**Agenda – Council – July 21, 2022**

**Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – June 28, 2022**

**Item No. 2 Winnipeg Climate Action Plan – Annual Report**

STANDING COMMITTEE RECOMMENDATION:

On July 13, 2022, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and submitted the following to Council:

1. That the report be received as information.

**Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – June 28, 2022**

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On July 13, 2022, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On June 28, 2022, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

COUNCIL DECISION:

On May 26, 2022, Council concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and adopted the following:

1. That an extension of time of up to 60 days be granted for the Winnipeg Public Service to report back on the Winnipeg Climate Action Plan.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the forgoing.

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On May 18, 2022, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On May 3, 2022, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment submitted the following to the Executive Policy Committee and Council:

**Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – June 28, 2022**

DECISION MAKING HISTORY (continued):

STANDING COMMITTEE RECOMMENDATION (continued):

1. That an extension of time of up to 60 days be granted for the Winnipeg Public Service to report back on the Winnipeg Climate Action Plan.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the forgoing.

COUNCIL DECISION:

On September 20, 2018, Council concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and adopted the following:

1. That Winnipeg's Climate Action Plan: Planning for Climate Change – Acting for People (the "Plan"), a copy of which is attached as Attachment "A", be approved for implementation and that the Council decision of September 30, 2009 approving the report titled Corporate and Community-wide Climate Change Action Plans to reduce Greenhouse Gas Emissions in Winnipeg, including all subsequent amendments, be rescinded.

2. That the Winnipeg Public Service review its departmental administrative objectives and plans to determine how they align with the strategic opportunity areas and priority actions identified within the Plan, and report the results to the interdepartmental Climate Change Working Group, as required by the Climate Change Working Group.

3. That the Winnipeg Public Service identify budget risks for those projects to be implemented in the short, medium and long term, which are currently underfunded or unfunded, within their yearly budget processes.

4. That the Office of Sustainability apply for external funding, through such funding programs identified in Appendix E of Attachment A, in support of the actions identified in the Plan.

5. That the Winnipeg Public Service undertake detailed greenhouse gas and economic modeling of the Plan to understand the estimated costs and benefits to the City of implementing the Plan.

**Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – June 28, 2022**

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

6. That the Winnipeg Public Service report back annually to Council on the Winnipeg Climate Action Plan beginning in 2019.

7. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

# ADMINISTRATIVE REPORT

**Title:** 2021 WINNIPEG'S CLIMATE ACTION PLAN ANNUAL REPORT

**Critical Path:** Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – Executive Policy Committee – Council

## AUTHORIZATION

| Author | Department Head | CFO | CAO |
|---|---|---|---|
| B. Raddatz, RPP<br>Manager, Office of Sustainability | T. W. Shanks, M. Eng., P. Eng.<br>Director, Water and Waste | N/A | M. Jack |

## EXECUTIVE SUMMARY

This annual report to Council summarizes the accomplishments in 2021, the third year of the Winnipeg Climate Action Plan (Plan).

The Plan outlines the City of Winnipeg and the broader community's commitment to work together to reduce greenhouse gas emissions and increase resiliency in the face of a changing climate.

Of the total 139 actions described in the Plan, 77 of them have been characterized as short term (2018-2022). The 2020 Corporate Greenhouse Gas (GHG) Emissions Update and a detailed status update of each short-term action under the Plan are found in Appendices 1 and 2.

In 2021, major planning initiatives in alignment with The Plan were underway, including OurWinnipeg 2045, Complete Communities 2.0, the Transportation Master Plan, the Transit Master Plan, Winnipeg's Parks and Recreation Strategies, and the Winnipeg Urban Forest Strategy.

The City also initiated a GHG emissions reduction modeling and financial analysis project, which was completed in 2022. The Community Energy Investment Roadmap forecasts energy use and emissions, and provides an estimation of the costs and benefits of implementing actions needed to meet climate targets (to be presented for Council consideration in 2022).

These major planning initiatives, with an updated policy framework, robust data, modeling and financial analysis, along with national and global climate change action targets of net zero by 2050, will inform the process of updating the Winnipeg Climate Action Plan in 2023.

## RECOMMENDATIONS

That Council receive the report as information.

## REASON FOR THE REPORT

On September 20, 2018, Council concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment that the Winnipeg Public Service report back annually to Council on the Winnipeg Climate Action Plan beginning in 2019.

## IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications associated with the recommendations of this report.

## HISTORY/DISCUSSION

The Winnipeg Climate Action Plan (the Plan) was adopted by City Council in September of 2018. Climate action includes two important aspects: mitigation and adaptation. Mitigation actions focus on reducing the use of fossil fuels to lessen the severity of impacts in the long term. Adaptation actions relate to preparing and planning for the impacts on ongoing climate change that is currently being experienced. While the Plan is focused on mitigation, it includes a call to action to develop a climate resiliency and adaptation strategy, to be included as part of the update process in 2023.

The **Winnipeg's Climate Action Plan – Year 1 Update** report included the following recommendation, which was adopted by Council January 30th, 2020:

> That as per Direction 1.2 of Winnipeg's Climate Action Plan (WCAP), the Public Service undertake detailed financial, energy and emissions mapping and modeling to understand the costs and benefits of implementing the Plan. The funding to conduct this modeling, $200,000, be referred to the 2020 Budget process.

