



## REPORT

To: Mayor and Council  
From: Chief Administrative Officer  
Subject: For Your Decision: Service Delivery Review - Fire Services Fleet Management  
Date: December 11, 2023

---

### Issue

Service Delivery Review - Fire Services Fleet Management

### Facts

- According to the 2020 Asset Management Plan, the Municipality currently has an annual funding gap of \$5.6 million between what should be spent to maintain assets and what is spent. This is the equivalent of \$2,156 per household, or more than double the current annual average levy on each house. The number is considered on the lower end of reality as it does not include all asset classes. Furthermore, inflation has increased significantly since the plan was developed, especially for Municipal infrastructure.
- By July 2025, Asset Management Planning legislation requires municipalities to determine current and future levels of service, the costs associated with that level of service and a plan to fund it. The legislation will, in essence, require municipalities to "live within their own means" by setting levels that are affordable and attainable long term. Not being compliant with this requirement will affect Municipal transfer funding.
- Grant funding programs have been shifting to take into account a Municipality's strategy in closing the asset gap and current state of funding their assets (i.e. the more the Municipality is addressing the deficit, the more likely a funding is to be approved. The less a Municipality is working to close the gap, the less likely they are to be approved for funding)
- Council directed staff to undertake Service Delivery Reviews (SDR) on all Municipal services. This is an evaluation process in which a specific municipal

service is systematically reviewed to determine the most appropriate way to provide it. The SDR process focuses on setting priorities and, where possible, reducing the cost of delivery (to the Municipality) while maintaining or improving services and service levels. At times, service levels may have to be cut.

- A part of SDR process is to consider how to enhance services through greater efficiency or process changes without added costs to the Municipality. In many cases however, Council will either need to reduce costs or increase revenues (fees & charges or levy) significantly to address the infrastructure gap and plan for the future. While doing so, the increased complexity of operating services needs to be taken into account. Therefore, it is only possible to reduce costs to the level required by reducing services and/or assets that Greenstone maintains.

## **Analysis**

Please see the attached Fire Services Fleet Management Service Delivery Review Report.

## **How does this tie to the Strategic Plan?**

### **1.0 Build Financial Capacity**

To create the financial capacity to invest in capital infrastructure and equipment to meet service level expectations and statutory requirements, and to allow flexibility to enhance existing and future service delivery options.

1.1 Service Delivery Review (SDR): Council has approved the commencement of a service delivery review. The SDR will look at current and future levels of service for program delivery and asset maintenance. With the completion of each SDR, develop business plans to ensure that the services meet the strategic service level objectives of Council in a fiscally prudent manner.

## **Recommendation**

**THAT** Council of the Municipality of Greenstone approve the following:

1. **THAT** Council adopt a revised fire fleet deployment model to include mini pumper and rescue pumper type fire apparatus presented as the Mini and Rescue Pumper Model; and
2. **THAT** Staff be directed to procure three pumper/tanker and one tanker type fire apparatus in 2024 for future delivery in 2025 or 2026 when completed; and
3. **THAT** Council adopt a blended funding model for fire fleet replacement; and
4. **THAT** Council approve the multi-year incremental funding identified in the capital project Fire Master Plan Implementation – Fleet Replacement as presented in the draft 2024 budget; and
5. **THAT** Council authorizes staff to utilize debt financing where necessary to effect the procurement of fire apparatus.

**DATE** **MONDAY, DECEMBER 11, 2023**

**SUBJECT** **SERVICE DELIVERY REVIEW – FLEET MANAGEMENT (FIRE)**

**REPORT NO.** **SDR-12**

## RECOMMENDATION

That Council of the Municipality of Greenstone approve the following:

1. THAT Council adopt a revised fire fleet deployment model to include mini pumper and rescue pumper type fire apparatus presented as the Mini and Rescue Pumper Model; and
2. THAT Staff be directed to procure three pumper/tanker and one tanker type fire apparatus in 2024 for future delivery in 2025 or 2026 when completed; and
3. THAT Council adopt a blended funding model for fire fleet replacement; and
4. THAT Council approve the multi-year incremental funding identified in the capital project Fire Master Plan Implementation – Fleet Replacement as presented in the draft 2024 budget; and
5. THAT Council authorizes staff to utilize debt financing where necessary to affect the procurement of fire apparatus.

