



# **Asset Management Plan**

## **Infrastructure Services - Fleet Division**

**May 2024**

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## Fleet Introduction

Asset management planning is a comprehensive process to ensure delivery of services from Infrastructure is provided in a financially sustainable manner.

This plan details information about the City of Kitchener, Fleet Division assets including actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services over a 20-year planning period.

The Fleet Division manages approximately 1,900 vehicles and equipment for the City of Kitchener. The primary function of the Division is to ensure City vehicles and equipment are properly maintained, repaired, fueled, as agreed to in the service agreement.

Fleet Division's primary objective is to ensure fleet users are capable of delivering their services to the public in a safe and efficient manner. In addition, the Fleet Division is also responsible for managing all fleet controls, policies and procedures across the City; including safe operation of the vehicle/equipment, meeting legislative requirements, fueling procedures, procurement practices to mitigate climate change, etc.

Ultimately, Fleet Division must ensure that all fleet users are provided with a prescribed level of quality and service defined within the service agreement, and vehicles/equipment operate and function as expected and as intended.

### **Operational services provided by Fleet Division related to asset management for City vehicles and equipment includes:**

- Procurement
- Storage and identification
- Monitoring and evaluation
- Repair and maintenance
- Fuel management
- Commercial vehicle operator registration compliance monitoring and evaluation
- Fleet user policy and procedural compliance monitoring and evaluation
- Life cycle evaluations/risk management
- Fleet user training and development

Additional administrative and operational areas within Fleet Division, relevant to providing and maintaining the service agreement to fleet users:

### **Fleet Planning:**

Fleet Division tracks and monitors vehicle and equipment usage, prepares life cycle costing and targets, reviews and evaluates vehicles and equipment annually and manages the Fleet Capital Replacement program and net new additional requests.

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**Fleet Mechanical:**

Fleet Division performs all required repairs, preventive maintenance and the scheduling of safety inspections to comply with legislative safety requirements with the goal of reducing vehicle and equipment breakdowns.

Additionally, Fleet Division ensures vehicles and equipment are operating efficiently to reduce unnecessary GHG emissions and to optimize the financial return on the sale of surplus when an asset is decommissioned.

**Fuel Distribution and Management:**

Fleet Division monitors and maintains fuel distribution sites on a daily basis. Fleet also maintains records of fuel consumption and performs Technical Standards and Safety Act inspections as required.

**Fleet Safety and Compliance:**

The City of Kitchener has adopted an internal permitting system for all city vehicles and self-propelled equipment to ensure operators have received adequate training and skill development. Fleet Division provides an assortment of online training, in class training, practical training and assessments related to the different classes of vehicles, and types of equipment. Fleet Division also conducts safety and compliance audits in the field to ensure all operators comply with City, safety, and regulatory requirements and legislation.

**Commercial Vehicle Operators Registration (CVOR) Compliance:**

Commercial vehicle operator registration is a legal function of fleet management at the City of Kitchener, and governs all vehicles that fall within the scope of provincial regulations under the Highway Traffic Act.

The regulatory affairs and compliance of the CVOR is closely monitored and addressed by the Safety and Compliance Department within Fleet Division.

**Fleet's Alignment with Strategic and Corporate Goals**

This asset management plan is prepared under the direction of the City of Kitchener's vision, mission, goals and objectives.

**Our Vision is:**

*Building a city for everyone where, together, we take care of the world around us – and each other."*  
*This vision guides our 2023-2026 strategic plan, strategic goals and actions.*

**Our mission is:**

- Building a connected city together
- Cultivating a green city together
- Creating an economically-thriving city together
- Fostering a caring city together
- Stewarding a better city together

Relevant actions and objectives, and how these are addressed within Fleet Division's asset management plan are:

Goal	Objective	How Goal and Objectives are addressed in AM Plan
Cultivating a green city together	Continued implementation of the action items within the CorCap 2.0 to achieve 50% GHG reduction by 2030 and Net Zero by 2050	Ensuring that we continue to consider environmental impacts fleet vehicles and work towards the goal reducing GHGs.
Cultivating a green city together	Supporting the clean energy transition.	Continue to support transitioning fleet vehicles and equipment to electric alternatives as well as exploring the implementation of alternative fuels where electric is not an option.
Stewarding a better city together	Procurement innovation	Consider different emerging procurement strategies and innovations within the field to create efficiencies and ensure we are accountable public servants.

## Fleet Asset Management Goals and Objectives

Fleet's primary objective is to ensure fleet users are capable of delivering their services to the public in a safe and efficient manner. In addition, the Fleet Division is also responsible for managing all fleet controls, policies and procedures across the City; including safe operation of the vehicle/equipment, meeting legislative requirements, fueling procedures, and procurement practices that mitigate climate change.

Our goal in managing Fleet Division assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future customers. The key elements of fleet asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a long-term financial plan which identifies required, affordable expenditure and how it will be allocated.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 <sup>1</sup>
- ISO 55000<sup>2</sup>

<sup>1</sup> Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

<sup>2</sup> ISO 55000 Overview, principles and terminology

## Core and Advanced Asset Management

This asset management plan has been created under the direction of **Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure**, beginning in clause 5 of the regulation, under the title *Asset Management Plans*.

This asset management plan is prepared as a ‘non-core’ asset management plan over a 20-year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. Core asset management is a ‘top down’ approach where analysis is applied at the system or network level. An ‘advanced’ asset management approach uses a ‘bottom up’ approach for gathering detailed asset information for individual assets.

**Note:**

*For the purposes of this asset management plan, there is a value threshold of \$5,000.00 that eliminates the need for a Service Agreement and as a result, the need to monitor and provide preventive maintenance and repair. For small equipment under the threshold, Fleet Division repairs and services the asset as deemed necessary. Such assets are replaced once the repair costs exceed their current value.*

## Fleet Asset Categories and Type

Fleet Division assets are broken out into 6 categories as defined below:

1. **Arena Equipment**
2. **Dump/Fire Truck**
3. **Lawn/Turf Equipment**
4. **Licensed Equipment**
5. **Misc./Small Equipment**
6. **Off Road Equipment**

Each category is then broken out into asset type. The current asset category average age of asset has been included as calculated within out Flint Fleet Software program.

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<sup>3</sup> IPWEA, 2015, IIMM.

## Asset Types by Category

Asset Category:	Asset Type:	Average Age of Asset Category
<b>Arena Equipment</b>	Ice Edger Ice Re-surfacer	8 years

Asset Category:	Asset Type:	Average Age of Asset Category
<b>Dump/Fire Truck</b>	Ariel Truck Catch Basin Cleaner Tandem Dump Truck Single Dump Truck Single Chipper Body Dump Truck Single Water Dump Truck Tandem Dump Truck Tandem w/Crane Dump Truck Tri Axle Dump Truck Tri Axle Hook Lift Fire Aerial Ladder Fire Haz-Mat Unit Fire Pumper Fire Rescue Garbage Packer Jet Rodder Vector Tridem Pavement Marker Rescue Truck	8 years

Asset Category:	Asset Type:		Average Age of Asset Category
<b>Licensed Equipment</b>	Aerial Truck Burial Cart Car Car Electric Cargo Van Cargo Van High Roof Electric Cargo Van High Roof XL Hybrid Crew Cab Crew Cab 4x4 Crew Cab Pickup Crew Cab Dump Crew Cab Dump 4x4 Crew Cab Pickup 4x4 Crew Cab Utility Cube Truck Fire Command Unit Generator Maintenance Trailer Motorcycle Electric	Trailer 10 Ton Deck Over Float Trailer 30 Ton Deck Over Float Trailer Box/Landscape Trailer Cargo Trailer Drop Deck Trailer Dump Trailer Dump 5 Ton Trailer Enclosed Trailer Fire Education Trailer Flatbed Trailer Gas Pipe Hauler 22 ft. Trailer Gas Pipe Reel Trailer Kut Kwik Trailer Landscape Trailer Mount Tank Sprayer Trailer Pipe Trailer Pressure Washer Trailer Skateboard Trailer Water Main	9 years



	Pickup Pickup 4x4 Pickup Compact Pickup Compact Crew Cab Pickup Compact Ext Cab Pickup Compact Ext Cab 4x4 Pickup Crew Cab 4x4 Pickup Dump Pickup Dump 4x4 Pickup Dump 4x4 (SRW) Pickup Dump Plow 4x4 Pickup Ext Cab Pickup Ext Cab 4x4 Pickup Flatbed Welder Pickup Plow 4x4 Pickup Utility Body Pump Trash 6' Trailer	Trailer Water Pump Van Van Cargo Van Cargo Compact Van Cargo Ext Van Cargo High Roof Van Cargo Medium Roof Van Cube Van Mini Passenger Van Mini Van Mini Cargo Van Passenger Salter Sander Screener SUV SUV Hybrid	
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Asset Category:	Asset Type:		Average Age of Asset Category
<b>Lawn/Turf Equipment</b>	Aerator Aerator Tractor Mount 60" Bedknife Grinder Blower Debris Blower Ride On Blower Tow Behind Core Harvester Flail Boom Golf Cart Golf Cart 4-Seater Groomer Infield Hydro Seeder Lawn Mower Fairway Line Painer Ride On Loader Dingo Mower 16' Winged Mower Gang Rotary Mower Fairway Mower Greens Mower Greens Walk Behind Mower Rotary Mower Rotary Out-front Mower Seven Plex Mower Sidewinder	Mower Triplex Mower Turn Electric Mower Zero Turn Mower Zero Turn Bagger Mower Zero Turns with Tracks Municipal Tractor Large Over Seeder Rake Sand Reel Grinder Seeder Split Sprayer Turf Spreader Fertilizer Sweepster Brush Tank Water Top Dresser Tractor Flail Mower Tractor Mower Turf Tractor Turf Tractor Loader Turf Tractor Mower Utility Vehicle Utility Vehicle Electric	9 years