With the assistance of the project's consultant (Sustainable Solutions Group) the Public Service collaborated with internal and external stakeholders to develop the Community Energy Investment Roadmap in 2021, which included detailed updates of Greenhouse Gas (GHG) emissions, energy and financial modelling. The purpose was to update the City's GHG emissions inventory and to identify strategic actions and investments required to achieve the emissions reduction target as outlined in the Plan, and additional actions to meet the goal of net zero by 2050. The work includes:

1. Updated community-wide energy and emissions inventory;
2. Determination of additional mitigation measures or refinements to currently planned measures that will be required to take the city beyond 2030 and to net zero by 2050;
3. Forecast of energy and emissions under two different scenarios: a) business as planned; and b) low carbon scenario (*actions identified in The Plan* with additional and refined actions beyond 2030 to reach net zero by 2050);
4. Estimation of the costs and benefits of implementing the Plan (including additional and refined actions beyond 2030) and provision of recommended priorities.

As of December 2021, the analysis and updating of emissions was completed and internal and external stakeholder engagement was in its final stages. The entire project will wrap up, and

the report will be presented for Council's consideration in 2022. The outcomes of this work will inform City decision-making, contributing to departmental planning, programs and policies, and will inform the process of updating the Winnipeg Climate Action Plan in 2023.

**Updates on Short Term Actions (2018-2022)**

Of the total 139 actions described in the Plan, 77 of them have been characterized as short term (2018-2022). These short-term actions provide direction on how the City will achieve it's 2030 target of 20 percent GHG emissions reduction. Of the 77 actions identified as short term (2018-2022) priorities:

- 53% are green (significant progress/complete)
- 33% are yellow (initiated/moderate progress)
- 14% are red (not yet initiated)

A few current City initiatives that align with achieving the actions described in the Plan are highlighted below. A more detailed status update on each short-term action and budget status is provided in Appendix 2.

*Strategic Direction #1: Corporate Leadership*

In 2021, GHG and economic modelling of the actions required to reach Net Zero climate targets in consultation with internal and external stakeholders was completed through the Community Energy Investment Roadmap. An enhanced methodology was implemented for the City's corporate GHG inventory, increasing the accuracy of the data gathering and reporting. The Winnipeg Fleet Management Agency continues to investigate the feasibility of incorporating electric vehicles into its fleet. The impacts of COVID-19 in 2021 continued raising the importance of food-related actions under direction 1.7, including increasing collaboration with the Winnipeg Food Council. In 2021, coordination activities for the Winnipeg Food Council were incorporated in the Office of Sustainability. This allowed for increased collaboration and support for the Food Council within the Public Service.

*Strategic Direction #2: Empower Community Leaders and Collaborate with Stakeholders*

The Local Energy Access Program (LEAP) pilot project was established to focus on construction of low carbon energy-efficient affordable housing by selling City-owned lots for $1 and investing the purchase cost savings towards energy efficiency upgrades. LEAP is supported by the Federation of Canadian Municipalities and was developed in consultation with community stakeholders.

*Strategic Opportunity #3: Advancing Sustainable Transportation*

With the approval of the Winnipeg Transit Master Plan in 2021, and the Transportation Master Plan coming forward in 2023, several transportation-related actions, including the integration of transportation planning with land use planning, and improvements to transit route planning, were advanced. OurWinnipeg 2045 and Complete Communities 2.0 came forward in 2021 and include provisions to increase the density of urban development along key transportation corridors. Additionally, in 2021, transition planning for Phase 1 of the Transit Master Plan (including a roll out of approximately 100 Zero Emission Buses) was completed and related funding has been applied for.

*Strategic Opportunity #4: Facilitate Compact, Complete Development and Increase Density*

The OurWinnipeg 2045 Development Plan includes Environmental Resilience as one of its six localized sustainable development goals and objectives, policy direction that enables transition to a resilient, low-carbon future. OurWinnipeg and Complete Communities 2.0 were given second reading by Council in July 2021 (and third reading on May 26, 2022, subsequent to the reporting period of this report). Design guidelines for New Communities will be considered as part of the plan implementation following adoption of Complete Communities Directions Strategy. The Residential Infill Strategy was approved by Council in June 2021. Further alignment with the Winnipeg Transit Master Plan also serves to support the actions related to transit oriented development.

*Strategic Opportunity #5: Low Carbon and Energy Efficient Buildings*

The building energy benchmarking, labelling and disclosure program (Building Energy Disclosure Project, BEDP) completed its first year. This initiative is aimed at helping Winnipeg commercial and institutional building owners better understand the energy performance of their buildings while supporting overall reductions in greenhouse gas emissions and energy consumption. Energy performance scorecards were provided to all participants, highlighting reported energy use information and providing comparison to the National Median Site Energy Use Intensity. The first annual BEDP report was also circulated to all BEDP participants focusing on detailed results by building type, case studies, key findings and next steps. This report is also posted on the project's webpage on the City of Winnipeg website.

*Strategic Opportunity #6: Waste Reduction and Diversion*

The Residential Food Waste Collection Pilot Program completed its first year. This pilot program services about 4,000 homes over two years. As part of the Biosolids Master Plan, 100 percent of biosolids were diverted from landfill and beneficially used through composting, soil fabrication, and land application. In 2021, Council approved funding to launch a food waste reduction campaign in partnership with the Winnipeg Food Council and Love Food Hate Waste Canada. In June 2021, a three-year partnership agreement was signed with Love Food Hate Waste Canada to continue to support Winnipeg residents in reducing their food waste using a variety of communications methods. These programs add to the benefits of the organic waste diversion of the ongoing leaf and yard waste composting program, and the compost giveaway events and commercial compost sales.

