

Fire Services – Response Protocols Related to Motor Vehicle Collisions

Purpose

This report describes the Greater Sudbury Fire Services response protocols related to Motor Vehicle Collisions (MVC's) as requested by Emergency Services Committee Chair, Councilor Montpellier, at the June 5, 2019 Emergency Services Committee meeting. The type of response to vehicle accidents varies based on the known or unknown information received at the 911 communications centre by way of direct contact from those involved or by third party observers to the accident. Since 2015, three specific and unique types of response protocols have been in place for MVC's across Greater Sudbury.

Executive Summary

In 2015, Greater Sudbury Fire Services launched a process for updating and restructuring the deployment model for all emergency incidents including Motor Vehicle Collisions (MVC's). This model uses a comprehensive set of rules which govern the recommended selection of the initial fire apparatus. The units in this model respond to an emergency incident once a call for service is received by the 911 communications centre. This model replaces a system, which was established in 2011 and went unchanged until September of 2015. Utilizing evidence-based knowledge and supporting historical data, MVC's were classified into three categories of response which can change depending on the severity of the accident, the type of vehicle(s) involved, or the total number of vehicles involved. In 2017 and again in 2018, further revisions of these three MVC response types were undertaken in order to apply changes which would result in efficiencies during dispatch and a more effective use of fire resources.

Analysis

MVC incidents are reported via 911 callers who are either those involved in the accident or who are only witness to the situation. Those who do drive by often do not stop and only report what they observed while moving past the accident location. This type of information provides a lack of detail in terms of specific needs related to emergency response and therefore a broader deployment may occur which sends multiple resources to an unknown MVC type. In addition, any MVC in a Volunteer Firefighter response area may have multiple vehicles attending as Volunteer Firefighters respond from home or work to the Fire Station at staggered times and may take several apparatus to attend to the accident. Volunteer Firefighters do not arrive at the station at the same time, do not know the location or number of other firefighters attending and only wait a short amount of time for other responders before leaving the Fire Station.

In every MVC response, the role of Greater Sudbury Fire Services is to ensure the safety of the public and that of all first responders who attend at the incident scene. Providing resources to block oncoming traffic while maintaining high visibility using Fire Services apparatus ensures all responders have a safe place to work and persons involved are not exposed to additional risks on busy roadways. The many

environmentally harmful vehicle fluids potentially spilled on the scene, the dangers of both deployed and non-deployed airbags, and the addition of hybrid or all electric vehicles adding numerous high voltage hazards to MVC incidents are mitigated as Fire Services trains for these situations. Firefighters carry the proper tools and have the resources to address these and other situations which may arise and potentially cause further harm to either persons involved or the responders on scene. Finally, Fire Services may assist Paramedics with their treatment of persons involved, perform auto-extrication to remove persons trapped, assist Police Services, and ensure the area is safe and accessible for tow and recovery operations.

2015-2016 MVC Response Types

Beginning in September of 2015, the updated response types for MVC's were the following:

- 1) No Injuries/Injuries – This type of response sent the one closest Fire Services engine to the emergency. Only one pumper was dispatched to this type of incident; however, in a volunteer response area, additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident.
- 2) Auto Extrication – This type of response sent the closest two Fire Services engines in all response areas except for the Val Caron/Val Therese/Hanmer area which had a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to number of volunteer firefighters who attend the incident.
- 3) Multi-Vehicle/Commercial/Rollover – This type of response sent the closest two Fire Services engines and the closest one support apparatus in all response areas except for the Val Caron/Val Therese/Hanmer area which had a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident. Further, if this type of response occurred in a volunteer response area, it triggered the Optimized Tiered Response (OTR). OTR is the dispatch of the closest career engine to the incident in order to provide a guaranteed response.

2016 Fire Services MVC Response	
697	No Injuries/Injuries and Multi-Vehicle/Commercial/Rollover
25	Auto Extrication
722	Total MVC Responses

2017 MVC Response Types

In January of 2017, one additional response type was added in order to capture the updated Greater Sudbury Police Service Collision Reporting Centre (CRC) incidents. CRC incidents are MVC's which do not have a Police Cruiser attending and affected parties are directed to the CRC located at the Lionel

Lalonde Centre in Azilda. CRC incidents are often known at the time of dispatch due to information the 911 call taker is able to obtain from the caller. In 2017, only incidents without injuries or property damage could qualify for CRC status.