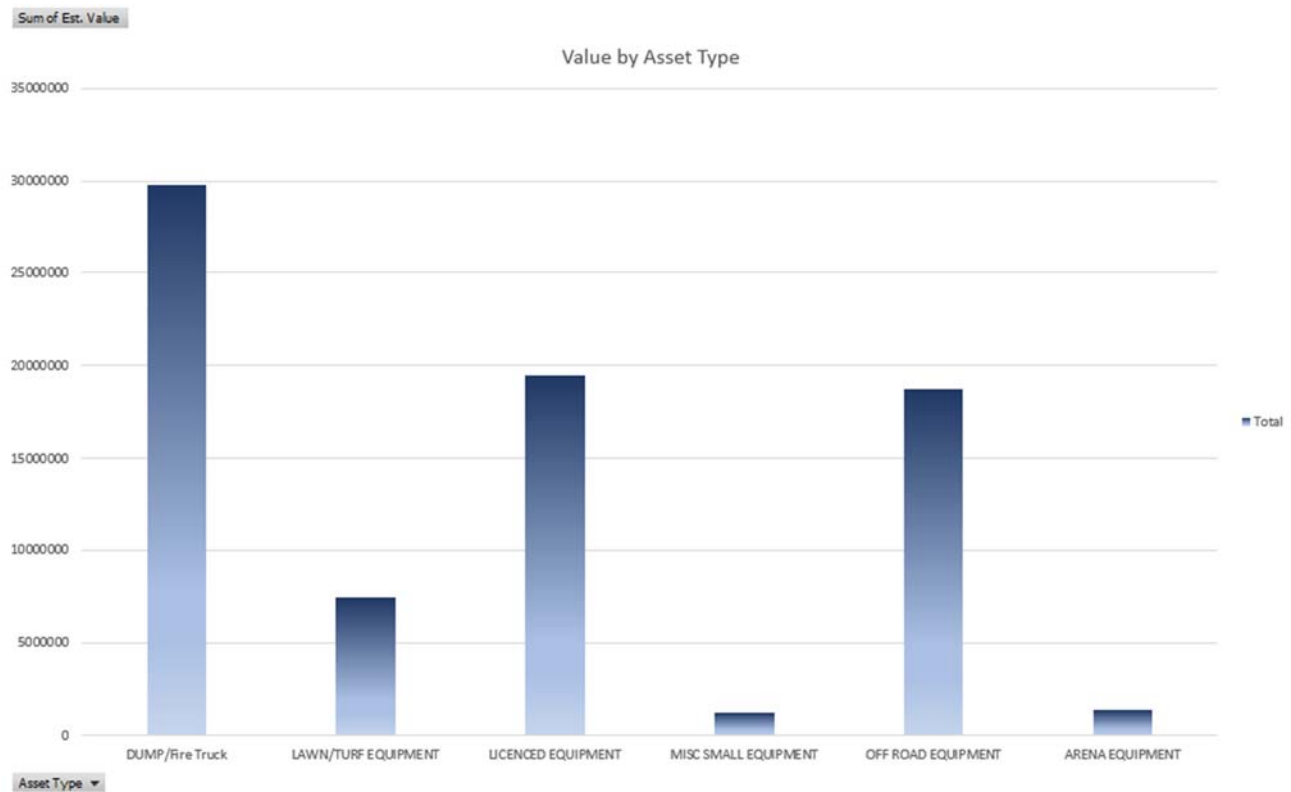
Asset Category:	Asset Type:		Average Age of Asset Category
<b>Misc/Small Equipment</b>	All In One Booster Angle Blade Auger Back Drag	Line Eraser Line Painter Over Seeder Pallet Truck	

	Boom Lift Electric Compactor Compressor Portable Concrete Mixer Diamond Wheel Guillotine Floor Scrubber Groomer Groomer Greens Groomer Infield Groomer Trail Hydraulic Breaker Hydraulic Hammer Hydraulic Packer Hydraulic Power Pack Leaf Blower Leaf Vacuum Line Driver	Pressure Washer Pump Trash Rake Landscape Rock Drill Salter Slide In Scissor Lift Sewer Cleaner Snow Blower Walk Behind Snow Pusher Sod Cutter Spreader Grader Vactor Small Valve Turner Front Mount Water Pump Tank and Reel Winch Hydraulic	9 years
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Asset Category:	Asset Type:		Average Age of Asset Category
<b>Off Road Equipment</b>	Asphalt Paver Backhoe Brush Chipper Brush Chipper Attachment Compactor Attachment Crack Router Excavator Excavator Rubber Tire Fork Lift Generator Steam Grader Hotbox Line Painter Pusher Loader Loader Compactor Loader Dingo Municipal Tractor Pipe Thawer	Pump Trash 4" Roll Off Bin Roller Roller Vibratory Salter Epoke Sidewalk Lifter Skid Steer Snow Blower Large Sprayer Asphalt Stump Cutter Stump Cutter Track Drive Sweeper Sweeper Small Sweeper Sidewalk Tar Kettle Tractor Loader Turf Tractor Utility Vehicle	9 years

## Asset Value by Category

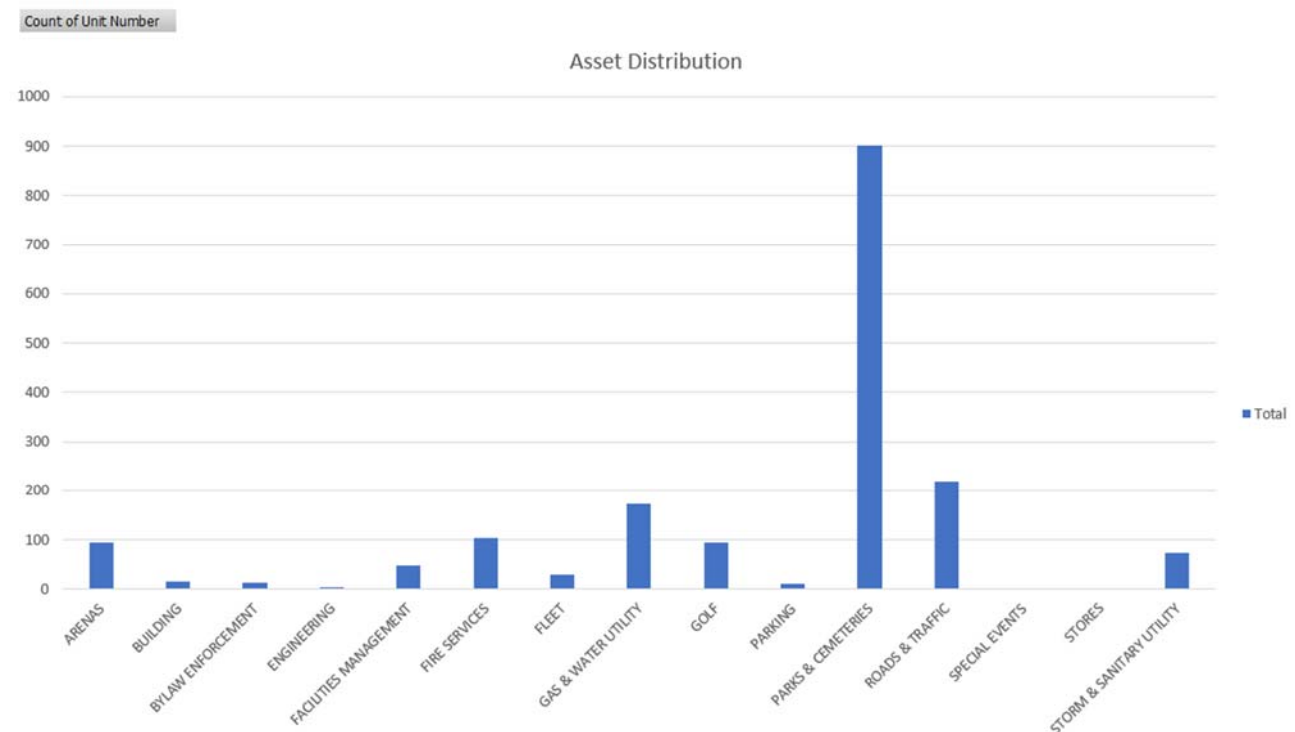
Asset Category	Asset Value
Dump/Fire Truck	\$29,799,815.49
Lawn/Turf Equipment	\$7,466,128.656
Licensed Equipment	\$19,490,353.71
Misc/Small Equipment	\$1,286,586.508
Off Road Equipment	\$18,729,999.23
Arena Equipment	\$1,364,465.98
<b>Total</b>	<b>\$78,137,349.58</b>