*Strategic Opportunity #7: Community Climate Resiliency*

In 2021, work continued on the Urban Forestry Strategy, including Phase 1 public engagement summary reports that were made public. In May 2021, a *State of the Urban Forest* report was released and the draft Urban Forestry Strategy is currently under development. The development of this strategy addresses key actions of the Plan, including developing canopy cover targets, and indicators that address public health and climate change considerations. In 2021, the City continued support for urban food production through allotment garden plot rentals, and improvements to zoning by-laws for urban agriculture. Due to the pandemic, the City also encouraged residents to garden by supporting Harvest Manitoba's Grow-a-Row program. These initiatives make progress toward Action 7.1: To implement opportunities to improve Winnipeg's resilience and adaptability to the effects of a changing climate.

**Corporate GHG Inventory**

Total corporate emissions for 2020 amounted to 114,610 tonnes $CO_2e$. The global pandemic began in March 2020 and this had a significant impact on energy consumption. Energy consumption dropped by 17 percent overall, and emissions dropped by 11 percent.

The buildings sector accounted for a significant portion of the City's energy consumption in 2020 (electricity plus natural gas) at about 34 percent of energy use. This translated to about 20 percent of the City's corporate GHG emissions. In 2020, vehicle fleet emissions approximated 63 percent of the City's total emissions. The waste sector (including waste and products of wastewater processes) accounted for about 17 percent of the City's emissions.

**FINANCIAL IMPACT**

## Financial Impact Statement **Date:** May 4, 2022

## Project Name:

## 2021 WINNIPEG'S CLIMATE ACTION PLAN ANNUAL REPORT

**COMMENTS:**

No financial implications related to the recommendations of this report

*Lucy Szkwarek, CPA, CGA*
Lucy Szkwarek, CPA, CGA
Manager of Finance and Administration

## CONSULTATION

This Report has been prepared in consultation with:

- Planning, Property and Development
- Public Works
- Winnipeg Transit
- Community Services

## OURWINNIPEG POLICY ALIGNMENT

This report is in accordance with the OurWinnipeg policies through:

OurWinnipeg reference: Section 02-2 ENVIRONMENT - Reduce the environmental impact of our activities, through strategies such as planning for sustainable energy use and greenhouse gas reduction.

## WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

This report is in accordance with direction provided in the Winnipeg Climate Action Plan and the Council Minute 572, recommendation #6.

## WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

The Winnipeg Climate Action Plan aligns with the Winnipeg Poverty Reduction Strategy as both place focus on building a more resilient, sustainable, and equitable city for all residents. The Plan and the Winnipeg Poverty Reduction Strategy both represent the intention for increased resiliency of our communities, municipalities, and the city as a whole, while also placing emphasis on providing increased support to residents experiencing poverty related to the effects of climate change.

## SUBMITTED BY

Department: Water and Waste Department
Division: Office of Sustainability
Prepared by: L. Mierau
Date: May 27, 2022
File No: O-005

Attachments:

**Appendix 1:** Corporate GHG Update and Forecast Report for 2020 Data

**Appendix 2:** 2021 Status Update on Short-term Actions (2018-2022)

**Appendix 1:** Corporate GHG Update and Forecast Report for 2020 Data

# City of Winnipeg Corporate Greenhouse Gas Emissions

## Inventory and Forecast, 2013 to 2020

A. INTRODUCTION

Purpose

The purpose of this report is to provide an update on the City's corporate greenhouse gas (GHG) inventory for 2020. The report provides an update on the City's GHG emissions profile for the time period of interest, and presents the results of modelling exercises to forecast future emissions under different GHG emission reduction scenarios. Opportunities for further reductions in emissions are described as well.

B. CORPORATE GHG INVENTORY (2013-2020)

Table 1 and Table 2, below, show the total energy consumption and Greenhouse Gas Emissions (GHGs) for City operations for the year ending December 31, 2020.

Table 1 shows **Vehicle fuel** from operations and contractors was the largest energy consumer (41% of all energy) and largest $eCO_2$ emitter for the year (63% of all emissions). **Buildings** not involved in providing water & wastewater services were the second largest consumer of energy and emitter of GHGs (34% and 20%, respectively). **Water & wastewater** services were the third largest consumer of energy (20%), and fourth highest emitter of GHGs (6%), after **Corporate waste** (11% of all emissions, but does not have an energy consumption component). **Streetlights & Traffic signals** consumed the least energy (5%) and were less than one percent of total emissions.

**Table 1 - Energy Costs and $eCO_2$ Emission by Sector**

| Sector | Energy (GJ) | % Energy (GJ) | Total $eCO_2$ (t) | % ECO2 (t) |
|---|---|---|---|---|
| Buildings | 770,193 | 34% | 22,385 | 20% |
| Vehicle Fuel | 928,199 | 41% | 72,010 | 63% |
| Streetlights | 109,565 | 5% | 40 | 0% |
| Water and Sewage | 445,962 | 20% | 7,079 | 6% |
| Corporate Waste | - | | 13,097 | 11% |
| **Total** | **2,253,918 GJ** | **100%** | **114,610 t** | **100%** |

Table 2 shows that **Diesel fuel** makes up the largest portion of all energy consumed by City operations, at 35% of total consumption, and 48% of GHGs. **Electricity** is the next highest, at 33% of consumption. Electricity's emissions, however, is just 1% of total emissions, owing to the low-carbon

profile of Manitoba's electrical grid. **Natural gas** consumption accounts for 26% of total consumption and 25% of emissions. **Gasoline** (in an ethanol blend) accounts for 15% of emissions, but just 6% of energy consumption. **Aviation** fuel's impacts are negligible.