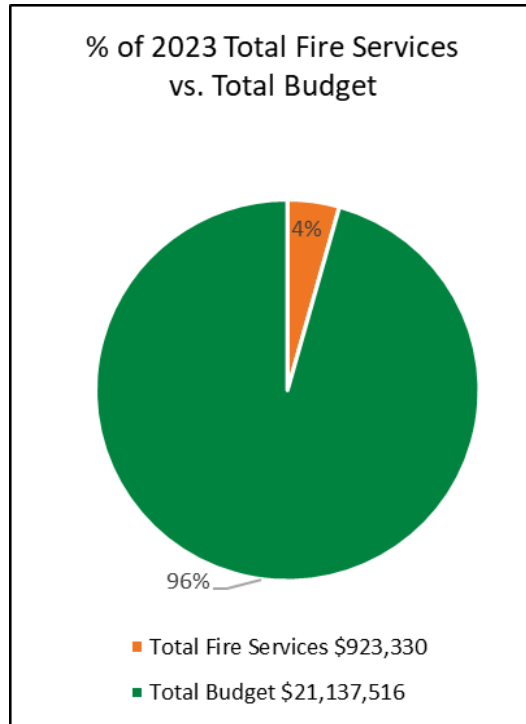
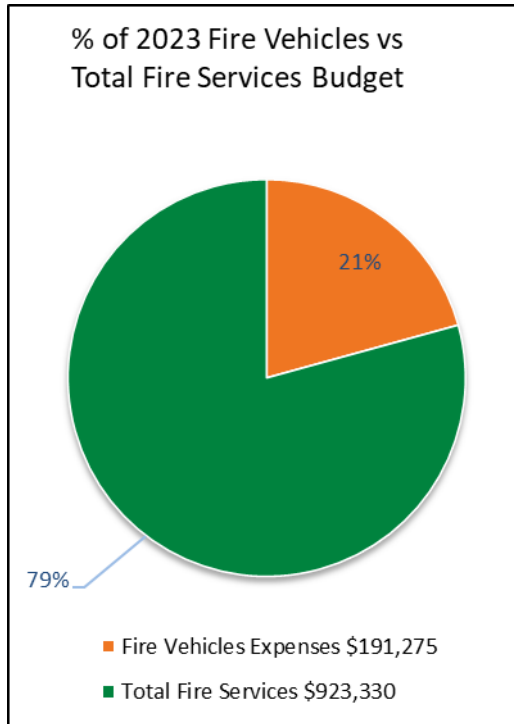
## SERVICE SUMMARY

<b>GREENSTONE FIRE AND EMERGENCY SERVICES</b>	
<b>DEPARTMENT</b>	Fire and Emergency Services
<b>SUMMARY</b>	<p>The Municipality of Greenstone operates a Fire Department with specific identified emergency response types and suppression capabilities. This is presently accomplished utilizing 16 vehicles operating out of the four station locations.</p> <p>These vehicles are used in the provision of services to not only residents but also to neighboring communities, the travelling public, and allied agencies.</p>
<b>INDUSTRY BEST PRACTICES</b>	<ul style="list-style-type: none"> <li>• National Fire Protection Association (NFPA) 1901 Standard for Automotive Fire Apparatus               <ul style="list-style-type: none"> <li>○ Minimum specifications of new build apparatus by function.</li> </ul> </li> <li>• National Fire Protection Association (NFPA) 1911 Standard for Automotive Fire Apparatus               <ul style="list-style-type: none"> <li>○ Inspection, maintenance, testing and retirement of in-service emergency vehicles.</li> </ul> </li> <li>• Underwriters Laboratories of Canada CAN/ULC-S515-13-</li> </ul>

	<p>R2018 Standard for Automobile Fire Fighting Apparatus</p> <ul style="list-style-type: none"> <li>○ Minimum capabilities of fire fighting apparatus components equipped with a pump.</li> <li>● Fire Underwriters Survey (FUS)</li> </ul> <p>Considers type, age, and capability of apparatus relating to insurance grading for fire protection on residential and commercial lines.</p>				
<b>LEGISLATION</b>	<ul style="list-style-type: none"> <li>● Fire Protection and Prevention Act, 1997 <ul style="list-style-type: none"> <li>○ Establishes that a Municipality must provide fire protection services it determines may be necessary in accordance with it's needs and circumstances.</li> </ul> </li> <li>● Asset management Planning for Municipal Infrastructure O.Reg 588/17 <ul style="list-style-type: none"> <li>○ Requires preparation of an asset management plan on or before July 1, 2025.</li> </ul> </li> <li>● Highway Traffic Act</li> <li>● Occupational Health and Safety Act</li> </ul>				
<b>BY-LAWS</b>	<ul style="list-style-type: none"> <li>● Bylaw 22-08 Establish &amp; Regulate the Greenstone Fire and Emergency Services</li> <li>● Bylaw 23-15 User Fees Schedule M Fire Services</li> <li>● Bylaw 04-32 Long Lake No.58 First Nation Fire Protection Agreement</li> <li>● Bylaw 05-45 Ginoogaming First Nation Fire Protection Agreement</li> <li>● Bylaw 18-21 Sand Point First Nation Fire Protection Agreement</li> </ul>				
<b>OTHER AGREEMENTS AND USERS</b>	<ul style="list-style-type: none"> <li>● Ministry of Natural Resources and Forestry (Forest Fires)</li> <li>● Ministry of Transportation (Highway Incidents)</li> <li>● Mutual Aid - Thunder Bay District (Other Area Fire Departments)</li> <li>● Unincorporated Ontario (Surrounding Areas - Grant Program)</li> </ul>				
<b>FEES/CHARGES</b>	<p>Bylaw 23-15 establishes user fees for responses to certain incident types where apparatus would be used. The Municipality also services many additional agencies and communities under agreements with a similar fee structure. It is important to note that fees are directly correlated to number of responses in any year and response types.</p> <p>Historical Fees Collected for Responses Only</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">2020: \$80,275.09</td> <td style="width: 50%;">2022: \$203,274.01</td> </tr> <tr> <td>2021: \$104,666.06</td> <td>2023: \$119,200.00 (est.)</td> </tr> </table> <p>On average these fees represent a recovery of 14.5% of total operating costs of the department from outside sources.</p>	2020: \$80,275.09	2022: \$203,274.01	2021: \$104,666.06	2023: \$119,200.00 (est.)
2020: \$80,275.09	2022: \$203,274.01				
2021: \$104,666.06	2023: \$119,200.00 (est.)				