## Fleet Asset Distribution and Replacement Values

Fleet Division assets covered by this asset management plan are used to provide a range of services including road maintenance, parks maintenance, facility maintenance, gas and water services, as well as many other municipal services, as shown below (includes assets valued above 5K):

Department	Division	Number	Replacement Value \$
Infrastructure Services	Roads and Traffic	220	25.5M
Infrastructure Services	Parks and Cemeteries	902	18M
Infrastructure Services	Facility Maintenance	49	2M
Infrastructure Services	Gas and Water Utility	174	6.8M
Infrastructure Services	Storm and Sanitary Utility	74	5.4M
Infrastructure Services	Fleet	30	600K
Community Services	Fire	104	15M
Community Services	Golf	94	2.5M
Community Services	Arenas	95	2M
Development Services	Building	17	600K
Community Services	By law Enforcement	14	600K
Development Services	Parking	11	300K
Development Services	Engineering	4	150K
Community Services	Special Events	3	50K
Financial Services	Stores	3	60K
<b>Total</b>		<b>1794</b>	



## Overall Condition of Assets

Due to the number of assets, condition is not currently monitored formally for all fleet assets. Therefore, the age of the asset is used to provide a simplified way of illustrating condition. However, all licensed vehicles and equipment require annual safety inspections and preventive maintenance inspections. Therefore, assets are inspected regularly; they are not provided condition assessment at this time. During a safety inspection, if a vehicle is deemed unsafe, it will be removed from service. Typically, this occurs when an asset is kept well beyond its expected life or has been severely damaged due to an accident.

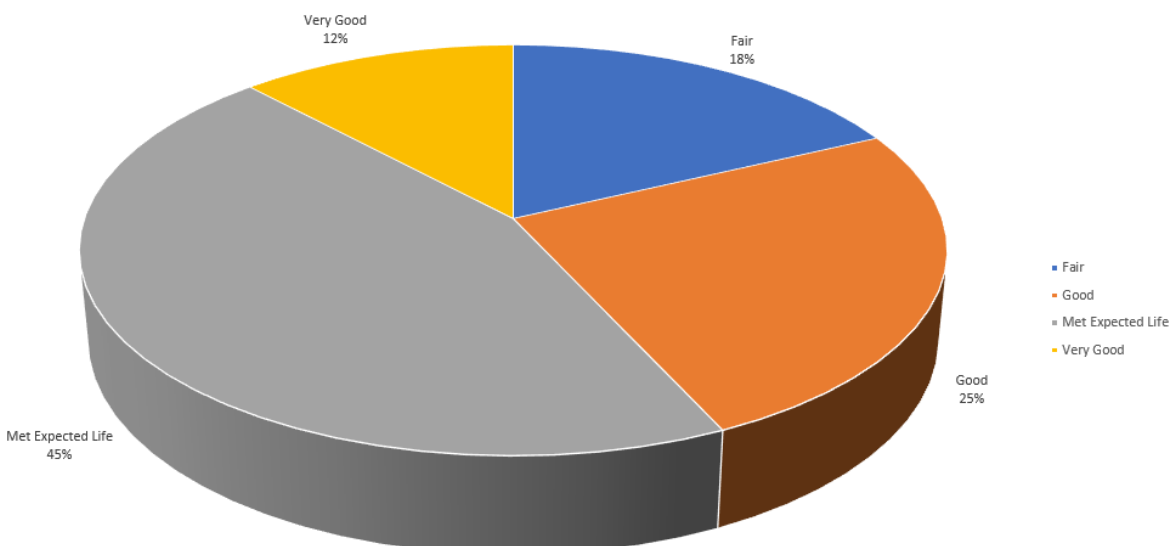
Percentage of Expected Life Used	Condition Based on Age
0% - 20%	Very Good
21% - 65%	Good
66% - 99%	Fair
100%	Met Expected Life - Fair

Once an asset has met the expected life, this triggers a comprehensive condition assessment and review. The asset is considered Met Expected Life – Fair until it is replaced and removed from service or has been deemed poor.

Due to the risks associated with driving an asset that have been deemed “poor” the city will not permit poor vehicles to be driven. Therefore, any vehicles that have been designated as poor will be immediately removed from service and sent to auction or will be repaired to elevate the status to either “fair” or “met expected life – fair”.

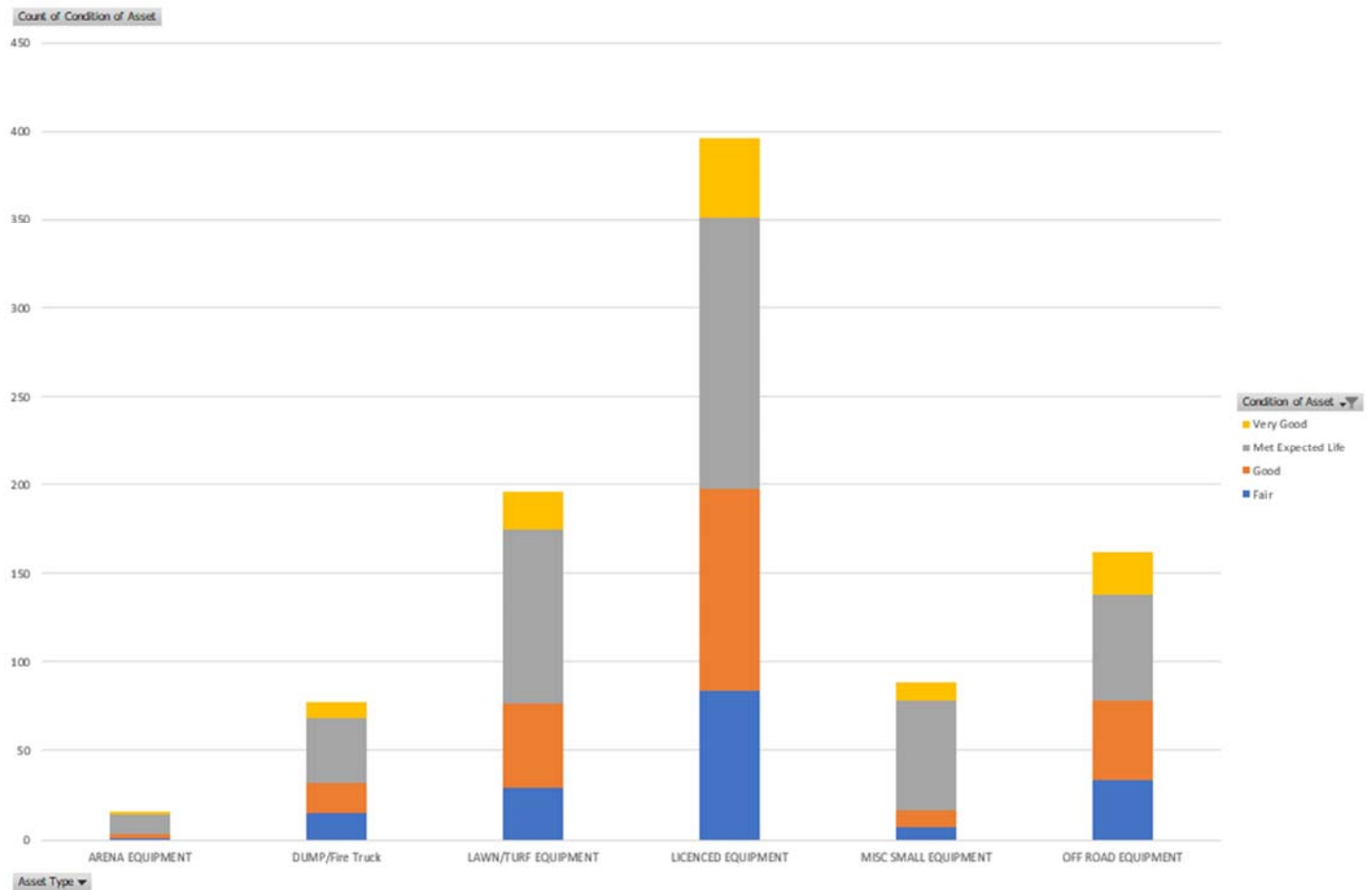
Count of Condition of Asset

Summary of Condition of Assets



## Overall Condition by Asset Category

Asset Category	Fair	Good	Met Expected Life - Fair	Very Good	Totals
Arena Equipment	1	2	11	2	16
Dump/Fire Truck	15	17	36	9	77
Lawn/Turf Equipment	29	47	98	22	196
Licensed Equipment	83	114	154	45	396
Misc/Small Equipment	7	10	61	10	88
Off Road Equipment	33	45	60	24	162
<b>Totals</b>	<b>168</b>	<b>235</b>	<b>420</b>	<b>112</b>	<b>935</b>



## Levels of Service and Compliance

The preparation and definition of City equipment and vehicle use, function and purpose, is generated as a collaborative effort between City users and Fleet management. Asset purpose and functionality within the City is identified via historical knowledge of the asset, the manufacturer's recommendations, and user input during the creation of the Service Agreement. Additional and betterment purposes can be requested during the completion of the Equipment Replacement Request form.

