via a newspaper
☒ Public access/notice via Public Request
☐ Public access/notice via a Public Library
☐ Public access/notice via other method

Describe your Drinking-Water System:

The Vaughan Distribution System consists of one (1) booster pumping station (Maplewood Booster Station/North Maple Booster Station), one (1) pressure elevating system (Woodland Acres Pressure Elevating System), and trunk and distribution watermain in the City of Vaughan.

Drinking water for the City of Vaughan is supplied from York Region, who obtains water from the City of Toronto and the Region of Peel. The City of Toronto operates four water treatment plants using Lake Ontario as a raw water source. The Region of Peel operates two water treatment plants using Lake Ontario as a raw water source.

List all water treatment chemicals used over this reporting period:

Water is treated by City of Toronto and the Regional Municipality of Peel. List of chemicals used for water supplied to City of Vaughan is available on their web site www.toronto.ca and www.peelregion.ca, respectively.

Were any significant expenses incurred to?

- ☐ Install required equipment
- ☒ Repair required equipment
- ☒ Replace required equipment

Brief description and a breakdown of monetary expenses incurred:

- Watermain replacements – \$15,040,000
- Scheduled and emergency valve repairs and maintenance – \$594,000
- Scheduled and emergency main repairs – \$1,070,300
- Scheduled and emergency hydrant repairs, maintenance, and inspections – \$781,100
- Operation and maintenance of the booster pumping station and pressure elevating system – \$33,700
- Scheduled and emergency water service repairs – \$512,200
- Water meter maintenance and installation – \$190,200
- Chamber repairs – \$122,700

Details of the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O. Reg. 170/03 and reported to Spills Action Centre:

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Incident Resolution Date
01/08/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	01/11/22
03/23/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	03/28/22
03/25/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/01/22
03/26/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	03/30/22
03/27/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/04/22
03/27/22	Total Coliform	1	CFU/100mL	Flush and resample	04/01/22
03/29/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/04/22
04/06/22	Combined Chlorine	4.11mg/L	mg/L	Flush and retest	04/06/22

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Incident Resolution Date
04/09/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/12/22
04/09/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/12/22
04/11/22	Combined Chlorine	3.06mg/L	mg/L	Flush and retest	04/14/22
04/24/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	04/28/22
06/01/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	06/06/22
06/06/22	Combined Chlorine	3.54mg/L	mg/L	Flush and retest	06/06/22
08/03/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/08/22
08/17/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	08/22/22
09/13/22	Combined Chlorine	0.02mg/L	mg/L	Flush and retest	09/13/22
09/27/22	Combined Chlorine	0.00mg/L	mg/L	Flush and retest	09/27/22
10/19/22	Combined Chlorine	0.07mg/L	mg/L	Flush and retest	10/19/22
10/19/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	10/25/22
11/20/22	Total Coliform	TC – P	P-A/100mL	Flush and resample	12/05/22
11/21/22	Combined Chlorine	3.61mg/L	mg/L	Flush and retest	11/21/22
11/22/22	Total Coliform	1	CFU/100mL	Flush and resample	12/05/22
11/24/22	Total Coliform	11	CFU/100mL	Flush and resample	12/05/22
11/24/22	Total Coliform	1	CFU/100mL	Flush and resample	12/05/22
11/26/22	Total Coliform	3	CFU/100mL	Flush and resample	12/05/22
11/26/22	Total Coliform	12	CFU/100mL	Flush and resample	12/05/22
11/26/22	Total Coliform	3	CFU/100mL	Flush and resample	12/05/22

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Incident Resolution Date
11/26/22	Total Coliform	3	CFU/100mL	Flush and resample	12/05/22
11/28/22	Total Coliform	2	CFU/100mL	Flush and resample	12/05/22
11/28/22	Total Coliform	6	CFU/100mL	Flush and resample	12/05/22
11/28/22	Total Coliform	1	CFU/100mL	Flush and resample	12/05/22
11/29/22	Total Coliform	5	CFU/100mL	Flush and resample	12/05/22
11/29/22	Total Coliform	4	CFU/100mL	Flush and resample	12/05/22
11/30/22	Total Coliform	4	CFU/100mL	Flush and resample	12/05/22
12/01/22	Total Coliform	3	CFU/100mL	Flush and resample	12/05/22

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period:

Location Type	Number of Samples	Range of E.Coli or Fecal Results Present (P) / Absent (A)	Range of Coliform Results Present (P) / Absent (A)	# of HPC Samples	Range of HPC Results (cfu/1mL)
Distribution	1,758	A – A MPN/100mL	A – P MPN/100mL	885	<1 CFU/mL – 310 CFU/mL

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report:

Parameter	Number of Grab Samples	Range of Results (min #) - (max #)
Turbidity	1	0.38 NTU
Combined Chlorine	2,118	0.00mg/L – 4.11mg/L

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument:

Date of Legal Instrument Issuance	Parameter	Date Last Sampled	Range of Results	Unit of Measure
05/23/19	Nitrosodimethylamine (NDMA)	12/20/22	<0.0008	µg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results:

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	10/31/22	<0.0005	mg/L	No
Arsenic	10/31/22	0.0013	mg/L	No
Cadmium	10/31/22	<0.0005	mg/L	No
Chromium	10/31/22	<0.0005	mg/L	No
Selenium	10/31/22	<0.0005	mg/L	No
Sodium	10/31/22	13.9	mg/L	No
Fluoride	10/31/22	0.63	mg/L	No
Nitrite	12/08/22	<0.05	mg/L	No
Nitrate	12/08/22	<0.50	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period:

Location Type	Number of Samples	Range of Lead Results (min #) – (max #)	Number of Exceedances
Plumbing	0	Not Applicable	Not Applicable
Distribution	20	<0.0005 – 0.0038	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results:

Parameter	Sample Date	Running Annual Average Result	Unit of Measure	Exceedance
Haloacetic Acids (HAA's)	4/year	<8.0	µg/L	No
Trihalomethane (THM)	4/year	17.3	µg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards:

Parameter	Result Value	Unit of Measure	Date of Sample
None			