Agenda – Council – September 22, 2022

Report – Executive Policy Committee – September 14, 2022

Item No. 21 City of Winnipeg Fuel Usage 2022

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On September 14, 2022, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service and submitted the following to Council:

1. That this report be received as information.

Report – Executive Policy Committee – September 14, 2022

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On September 14, 2022, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service and submitted the matter to Council.

COUNCIL DECISION:

On April 28, 2022, Council concurred in the recommendation of the Executive Policy Committee and adopted the following:

1. That the Winnipeg Public Service be directed to report back in 120 days on the following:

    A. That the Chief Administrative Officer be directed to instruct all departments to immediately develop formal plans to reduce departmental fuel usage, which could include but not be limited to the following:

        i. A means to demonstrate to the public that City departments are actively taking steps to reduce fuel costs.

        ii. The implementation of no-idling policies, more efficient routing while travelling, travel to and from sites during off traffic hours, carpooling instead of sending multiple vehicles, running onboard devices using batteries instead of the engine, transition to smaller vehicles, purchase of hybrid or electric vehicles, and virtual inspections.

        iii. The coordination of large amounts of work in a single area of the city rather than having crews travel across the city to various worksites within the same day.

    B. That the Chief Administrative Officer be directed to request increased funding from the Provincial and Federal governments which are benefiting from the higher fuel prices through increased taxation revenues.

Report – Executive Policy Committee – September 14, 2022

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

C. That the Chief Financial Officer be directed to develop and present to Council a detailed breakdown of City fuel purchases by department and their sub-units, for each of the past 3 years which would allow for Council to monitor impacts of rising fuel prices and departmental efforts to improve efficiency.

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

David Grant submitted a communication dated April 27, 2022 in support of the matter.

ADMINISTRATIVE REPORT

Title: City of Winnipeg Fuel Usage 2022

Critical Path: Executive Policy Committee – Council

AUTHORIZATION			
Author	**Department Head**	**CFO**	**CAO**
G. Balog	D. Konowich, on behalf of J. Berezowsky	N/A	M. Geer, acting for M. Jack

EXECUTIVE SUMMARY

The Public Service is working towards decreasing fuel usage in order to reduce financial impacts. This Administrative Report details the initiatives that have been implemented to address fuel usage and emissions reductions. For instance, the trial and testing of all-electric vehicles, purchasing hybrid units where feasible, implementing departmental anti-idling policies, working towards efficient route planning when conducting business operations, and promoting internal carpooling for City employees.

Departments are responsible for fuel and emission reduction as the fleet vehicles are in their care and control (as noted in Winnipeg Fleet Management Agency's Operating Charter). Department vehicles and equipment use is a variable factor determined by weather, business operations, and service delivery requirements.

From January – April 2022, the City of Winnipeg used 7.6 million litres of fuel (gasoline and diesel). This amounted to approximately $11 million in fuel costs. The year-to-date increase in fuel consumption has been primarily due to seasonal operations, such as snow clearing at Public Works, while the increase in City fuel costs is directly related to the market price of fuel and the rising costs.

RECOMMENDATIONS

1. That this report be received as information.

REASON FOR THE REPORT

At the April 28, 2022 meeting, Council concurred in the recommendation of the Executive Policy Committee and adopted the following:

1. That the Winnipeg Public Service be directed to report back in 120 days on the following:

    A. That the Chief Administrative Officer be directed to instruct all departments to immediately develop formal plans to reduce departmental fuel usage, which could include but not be limited to the following:

i. A means to demonstrate to the public that City departments are actively taking steps to reduce fuel costs.

ii. The implementation of no-idling policies, more efficient routing while travelling, travel to and from sites during off traffic hours, carpooling instead of sending multiple vehicles, running onboard devices using batteries instead of the engine, transition to smaller vehicles, purchase of hybrid or electric vehicles, and virtual inspections.

iii. The coordination of large amounts of work in a single area of the city rather than having crews travel across the city to various worksites within the same day.

B. That the Chief Administrative Officer be directed to request increased funding from the Provincial and Federal governments which are benefiting from the higher fuel prices through increased taxation revenues.

C. That the Chief Financial Officer be directed to develop and present to Council a detailed breakdown of City fuel purchases by department and their sub-units, for each of the past 3 years which would allow for Council to monitor impacts of rising fuel prices and departmental efforts to improve efficiency.

IMPLICATIONS OF THE RECOMMENDATIONS

As this report is for information only, there are no implications.

HISTORY/DISCUSSION

On April 28, 2022, Council concurred in the recommendation of the Executive Policy Committee (EPC) and directed the Winnipeg Public Service to report back on what the Winnipeg Fleet Management Agency (WFMA) and other departments are doing City-wide to decrease fuel usage in order to reduce financial impacts.