For equipment assets, there is a value threshold of \$5,000.00 that eliminates the need for a Service Agreement and as a result, the need to monitor and provide preventive maintenance and repair. For small equipment under the threshold, Fleet Division repairs and services the asset as deemed necessary. Such assets are replaced once the repair costs exceed their current value.

### Service Agreement

The Service Agreement is provided by the Fleet Division of the Infrastructure Services Department, with the purpose of prescribing a customized level of service at a competitive cost that enables the user department to fulfill their customer needs in an efficient, effective, and timely manner.

Assumptions and expectations are defined throughout the Service Agreement and cover the following areas/elements to be provided by Fleet to the user, on an annual basis:

#### Planning:

1. Vehicle and equipment procurement
2. New vehicle and equipment outfitting
3. Technical specifications, selector list
4. Vehicle titling, licensing, and insurance
5. Manage equipment reserve system - depreciation, life cycles
6. Control vehicle and equipment operating costs
7. Vehicle and equipment re-marketing
8. Fleet administration and management reports
9. Outsourcing of vehicles and equipment
10. Continuous review and development of improved methods, policies and procedures
11. Bulk fuel supplies
12. Spare equipment through pool system
13. Assist with vehicle costing and utilization analysis

#### Mechanical:

1. Vehicle and equipment repair and maintenance
2. Daily equipment maintenance
3. Fuel/Wash/Inspect
4. Collision/damage estimates and repair
5. Preventative maintenance program and schedules
6. Legislated maintenance and inspection programs
7. Warranty administration
8. Clean vehicles

## Safety and Compliance:

1. Collision Review
2. Operator training programs
3. Commercial vehicle operator registration monitoring
4. Permit System
5. Driver abstract review
6. Hours of Service

## Legislative Requirements

As part of their commitment to quality service to the City of Kitchener users, Fleet is governed by a myriad of laws and regulations related to the environment, health and safety and the transportation ministry of Ontario.

To ensure knowledge, enforce compliance and regulate policy and procedures, Fleet management annually performs internal and external audits of the laws and regulations. In addition, the Safety and Compliance department of Fleet also performs random audits and inspections of City users in the field.

The following laws and regulations govern the Fleet management system scope of purpose:

Canadian Federal	
<b>TRANSPORTATION OF DANGEROUS GOODS ACT</b> - <i>Transportation of Dangerous Goods Regulations</i>	
<b>ENVIRONMENTAL BILL OF RIGHTS ACT</b>	
<b>Hazardous Products Act</b> <i>R.S.C., 1985, c. H-3</i>	
<b>Controlled Products Regulations</b> <i>SOR/88-66</i>	
<b>Occupational Health and Safety Act</b>	

Ontario Provincial	
<b>ENVIRONMENTAL PROTECTION ACT</b>	
• Part iii	<b>Motor Vehicles</b> <i>including additional environmental controls added to vehicles after purchase</i>
• Part v.1	<b>Vehicle Permits and Number Plates</b>
• Part x	<b>Spills</b>
<i>Motor Vehicles - O. Reg. 361</i>	
<i>General – Air Pollution – Local Air Quality - O Reg. 419</i>	



<b>MINISTRY OF TRANSPORTATION - Highway Traffic Act</b>
<i>Commercial Vehicle Inspections O. Reg. 199</i>
<i>Safety Inspections – O. Reg. 611</i>
<i>Modernization and Harmonization of Commercial Vehicle Inspection Requirements - O. Reg. 601, 611 and 199</i>

## Monitoring and Measurement Agents of Fleet Assets

Fleet Administration ensures all vehicles and equipment are inventoried within Flint (software program maintained by Fleet), capable of providing all details associated with each piece of equipment and each vehicle. Users with access to Flint are able to quickly extract vehicle and equipment data and information including procurement data, lifecycle status, asset attributes, asset category, and/or type.

### Annual Equipment Review

The Annual Equipment Review is a comprehensive review, analysis and determinant for all Fleet assets that have been met the expected life. The review reports to City executive vehicle and equipment inventory, values and replacement needs juxtaposed against the asset's purpose and capability to maintain that purpose for the user.

The Annual Equipment Review is governed as follows:

Month	Activity
<b>January</b>	<ol style="list-style-type: none"> <li>1. Generate list of equipment/vehicles met expected life (including deferred assets from previous year)</li> <li>2. Schedule ER Meeting for Sept/Oct.</li> </ol>
<b>February/March</b>	<ol style="list-style-type: none"> <li>1. Fleet management completes a comprehensive review of each asset that has met expected life – including utilization, function, repair costs versus replacement costs.</li> </ol>
<b>April</b>	<ol style="list-style-type: none"> <li>1. Create Equipment Review (ER) sheets for all units evaluated</li> <li>2. Fleet enters points into ER sheets based on evaluations and makes recommendation on replacement or deferral</li> <li>3. Send list of equipment/vehicles qualifying for replacement to all operating areas</li> <li>4. Evaluations sent to Directors for approval</li> </ol>
<b>May/June</b>	<ol style="list-style-type: none"> <li>1. Approved ER sheets returned to Fleet</li> <li>2. Fleet updates database with recommendations, labour and parts costs</li> </ol>
<b>July</b>	<ol style="list-style-type: none"> <li>1. Print and check ER sheets from database</li> <li>2. Any additional equipment forms completed</li> </ol>
<b>August</b>	<ol style="list-style-type: none"> <li>1. Compile book and send for printing</li> <li>2. Deliver books and meeting timelines</li> </ol>
<b>September/October</b>	<ol style="list-style-type: none"> <li>1. Meeting</li> <li>2. Approved replacements and additional reports</li> <li>3. Flint updated with approved replacements</li> </ol>

The purpose of the annual process is to provide a financial risk assessment and impact analysis of equipment and vehicles that have come to their targeted lifecycle expectancy and require replacement.

Membership of Review Committee:

- Chief Financial Officer (*Chair*)
- Chief Administrative Officer (*Optional*)
- Deputy CAO & General Manager of Community Services or designate
- General Manager of Corporate Services or designate
- General Manager of Development Services or designate
- General Manager of Infrastructure Services or designate
- Director of Fleet
- Director of Asset Management or designate

Advisory:

- Director of Supply Services or designate
- Manager of Fleet Planning
- Manager of Fleet Mechanical
- Supervisors of Fleet
- Manager/Supervisor of operating area

*Including any staff required to support vehicle/equipment purchases.*

The assets recommended for replacement at the Equipment Review are deemed Met Expected Life – Fair and generally require minor to moderate mechanical and/or body repairs. Since most assets have met their expected life it may not be cost effective to continue to repair and/or restore the asset.

Occasionally, assets that have not met the expected life will be recommended for replacement. Through the year, input received from the using department and fleet mechanical (maintenance) to provide Fleet management with additional information relevant to condition of the asset. Subsequently, an asset may be deemed “poor” and removed from service prior to the Equipment Review.

As a method of analysis, Fleet management prepares body and mechanical estimates for all units that have met the recommended life cycle and also identified the equipment utilization from the Fleet FLINT record and appraisal system.

### **Equipment Replacement Form**

The Equipment Replacement Request form provides communication of service definition for City equipment and vehicles which includes requests for betterment costs. The Equipment Replacement Request is the dialogue between the users and Fleet management in an effort to ensure the asset is right for fit, function and serviceability.

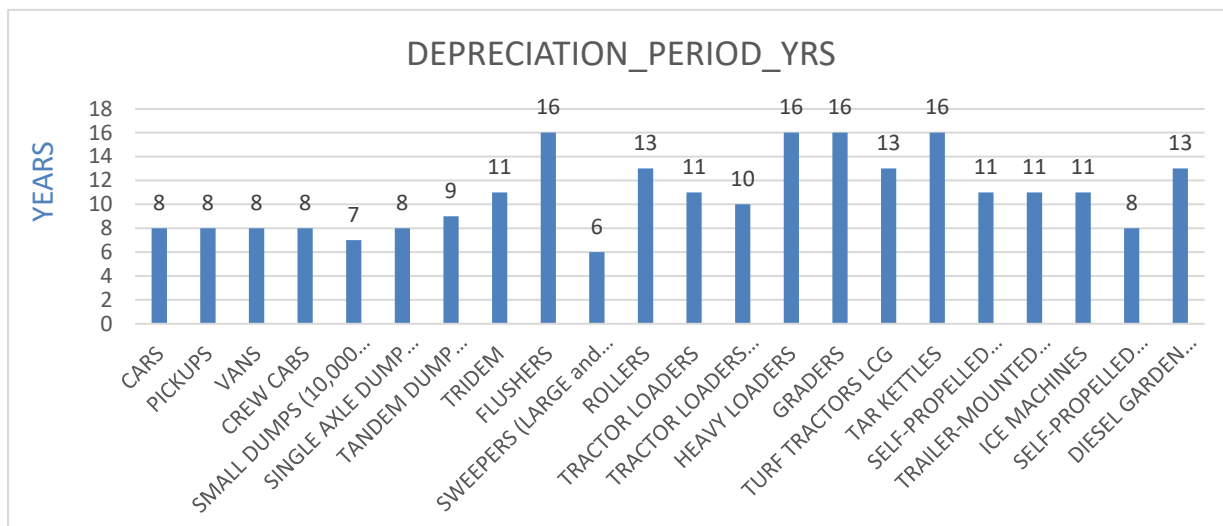
The Equipment Replacement Request form also allows users to make additional and rental requests to meet service growth requirements and short term/emergency requirements.