**Table 2 - Energy Costs and $eCO_2$ Emissions by Source**

| Energy Type | Total Use | Energy (GJ) | % Energy (GJ) | Total $eCO_2$ (t) | % $eCO_2$ (t) |
|---|---|---|---|---|---|
| Electricity | 203,749,792 kWh | 733,499 | 33% | 265 | 1% |
| Natural Gas | 15,410,370 $m^3$ | 592,221 | 26% | 29,239 | 25% |
| Ethanol Blend (E8.5) | 4,025,477 litres | 138,400 | 6% | 16,750 | 15% |
| Biodiesel Blend (B2) | 20,496,650 litres | 783,956 | 35% | 54,856 | 48% |
| Aviation | 162,015 litres | 5,843 | 0% | 404 | 0% |
| Waste | - | - | | 13,097 | 11% |
| **Total** | **-** | **2,253,918** | **100%** | **114,610** | **100%** |

**Table 3** and Figure 1, below, show year to year changes in emissions arising from energy consumption for the City. Table 1 shows a net 11% decrease from 2019 to 2020, coming from decreases in emissions across all sectors with the exception of **Waste**, which had an increase of 12% from 2019.

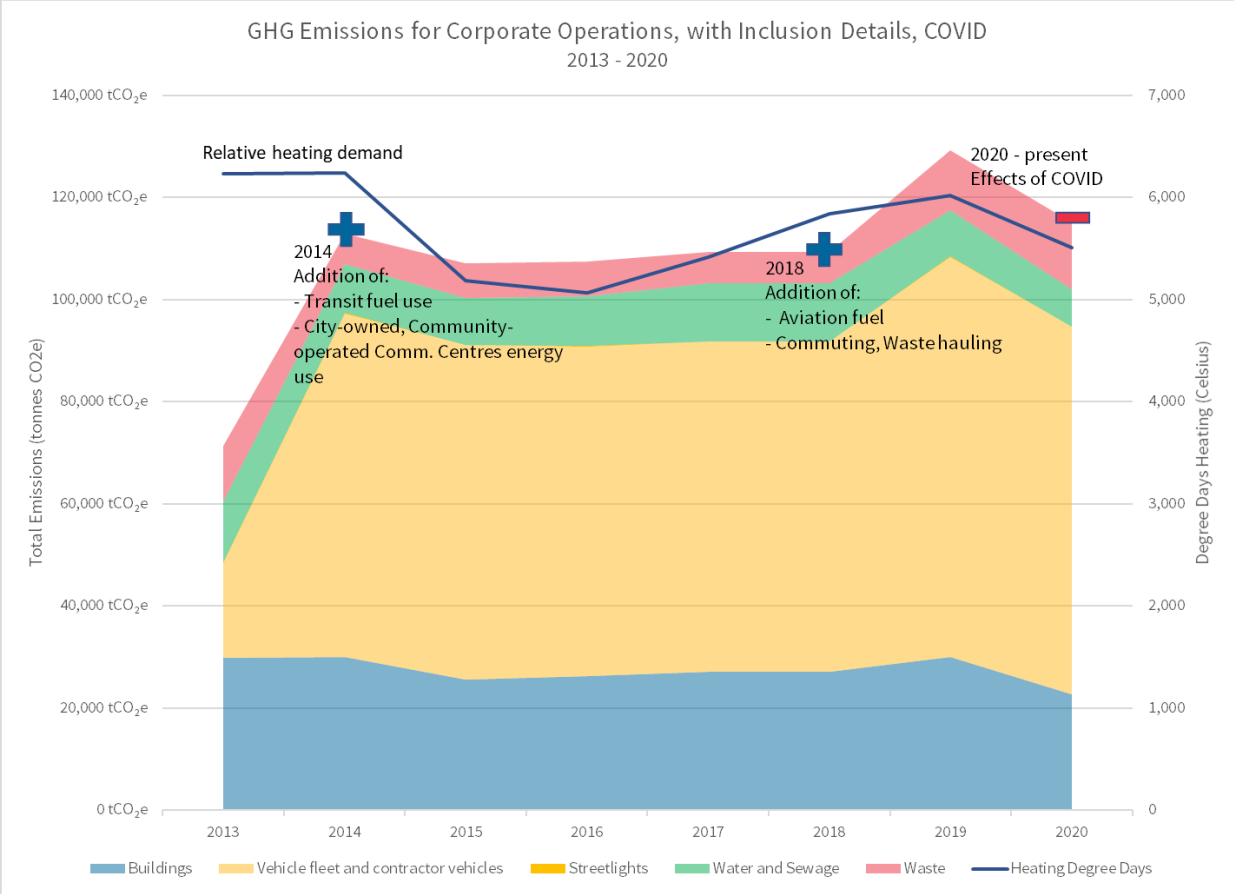
Table 3 - Total Annual Corporate Emissions by Sector, 2013-2020 (tonnes CO2e)