The WFMA has implemented several initiatives to address fuel usage and emission reductions in past years, such as:

- Conducted a two-year trial and test of all-electric vehicles and charging stations to determine potential suitability and inclusion into the fleet (report going to Standing Policy Committee on Innovation and Economic Development in Q3/Q4 2022).
- Updated the Green Fleet Plan to include strategies for reduced emission and fuel use (2022 Business Plan).
- Automatic Vehicle Location (AVL) device implementation and reporting to departments on idling statistics to encourage idling reduction.
- Working with departments to “Right Size” their fleet complement with attention to utilization and job requirements.
- Introducing multi-purpose vehicles in departments where it makes operational sense to reduce the number of vehicles required to perform multiple jobs.
- Implemented evaluation criteria in light fleet tenders that put significant weight on fuel efficiency.

- All new/replacement sedans and SUV's, where operationally feasible, are to be replaced with a hybrid vehicle (2017 Business Plan).
- All diesel engines in new/replacement vehicles are to meet the highest emission clean air rating which currently are the Tier 4 final compliant diesel engines (2017 Business Plan).
- Purchasing vehicles with emission and fuel reduction technologies, such as engine start/stop technology, automatic engine shut down after idling for a set number of minutes, and transmissions that are programmed for economy mode (currently working on a way to track these types of technologies).
- Installing auxiliary power units (APU) on new/replacement vehicles, where practical, so vehicle engines do not have to run/idle when power is still required for lights, heat, and air conditioning.
- In collaboration with the Public Works Operator Training Branch, implemented idle reduction education in their training programs.
- Implemented sidewalk machine sharing between Streets Maintenance in the winter months for snow clearing and Parks & Open Space in the summer for grass cutting.
- Investigate and trial the feasibility of using other alternative fuels, such as natural gas, and additional electric vehicle opportunities.
- The Office of the CAO is working with departments to formally address a stand-alone City-wide anti-idling directive.
- The Community Energy Investment Roadmap (CEIR) includes actions to further reduce fuel use and emissions.

The Council-approved CEIR sets targets for City transportation to reduce emissions that will also reduce fuel use. These targets include actions to make Transit and municipal fleet vehicles fully electric or zero-emissions by 2035.

Departments are responsible for fuel and emission reduction as the fleet vehicles are in their care and control (as noted in WFMA's Operating Charter). Department vehicles and equipment use is a variable factor determined by weather, business operations, and service delivery requirements.

In the first four months of 2022, the City of Winnipeg used 7.6 million litres of fuel (gasoline and diesel). The 3-year average from 2019 – 2021 was 7.8 million litres of fuel.

The CAO is communicating with both the Provincial and Federal governments to request financial assistance to help mitigate fuel costs incurred in order to deliver core City services. This process is ongoing as of the writing of this report.

The tables below show a breakdown of fuel usage for City departments and Transit.

	January	February	March	April	Year to Date
City Departments (2022)	664,225	656,290	561,540	431, 820	2,313,876
City Departments 3 Year Average (2019 – 2021)	609,229	551,682	497,396	471,274	2,129,581
Variance	54,996	104,608	64,144	-39,453	184,295

	January	February	March	April	Year to Date
Transit (2022)	1,361,702	1,387,800	1,366,846	1,155,531	5,271,879
Transit 3 Year Average (2019 – 2021)	1,485,218	1,380,007	1,464,680	1,324,721	5,654,626
Variance	-123,515	7,793	-97,834	-169,190	-382,747

The increase in fuel consumption has been primarily due to seasonal operations, such as snow clearing at Public Works.

In the first four months of 2022, the City of Winnipeg incurred costs of $11.1 million for fuel (gasoline and diesel). The 3-year average from 2019 – 2021 amounted to a total of $7.6 million.

The tables below show a breakdown of fuel costs for City departments and Transit.

	January	February	March	April	Year to Date
City Departments (2022)	$856,787	$912,460	$912,452	$712,161	$3,393,861
City Departments 3 Year Average (2019 – 2021)	$600,505	$561,687	$493,914	$465,979	$2,122,086
Variance	$256,282	$350,773	$418,538	$246,182	$1,271,775

	January	February	March	April	Year to Date
Transit (2022)	$1,698,861	$1,875,679	$2,185,901	$1,902,054	$7,662,494
Transit 3 Year Average (2019 – 2021)	$1,435,734	$1,363,425	$1,404,587	$1,274,818	$5,478,564
Variance	$263,127	$512,254	$781,314	$627,236	$2,183,931

For more detailed information on departmental fuel usage, see the attachments to this report.

