



The Corporation of the City of Stratford
Infrastructure, Transportation and Safety Committee
Open Session
AGENDA

Date: Monday, December 16, 2024

Time: 7:10 P.M.

Location: Council Chamber, City Hall

Committee Present: Councillor Burbach - Chair Presiding, Councillor Nijjar - Vice Chair, Mayor Ritsma, Councillor Biehn, Councillor Briscoe, Councillor Henderson, Councillor Hunter, Councillor McCabe, Councillor Sebben, Councillor Wordofa

Staff Present: Joan Thomson - Chief Administrative Officer, Tatiana Dafoe - City Clerk, Taylor Crinklaw - Director of Infrastructure Services, Adam Betteridge - Director of Building and Planning Services, Neil Anderson - Director of Emergency Services/Fire Chief, Karmen Krueger - Director of Corporate Services, Kim McElroy - Director of Social Services, Tim Wolfe - Director of Community Services, Audrey Pascual - Deputy Clerk, Dave Bush

To watch the Committee meeting live, please click the following link:

<https://video.isilive.ca/stratford/live.html>

A video recording of the meeting will also be available through a link on the City's website

<https://calendar.stratford.ca/meetings> following the meeting.

Pages

1. Call to Order

The Chair to call the Meeting to Order.

Councillor Beatty provided regrets for this meeting.

2. Disclosure of Pecuniary Interest and the General Nature Thereof

The *Municipal Conflict of Interest Act* requires any member of Council declaring a pecuniary interest and the general nature thereof, where the interest of a member of Council has not been disclosed by reason of the member's absence

from the meeting, to disclose the interest at the first open meeting attended by the member of Council and otherwise comply with the *Act*.

Name, Item and General Nature of Pecuniary Interest

- | | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 3. | Sub-committee Minutes | 4 - 11 |
| | Sub-committee minutes are attached for background regarding the discussion held at the November 27, 2024, Sub-committee meeting. | |
| 4. | Delegations | |
| | None scheduled. | |
| 5. | Report of the Climate Change Program Manager | |
| 5.1 | Annual Corporate Greenhouse Gas Emissions – 2023 (COU24-021) | 12 - 20 |
| | Staff Recommendation: THAT the report titled, "Annual Corporate Greenhouse Gas Emissions – 2023" (ITS24-021), be received for information. | |
| | Motion by | |
| | Sub-committee Recommendation: THAT the report titled, "Annual Corporate Greenhouse Gas Emissions – 2023" (ITS24-021), be received for information. | |
| 6. | Report of the Manager of Environmental Services | |
| 6.1 | Dunn Road Well Failure - Emergency Purchase Update Report (ITS24-020) | 21 - 23 |
| | Staff Recommendation: THAT the report titled, "Dunn Road Well Failure - Emergency Purchase Update Report" (ITS24-020), be received as per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1. | |
| | Motion by | |
| | Sub-committee Recommendation: THAT the report titled, "Dunn Road Well Failure - Emergency Purchase Update Report" (ITS24-020), be received as per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1. | |
| 6.2 | Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report (ITS24-023) | 24 - 27 |
| | Staff Recommendation: THAT the report titled, "Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report" | |

(ITS24-023), be received per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Motion by

Sub-committee Recommendation: THAT the report titled, "Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report" (ITS24-023), be received per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

7. Report of the Supervisor of Waste Operations

7.1 Stratford Landfill Public Input Invite November 2024 (ITS24-022)

28 - 29

Staff Recommendation: THAT the report titled, "Stratford Landfill Public Input November 2024" (ITS24-022), be received for information.

Motion by

Sub-committee Recommendation: THAT the report titled, "Stratford Landfill Public Input November 2024" (ITS24-022), be received for information.

8. For the Information of Committee

8.1 Department Update

A copy of the update was posted to the City's website on the "Engineering Division" page.

8.2 Advisory Committee/Outside Board Minutes

There were no Advisory Committee/Outside Board minutes to be provided to Committee.

9. Adjournment

Meeting Start Time:

Meeting End Time:

Motion by

Committee Decision: THAT the Infrastructure, Transportation and Safety Committee meeting adjourn.



**The Corporation of the City of Stratford
Infrastructure, Transportation and Safety Sub-committee
MINUTES**

Date: November 27, 2024
 Time: 4:30 P.M.
 Location: Council Chamber, City Hall

Sub-committee Present: Councillor Burbach - Chair Presiding, Councillor Nijjar - Vice Chair, Councillor Beatty, Councillor Hunter, Councillor McCabe

Staff Present: Tatiana Dafoe – Clerk, Taylor Crinklaw - Director of Infrastructure Services, Neil Anderson - Director of Emergency Services/Fire Chief, Sadaf Ghalib – Climate Change Programs Manager, Sean Beech – Manager of Environmental Services, Miranda Franken - Council Clerk Secretary

1. Call to Order

The Chair called the Meeting to Order.

Land Acknowledgment

Moment of Silent Reflection

Respectful Conduct Statement

2. Disclosure of Pecuniary Interest and the General Nature Thereof

The *Municipal Conflict of Interest Act* requires any member of Council declaring a pecuniary interest and the general nature thereof, where the interest of a member of Council has not been disclosed by reason of the member's absence from the meeting, to disclose the interest at the first open meeting attended by the member of Council and otherwise comply with the *Act*.

Name, Item and General Nature of Pecuniary Interest

No disclosures of pecuniary interest were made by a Member at the November 27, 2024, Infrastructure, Transportation and Safety Sub-committee meeting.

3. Delegations

None scheduled.

