



OFFICE OF THE  
**City Auditor**

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# **Fire Rescue Services Branch Audit**

October 30, 2013

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The Office of the City Auditor conducted  
this project in accordance with the  
*International Standards for the  
Professional Practice of Internal Auditing*

# Fire Rescue Services Branch Audit

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## ***Executive Summary***

The Fire Rescue Services Branch (FRS) is one of the Branches in the Community Services Department. The Branch is responsible for responding to fire, medical, rescue, and emergency situations; environmental disasters; and fire prevention and public education. FRS has an operating budget of \$171.1 million for 2013 which is the third highest in the City following Police and Transit. In 2012, FRS staff responded to approximately 37,000 events.

Our objectives for this audit were to determine if FRS has an effective process to address the impact of the City's growth on its ability to protect citizens; if training provided to operations staff is adequate and appropriate to meet operational needs; and if FRS' practices relating to the management of materials and equipment are effective and efficient.

### **Process to address the growth of the City**

To address the future growth of the City, FRS prepares a Station Location Master Plan (Appendix A). This Plan sets out where FRS will locate new stations, the order it will build the stations, whether it has funding for the new station, and whether it has purchased the land for the new station. FRS also frequently reviews the deployment of resources to ensure they have effective coverage.

Overall, we found that FRS does have an effective process to determine where to locate new stations and existing resources. We based this conclusion on the following:

- FRS is appropriately locating new stations – since 2003 FRS has opened three new stations all of which are in high growth areas. The next three planned stations are also in high growth areas.
- The percent of fires contained to room of origin in growth areas is increasing.
- Travel times in areas where new stations are built are improving.
- Edmonton's population coverage level (number of citizens per station) is similar to other Canadian cities.

### **Adequacy and Appropriateness of Operations Staff Training**

To determine if training provided to Fire Rescue Operations staff is adequate and appropriate to meet operational needs we assessed whether FRS is identifying those needs, providing required training in a timely manner, providing reasonable training, and maintaining training records.

We found that FRS does have a method of tracking the formal training received by operations staff. They are also basing training on National Fire Protection Association (NFPA) standards and its training program is comparable to other Canadian cities. However, we also found that not all firefighters have received their required training and that FRS can improve its process for identifying the specific training needs of Operations staff.

We made a recommendation that FRS improve and communicate its process for identifying training needs for all Operations staff.

### **Efficient and Effective Materials and Equipment Management**

FRS has an extensive inventory of materials and equipment used by the firefighters. This includes materials like medical supplies, cleaning supplies, and protective clothing; as well as equipment such as chainsaws, hand tools, and the jaws of life. FRS needs to ensure these items are supplied to the fire stations in a timely manner to ensure firefighters have everything they need to perform their jobs effectively. However it also needs to manage the materials and equipment efficiently and effectively.

We made three recommendations to improve the efficiency and effectiveness of FRS' materials and equipment management processes. We recommended that it implement a formal process to track and count materials and equipment inventory. This will enhance accountability and improve internal controls over inventory stock. We also recommended that FRS ensure all important processes relating to the management of materials and equipment are documented and up-to-date. Further, we recommended that FRS automate the ordering process used by fire station staff to obtain materials and equipment from central locations.

# Fire Rescue Services Branch Audit

## **1. Introduction**

The Fire Rescue Services (FRS) Branch provides the essential services of responding to fire, rescue, and emergency situations; fire prevention and public education; and responding to life threatening emergency medical situations. They also respond to environmental disasters, prepare for potential acts of terrorism, and foster partnerships both inside and outside the City. In the 2011 City of Edmonton Citizens Services Survey, 99 percent of respondents indicated that fire rescue services are an important service provided by the City.

FRS operates out of 27 stations with 1,118.5 full-time equivalent (FTE) staff members. It has an operating budget of \$171.1 million for 2013 which is the third highest in the City following Police and Transit. In 2012, FRS responded to approximately 37,000 events.

This value-for-money audit assessed whether FRS has an effective process to address the impacts of the City of Edmonton's growth; adequate and appropriate training to meet operational needs; and efficient and effective materials and equipment management practices.

## **2. Background**

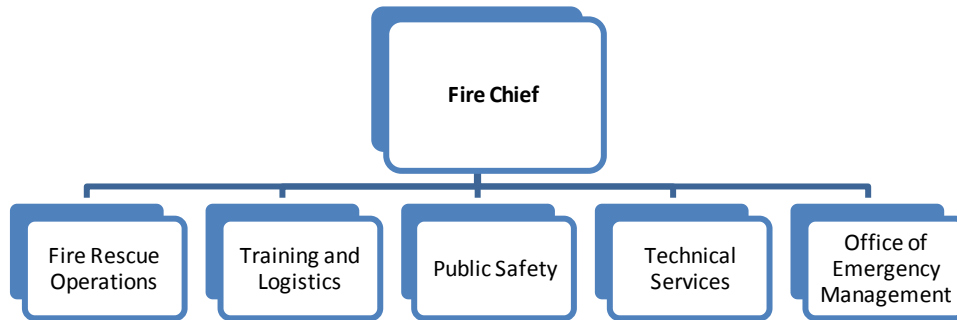
### **2.1. Branch Overview**

FRS is one of the branches in the Community Services Department. The goals of the branch are to:

- Provide service excellence to make Edmonton a safe and secure community where people choose to live, work, and play.
- Value employee growth, involvement, and development.
- Continue to strengthen, develop and enhance stakeholder partnerships.
- Ensure that services are comprehensive, effectively integrated, and sustainable.

