



City of Richmond

Report to Committee

To: Community Safety Committee

Date: January 10, 2022

From: Jim Wishlove
Acting Fire Chief

File: 09-5140-01/2022-Vol
01

Re: **Richmond Fire-Rescue Monthly Activity Report – December 2021 And Year in Review**

Staff Recommendation

That the staff report titled “Richmond Fire-Rescue Monthly Activity Report – December 2021 and 2021 in Review”, dated January 10, 2022, from the Acting Fire Chief, be received for information.

Jim Wishlove
Acting Fire Chief
(604-303-2715)

Att. 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

Analysis

Emergency Programs

Snow Event Planning and Exercise (December 2021):

- Emergency Programs (EP) staff created and led a table-top communications and preparation exercise, partnering with the City's Corporate Communications & Marketing department.
- The discussion-based exercise with the Corporate Communication team reviewed City's communications and public information procedures during an extreme snow event.
- Emergency Programs staff are analysing the outcomes of the exercise and will develop proposals for enhanced and streamlined internal communication processes for the City during an extreme winter emergency event.

Canadian Red Cross (CRC) National Inclusive Resiliency Project Update

- Emergency Programs delivered a virtual presentation on emergency preparedness specific to seniors to the Seniors Advisory Committee in December.
- Staff delivered a presentation in collaboration with the CRC to the Richmond Community Services Advisory Committee about the Inclusive Resilience program at their monthly meeting to promote engagement for future activities and share information on preparedness.
- Emergency Programs staff will include information from the two presentations at an upcoming planned event for seniors in early 2022.

One important goal of Emergency Programs is to plan and prepare a response to major incidents in a manner where loss of life is minimized, support for critical infrastructure is available and a reduction of property damage and protection of the environment is provided for.

2021 Highlight

During 2021, Emergency Programs staff responded to several significant weather-related events including planning, managing and working with internal City departments to support the community and City staff during the summer heat dome and other heat-related events. Also in the summer, staff from the EP team were deployed to the Provincial Emergency Operations Centre (PEOC) to provide logistical and planning support for mass evacuees from wildfire events, which occur frequently in the interior of the province. In the winter, the EP team was deployed to the Fraser Valley to work in their municipal EOC to create logistics processes, support short and medium-term planning and ultimately drafted a framework for recovery for the Fraser Valley municipalities.

By reacting to these events and participating fully during deployments, the EP team brought their excellent skill sets, experience and support ability to the various agencies who needed assistance at the time. More importantly, the EP team was able to apply their learning and adaptation from these deployment experiences into a review of Richmond’s current emergency plans for potential use during an event in the City.

Training and Public Education

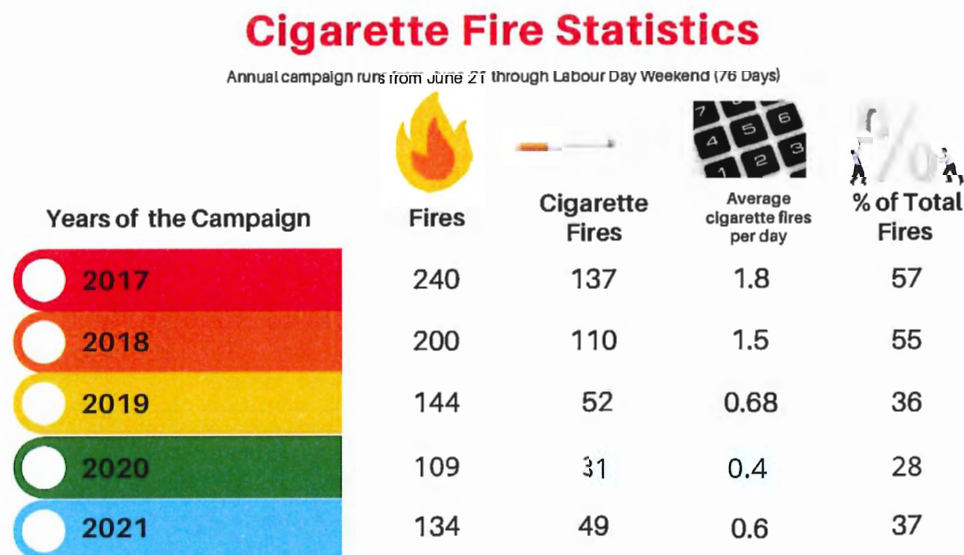
During December 2021, fire-training staff delivered educational activities programs including frontline leadership for future officers and fire & rescue training to all staff. Throughout 2021, training staff have continued to deliver high standards of training to all of RFR’s suppression staff while following COVID-19 protocol guidelines.

Public events for the month of December included the joint Richmond Cares-Richmond Gives Toy Drive held at Fire Hall No. 1. This event was held to collect new and unwrapped toys donated by the public for the Richmond Christmas fund. COVID-19 protocols were followed to keep staff and attendees safe. There were over 1,000 toys donated during the innovative, drive-through event.

Other public events, in December, included the lighting of the festive lights at Hamilton Fire Hall No.5; due to COVID-19 this event was not a public event. RFR crews decorated the Fire Hall to create a festive display for the community.