Current departmental initiatives include:

Assessment & Taxation
More Efficient Routing: When City inspections are required, this is primarily done on-site where a staff member will utilize a fleet vehicle. In order to provide greater efficiencies and reduce travel time and fuel consumption during these inspections, the department has implemented other options to on-site inspections, such as through photos or phone calls. **Hybrid/Electric Vehicles:** The Assessment and Taxation department has smaller-sized vehicles in their fleet, three of which are hybrids.

Community Services	
Within the Community Services Department, staff are advised not to idle and this is incorporated into vehicle training. Staff are also trained to take the most efficient route possible, taking into consideration both time and traffic conditions. Community Services has five hybrid vehicles in their fleet.	
Animal Services	The Animal Services division operates a fleet of six units. These units are rotated to help reduce starting issues and ensure mileage equalization.

	Idling: Animal Services has implemented an internal anti-idling policy to save both on fuel and reduce environmental impact. Operators of the fleet are not to warm up the units for more than five minutes in addition to the anti-idling policy. **More Efficient Routing:** Animal Services utilizes GPS to efficiently plan routing and only one vehicle is sent to a service call due to the division's small fleet size. **Hybrid/Electric Vehicles:** In the near future, Animal Services is planning to replace two gasoline vans with two all-electric vans in their fleet.

Planning, Property & Development	
Cemeteries	**Idling:** The Cemeteries division has regular discussions with staff on ways to reduce idling. **More Efficient Routing:** They also have required staff to report directly to the job site in which they are working that day, instead of meeting at home base and then travelling out to service areas again. This has reduced travel and idle time. **Carpooling:** Carpooling is regularly practiced.
Geomatics	**Idling:** The Geomatics division has advised staff to avoid idling when possible. **More Efficient Routing:** The Geomatics division has implemented an internal policy to ensure that staff are using the best available route when travelling between scheduled appointments. Efforts have also been made to schedule appointments in the same area of the City. This allows an increase in scheduling resulting in overall better service for clients.
Golf Services	**Idling:** The Golf Services division promotes anti-idling to reduce noise pollution and emissions. **Hybrid/Electric Vehicles:** They have converted roughly 100 golf carts from gas to electric. The fairway mowers used at the City golf courses are currently undergoing conversion, with two having been converted from diesel to hybrid already and more planned for the future.
Urban Planning & Design	**Idling:** The Urban Planning & Design division promotes anti-idling and reminds staff to turn off units upon arrival to work sites. **More Efficient Routing:** They have implemented efficient route mapping practices to better plan service trips. For meetings and service trips close in proximity to the division's offices, staff will utilize a shared bicycle. **Hybrid/Electric Vehicles:** The Urban Planning & Design division has one hybrid vehicle within their fleet.

Public Works	
Engineering	**More Efficient Routing:** The utilization of mapping and route planning software help to ensure the most direct route is being planned. **Carpooling:** The Engineering division has actively taken steps to promote carpooling to service areas in order to reduce emissions and fuel consumption.
Parks & Open Spaces	**Idling:** The Parks division has directed staff to minimize idling where possible. Idling reports are received on a regular basis by management. Every month, an idling fleet summary report is generated for each branch of the division. **More Efficient Routing:** To assist with emission reduction targets, more efficient routing has been implemented when travelling to work sites. The division is also currently working on an AVL project to measure mowing completion and maximization of routing. **Hybrid/Electric Vehicles:** More fuel-efficient vehicles are being purchased where possible, including hybrids. Currently, there is one hybrid vehicle in their fleet.
Streets Maintenance	**Idling:** The Streets division has directed staff to minimize idling where possible. Idling reports are received on a regular basis by management. Location-based idling reports (using geofencing) are essential to effectively review and minimize excessive idling. The Division will implement a location-based idling review process once that feature becomes available by the AVL service provider.
Transportation	**Idling:** The Transportation division has anti-idling technology installed in most fleet vehicles. **Hybrid/Electric Vehicles:** There has been a switch from purchasing diesel units to gas-powered options due to the recent increase in fuel costs.
Winnipeg Parking Authority	**Idling:** At WPA, idling is kept to a minimum, where possible. Idling times are monitored and the percentage of idling is reported for each vehicle operator through the AVL system. **More Efficient Routing:** Operators are directed to take the most direct route possible. Most units use the automated intuitive routing system which provides officers with the most efficient route assigned to their patrols. **Hybrid/Electric Vehicles:** WPA has one all-electric vehicle and five hybrids within their fleet.