| Year | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| Buildings | 29,840 t | 29,983 t | 25,633 t | 26,258 t | 27,102 t | 27,102 t | 29,951 t | 22,385 t |
| Vehicle Fuel Use | 18,569 t | 67,333 t | 65,435 t | 64,584 t | 64,644 | 64,644 t | 78,439 t | 72,010 t |
| Street Lights | 125 t | 125 t | 125 t | 125 t | 125 t | 125 t | 125 t | 40 t |
| Water & Sewage | 12,002 t | 9,560 t | 9,108 t | 9,678 t | 11,336 t | 11,336 t | 8,897 t | 7,079 t |
| Corporate Waste | 10,923 t | 5,840 t | 6,872 t | 6,756 t | 6,158 t | 6,158 t | 11,741 t | 13,097 t |
| Total | 73,472 t | 114,855 t | 109,188 t | 109,417 t | 111,382 t | 111,383 t | 129,154 t | 114,610 t |

Figure 1 shows the trajectory of inventories from 2013 to 2020, and includes notes to help understand the reasons behind a number of significant deviations shown. Improvements of process in 2014 and 2018 increased the breadth of scope for the inventory. This resulted in increases in reported sectoral consumption and emissions, relative to what those sectors would have reported using the previous years' methodology. Thus, 2014 shows a significant increase from 2013, and 2018 shows a fairly constant level from the previous year where repeating the methodology of 2017 for the 2018 data would likely have shown a decrease. The blue line of relative heating demand shows an increase in heating demand from 2016-2019, and the relative stability of the inventory over that time speaks to the effectiveness of some city measures in reducing emissions.

The COVID pandemic began in March 2020, and had a significant impact on operational energy consumption. Energy consumption dropped by 17% overall, and emissions dropped by 11%, driven by significant decreases **Building** operations (23% decrease) and **Vehicle fuel** (9% decrease).

**Figure 1 - GHG Emissions for Corporate Operations, 2013-2020**




## 2020 in depth

### Buildings

The COVID pandemic's effects on building consumption are apparent across most of the building portfolio of the City. Multiple lockdowns in 2020 reduced energy consumption across the City's portfolio of buildings to bare-minimum energy use, decreasing electricity use by 14% and natural gas use by 22% (higher in recreation focused buildings, lower in essential service buildings).

### Vehicle Fuel & Transportation

Generally, fuel use in 2020 was consistent with levels seen in 2019, with one large exception. Transit's reduced service dropped fuel use for that department by 2.28 million litres of diesel fuel, or 13% from 2019. This was the major contributor to the 13% decrease in energy consumed from 2019.

## Streetlights

Safety refinements in October of 2020 to the traffic signaling protocol meant an increase of 5% in energy consumption per hour. These improvements ended the practice of putting streetlights on blinking yellow/blinking red late at night, and instead continued a normal operation cycle. This change had a negligible impact on total GHGs for the City.

## Water and Sewage

Water and Sewage electrical consumption dropped 20% and natural gas consumption dropped 8% across the portfolio between 2019 and 2020. This comes from an 18% decrease in treated wastewater.

## Waste

Waste increased 12% from 2019 to 2020. This coincides with an 8% decrease in collected and reported recycling.

**Appendix 2:** 2021 Status Update on Short-term Actions (2018-2022)

## Strategic Opportunity #1: Corporate Leadership

| **Key Direction 1.1 Cultivate a Corporate Culture that Values Climate Action (Primary Responsibility: Office of Sustainability)** | |
|---|---|
| Short Term Action (2018-2022) | Progress |
| Celebrate staff taking initiative in corporate and community climate action. | Initiated |
| Incorporate a Climate Action Plan alignment section into all Council reports. | Complete |
| Integrate sustainability and climate action into procurement standards which can demonstrate increasing impact from year to year. | Moderate progress |
| Encourage department ownership of climate mitigation measurement, ongoing reporting and implementation through cross-departmental working group | Moderate progress |
| **Key Direction 1.2: Understand and Integrate Business and Economic Implications of Climate Action into Decision Making Processes (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Undertake detailed greenhouse gas and economic modeling of the Climate Action Plan to understand the estimated costs and benefits to the City of implementing the Plan. | Complete |
| Establish a dedicated Climate Action Reserve Fund to support implementation of this Action Plan | Initiated |
| Create an annual capital program for departmental sustainability and climate initiatives. Applications should be accepted by all departments | Not started |
| Incorporate climate action priorities into the annual budget process to ensure the City has resources to implement priority projects | Not started |

| Key Direction 1.3: Implement Low Carbon and Energy Efficient City Facilities and Buildings (Primary Responsibility: Planning, Property and Development Department) | |
|---|---|
| Short Term Action (2018-2022) | Progress |
| Implement energy benchmarking for all City-owned Buildings (using Portfolio Manager) to identify opportunities for improved energy performance | Significant progress |
| Conduct an energy audit of all City facilities to seek opportunities to implement equipment and programs that will maximize energy performance | Moderate progress |
| **Key Direction 1.4: Encourage Sustainable Transportation Options (Primary Responsibility: Winnipeg Fleet Management Agency)** | |
| Short Term Action (2018-2022) | Progress |
| Ongoing implementation of the Green Fleet Plan (2010) to reduce vehicle emissions | Moderate progress |
| Conduct a comprehensive business case evaluation of the City electric vehicle pilot project and look to accelerate the electrification of the City's fleet | Significant progress |
| **Key Direction 1.5: Reduce Employee Vehicle Kilometers Travelled (VKT) and associated GHGs (Primary Responsibility: Winnipeg Parking Authority)** | |
| Short Term Action (2018-2022) | Progress |
| Implement the 'Intuitive Routing System' program, which provides information to service providers conducting work on behalf of the City on the most optimal route for completing their required visits each day while ensuring minimal vehicle kilometers travelled. Benefits from a climate change mitigation lens include, but are not limited to: reduced fuel, reduced paper and minimized distance travelled for unscheduled enforcement requests | Complete |