4. Report of the Manager of Climate Change Programs**4.1 Annual Corporate Greenhouse Gas Emissions – 2023 (COU24-021)**

Staff Recommendation: THAT the report titled, "Annual Corporate Greenhouse Gas Emissions – 2023" (ITS24-021), be received for information.

Sub-committee Discussion: The Climate Change Programs Manager reviewed the report, highlighting the following:

- overall corporate emissions increased by 7.25% in the year ending 2023;
- staff using the baseline created as part of the Corporate Energy Emissions Plan annual reporting process and seeing an emissions decrease overall since 2017;
- identified factors for the increase, including the greenhouse gas intensity increase for the electricity grid, this being dictated by the province, expansion in fleet vehicles for service delivery and weather fluctuations having led to increase in historical energy consumption;
- corporate emissions driven primarily by buildings, accounting for 46% of total emissions and fleet accounting for 35%, this not including transit busses at this time;
- 160 tonne decrease in carbon emissions in 2024 resulting from efficient use of energy and light to medium retro fit initiatives;
- more retrofit projects planned for 2025 and coming years with significant progress anticipated for corporate building emissions;
- aging fleet being replaced with more efficient and hybrid or electric options where feasible, this being an ongoing process;

- Stratford Police having transformed 12 of 32 vehicles to hybrid options resulting in cost savings;
- reporting now including EV charging station inventory, which is on the rise with NRCan funding, and staff seeking further funding opportunities; and
- energy usage for 1 year having been established and now staff tracking fuel savings, energy use and average sessions.

Discussion on the update occurred between Sub-committee and Staff.
Highlights of the discussion included:

- the report being presented annually and tracking progress to support long term initiatives;
- FCM (Federation of Canadian Municipalities) Green Municipal Fund having granted \$200,000 towards feasibility studies helping staff to further understand how to proceed with upgrades under the retrofit to drastically reduce building emissions;
- 2023 staff created a benchmark for reporting and 2024 being an investigation into how to best address retrofits and fleet upgrades;
- upgrades and retrofits reducing emissions and saving operational costs over time;
- energy consumption from Water and Wastewater Plant being higher than expected with a 28% increase;
- methane being used to heat the primary digester at the plant with the excess being burned off;
- the Pollution Control Plant components primarily run by electricity with limited technological advances available for significant improvements in efficiencies;
- the facility being a heavy energy consumer now and in future and not likely to change in near future; and
- staff looking into reducing costs through peak energy demands.

Motion by Councillor Hunter

Sub-committee Recommendation: THAT the report titled, "Annual Corporate Greenhouse Gas Emissions – 2023" (ITS24-021), be received for information.

Carried

5. Report of the Manager of Environmental Services

5.1 Dunn Road Well Failure - Emergency Purchase Update Report (ITS24-020)

Staff Recommendation: THAT the report titled, "Dunn Road Well Failure - Emergency Purchase Update Report" (ITS24-020), be received as per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Sub-committee Discussion: The Manager of Environmental Services reviewed the report, highlighting the following:

- in April 2024 the Dunn Road Well having the aging submersible motor and pump break off and fall into the well during minor rehabilitation work;
- Lotowater Technical Services having successfully removed the pump and motor and these being determined unsuitable for use;
- Lotowater Services being retained to install replacement pump and motor and while out of service, performing cleaning and inspection of the well casing;
- this having met the criteria of an Emergency Purchase under Purchasing Policy P.5.1 with the risk of the second largest water supply being nonoperational and putting the City at risk of inadequate supply should further failures occur; and
- the total cost of the project being projected at \$55,000 and costing a final amount of \$119,000 after replacement of the pump and motor and additional work on well while out of service.

Discussion on this matter occurred between Sub-committee and Staff. Highlights of the discussion included:

- the incident occurred during contracted work to remove the pump from the well casing; and

- there being advanced corrosion on one of the couplings which failed and led to the pump and motor dropping into the well.

Motion by Councillor McCabe

Sub-committee Recommendation: THAT the report titled, "Dunn Road Well Failure - Emergency Purchase Update Report" (ITS24-020), be received as per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Carried

5.2 Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report (ITS24-023)

Staff Recommendation: THAT the report titled, "Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report" (ITS24-023), be received per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Sub-committee Discussion: The Manager of Environmental Services reviewed the report, highlighting the following:

- in May of 2024 an over pressure event occurred in the Primary Digester at the Stratford Water Pollution Control Plant;
- the existing roof on the Primary Digester lifted and the Ontario Clean Water Agency (OCWA) retained CIMA to assess the roof and concrete to determine damage and options for repair;
- this having met the criteria of an Emergency Purchase under Purchasing Policy P.5.1 with the efficiencies in the Water Pollution Control Plant being jeopardized and this being considered core City infrastructure;
- the CIMA report indicating the digester roof showed no visual signs of warping, deflection or weld cracking with the exception of one localized area;
- the roof coating having extensive corrosion on the entire surface including the equipment supported;
- significant concrete damage with lagging bolts lifting out of the concrete as a result of the overpressure event;

- the cost to refurbish and repair the roof and concrete being estimated by CIMA at \$1.5 million with this option expected to last a maximum of 15 years at which time a new roof will be required with associated cost of valves and piping;
- the cost for a full replacement of roof including concrete repair being estimated at \$2.6 million;
- staff working with OCWA to determine course of action with options being brought back to Council; and
- staff having received an update from OCWA on November 27, 2024 of a possible partial cost recovery through the insurance provider with OCWA looking into this further to verify.