The World is Not Your Ashtray smoking campaign ran in 2021 from June to September. Figure 1 below shows that throughout 2021 there were a total of 134 fires, 49 of them caused by carelessly discarded cigarettes. While this campaign has been overall very effective, in 2021 the percentage of cigarettes fires increased by 10 percent over 2020. The cause of increase was most likely due to the extreme weather during the summer months. In 2022, RFR staff will reevaluate the public awareness campaign in order to further educate the dangers of carelessly discarded cigarettes.

Figure 1 – Cigarette Fire Statistics



Emergency Response

Richmond Fire-Rescue staff continue to respond to incidents emanating from Health Orders issued by the Province to combat the COVID-19 pandemic, as well as provide regular services to the community.

Richmond Fire-Rescue's goal is to respond to incidents in a manner where loss of life, reduction of property damage and protection of the environment is mitigated. In December 2021, there were a total of 1,001 reported incidents, representing a 51 per cent increase in incidents from December 2020 (Attachment 1).

Richmond Fire-Rescue continues to experience an increase in medical call responses due to the changes in the Provincial Health Orders and Medical Health Officer's direction. The increase in December 2021 is a result of the gradual return to normal levels of service of medical event types and responses to medical calls. RFR continues to monitor all activities to identify and create programs to respond to emerging trends.

The average time on scene for RFR crews was 35 minutes, which was higher than then what was recorded in 2020. Time on scene can vary due to the nature and severity of each incident.

	Totals (2021)	Percentage Change from December 2020	Number Change from December 2020 to 2021	5 Year Average for December
Alarm Active No Fire	209	+58	77	151
Explosion	0	0	0	0
Fire	30	-3	-1	29
Haz-Mat	8	-27	-3	10
Medical	466	+50	155	405
MVI	89	+24	17	97
Public Hazard	11	+38	3	17
Public Service	114	+78	50	83
Response Cancelled/Unfounded	70	+119	38	70
Specialized Transport	4	+100	2	4
Tech Rescue	0	0	0	0
Totals	1,001	+51	338	866

In December 2021, there were 30 reportable fires to the Office of the Fire Commissioner, representing a three per cent decrease from December 2020. The average number of fires reported in December over the last five years is 29.

Richmond Fire-Rescue's emergency fire response goal is to contain the fire to the room of origin. The room of origin standard is especially important in terms of fire loss and damage, which increases significantly once the fire extends beyond the room of origin.

Fire damage and property losses during December 2021 are estimated at \$193,090. This total includes \$145,100 for building/asset loss and \$47,990 for content loss. The total building/asset and content value at risk was estimated to be \$206,583,963 and the total value preserved from damage was \$206,390,873. These numbers translate to 99 per cent of value protected (Table 2); this is the same as the value observed in 2020.

Incident Type Breakdown	Incident Volume	Estimated Building/Asset Value (\$)	Estimated Building/Asset Loss (\$)	Estimated Content Value (\$)	Estimated Content Loss (\$)	Estimated Total Value Preserved (\$)
Residential: Single family	2	63,200	-	40,000	-	103,200
Multi family	11	155,559,803	102,000	244,900	34,430	155,668,273
Commercial/Industrial	6	28,851,000	3,000	5,814,060	12,060	34,650,000
Outdoor	5	15,700,000	-	15,000	1,500	15,713,500
Vehicle/Vessel	6	281,000	40,100	15,000	-	255,900
Totals*	30	200,455,003	145,100	6,128,960	47,990	206,390,873

* The dollar losses shown in this table are preliminary estimates. They are derived from RFR's record management system and are subject to change due to delays in reporting and confirmation of actual losses from private insurance agencies (as available).

Significant Events

Fire crews minimized harm and limited fires to the place of origin in these notable December 2021 incidents:

- December 14, 2021 – Vehicle Fire on Blundell Road.** Crews responded to a vehicle engine fire in an underground parkade. First-arriving crews extinguished the fire quickly while other arriving units protected the exposures of the building from further fire extension. The fire caused damage to two vehicles and the exterior siding of the building. RFR crews sampled the air quality inside the building to ensure the air quality was safe for the building residents to return to their units. There were no injuries to the public or RFR personnel. A Fire Investigator attended the scene.
- December 16, 2021 – Outdoor Fire on Grauer Road.** RFR crews responded to a fire at the Templeton train station. On arrival crews could smell a heated electrical odour. The maintenance supervisor was on scene communicating with the Transit head office to shut down the power to the line. The supervisor confirmed that both the train and north track had been de-energized so crews and maintenance workers could investigate the source of the odour. They found no smoke or fire but did find melted cables. RFR crews checked over the areas with Thermal Imaging Cameras with no sign of heat present at that time. A Fire Investigator attended the scene. There were no injuries to any Transit employees, the public or RFR staff.