## 2023 BUDGET SUMMARY

<b>2023 Expenditures:</b>	\$191,275
<b>2023 Revenues:</b>	-\$0.00
<b>Net Budget:</b>	\$191,275



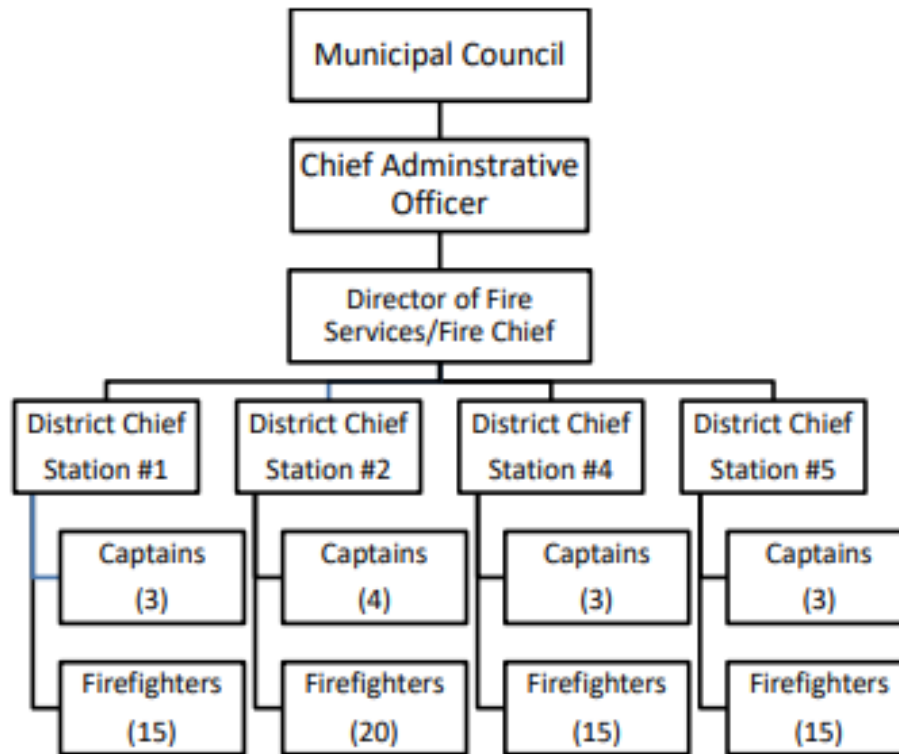
## STAFFING

The current staffing model identified in by-law 22-08 Establish and Regulate a Fire Department allows for a complement of the Director of Fire Services/Fire Chief and 82 suppression personnel (District Chiefs 4, Captains 13, Firefighters 65). The current suppression staffing level is 50 (District Chiefs 4, Captains 9, Firefighters 37).

The Director of Fire Services/Fire Chief is the only full-time employee in Fire Services section. The suppression personnel are classified as Volunteers per the definition in the Fire Protection and Prevention Act.

The fire station locations are:

- 🚒 Station 1 - Beardmore
- 🚒 Station 2 - Geraldton
- 🚒 Station 4 - Nakina
- 🚒 Station 5 - Longlac



## SERVICE BACKGROUND

Relating to fleet, the Fire Protection and Prevention Act provides that:

Municipal responsibilities

2 (1) Every municipality shall,

- (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

Council determines this level of service through the establishing and regulating bylaw, for Greenstone it is Bylaw 22-08 Establish & Regulate the Greenstone Fire and Emergency Services. The Municipality's current level of service includes emergency responses for which it requires a fleet of vehicles to perform these services.

Fleet vehicles are also used in the provision of public education and prevention programs.

The current fleet includes 16 vehicles of which 14 are assigned to front-line duty, one administrative, and one spare apparatus. Of the 16 vehicles, 8 are classified as pumpers. The remainder serve in capacities such as rescue, tanker, and support functions. All pumping apparatus were manufactured in the 1990's and 2000's, the newest one in 2008.

Council approved the Fire Master Plan (FMP) in 2023, which outlined moving to a 12-

vehicle model. Fire apparatus are specialized pieces of equipment that require significant investment. With an expected service life of 20 years, it is imperative that the vehicles meet the current and expected future needs of the community they will be protecting.