To meet its goals the branch is divided into five service areas as shown in Figure 1.

Figure 1 – Fire Rescue Services Branch Structure



Following is a brief description of the services provided by each of the areas:

- **Fire Rescue Operations:** This area provides public safety coverage to the City of Edmonton 24 hours a day, 7 days a week, 365 days a year. Firefighters respond to emergencies including fires, medical events, technical rescues (i.e., on the river or in high rises), and hazardous materials events. They also respond to public service calls, attend community events, and are relied upon by the Province to provide aid and relief efforts to other municipalities during times of emergencies. For example, in June 2013, FRS sent 170 firefighters to Calgary to help during the flooding.
- **Training and Logistics:** This area is responsible for recruitment and training of new firefighters as well as maintaining certifications, occupational skills and ongoing career development and recruitment outreach. It also coordinates the design, selection, and purchase of the fleet and manages the facilities, personal protective and safety equipment, and supplies.
- **Public Safety:** This area is responsible for oversight of the fire risk assessment model, fire prevention inspections, public education programs, and fire investigations by ensuring compliance with provincial and federal legislation for the safety and security of people and property.
- **Technical Services:** This area is responsible for evaluating incoming 911 calls, dispatching resources, providing emergency response communications support during emergency events, providing public safety technology and delivering mapping services. It also manages FRS' accreditation and environmental programs.
- **Office of Emergency Management (OEM):** This area is responsible for ensuring the City of Edmonton is prepared for, can respond to, and can recover from all hazards including natural disasters and technological and human-caused incidents.



## 2.2. Branch Resources

The majority of FRS' costs are for personnel. Table 1 shows FRS' 2009 to 2012 actual and 2013 budgeted financial operating details, as well as related full time equivalent (FTE) positions.

**Table 1 – Fire Rescue Services Branch Operating Details**  
(in thousands of dollars)

	Actual				Budget 2013
	2009	2010	2011	2012	
<b>Total revenues</b>	<b>\$1,736</b>	<b>\$2,590</b>	<b>\$4,162</b>	<b>\$2,494</b>	<b>\$1,197</b>
<b>Expenditures</b>					
Personnel	119,806	129,202	135,812	139,089	143,582
Other	20,448	24,479	24,047	26,314	28,688
<b>Total expenditures</b>	<b>140,254</b>	<b>154,681</b>	<b>159,859</b>	<b>165,403</b>	<b>172,270</b>
<b>Net operating requirement</b>	<b>\$138,518</b>	<b>\$152,091</b>	<b>\$155,697</b>	<b>\$162,909</b>	<b>\$171,073</b>
<b>FTE's</b>	1,053	1,065	1,082	1,117	1,119

In the 2013 budget, personnel costs account for 83 percent of all expenditures. Personnel costs have increased by 20 percent from 2009. This is mostly due to salary increases per the collective agreement with the Edmonton Fire Fighters Union, which includes cost of living increases and step increases. As well, benefit costs have increased due to increases in pension contribution. FRS also increased its total number of FTEs by 66 since 2009.

The Branch also invests in capital projects annually. Table 2 on the next page shows the list of capital projects and the actual or budgeted amounts for each project from 2009 to 2022.

**Table 2 – Fire Rescue Services Branch Capital Projects Financial Information**  
(in thousands of dollars)

Project	Actual				Budget		Total Project
	2009	2010	2011	2012	2013	2014 - 2022	
Ellerslie and Lewis Estates Fire Stations – land, design, construction, and apparatus	\$253	\$1,571	\$5,892	\$4,499	\$8,225	\$5,453	<b>\$25,893</b>
Heritage Valley Fire Station – land, design, and construction	-	69	1,321	438	8,025	-	<b>9,853</b>
Emergency Communications System Equipment	89	199	130	178	-	1,400	<b>1,996</b>
Dispatch System Replacement	-	-	137	264	2,279	2,096	<b>4,776</b>
Fire Rescue Emergency Equipment Replacement	-	-	-	821	1,249	10,845	<b>12,915</b>
Pilot Sound Fire Station – land and design	-	-	-	298	4,175	7,370	<b>11,843</b>
Fire Rescue Training Tower	-	-	-	36	3,809	-	<b>3,845</b>
<b>Total</b>	<b>\$342</b>	<b>\$1,839</b>	<b>\$7,480</b>	<b>\$6,534</b>	<b>\$27,762</b>	<b>\$27,164</b>	<b>\$71,121</b>

The large capital budgets for 2013 to 2022 compared to the actuals for 2009 through 2012 reflects the investment FRS is planning in growth-related projects such as new fire stations, apparatus, and equipment. We assessed the effectiveness of FRS' process to address the City's growth in Section 5.1 of this report.