- **December 19, 2021 – Residential Fire on Park Road.** Crews responded to a car fire in a parkade of Park Road. Crews evacuated the building due to the toxic smoke from the fire. The fire was quickly attacked and extinguished. Due to the rapid response of the crew, the fire affected only one vehicle. Crews set up ventilation and checked the adjoining buildings for any smoke. Once crews confirmed the air quality was acceptable the residents were allowed back into their suites. Richmond RCMP attended the scene due to the suspicious nature of the fire. A Fire Investigator attended the scene and there were no injuries to the public or RFR staff.
- **December 24, 2021 – Residential Fire on Barga Drive.** RFR crews attended a structure fire at a residence. On arrival, first-in crews found an exterior garbage container on fire with flames extending onto the house and soffits. Crews extinguished the fire with limited damage to the house. The rapid response and effective fire attack allowed the residents to remain in their home that night with no need to evacuate. A Fire Investigator attended the scene and there were no injuries to the public or RFR staff.
- **December 25, 2021 – Commercial Fire on Parker Place.** Crews were dispatched to a commercial kitchen fire. Arriving crews found that the restaurant had experienced a sizeable kitchen fire, which was now out. Crews investigated the scene and found a charred stove and pots. The stove deluge system had not activated but a nearby sprinkler head had extinguished the fire with a considerable amount of water left in the area. Crews secured the sprinkler system to slow the overhead water flow. The business was directed to have their sprinkler system fixed and a Fire Watch was assigned to the property. A Fire Investigator attended the scene and conducted the investigation while coordinating with public health authorities. There were no injuries to the public or RFR staff.
- **December 27, 2021 – Residential fire on Smith Street.** RFR crews responded to reports of a residential fire. On arrival, crews entered the property and extinguished a fire on the second floor of a single family home. There was a moderate amount of gray smoke coming from the roof vents of the structure and crews proceeded to ventilate the area. Crews encountered a large amount of clutter in the house but no residents was found during a search of the house. The RCMP and a Fire Investigator attended the scene. A BC Hydro representative arrived to disconnected power to the structure. There were no injuries to the public or RFR staff.
- **December 30, 2021 – Commercial Fire on River Road.** RFR crews responded and found a burning backpack in a stairwell of a commercial property. The sprinkler system had successfully extinguished the fire but the stairwell was filled with smoke. Crews turned off the sprinkler system and ventilated the area. Due to the suspicious nature of the fire, the RCMP attended and a Fire Watch was placed on the location. A Fire Investigator attended the scene. There were no injuries to the public or RFR staff.
- **December 2021 – Public Service Flooding Incidents.** Incidents relating to water issues including flooding and burst water pipes were exceptionally high in December, 2021. This was associated with extended freezing temperatures, and high volumes of rain during the atmospheric river issues. In December 2021 there were 18 flooding incidents to which RFR responded compared to two in December 2020, representing an 800 percent increase from December 2020.

Financial Impact

None.

Conclusion

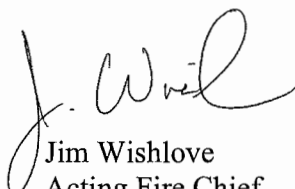
Throughout 2021, due to changes in the Provincial Health Orders and Medical Health Officer's direction, RFR experienced a gradual return back to normalized levels of service for medical event types, and responses to medical calls. This includes regular and incremental increases to incident volumes that are a return to the normal experience in the years prior to the COVID pandemic.

During 2021, another driver of the change in volumes for incidents was the significant weather-related events. RFR crews deployed twice into the interior of the Province to assist the province and several municipalities during the wildfire events. In support of the wildfires RFR deployed the Structure Protection Unit which was used by the Provincial firefighting services over the course of the summer. Additionally, RFR crews worked with internal City partners during the recent flooding and severe atmospheric river events during the close of 2021.

In 2021 RFR hired a cohort of 29 new firefighters. A portion of this cohort is a continuation of Council approved funding for 36 additional firefighters. The Recruitment Cycle was adopted by Council in 2018, and the strategy to hire 36 additional firefighters over the following three years was to ensure RFR is able to service the needs of a growing community and keep Richmond safe. This intake completes the hiring of the new fire fighters approved by Council as part of the Safe Community Program, as well as replace fire fighters who have retired from 2019-2021 during the temporary COVID hiring freeze.

The additional staff are now deployed onto firefighting and rescue apparatus, including an additional rescue truck at Steveston Fire Hall No. 2, and an additional firefighting engine at Cambie Fire Hall No. 3. The addition of these two fully staffed response units into the deployment model provides RFR the ability to manage multiple calls for service simultaneously, while maintaining the ability to have in-depth coverage for other emergency needs.

Richmond Fire-Rescue has not experienced any negative impacts to emergency response and will continue to monitor activities to identify and create programs to respond to emerging trends. RFR staff remain ready to continue to work through and adapt to the ever-changing pandemic situation.



Jim Wishlove
Acting Fire Chief
(604-303-2715)