Discussion on this matter occurred between Sub-committee and Staff. Highlights of the discussion included:

- the life expectancy of a full replacement and repair being 30-40 years;
- the current digester roof having been replaced in 1984 and being 40 years old;
- options for relief through the air relief valve in the digester roof being jeopardized as an overflow of sludge had occurred causing the valve to plug and a significant amount of pressure to build;
- the replacement costs being accounted for in the Water and Wastewater Rate Study and reflected in the appendix with a sum listed at \$2.4 million;
- details coming in 1-2 months regarding insurance coverage and options to refurbish or replace; and
- there being a buffer should the cost be of a lower scope.

Motion by Councillor Beatty

Sub-committee Recommendation: THAT the report titled, "Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report" (ITS24-023), be received per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Carried

6. Report of the Supervisor of Waste Operations

6.1 Stratford Landfill Public Input Invite November 2024 (ITS24-022)

Staff Recommendation: THAT the report titled, "Stratford Landfill Public Input November 2024" (ITS24-022), be received for information.

Motion by Councillor Hunter

Sub-committee Recommendation: THAT the report titled, "Stratford Landfill Public Input November 2024" (ITS24-022), be received for information.

Carried

7. Department Update

Sub-committee Discussion: The Director of Infrastructure Services provided the following highlights from the department update:

- staff preparing a report for Council's consideration regarding Automated Speed Enforcement;
- directional arrows being painted at the Albert Street traffic circle on November 27 in response to public concern regarding use of the traffic circle;
- pedestrian crossing improvements paused at Waterloo and William Street and at McCarthy Street due to challenges with scheduling a sub-contractor, and looking to spring for finalization;
- Environmental Services Water Staff having toured the Thamesford Water Filtration system to investigate how other municipalities navigate off colour water, and possible mitigation strategies in Stratford;
- Public Works winter operations at full capacity with staff assigned to appropriate shifts; and
- the warm weather allowing for further patching of potholes before snow starts falling.

8. Advisory Committee/Outside Board Minutes

No Advisory Committee/Outside Board minutes were provided to Sub-committee.

9. **Next Sub-committee Meeting**

The next Infrastructure, Transportation and Safety Sub-committee meeting is January 29, 2025 at 4:30 p.m. in the Council Chamber, City Hall.

10. **Adjournment**

Motion by Councillor Nijjar

Sub-committee Decision: THAT the Infrastructure, Transportation and Safety Sub-committee meeting adjourn.

Carried

Meeting Start Time: 4:30 P.M.

Meeting End Time: 4:56 P.M.



MANAGEMENT REPORT

Date: November 27, 2024
To: Infrastructure, Transportation and Safety Sub-committee
From: Sadaf Ghalib, Climate Change Program Manager
Report Number: ITS24-021
Attachments: None

Title: Annual Corporate Greenhouse Gas Emissions – 2023

Objective: To report annually on the City of Stratford’s Corporate Greenhouse Gas (GHG) emissions inventory for the year-ending December 31, 2023, and progress toward meeting corporate GHG emission reduction targets.

Background: On October 23, 2023, City Council endorsed the Corporate Energy and Emissions Plan (CEEP), which provides guidance on how the City can accelerate efforts toward decarbonization, operationalize actions to support energy efficiency and achieve the required emission reduction targets to align with provincial and federal objectives.

Staff continue to implement recommendations from CEEP, track and monitor efforts within each department, and document progress toward achieving overarching sustainability goals.

Analysis: Compared to the 2017 baseline year, the City’s total GHG emissions for 2023 decreased by approximately 12% (equal to 610.16 tonnes of carbon dioxide equivalent, or tCO₂e). However, annual emissions rose by 7.52% between 2022 and 2023. Total corporate GHG emissions in 2023 were approximately 4,466.24 tCO₂e (being "tonnes of carbon dioxide equivalent.")

The main factors influencing this increase include the steep rise in the GHG intensity of Ontario’s electricity grid, expansion of fleet for corporate service delivery, enhanced infrastructure to cater to a growing population, as well as the availability of more accurate data from historical reporting. There may also be impacts on annual variations changes in overall outdoor temperatures, that also influence GHG emission outcomes from year to year by causing fluctuations in energy consumption to accommodate thermal comfort. Such variations cannot be determined or predicted for future years.

Measured GHG emissions are noted for each asset class below (Table 1) and overall corporate GHG emissions are depicted graphically in Figure 1.