### **3. Results of Risk Assessment**

Our risk assessment covered all FRS areas. This included interviews with the Fire Chief and management teams from each area (Operations, Technical Services, Training and Logistics, Public Safety, and OEM) to gain an understanding of the business environments and the risks they face. We also visited fire stations and the training facilities to talk with staff and gain a better understanding of the business. We then had each area's management team assess the likelihood and impact of risks relating to their area. We used the results of this assessment to develop the audit scope and objectives.

### **4. Audit Scope, Objectives, and Criteria**

Based on the results of our risk assessment we limited this audit to the Fire Rescue Operations and the Training and Logistics areas.

The three objectives we established for this audit were to determine if:

1. *Fire Rescue Services has an effective process to address the impact of the City's growth on its ability to protect citizens.*

We considered the following questions in our assessment of this objective:

- Does FRS strategically plan for future stations and resources to address anticipated needs, such as expected rate of expansion, changes in population, coverage levels, and response times?
- Does FRS have a process to annually review the strategic placement of resources to improve coverage levels and better meet service level targets for response time?

2. *Training provided to Fire Rescue Operations staff is adequate and appropriate to meet operational needs.*

To assess this objective we considered whether Fire Rescue Operations staff members:

- Training needs are identified,
- Have received required training in a timely manner, and
- Training records are maintained.

We also assessed the reasonableness of the training they are provided.

3. *Fire Rescue Services' practices relating to the management of materials and equipment are effective and efficient.*

We considered the following questions in our assessment of the materials and equipment management process:

- Does FRS use resources efficiently?
- Are equipment and materials appropriately ordered, received, inventoried, issued, and secured?
- Is equipment maintenance performed as required?
- Are accountabilities, roles, and responsibilities adequately defined and communicated to staff?
- Are the processes and controls formal, comprehensive, and consistently applied?

## **5. Observations and Analysis**

### **5.1. Process to Address the Growth of the City**

As the City grows in land area and population it affects the ability of FRS to protect citizens and their property. To address the future growth of the City, FRS prepares a Station Location Master Plan and frequently reviews the deployment of resources.

The Station Location Master Plan set out where FRS will locate new stations, the order it will build the stations, whether it has funding for the new station, and whether it has purchased the land for the new station. In order to determine the priority of the new stations and the best locations for them FRS management reviews things such as anticipated population growth, traffic volume, and the anticipated change in travel times to events. Appendix A contains the Spring 2013 Station Location Master Plan.

To help determine if current resource deployment is effective, senior officers solicit ideas for changes to apparatus deployment from staff on an annual basis. The senior officers discuss any potential ideas to ensure that they are viable and worth exploring further. Prior to implementing changes FRS uses specialized software to see what would happen to coverage levels if it made the potential changes. This ensures that actual changes result in a more effective service.

To determine if FRS has effectively placed new stations and current resources we:

- Reviewed the locations of new and planned stations compared to population growth.
- Reviewed the percent of fires contained to room of origin over the past 10 years.
- Analysed the impact of new stations on travel times.
- Compared Edmonton's population coverage levels to other Canadian cities.

Overall, we found that FRS does have an effective process to determine where to locate new stations and existing resources. We based this conclusion on the following:

- FRS is appropriately locating new stations.
- The percent of fires contained to room of origin in growth areas is increasing.
- Travel times in areas where new stations are built are improving.
- Edmonton's population coverage level (number of citizens per station) is similar to other cities.

### **5.1.1. New station locations**

#### **OCA Assessment**

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Since 2003 FRS has opened three new stations all of which are in high growth areas. The next three stations planned for the future are also in high growth areas.

To determine if FRS has built and plans to build new stations in appropriate locations we compared the areas of the City that have had the highest population growth over the past 10 years to the locations of the new and proposed fire stations.

Our analysis shows that 84 percent of the growth the City has experienced since 2001 has occurred in the outer ring of the City. This area is highlighted in Appendix B. For planning purposes, FRS has divided the City into zones. Appendix B shows the ten zones with the largest increase in population since 2001 - nine of which are in the outer

ring. The last three stations built (stations 25, 26, and 27) and the next three planned stations (stations 28, 29, and 30) are all in areas of high growth.

Building new stations in high growth areas demonstrates that FRS is building stations in appropriate locations to help them effectively protect citizens.