Users are required to provide details related to the function of the asset, such as the total number of hours of service required per day and any betterment or upgrades to be added to the asset.

## Fleet Assets Lifecycle

The lifecycle of the vehicle and/or equipment begins the process of determining the asset's risk; operational and financial. Lifecycle expectancies are pre-determined by the Manager, Fleet Planning, and calculated based on historical data and annual depreciation costs in association with projected repair and maintenance costs. In addition, the Fleet Rating points system provides an objective opportunity to prioritize the risks replacement requirements.

Equipment Description	Estimated Life Cycle
Cars	8 Years
Pickups	8 Years
Vans	8 Years
Crew Cabs	8 Years
Small Dumps (10,000 to 18,000 lb. GVW)	7 Years
Single Axle Dump Trucks (30,000 to 39,000 lb. GVW)	8 Years
Tandem Dump Trucks (50,000 to 55,000 lb. GVW)	9 Years
Tridem	11 Years
Flushers	16 Years
Sweepers (large and small)	6 Years
Rollers	13 Years
Tractor Loaders	11 Years
Tractor Loader Backhoes	10 years
Heavy Loaders	16 Years
Graders	16 Years
Turf Tractors LCG	13 Years
Tar Kettles	16 Years
Self-Propelled Gang Mowers	11 Years
Trailer-Mounted Compressors 160 CFM	11 Years
Ice Machines	11Years
Self-Propelled Rotary and Reel Mowers	8 Years
Diesel Garden Tractor	13 Years



## Vehicle and Equipment Rating Management

All assets that have met the expected life are monitored and rated via the Fleet Point rating system as defined below:

Factor	Points								
<b>Age</b>	Maximum 10 points for meeting the life cycle or less one point for every 10% beneath the current life cycle.								
<b>Utilization</b>	One point for every 10,000 kms. or 1,000 hours for heavy equipment. One point for every 400 hours on equipment under 120 hp.								
<b>Service Type</b>	Points are assigned based on the type of service that the vehicle provides i.e. 5 = easily replaced, 10 = heavy duty or specialized.								
<b>Reliability</b>	Points are assigned based on the frequency that the vehicle is in the shop for repair i.e. 1 point for every 10 days (Flint Downtime Report).								
<b>M&amp;R Costs</b>	Points are assigned based on the maintenance and repair costs in relation to the purchase price.								
<b>Fuel Efficiency</b>	Points are assigned based on best-in-class fuel economy factor: Best - 0 points, Medium – 5 points, Worst – 10 points.								
<b>Condition</b>	This category takes into consideration the ratio of the estimated repair cost to the depreciated cost.								
<b>Point Ranges</b>	<table> <tr> <td>Under 40 points</td><td>Very Good</td></tr> <tr> <td>41-45</td><td>Good</td></tr> <tr> <td>46-55</td><td>Fair</td></tr> <tr> <td>56 and above</td><td>Met Expected Life</td></tr> </table>	Under 40 points	Very Good	41-45	Good	46-55	Fair	56 and above	Met Expected Life
Under 40 points	Very Good								
41-45	Good								
46-55	Fair								
56 and above	Met Expected Life								

In addition, data associated with the “Condition” is ascertained via trained mechanical staff within Fleet services. Condition data that supplements the above Rating system includes a visual examination with an estimate of the cost associated with bringing the condition to normal condition or “fair” or “good”.

Estimated asset condition values are provided during the Equipment Review to aid in the discussion and determination of replacement.

## Condition Assessment Data

Factor	Points
<b>Body Condition</b>	<p>The overall condition of the body is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the body condition, an estimated cost of repair/replacement to bring the body's condition to normal/good.</p>
<b>Interior Condition</b>	<p>The overall condition of the interior of the vehicle is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the interior condition, an estimated cost of repair/replacement to bring the interior's condition to normal/good.</p>
<b>Tire Condition</b>	<p>The overall condition of the tires is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the tires condition, an estimated cost of replacement of the tires required.</p>
<b>Engine Condition</b>	<p>The overall condition of the engine is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the engine condition, an estimated cost of repair/replacement to bring the engine's condition to normal/good.</p>
<b>Transmission Condition</b>	<p>The overall condition of the transmission is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the transmission condition, an estimated cost of repair/replacement to bring the transmission's condition to normal/good.</p>
<b>Rear Axle Condition</b>	<p>The overall condition of the rear axle is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the rear axle's condition, an estimated cost of repair/replacement to bring the axle's condition to normal/good.</p>
<b>Front Axle Condition</b>	<p>The overall condition of the front axle is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the front axle condition, an estimated cost of repair/replacement to bring the axle's condition to normal/good.</p>
<b>Accessories Condition</b>	<p>The overall condition of the accessories is analyzed by a qualified service technician who provides an estimated rating of either: poor, good, or excellent.</p> <p>In addition, the service technician will include as part of the overall assessment of the accessories' condition, an estimated cost of repair/replacement to bring the accessories' condition to normal/good.</p>

*The condition data is assessed, analyzed and calculated into the overall condition rating, and highlighted within the annual vehicle report at the Annual Equipment Review.*

## Asset Attributes

The following asset attributes are extrapolated from the CMMS and populated on the Equipment Review sheet to be included in the analysis of the comprehensive condition assessment.

Factor	Points
<b>Division</b>	The location of the vehicle or equipment is indicated via department and division.
<b>Identification number</b>	Each asset is identified with a unique number which is maintained in Flint. The identification number provides tracking and monitoring capabilities during the equipment review and analysis process.
<b>Make, model and year</b>	The vehicle or equipment make and model is identified in Flint along with the year the asset was manufactured.
<b>Gross vehicle weight</b>	This category takes into consideration the weight of the asset. For vehicle assets, it is used to determine the necessity of registering the vehicle under the commercial vehicle operator's registration regulation in Ontario.
<b>Mileage</b>	For vehicle assets, the mileage as indicated on the odometer in the vehicle and is recorded and maintained in Flint. For equipment, the approximate number of hours of service, utilization is recorded and maintained in Flint.
<b>Previous year mileage</b>	For vehicle assets, the mileage as indicated on the odometer year to year is recorded and maintained in Flint. For equipment, the approximate number of hours of service, utilization year over year is recorded and maintained in Flint.
<b>Description</b>	A description of the asset is recorded.
<b>Attachments</b>	If an addition to the asset have been made (such as a snow plow on a pick-up truck), it will be noted.
<b>Life cycle</b>	The number of years projected for the asset's life cycle is noted.

## Overall Assessment Value

1. Very Good
2. Good
3. Fair
4. Met Expected Life – Fair
5. Poor

The Overall Assessment Value provides a guideline tool during the risk assessment process at the annual Fleet Review. Values can be ignored providing proponents articulate and rationalize their objection to the provided value.

Additional data that is utilized to assist with determining the ongoing commitment to maintain the asset include:

- Estimated Purchase Price
- Estimated Annual Depreciation
- Estimated Repair Cost
- Depreciation versus Repair Costs

Overall recommendations can include:

1. Keep one more year
2. Replace
3. Remove from service

Recommendation provides a guideline tool during the risk assessment process at the annual Fleet Review. The recommendation can be modified providing proponents articulate and rationalize their objection to the provided value.



## Related Risks and Mitigation Management of Fleet Assets

A key part of the asset management process, is a risk analysis of vehicles and equipment that is performed based on a lifecycle target.

Every year, the Manager of Fleet Planning, undergoes a thorough examination of Fleet inventory based on the lifecycle objectives associated with each piece of equipment and vehicle. Detailed summaries/reports are provided for the following user groups within the City:

- *Community Services Enterprise (Neighbourhood Programs and Services)*
- *Community Services (Bylaw Enforcement)*
- *Community Services (Fire)*
- *Community Services Enterprise (Sport)*
- *Corporate Services (Human Resources)*
- *Development Services (Building)*
- *Development Services (Engineering)*
- *Development Services (Transportation Services)*
- *Financial Services (Supply Services)*
- *Infrastructure Services (Parks and Cemeteries)*
- *Infrastructure Services (Facilities Management)*
- *Infrastructure Services (Fleet)*
- *Infrastructure Services (Operations – Roads and Traffic)*
- *Infrastructure Services (Utilities)*

This method of ongoing assessment and rating provides Fleet with a comprehensive tool to provide risk assessment and optimize the level of quality service for City users. The function of the quality management system will enhance Fleet's capacity to provide a measured and continually monitored performance of quality customer service to the City user.