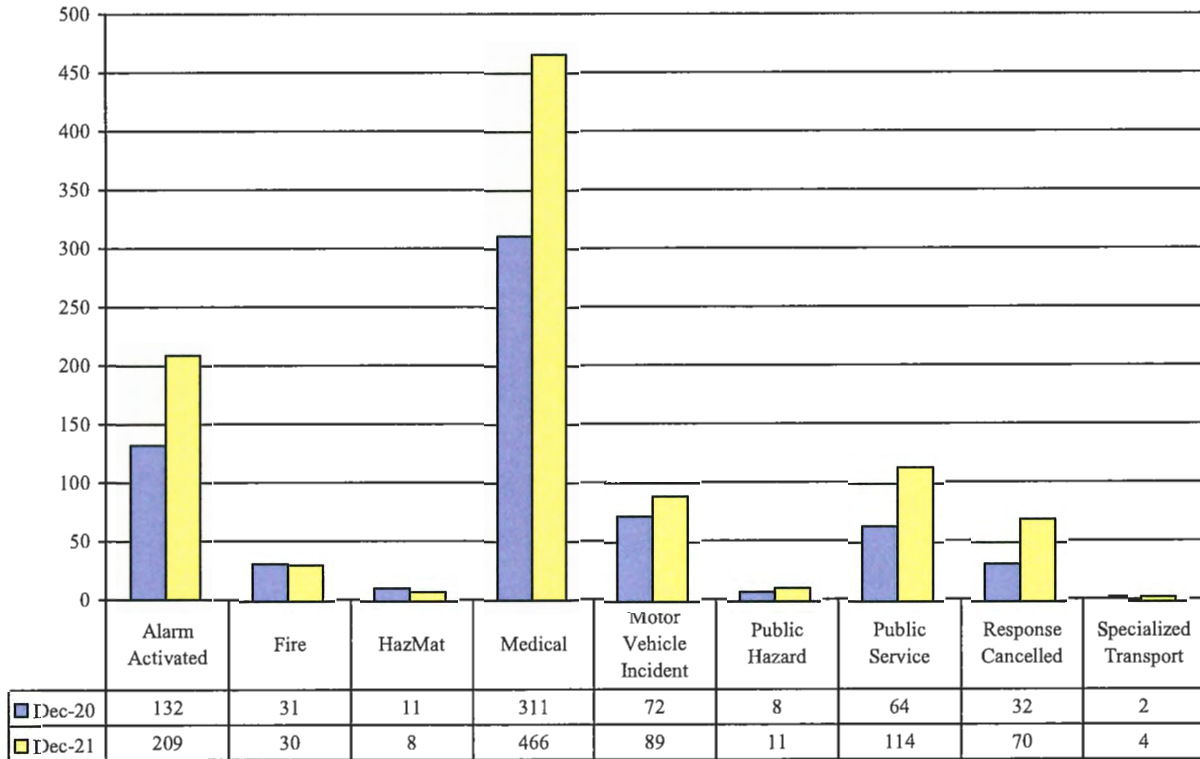
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Att. 1: Suppression Activity, including location of December's Fire, Medical and MVIs

Incident Volumes

The following chart provides a month to month comparison regarding incidents occurring in December 2021 and 2020. In December 2021, there were a total of 1,001 incidents, compared to 663 in December 2020. This represents an increase of 51 per cent.

Table 4a: December 2020 & December 2021 Incident Volumes



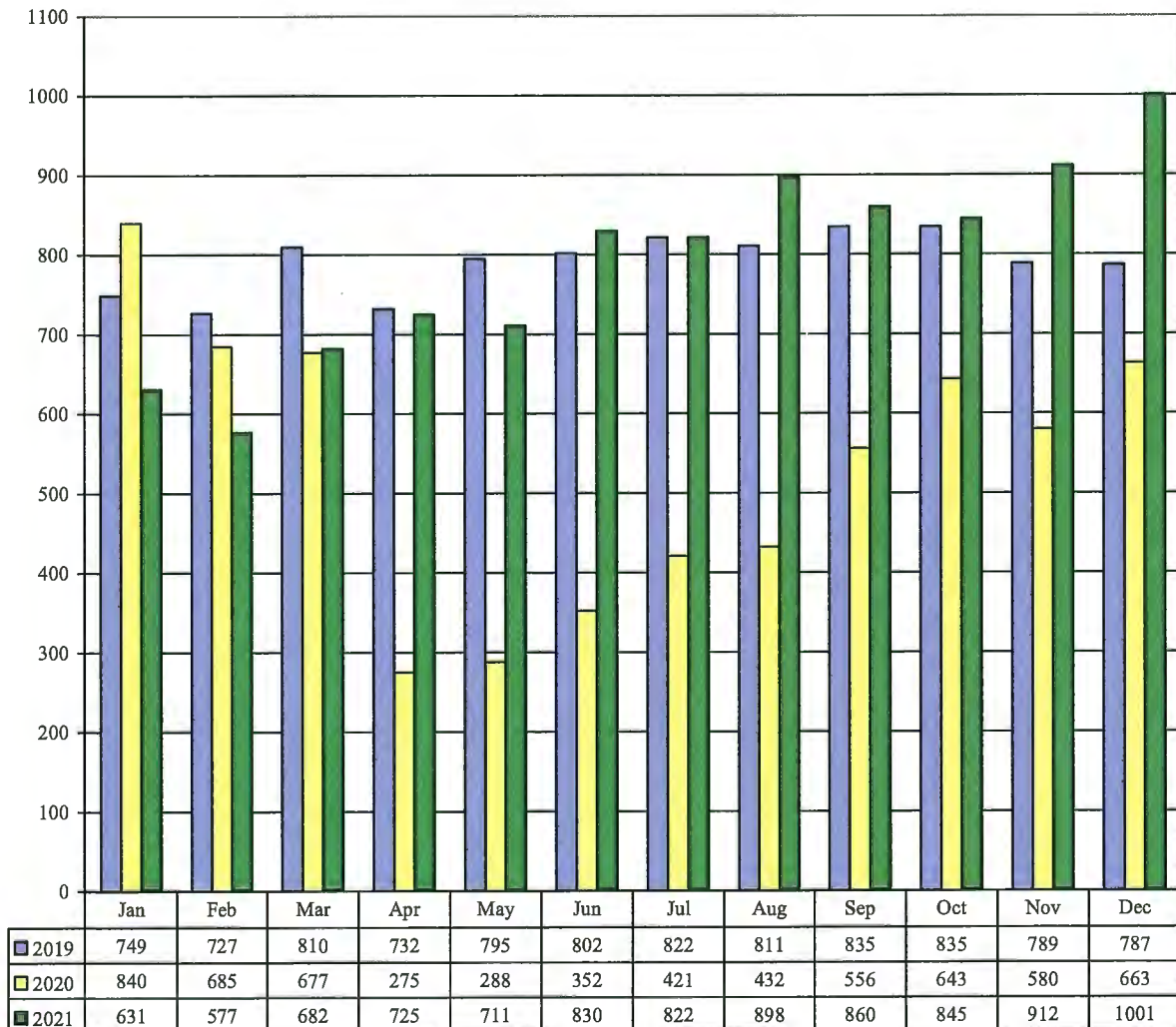
Incident Type Legend:
HazMat: includes fuel or vapour; spills, leaks, or containment
Medical: includes: cardiac arrest, emergency response, home or industrial accidents
Public Hazard: includes: aircraft emergency, bomb removal standby, object removal, or power lines down
Public Service: includes: assisting public, ambulance or police, locked in/out, special events, trapped in elevator, water removal