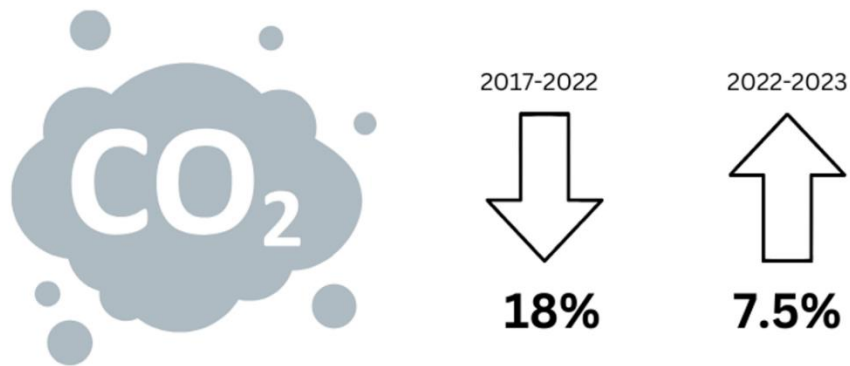
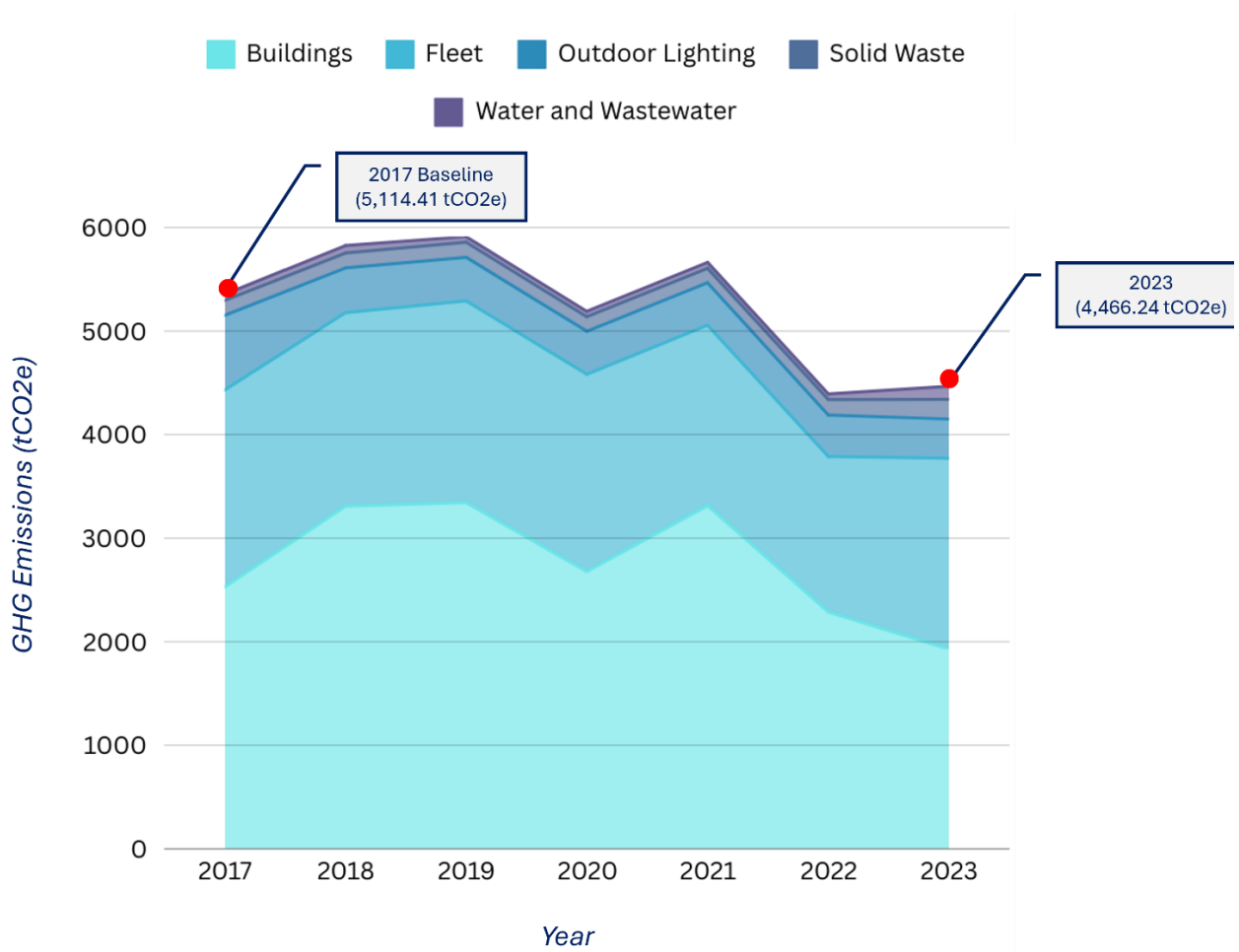
Table 1 Corporate GHG Emissions by Sector (2023)

Asset Class	Energy Type(s) in Use	Usage	2023 GHG Emissions (tCO ₂ e)
Buildings (including Municipal Airport)	Electricity	5,297,587 kWh	201.31 tCO ₂ e
	Natural Gas	898,974 cu. m.	1,726.93 tCO ₂ e
Fleet (including Stratford Police Services)	Gasoline	220,682.44 Litres	1,842.28 tCO ₂ e
	Diesel	215,149.93 Litres	-
	Propane	11,022 Litres	-
Outdoor Lighting	Electricity	110,000 kWh (est.)	380 tCO ₂ e
Solid Waste	Not applicable	299.99 tonnes	191 tCO ₂ e
Water & Wastewater	Electricity	3,281,900 kWh	124.71 tCO ₂ e

Corporate Energy and Emissions Plan (CEEP) Implementation

Notable projects and initiatives from CEEP are summarized below.

- Continued to provide inter-departmental support to staff and ensured that a strategic climate lens informed planning and decision making.
- Monitored the implementation of CEEP recommendations for corporate assets.
- Piloted the inclusion of climate considerations in the annual budget process to quantify energy and emissions impacts of city-wide initiatives including but not limited to projects, plans and procurement components. This evaluation tool helped staff assess climate impacts for initiatives at conception and is intended to continue to support decision making for staff as well as Council.
- Supported inter departmental initiatives including building energy audits for facilities, the determination of more assets to be included, evaluation of street light inventory, assistance on EV charging station initiatives, technical guidance on grant funding applications for fleet transition to hybrid and electric buses, periodic reporting to funding organizations for secured grants.



Corporate GHG emissions from 2017 baseline year have decreased by 12%, however annual emissions from 2022 have increased by 7.5%

Figure 1 Corporate GHG Emissions (2023)

Energy and Emissions Share

Consistent to previous years, a predominant share of energy usage and emissions is driven by facilities and fleet. Figure 2 highlights the percentage breakdown of the share of emissions by corporate assets.