**5.1.2. Percent of fires contained to room of origin**

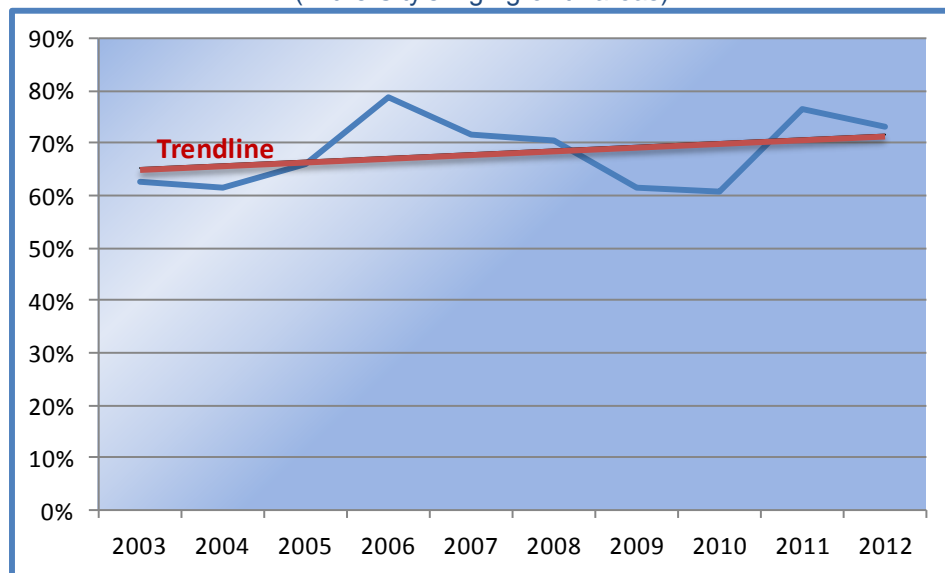
**OCA Assessment**

The percent of fires that FRS contained to the room of origin (in the City’s high growth areas) is increasing.

If firefighters contain a fire to the room of origin, they can usually save the building. If the fire escapes the room of origin, the building is usually severely damaged and the fire crews must work to protect the surrounding buildings. There are a number of factors that impact firefighters’ ability to contain a fire, including proximity of the event to a fire station, safety codes, building materials, public education, apparatus deployment, dispatch, etc.

Our review of statistics maintained by FRS shows that the percent of fires contained to the room of origin has gradually increased over time in the City’s high growth areas (the outer ring), as illustrated in Figure 3.

**Figure 3 Percent of Fires Contained to Room of Origin**  
(in the City’s high growth areas)



Over a long period of time an increase in this measure does suggest firefighters are arriving at the events in a timely manner. The ability to maintain or increase the percent of fires contained to room of origin shows the benefit of new stations and the effectiveness of the deployment strategy.

### 5.1.3. Travel times

#### OCA Assessment

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The opening of new stations has improved the time it takes FRS to get from a station to an event.

City Council approved the Fire Rescue Master Plan in 2012, which includes the following response time targets:

- **Call evaluation time** of 90 seconds, 90% of the time.  
Time between when a call arrives and units has been dispatched.
- **Turnout time** of 90 seconds or less, 90% of the time.  
Time between the notification of the station and when the unit leaves the station.
- **Travel time** of 240 seconds (4 minutes) or less, 90% of the time.  
Time between leaving the station and the first pumper truck (four firefighters) arriving on scene.
- **Full first alarm response time** of 480 seconds (8 minutes) or less, 90% of the time.  
Time between the first unit leaving the station until 16 firefighters are on scene.

Of these response time targets, travel time is the best indicator of whether or not FRS has been locating new stations in appropriate locations. However, travel time is also affected by things such as road conditions, construction, traffic congestion, weather, etc.

To determine how effective FRS was in choosing locations for new stations, we analysed the change in the percent of times their travel time was less than four minutes for the areas surrounding the new stations. Figure 4 on the next page shows this change for the areas around fire stations 25 and 26.<sup>1</sup>

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<sup>1</sup> FRS opened Station 27 in 2012; therefore, there is not enough data to analyze.