During the Annual Equipment Review, each piece of equipment and vehicle (selected for review based on the lifecycle assessment) undergoes an analysis based on the ratings juxtaposed with financial requirements, losses and projected costs.

### Fleet Users Working Group

The primary objective of the Fleet Users Working Group is to improve user satisfaction and service, while educating City users to vehicle and equipment tendencies and uses.

Users of Fleet vehicles and equipment are represented via the Fleet Users Working Group (FUWG); a committee made up of management from across the City. The committee meets on a regular basis and minutes are recorded and maintained by the Fleet, Administrative Assistant.

Members of FUWG include:

- All Operating Areas utilizing Fleet Assets shall have representation on the FUWG.
- Waterloo Region Insurance Pool shall be represented to provide insight and information with respect to Risk Management.

- The Corporate Sustainability Officer shall participate in providing insight, information and support with respect to Corporate Sustainability Initiatives which guide improvement to the environmental impacts of the Fleet.
- The Manager of Corporate Health & Safety shall participate in the provision of information and oversight regarding Health & Safety.
- The Human Resources Associate responsible for Fleet shall participate in providing information and oversight regarding Labour Relations.
- Other participants may be invited to present information or request feedback as applicable to the FUWG.

FUWG is the most active and productive committee for City Fleet users. Its function is ensuring there is an ongoing internal dialogue associated with monitoring, discussing, communicating and educating Fleet users on vehicle and equipment use. FUWG provides the best forum for changes and modifications to Fleet inventory, its policies, procedures and practices. The committee provides a consistent and reliable format for Fleet administration to improve users' understanding and awareness of the vehicles and equipment available for City use.

### Global Positioning System Tracking

All vehicles, large equipment and some small equipment utilize GPS as a method of ongoing data analysis and reporting.

Service of vehicles and large equipment and related objectives and targets are monitored by Fleet administration via GPS data received in addition to service records entries as:

Data Collected	Provides information relevant to:
% of Completed Inspections Non-CVOR	<ol style="list-style-type: none"> <li>1. Vehicle/equipment operation</li> <li>2. Vehicle/equipment history</li> <li>3. Vehicle/equipment capabilities and limitations</li> <li>4. Vehicle/equipment serviceability and risk</li> <li>5. Vehicle/equipment value and replacement index</li> </ol>
% of Completed Inspections CVOR	
Idling Time	
Harsh Breaking Incidents	
Harsh Cornering Incidents	
Speeding Incidents	

All of the above data and information is provided by Fleet Administration on a daily bases. By monitoring user behaviours, the City is able to address employees who are considered a high risk.

## Repair Priority Matrix

The following matrix is applied to determine priority of repairs.

CORPORATE PRIORITY MATRIX			DESCRIPTION
<b>1.</b>	<b>EMERGENCY</b>		
		<ol style="list-style-type: none"> <li>1. SSU emergency equipment</li> <li>2. Winter maintenance equipment (Nov. 1 to Apr. 7)</li> <li>3. Utilities main break equipment</li> <li>4. Forestry – aerial truck</li> <li>5. Fire Department</li> </ol>	A threat to life and/or the environmental destruction of property, equipment or facility.
<b>2.</b>	<b>BREAKDOWN</b>		
	<ul style="list-style-type: none"> <li>• Road service</li> </ul>	<b>Questions:</b> <ol style="list-style-type: none"> <li>1. Is it a hazardous situation?</li> <li>2. Is it in an unsafe area?</li> <li>3. What is the problem (type of repair)?</li> <li>4. When needed? Is there a spare?</li> <li>5. Supervisor of Fleet negotiate time frame.</li> </ol>	<p>Immediate response with appropriate resources.</p> <p>Permanent or corrective action will be completed through one of the lower priorities.</p>
<b>3.</b>	<b>RUNNING REPAIRS</b>		
	<ul style="list-style-type: none"> <li>• Defects</li> <li>• Building</li> </ul>	<ol style="list-style-type: none"> <li>1. How long down?</li> <li>2. Is there a spare?</li> <li>3. User and Fleet negotiate time frame for repair.</li> </ol>	Does not render the vehicle/equipment inoperative, but can be completed during the shift. Vehicle cannot operate and can be repaired during the shift with minimal inconvenience to the user.
<b>4.</b>	<b>SCHEDULED REPAIRS</b>		
	<ul style="list-style-type: none"> <li>• Bodywork</li> <li>• Collisions</li> <li>• Pre-delivery inspection</li> <li>• Servicing (i.e. clean, fuel)</li> <li>• PM inspection/repairs</li> <li>• Legislated inspection/repairs</li> <li>• Retrofitting (i.e. H &amp; S)</li> <li>• Building maintenance</li> </ul>	<ol style="list-style-type: none"> <li>1. Fleet to negotiate with contact person on time frame.</li> <li>2. Can be upgraded to a higher priority at any time.</li> </ol>	Work that can be scheduled and completed within a week and can be interrupted for work of higher priority.
<b>5.</b>	<b>SEASONAL/CAPITAL</b>		
	<ul style="list-style-type: none"> <li>• Rebuilding</li> <li>• New vehicle outfitting</li> <li>• Seasonal overhauls</li> </ul>	<ol style="list-style-type: none"> <li>1. Fleet to negotiate with user on time frame.</li> <li>2. Can be upgraded to a higher priority at any time.</li> </ol>	<p>Completion date required.</p> <p>Work is scheduled on quarterly basis (from 1 week to 12 weeks)</p> <p>Work that can be interrupted for work of a higher priority.</p>

## Repair and Maintenance Costing Analysis

### Fleet Management System (Flint)

The Fleet Management System (Flint) is a statistics management system utilized by Fleet and maintained by the Manager, Fleet Planning. The primary function of Flint is to record and maintain data relevant to each uniquely identified vehicle and equipment utilized by City users.

Users have access to Flint via Chrystal Reports with an approved access and password from Fleet. Chrystal Reports only provide costs and vehicle/equipment values. Users may obtain detailed information and data for any vehicle or equipment by request.

Jobs and service requests for vehicles and equipment are created and input into Flint by the Manager, Fleet Planning. Jobs and service requests may be accessed by our Service Technicians in Flint in the shop. Technicians must enter work performed and additional notes and details in Flint once the job/service is complete. This process maintains complete and accurate data relevant to maintaining a high level of customer service for City users.

Preventive maintenance schedules are automatically generated in Flint as prescribed in the Service Agreement.

### Work Orders – Maintenance, Service and Repairs

Work orders are initiated via Flint and by the Fleet Mechanical staff. For the most part, work orders are generated for the purpose of asset maintenance and repair but may also be executed for betterment, non-routine and/or service requests.

Service work orders are entered into Flint. Data received from the service technicians in Flint is utilized as part of the value criteria for each asset.

<b>SERVICE</b>	Typical examples include accessory items and attachments to vehicles and equipment such as: plows, running boards, Geotab GPS, back rack, box alarms
<b>ROUTINE</b>	Typical examples include: oil changes, filter changes, tire rotation and changes, brake changes
<b>BETTERMENT</b>	Typical examples include: battery replacement, transmission replacement, replacement of water pump, power steering unit

### Assets Out of Scope

Although this plan generally covers vehicle and equipment assets, there are two groups of assets that have not been included or monitored in our CMMS.

#### *Vehicle Charging Stations*

The city currently owns and operates 48 charging stations (59 charging ports) both for public use and dedicated fleet use. Repair and maintenance occurs on an on-demand basis. Performance is monitored through the 3 party provider (Chargepoint).

### Fuel Stations

The Fleet Division is responsible for 17 Fuel tanks of varying size and type. Although these tanks are not monitored within our CMMS, they are inspected monthly by fleet staff and are inspected annually by a 3<sup>rd</sup> party to insure TSSA compliance.