It is important to note that pumpers are considered the front-line vehicle type as they carry water and are capable of discharging it, along with a variety of tools. These vehicles typically respond to a greater variety of calls due to their broad capabilities compared to stand alone rescue, tanker and support units.

The fleet replacement schedule in the Fire Master Plan identifies that all vehicles in the present fleet would need to be replaced or retired by 2033. All pumpers in the fleet will have reached the 20-year mark in 2028. The 20 year life cycle is derived from two sources. First, NFPA 1911 stipulates that any fire service vehicle should be replaced upon reaching 20 years of age. NFPA is a standards organization that develops industry best practices. The second is Fire Underwriter's Survey, whereby the front-line pumper at a station needs to be 20 years or less in age regardless of use to be considered in area insurance grading purposes on residential and commercial lines.

More practical issues of operating ageing vehicles include increased breakdowns and lower parts availability which translate into increased costs and reduced response capabilities. Local repair facilities can only work on the truck portion; any issues with the pump or fire truck part of the vehicle require contractors from outside of the area to attend for repairs. These repairs are typically diverted until annual pump testing if possible and completed when the technicians are already on site to minimize cost. Vehicles beyond their life cycle typically lose residual or disposal value very quickly; the remoteness of our Municipality may factor into the ability to dispose of these assets the longer they are operated.

Supply chain issues and production capacities have produced an approximately 18-24+ month lead time for apparatus builds and delivery across manufacturers dependent on apparatus type. Inflationary pressures on vehicles have outpaced typical market indicators. JD Power and Autotrader's Price Index Report are recording average increases in the 10-13% per year range, with the higher reporting a 47% increase over the last four years. The actual yearly increases vary, though they have occurred every year and there are no indications of this rate slowing. To order an identical apparatus to the one currently on order which was tendered in the spring has increased 11.7% when requested for this SDR with the same specifications. The replacement schedule identified in the Fire Master Plan (FMP) accounting for two-year lead times and inflationary pressures show that approximately \$6.5M is required over the next 9 years to achieve the deployment model. The largest portion, 75%, of this amount occurs within the next 5 years due mostly to the age of apparatus.

Significant investment will be required, and an appropriate funding model adopted to ensure that the services identified by the Municipality's establishing and regulating bylaw can be realistically achieved and reliably delivered.

## KEY PERFORMANCE INDICATORS

**Time-Based Utilization and Wear** - Apparatus typically spend more time operating at emergency scenes than driving. This usually results in a disproportionate number of

engine and pump hours compared to odometer readings. Pumping involves the engine and drive train components in conjunction with the pump to discharge water. The number of pumping vehicles affects how much each is used, and in turn wear from use. It is estimated that one hour of idle time (pump not engaged) produces the equivalent wear on a vehicle as 40-48km of driving according to Ford and Enterprise. While pumping, this wear equivalent increases.

**Fuel Efficiency** - Fire apparatus are typically large and heavy vehicles. Requiring fuel, the more utilization there is of the apparatus the more impact fuel use has on operating costs. Different apparatus ages and styles will produce different fuel economies. Fuel costs are also incurred when the apparatus is pumping as the engine drives the pump.

**Preventative Maintenance** - Amount of and extent of preventive maintenance conducted compared to operating time, downtime, and repairs.

**Apparatus Breakdowns** - Examining downtime, component failures, and critical failures where apparatus cannot be used.

**Repair Costs** - Expenses incurred to repair apparatus after a breakdown or to conduct preventative maintenance.

**Response Effectiveness** - Ability of apparatus type to mitigate the response types most frequently dispatched to.

**Community Risk Mitigation Effectiveness** - Ability of vehicles to mitigate risks identified in the Community Risk Assessment.

**Safety Incident Rates** - Frequency of safety-related incidents such as collisions, near misses, violations, operating injuries (slip/fall) compared to safety equipment and features of apparatus.

## ASSET USE

The current fire apparatus fleet consists of:

Type	Current Replacement Cost Per Unit	Quantity Owned
Pumper	\$650,000	7
Tanker	\$400,000	1
Aerial Ladder	\$1,800,000	1
Heavy Rescue	\$350,000	2
Light Rescue	\$180,000	1
Support	\$100,000	2
Brush	\$100,000	1
Command	\$80,000	1
Air Trailer	\$140,000	1



## ANALYSIS

### Fleet and Deployment

Fire apparatus are specialized vehicles. There is significant investment required to ensure that the Municipality can acquire a vehicle that meets its needs long term. The amount of investment is high enough that if a vehicle is found in the future not to perform as expected or not meet local needs, it would present significant challenges to replace or retrofit it. There needs to be more than acquisition costs considered.

Consideration should be given to:

- The ability to standardize to some extent the make, model, look and layout to facilitate easier servicing and operational fleet standardization.
- Availability of parts, warranty, labor, aftermarket support, and ability to build a parts inventory locally.
- Ability of vehicles to accomplish multiple tasks or address multiple hazards and call types.
- Be user friendly, where unknown turnout or low staffing can still accomplish incident tasks.
- Consider local realities in design and operation, such as terrain, travel distances, and climate.