**Figure 4 First Pumper Truck Travel Time Success for Areas Around Station 25 and 26**  
(Percent within four minutes)

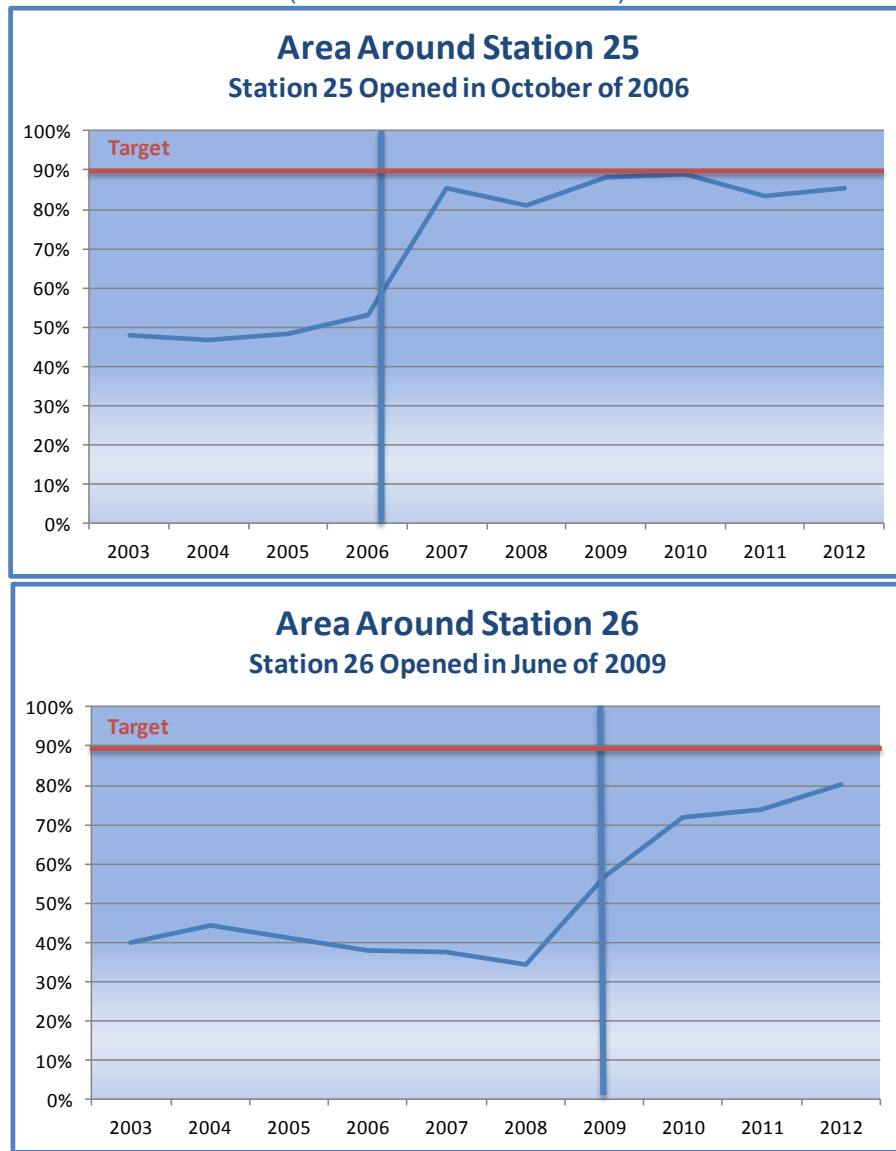


Figure 4 shows there is a significant improvement in FRS' ability to meet its target of a four-minute travel time after a new station opens. This confirms that FRS has placed these new stations in appropriate locations.

**5.1.4. Population coverage levels**

**OCA Assessment**

*The number of citizens per fire station is not significantly different from other cities.*

Population coverage can be represented by the number of citizens per station or the number of square kilometres per station. We compared Edmonton's population coverage levels to that of six other Canadian cities. Table 3 shows the results.

**Table 3 2012 Population Coverage Level Comparison**

City	# of stations	Sq. km's	Citizens/ Station	Sq. km/ Station
Mississauga	20	288	36,500	14
Toronto	84	630	33,228	8
Vancouver	20	128	30,430	6
Edmonton	27	700	30,278	26
Regina	7	146	29,571	21
Saskatoon	9	218	27,778	24
Ottawa Region	45	2,796	20,779	62

Each of Edmonton's 27 fire stations covers an average of 26 square kilometres and 30,278 people. Although the number of stations and square kilometres per station varies considerably between Edmonton and the other cities, the number of citizens per station in Edmonton is similar to the other cities.

## 5.2. Adequacy and Appropriateness of Operations Staff Training

To determine if training provided to Fire Rescue Operations staff is adequate and appropriate to meet operational needs, we assessed whether FRS is identifying the training needs, providing required training in a timely manner, providing reasonable training, and maintaining training records.

We found that:

- FRS should add more formality to its process for identifying the specific training needs and requirements of operations staff.
- Not all firefighters have received their required training.
- Training is based on National Fire Protection Association (NFPA) standards and is comparable to other Canadian cities.
- FRS is tracking the formal training received by operations staff.

### 5.2.1. Required training

There are some courses that the City or FRS Standards require all firefighters to take: Cardiopulmonary Resuscitation (CPR), Fall Protection, Respectful Workplace, and Code of Conduct. We reviewed FRS training records and found that the following courses were not taken by all firefighters:

- Respectful Workplace training – 19 percent of staff have not taken this course.
- Fall Protection recertification – 15 percent of staff have not taken the recertification course, which is required every three years.



FRS also has a target of providing the core competency courses to 85 percent of firefighters (excluding Platoon Chiefs and District Chiefs). The core competency training provided by the Training School includes a variety of medical training, as well as other courses that the Training School believes are required such as wild land fires, elevator alarm panels, firefighter survival, etc. The target is set at 85 percent to recognize that some staff members are not available for training during the time period the Training School is offering the course.

