

**COMMISSION ON FIRE ACCREDITATION  
INTERNATIONAL**

**FIRE AND EMERGENCY SERVICES SELF  
ASSESSMENT MANUAL**

**8<sup>TH</sup> EDITION**

**CITY OF CALGARY FIRE DEPARTMENT**

**W. (BRUCE) BURRELL, FIRE CHIEF**

**FEBRUARY 2014**



# **TABLE OF CONTENTS**

## **CATEGORY 1: GOVERNANCE AND ADMINISTRATION**

- Criterion 1A –Governing Body
- Criterion 1B – Agency Administration

## **CATEGORY 2: ASSESSMENT AND PLANNING**

- Criterion 2A – Documentation of Area Characteristics
- Criterion 2B – Fire Risk Assessment and Response Strategies
- Criterion 2C – Non-Fire Risk Assessment and Response Strategies
- Criterion 2D – Strategic Planning

## **CATEGORY 3: GOALS AND OBJECTIVES**

- Criterion 3A – Goals and Objectives
- Criterion 3B – Implementation of Goals and Objectives
- Criterion 3C – Measurement of Organizational Progress

## **CATEGORY 4: FINANCIAL RESOURCES**

- Criterion 4A – Financial Planning
- Criterion 4B –Financial Practices
- Criterion 4C – Resource Allocation

## **CATEGORY 5: PROGRAMS**

- Criterion 5A – Fire Suppression
- Criterion 5B –Fire Prevention /Life Safety Program
- Criterion 5C – Public Education Program
- Criterion 5D – Fire Investigation Program
- Criterion 5E – Technical Rescue
- Criterion 5F – Hazardous Materials
- Criterion 5G – Emergency Medical Services
- Criterion 5H – Domestic Preparedness Planning and Response
- Criterion 5I – Aviation Rescue and Fire Fighting Services
- Criterion 5J – Marine and Shipboard Fire Fighting and Rescue Services

## **CATEGORY 6: PHYSICAL RESOURCES**

- Criterion 6A – Physical Resources Plan
- Criterion 6B – Fixed Facilities
- Criterion 6C – Apparatus and Vehicles
- Criterion 6D – Apparatus Maintenance
- Criterion 6E – Tools and Small Equipment
- Criterion 6F – Safety Equipment

**CATEGORY 7: HUMAN RESOURCES**

- Criterion 7A - Human Resources Administration
- Criterion 7B - Recruitment, Selection, Retention and Promotion
- Criterion 7C - Personnel Policies and Procedures
- Criterion 7D - Use of Human Resources
- Criterion 7E - Personnel Compensation
- Criterion 7F - Occupational Health and Safety Risk Management
- Criterion 7G – Wellness/Fitness Programs

**CATEGORY 8: TRAINING AND COMPETENCY**

- Criterion 8A - Training and Education Program Requirements
- Criterion 8B - Training and Education Program Performance
- Criterion 8C - Training and Education Resources

**CATEGORY 9: ESSENTIAL RESOURCES**

- Criterion 9A - Water Supply
- Criterion 9B - Communication Systems
- Criterion 9C - Administrative Support Services and Office Systems

**CATEGORY 10: EXTERNAL SYSTEMS RELATIONSHIPS**

- Criterion 10A – External Agency Relationships
- Criterion 10B – External Agency Agreements

## **Category I: Governance and Administration**

For purposes of this Category, Governance is defined as the recognition of the authority that allows an organization or agency to legally form and operate. In fulfilling this responsibility, the legal entity that oversees this formation process reflects the public interest, protects the agency from undesirable external interference, determines basic policies for providing services and interprets the agency's activities to its constituency. Administration is defined as the activities that carry out the implementation of the policies established by the authority having jurisdiction. In fulfilling this responsibility, the agency or organization carries out the day-to-day operations.

The legal entity and governing authority defines the duties and responsibilities of the agency in an official policy statement, which should include a separation of powers between the policy-making function of the boards of directors or other elected officials and the executive and administrative responsibilities of those who carry out those policies. An organization's charter or local or state general statutes likely contain an agency's official policy statement.

The chief executive or chief fire officer should provide staff leadership in developing policy proposals for the legal civil authority having jurisdiction, so those officials can take action to implement public policy based upon knowledgeable input from public safety leadership. It is the primary responsibility of agency leadership that reports to an elected governing board and/or other high-ranking individual for the execution of policy, to keep that higher authority informed on all matters affecting the agency and delivery of emergency services to the public.

It must be recognized that other organizations participate in the governance of the agency, such as the state/provincial and federal governments through legislation, regulations and funding procedures, and other organizations through associations and bargaining units. The governing board has the responsibility for the administrative activity and coordinates all of these diverse interests to set the direction of the agency.

The agency administration exercises responsibility for the quality of the agency through an organized system of planning, staffing, directing, coordinating, and evaluating. The agency administration is entrusted with the assets and charged to uphold its mission and programs, to ensure compliance with laws and regulations, and to provide stability and continuity to the agency.

For many volunteer fire service organizations, the governing board is within the municipal or county government and is the executive/legislative body for municipal or county governance, some elected directly by the public, such as special districts.

In the absence of a municipally appointed fire chief, or chief executive officer, for purposes of accreditation, the duly elected or appointed fire chief shall be the individual responsible for the criteria and performance indicators.

In many city or county municipal organizations a separation of powers exists that give the governing body legislative responsibility while giving administrative responsibility for policy and administration with a strong mayor or city manager. The chief fire officer/chief executive officer in such organizations generally reports directly to the mayor, manager, or their designee. It is vital that the leadership of every agency understand who actually sets policy for the government structure they are working in and their role in implementing that policy.

## **Criterion 1A: Governing Body**

*The governing body and/or agency manager is legally established to provide general policies to guide the agency, approved programs and services, and appropriated financial resources.*

### **Summary:**

City Council is the primary governing body of the Fire Department and is established under The Province of Alberta *Municipal Government Act R.S.A. 2000*. Council is comprised of 14 elected councillors and one elected mayor whose roles are to: 1) represent the public and consider the well being of the municipality; 2) to propose, adopt, evaluate and guide policies and programs of the municipality; 3) to determine municipal services; 4) to ensure that administrative practices are in place to implement Council approved decisions, policies and programs; 5) to provide financial resources and sustain the financial integrity of the municipality; and 6) carry out any other duties specified under the Act (Part 5 Division 1).

The *Municipal Government Act* enables Council to pass bylaws with respect to the safety, health and welfare of people and the protection of people and property. Calgary's fire chief is appointed on the authority of Council and is charged with governing the internal operations of the Fire Department. The fire chief operates under City of Calgary Bylaw Number 37M84, *Operations of a Fire Department*. This bylaw grants the fire chief authority to develop and approve policies that guide the operations, programs and services of the Fire Department, and distribute financial resources as required.

A cascading series of City of Calgary planning documents provide a vision, mission and guiding direction for the Fire Department. The City's 2020 Sustainability Direction, a 10-year plan, links the 100-year vision set out in the imagineCALGARY Plan to The City's three-year business plan and budgets. The Fire Department's 2011-2021 Sustainability Plan supports The City's broad sustainability goals, advances The City's 100-year vision and provides a vision for organizational longevity and prosperity around which supporting short-term plans are developed.

## **Performance Indicators:**

### **CC 1A.1 The agency is legally established.**

#### **Description**

The City of Calgary (“The City”) is a legally established municipality under the Province of Alberta *Municipal Government Act R.S.A. 2000, Chapter M-26*. The *Municipal Government Act* enables City Council to pass bylaws respecting the safety, health and welfare of people and the protection of people and property.

City Council enacted Calgary Bylaw Number 37M84, *Operations of a Fire Department*, which is a statutory document that defines the establishment of the fire department, its governing authority, provision of policies and programs and its services.

#### **Appraisal**

The Fire Department has been legally established. The Province of Alberta *Municipal Government Act R.S.A. 2000, Chapter M-26* remains relevant and appropriate, and the Fire Department has complied with Bylaw Number 37M84. Bylaw Number 37M84 continues to provide authority and governance for the Fire Department but requires modernization to combine the primary and supporting bylaws into a single, comprehensive legislative framework to govern Fire Department operations. Due to administrative and political changes, seeking Council approval of bylaw changes has been delayed.

#### **Plan**

The Fire Department and The City’s Law Department will combine a number of fire-related bylaws, including Bylaw Number 37M84, to collate and update the bylaws to be more reflective of the present state of the Fire Department’s activities. Ongoing discussions with the City Manager and general manager of Community Services & Protective Services, the department under which the Fire Department falls in The City’s administrative structure, took place late in 2013 and work will continue to develop a legislative framework in accordance with the City Manager’s direction.

The Fire Department plans to present a consolidated bylaw for City Council approval in 2014. Until changes are approved, the Fire Department will continue to operate under Bylaw Number 37M84.

## **References**

- 1A.1a. *Province of Alberta Municipal Government Act R.S.A. 2000, Chapter M-26,*  
current as of June 17, 2013
- 1A.1b. *City of Calgary Bylaw Number 37M84, Operations of a Fire Department,*  
September 18, 1984

1A.2 The governing authority having jurisdiction over the fire service organization or agency periodically reviews and approves programs and ensures compliance with basic governmental as well as agency policies.

### **Description**

The governing authority, City Council, reviews and approves programs and ensures compliance with basic governmental and agency policies. Council designates authority for ensuring compliance with governmental policies to subject matter business units, including the Fire Department.

Council reviews and approves the three-year business plans and budgets for City departments to ensure alignment with budget guidelines and its priorities, as set out in Council's Fiscal Plan for Calgary. Each year, Council reviews budget adjustments to approve the resources necessary for each business unit to deliver on the goals and objectives set out in their respective business plans. City Council also requests reports on programs, policies or budget items throughout the year through one of four Standing Policy Committees of Council, as established by City of Calgary Bylaw Number 44M2006, *The Procedure Bylaw*.

Through The City's business planning and budget coordination process, the Fire Department completes monthly, mid- and year-end reporting on the programs and services that support Council's priorities and the four service level benchmarks in its 2012-2014 Business Plan.

### **Appraisal**

Council has periodically reviewed and approved programs and ensured compliance with governmental and agency policies. Performance reporting has required City business units, including the Fire Department, to compare actual performance to service level benchmarks identified in its Business Plan. This reporting has contained explanations and mitigations for significant deviations from intended program results, and all business units are accountable for following the direction of City Council or The City's Administrative Leadership Team to rectify deficiencies.

The review process has provided the Fire Department an opportunity to share with Council policy or program updates and recommendations to improve service delivery.

### **Plan**

The Fire Department will continue to complete monthly, mid-year and annual reporting on programs and services to City Council and will periodically report to Council to seek approval for programs, identify areas where compliance gaps exist and provide recommendations on how to maintain compliance with legislation and governmental policies.

### **References**

- 1A.2a. City of Calgary Bylaw Number 44M2006: *The Procedure Bylaw*, November 13, 2006
- 1A.2b. Council's Fiscal Plan for Calgary, C2011-65, June 28, 2011
- 1A.2c. Council Policy CFO004: Multi-Year Business Planning and Budgeting Policy for The City of Calgary, April 9, 2012
- 1A.2d. City of Calgary 2013 Mid-Year Report on Business Plans & Budgets, PFC2013-0618, September 3, 2013
- 1A.2e. City of Calgary 2012 Year End Accountability Report, PFC2013-0300, April 2, 2013
- 1A.2f. City of Calgary executive information report, monthly economic/operational indicators, 2013

1A.3 The method used to select the agency's chief fire officer/chief executive officer includes evaluation of candidate qualifications and credentials.

### **Description**

Through Bylaw Number 37M84, the position of fire chief of Calgary is appointed by City Council. Council follows all legislated and mandated hiring practices, and uses an external recruitment agency, with input from the current fire chief, the general manager of the Community Services & Protective Services department and the city manager, to develop a position profile and description outlining specific qualifications and credentials. The position is advertised nationally and internationally. Applications are submitted to the external recruitment agency and screened before selecting candidates to proceed to the interview phase.

### **Appraisal**

The method for selecting a fire chief has been appropriate and met the needs of the Fire Department and The City. Input from the Fire Department, the general manager of the Community Services & Protective Services department and the city manager regarding qualifications and credentials has provided a well-rounded perspective on the requirements for the position and provided essential input to Council and the recruitment agency in the selection process.

### **Plan**

The Fire Department will continue to follow and support the selection methods as outlined by Bylaw Number 37M84.

### **References**

- 1A.3a. City of Calgary Bylaw Number 37M84, *Operations of a Fire Department*, September 18, 1984
- 1A.3b. Position description – fire chief, The City of Calgary Fire Department
- 1A.3c. City of Calgary fire chief position and person profile, Davis Park Executive Search Consultants, May 17, 2005

1A.4 The governing body approves the administrative structure that carries out the agency's mission.

### **Description**

The Province of Alberta *Municipal Government Act R.S.A. 2000* grants City Council the authority to establish an administrative structure. This structure is comprised of the chief administrative officer and designated officers to carry out the mission of The City.

Council has the authority to provide any title to designated officer positions as they deem appropriate. At The City, the chief administrative officer holds the title of city manager. There are six designated officers, titled general managers, who report to the city manager. They make up The City's Administrative Leadership Team and oversee the operations of the municipality.

As set out in Bylaw Number 37M84, *Operations of a Fire Department*, the governing body, City Council, grants the fire chief the responsibility and authority to establish an administrative structure to carry out the Fire Department's mission.