It is important to understand what types of incidents these apparatus may be called to. Fire services responds to an average of 150-200 calls for service per year. The highest call types in order are Other (Other not specified such as cooking, public hazard, burning complaints, etc.), Motor Vehicle Collisions, Alarms, Property Fires, and No Loss Outdoor Fires. Call types are classified by what the call was determined to be once mitigated, not necessarily what the dispatch information was.

The Community Risk Assessment identified possible emergencies in the Municipality based on likelihood and effect. In ranking order, the categories were: Highway Emergencies, Property Fires (various types), Weather Event, Airport, followed by a mix of Other Fires (various types), Infrastructure Failures, and Wildland Fires.

It is important to remember that these statistics, risks and our capabilities service not only the residents and businesses in Greenstone, but that they are also provided under some form of agreement to seven other user groups/agencies. These include neighboring communities, travelling/transport traffic, and visitors among others.

If a sustainable deployment model is not selected and services cannot be reliably delivered, the Municipality will be challenged to continue to provide emergency response services. Based on the main risks and call types, vehicles need to be capable of effectively responding to highway incidents and fires.

Below are two possible fleet deployment models based on a 12-vehicle fleet. For consideration is the Fire Master Plan model, and another possibility of changing the recommended rescue units to Mini Pumpers and Rescue Pumpers.

There was also engagement with groups of fire service members from all stations regarding fleet needs from an operational lens. The main feedback received was that they would like vehicles that were generally more capable, versatile, reliable, and better suited to meet the realities and challenges in our region such as terrain, distance, and weather.

### 1) Fire Master Plan Model

Example of Vehicle Types and Quantities:

Pumper/Tanker (x5)



Tanker (x2)



Light Rescue (x2)



Heavy Rescue (x2)



Chief Vehicle (x1)



### What works about this model?

- Less pump maintenance due to less pumpers in fleet.
- More overall water supply over current fleet.
- Lower cost of acquisition

### Limitations of this model:

- Likely requires maintaining a current vehicle as spare, increasing maintenance costs. The newest vehicle we have presently would be in service 36 years before the next fleet cycle.
- Rescue units do not carry water and are not equipped with a pump.
- Majority of calls are collisions. A minimum of 2 vehicle response would be required under this model to vehicle collisions to fully mitigate risks (a pumper and rescue).
- Commits a tanker (water supply) truck to an initial attack role on fires.
- Beardmore and Nakina being the most remote stations would have a single vehicle with water and pump capabilities.
- No pump capable vehicle in this model can access terrain, trails, and tight driveways (too big and heavy).

## 2) Mini and Rescue Pumper Model

Example of Vehicle Types and Quantities:

Pumper/Tanker (x5)



Rescue Pumper (x2)



Mini Pumper (x2)



Tanker (x2)



Chief Vehicle (x1)



### **What works about this model?**

- Each station will have multiple pumpers.
- No older spare vehicles required after 2030 delivery. Reduces maintenance costs, towing costs, and staff time switching vehicles.
- Staggered/batch acquisition possible increasing lifespan of larger more expensive vehicles.
- Mini pumpers when properly specified can meet the requirements of a pumper for insurance grading purposes at reduced acquisition cost over full sized pumpers.
- Pumper/tankers can be utilized for water shuttle with less firefighters.
- Terrain, inclement weather, bush road/driveway and trail capable pumping vehicles.
- Rescue pumpers can be self-sufficient for majority of highway calls. Better incident mitigation in cases of low turnout or single truck response. Reduces response delays.
- More water supply over Fire Master Plan model and current fleet.
- Mini-pumpers and Rescue Pumpers once acquired would be the primary response apparatus to most incidents. This reduces the use and associated wear on the larger and comparatively more expensive Pumper/Tankers.
- In cases of mutual aid incidents, there can be remaining coverage provided by pumpers.
- Increased storage and potential training space at Evac building as no spare apparatus needs to be stored.
- Provides resiliency in the fleet should there be major incidents committing numerous resources, or if there are any instances of vehicles being out of service.
- Ability to build a parts inventory due to same makes and models in the fleet.

### **Limitations of this model:**

- Higher pump maintenance costs.
- Higher acquisition costs.
- Higher risk of recalls due to identical vehicle makes and models with batch purchasing.

**Options:**

1. Adopt the Fire Master Plan deployment model with blended financing.
2. Adopt the Mini and Rescue Pumper model with blended financing.
3. Adjust level of service to exclude emergency response (discontinue).

**Recommendation:**

Despite the higher acquisition costs of the Mini and Rescue Pumper Model (MRP), there are many advantages. It offers better operational capability, capacity, and long-term savings. It also builds resiliency into the fleet should any defects or incidents place an apparatus out of service.