- 1) CRC – This type of response was selected when it was a known CRC incident and sent the one closest Fire Services engine to the emergency. Only one pumper was dispatched to this type of incident; however, in a volunteer response area, additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident.
- 2) No Injuries/Injuries – This type of response sent the one closest Fire Services engine to the emergency. Only one pumper was dispatched to this type of incident; however, in a volunteer response area, additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident.
- 3) Auto Extrication – This type of response sent the closest two Fire Services engines in all response areas except for the Val Caron/Val Therese/Hanmer area which had a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident.
- 4) Multi-Vehicle/Commercial/Rollover – This type of response sent the closest two Fire Services engines and the closest one support apparatus in all response areas except for the Val Caron/Val Therese/Hanmer area which had a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident. Further, if this type of response occurred in a volunteer response area, it triggered the Optimized Tiered Response. OTR is the dispatch of the closest career engine to the incident in order to provide a guaranteed response.

2017 Fire Services MVC Response	
154	Collision Reporting Centre
698	No Injuries/Injuries and Multi-Vehicle/Commercial/Rollover
35	Auto Extrication
887	Total MVC Responses

2018 MVC Response Types

In June of 2018, changes were made once more to the response types which removed the CRC type and the No Injury type from incidents which Fire Services responds and further clarified the remaining incident types in order to provide an effective response with the proper number of apparatus:

- 1) Injuries/Unknown Injuries/Hazards/EMS Attending – This type of response sends the one closest Fire Services engine to the emergency. Only one pumper is dispatched to this type of incident; however, in a volunteer response area, additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident. (Hazards are identified as unknown fluids leaking from the vehicle or the vehicle is in a location or state which is a potential danger to the occupants or others.)
- 2) Auto Extrication/Rollover – This type of response sends the closest two Fire Services engines in all response areas except for the Val Caron/Val Therese/Hanmer area which has a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident. (Rollover is more likely to lead to an extrication type event and was included in this response type to better reflect that potential.)
- 3) Multi-Vehicle (4 or more)/Commercial – This type of response sends the closest two Fire Services engines and the closest one support apparatus in all response areas except for the Val Caron/Val Therese/Hanmer area which has a special response type to send the full time staffed Engine 16, the closest one volunteer engine, and the one volunteer support apparatus from Station 16. Additional apparatus might arrive on scene due to the number of volunteer firefighters who attend the incident. Further, if this type of response occurs in a volunteer response area, it triggers the Optimized Tiered Response. OTR is the dispatch of the closest career engine to the incident in order to provide a guaranteed response. (Multi-Vehicle is now defined as 4 or more vehicles involved in a very serious collision or incident.)

2018 Fire Services MVC Response – January to June	
106	Collision Reporting Centre
483	No Injuries/Injuries and Multi-Vehicle/Commercial

2018 Fire Services MVC Response – July to December	
412	No Injuries/Injuries and Multi-Vehicle/Commercial
24	Auto Extrication/Rollover

2018 Fire Services MVC Response	
1025	Total MVC Responses

2019 Fire Services MVC Response – January to June	
321	No Injuries/Injuries and Multi-Vehicle/Commercial
16	Auto Extrication/Rollover

Projections for total 2019 approximately 680 MVC responses

Conclusion

Since 2015, the response of Fire Services to MVC's has been modified as the needs and circumstance to this type evolve and change. Three distinct and specific modifications have occurred in 2015, 2017, and 2018 which addressed targeted outcomes in order to make evidence-based changes to the MVC response types. In addition to these changes, our partners in response at Greater Sudbury Police Services (GSPS) continue to also make changes to their CRC criteria which affect the overall response to a MVC by first responders. By continuing to work with GSPS and the 911 Fire/Police Communications Centre while analyzing our year-over-year response data, Fire Services continues to evaluate our MVC response types in order to provide an effective and efficient response which will ensure the safety of the public and first responders.