Transit

Idling: The Winnipeg Transit department has implemented an internal idling policy where all busses are required to reduce idling from May to October, as long as the temperature is over 0 degrees Celsius and if over 5 minutes. Transit has implemented no idling zones on all Transit properties and a no idling policy on the street, when temperatures permit.

Transit staff are encouraged to travel to meetings by bus or bike, rather than by private automobile or by using a Transit auxiliary vehicle.

More Efficient Routing: Route efficiency mapping has been implemented for the cleaning of shelters, stations and comfort stations to ensure the least amount of travel time to efficiently provide cleaning services and reduce emissions.

Winnipeg Transit Plus is working to procure a new routing software that should provide better routing, creating less unnecessary diving for contracted vehicles.

To reduce travel time, Winnipeg Transit utilizes photos and virtual platforms to gather information about mobility aids and for inspection purposes to determine if an in-person visit is required.

Hybrid/Electric Vehicles: Transit's fleet has more than 35 hybrid and fuel-efficient vehicles and has a funding application in progress to purchase up to 110 zero-emission buses.

Virtual Meetings: Virtual meetings have reduced travel time and fuel costs.

Water & Waste

Idling: The Water and Waste Department has an Idling Reduction Initiative in place under Environmental Management (ISO 14001) for some divisions. This work began in 2021 and is continuing. The scope of work is to develop standardized reporting and tracking of idling statistics, identify measures for implementation to create awareness among staff for the need to reduce idling, and identify procedures/processes/technologies to reduce idling across Water and Waste. Goals have been set to reduce idling within one to two years.

In other divisions, idling reports are monitored and reviewed with staff. Staff have been instructed to reduce idling whenever possible in accordance with the City's current anti-idling guidelines. Standards are being developed that are specific to equipment and job requirements.

More Efficient Routing: In several divisions, staff utilize applications and software to strategize travel between work locations. Staff are encouraged to travel to work locations together, where possible.

Carpooling: Team members are encouraged to travel to work sites together where possible.

Hybrid/Electric Vehicles: Over the last five years, Water & Waste has been transitioning to light, less expensive, more fuel-efficient vehicles, and reducing the number of vehicles in the fleet compliment. When units are up for replacement, hybrid and all-electric options are considered. Currently, they have five hybrid vehicles and one all-electric vehicle in their fleet.

Virtual Meetings: Virtual meetings have reduced travel time and fuel costs. Staff are better positioned to travel to inspections that are in closer proximity to remote work locations.

Winnipeg Fire Paramedic Service (WFPS)

Idling: The Winnipeg Fire Paramedic Service has implemented an internal idling standard operating procedure that states vehicles are to be shut off if idling is anticipated and be longer than 2 minutes. This applies to both non-emergent vehicles and equipment. Anti-idling reports are used for internal departmental information/action in an effort to reduce vehicle idle hours.

The department is actively installing anti-idling, auxiliary power units (APU), and remote start technologies where feasible. The recent WFPS fire pumpers (2020 – 2022) have new idling reduction technology that utilizes lithium-ion batteries. This allows WFPS to run lights, HVAC climate control, mission critical on-scene loads, and other vehicle components, with the main chassis engine shut down. There are 11 units within the WFPS fleet and five arriving in the near future with this technology.

Hybrid/Electric Vehicles: The department has also started the process of migrating to smaller vehicles when specifying new/replacement vehicles. Most new vehicle leases are hybrid, with nine currently in their fleet.

Winnipeg Police Service (WPS)

The Winnipeg Police Service operates 382 vehicles. This equipment plays a critical role in supporting essential public safety services.

Rising fuel costs and environmental concerns prompted the WPS to implement changes to fleet operations, while maintaining service delivery. As fleet availability and technology is constantly changing, WPS must adapt when it's feasible and appropriate to address evolving needs.

Idling: As an emergency service, the WPS is exempt from anti-idling policies. Marked police vehicles are left idling when a unit is on active duty, but members are outside of the vehicle, in order to protect the internal electronics, which includes in-car computers, and for activation of emergency lights for extended periods. In addition, if there is a police dog or a prisoner inside the vehicle, the heating and/or air conditioning must be operational. Further, in very cold conditions, cars are left running to avoid the risk that they may not re-start.

While police vehicles are exempt from a no idling policy, members are educated about idling and are encouraged, whenever possible, to avoid idling.

The WPS has introduced hybrid vehicles into the fleet; however, they have operating limitations. As the technology evolves, the Service will be able to expand their use. The current hybrid model can run systems without idling. Another year of usage will produce good data that can be used to inform WPS policies and educate members.

More Efficient Routing: The Service is mandated to arrive at emergency destinations as quickly as possible. This means that members must use the shortest and quickest route to get to a call for service.