Between January 2011 and July 2013, the Training School offered 18 core competency courses. We found that they met the training target for 2 of the 18 courses.

FRS provided the following reasons for not meeting its target:

- The Training School may be offering too many courses each year making it difficult for Operations management to ensure all staff members are scheduled in all courses.
- External factors such as the weather, river conditions, etc. affect the safety and ability to conduct specific training (i.e., if river levels are too high or too low, it may not be safe to perform river rescue training).

By not achieving the established target, there is a risk that firefighters will not be familiar with current practices, which may decrease the effectiveness of the service.

### **5.2.2. Identification of training needs**

While FRS does have a method of tracking training that firefighters have taken, the process it uses to identify training needs could be improved.

They have several ways of determining training needs which include:

- Questionnaires at the end of course evaluations,
- Input from Captains regarding when new firefighters are ready to take driver training, and
- Round table discussions to get information from Platoon and District Chiefs.

However, there is no documentation on whether the information gathered through these methods is actually used to create a training plan or if the information is communicated to staff. There is a risk that the training plans are not fully aligned with operational needs.

#### **Recommendation 1 – Improve the training identification process**

The OCA recommends that the Fire Chief ensure that Training staff work with Operations staff to improve and communicate the process for identify training needs for all Operations staff.

**Management Response and Action Plan****Accepted**

**Action Plan:** Fire Rescue Services will formalize the process for identifying and documenting training needs and developing a comprehensive training calendar. The process will include conducting bi-annual reviews of training progress. Additions and revisions to the training calendar will be reviewed and documented along with a review of whether training goals and outcomes are met.

**Planned Implementation Date:** Process to be implemented by June 2014.

**Responsible Party:** Deputy Fire Chief, Training and Logistics

### **5.3. Efficient and Effective Materials and Equipment Management**

The Logistics section of the Training and Logistics Area of FRS is mainly responsible for the management of the materials and equipment used by Firefighters. This includes overseeing the flow of materials and equipment in and out of inventory.

The materials managed by Logistics include medical supplies (latex gloves, bandages, etc.), station supplies (cleaning products, paper products, etc.), and protective clothing and equipment (breathing apparatus, gloves, helmets, etc.). Logistics determines the small equipment (chain saws, jaws of life, etc) required to be on each apparatus and staff from the Materials Management Branch order and supply these items to the vehicles. As well, staff members from the Fleet Services Branch or the Material Management Branch perform the required maintenance on most of the equipment.

The process for managing materials and equipment effectively and efficiently should:

- Be formal, comprehensive, and consistently applied,
- Ensure materials and equipment are ordered, received, inventoried, issued, and secured appropriately,
- Use resources efficiently, and
- Have adequately defined roles and responsibilities.

We found the following opportunities for FRS to improve the efficiency and effectiveness of its materials and equipment management processes.

#### **5.3.1. Inventory tracking and counting**

We found that FRS does not track or perform counts of materials and equipment held at inventory storage locations on a regular basis. Also there is no expectation that staff perform inventory control procedures, including tracking and counting inventory.

Without appropriate inventory controls, such as tracking and counting, FRS cannot determine the accuracy and values of stock on-hand and there is an increased

potential for loss or misappropriation of materials. Further, without performing full inventory counts, stock may expire and/or become obsolete.

### Recommendation 2 – Perform inventory tracking and counts

The OCA recommends that the Fire Chief ensures that Logistics staff members implement a formalized process to track materials and equipment inventory and conduct periodic physical counts to enhance accountability and internal control at all locations where stock is located.

### Management Response and Action Plan

#### Accepted

**Action Plan:** Fire Rescue Services will clarify and document all stock held in various inventory locations. FRS will work with Materials Management to leverage and implement current City of Edmonton SAP Inventory Management functionality to ensure that inventory tracking and stock control is appropriately performed.

**Planned Implementation Date:** The inventory control system will be in operation by March 2014 with full evidence of stock control by December 2014

**Responsible Party:** Deputy Fire Chief, Training and Logistics

### 5.3.2. Use of standard operating procedures

FRS uses standard operating procedures to document and communicate the processes and the roles and responsibilities relating to the management of materials and equipment. We found that some of these procedures use terminology or position titles that no longer exist or do not reflect current operations. As well, some processes are not documented and communicated to staff, leading to inefficiencies. We also found some cases where staff members are not following the formal procedures.

The following are examples of procedures that FRS could improve to be more effective and efficient:

#### Security and safeguarding assets at inventory storage locations

FRS does not have a formal procedure in place for the security and safeguarding of assets at inventory storage locations. Without proper guidance, staff may not have a clear understanding of their roles and responsibilities to support effective security and safeguarding on a consistent basis. For example, we observed doors to rooms containing valuable equipment being propped open at one inventory storage location. This could lead to the loss of inventory and other items of value.