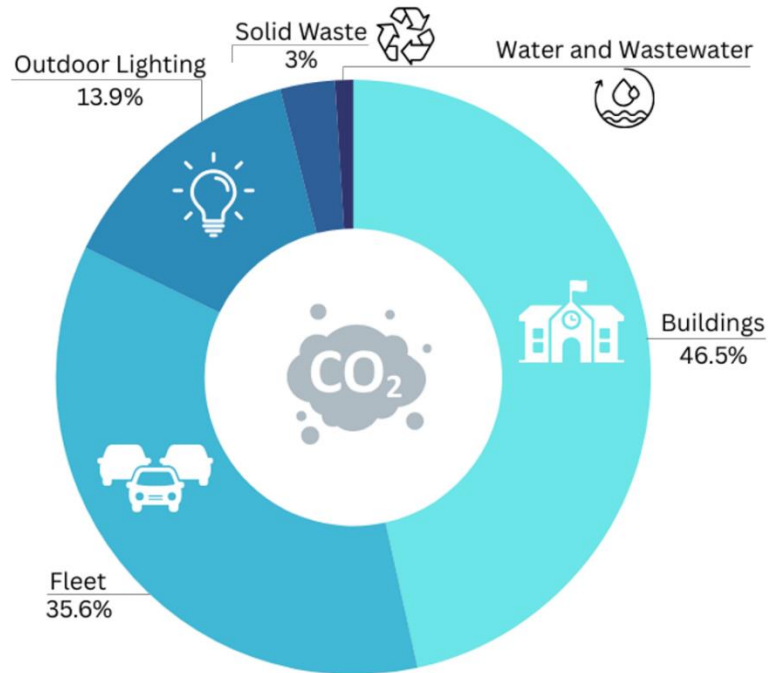


Figure 2 Corporate Assets- Energy and Emissions Share

Overview of Initiatives from Corporate Asset Classes

A high-level overview of initiatives for each asset class is provided below.

Building Asset Class

Through strategic investments in building retrofits such as efficient mechanical system replacements, envelope improvements and lighting upgrades, corporate buildings attained emission reduction of approximately 7.67% over the past year along with significant operating cost savings. This translates to a decrease in approximately 160 tCO₂e of emissions.

Some initiatives undertaken for buildings are noted as follows.

- Basic energy audits (ASHRAE Level 1) performed on the sixteen City facilities, which consisted of a walkthrough the facility, analysis of utility usage over the course of 2023, and identification of low cost retrofit measures to consider in planning for the 10-year capital budget cycle.
- Conducted benchmarking for four buildings to understand and analyse energy performance: Rotary Complex, Burnside Agriplex, Dufferin Lions Arena and

William Allman Memorial Arena. It was observed that over a period from January 2022 – March 2023, these facilities collectively achieved electricity as well as cost savings. Some identified projects that can result in energy and cost savings, such as phased retrofits are being built into the 10-year capital budget.

- Seven facilities have been approved for funding to undergo feasibility studies from Federation of Canadian Municipalities (FCM): Burnside Agriplex, City Hall, City Hall Annex, Dufferin Arena, Police Station, Rotary Complex, and William Allman Memorial Arena.
- Reduced facility energy use by 14.3% at the Dufferin Arena through phased retrofit upgrades including boiler, hot water tank replacements, and LED lighting installations. This included electricity demand reduction of 30.3% and GHG emission reduction of 4.71 tCO₂e along with significant utility cost savings.
- Planned retrofits for the corporate portfolio are anticipated to contribute toward energy efficiency efforts.

Fleet Asset Class

Ongoing procurement of low carbon options as a replacement for ageing conventional internal combustion engine (ICE) vehicles and equipment that have been added to the City's inventory over the past year have resulted in fuel cost savings of up to 30%.

Table 2 Corporate Fleet and Equipment

Fuel type	Number of units (fleet & equipment)	Percentage breakdown
Gasoline	64	40.51%
Diesel	58	38.41%
Propane	7	4.64%
Hybrid	24	15.19%
Electric	5	3.31%

While there is a slight reduction in emissions due to the replacement of ageing fleet to hybrid options and electric equipment, the overall fleet inventory has increased due to the addition of several light duty vehicles for staff who previously utilized personal vehicles for official purposes. The expanded inventory has also resulted in an increase in fleet emissions, although this spike in emissions is not anticipated to be consistent each year and will not serve as a suitable indicator to determine annual trends.

Some initiatives undertaken for fleet are noted as follows.

- Stratford Police Services (SPS) continues to replace ageing fleet with low carbon options. Out of an inventory comprising 32 vehicles, 20 are gasoline and 12 are hybrid vehicles. Overall, SPS has completed 37.5% of their fleet transition to hybrids and continues to replace vehicles to low carbon options at the end of their service life.
- Through funding from the federal government's Zero Emission Transit Fund (ZETF), the City commissioned a bus electrification feasibility study to plan for

replacement of transit fleet of 15 diesel-powered buses with electric buses and hybrid options as the current buses age out of service.

Outdoor Lighting

There were no LED conversions conducted for outdoor lighting in 2023. Overall, 76% of total streetlights (5,777 units) have been converted to LED. Remaining lights include high-pressure sodium (1,382 units), fluorescent lamps (2 units), incandescent and metal halide lamps (2 units).

Water and Wastewater

The annual energy consumption for 2023 has been noted as 3,281,900 kWh, marking a 28% increase from the annual consumption in 2022. Energy consumption and associated costs at the Water Pollution Control Plant facility have been consistently increasing over the years, which is primarily due to increased infrastructure needs of the growing community leading to increased flow, as well as variable precipitation patterns and snow melt in the region.