Carpooling: Carpooling is in place for WPS members attending administrative or large-scale events.

Downsizing: WPS has used smaller and less costly vehicles in some areas of the police service. The Service tested the use of smaller vehicles in General Patrol (GP); however, they were deemed inadequate for GP use based on operational needs. The WPS is restricted in the selection of operational vehicles as they are mass-produced for the policing sector. At present, hybrid SUVs are the only available police-package vehicle that can be used to evergreen the existing fleet of sedans.

Hybrid/Electric Vehicles: The WPS recognizes the benefits of hybrid vehicles in terms of reducing fuel consumption. However, these vehicles pose a challenge in regard to their acceleration rate as the rate does not meet policing operational needs.

Currently, the WPS has 13 hybrid vehicles service-wide in various operational units to analyze their usage. This data will assist the Service in developing its replacement strategy and in maximizing the fuel reduction initiatives.

In 2022, the Service was unable to purchase additional hybrid vehicles due to supply chain shortages. The Service will add these units to its 2023 vehicle order.

Deployment Strategy to Maximize Use: Several initiatives, including the Connected Officer pilot, Virtual Police Response and Domestic Violence Event Assessment pilot, reduce or eliminate travel and idling time for certain event types. The Service will continue to explore opportunities for efficiencies.

The Service has implemented two changes to help maximize the use of fleet vehicles: (1) the creation of a G pool to accommodate repairs, maintenance and/or accidents; and (2) the move from assigned divisional vehicles to the use of a sign-out pool across the divisions.

The merger of personnel and divisions to the central WPS Headquarters resulted in the Service proactively reducing the vehicle fleet.

The move from a six-district model to a four-district model resulted in a reduction in the number of the vehicles assigned to General Patrol. The larger districts resulted in extra driving, and higher gas consumption beginning in 2017; however, fuel consumption is still comparatively lower.

Policies: The Service will continue to enhance its assignment of vehicles on an as-required basis vs the sole assignment of a vehicle to a division in order to maximize use and minimize cost.

FINANCIAL IMPACT

Financial Impact Statement Date: August 3, 2022

Project Name:

City of Winnipeg Fuel Usage 2022

COMMENTS:

This report is for information only and has no financial impact.

Joseph Chammartin, August 3, 2022

Joseph Chammartin, CPA, CGA
Manager of Finance
Winnipeg Fleet Management Agency

CONSULTATION

This Report has been prepared in consultation with:

- Animal Services – Special Operating Agency
- Assessment and Taxation Department
- Community Services Department
- Planning, Property and Development Department
- Public Works Department
- Water and Waste Department (including the Office of Sustainability)
- Winnipeg Fire Paramedic Service Department
- Winnipeg Parking Authority – Special Operating Agency
- Winnipeg Police Service Department
- Winnipeg Transit
- Legal Services (as to legal issues)

OURWINNIPEG 2045 ALIGNMENT

In alignment with:

Environmental Resilience Objective 1: Prioritize the transition to a resilient, low-carbon future through demonstrated organizational and community leadership, and collaborative actions that mitigate and adapt to a changing climate.

Environmental Resilience Objective 2. Prioritize sustainable transportation as the mobility option of choice.

Policy 1.3 Integrated Service Planning and Outcomes:

- Advance operational plans that align with this Plan's sustainability goals through responsive, innovative and integrated government leadership.

Policy 2.2 Climate Action Investment:

- Prioritize the long-term economic benefits of sustainability and climate action in municipal decision-making processes.

Policy 2.3 Climate Action Investment:

- Demonstrate municipal environmental leadership through an integrated, proactive organizational culture that applies innovative practices, including piloting new initiatives and evaluating and sharing results to eliminate the use of fossil fuels and enhance climate resilience in the built and natural environment.

Policy 2.8 Climate Action Leadership:

- Adapt municipal practices to enable a shift in employee behaviours that reduce greenhouse gas emissions, resource consumption and waste.

Policy 2.11 Eliminate Fossil Fuel Dependence:

- Pursue an increase in the use of alternative fuels, electric and zero-emission vehicles and charging infrastructure as part of a sustainable transportation system and green fleet.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

In alignment with:

Strategic Opportunity #1 – Corporate Leadership:

- Key Direction 1.4 – Encourage Sustainable Transportation Options
- Key Direction 1.5 – Reduce Employee Vehicle Kilometers Travelled (VKT) and associated GHGs

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Public Works
Division: Winnipeg Fleet Management Agency
Prepared by: Gabriella Balog
Date: August 3, 2022
File No: City of Winnipeg Fuel Usage 2022

Attachments: