Fire Services

2016 Annual Report

October 2016

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EXECUTIVE SUMMARY

St. Albert Fire Services (SAFS) has had a busy and productive twelve months since issuing the first department annual report last October. The department has been pursuing two accreditation processes, one required by the ambulance contract and the second in pursuit of continuous improvement. The latter accreditation is sponsored by Centre for Public Safety Excellence. SAFS was recommended to go before the Commission on Fire Accreditation on August 17, 2016 and was granted Accreditation. St. Albert Fire Services is just the seventh Canadian city to achieve this accreditation along with cities of Calgary, Edmonton, Red Deer, Regina, Ottawa and Guelph. In total there are 234 accredited fire departments world wide. The department's second accreditation project is with Accreditation Canada and the peer review for this accreditation will occur the first week of October, 2016. Once completed, SAFS will be the first Alberta city to have achieved both accreditations. Together these two accreditation processes will help ensure continuous quality improvement and the enhancement of service delivery to our community.

SAFS was called upon to assist our neighbours to the north, and St. Albert firefighters spent 24 days in May, providing response to the wild fire that impacted Fort McMurray. SAFS contributed over of 8000 staff hours battling the fire over this period of time and deployed two fire apparatus. In addition over 1000 staff hours were provided to support the emergency operation response from other city departments including Utilities, Public Works, Finance, Corporate Communications, Community and Social Development, Innovation and Technology Services, Recreation and Parks, Human Resources and Fire Services. The city's Emergency Operation Centre was also activated with a limited staffing model to assist with the deployment of staff and resources during the course of the Fort McMurray fires. Expenses relating to the Fort McMurray fires will be reimbursed by the province.

St. Albert also experienced a rare fire phenomenon in May with the so called "tornado fire" that occurred in the south west corner of the city near Big Lake. Fire crews were impacted by a thermal uplift created by the fire and abrupt change in wind direction and speed. These unusual fire dynamics resulted in a minor injury to a fire fighter, the first department fire injury in many years. The fire was impacting the main power line through the area and resulted in only minimal fire damage.

The SAFS will be celebrating forty years of Emergency Medical Service (EMS) to our community early in 2017. The EMS activities were first approved by City Council in 1977, two years after establishing the cities first full-time fire department. Since its inaugural year the

EMS has been delivering quality service to the residents of St. Albert and the surrounding community. In 2009 the province acquired the governance of the ground ambulance function Currently SAFS is under a long-term contract with Alberta Health Services which ends in 2019. In 2016 City Council approved an advance life support (ALS) level of service for the medical first responses (MFR) where a fire apparatus is called upon to respond when no ambulances are available or to provide more personnel on very serious medical emergencies. This level of service was defined as ALS “capable” which means the fire apparatus would respond as an ALS unit when there was at least one paramedic attached to that unit. It was felt that the department could provide a baseline for this level of service 85% of time. Currently the actual ALS MFR level of service is 100% of the time.

The fire accreditation activities mentioned earlier in the executive summary was successful in part due to the documents that were developed as part of the self-assessment process. These documents included the Self-Assessment Manual (SAM), the department’s five year Strategic Plan and the Standards of Cover (SOC) document. Together these documents, along with the Long Range Plan and the 2009 Service Level Review are excellent planning tools and a continuous improvement model for the department as it moves forward. The SOC document follows a risk based approach similar to the Long Range Plan, and together they will enable the department to meet current and long term needs of the community by providing its core services, while continually working towards the departments key strategic goals.

SYSTEM DEMAND AND COMMUNITY RISK ANALYSIS

It is important to review the Community Risk and the System Demand that impact the departments services, at least annually. The Fire Accreditation process accomplished this and has resulted in a few minor adjustments. The City's fire protection planning area has not changed and is well defined within the Municipal Development Plan. For the purpose of this risk analysis properties are classified as low, moderate, high and special hazard. In knowing the number and location of these properties by their risk classification will help organizations to identify the resources and mitigation strategies needed during an emergency. Through the Fire Accreditation process the department was better able to refine the property classification risk matrix and the revised risk matrix. Chart 1 shows the property count for each classification.

Chart #1: Risk Matrix (2016)

Hazard Type	Total Properties	Percent
Low Risk (Non-occupied detached buildings)	576	2.5%
Moderate Risk (Up to four-family residences, small businesses)	22,917	96%
High Risk (Apartments, schools, offices, mercantile, industrial)	114	0.5%
Special Risk (Hospitals, care facilities, wide and high rise)	35	0.1%

The department has also revised how response data is being analyzed. Going forward total response data will be reviewed for each of the risk and service areas (Appendix A). These include; low risk fires, moderate risk fires, high and special risk fires, low and moderate risk technical rescue, high and special risk technical rescue, hazardous material response and emergency medical calls. Within each category the dispatch time, turnout time, travel time and total response times will be monitored and analyzed. This revised approach will provide a better understanding of the department's baseline performance and assist with moving closer to industry benchmark standards. The third area assessed was the review of the department's critical tasking charts. The ability of a fire department to assemble an effective response force when confronted with the need to perform required tasks at a fire scene will demonstrate its ability to provide adequate resources to mitigate each event. Critical tasks are specific activities (tasks) that must be conducted in a timely manner by firefighters at a structure fire in

order to control the fire prior to flashover or to extinguish the fire in a timely manner. A fire department is responsible for assuring that responding emergency response crews are capable of performing all of the critical tasks in a safe, prompt and proficient manner. SAFS standard operating procedure covering critical tasks identifies the human resources (firefighters on scene) along with fire apparatus assignments for each risk and service category as noted in the previous paragraph. The gap analysis of the resulting review helped to re-affirm when mutual aid will be required. Appendix B shows the various tasking assignments and firefighter resources for each type of service that is provided by SAFS.

The fourth area of refinement was the additional information that has been added to the community risk assessment. Currently the city is divided into three fire response zones that align with the 3 fire hall locations. The adjacent fire response map graphically shows the 3 zones (fixed deployment operational model). These zones were last amended with the addition of Fire Hall 3 in 2009. The fire accreditation self-assessment helps to confirm previous findings in that the population, number of properties, road miles and the number of incidents in each zone demonstrated a fairly even distribution of the risk for the three zones. Data for the past three years (2013 – 2015) was reviewed along with the three year cumulative total. The outcome showed some interesting data when the actual response data is viewed (Charts 2 & 3).

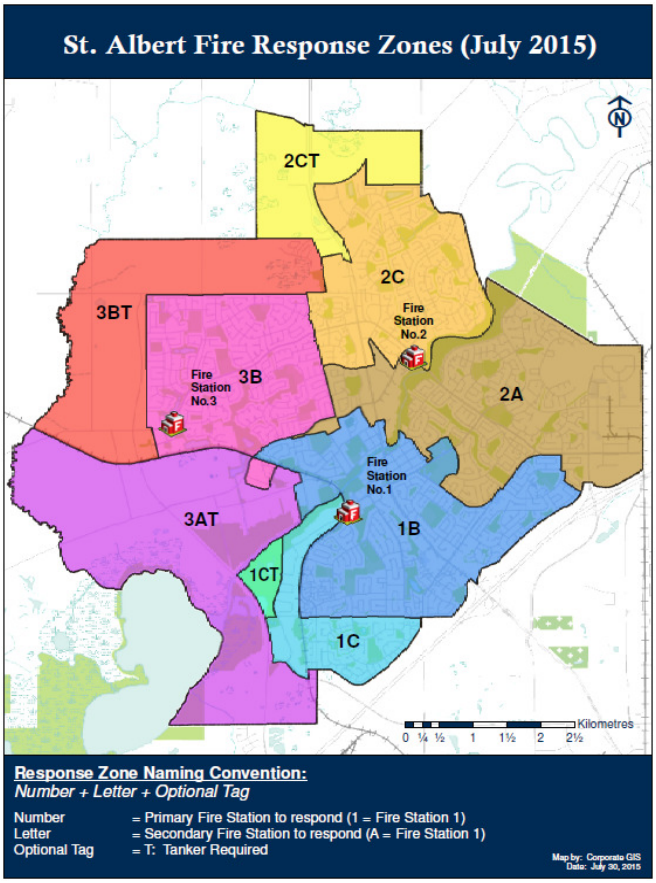


Chart 2				
	Population	**Population %**	**Properties**	**Properties %**
District 1	23,844	37.7	6303	34.6
District 2	21270	33.6	6149	33.7
District 3	18139	28.7	5782	31.7
	63,253	**100.0**	**18234**	**100.0**
Note: Data is based on 2014 reports.				

Chart 3					
Actual Service Demand (2013-2015)	**Fire Incidents**	**%**	**Non-Fire Incidents**	**%**	**All Incidents**
District 1	4,353	51.0	4277	37.6	8630
District 2	3,161	37.1	6122	53.8	9283
District 3	1016	11.9	983	8.6	1999
	8530	**100.0**	**11382**	**100.0**	**19912**

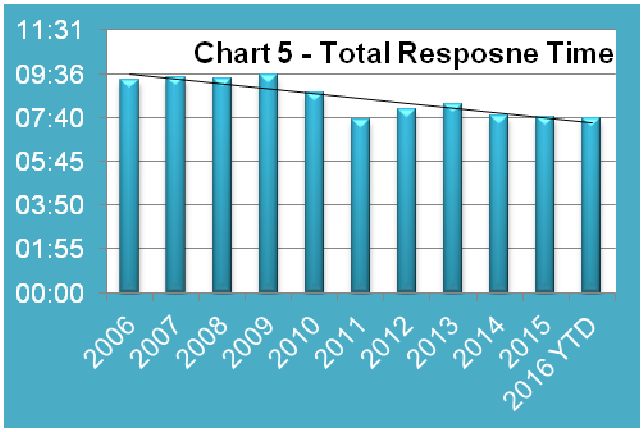
In conclusion, the fire accreditation process has demonstrated that with additional critical analysis and expansion of the reference data, fire departments are able to gain new understanding of their actual performance and look for areas for improvement based on risk management principles. Five of the recommendations found in the Fire Accreditation Peer Audit report, as noted below in Chart 4, address the department's strategic performance and once addressed performance outcomes will improve accordingly.

Chart 4 - Fire Accreditation Recommendations
1. It is recommended the department shift from a single urban risk profile in its standard of cover into one that more accurately reflects the true population densities around the city to include suburban and rural density types (2A.3).
2. It is recommended that the department stringently monitor the recently implemented pre-alerting improvements to verify that turnout times for fire and non-fire response improve. (2B.5).
3. It is also recommended that the department proceed with its purchase of mobile data terminals and automated station alerting to improve the speed and quality of its response time data (2C.5).
4. It is recommended that the department reduce its benchmark first-due total response time for fire incidents to better align with National Fire Protection Association (NFPA) 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (5A.1).
5. It is recommended the department revisit the Fire Services Long Range Plan 2011 and incorporate in its analysis the following: risk management zones, adopted travel time benchmarks, and future growth identified in the city's municipal plan (6B.3)

EXPECTED OUTCOME: FIRE AND RESCUE

That Fire and Rescue operations will meet the community and regulatory expectations.

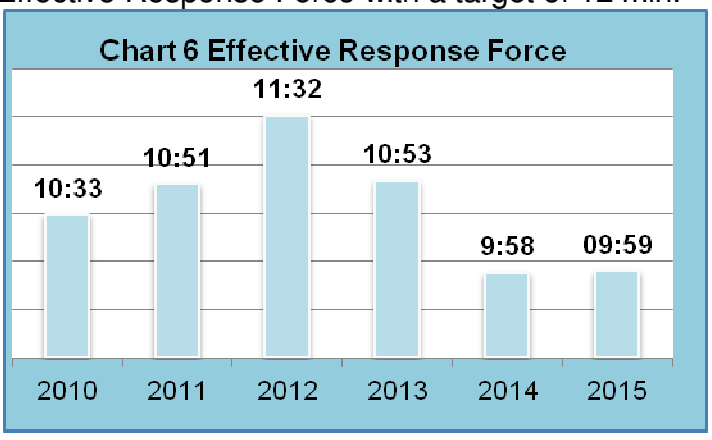
SAFS continues to monitor is performance and effectiveness through the department's Key Performance Indicators (KPI) and the recent Fire Accreditation process. The 2016 KPI report has been revised and captures some of the Fire Accreditation performance measures. There are 22 KPIs in the revised report template. Data is reported upon quarterly with several KPI's monitored on a monthly basis with staff. Some examples include, performance evaluations, call processing time (dispatch time) and turnout time.



Fire response data is evaluated in a variety of ways. The city wide total response time (TRT) is the most common data chart (Chart 5); however the TRT is also analyzed by platoon, by fire hall, by fire district and by fire apparatus. This is further broken down by time of day, day of week and by the month. Chart 5 shows a steady decline of the TRT that currently sits at 7 minutes, 37 seconds and is higher then the industry standard of 6 minutes and 40 seconds.

The department has several initiatives underway that will help move closer to the industry standard. This includes mobile CAD (computer aided dispatch) in each response unit and this project will be operational in Q4 2016. Second, the first phase and future phases 2 and 3 of the pre-emptive intersection traffic signals will also have a positive impact. The third change implemented in May 2016 was the use of pre-alert within the CAD software that permits the response crews to be alerted earlier into response sequence therefore reducing the call processing time.

Chart 6 shows the six-year time value for the Effective Response Force with a target of 12 min.



EXPECTED OUTCOME: FIRE PREVENTION

That Fire Prevention and Public Education activities will meet the community and regulatory expectations

The Fire Prevention Branch continues to follow the inspection risk matrix developed in 2015 as part of the revisions to the Quality Management Plan (QMP) (Fire). As required by the Alberta Safety Codes Council the QMP received a self audit and that activity was submitted and confirmed by the SCC in Q1 2016.

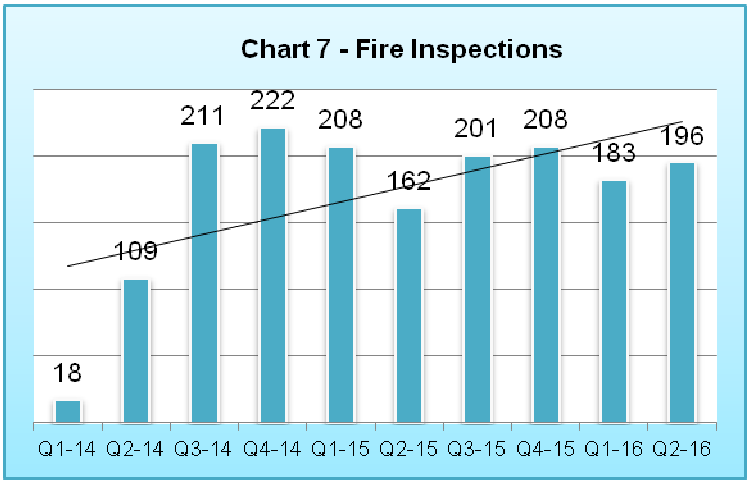


Chart 7 shows the progress being made in the last two years (Q2 – 2014 to Q2 - 2016) of the quarterly inspection frequency target of 200 properties.

Chart 8 shows the fire loss, fire death and injury data obtained form the Office of the Fire Commissioners annual statistical report.

Chart 8

Year	Fires	Deaths	Injuries	$ Losses
2005	70	0	5	9627128
2006	63	0	5	1805033
2007	46	0	3	789758
2008	54	0	1	2882292
2009	49	0	2	1489844
2010	26	0	0	1773147
2011	46	0	1	1099873
2012	54	0	1	5249230
2013	50	0	0	4136543
2014	30	0	1	1674082

The average fire loss for St. Albert over the ten-year period is over $3.0 million. Over this same period the city has averaged 49 fires. This includes structural, vehicle, dumpster and grass fires. During this ten year period there has been an average of 2 injuries (responders or public) each year.

The breakdown on where these fires have occurred:

46% - structures (dwellings, apartments)
17% - vehicles
12% - garbage bins/dumpsters
01% - grass/brush fires
24% - other (specified)

The act or omission associated with these fire incidents are:

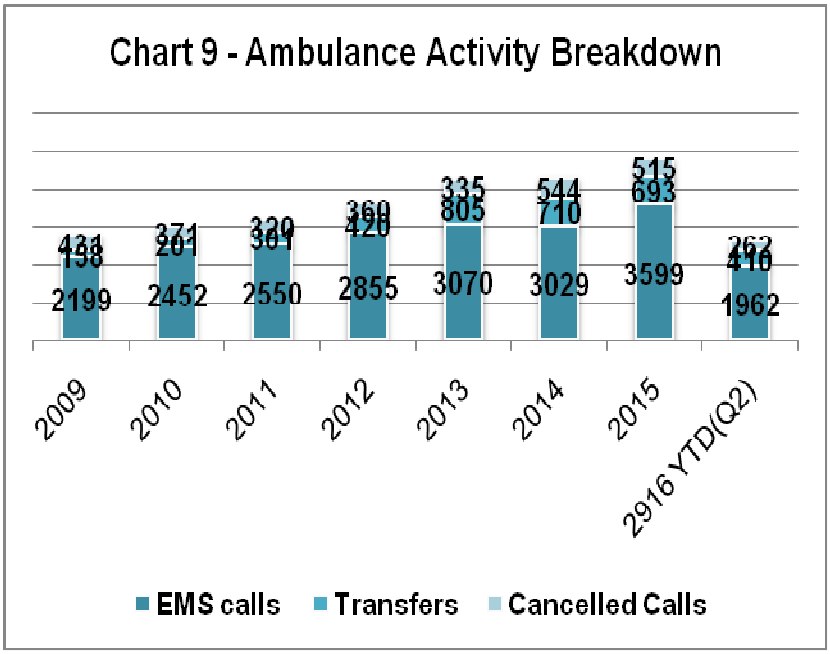
22% - Undetermined
22% - Mechanical/Electrical
17% - Human Failing
14% - Arson/Suspect Arson
11% - Suspect Impairment
3% - Smokers Material
3% - Vandalism

EXPECTED OUTCOME: EMERGENCY MEDICAL SERVICE

That the Emergency Medical Service work will meet the community and regulatory expectations while meeting all contractual requirements.

Emergency medical calls continue to increase under the provincial ground ambulance model implemented in 2009, as shown in Chart 9. The SAFS ambulance unit utilization rate is at the upper end of the industry standard and has been for some time. This is a measure of the number of unit hours compared against the number of patient transfers/calls. A high unit utilization rate in the response district is one indication of a low allocation of resources that can lead to longer response times similar to what is being experienced in St. Albert.

The 2016 year-to-date data for response times has not improved in spite of AHS's addition of a BLS transfer ambulance and the relocating the peak time ambulance into Fire Hall #1 in April. The provincial data shows the response times once again approaching 15 minutes for the month of June. AHS target is 12 minutes. SAFS ambulance response times within St. Albert are 08:11 minutes (Q2 2016).



Currently (Q2- 2016) the Medical First Responses (MFR) is being delivered 100% at the advance life support level (ALS). The change in service level was approved in January 2015.

The department is working on a second accreditation process. This one relates to the emergency medical service and is a requirement under the AHS ambulance contract. The accreditation team will be in St. Albert the first week of October and work on completing the primer standards is nearly 90% complete as of August 15. The first phase of the ambulance accreditation, the primer, is followed by the Qmentum phase which must be complete by March 31, 2019. Work on the Qmentum will commence immediately in Q4 2016 to meet the required target date.

EXPECTED OUTCOME: EMERGENCY MANAGEMENT

That the Emergency Management activities will meet the community and regulatory expectations.

Since reporting last October the Emergency Management program has accomplished many ICS training sessions and public education events. The city has over 60 people trained at various levels within the Incident Command System (ICS) and two additional ICS courses planned for Q4-2016. In addition some specific ICS and emergency operation staff training was completed in the areas of Emergency Social Services and EOC Scribe training. In total, 13 days of ICS training has occurred. St. Albert staff assisted Red Deer with their EOC exercise while gaining valuable experience working in the EOC.

SAFS sponsored a Crisis Communications workshop in April made possible with a provincial grant. Several regional partners attended the full day session lead by Dr. Vincent Covello.

A mock exercise is in the planning stage for late October and St. Albert will partner with Spruce Grove for this exercise. Municipalities are required to conduct these types of exercises every three years. A provincial grant, in partnership with Spruce Grove, has been secured for this event.

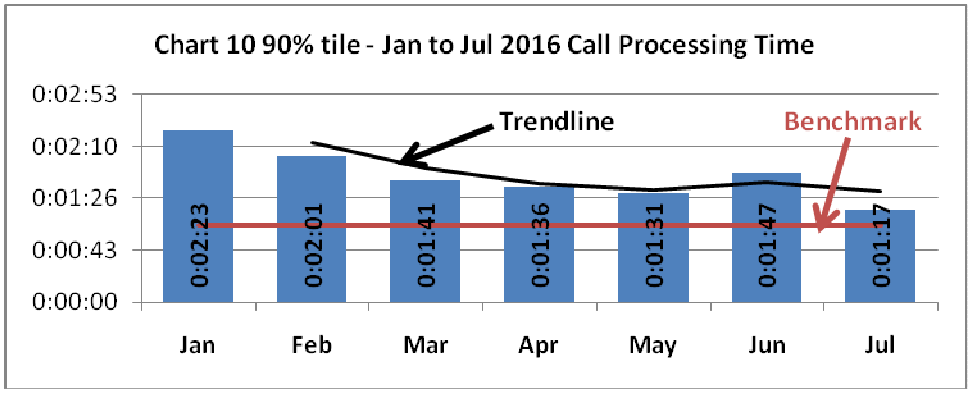
The 4th annual Public Safety Open House was held on June 5th 2016 and the new location at St. Albert Centre was successful. It is estimated that over 700 people attended. This year had the largest number of exhibitors with twenty-two.

The City's EOC was activated from May 3rd to June 3rd to support the Fort McMurray fires and the deployment of city staff. Staff included firefighters to the fire scene, support within the provincial operations centre (POC) in Edmonton and at the regional operation centre (REOC) in Fort McMurray.

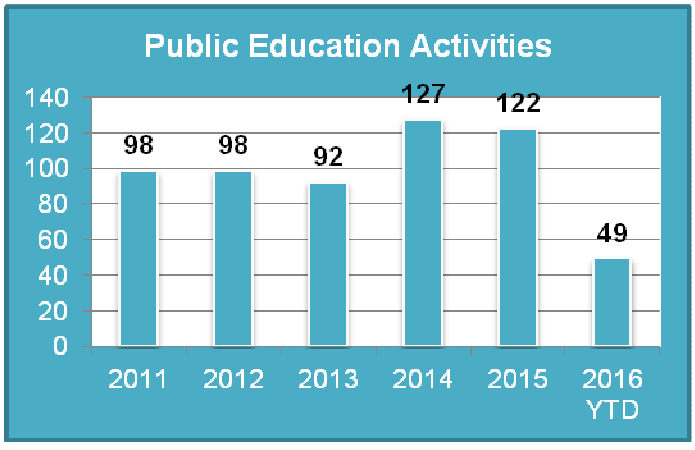
EXPECTED OUTCOME: FIRE COMMUNICATION CENTRE

That the Fire Communication activities will meet the community expectations.

As discussed in the fire and rescue section of this report, the increase in call volume has an equivalent impact on the Fire Communication Centre (FCC). The centre receives over 6000 calls annually. The FCC is responsible for receiving all fire and medical first response emergency calls and to effectively dispatch the proper resources in timely manner. This is referred to a call processing time and the new NFPA standard is 64 seconds. Chart 10 shows the progress being made to reduce the call processing time.



The FCC also performs other critical functions including the issuing of weather watches and warnings via the city's intranet and radio network system. The FCC also issues Dangerous Goods permits as required by the City's Fire Services Bylaw. This group also tests the city's emergency radio system on a monthly basis. The FCC staff receives and registers all requests for any department public education activities.



EXPECTED OUTCOME: FIRE ADMINISTRATION

That the Fire Administration activities will lead and support the administrative function to ensure the community and regulatory expectations are met.

The department's commitment to analytics and benchmarking continues to expand as the information being collected for the two accreditation processes provides the data to make informed decisions. The department continues to produce quarterly Key Performance Indicators (KPI) report which was first produced 2010. The 2016 report has been modified to address some of the recommendations noted within the Fire Accreditation Peer Audit. The data in the department's self-assessment manual (SAM) will make future benchmarking more meaningful as the data reflects industry standards that can be measured against over 200 fire departments.

Fire Services participated in the regional fire recruiting process along with Spruce Grove and Strathcona County. The process proved to be time and cost effective with the three municipalities sharing the work load and expenses. Three new recruits started on August 15, two permanent and one term position. This regional partnership also has expanded its functions and now includes regional recruit training for the 2016 hires. This too will reduce the individual expenses of the municipalities and better utilize training staff resources.

Fire Services continues to be successful in obtaining funds from the provincial training grant. Grants have been secured for two emergency management projects and both involved the regional partners. Fire training grants have been provided for the past five years and have been utilized for various mandatory training courses. The regional training partners include Spruce Grove, Morinville and Lac St. Anne. In Q1 2016 SAFS partnered with Edmonton Fire and Rescue to deliver the first Live Fire Ground course to be delivered in Alberta (NFPA 1403). A provincial grant from the OFC funded this course.

SAFS has taken a lead role in promoting regional collaboration by hosting and participating in the capital region fire department meetings. The capital region members have been meeting quarterly for the past few years and this concept has been expanded to include individual section meetings for Deputy Fire Chiefs, Chief Training Officers, and fire prevention staff. The goal is to learn from best practises and look for additional partnership opportunities.