The Mini and Rescue Pumper model also allows for the fleet of larger, more expensive pumper/tanker vehicles to be purchased first saving on future inflation. The second batch purchase is for less expensive vehicles today, meaning a lower inflation pressure applied. This second batch would include a second pumper for each station, resetting the 20-year clock for FUS purposes and resulting in an additional six years of service on the overall fleet from reduced wear. At the time of next cycling, the oldest vehicle in the fleet would be 26 years old which though outside of the 20-year target under NFPA, is still lower than where we are today and a more sustainable approach overall. As the newer batch of vehicles would see more use, the oldest vehicles would likely be utilized less resulting in reduced wear and tear from age.

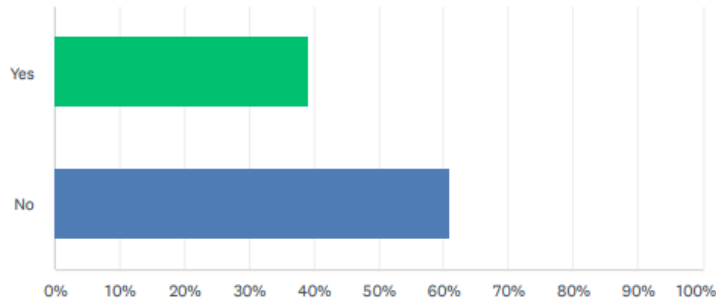
The Mini and Rescue Pumper model, due to the extended fleet cycle it allows for, also results in an extra \$2.65M in reserves to start the next cycle over the FMP model, which is higher than the added cost of acquisition long term. The MRP model also has sufficient reserves to allow the Municipality to fully fund the next batch of vehicles, whereas the FMP model does not.

The MRP Model, excluding the Chief vehicle replacements, calls for two batches of apparatus purchases. The first procurement suggested for 2024 with delivery in 2025/2026 of three pumper/tankers and a tanker has an estimated cost of \$2,350,000. The second batch of apparatus are suggested to be procured in 2029 for delivery in 2030/2031 at an estimated cost of \$4,725,000. Final costing is subject to outcomes of the tendering process.

A recent public engagement included the fleet topic for all Municipal services, specifically around investment and service reliability. The excerpts below support the recommendation that there should be investment into new vehicles and equipment to build service resiliency while also reducing overall operating costs and long-term acquisition costs.

### Q9 As a taxpayer, are you willing to accept service disruptions from mechanical failures in an effort to reduce the need for more funding to replace the fleet?

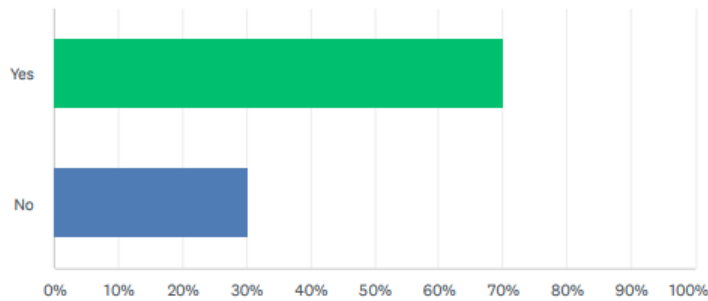
Answered: 282 Skipped: 70



ANSWER CHOICES	RESPONSES	
Yes	39.01%	110
No	60.99%	172
TOTAL		282

### Q10 Would you prefer to see new equipment purchased to avoid service disruptions and probable high maintenance costs?

Answered: 282 Skipped: 70



ANSWER CHOICES	RESPONSES	
Yes	69.86%	197
No	30.14%	85
TOTAL		282

With the added benefits and supporting long-term financial forecast, the recommendation is:

1. THAT Council adopt a revised fire fleet deployment model to include mini pumper and rescue pumper type fire apparatus presented as the Mini and Rescue Pumper Model; and
2. THAT Staff be directed to procure three pumper/tanker and one tanker type fire apparatus in 2024 for future delivery in 2025 or 2026 when completed; and
3. THAT Council adopt a blended funding model for fire fleet replacement; and
4. THAT Council approve the multi-year incremental funding identified in the capital project Fire Master Plan Implementation - Fleet Replacement as presented in the draft 2024 budget; and
5. THAT Council authorizes staff to utilize debt financing where necessary to affect the procurement of apparatus.

## FINANCIAL IMPACT

### Funding Fleet Needs

Funding options considered needed to be achievable and sustainable, while also respecting the financial impacts on the area population and businesses recognizing minimal or no outside funding sources. This SDR is not only looking at what has to be done in the next few years to meet Community needs, but also plans for the next cycling of the fleet in 20-25 years time and how to best build capacity to meet future demands.

The reasonable levy increases needed to achieve either scenario is an approximately one percent (1%) increase annually for five (5) years, and then holding that rate. This funding was introduced as capital project Fire Master Plan Implementation – Fleet Replacement in the draft 2024 budget. The percentage expression is based on current property valuations and may vary, however the required funding amount from the tax levy is as described.

After modelling numerous scenarios involving both deployment options, it was determined that the required purchases could not be reasonably accomplished as a fully funded model. Blended options were explored for both involving a mix of financing and purchases, and for both deployment options this was found to be possible within the parameters of the capital request. Spreadsheets with detailed financial information are attached.