The following chart provides the total incident volumes on a month to month comparison occurring in 2019, 2020 and 2021 to show the pre COVID incident call numbers.

The impacts of the pandemic on call volumes during 2020 resulted in RFR Management pivoting staff to learning, development and preparedness activities. In 2021, due to further changes in the Provincial Health Orders and Medical Health Officer’s direction, there has been a return back to normal levels of service for medical event types and responses to medical calls.

In 2020 there was a drop in calls due to the due to the changes in the Provincial Health Orders and Medical Health Officer’s direction in response to the COVID pandemic. The increase in 2021 are as a result of the gradual return to normal levels of service of event types and responses to medical calls.

Table 4b: 2019, 2020 & 2021 Total Incident Volumes



First Responder Totals

Medical first responder incidents comprised 50 per cent of the total emergency responses for RFR during the month of December 2021. A detailed breakdown of the medical incidents for December 2020 and 2021 is set out in the following table by sub-type. There were a total of 466 medical incidents in December 2021 compared to 311 in December 2020, an increase of 47 per cent. RFR continue to see incident numbers returning to normal levels due to gradual changes in the Provincial Medical Health Officer orders in response to the pandemic.

Table 5a: December 2020 & December 2021 Medical Calls by Type

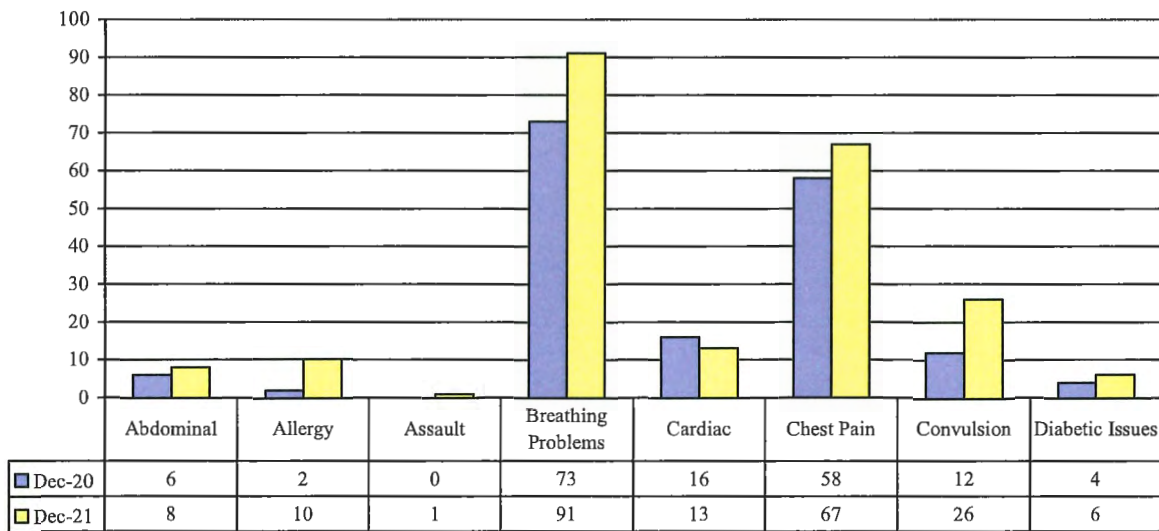
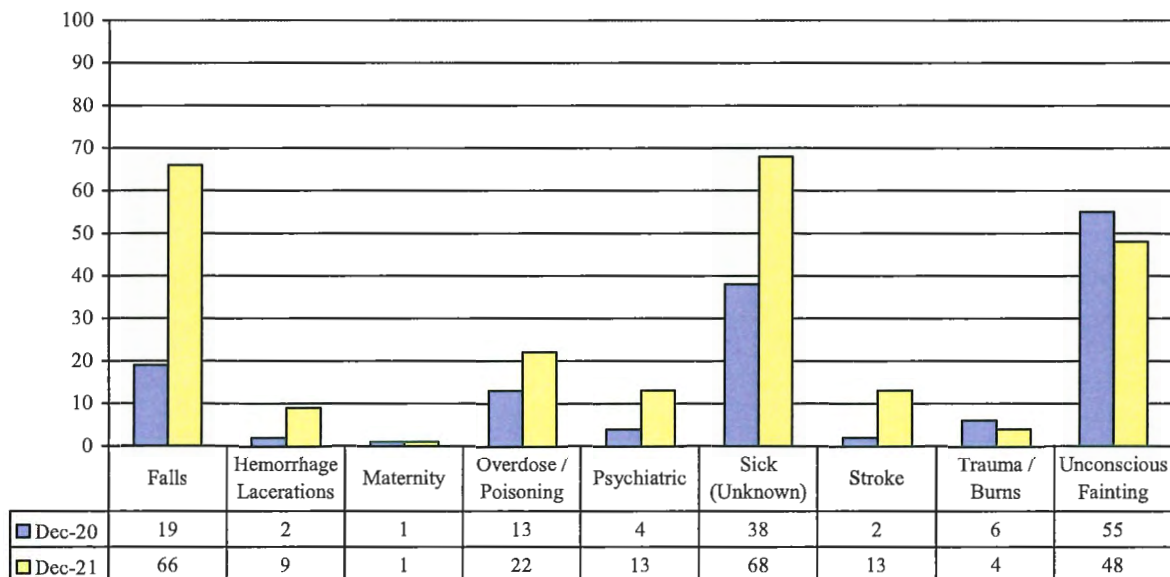


Table 5b: December 2020 & December 2021 Medical Calls by Type



Fire Investigations

The fire investigation statistics for December 2021 are listed below:

Table 6: Total Fire Investigation Statistics – December 2021			
	Suspicious	Accidental	Undetermined
Residential - Single-family	-	2	-
Residential - Multi-family	-	10	1
Commercial/Industrial	1	5	-
Outdoor	2	2	1
Vehicle	1	2	3
Totals	4	21	5

Richmond Fire-Rescue investigators report all suspicious fires to the RCMP, while working alongside RCMP staff to address potential risks to the community.

Hazardous Materials

Table 7: Hazardous Materials Incidents By Type – December 2021	
	Details
Flammable / Combustible Liquids	1
Natural Gas / Propane Leaks (small)	6
Unclassified	1
Totals	8

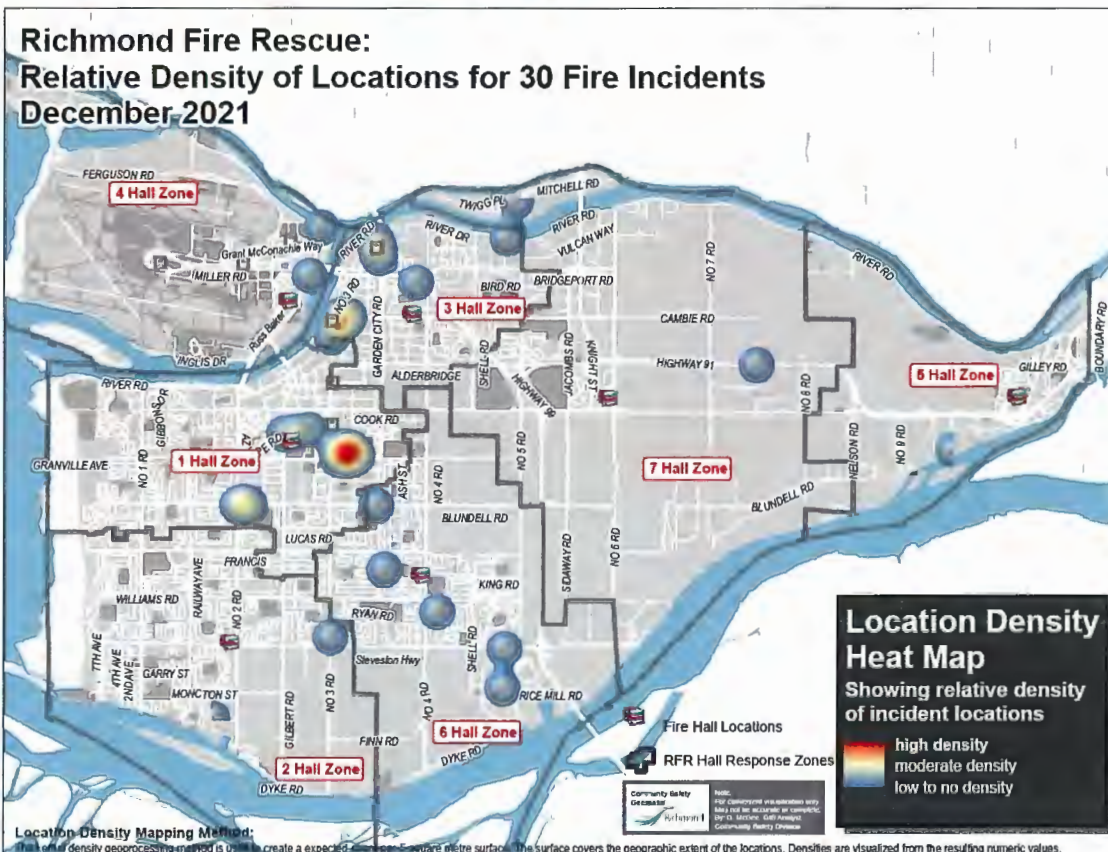
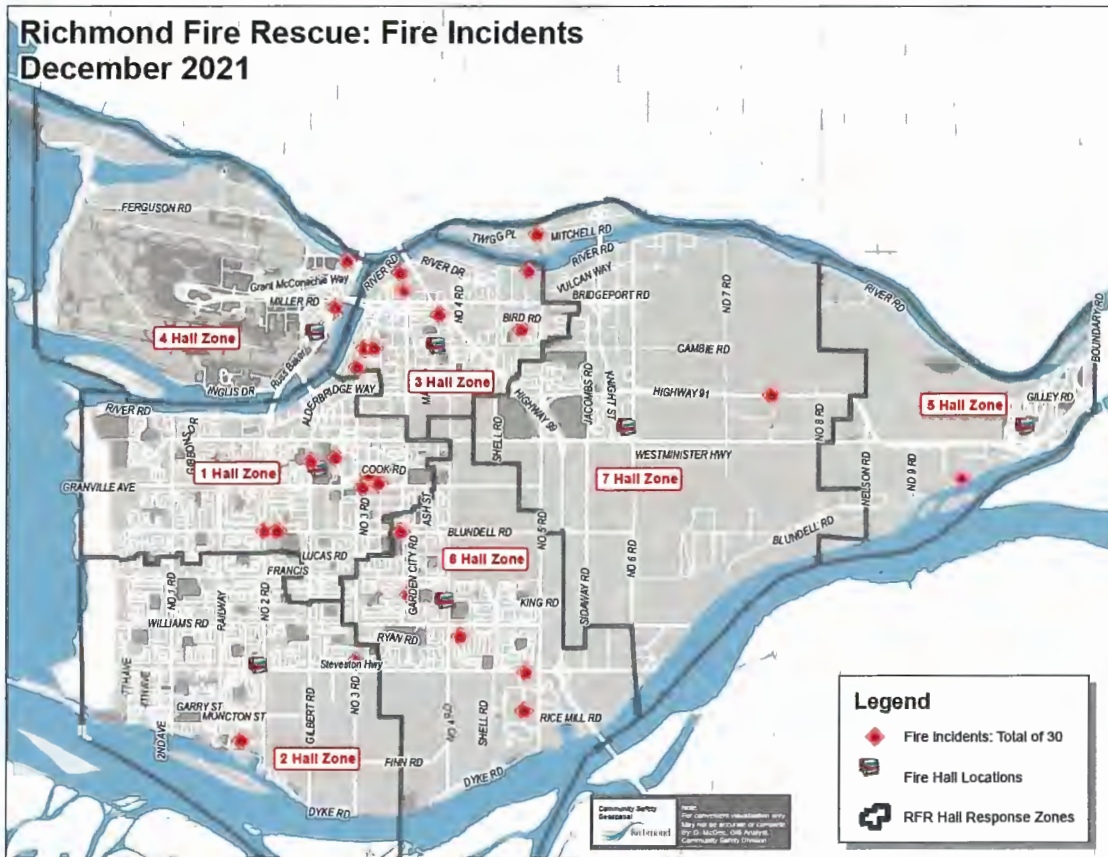
Freedom of Information Requests

In 2021, Richmond Fire received 85 Freedom of Information requests from the public. This is a decrease over the requests received in 2020.

In 2021 RFR Freedom of Information request accounted for approximately 48 per cent of all requests received by the City.

Table 8: Freedom Of Information Requests for 2020 & 2021	
2020	2021
94	85

Figure 1: Location of reportable fires attended in December 2021 (total 30)



Location Density Mapping Method:
This density geospatial method is used to create an expected density surface over a geographic area. The surface covers the geographic extent of the locations. Densities are visualized from the resulting numeric values.

Figure 2: Location of medical incidents in December 2021 (total 466)

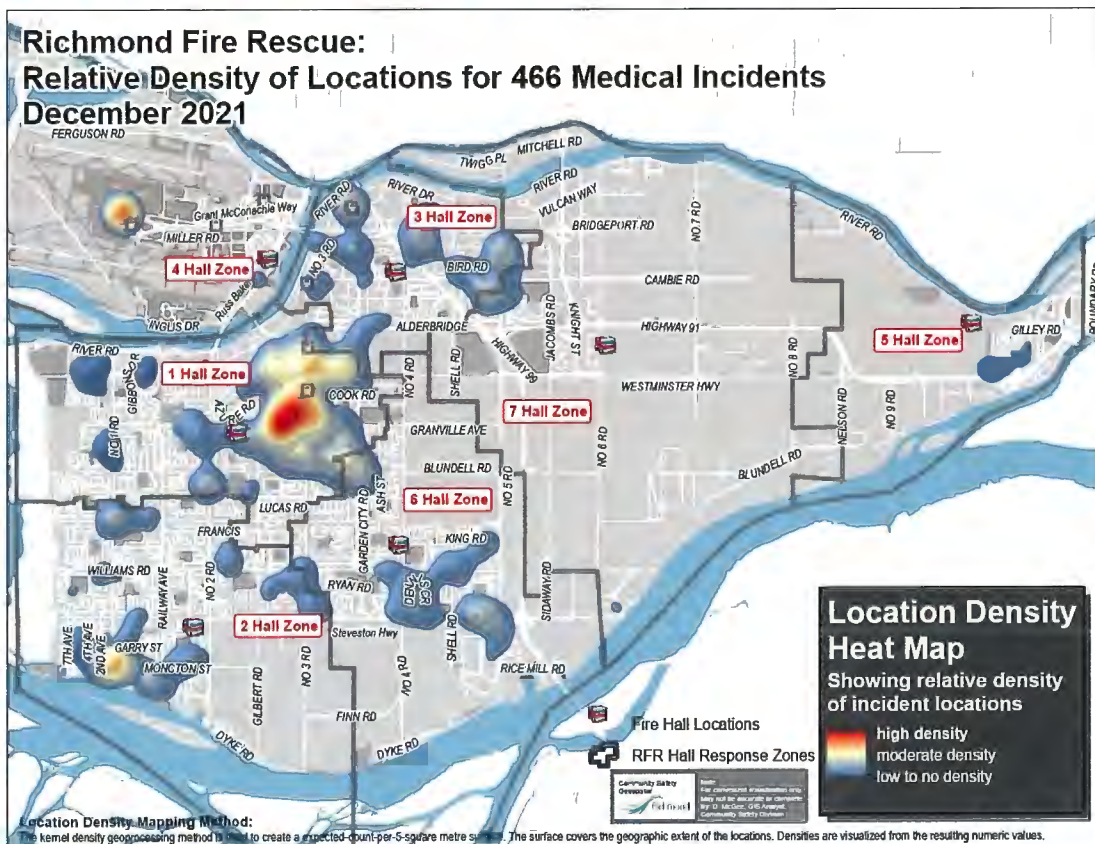
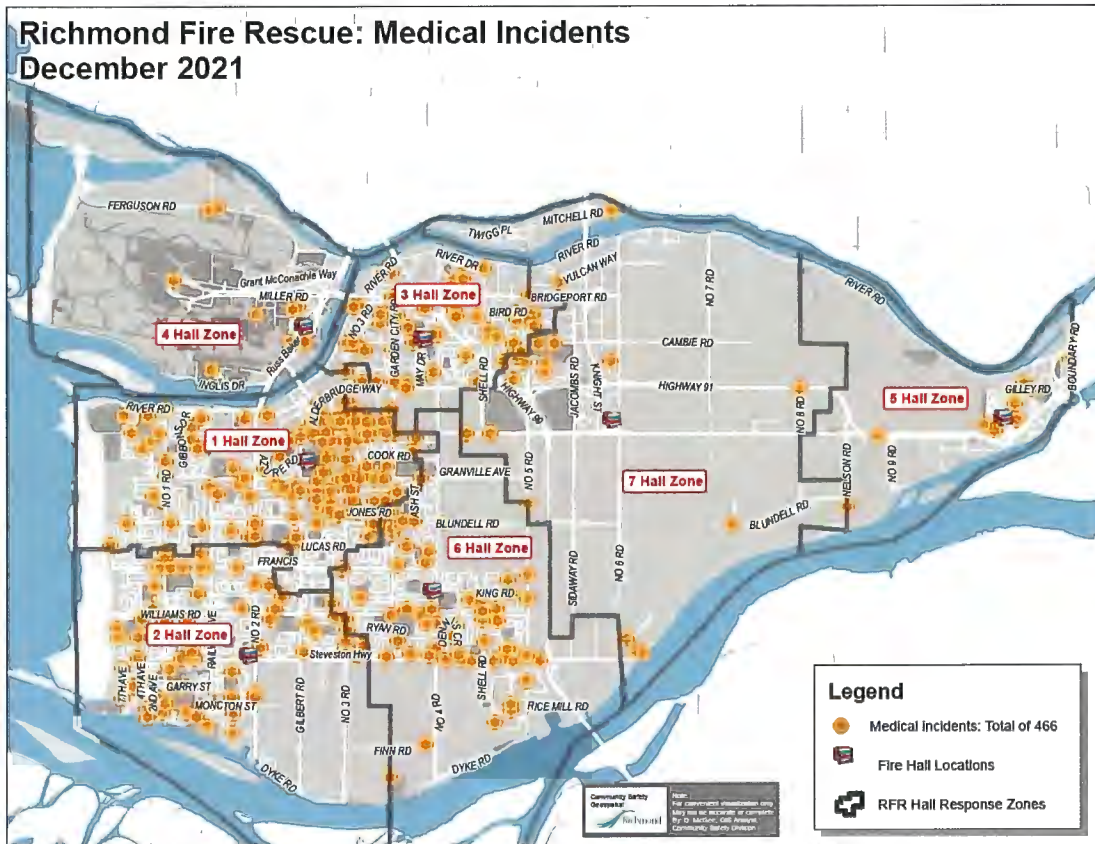


Figure 3: Location of MVI Incidents in December 2021 (total 89)