- The average demand at the facility in 2023 was 486.9 kW, representing an 11% increase from the average demand recorded in 2022 (439 kW). The maximum energy demand from 2020 to 2023 was highest in July 2023 where demand reached 638 kW.
- In 2023, the annual total cost has been verified at \$401,578.07, reflecting a 14% increase compared to the annual cost in 2022. The energy cost was the highest during July 2023, reaching record highest cost of \$46,296.40
- Ontario Clean Water Agency (OCWA) continues to monitor the facility and provide recommendations for potential energy saving programs and initiatives.

Municipal Solid Waste

For the GHG emissions inventory, the emissions are determined from the total waste landfilled in a year. In 2023, overall, the city disposed 29,999.28 tonnes of waste to the landfill, which is significantly higher than the amount of waste generated and disposed to landfill in 2022 (19,267.76 tonnes).

While an accurate number cannot be determined for corporate-generated waste, it is estimated that 1% of the total waste can be considered as being generated at municipal facilities, or approximately 299.99 tonnes. This estimate includes waste collection from downtown waste receptacles, parks and other public buildings.

While managing waste generated at all municipal facilities, parks, public spaces and during events can be a challenging metric to track, efforts are underway to increase awareness around waste generation and reduction.

- In 2023, staff implemented a green bin program for City Hall and City Hall Annex to divert kitchen waste and other organic materials from the landfill site. This initiative is planned to be expanded to other facilities.
- Downtown Stratford Business Improvement Area (BIA) and Destination Stratford, the Public Works department have recently collaborated to provide green bins at Market Square, with scheduled bi-weekly pick ups.
- Three dog waste containers have been installed in the parks system to collect and divert animal waste from the landfill. In a three-month period of 2023, 700 kg of waste was collected and sent to a facility that produces energy from waste. It was suggested that the energy produced within this quarter itself was sufficient to power an entire home for approximately 6 months.

Infrastructure Upgrades

While infrastructure upgrades like installing EV charging stations involve upfront costs, they are expected to support the transition to electric vehicles and meet the community's future infrastructure needs as more drivers switch from conventional cars to plug-in hybrids and EVs.

Staff continue to track usage for the current inventory and explore opportunities for grants and funding. Below are excerpts from the 13-month usage of EV stations in municipal parking lots.

Table 3 EV Charging Station Session Details (13-months)

Time Period	Aug 1, 2023 to Aug 31, 2024
Energy deployed	37.60 MWh
Cost incurred (based on hydro cost of 0.18c per kWh)	\$6,768
GHG savings (see note below)	39,030 kgCO ₂ e or 39 tCO ₂ e
Gasoline savings	18,041.34 Litres

At the time of writing this report, the City's EV station deployment helped avoid an estimated 86,932 kgCO₂e (carbon emissions or 87 tCO₂e), which is equivalent to planting 2,229 trees and letting them grow for 10 years.

Notable efforts from 2023 are noted below.

- Through funding provided by Natural Resources Canada (NRCan) and the Zero Emission Vehicle Infrastructure Program (ZEVIP), the City is finalizing the installation of 6 new dual port Level 2 EV charging stations and 1 Level 3 charging station at municipal parking lots.
- Staff submitted applications for the province's Electric Vehicle ChargeON program and NRCan's new ZEVIP intake to further install 4 L3 charging stations at the Rotary Complex.

- Staff continues to collaborate with Festival Hydro Inc. and analyze the feasibility of drawing power from the electric grid to serve future demand.

Climate Lens Across Corporate Initiatives

The Climate Action Division continues to provide guidance and support across the organization to ensure that the climate lens application is a priority when updating existing or developing municipal frameworks and planning instruments. Projects such as the 2024 – 2027 Strategic Priorities, Community Climate Action Plan (CCAP), and the Transportation Master Plan (TMP), have incorporated this lens during development; several other ongoing initiatives including the Official Plan Review (OPR) also continue to apply this approach.

Financial Implications:

Not applicable:

There are no financial implications to be reported because of this informational report.

Alignment with Strategic Priorities:

Enhance our Infrastructure

This report aligns with this strategic priority as its recommendations promote energy efficient buildings, sustainable transportation options and infrastructure, support the energy transition for the City and community, that is anticipated to significantly drive emission reduction and support sustainable growth.

Alignment with One Planet Principles:

Equity and Local Economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Sustainable Water

Using water efficiently, protecting local water resources and reducing flooding and drought.

Travel and Transport

Reducing the need to travel, encouraging walking, cycling and low carbon transport.

Material and Products

Using materials from sustainable sources and promoting products which help people reduce consumption.

Zero Waste

Reducing consumption, reusing and recycling to achieve zero waste and zero pollution.

Zero Carbon Energy

Making buildings and manufacturing energy efficient and supplying all energy with renewables.

Staff Recommendation: THAT the report titled, "Annual Corporate Greenhouse Gas Emissions – 2023" (ITS24-021), be received for information.

Prepared by: Sadaf Ghalib, Climate Change Program Manager
Recommended by: Taylor Crinklaw, Director of Infrastructure Services
Joan Thomson, Chief Administrative Officer



MANAGEMENT REPORT

Date: November 27, 2024
To: Infrastructure, Safety, and Transportation Sub-committee
From: Sean Beech, Manager of Environmental Services
Report Number: ITS24-020
Attachments: None

Title: Dunn Road Well Failure - Emergency Purchase Update Report

Objective: To provide an update for Council on the drinking water well emergency repair completed at the Dunn Road Well House.

Background: The 2024 approved Capital Budget included \$100,000 for repair and maintenance work on the City's drinking water wells. In April of this year, the Dunn Road Well, which is the City's second largest water supply pumping station, incurred a failure while undergoing minor rehabilitation work. During the removal of the pumping equipment, the aging submersible motor and pump infrastructure broke off and fell into the well. While mobilized onsite, City contractor, Lotowater Technical Services, successfully removed the pumping equipment from the well. Regrettably, the pump and motor were determined as unsuitable for reuse.