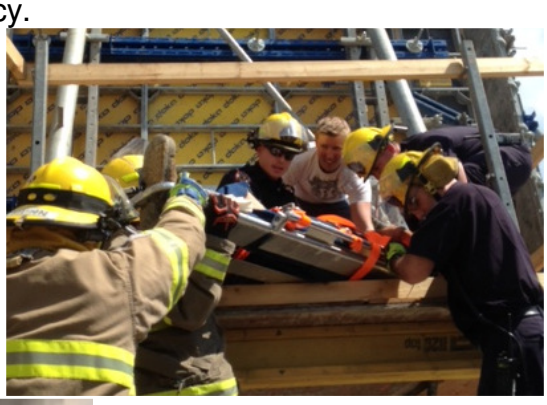
Fire Services has completed many capital projects in the past 12 months and there are several currently underway. Except for one project, FH 3 Exhaust system, all have been on time and on budget.

EXPECTED OUTCOME: FIRE TRAINING

That the Fire Training activities will lead and support the administrative function to ensure the community and regulatory expectations are met.

The Chief Training Officer (CTO) has facilitated several new training courses in the past 12 months covering passenger elevator rescue techniques, wide-rise (big box stores) training, and live fire ground certification course (NFPA 1403). The department participated in a course delivered by CN rail and was designed to educate municipal fire departments on fire resource available provincially and to become more knowledgeable of rail car safety. The department is now also versed on the new "AskRail" app designed for emergency responders to quickly determine what products are involved in a rail emergency.

Other special training included Large Unit Vehicle extrication; fire incident command (Blue Card), first year officer candidate training and the CTO will be leading the 2016 recruit training.



The CTO has been involved with the specification of the new aerial apparatus. The unit received its final assembly inspection at the end of August and was delivered in early October.

SAFS has made extensive use of the regional training facilities and they have proven effective. The Spruce Grove site has proven very versatile as the burn structure can be used for many different fire scenarios and the facility size replicates the majority of the fire risk in St. Albert (one and two-family residences.)

The water conservation unit purchase in 2015 has proven to be an effective training aid while conserving water usage. As expected the unit has created interest from other regional partners and has been used by Leduc, Spruce Grove and Edmonton for fire apparatus testing.

APPENDIX A: Fire Accreditation Response Time Data

Low Risk Fires - 90th Percentile Times – Baseline Performance		2013 – 2015	2015	2014	2013
Number of Incidents		98	29	34	35
Alarm Handling	Pick-up to Dispatch	02:24	02:34	02:17	02:31
Turnout Time	Turnout Time 1st Unit	02:49	03:20	02:30	02:44
Travel Time	Travel Time 1st Unit **Distribution**	06:10	05:24	06:40	05:37
	Travel Time ERF **Concentration**	06:10	05:24	06:40	05:37
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	07:50	07:08	08:38	07:24
	Total Response Time ERF **Concentration**	07:50	07:08	08:38	07:24
Notes: grass fires dumpster fires and limited exposures ERF is same as 1st Unit times as single unit makes up ERF					

Moderate Risk Fires - 90th Percentile Times – Baseline Performance		2013 – 2015	2015	2014	2013
Number of Incidents		63	20	20	23
Alarm Handling	Pick-up to Dispatch	02:14	02:26	02:10	02:36
Turnout Time	Turnout Time 1st Unit	03:05	03:35	02:59	03:04
Travel Time	Travel Time 1st Unit **Distribution**	05:16	05:27	04:44	05:19
	Travel Time ERF **Concentration**	08:52	06:13	08:09	09:03
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	07:40	09:47	06:38	08:09
	Total Response Time ERF **Concentration**	13:51	12:54	10:14	14:09
Notes: data set is small for structural firefighting.					

High and Special Risk Fires - 90th Percentile Times – Baseline Performance		2013 – 2015	2015	2014	2013
Number of Incidents		0	0	0	0
Alarm Handling	Pick-up to Dispatch	Data not available for assessment period			
Turnout Time	Turnout Time 1st Unit				
Travel Time	Travel Time 1st Unit **Distribution**				
	Travel Time ERF **Concentration**				
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**				
	Total Response Time ERF **Concentration**				
Notes: No calls of this type for assessment period.					

Low and Moderate Risk Technical Rescue - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Number of Incidents		387	129	102	156
Alarm Handling	Pick-up to Dispatch	02:09	02:06	02:20	02:00
Turnout Time	Turnout Time 1st Unit	03:13	02:59	02:51	03:36
Travel Time	Travel Time 1st Unit **Distribution**	06:08	05:49	06:33	06:03
	Travel Time ERF **Concentration**	08:26	07:15	08:18	08:40
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	08:00	07:58	7:53	08:02
	Total Response Time ERF **Concentration**	12:55	11:40	12:49	12:56
Note: This data contains vehicle extrication data set only.					

Low and Moderate Risk Technical Rescue - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Number of Incidents		387	129	102	156
Alarm Handling	Pick-up to Dispatch	02:09	02:06	02:20	02:00
Turnout Time	Turnout Time 1st Unit	03:13	02:59	02:51	03:36
Travel Time	Travel Time 1st Unit **Distribution**	06:08	05:49	06:33	06:03
	Travel Time ERF **Concentration**	08:26	07:15	08:18	08:40
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	08:00	07:58	7:53	08:02
	Total Response Time ERF **Concentration**	12:55	11:40	12:49	12:56
Note: This data contains vehicle extrication data set only.					