Methodology included a 10%/year inflation factor at time of purchase contract. Funding through Infrastructure Ontario rates of 4.88% on five (5) years and 4.89% on ten (10) years were used. Based on the capital request amounts, some purchase years may have included a loan, outright purchase, or both. Where possible, purchases were factored in to reduce debt payments. However, the interest rates used for this modelling are considered high when compared to historical rates. It is also important to note that despite this, current interest rates are below or comparable to inflation rates. These estimates and figures are considered to be in the high range of the probable scenario.

Should rates, terms, and funding programs improve for fleet purchases, there may be opportunities to decrease payments or acquisition costs. Due to the multi-year staggered nature of apparatus purchasing, there may also be opportunities for short-term in-house financing to reduce loan lengths and/or amounts, or eliminate a loan.

This funding model and calculations project the highest investment that may be necessary to accomplish the fleet deployment should economic pressures not ease and no other funding options become available.

Highlights and key figures of both deployment options are illustrated below:

**Fleet Funding Comparison (Single Cycle)**

	<b>Fire Master Plan Model</b>	<b>Mini and Rescue Pumper Model</b>	<b>Difference</b>
Asset Valuation	\$5,884,000	\$7,179,000	+\$1,295,000
Financing Required	\$617,205	\$1,495,493	+\$878,288
Total Acquisition	\$6,501,205	\$8,674,492	+\$2,173,287
Last Pumper Acquired	2028	2030	+2
Last Loan Payment Year	2034	2039	+5
Loans Required	5	3	-2
Next Fleet Cycle Year (Ordered a Year in Advance)	2043	2049	+6
Debt Free Years at Next Cycle	9	10	+1
Reserves at Next Cycle Order Year	\$8,023,795	\$10,650,507	+\$2,626,712

Included in this SDR is a financial sustainability outlook. A 20-year cycle accounts for only one fleet rotation/batch, but does not account for whether the Municipality can adequately fund the next round of apparatus purchases in the future. A supporting worksheet is included with a 25-year projection. Note that the Chief vehicle has an anticipated service life of 10 years and this projection included future replacements in 2037 and 2047.

Sustainability highlights are illustrated below:

**25 Year Sustainability Outlook**

	<b>Fire Master Plan Model</b>	<b>Mini and Rescue Pumper Model</b>
First Batch Renewal	2043 - 2050	2049 - 2050
Remaining Reserves After Purchase	(\$1,152,205)	\$818,507





25 Year Sustainability Outlook

Fire Master Plan Model

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Carried		\$ 69,615	\$ 314,230	\$ 409,645	\$ 246,860	\$ 30,617	\$ 273,650	\$ 286,283	\$ 223,805	\$ 311,727	\$ 243,907	\$ 823,795	\$ 1,623,795	\$ 2,423,795	\$ 3,223,795	\$ 4,023,795	\$ 4,823,795	\$ 5,623,795	\$ 6,423,795	\$ 7,223,795
Levy	\$ 175,000	\$ 350,000	\$ 525,000	\$ 675,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000
Available	\$ 175,000	\$ 419,615	\$ 839,230	\$ 1,084,645	\$ 1,046,860	\$ 830,617	\$ 1,073,650	\$ 1,086,283	\$ 1,023,805	\$ 1,111,727	\$ 1,043,907	\$ 1,623,795	\$ 2,423,795	\$ 3,223,795	\$ 4,023,795	\$ 4,823,795	\$ 5,623,795	\$ 6,423,795	\$ 7,223,795	\$ 8,023,795
2024 Loan 10Yr	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385	\$ 105,385									
2025 Loan 10Yr		\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112	\$ 220,112									
2026 Loan 5Yr		\$ 104,089	\$ 104,089	\$ 104,089	\$ 104,089	\$ 104,089	\$ 104,089													
2027 Purchase			\$ 408,200																	
2028 Purchase				\$ 540,800																
2028 Loan 5Yr				\$ 45,857	\$ 45,857	\$ 45,857	\$ 45,857	\$ 45,857	\$ 45,857											
2029 Loan 5Yr				\$ 81,524	\$ 81,524	\$ 81,524	\$ 81,524	\$ 81,524	\$ 81,524	\$ 81,524										
2030 Purchase					\$ 230,400															
2031 Purchase						\$ 409,600														
2032 Purchase							\$ 259,200													
2033 Purchase								\$ 460,800												
Payments	\$ 105,385	\$ 105,385	\$ 429,585	\$ 837,785	\$ 1,016,243	\$ 556,967	\$ 787,367	\$ 862,478	\$ 712,078	\$ 867,821	\$ 220,112	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Remainder	\$ 69,615	\$ 314,230	\$ 409,645	\$ 246,860	\$ 30,617	\$ 273,650	\$ 286,283	\$ 223,805	\$ 311,727	\$ 243,907	\$ 823,795	\$ 1,623,795	\$ 2,423,795	\$ 3,223,795	\$ 4,023,795	\$ 4,823,795	\$ 5,623,795	\$ 6,423,795	\$ 7,223,795	\$ 8,023,795