LotoWater was engaged to install a new pump and motor. They also performed cleaning and inspection of the well casing when the well was out of service. The intention was to competitively procure for the planned work after the minor repair work, but it made sense to have all work completed at the time. Compliance with all guidelines and regulations set out by the Ministry of the Environment, Conservation and Parks occurred during the period.

This situation met the criteria of an emergency purchase under the City's Purchasing Policy P.5.1, Section 39.1.b. Not having the City's second largest water supply pumping station operational could put the City at risk of inadequate supply if further failures in the system were to occur. At the April, ITS Sub-committee meeting Council was advised of the situation. This report provides additional details of the City's response and concludes the required communication with Council regarding the incident as per the City's Procurement Policy.

Analysis: Due to the severity of the situation, the City promptly retained Lotowater Technical Services as the single-source contractor to complete this work. Consideration was given to the risks and outcomes of having this well out of service for an extended period when making this decision.

In April, Staff moved forward with single sourcing the unplanned work to LotoWater, a trusted contractor who completed the emergency repairs for \$72,772.00 HST included. The planned work, originally scheduled for later in the year, was expedited due to the emergency, with costs totaling \$55,360.00, or \$52,545.50 including HST. This brought the total costs to \$135,317.50 before the HST rebate credits.

In addition to the repair budget, an additional \$200,000 for planned mechanical well upgrades and miscellaneous water repairs was available, both funded through R-R11-WATR reserve. The total costs of the emergency repair are \$119,751.02, after the partial HST Rebate. Accounting for these costs and other assigned expenses to the Mechanical Well Upgrades and Miscellaneous Water Repairs account, there remains approximately \$36,000 of available funds between these two budget accounts.

Financial Implications:

Financial impact to current year operating budget:

There is no anticipated impact on the current operating budget as these projects use existing reserve funds.

Financial impact on future year operating budget:

Ongoing maintenance and operating costs will be slightly lower due to the efficiency of the new pump and motors. Routine maintenance to the equipment will continue as recommended by the manufacturer and regulatory requirements and budgeted accordingly.

Link to asset management plan and strategy:

The completion of this project has resulted in the replacement of the motor and pump for the water supply station in advance of the scheduled life cycle. Consequently, the replacement timeline for these components will change to align with the 10-year forecast. The previously damaged motor and pump were slated for maintenance in 2026, and the cleaning and rehabilitation of the well casing in 2024. This maintenance work was completed while the system was out of service and will not be required in the coming two years.

Alignment with Strategic Priorities:

Enhance our Infrastructure

By replacing the motor, pump, while inspecting and cleaning the well casing, this water supply station ensures reliability and efficiency of water delivery to the residents of the City. Going forward, preventative maintenance will continue to ensure longevity and reliability of this critical infrastructure for drinking water.

Alignment with One Planet Principles:

Equity and Local Economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Sustainable Water

Using water efficiently, protecting local water resources and reducing flooding and drought.

Staff Recommendation: THAT the report titled, "Dunn Road Well Failure - Emergency Purchase Update Report" (ITS24-020), be received as per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Prepared by: Sean Beech, Manager of Environmental Services
Recommended by: Taylor Crinklaw, Director of Infrastructure Services
Joan Thomson, Chief Administrative Officer



MANAGEMENT REPORT

Date: November 27, 2024
To: Infrastructure, Transportation and Safety Sub-Committee
From: Sean Beech, Manager of Environmental Services
Report Number: ITS24-023
Attachments: None

Title: Stratford Water Pollution Control Plant (WPCP)-Primary Digester Roof Failure-Update Report

Objective: To present an update to Council regarding the Primary Digester Roof Failure at the Stratford Water Pollution Control Plant and respective Emergency Purchases.

Background: The WPCP digesters has long been recognized as undersized for handling the current volumes of waste processed, and recommendations for capacity upgrades have been in consideration for several years. This is one contributing factor that led to an overpressure event that occurred in the Primary Digester at the Stratford Water Pollution Control Plant in May of this year. As a result of the overpressure, the existing roof on the primary digester lifted. Ontario Clean Water Agency (OCWA) retained CIMA+ to assess the roof and concrete to determine damage and options for repair.

Analysis: This situation met the criteria of an emergency purchase under the City's Purchasing Policy P.5.1, Section 39.1.b. The WPCP is considered core City infrastructure, and having the digester out of commission for a prolonged period jeopardizes the effective operations of wastewater treatment within the City. At the May, ITS Sub-committee meeting Council was advised of the situation. This report provides additional details of the City's response and concludes the required communication with Council regarding the incident as per the City's Procurement Policy.

The goal of the emergency response from OCWA and the City was to expedite the incident investigation and corresponding report that provides recommended courses of action. The longer the plant operates without the digester, the more costly the alternative treatment options become and the more difficult it is for the plant to operate within legislated parameters.

According to the CIMA+ report, the digester roof showed no visual signs of warping, deflection, or weld cracking, except for one localized area. However, the roof coating has failed extensively across the entire surface, including on equipment supports. This coating failure has resulted in significant corrosion in several areas of the roof. There is also significant concrete damage where the lagging bolts for the roof lifted out of the concrete. The unfortunate result is that there will be significant costs going forward to either refurbish or replace the Primary Digester.

The CIMA+ Report estimates refurbishing and repairing the roof and concrete will be approximately \$1,545,000. This repair option is expected to only last a maximum of 15 years, which would then require a new roof and other associated costs. The full replacement of the roof and repairing of the concrete is estimated to cost \$2,676,000 according to the CIMA+ Report. Staff are still assessing the incident and determining a recommended course of action that will require a Council decision soon.