High/Special Risk Technical Rescue - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Number of Incidents		0	0	0	0
Alarm Handling	Pick-up to Dispatch	Data not available for assessment period			
Turnout Time	Turnout Time 1st Unit				
Travel Time	Travel Time 1st Unit **Distribution**				
	Travel Time ERF **Concentration**				
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**				
	Total Response Time ERF **Concentration**				
Notes: No calls of this type for assessment period					

Hazardous Materials Response - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Number of Incidents		8	2	5	1
Alarm Handling	Pick-up to Dispatch	02:02	01:40	02:14	00:27
Turnout Time	Turnout Time 1st Unit	02:10	01:59	02:08	01:44
Travel Time	Travel Time 1st Unit **Distribution**	07:51	03:54	08:17	05:28
	Travel Time ERF **Concentration**	N/A	N/A	N/A	N/A
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	09:05	05:52	09:15	07:12
	Total Response Time ERF **Concentration**	N/A	N/A	N/A	N/A

Notes:

- only one hazardous materials response in 3 year period required moderate hazard ERF
- only moderate ERF incident was because of delayed call for EMS for a patient which was outside of threshold values
- Dataset is very small

EMS - 90th Percentile Times – Baseline Performance		2013 - 2015	2015	2014	2013
Number of Incidents		4684	1623	1515	1546
Alarm Handling	Pick-up to Dispatch	01:05	01:14	00:35	01:08
Turnout Time	Turnout Time 1st Unit	03:01	02:46	03:05	03:20
Travel Time	Travel Time 1st Unit **Distribution**	06:12	06:05	06:14	06:18
	Travel Time ERF **Concentration**	09:02	08:57	09:05	09:05
Total Response Time	Total Response Time 1st Unit On Scene **Distribution**	08:08	07:55	08:04	08:27
	Total Response Time ERF **Concentration**	10:32	10:15	10:40	10:48

Note:

- ERF data calculated for Moderate risk with ERF of 6 staff

APPENDIX B: Critical Tasking Charts

FIRE INCIDENTS		
Low Risk – Fires Grass, Vehicle and Dumpster Fires (limited exposure)		
Task	**Firefighters**	**Assignment**
Attack Line/Water Supply	2	1st Engine
Pump Operator/Accountability	1	1st Engine
Command/Safety Officer	1	1st Engine
Total	**4**	
Moderate Risk – Fires One up to four-family & scattered small businesses & industrial occupancies		
Task	**Firefighters**	**Assignment**
Attack Line/Exposures/Water Supply	2	1st Engine
Rapid Intervention Team	2	3rd Engine
Search and Rescue	2	2nd Engine
Ventilation	2	3rd Engine
Back-Up Line	2	2nd Engine
Safety Officer	1	Command 1
Pump Operator/Accountability	1	1st Engine
Aerial/Tanker Driver & Operator	2	Aerial/Tanker
Command	1	1st Engine Captain
Total	**15**	
High Risk – Fires Apartments, schools, offices, mercantile and industrial occupancies		
Task	**Firefighters**	**Assignment**
Attack Line/Exposures/Water Supply	4	1st and 2nd Engine
Rapid Intervention Team	2	3rd Engine
Search and Rescue	2	2nd Engine
Ventilation	2	3rd Engine/Medic Unit/Mutual Aid
Back-Up Line	4	Medic Unit/Mutual Aid/Call-In
Safety Officer	1	Command 1
Pump Operator/Accountability	1	1st Engine
Aerial/Tanker Driver & Operator	2	Aerial/Tanker
Command	1	1st Engine Captain
Total	**19**	
Special Risk – Fires Hospitals, Care Facilities, High/Wide Rise occupancies		
Note: Special Risk Fire incidents represent unique critical tasking situations for which there has been no historical response information to base this tasking upon. These types of incidents are addressed with the mutual aid agreements, including the City of Edmonton, Edmonton Fire and Rescue		

NON-FIRE INCIDENT		
Low Risk – Hazardous Material (Small Gasoline/Oil Spills)		
Task	**Firefighters**	**Assignment**
Reference, Research	1	1st Engine
Hazmat Team	2	1st Engine
Safety Officer/Accountability Command/Size Up	1	1st Engine
Total	**4**	
Moderate Risk – Hazardous Material (Static hazardous materials release – no immediate threat to life, environment or property)		
Task	**Firefighters**	**Assignment**
Reference and Research	1	1st Engine
Hazard Detection and Monitoring	2	1st Engine
Hazmat Team	2	2nd Engine
Backup Hazmat Team	2	Rescue
Decontamination	2	2nd Engine
Command/Size Up	1	1st Engine
Safety Officer/Accountability	1	Command 1
Total	**11**	
High/Special Risk – Hazardous Material		
Note: High and Special Hazardous Material Risk incidents represent unique critical tasking situations for which there has been no historical response information to base this tasking upon. These types of incidents are addressed with the mutual aid agreement with the City of Edmonton, Edmonton Fire and Rescue and/or private contractor.		

Low & Moderate Risk – Technical Rescue		
Task	**Firefighters**	**Assignment**
Ice Water Rescue		
Traffic Control	1	1st Engine
Rescue Team	4	Rescue and 1st Engine
Safety	2	2nd Engine
Patient Treatment & Transport	2	Medic Unit
Back up	2	2nd Engine
Command/Safety Officer/Accountability	1	1st Engine Captain
Total	**12**	
Vehicle Extrication		
Extrication Team	2	Rescue
Pump Operator/Accountability	1	1st Engine
Traffic Control/Backup	2	1st Engine
Command/ Safety Officer	1	1st Engine Captain
Patient Treatment & Transport	2	Medic Unit
Total	**8**	
High/Special Risk – Technical Rescue		
Note: High and Special Risk Technical Rescue incidents represent unique critical tasking situations for which there has been no historical response information to base this tasking upon. These types of incidents are addressed with the mutual aid agreement with the City of Edmonton, Edmonton Fire and Rescue.		