#### Locating and replacing missing equipment following a major event

Firefighters may misplace or lose equipment following a major event (e.g., a large structural fire). Typically they locate the missing items the next day. However, FRS does not have a formal procedure to locate or replace missing equipment following major

events. Therefore staff members are using inconsistent and inefficient ways of finding and replacing the missing equipment. For example, some fire station staff may order a replacement right away instead of requesting a loaner. Such requests unnecessarily increase the workload of Logistics staff and could potentially lead to unnecessary orders of new equipment.

### Disposal of surplus and salvage equipment and materials

The City has a policy to guide all City staff on the proper disposal of surplus or salvage materials and equipment. We found that FRS staff members are not following the policy. For example, some staff are throwing away small items such as hand tools when they become damaged or broken. In these cases, they should be surrendering the damaged or broken item to the Materials Management Branch so that the City can realize the proceeds or benefits from the auction, sale, or recycling of the items.

### Delivery of materials and equipment to storage locations

FRS equipment is located at the FRS Logistics building and at the Materials Management Branch's Parts Department. There is no documentation on what equipment is stored at what location. We found cases where equipment was delivered/returned to the wrong location. This required that delivery staff transport the equipment a second time to the proper location. This negatively impacts the efficiency of the delivery staff as well the inventory sourcing location whether it be the Parts Department or Logistics. FRS should formally document where specific types of deliveries should be routed and share this information with operational staff.

### Recommendation 3 – Update standard operating procedures

The OCA recommends that the Fire Chief ensures that Logistics staff updates all standard operating procedures relating to the management of materials and equipment, document all important processes, and communicate all changes to procedures to staff.

### Management Response and Action Plan

#### Accepted

**Action Plan:** An immediate review of facility security has been initiated and a plan to address security issues will be developed by the end of 2013.

Fire Rescue Services, in consultation with Materials Management, will review all processes around access control, replacement of damaged inventory and the disposal of surplus inventory and will revise all associated Standard Operating Procedures by June 2014. This will include communication and training for all affected employees.

**Planned Implementation Date:** June 2014

**Responsible Party:** Deputy Fire Chief, Training and Logistics

### 5.3.3. Ordering process

We found that the processes used by fire station staff to order materials and replace lost or damaged equipment is not efficient. It relies on FRS staff to properly complete the right paper forms, ensure proper approval on forms, and provide copies of the forms to the right people. We found a lack of controls in all of these areas, which increases the inefficiency of the process and could also lead to increased costs associated with purchasing unnecessary equipment and materials.

The process also does not allow Fire Station staff to track their orders. This increases the potential that staff will order equipment more than once, which increases the workload and costs for the Logistics Area. Also the process does not allow FRS management to track and analyse consumption. Without performing analyses of stations' consumption of equipment and materials, Logistics and FRS management does not have a reliable indication of how station staff members are using these assets. Such analyses will assist FRS management to observe trends in consumption patterns at the station level, between stations, and by platoons. Analyses will also provide valuable information including highlighting quality issues with a given make or model of equipment and instances where excessive requests are being made.

#### Recommendation 4 – Update the materials and equipment ordering process

The OCA recommends that the Fire Chief ensures that Logistics staff automates the materials and equipment ordering process used by the fire stations to improve its efficiency and facilitate data analysis on consumption by station.

#### Management Response and Action Plan

##### Accepted

**Action Plan:** Fire Rescue Services will work with Materials Management to leverage and implement current City of Edmonton SAP Inventory Management functionality to ensure that inventory tracking and stock control is appropriately performed.

FRS has initiated a project to streamline and automate station supply ordering and will determine how to incorporate this project into the Inventory Management functionality.

**Planned Implementation Date:** September 2014.

**Responsible Party:** Deputy Fire Chief, Training and Logistics

## 6. Conclusion

Overall, we found that FRS does have an effective process to determine where to locate new stations and existing resources. We based this conclusion on the following:

- FRS is appropriately locating new stations.

- The percent of fires contained to room of origin in growth areas is increasing.
- Response times in areas where new stations are built are improving.
- Edmonton's FRS is not significantly different from other cities with respect to number of stations, population coverage levels, minimum apparatus staffing, and general staffing levels.
- FRS has been improving on the time it takes them to get from a station to an event.

We found that FRS is adequately tracking Operations staff training and is providing them with appropriate training. However, we also found that not all firefighters have received their required training and that FRS needs to improve its process for identifying the specific training needs of Fire Rescue Operations staff. We recommended the FRS improve its training identification process.

We found that FRS can improve the efficiency and effectiveness of its materials and equipment management processes. We identified the following recommendations to improve the efficiency and effectiveness of the materials and equipment management process:

- Regular counts of inventory.
- Update the standard operating procedures relating to materials and equipment management.
- Update the process for fire stations to order materials and equipment.