As part of the 2024 budget deliberations, Council approved \$380,000 for Planned Capital maintenance and upgrades at the WPCP. This maintenance and upgrades are based on an 8-year recommended project forecast provided by OCWA based on age and condition of needed repairs. This account is funded through the wastewater reserve. Many of the planned projects were put on hold, to fund approximately \$200,000 in investigative services required to respond to this event.

With the report now finalized and recommended alternatives identified, staff will collaborate with OCWA to determine the optimal course of action for the City. The proposed 2025 budget presented to Council will require adjustments to allocate the necessary resources and capacity for the urgent Primary Digester repairs, but this work has been factored into the current Water and Wastewater Rate Study. Staff will proceed with preparing a proposal for a competitive procurement process to engage an engineering consultant for detailed design work. Additionally, a third-party assessment is underway to investigate the root cause of the issue and identify any potential lessons learned.

Before the investigation conducted by CIMA+, the costs associated with biosolids removal, scaffolding setup, and industrial cleaning amounted to approximately \$135,000. The estimated cost for the investigation and assessment performed by CIMA+ was \$65,900. The total costs to date for work on preparing the roof for inspection and the report by CIMA+ are \$135,000 and \$65,900 respectively, for a total of \$200,900.

Many maintenance projects were put on hold at the WPCP, to ensure sufficient funds to complete the investigation.

While this work was unbudgeted, there are sufficient funds in the Wastewater Reserve to cover the expenses with no immediate impact on the current year operating budget.

This timing offers one advantage: the Water and Wastewater Rate Study and Financial Plan, scheduled for Council review before year-end, can incorporate this significant project, allowing for appropriate adjustments in user rates to ensure adequate funding.

Financial Implications:

Financial impact to current year operating budget:

Expenditures to be managed with current Wastewater reserve fund balances.

Financial impact on future year operating budget:

The subsequent project will have a more substantial impact on future operating budgets, as it was not initially anticipated and may require borrowing to accommodate the timing in advance of sufficient rates being collected.

Link to asset management plan and strategy:

The completion of this project will result in the replacement of the roof, concrete repairs, and a new mixing system for the Primary Digester. Enhancing the long-term performance and life cycle of this asset aligns with our strategic priorities as a City.

CIMA+ recommends the installation of a new digester roof, citing that the lifecycle cost of a new roof will be lower than the ongoing expenses associated with repairing the existing roof. Repairs to the current roof would last no more than 15 years and may incur unforeseen costs. In contrast, a new roof will improve the overall reliability and efficiency of the biosolids digestion process for the City, and also meet the latest industry standards, further enhancing the reliability and long-term performance of the biosolids management system.

Alignment with Strategic Priorities:

Enhance our Infrastructure

This project advances key infrastructure maintenance and new growth-related projects in the 10-year capital forecast and beyond.

Alignment with One Planet Principles:

Equity and Local Economy

Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Land and Nature

Protecting and restoring land for the benefit of people and wildlife.

Sustainable Water

Using water efficiently, protecting local water resources and reducing flooding and drought.

Material and Products

Using materials from sustainable sources and promoting products which help people reduce consumption.

Zero Carbon Energy

Making buildings and manufacturing energy efficient and supplying all energy with renewables.

Staff Recommendation: THAT the report titled, "Stratford Water Pollution Control Plant (WPCP) - Primary Digester Roof Failure - Update Report" (ITS24-023), be received per Section 39.1.b. of the City of Stratford's Purchasing Policy P.5.1.

Prepared by: Sean Beech, Manager of Environmental Services
Recommended by: Taylor Crinklaw, Director of Infrastructure Services
Joan Thomson, Chief Administrative Officer



MANAGEMENT REPORT

Date: November 27, 2024
To: Infrastructure, Transportation and Safety Sub-committee
From: Emily Skelding, Supervisor of Waste Operations
Report Number: ITS24-022
Attachments: None

Title: Stratford Landfill Public Input Invite November 2024

Objective: To consider comments received regarding the operation of the Landfill site.

Background: As a requirement of Environmental Compliance Approval (ECA) Number A150101 for the Stratford Landfill Site, the public must be invited to make comments, either verbal or written, about the operation of the Landfill Site on a semi-annual basis.

Analysis: Notice was placed in the Beacon Herald Town Crier and Marketplace from October 12 through November 5, 2024, inclusive, inviting citizens to provide comments on the operation of the landfill site or request to appear as a delegation at the November 27, 2024, Infrastructure, Transportation and Safety Sub-committee meeting.

At the time of the writing this report, there have been no comments or delegation requests received from the public.

Any change in service levels at the Stratford Landfill site would have a financial impact to be determined by staff and brought to a future meeting for consideration.

Financial Implications:

Financial impact to current year operating budget:

There are no implications because of this report.

Financial impact on future year operating budget:

There are no implications anticipated in the future year budget.

Alignment with Strategic Priorities:

Developing our Resources

Optimizing Stratford's physical assets and digital resources. Planning a sustainable future for Stratford's resources and environment.

Alignment with One Planet Principles:

Culture and Community

Nurturing local identity and heritage, empowering communities, and promoting a culture of sustainable living.

Zero Waste

Reducing consumption, reusing, and recycling to achieve zero waste and zero pollution.

Zero Carbon Energy

Making buildings and manufacturing energy efficient and supplying all energy with renewables.

Staff Recommendation: THAT the report titled, "Stratford Landfill Public Input November 2024" (ITS24-022), be received for information.

Prepared by: Emily Skelding, Supervisor of Waste Operations

Recommended by: Taylor Crinklaw, Director of Infrastructure Services
Joan Thomson, Chief Administrative Officer