| Key Direction 1.6: Reduce Consumption and Increase Waste Diversion (Primary Responsibility: Office of Sustainability) | |
|---|---|
| Short Term Action (2018-2022) | Progress |
| Building on direction from the Corporate Waste Strategy (2015), examine procurement policies to look for opportunities to reduce consumption (e.g. paper products) | Moderate progress |
| **Key Direction 1.7: Increase Opportunities to Respond to Food Needs Throughout Winnipeg and Increase Access to Local and Sustainable Food (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Support local food procurement at City of Winnipeg facilities | Initiated |
| Work with Winnipeg Food Council to advise on opportunities for greenhouse gas mitigation, including local food procurement, support for urban agriculture, and promoting plant-based diets | Significant progress |
| Supported by the Winnipeg Food Council, create the Winnipeg Agricultural and Food Strategy to improve food security and address food system issues with respect to climate mitigation and resiliency | Initiated |
| **Key Direction 1.8: Ensure that City Land Use, Transportation and Built Environment Policy, Bylaw, and Regulation Recognize the Council-Approved Climate Protection and Mitigation Priorities (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Incorporate climate risks and mitigation targets and opportunities related to land use, transportation and development into *OurWinnipeg* review that is currently underway. This will necessitate a review of all four Direction Strategies (*Sustainable Winnipeg*, *Sustainable Water and Waste*, *Sustainable Transportation* and *Complete Communities*). | Significant progress |
| Incorporate climate risks and mitigation targets and opportunities that relate to parks and recreation development as part of the Recreation and Parks Strategies and Urban Forestry Strategic Plan. | Significant progress |

| | |
|---|---|
| Incorporate climate risks and mitigation targets and opportunities into the anticipated Transportation Master Plan update and the Winnipeg Transit Master Plan. | Moderate progress |
| Incorporate climate risks and mitigation targets and opportunities into the Comprehensive Integrated Waste Management Strategy (CIWMS). | Complete |
| **Key Direction 1.9 Work with Indigenous Communities, the Province, and Federal Government to Advance Climate Action (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Collaborate with senior levels of government for increasing investment in programs supporting climate action. | Moderate progress |
| Leverage funding from the province and federal governments to advance climate action. | Moderate progress |
| Engage Winnipeg's Indigenous population on issues around climate change | Initiated |

## Strategic Opportunity #2: Empower Community Leaders and Collaborate with Stakeholders

| | |
|---|---|
| **Key Direction 2.1 Engage Community Leadership and Associations on an Ongoing Basis to Help Shape Implementation of the Climate Action Plan (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Establish a Community Advisory Committee representative of the local population and a series of Community Action Teams to provide strategic advice and guidance during the implementation of the Plan. The Action Teams will support collaboration amongst the City and community in advancing action. Establish clear roles and responsibilities, terms of references, and transparency in roles, participation, and outcomes. | Initiated |
| Engage with the Mayor's Indigenous Advisory Circle twice a year to solicit feedback on actions, priorities, and opportunities for engaging Winnipeg's Indigenous community. | Initiated |

| Key Direction 2.2: Develop Public Education and Awareness Campaigns related to Sustainable Transportation (Primary Responsibility: Public Works Department) | |
|---|---|
| Short Term Action (2018-2022) | Progress |
| With every new transit, cycling or pedestrian infrastructure investment, launch an education and awareness campaign targeting residents who live and work in the areas served by the infrastructure to gain the most from the City's investments in infrastructure (including GHG emissions reductions) | Moderate progress |
| **Key Direction 2.3: Create Conditions to Enable Community Climate Action (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Develop and implement a strategy to empower and celebrate community-led climate action successes by advising on funding opportunities, technical expertise, and facilitating organization/industry/government linkages | Initiated |

## Strategic Opportunity #3: Advancing Sustainable Transportation – Increase Mobility Options and Shift to Zero Emission Vehicles

| Key Direction 3.1 Increase Use and Efficiency of Public Transit Systems (Primary Responsibility: Winnipeg Transit) | |
|---|---|
| Short Term Action (2018-2022) | Progress |
| Integrate and align transportation master planning with land use planning by conducting a comprehensive review of transportation and development bylaw, policy and regulation for alignment with OurWinnipeg | Complete |
| Deliver continuous improvement in transit service with a focus on customer service, reliability, route connectivity, and public education | Complete |