TANK NUMBER	LOCATION	FUEL TYPE	TANK TYPE	DESIGN	CAPACITY	ESTIMATED COST OF DISPOSAL
1	KOF - 131 Goodrich Drive	Diesel, Clear	Steel	Above Ground	78, 000 L	\$20,000.00
2	KOF - 131 Goodrich Drive	Diesel, Marked	Steel	Above Ground	39, 000 L	\$10,000.00
3	KOF - 131 Goodrich Drive	Regular Gas	Steel	Above Ground	39,000 L	\$10,000.00
4	KOF - 131 Goodrich Drive	Premium Gas	Steel	Above Ground	1,136 L	\$1,000.00
5	Rockway Golf Course - 280 Carwood Drive	Regular Gas	Fiberglass	Underground	2,250 L	\$100,000.00
6	Rockway Golf Course - 280 Carwood Drive	Diesel, Marked	Fiberglass	Underground	4,500 L	\$150,000.00
7	Doon Valley Golf Course - 500 Doon Valley Drive	Regular Gas	Steel Protected	Underground	2,250 L	\$100,000.00
8	Doon Valley Golf Course - 500 Doon Valley Drive	Diesel, Marked	Fiberglass	Underground	4,500 L	\$150,000.00
9	Woodland Cemetery - 119 Arlington Blvd.	Regular Gas	Steel	Above Ground	2,200 L	\$1,000.00
10	Woodland Cemetery - 119 Arlington Blvd.	Diesel, Marked	Steel	Above Ground	2,200 L	\$1,000.00
11	Williamsburg Cemetery - 1541 Fischer Hallman Rd.	Regular Gas	Steel	Above Ground	1,136 L	\$1,000.00
12	Williamsburg Cemetery - 1541 Fischer Hallman Rd.	Diesel, Marked	Steel	Above Ground	1,136 L	\$1,000.00
13	Victoria Park - 135 Dill St.	Diesel, Marked	Steel	Above Ground	1,136 L	\$1,000.00
14	Budd Park - 1111 Homer Watson Blvd.	Diesel, Marked	Steel	Above Ground	1,136 l	\$1,000.00
15	Bridgeport Sportsfields - Bridge St. E.	Diesel, Marked	Steel	Above Ground	1,136 L	\$1,000.00
16	Queensmount Arena - 1260 Queen's Blvd.	Diesel, Marked	Steel	Above Ground	1,136 L	\$1,000.00
17	Peter Hallman Ball Yard - Lennox Lewis way	Diesel, Marked	Steel	Above Ground	1,136 L	\$1,000.00

## Financial Summary

### Fleet Ten Year Operating Budget

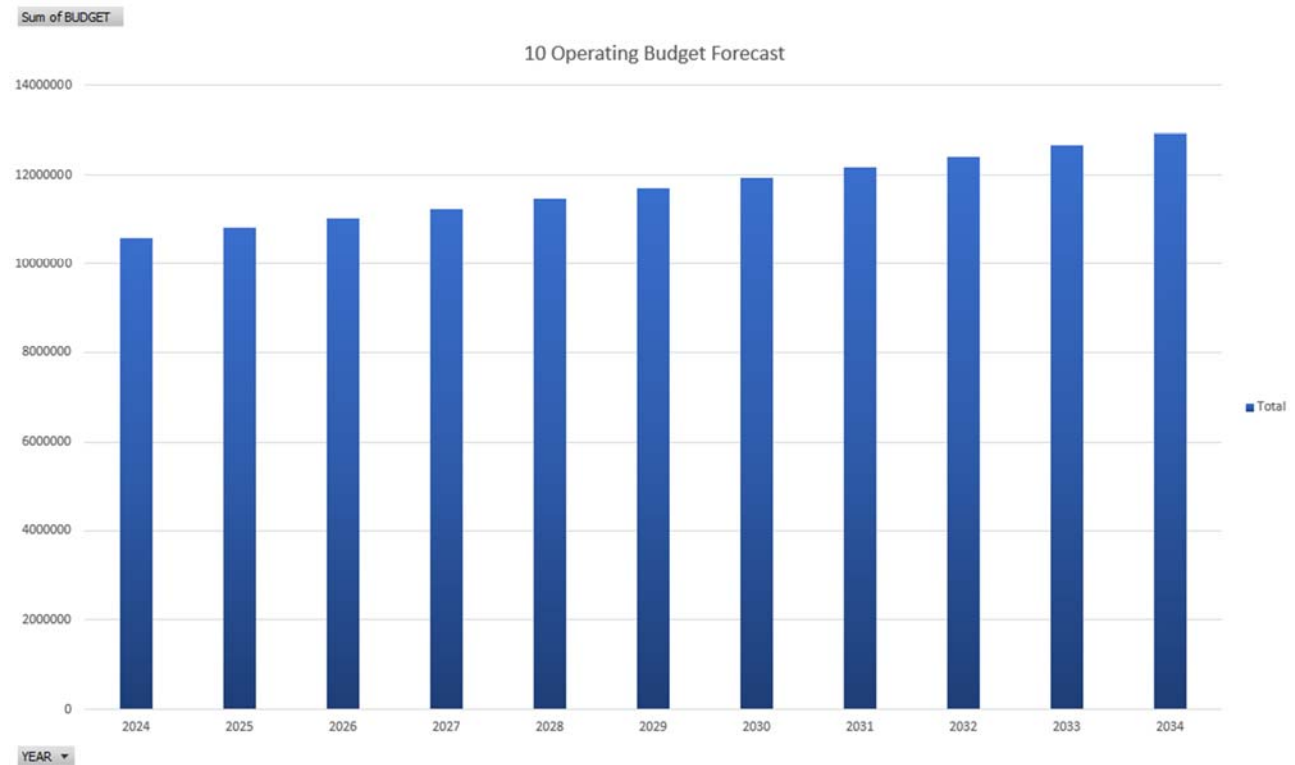
Operating and maintenance charges are applied against each asset through an hourly shop rate. The shop consists of the hourly technician rate plus percentage increases to include benefits, shop supplies and management/ administration fees.

The following 10-year operating budget has been extrapolated via the previous year of actual Work Order costs associated with all asset categories and a 2% inflation rate has been applied to build out the projection.

The Fleet Operating budget is intended for the repair and maintenance of Fleet assets. This includes ongoing routine maintenance, preventative maintenance, annual safety inspections, defect repairs and body repairs.

Funding for this operating budget is generated through an internal charge out rate when vehicles and equipment are applied to an operations workorder. Any repair and maintenance completed on an asset will draw down on this account according to the hourly Shop Rate. The operating budget for Fleet division is intended to operate at net zero dollars. Therefore, if there is a deficit at year end, the gap will be funded through internal charges spread across the different users (divisions). If there is a surplus, the funds will be moved to maintenance the Fleet Equipment Reserve.

Year	Budget
2024	\$10,597,280.00
2025	\$10,809,225.60
2026	\$11,025,410.11
2027	\$11,245,918.31
2028	\$11,470,836.68
2029	\$11,700,253.41
2030	\$11,934,258.48
2031	\$12,172,943.65
2032	\$12,416,402.53
2033	\$12,664,730.58
2034	\$12,918,025.19
<b>Total</b>	<b>\$128,955,284.50</b>