Low Risk – Medical Call		
Task	**EMS**	**Assignment**
Scene Safety/Patient Assessment & Treatment	1	1st Medic Unit
Scene Safety/Treatment/Medical Information Collection/Driver	1	1st Medic Unit
Total	**2**	
Note *: Chart of Call indicates no MFR dispatched on Alpha and Bravo medical incidents; all Medic Units are ALS		
Moderate Risk – Medical Call		
Task	**EMS/Firefighters**	**Assignment**
Patient Assessment & Treatment	1	1st Medic Unit
Treatment/Medical Information Collection/Driver	1	1st Medic Unit
Treatment/Patient Lifting/ Packaging	4*	1st Engine
Total	**2 - 6**	
Note *: Chart of Call indicates MFR dispatched on Charlie and above calls for medical incidents. All Engine/Rescue units are ALS capable; all Medic Units are ALS		
High Risk – Medical Call		
Task	**Firefighters**	**Assignment**
Command	1	1st Engine
Scene Safety/Pump Operator	3	1st Engine, PC
Triage	2	1st Engine, 2nd Engine
Extrication	2	Rescue
Treatment	2	2nd Engine
Transport	2	Medic Unit
Staging	1	2nd Engine
Total	**13**	
Note *: Chart of Call indicates MFR dispatched on Charlie and above calls for medical incidents. All Engine/Rescue units are ALS capable; all Medic Units are ALS		
Special Risk – Medical Call		
Note: Special Risk Medical Call incidents represent unique critical tasking situations for which there has been no historical response information to base this tasking upon.		

GLOSSARY of TERMS

Advanced Life Support	A level of pre-hospital care that builds upon basic life support procedures, and includes the use of invasive techniques to save a patient's life.
Call Processing	The time interval from when the alarm is acknowledged at the fire communication centre until response information begins to be transmitted. The benchmark is 64 seconds.
Baseline	The current measurement of performance in an organization usually includes critical observations or data used for comparison or control. The activities that are currently in place to achieve the organization's goals and objectives.
Basic Life Support	A primary level of pre-hospital care aimed at supporting life.
Benchmark	Is a standard from which something can be judged. Seeking to achieve the benchmark, or best practise, will help define superior performance of a service or process.
Deployment	The strategic assignment and placement of fire agency resources such as fire companies, fire stations and specific staffing levels for those companies.
Effective Response Force	The minimum amount of staffing and equipment that must reach a specific emergency scene in maximum prescribed travel or driving time.
Fire Accreditation	A process by which a fire agency evaluates and recognizes a program of study as meeting certain predetermined standards or qualifications.
Fire Demand Area/Zone	A protection area with the level of fire protection service to be delivered to properties served within a defined geographical area.
Fire District	Defined fire protection areas with assigned resources within the fire protection planning area.
First Arriving Unit	First unit arriving to an assigned emergency and is time stamped.
Hazard Risk Vulnerability Assessment	A review that looks at hazards, risk and exposures to help assess the community's vulnerability and coping capacity.
High Hazard Risk	Built-up areas of substantial size with a concentration of property presenting s substantive risk of life loss, a severe financial impact on the community or unusual potential damage to property in the event of a fire. (Apartments, schools)
Incident Command System	Is a standardized approach to the command, control, and coordination of emergency response with a common hierarchy.
Level of Service	The resources needed to meet the stated service objective. Service level is defined only in terms of what is provided and not in terms of effectiveness or of quality.
Low Hazard Risk	.Non-occupied detached buildings.
Moderate Hazard Risk	Small commercial structures that are remote from other buildings, residential; single family and duplexes Built-up areas of average size, where the risk of life loss or damage in the event of a fire will be limited to that occupancy.
Quality Management Plan	A document that helps ensures that an organization's service is consistent and provides a means to achieve it.
Risk	Exposure to a hazard based on the probability of an outcome when

	combined with a given situation with a specific vulnerability. The level of risk can be described as the probability of a specific loss over a given period of time: a measurement of both probability and consequence of a particular hazard. For example, all structures are subject to destruction by fire; however, individual structures vary considerable as to the possibility of loss as a result of their construction, content, and built-in fire protection systems
Risk Analysis (Fire)	The assessment of the fire risks to occupants of a building and other people in the vicinity of a building and to ensure their safety from fire and its effects.
Service Standard	Helps an organization define the service that a customer is entitled to receive.
Special Risk	Areas that require a first due response over and above that appropriate to the risk which predominates the surrounding area. (Hospitals, care facilities wide/high rise)
Total Response Time	The time interval from the receipt of the alarm at the primary 9-1-1 to when the first emergency response unit is initiating action or intervening to control the incident.
Travel Time	The time begins when unit is en route and ends when unit arrives.
Unit Hour Utilization	Is the numerical expression and methodology to measure workload levels and ability to compare with other systems. It is calculated by dividing the number of patient transports by the number of unit hours, with one unit hour defined as a fully equipped and staffed vehicle within the system. The higher numerical value represents a higher level of productivity, with a number near 40 is considered high.