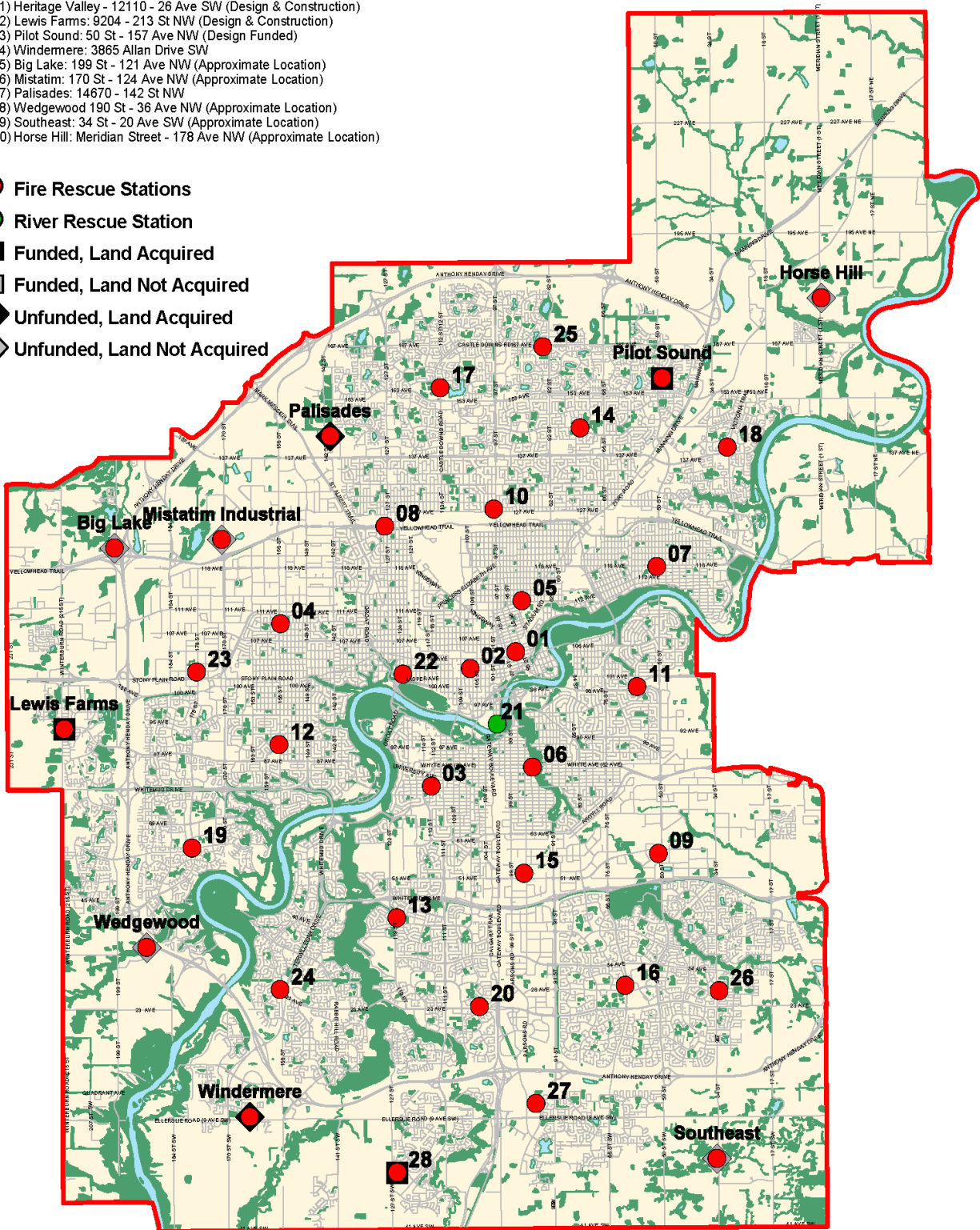
We thank the management and staff of the Fire Rescue Services Branch for their cooperation and assistance during this review.

# Appendix A Fire Station Location Master Plan (Spring 2013)

## Future Fire Stations by Priority

- 1) Heritage Valley - 12110 - 26 Ave SW (Design & Construction)
- 2) Lewis Farms: 9204 - 213 St NW (Design & Construction)
- 3) Pilot Sound: 50 St - 157 Ave NW (Design Funded)
- 4) Windemere: 3865 Allan Drive SW
- 5) Big Lake: 199 St - 121 Ave NW (Approximate Location)
- 6) Mistatim: 170 St - 124 Ave NW (Approximate Location)
- 7) Palisades: 14670 - 142 St NW
- 8) Wedgewood 190 St - 36 Ave NW (Approximate Location)
- 9) Southeast: 34 St - 20 Ave SW (Approximate Location)
- 10) Horse Hill: Meridian Street - 178 Ave NW (Approximate Location)

- Fire Rescue Stations
- River Rescue Station
- Funded, Land Acquired
- Funded, Land Not Acquired
- ◆ Unfunded, Land Acquired
- ◇ Unfunded, Land Not Acquired



### Appendix B High Growth Areas and New Station Locations