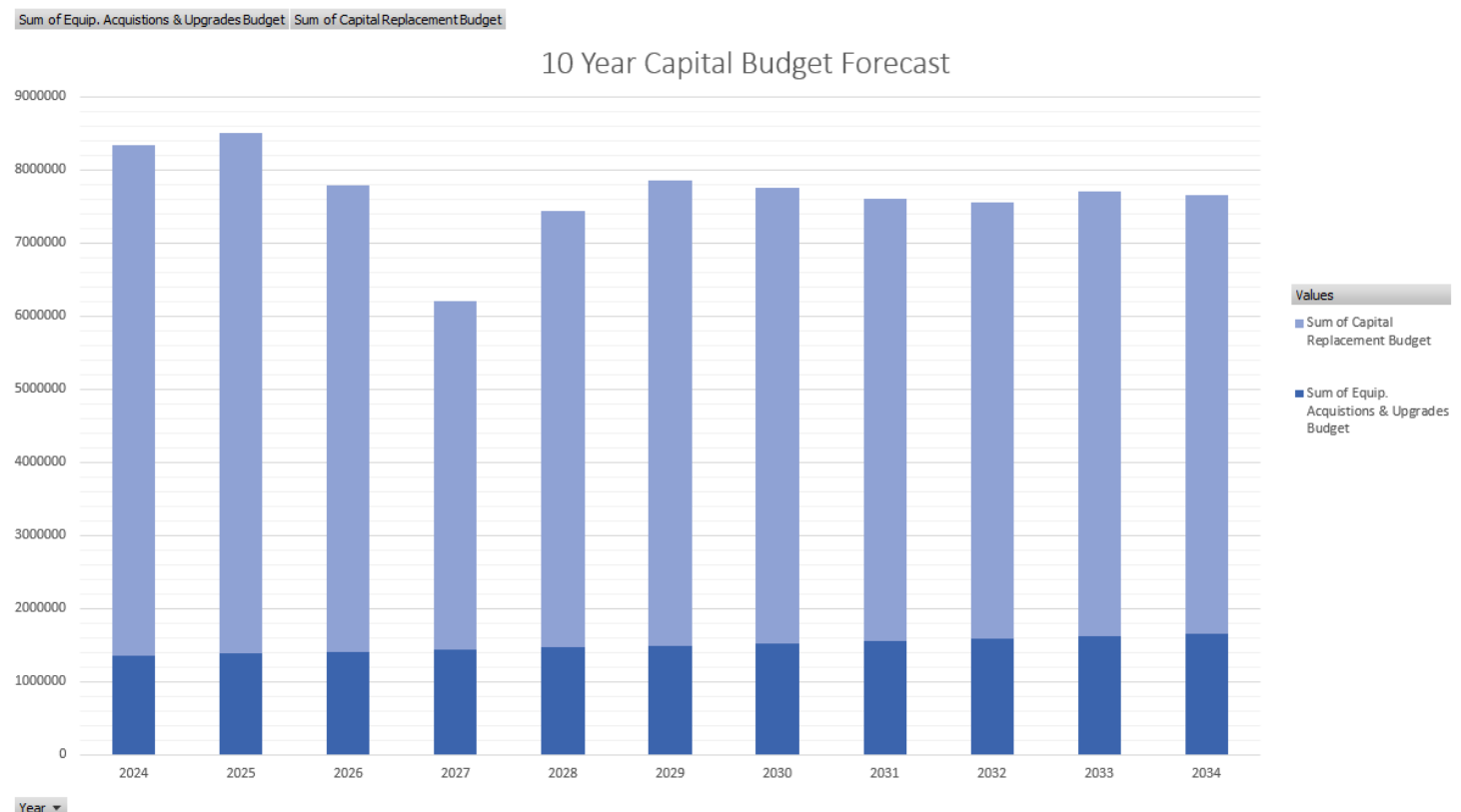


## Ten Year Capital Budget Forecast

The 10 year Capital Budget Forecast is the budget that is currently entered into the budget system. However, this forecast is reviewed and updated annually after the Equipment Review process. Fleet Capital purchases are funded through the Equipment Reserve. The Equipment Reserve is maintained by depreciating the cost of the asset on a monthly basis through internal charges to the user (division).

This forecast also includes the budget for Equipment Acquisitions & Upgrades. This funding is applied to net new assets and upgrades to replacement vehicles & equipment. This funding source is from the City's enterprises (Kitchener Gas & Water Utilities) and the City's Development Charges.

Year	Capital Replacement Budget	Equip. Acquisitions & Upgrades Budget	Total Budget
2024	\$ 6,987,000	\$ 1,353,000	\$ 8,340,000
2025	\$ 7,124,000	\$ 1,381,000	\$ 8,505,000
2026	\$ 6,387,000	\$ 1,407,000	\$ 7,794,000
2027	\$ 4,768,000	\$ 1,435,000	\$ 6,203,000
2028	\$ 5,966,000	\$ 1,464,000	\$ 7,430,000
2029	\$ 6,354,000	\$ 1,493,000	\$ 7,847,000
2030	\$ 6,225,000	\$ 1,523,000	\$ 7,748,000
2031	\$ 6,042,000	\$ 1,554,000	\$ 7,596,000
2032	\$ 5,971,000	\$ 1,585,000	\$ 7,556,000
2033	\$ 6,091,000	\$ 1,616,000	\$ 7,707,000
2034	\$ 6,000,000	\$ 1,650,000	\$ 7,650,000



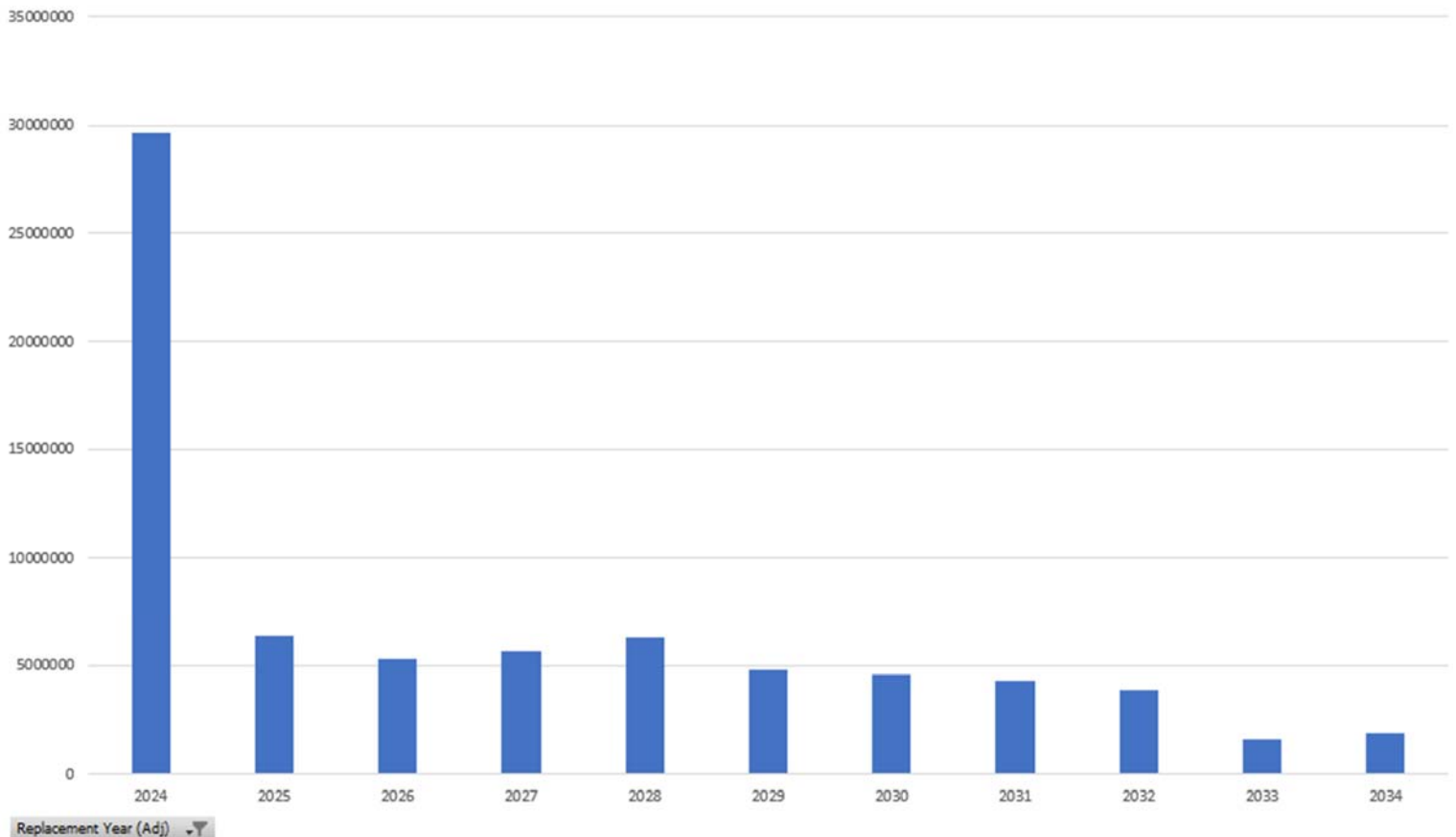
## Asset Replacement Forecast

The Replacement Forecast is based on the expected life cycle and based on current estimated replacement values. Although there is a high estimated value for the year 2024, this value is a sum the assets that have met the expected life at the year 2024 or prior and are considered fair and therefore, still in service. These assets are evaluated each year as part of the Equipment Review process and are continually maintained according to the prescribed level of service. This value will continue to move forward year to year as assets continue to meet the expected life and assets are replaced (removed from inventory).

Year	Estimated Replacement Value
2024	\$29,623,039.04
2025	\$6,404,288.68
2026	\$5,323,942.34
2027	\$5,693,383.50
2028	\$6,301,473.28
2029	\$4,833,451.39
2030	\$4,629,617.97
2031	\$4,331,981.24
2032	\$3,906,939.22
2033	\$1,632,217.82
2034	\$1,899,824.73
<b>Total</b>	<b>\$74,580,159.20</b>

Sum of Est. Value

### 10 Year Capital Forecast





## Replacement Budget versus Replacement Forecast

In order to budget for the value of assets being deferred, the total value is divided over the 10 Capital Budget Forecast. Although there is a projected gap, the gap is expected to be funded from the Fleet Equipment Reserve. Again, these budgets are reviewed annually after the Equipment Review.

Row Labels	Sum of Total Forecast	Sum of Capital Replacement Budget	Sum of Funding Gap
2024	\$7,620,063	\$6,987,000	-\$633,063
2025	\$8,849,064	\$7,124,000	-\$1,725,064
2026	\$7,768,717	\$6,387,000	-\$1,381,717
2027	\$8,138,159	\$4,768,000	-\$3,370,159
2028	\$8,746,248	\$5,966,000	-\$2,780,248
2029	\$7,278,227	\$6,354,000	-\$924,227
2030	\$7,074,393	\$6,225,000	-\$849,393
2031	\$6,776,756	\$6,042,000	-\$734,756
2032	\$6,351,714	\$5,971,000	-\$380,714
2033	\$4,076,993	\$6,091,000	\$2,014,007
2034	\$4,344,600	\$6,000,000	\$1,655,400
<b>Grand Total</b>	<b>\$77,024,934</b>	<b>\$67,915,000</b>	<b>-\$9,109,934</b>