Mini & Rescue Pumper Model

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	
Carried		\$ 67,324	\$ 118,225	\$ 344,126	\$ 616,026	\$ 1,116,927	\$ 83,695	\$ 150,579	\$ 217,463	\$ 284,348	\$ 351,232	\$ 574,925	\$ 990,041	\$ 1,405,158	\$ 1,820,274	\$ 2,235,391	\$ 2,650,507	\$ 3,450,507	\$ 4,250,507	\$ 5,050,507	\$ 5,850,507	\$ 6,650,507	\$ 7,450,507	\$ 8,250,507	\$ 9,050,507	\$ 9,850,507	
Levy	\$ 175,000	\$ 350,000	\$ 525,000	\$ 675,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	
Available	\$ 175,000	\$ 417,324	\$ 643,225	\$ 1,019,126	\$ 1,416,026	\$ 1,916,927	\$ 883,695	\$ 950,579	\$ 1,017,463	\$ 1,084,348	\$ 1,151,232	\$ 1,374,925	\$ 1,790,041	\$ 2,205,158	\$ 2,620,274	\$ 3,035,391	\$ 3,450,507	\$ 4,250,507	\$ 5,050,507	\$ 5,850,507	\$ 6,650,507	\$ 7,450,507	\$ 8,250,507	\$ 9,050,507	\$ 9,850,507	\$ 10,650,507	
2024 Loan 10Yr	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676	\$ 107,676											
2027 Purchase			\$ 104,000																								
2029 Purchase						\$ 1,485,000																					
2029 Loan 5Yr						\$ 49,133	\$ 49,133	\$ 49,133	\$ 49,133	\$ 49,133																	
2030 Loan 10Yr							\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884											
Payments	\$ 107,676	\$ 299,099	\$ 299,099	\$ 403,099	\$ 299,099	\$ 1,833,232	\$ 733,116	\$ 733,116	\$ 733,116	\$ 733,116	\$ 576,307	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ 384,884	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Remainder	\$ 67,324	\$ 118,225	\$ 344,126	\$ 616,026	\$ 1,116,927	\$ 83,695	\$ 150,579	\$ 217,463	\$ 284,348	\$ 351,232	\$ 574,925	\$ 990,041	\$ 1,405,158	\$ 1,820,274	\$ 2,235,391	\$ 2,650,507	\$ 3,450,507	\$ 4,250,507	\$ 5,050,507	\$ 5,850,507	\$ 6,650,507	\$ 7,450,507	\$ 8,250,507	\$ 9,050,507	\$ 9,850,507	\$ 10,650,507	

# 25 Year Sustainability Outlook

## Fire Master Plan Model

Year	2044	2045	2046	2047	2048	2049	2050
Carried	\$ 7,192,595	\$ 4,426,595	\$ 255,795	-\$ 192,205	-\$ 397,005	-\$ 1,403,405	-\$ 1,448,205
Levy	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000
Available	\$ 7,992,595	\$ 5,226,595	\$ 1,055,795	\$ 607,795	\$ 402,995	-\$ 603,405	-\$ 648,205
2024 Loan 10Yr							
2025 Loan 10Yr							
2026 Loan 5Yr							
2027 Purchase							
2028 Purchase							
2028 Loan 5Yr							
2029 Loan 5Yr							
2030 Purchase							
2031 Purchase							
2032 Purchase							
2033 Purchase							
Next Replacement	\$ 3,566,000	\$ 4,970,800	\$ 1,248,000	\$ 1,004,800	\$ 1,806,400	\$ 844,800	\$ 504,000
Payments	\$ 3,566,000	\$ 4,970,800	\$ 1,248,000	\$ 1,004,800	\$ 1,806,400	\$ 844,800	\$ 504,000
Remainder	\$ 4,426,595	\$ 255,795	-\$ 192,205	-\$ 397,005	-\$ 1,403,405	-\$ 1,448,205	-\$ 1,152,205

## Mini & Rescue Pumper Model

Year	2044	2045	2046	2047	2048	2049	2050
Carried	\$ 5,674,507	\$ 6,474,507	\$ 7,274,507	\$ 8,074,507	\$ 8,618,507	\$ 9,418,507	\$ 6,546,507
Levy	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000
Available	\$ 6,474,507	\$ 7,274,507	\$ 8,074,507	\$ 8,874,507	\$ 9,418,507	\$ 10,218,507	\$ 7,346,507
2024 Loan 10Yr							
2025 Loan 10Yr							
2027 Purchase							
2029 Purchase							
2029 Loan 5Yr							
2030 Loan 10Yr							
Next Replacement				\$ 256,000		\$ 3,672,000	\$ 6,528,000
Payments	\$ -	\$ -	\$ -	\$ 256,000	\$ -	\$ 3,672,000	\$ 6,528,000
Remainder	\$ 6,474,507	\$ 7,274,507	\$ 8,074,507	\$ 8,618,507	\$ 9,418,507	\$ 6,546,507	\$ 818,507