| | |
|---|---|
| Improve existing park and ride services, and increase the total number throughout the City. Explore partnerships to increase convenient park and ride services. Work with retailers with large surplus parking close to transit services and with the Winnipeg Metro Region to increase availability of park and rides near the City boundary, to facilitate ridesharing across the region | Significant progress |
| Improve active transportation connectivity to transit services by installing sidewalks and cycling routes to link stops with the surrounding community, and provide bike racks at stops and on buses | Significant progress |
| **Key Direction 3.2: Increase the Density of Urban Development Along Key Transit Corridors (Primary Responsibility: Planning, Property and Development Department)** | |
| Short Term Action (2018-2022) | Progress |
| Implement the policies included in the Transit Oriented Development Handbook, which guides and facilitates mixed-use, pedestrian-oriented infill development along high frequency transit corridors | Significant progress |
| Align transit route planning with growth and development trends to ensure neighbourhoods undergoing transition have convenient and frequent transit services | Complete |
| **Key Direction 3.3: Design New Suburban Communities to Enable Enhanced Transit Services and Access to Transit Corridors (Primary Responsibility: Winnipeg Transit)** | |
| Short Term Action (2018-2022) | Progress |
| Require sidewalks in new residential developments to ensure safe walking routes to transit stops | Significant progress |
| Ensure street network layout in new communities forms an overarching grid pattern with direct connections to adjacent neighbourhoods to allow for convenient and efficient transit routes along major streets | Complete |
| **Key Direction 3.4: Increase Active Transportation Rates (Primary Responsibility: Public Works Department)** | |
| Short Term Action (2018-2022) | Progress |
| Accelerate the implementation of the Pedestrian and Cycling Strategies (e.g. through increased funding and staffing) | Significant progress |

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| Continue to fund the Bike Education and Skills Training Program currently run by the Green Action Centre in partnership with Seven Oaks School Division and MPI. Work with partners to pilot, improve, and expand the program to other school divisions | Significant progress |
| Continue to fund and develop W.R.E.N.C.H, an organization focusing on core area education and outreach on bike repair | Significant progress |
| Continue to partner and promote initiatives that encourage active transportation (e.g., Bike to School Month, Commuter Challenge) | Significant progress |
| Enhance operation and maintenance of pedestrian and cycling facilities during winter months through re-prioritization of snow-clearing activities, assessing equipment needs, and engaging the active transportation community | Significant progress |
| Update the City's Snow Clearing Priorities to align with sustainable transportation modal shift goals. Adopt Priority 1 Pedestrian and Cycling snow clearing network Policy and associated budget that is separate and distinct from road priority snow clearing routes | Significant progress |
| **Key Direction 3.5: Reduce Traffic Congestion (Primary Responsibility: Public Works Department)** | |
| Short Term Action (2018-2022) | Progress |
| Adopt intelligent railway crossing measurement and compensation mechanisms that reduce congestion due to railway crossings | Initiated |
| Adopt intelligent and automated signal timing systems that adapt signal timings to weather and traffic conditions, alleviating congestion and reducing transit times | Initiated |
| Improve clarity and precision of Transit services through enhanced data analytics and insights into Transit service consumption and delivery | Significant progress |

| Key Direction 3.6: Increase the Use of Electric Vehicles (Primary Responsibility: Public Works Department) | |
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| Short Term Action (2018-2022) | Progress |
| Develop an Electric Vehicle Strategy for Winnipeg | Initiated |
| Partner with Red River College's Electric Vehicle Technology and Education Centre (EVTEC) to develop an education and information program to inform citizens about the latest developments and opportunities related to electric vehicles, charging infrastructure and policies | Not started |
| **Key Direction 3.7: Utilize Zero Emission Buses (Primary Responsibility: Winnipeg Transit)** | |
| Short Term Action (2018-2022) | Progress |
| Building on the momentum of the Electric Bus Pilot Project, plan for and initiate the deployment of electric buses at a larger scale | Complete |
| Prepare a transition plan outlining approaches to network integration, facility needs (charging facilities and storage), maintenance requirements and expected training considerations | Significant progress |
| Leverage funds from the Government of Manitoba or federal government to support the planning, capital investment, and operating costs associated with the shift | Initiated |

## Strategic Opportunity #4: Facilitate Compact, Complete Development and Increase Density

| Key Direction 4.1 Increase Strategic Infill Development That Provides Access to and Capitalizes on Existing and Planned Corridors with Frequent Transit Service (Primary Responsibility: Planning, Property and Development Department) | |
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| Short Term Action (2018-2022) | Progress |
| Complete the Residential Infill Strategy which will provide direction for infill development that supports complete communities and increased mobility options. Implementation tools that should be considered include innovative financial incentives (e.g. taxation, permits), non-financial incentives (e.g. streamlining permit process) and opportunities to enhance customer service by establishing clearer systems and simpler permitting pathways to help reduce processing times | Complete |
| Complete the OurWinnipeg Residential Growth Study which will identify priority areas for residential growth within Winnipeg | Complete |
| **Key Direction 4.2: Ensure New Areas of Growth are Designed According to the Principles of Complete Communities (Primary Responsibility: Planning, Property and Development Department)** | |
| Short Term Action (2018-2022) | Progress |
| Develop neighbourhood design guidelines and other tools that incorporate design elements essential to support a shift to sustainable modes of travel and which capitalize on opportunities to use passive renewable energy (e.g. street and lot orientation to capture passive solar energy) | Significant progress |
| **Key Direction 4.3: Pursue Transit-Oriented Development (Primary Responsibility: Planning, Property and Development Department)** | |
| Short Term Action (2018-2022) | Progress |
| In new transit-oriented development, ensure there are active transportation linkages and connections to facilitate a connected diverse and sustainable transportation network | Complete |

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| Gain further insight into the opportunities and constraints to transit-oriented development through the current Eastern Corridor Study | Significant progress |
| **Key Direction 4.4: Support Redevelopment of Former Commercial and Industrial Lands into Active Use (Primary Responsibility: Planning, Property and Development Department)** | |
| Short Term Action (2018-2022) | Progress |
| Develop a Brownfield Redevelopment Strategy for public and private lands. Implementation tools that should be considered include financial incentives to encourage redevelopment of key sites, development approval process incentives that encourage private sector investment into redevelopment activities, and streamlined processes | Not started |

## Strategic Opportunity #5: Low Carbon and Energy Efficient Buildings

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| **Key Direction 5.1 Increase Energy Performance of Existing Buildings (Primary Responsibility: Planning, Property and Development Department)** | |
| Short Term Action (2018-2022) | Progress |
| Advance a business case analysis to support the design and development of a residential and commercial energy performance program that includes both financial and non-financial incentives | Not started |
| Review City by-laws to identify opportunities to facilitate retrofits and renovations that improve building energy performance, and/or increase the presence of renewable energy technologies | Not started |
| Work with the Manitoba Chapter of the Canada Green Building Council and Manitoba Hydro to generate Winnipeg-specific energy performance data for existing buildings with a goal of strategically targeting the highest emitting buildings to ensure the greatest return on investment | Significant progress |
| Work with key stakeholder groups to accelerate the implementation of an energy performance labelling program for existing and new buildings | Significant progress |

| Key Direction 5.2: Improve Energy Performance of New Buildings (Primary Responsibility: Planning, Property and Development Department) | |
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| Short Term Action (2018-2022) | Progress |
| Complete a review of existing practices used to enforce existing Energy Codes and determine if there are opportunities for continuous improvement and innovation | Complete |
| Review City by-laws to identify opportunities to help facilitate the innovative application of technologies that reduce energy use, and/or increase the presence of renewable energy technologies | Not started |
| **Key Direction 5.3: Increase Access to Educational Materials (Primary Responsibility: Office of Sustainability)** | |
| Short Term Action (2018-2022) | Progress |
| Work with American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Building Energy Management Manitoba (BEMM), CaGBC, BOMA, Sustainable Buildings Manitoba and other key stakeholders (such as builders) to develop and offer courses to support green building standards | Moderate progress |
| Work with American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), Building Energy Management Manitoba (BEMM), CaGBC, BOMA, Sustainable Buildings Manitoba and other key stakeholders to provide access to locally-sourced (when possible) green building material resources. | Moderate progress |

## Strategic Opportunity #6: Waste Reduction and Diversion

| Key Direction 6.1 Reduce Consumption and Increase Waste Diversion from Residential, Commercial and Industry (Primary Responsibility: Water and Waste Department) | |
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| Short Term Action (2018-2022) | Progress |
| Implement direction from the Comprehensive Integrated Waste Management Strategy to advance the priority of organic material diversion from landfill | Significant progress |
| Continue to invest in educational and awareness programming to help maximize waste diversion (i.e. recycling and organics) | Complete |

| Key Direction 6.3: Utilize Biosolids in Agriculture and Landscaping Industries (Primary Responsibility: Water and Waste Department) | |
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| Short Term Action (2018-2022) | Progress |
| Continue to work with key stakeholders to accelerate the implementation of the Biosolids Master Plan and maximize the diversion of biosolids from landfill | Complete |
| Strategically support (incentives, pilot projects, etc.) the application of biosolids in agriculture and the use of biosolids in soil manufacturing | Complete |
| **Key Direction 6.4: Support Integrated Resource Recovery Opportunities (Primary Responsibility: Water and Waste Department)** | |
| Short Term Action (2018-2022) | Progress |
| Complete a feasibility analysis to determine the value of investing in integrated resource recovery projects (including capture and reuse of methane and combined heat and power) within the City's wastewater facilities and landfills | Complete |

## Strategic Opportunity #7: Community Climate Resiliency

| Key Direction 7.1 Implement Opportunities to Improve Winnipeg's Resilience and Adaptability to the Effects of a Changing Climate (Primary Responsibility: Office of Sustainability) | |
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| Short Term Action (2018-2022) | Progress |
| Develop a Climate Resiliency Strategy. Ensure the Strategy considers the cobenefits and opportunities for alignment with the City's climate mitigation and adaptation efforts | Not started |
| Encourage climate-friendly landscaping in residential, commercial and industrial buildings | Not started |
| Launch a public awareness campaign to highlight opportunities for residential climate resilience initiatives, including backyard composting and use of rain barrels | Not started |

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| Explore regional opportunities to better connect the ecological network to add resiliency to Winnipeg and surrounding municipalities | Not started |
| **Key Direction 7.2: Increase and Preserve Tree Canopy (Primary Responsibility: Public Works Department)** | |
| Short Term Action (2018-2022) | Progress |
| Continue and explore opportunities to expand the Winnipeg Releaf Program | Significant progress |
| Continue partnership with the University of Winnipeg and Trees Winnipeg to map the City's canopy cover and to determine canopy cover targets for the city overall and for various land use categories | Significant progress |
| Prepare an Urban Forestry Strategic Plan that includes key indicators based on public health and climate mitigation considerations. The Strategic Plan should recognize and consider different strategies for Winnipeg's diverse communities, including new, developing and mature neighbourhoods | Significant progress |
| Continue to work with neighbourhoods/communities to ensure equal access to resources and funds that facilitate urban forest initiatives. In these cases, the City should consider how best to enable community organizations or other neighbourhood scale forestry investment initiatives | Initiated |