### **Appraisal**

The process by which the administrative structure has been established and approved has adequately addressed the Fire Department's structure, reporting relationships and delivery of services and programs.

### **Plan**

The Fire Department will continue to support and comply with the administrative structure approval process.

### **References**

1A.4a. *Province of Alberta Municipal Government Act R.S.A. 2000, Chapter M-26*,  
Current as of June 17, 2013

1A.4b. City of Calgary Administrative Leadership Team organizational chart, September 3, 2013

1A.4c. City of Calgary Bylaw Number 37M84, *Operations of a Fire Department*,  
September 18, 1984

1A.5 The governing body has policies to preclude individual participation of governing board members and staff in actions involving possible conflict of interest.

### **Description**

City Council, the governing body, has approved policies in place to govern their members and staff. City of Calgary Bylaw Number 44M2006, *The Procedure Bylaw*, addresses issues involving pecuniary interest and City Council code of conduct. With respect to conflict of interest and code of conduct, City Council is guided by two policies: the *Whistle Blower Policy* and the *Ethical Conduct for Members of Council*. All employees of The City must comply with the *Administrative Code of Conduct Policy*, which is approved by The City's Administrative Leadership Team and contains a series of policy summaries including an *Administrative Conflict of Interest Policy*.

### **Appraisal**

Council, City Administration and the Fire Department have complied with relevant conflict of interest policies and the Fire Department has not had any concerns with the content or execution of any of the policies.

### **Plan**

In the event of any concerns regarding policies pertaining to conflict of interest, the Fire Department will submit items for consideration during Council's scheduled review of these policies.

### **References**

- 1A.5a. City of Calgary Bylaw Number 44M2006: *The Procedure Bylaw*, November 13, 2006
- 1A.5b. City of Calgary Council Policy Number CC026: *Whistle Blower Policy*, May 28, 2007
- 1A.5c. City of Calgary Council Policy Number CC042: *Ethical Conduct Policy for Members of Council*, July 1, 2013
- 1A.5d. City of Calgary Administration Policy Number HR-LR-005: *Code of Conduct*, September 21, 2004

1A.5e. City of Calgary Administration Policy Number HR-LR-004 (B): *Conflict of Interest Policy*, September 21, 2004

1A.6 A communication process is in place between the governing body and the administrative structure of the agency.

### **Description**

The communication process between City Council, the governing body, and the administrative structure is defined in City of Calgary Bylaw Number 44M2006, *The Procedure Bylaw*. The city manager and six general managers report to City Council via four standing policy committees and four special committees of Council.

The Fire Department communicates to Council through two formal and one informal process. On a formal basis, the Fire Department works in consultation with the general manager of the Community Services & Protective Services department to bring forward to standing policy or special committees emerging issues facing the Fire Department. It can also be requested by committee to develop reports on specific items. All formal reports contain recommendations that the committee either approves or makes amendments to prior to forwarding reports for final decision to Council. On an informal basis, the fire chief meets with each councillor following elections to present a summary of fire service activity within his or her respective ward. The fire chief also meets with councillors and the mayor on an as requested basis.

Each committee produces an annual calendar of all meetings, and from there a schedule of reports is created. The general manager and Fire Department representatives, as appropriate, appear at committee and Council meetings to address questions related to reports. The City of Calgary provides live streaming of committee and council meetings, and meeting minutes are generally available for public viewing on The City's website within three days after adjournment of a meeting.

### **Appraisal**

Formal and informal communication processes with Council have been effective in meeting the needs of the Fire Department. The process has provided the Fire Department time to research information and develop recommendations for committee and Council

decision-making purposes, and has encouraged understanding of the unique fire services challenges within each ward for individual councillors.

### **Plan**

The Fire Department will continue to use formal and informal methods for communication with Council and individual councillors.

### **References**

- 1A.6a. City of Calgary Bylaw Number 44M2006: *The Procedure Bylaw*, November 13, 2006
- 1A.6b. 2013 Council, Standing Policy Committee (SPC) and Special Committee and Priorities and Finance Committee meeting dates
- 1A.6c. Electronic Legislative Management Solution, records of meetings of Council and its committees
- 1A.6d. Calgary Fire Department Ward 12 profile, December 2013

1A.7 The role and composition of various policy making, planning and special purpose bodies are defined in a governing body organization chart for the authority having jurisdiction.

### **Description**

The role and composition of standing policy committees and special purpose bodies of City Council is outlined in City of Calgary Bylaw Number 44M2006, *The Procedure Bylaw*, which establishes the process for appointment of members of Council, Administration and citizens to agencies. There are more than 80 boards, commissions and committees that provide guidance to Council on a variety of issues. They are listed in the Boards, Commissions and Committees of Council, which outlines the purpose, role, composition, and selection process of members. The City's Administrative Leadership Team approves corporate policies and decisions that are required for internal business operations of The City.

### **Appraisal**

City Council has approved the role and composition of all boards, commissions and committees, as they deemed necessary to support The City's goals and objectives. The role and structure of policy-making, planning and special committees of City Council meets the needs of the Fire Department.

### **Plan**

The Fire Department has provided, and will continue to support direction provided by Council's boards, commissions and committees.

### **References**

1A.7a. City of Calgary Bylaw Number 44M2006: *The Procedure Bylaw*, November 13, 2006

1A.7b. Boards, Commissions and Committees of Council listing

1A.7c. City of Calgary Administrative Leadership Team organizational chart, September 3, 2013

1A.8 The governing body publishes a mission statement for the agency.

### **Description**

The imagineCALGARY Plan guides the direction of City services and sets out a 100-year vision of making Calgary, “a great place to make a living; a great place to make a life.” In 2011, City Council approved a 2020 Sustainability Direction for The City of Calgary to ensure strategic alignment of The City’s three-year business plans in achieving the vision and goals set out in imagineCALGARY. Six broad goals are set out in the 2020 Sustainability Direction and include community well-being, a prosperous economy, sustainable environment, smart growth and mobility, financial capacity and a sustainable corporation. The Sustainability Direction recognizes the importance of achieving public outcomes related to better service delivery while also focusing on the internal capacity, structures and processes to ensure longevity of a sustainable organization.

Although the Sustainability Direction does not provide a separate and distinct mission statement for the Fire Department, it is expected that every City business unit adopt strategies and actions within their three-year business plans to achieve these broad organizational goals.

### **Appraisal**

The Fire Department’s mission to serve the community through excellence in fire prevention, education, protection and safety has advanced and supported The City’s 100-year vision and sustainability goals. The Fire Department’s 2011-2021 Sustainability Plan established 10-year visions for each of its six sustainability priorities that support the broad-based goals in The City’s 2020 Sustainability Direction. In addition, the strategic result areas within the Fire Department’s business plan were designed to support The City’s and Fire Department’s sustainability vision and priorities.

### **Plan**

The Fire Department will continue to align with City and Council direction related to the sustainability goals established for the administration, as well as continue to track and report on the progress in achieving the defined sustainability goals.

## **References**

1A.8a. imagineCALGARY plan

1A.8b. City of Calgary 2020 Sustainability Direction

1A.8c. Calgary Fire Department 2011-2021 Sustainability Plan

1A.8d. Calgary Fire Department planning continuum

## **Criterion 1B: Agency Administration**

*The established administrative structure provides an environment for achievement of the agency's mission, purposes, goals, strategies, and objectives.*

### **Summary:**

The Fire Department has an established internal administrative structure to ensure its operations, services, policies and programs contribute to its mission, goals and objectives.

Upon appointment by City Council, the fire chief, under City of Calgary Bylaw Number 37M84, *Operations of the Fire Department*, has the responsibility to establish the required administrative structure to develop and implement the Fire Department's mission, purpose, goals, strategies and objectives.

The fire chief is the head of the Fire Department and has eight deputy chiefs and nine assistant deputy chiefs that make up the Fire Executive Team. Deputy chiefs, supported by assistant deputy chiefs, are responsible for a division comprised of multiple lines of business. Within each division are sections, which are overseen by managers and coordinators who report to the designated deputy chief and are members of the Fire Department's Leadership Team. Roles and responsibilities for staff are clearly defined through a thorough job evaluation questionnaire process.

An appropriate allocation of resources to achieve the goals and objectives of the Fire Department is provided through The City of Calgary's budget and business planning process. The Fire Department's three-year business plan is approved by City Council in conjunction with its capital and operating budget. This process ensures adequate resources are provided to allow the Fire Department to meet its goals and objectives.

## **Performance Indicators:**

1B.1 The administrative structure reflects the agency's mission, goals, objectives, size, and complexity.

### **Description**

The fire chief is the head of the Fire Department's more than 1,430 employees. There are eight deputy chiefs and nine assistant deputy chiefs. Each deputy chief mentors, and is assisted by, an assistant deputy chief(s) and oversees a specific division that consists of multiple lines of business for the Fire Department. Within each division are sections headed by managers and coordinators who are responsible for the day-to-day operations in support of the mission, goals and objectives of the Fire Department.

The Fire Department uses a matrix-management governance model anchored by six major service areas. This structure optimizes the effectiveness and efficiency of the Fire Department, maximizes the use of resources, encourages intra-departmental connections and communications and ensures the best possible service provision to business partners and citizens.

### **Appraisal**

The administrative structure has been designed to reflect the core service areas of the Fire Department, which supports the achievement of the Fire Department's mission, goals, objectives, size and complexity. It has worked well for the Fire Department and amendments are made as the size and complexity of the organization change.

As Council and community expectations, demand for services and risk levels change within the city, the matrix management model has allowed for the fluidity of staff across functions and sections to work on a project basis to quickly address emerging issues.

### **Plan**

The Fire Department will continue with its existing administrative structure and will amend the structure as the fire service environment, goals, objectives, size and complexity of the Fire Department change.

## **References**

1B.1a. Calgary Fire Department service delivery organizational chart, September 2013

1B.1b. City of Calgary deputy fire chief position description

1B.1c. City of Calgary deputy chief job posting

1B.1d. City of Calgary assistant deputy chief job posting

1B.2 Resource allocation reflects the agency's mission, goals, and objectives.

### **Description**

The City Manager's Office is responsible for working with City Council and The City's Administrative Leadership Team to coordinate the development of three-year business plans and budgets for Council approval. Working from the sustainability goals set out in The City's 2020 Sustainability Direction and a series of priorities set by Council through its Fiscal Plan for Calgary, The City's Business Planning & Budget Coordination team prepares a suite of documents that outline the priorities, plans, performance measures and resources that drive the provision of public service. Each City business unit then uses these guidelines to develop their business plan and budgets.

Through The City's 2012-2014 business planning and budgeting process, the Fire Department developed its business plan with a series of goals and objectives that help advance The City's sustainability goals, City Council priorities and its own sustainability vision as outlined in its 2011-2021 Sustainability Plan. In concert, the Fire Department developed a budget that allowed it to deliver on the goals and objectives set out in its business plan. City Council approved the 2012-2014 Community Services & Protective Services Business Plan, which incorporated the high-level goals and performance measures of the Fire Department, as well as the capital and operating budgets that provide the necessary resources for the Fire Department to action its 2012-2014 Business Plan.

### **Appraisal**

The process for identifying 2012-2014 goals, objectives and priorities and then devising a budget that identifies the necessary supporting funding and resources has been effective for the Fire Department. The planning process has allowed the Fire Department to align operating and capital resources to support its business plan goals and objectives.

### **Plan**

The Fire Department will continue to prepare and maintain its budget and business plan as part of the established City processes. In addition, the Fire Department will adjust its own internal system of budget planning and accountability to provide a more detailed level of

financial information than those required by The City, allowing for better identification of future budget needs.

### **References**

- 1B.2a. City of Calgary Business plan & budget coordination 2012-2014
- 1B.2b. City of Calgary, Instructions for developing the 2012-2014 business plans and budgets
- 1B.2c. City of Calgary 2020 Sustainability Direction
- 1B.2d. Community Services & Protective Services 2012-2014 Business Plan
- 1B.2e. Calgary Fire Department 2012-2014 Business Plan
- 1B.2f. Calgary Fire Department current operating budget (see Finance Lead)
- 1B.2g. Calgary Fire Department 2011-2021 Sustainability Plan
- 1B.2h. Council's Fiscal Plan for Calgary, C2011-65, June 28, 2011

**CC 1B.3 The agency administration demonstrates compliance with legal requirements of local, state/provincial, and federal governments.**

**Description**

With the exception of City of Calgary Bylaw Number 37M84, *Operations of a Fire Department*, and the Government of Alberta *Safety Codes Act* outlining the reporting and investigation of fires, there are no specific municipal, provincial or federal legal requirements directly related to the operations of a municipal fire agency.

At a provincial level, the Government of Alberta *Safety Codes Act* requires municipalities to report and investigate all fires within its jurisdictions. At a municipal level, Bylaw Number 37M84 directs the fire chief regarding the responsibilities and requirements for operating a fire department in Calgary. City of Calgary Bylaw Number 25M2002, *Emergency Management*, requires the director of emergency management, identified as the fire chief, to lead the municipality in emergency planning and response for the city.

Through performance management systems, the Fire Department regularly evaluates occupational health and safety components, facilities, vehicles and equipment to ensure ongoing compliance with legislated requirements. The Fire Department also works in partnership with others to recommend and reference changes to the Province of Alberta Municipal Government Act, plus reports to standing policy committees and City Council as required on any areas of identified or potential non-compliance with legislation or government policy.

**Appraisal**

The Fire Department has maintained compliance with all legal requirements under the provincial Safety Codes Act as confirmed by the Alberta Fire Commissioner's Office and under municipal bylaws as confirmed by Council. Through The City's Emergency Management Committee, the Calgary Emergency Management Agency meets on a regular basis to ensure that the director of emergency management is updated on any changes or legislative requirements impacting emergency management powers. Through various auditing programs, the Fire Department has demonstrated compliance with provincial and federal legal requirements.

## **Plan**

The Fire Department will continue to use performance management systems to monitor and ensure operational areas subject to government legislation remain in compliance and will maintain the use of both internal and external auditing processes to evaluate its compliance.

## **References**

- 1B.3a. City of Calgary Bylaw Number 37M84: *Operations of a Fire Department*, September 18, 1984
- 1B.3b. City of Calgary Bylaw Number 25M2002, *Emergency Management Bylaw*, April 14, 2008
- 1B.3.c. Government of Alberta *Safety Codes Act*, Chapter S-1 RSA 2000, Current as of December 10, 2012
- 1B.3d. Calgary Fire Department audits and assessments overview, 2013
- 1B.3e. *Province of Alberta Municipal Government Act R.S.A. 2000, Chapter M-26*, current as of June 17, 2013
- 1B.3f. City of Calgary Emergency Management Committee,  
<http://bcconline.calgary.ca/publish/bcc.aspx?id=32>

1B.4 Personnel functions, roles, and responsibilities are defined in writing, and a current organization chart exists that includes the agency's relationship to the governing body.

### **Description**

The City's organizational chart outlines the positions that are assigned to each business unit to complete functional roles, goals and objectives. The Fire Department's functional organizational chart outlines the functional roles encapsulated within each of its divisions.

All non-International Association of Fire Fighters union and management-exempt position roles and responsibilities are defined using a formalized job evaluation questionnaire that involves input of the employee, manager and The City's Human Resources business unit. The purpose of the job evaluation process is to create an internally equitable hierarchy of positions based on their relative value to the organization. Employees and/or management-exempt supervisors complete a job evaluation questionnaire when a new job is created or when an existing position undergoes significant change. These questionnaires form the basis of subsequent job descriptions and position postings.

### **Appraisal**

Personnel functions, roles and responsibilities have been well defined in writing and are maintained by The City's Human Resources business unit. When a new job was created or an existing position underwent significant changes in roles and responsibilities, employees and supervisors completed a job evaluation questionnaire and submitted the form to Human Resources for review and evaluation.

### **Plan**

As the Fire Department adjusts its organization and functions of personnel, it will continue to define positions in writing through the job evaluation questionnaire process and update and change the organizational chart. As roles, responsibilities and duties within particular positions change, employees will complete a job evaluation questionnaire.

### **References**

1B.4a. City of Calgary Administrative Leadership Team organizational chart, September 2013

- 1B.4b. Calgary Fire Department organizational chart, September 2013
- 1B.4c. City of Calgary Human Resources, job evaluation process, October 31, 2007
- 1B.4d. City of Calgary Human Resources, C.U.P.E. Local 38 job evaluation questionnaire  
version 1.2, March 2005
- 1B.4e. City of Calgary exempt job evaluation questionnaire

1B.5 The agency's title is consistent with its mission.

### **Description**

The title of the Fire Department is the Calgary Fire Department. The Fire Department's mission is to serve the community through excellence in prevention, education, protection, and safety.

### **Appraisal**

In the fall of 2007, the Fire Department formally reviewed its title and reaffirmed that it was consistent with its vision, mission and values.

While other titles may more accurately represent the broad base of services the Fire Department provides, the Fire Executive Team recognized that the value of Fire Department branding supersedes the clarity of the mission.

### **Plan**

The Fire Department has no plans to change the name of the Calgary Fire Department.

### **References**

1B.5a. Calgary Fire Department mission statement

## **Category II: Assessment and Planning**

Assessment and planning are defined as the processes used to identify the community's fire protection and other emergency service needs in order to identify potential goals and objectives. All agencies should have a basic source of data and information in order to logically and rationally define the organization's mission. Assessment and planning is critical to the establishment of service level objectives, standards of response coverage, and ultimately, the quality of program outcomes.

The overall purpose of using these processes is to establish a long-range general strategy for the operation of the system.

## **Criterion 2A: Documentation of Area Characteristics**

*The agency collects and analyzes data specific to the distinct characteristics of the community served and applies the findings to organizational planning.*

### **Summary:**

The Fire Department consistently identifies, analyzes, and uses key community information, including geographical boundaries, demographic and physical characteristics of geographic planning zones, demand for services, economic indicators and water supply data, in its planning efforts. These factors, in combination with the Fire Department's community risk assessment, comprise the city's unique fire service environment and are used to determine the needs of the community and design and deliver an organizational service model to address those needs.

These factors contribute to helping the Fire Department establish its geographic planning zones known as first-due districts, form the basis for portions of its community risk assessments and provide evidence used in establishing goals and objectives within its long- and short-term planning.

Since mid-2004, the Fire Department has maintained an electronic record of its historical data in a records management system known as FireRMS. This system contains all key data related to every incident to which the Fire Department responds, including data on fire, life and property loss as well as associated injuries. This incident-based data is analyzed to provide performance metrics, such as call volumes and response times, which provide another layer of insight into service demands in each of its planning zones. When this data is used in combination with a broad range of demographic data from multiple sources and many City business units, the Fire Department creates very detailed profiles that are used to formulate risk scores for each structure in the city.

## **Performance Indicators:**

2A.1 Geographical boundaries for the authority having jurisdiction are identified (e.g., street and local highway network, jurisdictional boundaries, mutual and automatic aid zones, contract service areas, etc.)

### **Description**

The Fire Department serves the area within the city of Calgary's legal geographic boundaries. These boundaries are identified and set by The Province of Alberta and are documented by The City of Calgary's (The City's) Integrated Information Services (IIS) business unit in consultation with the City Clerk's office. In the event the city's boundaries are changed due to factors such as land annexations, IIS completes the required boundary updates and provides them to the Fire Department. The Fire Department is the sole fire department operating within the city limits and is responsible for providing emergency and non-emergency response services to all areas within city limits, including all streets and the local provincial highway network.

The Fire Department's mutual aid agreement with The City of Edmonton Fire and Rescue Services identifies the geographic boundaries in which both agencies will provide assistance.

### **Appraisal**

The Fire Department has clearly defined geographic boundaries for the areas it serves within Calgary city limits and for areas in which it will receive, and provide, mutual aid.

### **Plan**

The Fire Department will continue to provide services within its legally established geographical boundaries and will continue to work with The City to monitor and adjust its geographical boundaries as necessary.

For any future secondary fire response agreements outside the city boundaries, as outlined in Performance Indicator 10A.1, the Fire Department will identify clear geographical boundaries for service areas.

## **References**

2A.1a. City of Calgary, Base data map

2A.1b. Mutual Aid Agreement – City of Calgary and Edmonton, January 2010

2A.2 The agency organizes the community into geographic planning zone(s) for purposes of analyzing service provision.

### **Description**

The Fire Department organizes the city into 38 main geographic planning zones for the purposes of analyzing service provision needs. There is also an additional boundary for the Calgary International Airport that comprises a specialized planning area for aviation rescue and firefighting services. The main planning zones are known as first-due districts and are used in the Fire Department's planning and performance evaluation.

A wide range of data from internal and external sources at the community district level is rolled up into the 38 first-due district planning zones. The City has 293 legally designated community districts that are generally divided by proximity and land use. Since Calgary civic census and federal Statistics Canada data is available at the community level, these areas are used for more detailed planning purposes. Through its geographic information system (GIS) software, the Fire Department combines census socioeconomic data with other information at the community district level, such as zoning and land use, structure counts and incident-based data including call volumes and response times, to provide another layer of insight into risk, service demands and performance in each planning zone.

### **Appraisal**

The Fire Department effectively organized the city into geographic planning zones for the purposes of analyzing service needs and evaluating service performance. Using data available at both the first-due and community district level, the Fire Department has undertaken service-planning initiatives based on assessed risk, historical incidents and call volumes, projected population growth and other demographic and emergency response factors. The Fire Department has integrated data sources from throughout The City to ensure a comprehensive analysis and understanding of its districts.

**Plan**

The Fire Department will maintain its system of defining geographic planning zones based on first-due districts and community districts, and will continue to use these geographic planning zones to analyze the need for services in communities and assess its performance.

**References**

2A.2a. Calgary Fire Department, First-due district map

2A.2b. City of Calgary, Community boundary map

2A.2c. City of Calgary 2013 Civic Census results

**CC 2A.3 The agency analyzes the community by service area/population density<sup>1</sup> for the purpose of developing total response time standards.**

**Description**

Based on the Commission on Fire Accreditation International's (CFAI's) population density definitions on page 71 of the 8<sup>th</sup> Edition of the Fire & Emergency Service Self-Assessment Manual (FESSAM), analysis shows that the city of Calgary overall can be classified as a metropolitan population density.

Sixty per cent of the city's 293 community districts are classified as having a metropolitan population density, while 35 per cent are mainly rural based on CFAI's population density classification. These areas range widely from new residential areas in the early stages of development, to established industrial areas with little resident population, to wilderness areas and completely undeveloped rural areas. There are very few community districts classified as urban or suburban, at three per cent and two per cent, respectively.

The Fire Department considers the CFAI's range of acceptable response time standards for the various population density categories, and uses these for guidance on acceptable variations to the total response time standards developed.

**Appraisal**

The Fire Department's total response time standards have been applied consistently across all population density areas, as previously approved by City Council. This approach has supported the commitment of the Fire Department and Council to ensure safe communities for all Calgarians and addressed community expectations that the fire service be appropriate, affordable and acceptable for all communities. Total response time benchmarks have varied by incident type but not by population density, as outlined in the Fire Department's Standards of Cover.

The decision to use total response time benchmarks that are applied consistently across the city for all population density areas was due in part to the city's population distribution. Calgary has been characterized as a large city with well-distributed population and

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<sup>1</sup> See FESSAM pp. 70-71 for discussion of service area/population density.

densities that do not vary widely outside of the downtown core, industrial areas and newly developing communities at the edges of the city, as shown the Fire Department's Standards of Cover. A majority of the city's area has been classified as metropolitan according to population density, and many of the areas that could be classified as rural have actually been identified as industrial areas with few actual residents but high daytime populations during business hours. As such, the Fire Department's citywide response time benchmarks have adopted travel time benchmarks that fall within acceptable ranges for a variety of population density areas as determined by CFAI.

In analyzing variations in response coverage and response time performance, population density has been taken into account when planning for optimal deployment of Fire Department resources. Though benchmarks are applied consistently across the city, variation in response time performance may be more acceptable in rural/wilderness areas, and this has been taken into account when analyzing the range of response time performance across planning districts.

### **Plan**

Because the Fire Department's current approved total response time benchmarks are consistent among all service areas/population density levels, the Fire Department will continue with analysis of total response time performance that includes population density as one consideration. It will continue to report on total response time performance at the service area/population density level to meet accreditation requirements and for the purposes of ongoing evaluation of response time standards to ensure that benchmarks align with the prescribed ranges.

### **References**

- 2A.3a. Calgary Fire Department population density by community district map, September 17, 2013
- 2A.3b. Calgary Fire Department 2014 Standards of Cover (see Distribution of Resources, and Service Level Benchmarks and Baseline Performance sections)
- 2A.3c. City of Calgary 2013 Civic Census

2A.4 Data including fire loss, injury and life loss, property loss, and other associated losses, are recorded for a minimum of three immediately previous years.

### **Description**

The Fire Department records and stores detailed information about all incidents attended and each apparatus response associated with an incident in its electronic fire records management system known as FireRMS. A record begins with the automatic import of key data from the computer-aided dispatch (CAD) system and this information is further supplemented with the manual entry of information by company officers, fire investigators and hazardous materials officers, as appropriate. Much of the information captured in the Fire Department's incident records is mandated by the Alberta Fire Commissioner's Office, including detailed data on civilian injuries and deaths due to fire, as well as content and property loss.

FireRMS contains records dating back to mid-2004. Fire-related incident data prior to that time is available in an electronic database and hard copy format.

### **Appraisal**

The Fire Department has an established system for recording and storing incident data including fire, life and property loss due to fire and associated injuries. Data for the past nine years has been made available in FireRMS and has met the Alberta Fire Commissioner's Office reporting requirements. Information within FireRMS has informed strategic, operational, fire prevention, public education and deployment planning as well as analysis of response time performance.

Training and a quality assurance program have ensured accurate and complete data input by fire officers. Furthermore, the required data submission to the Alberta Fire Commissioner's Office has included data quality assurance and verification processes, which have ensured any anomalies are corrected.

While FireRMS has adequately met the needs for recording and storing incident information, it was determined to be lacking in functionality for linking all Fire Department data, a growing concern as the Fire Department moves to increasing reliance on electronic and web-based data systems. Following a September 2010 business process

review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, as well as information from other external sources, into a single repository. Phased implementation of FireHub is anticipated in late 2014 and will allow transfer and storage of historical data to ensure consistency and long-term trend analysis.

### **Plan**

The Fire Department will continue to use its existing records management system until the new records management application is implemented in late 2014. Accuracy and completeness of incident data records will remain critical for analysis, reporting, and planning purposes, so the Fire Department will implement training in the new system for fire officers, including specialized training for staff responsible for maintaining and utilizing the incident records database for strategic and operational planning and decision-making.

### **References**

- 2A.4a. Calgary Fire Department, FireRMS (suggest live demonstration)
- 2A.4b. Calgary Fire Department, FireRMS online tutorials and manuals
- 2A.4c. Alberta Municipal Affairs Fire Statistics Reporting Manual, revised March 2006
- 2A.4d. Calgary Fire Department procedure: Conducting data quality assurance procedures, November 2013
- 2A.4e. CFDNet: FireHub
- 2A.4f. Calgary Fire Department, Summary of current state FireRMS BPR, September 30, 2010

2A.5 Demographics such as population, land use, topography, climate and occupancy groups are identified and documented.

### **Description**

The Fire Department identifies, documents and accesses a variety of demographic and related data from multiple sources and many City business units. The Fire Department participates in The City's Enterprise Geospatial Data Repository system, known as the SDE, which is accessible through its GIS. The data contained in the SDE is maintained and accessible by all City business units to ensure that it is as accurate and current as possible. The information contained in the SDE includes diverse data sets such as community boundaries, aerial survey data, projected population growth, land use, street networks and other transportation features, land records, utilities and structure-related information.

The Fire Department stores occupancy information in the occupancy module of its records management system, FireRMS, and this information can be cross-referenced against other data sets in the SDE. In cases where occupancy information is not available, information is accessed from The City's building inspection and permitting system, known as POSSE system, and The City's assessment system, known as CIAO, as well as demographic community profile information from Statistics Canada and Calgary's civic census.

### **Appraisal**

The City has a well-established system and record of identified and documented demographic and related information, including population, land use, topography, occupancies and structures, and has shared that information with the Fire Department. The City's SDE has been regularly updated with new data and information to ensure the most current information is readily available for the Fire Department's use.

### **Plan**

The Fire Department will continue to leverage The City's SDE to identify and document relevant and appropriate demographic and related data, and work with other City business units to share data and information.

## References

2A.5a. SDE web catalog: <http://gis-metadata/metadata/default.htm>

2A.5b. City of Calgary SDE instances:

[http://mycity/OurOrg/Dept/CS/InformationTechnology/Services/gis/about\\_us/Pages/SDEInstances.aspx](http://mycity/OurOrg/Dept/CS/InformationTechnology/Services/gis/about_us/Pages/SDEInstances.aspx)

2A.5c. Community district population map, September 17, 2013

2A.5d. Major land use types map, August 2013

2A.5e. Occupancy type map (by structure), August 2013

2A.6 Significant economic indicators used in the planning effort are identified (e.g., revenue sources, local economic factors, insurance evaluations, and assessed valuation of various components).

### **Description**

Economic indicators are used in the Fire Department's planning efforts, including revenue sources, such as mill rate and development infrastructure levies, and other budgetary factors as outlined in Criterion 4C. Local economic factors are also taken into account. The Fire Department obtains the majority of its local economy information from City economic reports and forecasts, including The City's bi-annual Calgary and Region Economic Outlook report as well as monthly updates published by The City's Corporate Budgets, Economics, Management Analysis & Reporting section.

Annually, the Fire Department reports to City Council on a number of benchmarks that incorporate economic considerations, including fire suppression costs per capita and calculated save rates for fire losses. A number of the Fire Department's operational indicators contribute to a monthly City of Calgary Executive Information Report, which links operational and budget indicators.

### **Appraisal**

The Fire Department identified and incorporated significant economic indicators into its planning and budgeting, including the visions set out in its 2011-2021 Sustainability Plan and the goals and objectives in its 2012-2014 Business Plan. Through both plans, the Fire Department identified key economic issues and trends it believes will impact operations, services and staffing, and developed goals to address those challenges.

These key planning documents have considered the Fire Department's fiscal capacity as a primarily tax-supported service and provided direction intended to move it towards becoming a sustainable fire service resilient to changing economic circumstances. The economic indicators have been used by the Fire Department to plan for future growth and operational needs, maintain accountability to City Council and citizens and measure the efficiency of services provided. Indicators used in the planning effort have been valuable in setting the context for strategic and business planning for the Fire Department.

## **Plan**

The Fire Department will continue to use current economic indicators in its planning efforts and maintain ongoing monitoring of economic trends.

## **References**

2A.6a. Calgary & Region Economic Outlook 2013-2018, Fall 2013

2A.6b. Current economic analysis, August 2013

2A.6c. Calgary Fire Department 2012-2014 Business Plan

2A.6d. Calgary Fire Department 2011-2021 Sustainability Plan

2A.6e. Calgary Fire Department 2012 Annual Report

2A.6f. City of Calgary, Executive Information Report, Fire monthly economic/operational indicators, 2013

2A.7 The water supply system that provides available fire flow for the planning zones, major risks, key risks, and special hazard areas should be documented and included in the planning effort.

### **Description**

The water supply system that provides available fire flow for planning zones, major risks, key risks and special hazard areas, as outlined in Criterion 9A, is documented by The City's Water Services business unit and included in the Fire Department's planning effort through its community risk assessment process. In this process, fire hydrant data, including location, fire flow and static pressure for all 15,400 public hydrants, is maintained in a database shared by the Fire Department and Water Services known as Waterfront. The data is imported into GIS and used as one of the factors that contribute to the risk rating for each structure in the city. Structures with issues related to available water supply are identified as higher risk, and associated plans and strategies are developed to mitigate the risk.

### **Appraisal**

The Fire Department has an effective method for documenting and including the water supply system in its community risk assessment and planning efforts. The ability to share information between the Fire Department and Water Services has resulted in the most up-to-date information available for analysis.

### **Plan**

The Fire Department will continue to work with Water Services to collect information about the water supply system, which will continue to be a critical factor in the community risk assessments.

### **References**

- 2A.7a. Waterfront application website (<http://waterfront>): intranet
- 2A.7b. Response map book page showing hydrants
- 2A.7c. IIS water utility map page
- 2A.7d. Utility dispatch map application (screenshot)

## **Criterion 2B: Fire Risk Assessment and Response Strategies**

*The agency assesses the nature and magnitude of the hazards within its jurisdiction and develops appropriate response coverage strategies.*

*Each significant fire risk should be categorized and listed to permit future analysis and study in determining standards of response coverage and related services.*

### **Summary:**

The Fire Department's community fire risk assessment process combines objective and quantifiable data for over 423,500 structures with the probability of a fire event occurring to calculate an overall fire risk ranking for every building. This risk ranking forms the basis for an overall fire risk analysis for each of the Fire Department's 38 planning zones, known as first-due districts.

The Fire Department's community fire risk assessment process has effectively identified the number and location of structures in all risk category rankings - maximum/special, high, moderate and low - in each first-due district. The process also provides the ability to drill down into each structure's attributes in order to perform even more detailed analysis. Crews are made aware of fire risks of all levels in their first-due districts through risk assessment and community response profile maps that contain information about the layout of the area and key features that are present in the region.

The Fire Department's standards of response coverage strategy, as outlined in its Standards of Cover, determines the distribution and concentration of the Fire Department's fixed and mobile resources through defined critical tasks for all risk levels present in the community, along with service level benchmarks to establish goals for on-scene arrival of the first-in unit and initial effective response force. The standards of response coverage strategy include a range of policies, programs, procedures and practices designed to support an optimal level of response coverage.

Regular assessment of the Fire Department's fire suppression capabilities and risk identified imbalances that are being addressed through reviews of system performance, a Performance Improvement Programme and ongoing deployment reviews.

## **Performance Indicators:**

**CC 2B.1 Each planning zone and population area is analyzed and risk factors are evaluated in order to establish a standards of response coverage.**

### **Description**

Fire risk attributes for over 423,500 structures citywide are assessed and form the basis for an overall fire risk analysis for each of the Fire Department's 38 planning zones, known as first-due districts. Risk attributes to be considered in the analysis are identified using The City's Triple Bottom Line, which considers economic, social and environmental risks. The impact from a fire event occurring that involves a structure is assessed using attributes including structure features, response constraints, hazardous materials proximity and water supply. Within each attribute are a series of related considerations to be assessed, known as layers. In total, 19 unique layers are used in calculating the final fire risk of each structure. These layers are weighted in proportion to their relative influence on the final risk.

When combined with the probability of a fire event occurring, as outlined in Performance Indicator 2B.2, the result is an overall fire risk ranking for each structure of low, moderate, high, or maximum/special risk. This comprehensive assessment of the overall fire risk within the city and first-due district risk informs the Fire Department's standards of response coverage. The process also provides the ability to drill down into each structure's attributes in order to perform even more detailed analysis.

### **Appraisal**

As indicated in its Standards of Cover, the Fire Department's fire risk assessment determined the majority of structures, 95.4 per cent, fell within the low, or normal, fire risk category. Risk assessments have been updated as new data has been made available in GIS, which has provided the Fire Department with the most current evaluation of risk for use in its planning, operational decision-making, prevention and community safety strategies.

The Fire Department has used its fire risk assessments by first-due district to develop response coverage and strategies for risk mitigation, including apparatus deployment

strategies, community response profiles and risk assessment maps for crew district familiarization and targeted fire prevention programming.

### **Plan**

The Fire Department will review its community risk assessments annually, at a minimum, to determine if further updates are required or available to enhance the evaluation of fire risk in each community and first-due district area.

### **References**

- 2B.1a. City of Calgary, Triple Bottom Line policy framework, October 2011
- 2B.1b. Calgary Fire Department, Community risk assessment process (see Supervisor, GIS Mapping and Analysis)
- 2B.1c. Calgary Fire Department 2014 Standards of Cover (see Community Risk Assessment section)
- 2B.1d. First-due district community risk assessment map, District 10, December 2013
- 2B.1e. First-due district community response profile, District 10, December 2013

2B.2 The frequency and probability of occurrence of fire suppression service demands are identified in each planning zone.

### **Description**

As a component of the Fire Department's community risk assessment, the frequency and probability of occurrence of fire suppression service demands by structure are identified in each of its 38 first-due districts, and are modeled independently for each major occupancy grouping, as identified in the *Alberta Building Code*.

For each structure, a base probability is calculated using the number of structures within an occupancy grouping that have experienced at least one fire. Individual structures within that occupancy grouping are then elevated based on the number of specific fires that have occurred involving them. The final scores are then grouped on standard deviations beyond the normal (mean) distribution to identify structures that experience an abnormal number of fire incidents.

The Fire Department's risk assessment process supports the methods set out by the National Fire Protection Association Standard 551: *Guide for the evaluation of fire risk assessments*, related to the determination of risk and recommending the use of deterministic and probabilistic models (4.4.4.2) which respect measuring both likelihood and consequence (5.1.1.1) and their correlation using a matrix approach (A.5.2.5) then generalizing the risk categories.

### **Appraisal**

The Fire Department has effectively identified the frequency and probability of fire suppression service demands in each first-due district. The Fire Department's modeling of fire probability at a structure level has been an improvement from past methods of tallying the number of fires that occurred at a single address. Its current model has employed predictive analysis to determine the possibility of a fire occurring that involves a structure within each occupancy grouping and has identified those structures that exhibit a high trend of repeat fire incidents.

Trending models have been generated on a year-over-year basis to assist in predicting the probability of occurrences and identify areas of increase in fire service demands the Fire

Department will likely experience. This predictive modeling has been used with the community risk assessments to inform planning and resource deployment efforts.

### **Plan**

The Fire Department will continue to model and analyze the frequency and probability of fire incidents within its first-due districts to support its community risk assessments. Predictive modeling will continue to be used to support community risk assessments.

### **References**

2B.2a. Calgary Fire Department, Fire probability map, August 2013

2B.3 The maximum or worst fire risk(s) in each planning zone is/are identified and located, i.e., hazards that require the maximum amount of fire protection resources or that would result in the greatest loss of life or property; the key or special hazard risk in each planning zone is identified and located, i.e., hazards, which if destroyed would be a critical or essential economic loss to the community (this also could include cultural, environmental, or historical loss); the typical or routine risks in each planning zone are identified, i.e., those risks most common to the planning zone; the remote or isolated risks in each planning zone are identified, i.e., those risks most distant from other risks as to be almost unique to the planning zone; and/or other locally adopted equivalencies are utilized to identify fire risk.

### **Description**

As outlined in Performance Indicator 2B.1, the Fire Department has analyzed each of its 38 planning zones, known as first-due districts, and each structure within its boundaries to determine fire risk levels. The potential consequence of a fire occurring within a structure is combined with the probability modeling and occurrence information as outlined in Performance Indicator 2B.2, and a risk matrix is created to identify the number and location of all levels of fire risks in each planning zone. The risk assessment yields a ranking of low, moderate, high or maximum/special risk for each structure.

Risk rankings and information are factors taken into consideration in response coverage planning and deployment optimization. Crews are made aware of fire risks of all levels in their first-due districts through risk assessment and community response profile maps that contain information about the layout of the area and key features and hazards that are present in the region. These maps are used for preparing drills and providing district familiarization.

### **Appraisal**

The Fire Department's community risk assessment process has effectively identified the number and location of structures in all fire risk category rankings (maximum/special, high, moderate and low) in each first-due district. The results by district are included in the Fire Department's Standards of Cover. The maximum/special fire risks within each

planning zone have been identified and have been shared with fire crews through maps developed for each first-due district outlining the risk level of each structure.

### **Plan**

The Fire Department will continue to use its community risk assessment to identify the specific levels of fire risk in each planning zone. As more data and information becomes available, it will be integrated into the risk assessments to further enhance understanding of risk and support appropriate response coverage and deployment system.

### **References**

- 2B.3a. Calgary Fire Department 2014 Standards of Cover (see Community Risk Assessment section)
- 2B.3b. First-due district community risk assessment map, district 10, December 2013
- 2B.3c. First-due district community response profile, district 10, December 2013

2B.4 A critical task analysis of each risk category and/or fire incident is conducted to determine the effective response force (ERF).

### **Description**

The Fire Department's critical task analysis for each risk category of fire incident determines and verifies the effective response force. Fire incidents are categorized by risk into low, moderate, high and maximum/special risk call types. This categorization is based on the need to ensure the following priorities: life safety, incident stabilization and property protection. The critical task analysis specifies the tasks required on scene for each type of fire incident response and the corresponding number of personnel needed to complete those tasks, as outlined in the Fire Department's Standards of Cover.

### **Appraisal**

The Fire Department has conducted a critical task analysis and identified each level of fire incident risk as well as the corresponding requirements for an effective response force. This work is outlined in the Fire Department's Standards of Cover and its Performance Improvement Programme, which was developed to support its 2011-2021 Sustainability Plan strategy to optimize service planning and ensure the most cost efficient and effective use of resources based on community and city risk.

Through its Performance Improvement Programme, detailed in Performance Indicator 2B.5, the Fire Department identified a series of strategies to improve response performance, including an evaluation to more closely align dispatch protocols with the required effective response force for each fire risk level.

### **Plan**

The Fire Department will continue to work with Public Safety Communications, The City's emergency and non-emergency call answer, evaluation and dispatch centre, on refining the dispatch process to support its work on critical tasking and ensure the appropriate configuration of resources is dispatched for each specific call type.

### **References**

- 2B.4a. Calgary Fire Department 2014 Standards of Cover (see Critical Tasking section)
- 2B.4b. Calgary Fire Department Performance Improvement Programme, Strategy D-5

**CC 2B.5 Agency baseline and benchmark total response time objectives for fire response conform to industry best practices as prescribed on pages 71 for first due and effective response force (ERF).**

**Description**

Benchmarks for each of the individual components of total response time for fire response were developed following an extensive review of industry best practices and take into consideration the Fire Department's unique fire service environment, including risks, financial resources and community expectations, as well as historical response time performance. Total response time benchmarks and baseline performance for fire response fall within the ranges shown for the combination of individual components of response time on page 70-71 of the 8<sup>th</sup> Edition FESSAM, considering variations in risk levels and population densities.

As outlined in Performance Indicator 5A.1, the Fire Department's first unit benchmark is to respond to fire suppression incidents in seven minutes or less total response time, 90 per cent of the time, and in eleven minutes or less total response time, 90 per cent of the time for effective response force.

In alignment with its 2011-2021 Sustainability Plan, and in pursuit of Objectives 2.2 and 11.1 in its 2012-2014 Business Plan, the Fire Department conducted a comprehensive and holistic review of response time performance and developed a Performance Improvement Programme to improve response performance and system reliability. The Performance Improvement Programme identified a number of short-, medium- and long-term strategies, such as streamlining the call handling and dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines introduced in late 2013 to manage resources based on risks, probability, reliability, and service demands.

**Appraisal**

When considering the range of variation provided by differing population density levels, the Fire Department's total response time benchmarks for fire response were within

appropriate and acceptable ranges for both first-due units and effective response force, as set out on pages 70-71 of the 8<sup>th</sup> Edition of FESSAM.

The Fire Department has assessed its total response time benchmarks for fire incidents to be within an acceptable range considering industry best practices, in particular because the Fire Department's response time benchmarks apply citywide. While the Fire Department's total response time benchmarks for fire incidents was slightly longer than the benchmark for metropolitan and urban areas than what is prescribed within the 8<sup>th</sup> Edition FESSAM, this same benchmark was the goal for suburban and rural areas as well.

Detailed results of the Fire Department's actual performance have been provided in its Standards of Cover. When considering actual performance against the total response time benchmarks, much of the Fire Department's baseline performance for the most recent period available was better than the guidelines established in the 8<sup>th</sup> Edition FESSAM. Where performance was outside of the baseline guidelines, it did not deviate substantially from the prescribed ranges.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

## **Plan**

The Fire Department will continue to reassess its benchmarks for all components of fire response time, including regular monitoring of changes to industry standards, and maintain its extensive analysis and reporting on response time performance. In particular, the Fire Department will continue to analyze the impact of strategies resulting from its Performance Improvement Programme. If appropriate, adjustments to these strategies will be made to ensure that the Fire Department's baseline total response time performance continues to improve and align with industry best practices.

As work progresses on the 2015-2018 business planning cycle, the Fire Department will incorporate updates to its response time benchmarks, some of which have been adopted internally, into broader City performance measurement reporting.

## **References**

- 2B.5a. Calgary Fire Department 2014 Standards of Cover (see Service Level Benchmarks and Baseline Performance section)
- 2B.5b. Calgary Fire Department, Performance Improvement Programme
- 2B.5c. Calgary Fire Department 2012-2014 Business Plan, Objectives 2.2 and 11.1, p. 18 and 26

**CC 2B.6 Given the fire risk(s), area of responsibility, demographics, economic indicators, fire loss data, water supply and automatic fire protection system information, an effective standards of response coverage strategy is established.**

### **Description**

The Fire Department's standards of response coverage strategy to manage the fire risks in Calgary are documented in its Standards of Cover. The standards of response coverage strategy is based on a thorough assessment of the community served, including geographical boundaries, demographic and physical characteristics of geographic planning zones, demand for services, economic indicators and community expectations. These factors, in combination with the Fire Department's community fire risk assessment outlined in Performance Indicator 2B.1, comprise the city's unique fire service environment and are used to determine the required standards of response coverage.

The Fire Department's standards of response coverage strategy determines the distribution and concentration of the Fire Department's fixed and mobile resources through defined critical tasks for all incident types and risk levels present in the community, along with service level benchmarks to establish goals for on-scene arrival of the first-in unit and assembly of effective response force. The standards of response coverage strategy include a range of policies, programs, procedures and practices designed to support an optimal level of response coverage. These begin with fire prevention activities aimed to reduce fire risk, such as inspections and public education, and extend to response initiatives, such as risk-based critical tasking for all incident types, incident pre-planning, dispatch policies, district familiarization for station crews, and station and apparatus deployment.

### **Appraisal**

The effectiveness of the Fire Department's standards of response coverage strategy has been evaluated through regular performance reports, including monthly reports to the Fire Executive Team, semi-annual and annual reports to City Council, annual compliance reports for CFAI and detailed system performance analysis undertaken to update the Fire Department's Standards of Cover.

## **Plan**

The Fire Department will continue to monitor best practices, update its fire risk assessment and other analyses that contribute to the development of its standards of response coverage and regularly measure the effectiveness of its standards of response coverage strategy.

In support of Objective 6.2 in the Fire Department's 2012-2014 Business Plan that directs staff to identify opportunities to increase partnerships with educational agencies, the Fire Department will commission a research study by the University of Alberta to investigate risk and deployment. Results of the 2014 study will be incorporated into findings for future station planning, apparatus deployment and related strategies.

## **References**

2B.6a. Calgary Fire Department 2014 Standards of Cover

2B.6b. Calgary Fire Department 2012 Annual Report

2B.6c. Calgary Fire Department 2012-2014 Business Plan, Objective 6.2, p. 20

2B.7 Fire protection suppression and detection systems are identified and being considered in the planning process.

### **Description**

When building permit applications are submitted, fire detection and suppression systems are identified and reviewed for compliance by both The City's Development & Building Approvals (DBA) business unit and the Technical Services section of the Fire Department. Technical services officers assess plans against standards set out in the *Alberta Building Code* and *Alberta Fire Code*. These codes, in turn, reference national standards including those issued by the National Fire Protection Association, Canadian Standards Association and the Underwriters Laboratories of Canada. Other guiding documents may also be used such as the Calgary Fire Department Access Standard and The City of Calgary Construction and Design Standards for Subdivision Servicing. From time to time, the Province of Alberta releases Standata documents that provide additional applied clarification on building and fire code interpretations.

Information on fire detection and suppression systems for commercial buildings is stored in the Fire Department's records management system, known as FireRMS, and the POSSEE database managed by DBA. The Fire Department's Technical Services team uses data from both systems during the planning process to ensure the proper consideration of fire protection and suppression systems.

### **Appraisal**

The Fire Department has established a multiple stage review and approval process to ensure proper consideration is given to fire detection and suppression systems in new buildings.

### **Plan**

The Fire Department will continue to work with DBA to ensure that all fire detection and suppression systems meet minimum requirements as specified in the *Alberta Building Code* and *Alberta Fire Code*.

## **References**

2B.7a. Alberta Building Code, 2006 (see Office of the Fire Marshal)

2B.7b. Alberta Fire Code, 2006 (see Office of the Fire Marshal)

2B.7c. Calgary Fire Department Access Standard, amended September 15, 2008

2B.7d. City of Calgary Construction and Design Standards for Subdivision Servicing

**CC 2B.8 The agency utilizes a formal process periodically to assess the balance between fire suppression capabilities and fire risks in the service area. Identified imbalances are addressed through the planning process.**

### **Description**

The Fire Department's community risk assessment locates and quantifies fire risks in all first-due districts, while its critical task analysis outlines the initial effective response force required for each assessed fire risk level. In addition, the Fire Department has set service level benchmarks for response times as identified in its Standards of Cover. Regular performance analysis identifies imbalances between risks and the Fire Department's ability to respond.

The Fire Executive Team is provided with monthly reporting on performance, including response time performance and flame spread as well as related indicators such as civilian injuries and fatalities and fire loss. In addition, the team is provided periodic reporting of performance following apparatus deployment changes in affected first-due districts. The Fire Department's annual report outlines for City Council and citizens its performance against service level benchmarks and annual compliance reports for CFAI highlight service level baselines, identify gaps in risk management and outline mitigation strategies. The Standards of Cover and other third-party assessments, including those through the Fire Underwriters' Survey, provide in-depth assessment and review of the Fire Department's ability to manage risk.

Imbalance between the level of risk present and the Fire Department's ability to manage it is addressed through goals and objectives in the Fire Department's 2012-2014 Business Plan, including reviews of system performance (Objective 2.1), a Performance Improvement Programme (Objective 2.2) and ongoing deployment reviews (Objective 11.1). Shorter-term methods to address imbalances include modifications to apparatus and personnel deployment.

### **Appraisal**

The Fire Department identified areas where further in-depth analysis was required to address imbalances and implemented a Performance Improvement Programme to explore the causes and make recommendations for improvements. In 2013, a formalized

deployment working group was established and has met at least twice a year to review the performance resulting from changes made within the previous year. The group has also analyzed specific performance issues that have arisen from internal and external influences.

### **Plan**

The Fire Department will continue to assess the balance between fire suppression capabilities and fire risks by using the formal processes already in place. Imbalances will continue to be addressed through implementation of the objectives set out in the Fire Department's 2012-2014 Business Plan as well as other ongoing operational planning.

### **References**

- 2B.8a. Calgary Fire Department, Sample monthly activity report for Fire Executive Team
- 2B.8b. Calgary Fire Department 2012 Annual Report
- 2B.8c. Calgary Fire Department 2014 Standards of Cover (see Community Risk Assessment section)
- 2B.8d. Calgary Fire Department 2012-2014 Business Plan, Objective 2.1, 2.2 and 11.1, p. 18 and 26
- 2B.8f. Report to Fire Executive Team, Deployment working group annual deployment review, December 4, 2013

## **Criterion 2C: Non-Fire Risk Assessment and Response Strategies**

*The agency assesses the nature and magnitude of other hazards and risks within its jurisdiction and identified appropriate strategies, methods of operation, and resource allocation required to mitigate potential emergencies.*

*These may include a wide variety of risk and service demands, e.g., hazardous materials, emergency medical services, rescue, etc. Special attention should be paid to identify, analyze and develop strategies for non-fire or limited fire risks that gain importance due to cultural, economic, environmental, or historical value.*

### **Summary:**

The Fire Department's community non-fire risk assessment process combines objective and quantifiable data for over 423,500 structures with the probability of a non-fire event occurring to calculate an overall risk ranking for every building. This risk ranking forms the basis for an overall non-fire risk analysis for each of the Fire Department's 38 planning zones, known as first-due districts. Non-fire events include emergency medical service, hazardous materials incidents and technical rescue responses.

The Fire Department's community non-fire risk assessment process has effectively identified the number and location of structures in all risk category rankings - maximum/special, high, moderate and low - in each first-due district. The process also provides the ability to drill down into each structure's attributes in order to perform even more detailed analysis. Crews are made aware of non-fire risks of all levels in their first-due districts through risk assessment and community response profile maps that contain information about the layout of the area and key features that are present in the region.

The Fire Department's standards of response coverage strategy determines the distribution and concentration of the Fire Department's fixed and mobile resources through defined critical tasks for all risk levels present in the community, along with service level benchmarks to establish goals for on-scene arrival of the first-in unit. The standards of response coverage strategy include a range of policies, programs, procedures and practices designed to support an optimal level of response coverage.

## **Performance Indicators:**

**CC 2C.1 Each planning zone and population area is analyzed and non-fire risk factors evaluated in order to establish a standards of response coverage.**

### **Description**

Non-fire risk attributes for over 423,500 structures citywide are assessed and form the basis for the overall non-fire risk analysis for each of the Fire Department's 38 planning zones, known as first-due districts. Where structures are not available to assess non-fire risk, other geographic factors are used. Non-fire risk attributes considered in the analysis are identified using The City's Triple Bottom Line, which considers economic, social and environmental risks. The impact from a non-fire event occurring that involves a structure is assessed using attributes including structure features, response constraints, hazardous materials proximity, demographics, proximity to parks/natural areas, and utilities. Within each attribute are a series of related considerations to be assessed, known as layers, which are weighted in proportion to their relative influence for each individual non-fire risk assessment. In total, 21 unique layers are used in calculating the final non-fire risk of each structure. These layers are weighted in proportion to their relative influence on the final risk.

When combined with the probability of a non-fire event occurring, as outlined in Performance Indicator 2C.2, the result is an overall non-fire risk ranking for each structure of low, moderate, high, or maximum/special risk. This comprehensive assessment of the overall non-fire risk within the city and first-due district risk informs the Fire Department's standards of response coverage. The process also provides the ability to drill down into each structure's attributes in order to perform even more detailed analysis.

For non-fire risk categories within a structure, risk assessments are developed for: emergency medical service, hazardous material incidents and technical rescue responses. For non-fire risk categories that do not occur in structures, such as emergency medical events resulting from motor vehicle collisions, water/ice rescue and natural area fires, alternate risk modeling approaches are based on their unique geographic factors.

## **Appraisal**

As indicated in its Standards of Cover, the Fire Department's non-fire risk assessment determined that within each of the individual non-fire risk event categories, the following percentage of structures fell within the low or normal risk category: 69.5 per cent for emergency medical, 76.5 per cent for hazardous materials and 86.6 per cent for the technical rescue event category.

Risk assessments have been updated as new data has been made available in GIS, which has provided the Fire Department with the most current evaluation of risk for use in its planning, operational decision-making, prevention and community safety strategies.

The Fire Department has used its non-fire risk assessments by first-due district to develop response coverage and strategies for risk mitigation, including apparatus deployment strategies, community response profiles and risk assessment maps for crew district familiarization and targeted injury and accident prevention programming.

## **Plan**

The Fire Department will review its community risk assessments annually, at a minimum, to determine if further updates are required or available to enhance the evaluation of non-fire risk in each community and first-due district area.

## **References**

- 2C.1a. City of Calgary, Triple Bottom Line policy framework, October 2011
- 2C.1b. Calgary Fire Department community risk assessment process (see Supervisor, GIS Mapping and Analysis)
- 2C.1c. Calgary Fire Department 2014 Standards of Cover (see Community Risk Assessment section)
- 2C.1d. First-due district community risk assessment map, district 10, December 2013
- 2C.1e. First-due district community response profile, district 10, December 2013

2C.2 The frequency and probability of occurrence of service demands other than fire are identified in each planning zone.

### **Description**

As a component of the Fire Department's community risk assessment, the frequency and probability of occurrence of non-fire event service demands by structure, which includes emergency medical incidents, hazardous material incidents and technical rescue incidents, are identified in each of its 38 first-due districts, and are modeled independently for each major occupancy grouping, as identified in the *Alberta Building Code*.

Some incident types that do not occur within a structure are modeled on other features, such as motor vehicle collisions that are represented by road segments, and water/ice technical rescue incidents that are modeled on river or lake segments.

For each structure, a base probability is calculated using the number of structures within an occupancy grouping that have experienced at least one incident within the non-fire event category. Individual structures within that occupancy grouping are then elevated based on the number of specific incidents that have occurred within them. The final scores are then grouped on standard deviations beyond the normal (mean) distribution to identify structures that experience an abnormal number of incidents. Non-structure base probability is based on past incident history alone for each individual non-structure site.

### **Appraisal**

The Fire Department has effectively identified the frequency and probability of non-fire event service demands in each first-due district. Trending models have been generated on a year-over-year basis to assist in predicting the probability of occurrences and identify areas of increase in non-fire event service demands the Fire Department will likely experience. This predictive modeling has been used with the community risk assessments to inform planning and resource deployment efforts.

**Plan**

The Fire Department will continue to model and analyze the frequency and probability of non-fire incidents within its first-due districts to support its community risk assessments. Predictive modeling will continue to be used to support community risk assessments.

**References**

- 2C.2a. Calgary Fire Department, Community risk assessment non-fire incident maps (see Supervisor, GIS Mapping and Analysis)
- 2C.2b. Calgary Fire Department, Community risk assessment non-fire frequency maps (see Supervisor, GIS Mapping and Analysis)

2C.3 The maximum or worst non-fire risk(s) in each planning zone is/are identified and located; the key or special hazard risk in each planning zone is identified and located, i.e., hazards, which if destroyed would be a critical or essential economic loss to the community (this could also include cultural, environmental, or historical loss); the typical or routine non-fire risks in each planning zone are identified, i.e., those risks most common to the planning zone; the remote or isolated non-fire risks in each planning zone are identified, i.e., those risks most distant from other risks as to be almost unique to the planning zone; and/or other locally adopted equivalencies are utilized to identify non-fire risks.

### **Description**

As outlined in Performance Indicator 2C.1, the Fire Department has analyzed each of its 38 planning zones, known as first-due districts, and each structure within its boundaries to determine non-fire risk levels. The potential consequence of a non-fire incident occurring involving a structure is combined with the probability modeling and occurrence information as outlined in Performance Indicator 2C.2, and a risk matrix is created to identify the number and location of all levels of non-fire risks in each planning zone. The risk assessment yields a ranking of low, moderate, high or maximum/special for each structure. In the case of emergency medical events resulting from motor vehicle collisions that do not occur within a structure, the same levels of risk rankings are applied to road segments in each planning zone.

Risk rankings and information are factors taken into consideration in response coverage planning and deployment optimization. Crews are made aware of non-fire risks of all levels in their first-due districts through risk assessment and community response profile maps that contain information about the layout of the area and key features that are present in the region. These maps are used for preparing drills and providing district familiarization.

## **Appraisal**

The Fire Department's community risk assessment process has effectively identified the number and location of structures in all non-fire risk category rankings (maximum/special, high, moderate, and low) in each first-due district. The results by first-due district are included in the Fire Department's Standards of Cover. The maximum/special non-fire risks within each planning zone have been identified and located and are shared with fire crews through maps for each first-due district outlining the risk level of each structure.

## **Plan**

The Fire Department will continue to use its community risk assessment to identify the specific levels of non-fire risk in each planning zone. As more data and information becomes available, it will be integrated into the risk assessments to further enhance understanding of risk and support appropriate response coverage and deployment system.

## **References**

- 2C.3a. First-due district community risk assessment map, district 10, December 2013
- 2C.3b. First-due district community response profile, district 10, December 2013

2C.4 A critical task analysis of each risk category and/or non-fire incident is conducted to determine the effective response force (ERF).

### **Description**

The Fire Department's critical task analysis for each risk category of non-fire incident determines and verifies the effective response force. Non-fire incidents are categorized by risk into low, moderate, high and maximum/special risk call types. This categorization is based on the need to ensure the following priorities: life safety, incident stabilization and property protection.

The Fire Department outlines critical tasking for emergency medical incidents, hazardous materials incidents, technical rescue incidents, aircraft crash rescue and public service calls. The critical task analysis specifies for each type of non-fire incident response the tasks required on scene and the corresponding number of personnel needed to complete those tasks as noted in the Fire Department's Standards of Cover.

### **Appraisal**

The Fire Department has conducted a critical task analysis and identified each level of non-fire incident risk as well as the corresponding requirements for an effective response force as part of its Standards of Cover update and its Performance Improvement Programme, which supports its 2011-2021 Sustainability Plan strategy to optimize service planning and ensure the most cost efficient and effective use of resources based on community and city risk.

Through its Performance Improvement Programme, detailed in Performance Indicator 2C.5, the Fire Department identified a series of strategies to improve response performance, including the further evaluation of non-fire event dispatch protocols to ensure effective response force requirements are met.

### **Plan**

The Fire Department will continue to work with Public Safety Communications, The City's emergency and non-emergency call answer, evaluation and dispatch centre, on refining changes to the dispatch process to support its work on critical tasking and ensure the appropriate configuration of resources is dispatched for each specific call type.

## **References**

2C.4a. Calgary Fire Department 2014 Standards of Cover (see Critical Tasking section)

2C.4b. Calgary Fire Department Performance Improvement Programme, Strategy D-5

**CC 2C.5 Agency baseline and benchmark total response time objectives for non-fire incident response conform to industry best practices as prescribed on page 71 for first due and effective response force (ERF).**

**Description**

Benchmarks for each of the individual components of total response time for non-fire response were developed following an extensive review of industry best practices and take into consideration the Fire Department's unique fire service environment, including risks, financial resources and community expectations, as well as historical response time performance. Total response time benchmarks and baseline performance for non-fire response fall within the ranges shown for the combination of individual components of response time on page 70-71 of the 8<sup>th</sup> Edition FESSAM, considering variations in risk levels and population densities.

As outlined in Performance Indicators 5E.1, 5F.1, 5G.1, and 5I.1, the Fire Department's first unit benchmark is to respond to emergency medical incidents in six minutes and thirty seconds or less total response time, 90 per cent of the time, in seven minutes or less total response time, 90 per cent of the time for hazardous material and technical rescue incidents, and as set forth by Canadian Aviation Regulations, within a three minute travel time for aviation firefighting responses.

As outlined in Performance Indicator 2B.5, the Fire Department developed a Performance Improvement Programme to improve response performance and system reliability. A number of strategies were identified to improve response coverage and performance such as streamlining the call handling and dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines introduced in late 2013 to manage resources based on risks, probability, reliability and service demands.

**Appraisal**

When considering the range of variation provided by differing population density levels, the Fire Department's total response time benchmarks for non-fire response were within

appropriate and acceptable ranges for first-due units as set out on pages 70-71 of the 8<sup>th</sup> Edition FESSAM. Although the Fire Department has not yet established effective response force benchmarks for non-fire incidents, baseline response time performance is analyzed and reported in its Standards of Cover.

The Fire Department has assessed its first-in unit total response time benchmarks for non-fire incidents to be within an acceptable range considering industry best practices, in particular because the Fire Department's response time benchmarks apply citywide. While the Fire Department's total response time benchmarks for non-fire incidents is slightly longer than the benchmark for metropolitan and urban areas than what is prescribed within the 8<sup>th</sup> Edition FESSAM, this same benchmark was the goal for suburban and rural areas as well.

Detailed results of the Fire Department's actual performance have been provided in its Standards of Cover. When considering actual performance against the total response time benchmarks, the Fire Department's first unit baseline performance for the most recent period available was generally better than the guidelines established in the 8<sup>th</sup> Edition FESSAM. Where performance was outside of the baseline guidelines, it did not deviate substantially from the prescribed ranges.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

### **Plan**

The Fire Department will continue to reassess its benchmarks for all components of non-fire response time, including regular monitoring of changes to industry standards, and maintain its extensive analysis and reporting on response time performance. In particular, the Fire Department will continue to analyze the impact of strategies resulting from its Performance Improvement Programme. If appropriate, adjustments to these strategies will be made to ensure that the Fire Department's baseline total response time performance continues to improve and align with industry best practices.

As work progresses on the 2015-2018 business planning cycle, the Fire Department will work to incorporate updates to its response time benchmarks, some of which have been adopted internally, into broader City performance measurement reporting. It will also establish effective response force benchmarks for non-fire incidents.

### **References**

2C.5a. Calgary Fire Department 2014 Standards of Cover (see Service Level Benchmarks and Baseline Performance section)

2C.5b. Calgary Fire Department Performance Improvement Programme  
[http://cfdnet/Library/prog\\_proj/PIP/Pages/Default.aspx](http://cfdnet/Library/prog_proj/PIP/Pages/Default.aspx)

**CC 2C.6 Given the importance and magnitude of service demands, a standards of response coverage strategy is established for each type of non-fire risk(s) and service demand.**

**Description**

The Fire Department's standards of response coverage strategy to manage the non-fire risks in Calgary are documented in its Standards of Cover. The standards of response coverage strategy is based on a thorough assessment of the community served, including geographical boundaries, demographic and physical characteristics of geographic planning zones, demand for services, economic indicators and community expectations. These factors, in combination with the Fire Department's community non-fire risk assessment outlined in Performance Indicator 2C.1, comprise the city's unique fire service environment and are used to determine the required standards of response coverage.

The Fire Department's standards of response coverage strategy determines the distribution and concentration of the Fire Department's fixed and mobile resources through defined critical tasks for all risk levels present in the community, along with service level benchmarks to establish goals for on-scene arrival of the first-in unit. The standards of response coverage strategy include a range of policies, programs, procedures and practices designed to support an optimal level of response coverage. These begin with prevention activities aimed to reduce injury risk and extend to response initiatives, such as risk-based critical tasking for all non-fire incident types, incident pre-planning, dispatch policies, district familiarization for station crews, and station and apparatus deployment.

**Appraisal**

The effectiveness of the Fire Department's standards of response coverage strategy has been evaluated through regular performance reports, including monthly reports to the Fire Executive Team, semi-annual and annual reports to City Council, annual compliance reports for CFAI and detailed system performance analysis undertaken to update the Fire Department's Standards of Cover.

## **Plan**

The Fire Department will continue to monitor best practices, update its non-fire risk assessment and other analyses that contribute to the development of its standards of response coverage and regularly measure the effectiveness of its standards of response coverage strategy.

## **References**

2C.6a. Calgary Fire Department 2014 Standards of Cover

2C.6b. FD Notice #176-2013: Dynamic deployment model - Apparatus redeployment guidelines. December 4, 2013

2C.6c. Calgary Fire Department 2012 Annual Report

## **Criterion 2D: Strategic Planning**

*A strategic plan or other form of long-term planning (3 to 5 years in the future) is in place and, along with the budget, is guiding the activities of the agency. The plan is submitted to the appropriate authority having jurisdiction.*

### **Summary:**

The Fire Department is guided by two key strategic plans: its 2011-2021 Sustainability Plan and its 2012-2014 Business Plan. The Sustainability Plan sets out a 10-year vision for the Fire Department that takes into consideration the economic, environmental and social issues likely to impact fire service over the next decade. It includes six sustainability priorities intended to build a self-sufficient, resilient organization, and each priority is defined by a set of targets and strategies. The Sustainability Plan advances the goals set out in broader City planning documents, including the 100-year vision set out by the imagineCALGARY Plan, which includes The City's 30-year Municipal Development Plan, and the strategies identified in The City's 2020 Sustainability Direction.

The three-year business plan and corresponding budget is intended to move the Fire Department towards the vision set out in the Sustainability Plan, while also taking into consideration the shorter term direction set out by current City Council and emerging issues in community safety. The strategic result areas, goals and objectives set out in the business plan align with, and support, the six sustainability priorities outlined in the Sustainability Plan.

The 2012-2014 Business Plan has been approved by the general manager of Community Services & Protective Services, the department under which the Fire Department falls in the City organizational structure, as well as City Council.

In 2014, the Fire Department will begin work on a four-year business plan that will guide its activities from 2015 to 2018.

## **Performance Indicators:**

### **CC 2D.1 The fire service agency has a published strategic plan.**

#### **Description**

The Fire Department's long-term strategic plan is its 2011-2021 Sustainability Plan, which outlines the Fire Department's commitment to making sustainability central to planning, decision making and operations. The plan includes targets and strategies that support six sustainability priorities of the Department: 1) managing growth; 2) ensuring safe communities; 3) leading in service to citizens; 4) elevating our environmental stewardship; 5) valuing and empowering our workforce, and 6) building service resiliency through emergency management.

The Sustainability Plan informs the Fire Department's three-year business plan and links the Fire Department's planning with The City's long-term strategic documents, such as imagineCALGARY, which provides a 100-year vision for Calgary, the 30-year Municipal Development Plan and The City's 2020 Sustainability Direction. The Fire Department's business plans are intended to move the Fire Department towards the visions set out in the Sustainability Plan.

The Fire Department's annual report provides an overview of the past year's activities and performance based on the six sustainability priorities.

#### **Appraisal**

The Fire Department's Sustainability Plan has been made available to the public through The City's web site. Staff have access to the plan through the Fire Department's intranet.

#### **Plan**

As the Fire Department prepares for its next business planning cycle from 2015-2018, it will revisit its Sustainability Plan annually to determine if any adjustments are required to ensure it remains aligned with existing and forecast factors and trends. In mid-2014, the Fire Department will present its annual report to City Council, which will provide an update on how the work of the Fire Department in 2013 helped advance its ten-year plan.

## **References**

2D.1a. Calgary Fire Department 2011-2021 Sustainability Plan

2D.1b. Calgary Fire Department 2012-2014 Business Plan

2D.1c. City of Calgary 2020 Sustainability Direction

2D.1d. imagineCALGARY Plan

2D.1e. External website <http://www.calgary.ca/CSPS/Fire/Pages/home.aspx?redirect=/fire>

2D.1f. Internal website <http://cfdnet/Library/businessplanning/Pages/Default.aspx>

2D.2 The strategic plan is approved within the agency and submitted to the governing body or administrative officer with responsibility over the fire agency and to whom the chief fire officer/chief executive officer reports.

### **Description**

The Fire Department's 2011-2021 Sustainability Plan is intended to align with, and support, The City's more broadly based 2020 Sustainability Direction. To create a plan reflective of all aspects of operations and the future plans of other business units, the Sustainability Plan is a result of an extensive stakeholder consultation process that involved Fire Department leadership and staff, and a team of representatives from business units across The City.

The plan informs the Fire Department's three-year business plan which is formally approved by the Fire Executive Team and endorsed by the fire chief.

### **Appraisal**

In 2011, the Fire Department presented its 2011-2021 Sustainability Plan to City Council and the general manager of Community Services & Protective Services.

### **Plan**

The Fire Department will review and update its Sustainability Plan annually to ensure it adequately reflects existing and forecast environmental factors and trends. This plan will inform its 2015-2018 business planning and budgeting process.

### **References**

2D.2a. Calgary Fire Department 2012-2014 Business Plan

2D.2b. Calgary Fire Department 2011-2021 Sustainability Plan

2D.2c. Calgary Fire Department Sustainability Plan cover report, CPS2011-46, September 7, 2011

### Category III: Goals and Objectives

Agencies should establish general organizational goals designed to implement their assigned mission and short-range plans. Additionally, agencies should establish goals and objectives for and to direct the priorities of operational programs (to include at least those outlined in Category V) and support services. All goals and objectives should be developed consistent with the elements of the published Strategic and Capital Improvement Plans.

Goals are general statements that identify where the agency wants to be at some point in time. Goals establish targets for performance improvement.

Objectives are specific statements designed to document the steps necessary to achieve the agency's goal statements, and apply to a specific time period. For purposes of accreditation, objectives should be consistent with the elements of the acronym "S.M.A.R.T."<sup>1</sup>

- Specific
- Measurable
- Attainable
- Realistic
- Time-bound

Standards of Cover incorporate performance objectives written to measure current (baseline) and future (benchmark) response capability and performance and should be depicted as appropriate within the written responses to the criteria outlined below. An agency that wishes to make improvements in their standards of cover performance should include goals and objectives to that effect.

Agencies should establish a systematic method of communicating and implementing the established goals and objectives. Agencies also should enact a formal process to routinely assess their organizational progress toward achievement. Each of the goals and objectives should be re-

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<sup>1</sup> Peter F. Drucker (1986). *The Practice of Management*, New York: HarperCollins Publishers, Inc.

examined and modified routinely with an eye toward their necessity and appropriateness. In this way, the agencies can ensure their goals and objectives remain consistent with their mission and their short/long-range plans.

### **Criterion 3A: Goals and Objectives**

*The agency has established general goals and specific objectives that direct the agency's priorities in a manner consistent with its mission and appropriate for the community it serves.*

#### **Summary:**

The Fire Department uses a cascading framework of strategic and business plans to establish its goals and objectives for each business planning cycle. Its 2012-2014 Business Plan is a reflection of the visions and directions set out by broader, overarching City and Fire Department plans, such as the 100-year vision set by the imagineCALGARY plan, the 10-year vision for the Fire Department outlined in its 2011-2021 Sustainability Plan and the three-year direction set forth in the Community Services & Protective Services business plan.

The mission, vision and values of the Fire Department align with the 100-year vision set out by the imagineCALGARY plan and are supported in all the work performed by the organization. The long-range plan of the Fire Department, its 2011-2021 Sustainability Plan, sets out six sustainability priorities to guide the organization over the next decade. The 2012-2014 Business Plan contains organizational and operational program goals and objectives that advance those sustainability priorities, as well as direction set forth by other overarching plans, including the Community Services & Protective Services 2012-2014 Business Plan and Council's Fiscal Plan for Calgary.

## **Performance Indicators:**

**CC 3A.1 The agency publishes general organizational goals directed toward achieving the agency's long-range plans. Corresponding specific objectives are published to implement these goals and incorporate the measurable elements of time, quantity, and quality.**

### **Description**

As part of The City of Calgary's (The City's) business planning and budget coordination program, all business units are required to develop three-year business plans. The 2012-2014 Business Plan for the Community Services & Protective Services department provides guidance to its business units in establishing their respective goals.

The Fire Department's 2012-2014 Business Plan contains five strategic result areas, 23 goals and 84 associated objectives that were developed to advance the Community Services & Protective Services business plan, support the long-range vision set out in its 2011-2021 Sustainability Plan, consider City Council direction provided through its Fiscal Plan for Calgary, address emerging issues and trends and reflect input from employees, citizens and the Fire Executive Team. Goals and objectives fall within overarching categories known as strategic result areas. Each objective has a related qualitative and/or quantitative performance measure or desired outcome to evaluate the Fire Department's progress.

Deputy chiefs are responsible for overseeing the development and execution of implementation plans for each objective assigned to their division. These implementation plans outline the activities that will need to be accomplished to meet the objective over the three-year business plan period.

### **Appraisal**

Both the Community Services & Protective Services 2012-2014 Business Plan and the Fire Department's 2012-2014 Business Plan have been published and are available on The City's web site. The Fire Department's plan has established goals and objectives that advance the long-range vision set out in its 2011-2021 Sustainability Plan. For example, Sustainability Priority 1: Managing growth in the Sustainability Plan is supported by goals and objectives within the 2012-2014 Business Plan, including:

- Goal 2: Develop a holistic strategic plan for growth in order to provide optimal and sustainable service delivery
  - Objective 2.1: Conduct a comprehensive review of system performance
  - Objective 2.2: Develop and implement a Performance Improvement Programme that considers response and deployment improvement strategies
  - Objective 2.5: Maximize the effectiveness of the Fire Department in the delivery of medical first response under the new Alberta Health Services delivery model to ensure health and wellness of citizens

### **Plan**

The Fire Department will continue to develop its multi-year business plans in accordance with The City's business planning and budget process and will work towards achievement of the goals and objectives identified in its 2012-2014 Business Plan. Throughout 2014, the Fire Department will participate in The City's 2015-2018 business planning and budget coordination process to develop its next business plan.

### **References**

3A.1a. Community Services & Protective Services 2012-2014 Business Plan

3A.1b. Calgary Fire Department 2011-2021 Sustainability Plan

3A.1c. Calgary Fire Department 2012-2014 Business Plan

3A.1d. Council's 2012-2014 Fiscal Plan for Calgary

3A.1e. Calgary Fire Department 2012-2014 Business Plan implementation work plan, Objective 2.1

3A.2 The agency establishes goals for each operational program with corresponding specific objectives that incorporate the measurable elements of time, quantity and quality.

### **Description**

Within the Fire Department's 2012-2014 Business Plan are goals and objectives related to its operational programs, specifically emergency medical incidents and fire rescue incidents, which includes fire suppression, hazardous materials and technical rescue.

Using the same process as identified in Performance Indicator 3A.1, a deputy chief is assigned to every objective within the business plan and is expected to oversee completion of an implementation plan for the objective detailing the timelines and risk. In addition, each objective has a related qualitative and/or quantitative performance measure or desired outcome to evaluate the Fire Department's progress.

### **Appraisal**

The *Appraisal* section within Criteria 3A.1 noted specific goals and objectives within the business plan tied to operational programs. In addition, the 2012-2014 Business Plan includes a series of other goals and objectives related to operational programs, including:

- Goal 11: Develop a framework for deployment planning and operational review
  - Objective 11.1: Establish an ongoing deployment review process
  - Objective 11.3: Incorporate Fire Executive Team approved recommendations from the 2011 Review of the Deployment Strategy of CFD into deployment planning
  - Objective 11.4: Update the Vital Industrial Information Program
  - Objective 11.5: Establish a framework for fire pre-incident planning related to high risk facilities such as hospitals, E2 hazardous materials sites and identified Wildland Urban Interface areas within city limits

### **Plan**

The Fire Department will continue to evaluate progress and refine objectives in its 2012-2014 Business Plan to support attaining its operational program goals. It will also assess its current operational performance against service level benchmarks discussed in Performance Indicator 3C.2 to develop new operational program goals and objectives for its 2015-2018 Business Plan.

## **References**

3A.2a. Calgary Fire Department 2012-2014 Business Plan

3A.2b. Calgary Fire Department 2012-2014 Business Plan, implementation work plan, Objective  
11.1

3A.3 Published materials accurately portray the agency's goals and objectives as well as mission, vision and values in context.

### **Description**

The Fire Department's 2011-2021 Sustainability Plan and 2012-2014 Business Plan provide context for why and how visions, strategies, goals and objectives were created. Both plans discuss the internal and external environmental factors influencing the Fire Department's strategies, goals and objectives, including emerging issues, stakeholders and other City and Fire Department plans that were considered. The 2012-2014 Business Plan also sets out the mission, vision and values guiding the Fire Department.

Each plan discusses how the strategies, goals and objectives align with higher-level direction provided by a cascading series of long- and medium-term plans, including the imagineCALGARY plan and The City's 2020 Sustainability Direction. Every plan is developed to support the goals of the plans above and below in the cascading framework.

Regular reviews, on a semi-annual basis, of the 2012-2014 Business Plan by the Fire Executive Team ensure the goals and objectives within the plan are an accurate reflection of the work being performed by the Fire Department. At the semi-annual review, the Fire Executive Team updates, adds and removes goals and objectives as appropriate to accurately reflect the current operating environment and budget realities.

### **Appraisal**

The Fire Department's 2011-2021 Sustainability Plan and 2012-2014 Business Plan have been published and reflected the mission, vision and values in the broader strategic result areas, strategies, goals and objectives within the plans. In addition, the business plan clearly illustrated how the Fire Department's work supports the broader vision set out in higher-level plans of The City and Fire Department.

Regular reviews of the business plan have resulted in revised goals and objectives that accurately reflect the work that is underway in the Fire Department.

## **Plan**

The Fire Department will continue to publish its business plan with its mission, vision and values, as well as a review of the environment in which planning has taken place to ensure context is provided for the goals and objectives set in each period. The Fire Executive Team will continue with its regular review of the business plan and modify goals and objectives as necessary to ensure an accurate representation of the work that is underway in the Fire Department.

## **References**

- 3A.3a. Calgary Fire Department 2012-2014 Business Plan
- 3A.3b. City of Calgary 2020 Sustainability Direction
- 3A.3c. Community Services & Protective Services 2012-2014 Business Plan
- 3A.3d. Calgary Fire Department 2011-2021 Sustainability Plan
- 3A.3e. Calgary Fire Department planning continuum
- 3A.3f. City of Calgary imagineCALGARY plan, revised March 12, 2013

3A.4 Agency goals and objectives are submitted to and reviewed by the governing authority responsible for establishing policy.

### **Description**

In 2011, the governing authority of City Council approved the Fire Department's 2011-2021 Sustainability Plan, which sets out its long-term vision and strategies.

For 2012-2014, Community Services & Protective Services, the department under which the Fire Department resides in The City's administrative structure, developed its business plan in consultation with its business units, including the Fire Department. Strategic results areas and goals from the Fire Department's business plan are rolled up into performance measures and strategies to form the Community Services & Protective Services business plan.

Council reviews and approves the Community Services & Protective Services business plan to ensure its priorities are advanced, as outlined in Council's Fiscal Plan for Calgary, and other key directives are supported, such as The City's 2020 Sustainability Direction and imagineCALGARY Plan. In addition to business plans, City Council approves the corresponding budgets to support achievement of the plan's goals and objectives.

The Fire Department's business plan goals and objectives are approved by the Fire Executive Team, fire chief and general manager of Community Services & Protective Services before being rolled up into high-level strategies and performance measures within the Community Services & Protective Services business plan for Council approval.

### **Appraisal**

On September 7, 2011, Council reviewed and approved the Fire Department's 2011-2021 Sustainability Plan.

On November 29, 2011, Council reviewed and approved the Community Services & Protective Services 2012-2014 Business Plan and budget.

### **Plan**

The Fire Department will continue to use existing committee and Council processes to approve long-term planning and direction related to Fire Department activities. The Fire Department will also continue to use The City's business planning and budget coordination process as a means

for securing City Council approval of its business plan, goals and objectives and the budgetary resources to support them.

## **References**

3A.4a. Community Services & Protective Services 2012-2014 Business Plan and Budget

3A.4b. Calgary Fire Department 2012-2014 Business Plan

3A.4c. Community Services & Protective Services Report to the SPC on Community and Protective Services, CPS2011-45, Calgary Fire Department Sustainability Plan, 2011-2021, September 7, 2011

3A.4d. Special Meeting of Council, Re: 2012-2014 Business Plan and Budget Debates, Commencing 2011 November 21, item 5.1.1

<http://agendaminutes.calgary.ca/sirepub/mtgviewer.aspx?meetid=317&doctype=MINUTES>

### **Criterion 3B: Implementation of Goals and Objectives**

*A management process is utilized for implementation of goals and objectives.*

#### **Summary:**

All objectives within the Fire Department's 2012-2014 Business Plan are assigned to a division and its deputy chief. The deputy chief delegates objectives as appropriate to staff and provides oversight and direction to ensure the objective is completed. For each objective, a detailed implementation plan is developed that outlines the specific actions, projects and tasks required, as well as corresponding timelines. A risk analysis, consistent with The City of Calgary's Integrated Risk Management Policy, is also included within each implementation plan.

Through this management process, all tasks outlined in implementation plans are intrinsically linked back to the Fire Department's goals and objectives and City Council priorities. The Fire Executive Team reviews the status of all objectives on a semi-annual basis to collaboratively address any issues posing a barrier to completion and assess whether objectives continue to remain relevant.

Goals and objectives within the business plan form the basis for the fire chief's and each deputy chief's annual performance evaluation to ensure a comprehensive organizational alignment with the business plan.

## **Performance Indicators:**

**CC 3B.1 Some form of organizational management process is identified and used to implement and track the agency's goals and objectives.**

### **Description**

Every objective within the Fire Department's business plan is assigned to a division and its respective deputy chief. Division staff are assigned objectives and expected to develop an implementation plan, using templates provided by the Fire Department's Strategic Services section that help outline the specific tasks and timelines required to fulfill the objective. A risk analysis, consistent with The City of Calgary's Integrated Risk Management Policy, is completed for each objective within the plan and forms part of the implementation plan as well.

By following this process, all tasks outlined in implementation plans are intrinsically linked back to Fire Department goals and objectives and City Council priorities.

Semi-annually, the Fire Executive Team conducts a business plan review to assess the progress made on achieving the assigned objectives. Goals and objectives from the business plan form the basis of the fire chief's and each deputy chief's annual performance evaluation.

### **Appraisal**

The Fire Department has a well-established process for identifying responsibility for completion of each objective within its business plan, and a clear path for staff to follow in developing actions that support achieving objectives. The Fire Department has tracked progress of objectives on a regular basis and adjusted, added or removed objectives as necessary to reflect changes in the operating environment or Council priorities.

### **Plan**

The Fire Department will continue to assign objectives within its business plan to divisions to ensure clear accountability for delivering on items within the business plan. It will also continue to conduct semi-annual business plan reviews of progress made on achieving assigned objectives and incorporate business plan objectives into the Fire Executive Team performance evaluation process.

## **References**

- 3B.1a. Calgary Fire Department 2012-2014 Business Plan
- 3B.1b. Calgary Fire Department 2012-2014 Business Plan implementation work plan template
- 3B.1c. Calgary Fire Department 2012-2014 Business Plan report card, 2013
- 3B.1d. City of Calgary exempt performance and career development process form, P 994 (2010-03)
- 3B.1e. City of Calgary Integrated Risk Management Policy CC011, July 6, 2004
- 3B.1f. Calgary Fire Department 2012-2014 Business Plan register (see Business Policy Planner)

3B.2 The agency's goals and objectives are disseminated to all members of the organization.

### **Description**

The Fire Department's goals and objectives are outlined in its 2012-2014 Business Plan. All fire stations and office locations receive a hard copy of the business plan, and all staff can access the plan on the Fire Department's internal and external websites. The Fire Department's intranet has a section dedicated to business planning and items posted there include archived business plans, business planning resources, City business plans, and the Fire Department's 2011-2021 Sustainability Plan.

### **Appraisal**

Each fire station and office location has received a copy of the Fire Department's 2012-2014 business plan, and the plan has been made available online to all staff.

### **Plan**

The Fire Department will continue to publish its business plans on both its internal and external websites and will distribute a copy to each fire station and office location.

### **References**

3B.2a. CFDNet Intranet Site, screen shot of business planning section

3B.2b. Calgary Fire Department external website,

<http://www.calgary.ca/CSPS/Fire/Pages/home.aspx?redirect=/fire>

### **Criterion 3C: Measurement of Organizational Progress**

*Processes are in place to measure and evaluate progress towards completion of specific objectives and overall system performance. The goals and objectives are re-examined and modified periodically.*

#### **Summary:**

The Fire Executive Team reviews the goals and objectives proposed for the year in the Fire Department's three-year business plan and assesses whether they are still appropriate given current environmental factors, including any changes made to its budget. The goals and objectives are modified, added or removed as necessary.

For each objective set out in the Fire Department's 2012-2014 Business Plan, at least one quantitative and/or qualitative performance measure or desired outcome is established to identify what a successful outcome would look like and provide a means by which progress can be evaluated. In addition, key service level benchmarks related to the Fire Department's operational program are set out in the business plan to define for citizens and City Council what successful response performance looks like for the 2012-2014 period. These benchmarks are reported on monthly, semi-annually and annually to City Administration and Council and annually through the Fire Department's annual report to Council and citizens.

A series of additional service level benchmarks related to the Fire Department's operational program are reported on monthly to the Fire Executive Team to assist in operational planning decisions.

## **Performance Indicators:**

**CC 3C.1 The agency's goals and objectives are examined and modified at least annually for quality and to ensure they remain current and consistent with the agency's mission, vision, and long range plan(s).**

### **Description**

On at least an annual basis, the Fire Executive Team reviews the goals and objectives proposed for the year in the Fire Department's three-year business plan and assesses whether they are still appropriate and relevant given the current operating environment and other internal and external factors, including any changes to its budget. Goals and objectives are also reviewed to ensure continued alignment with, and advancement of, the strategies and visions set out in the Fire Department's 2011-2021 Sustainability Plan.

City Council approves any significant changes to goals or objectives that result in service level changes, require additional budget, impact Council's Fiscal Plan for Calgary or The City's 2020 Sustainability Direction, or places the Fire Department at risk of not meeting the service level benchmarks identified in its 2012-2014 Business Plan.

### **Appraisal**

The Fire Department has established a formal process for the semi-annual review of its business plan goals and objectives. The process has ensured Fire Department activities are current and consistent and continue to help it progress towards achieving the targets, vision and strategies identified in its Sustainability Plan.

### **Plan**

The Fire Department will continue to use the established process for semi-annual review of its business plan goals and objectives by the Fire Executive Team.

### **References**

3C.1a. Calgary Fire Department 2012-2014 Business Plan

3C.1b. Calgary Fire Department 2011-2021 Sustainability Plan

3C.1c. Calgary Fire Department 2012-2014 Business Plan register (see Business Policy Planner)

3C.2 The agency establishes performance measures to evaluate achievement of general organizational and operational program goals and objectives.

### **Description**

Long-term performance targets are set out in the Fire Department's 2011-2021 Sustainability Plan. These are broken down into shorter-term strategies that are incorporated into the Fire Department's 2012-2014 Business Plan objectives and assessed through the objectives' respective performance measures.

For each objective set out in the Fire Department's 2012-2014 Business Plan, at least one quantitative and/or qualitative performance measure or desired outcome is established to identify what a successful outcome would look like. In addition, key service level benchmarks related to the Fire Department's operational program are set out on page 56 of the Business Plan to define for citizens and City Council what successful response performance looks like for the 2012-2014 period. These service level benchmarks are reported on monthly to City Administration and Council through the Executive Information Report, semi-annually and annually through the Community Services & Protective Services business plan and budget process and annually through the Fire Department's annual report to Council and citizens.

A series of additional service level benchmarks related to the Fire Department's operational program are reported on monthly to the Fire Executive Team to assist in operational planning decisions.

### **Appraisal**

The Fire Department has a broad range of measures spread across its Sustainability Plan and Business Plan as well as a series of performance benchmarks used in operational planning. To improve transparency and reporting, the Fire Department needs to consolidate all of these measures and benchmarks into its business plan to simplify monitoring and reporting.

Service level benchmarks related to the Fire Department's operational program as set out in the Business Plan have been monitored and reported on a regular basis through the year.

Performance measures tied to organizational objectives in the Business Plan, while established, have not been consistently monitored and reported.

## **Plan**

In its 2015-2018 business plan, the Fire Department will integrate the targets from its Sustainability Plan into business plan performance measures to create greater continuity between plans and ensure Sustainability Plan targets are being addressed each year. The 2015-2018 business plan will also include key service level benchmarks from its 2012-2014 Business Plan and additional performance benchmarks currently being used internally, as outlined in its Standards of Cover, to improve alignment with Commission on Fire Accreditation International standards as well as overall transparency and accountability. In the 2015-2018 business planning cycle, the Fire Department will also develop regular reporting on the status of all performance measures included in its business plan.

In 2014, the Fire Department will provide monthly reporting to the general manager of Community Services & Protective Services, the department under which the Fire Department resides in The City's administrative structure, on service level benchmarks, performance, section activities, business plan and project status, and operational and capital budget information to support additional accountability by the Fire Department and increase understanding of its operations.

## **References**

- 3C.2a. Calgary Fire Department 2011-2021 Sustainability Plan
- 3C.2b. Calgary Fire Department 2012-2014 Business Plan, p. 56
- 3C.2c. Calgary Fire Department 2012 Annual Report
- 3C.2d. City of Calgary executive information report, monthly economic/operational indicators, 2013
- 3C.2e. Calgary Fire Department Monthly activity report, December 2013
- 3C.2f. Community Services & Protective Services general manager accountability reporting (see Business and Policy Planner)
- 3C.2g. Calgary Fire Department 2014 Standards of Cover (see Service Level Benchmarks and Baseline Performance section)



## **Category IV: Financial Resources**

This category evaluates the financial condition of an agency to determine its ability to fund operational priorities, its effectiveness in serving the community needs, and its prognosis for long-range quality of service given what can be a dynamic and adverse fiscal environment.

Resources must be adequate to maintain the various programs to which an agency has made a commitment. Whether the agency is public or private, stability of revenues (demonstrated by a consistent history through at least the past three years) is fundamental.

The chief fire officer or chief executive officer, professional staff, and governing board share responsibility for planning, management, and stability of financial resources. Budget preparation is the ultimate responsibility of the chief fire officer or chief executive officer and administrative staff. Since the budget is the financial expression of agency programs and priorities, it should be developed through appropriate consultation with the governing board of the authority having jurisdiction, departments, divisions, and other units.

In approving the budget, the governing board approves the acquisition and allocation of resources consistent with agency goals, objectives, and stated priorities.

## **Criterion 4A: Financial Planning**

*Financial planning and resource allocation is based on agency planning involving broad staff participation.*

*The agency's plan for financing should reflect sound strategic planning and a commitment to its stated goals and objectives. Financial support for programs and services should be deemed by the agency as adequate to maintain the number and quality of personnel and other operational costs.*

### **Summary:**

The City of Calgary's Business Planning & Budget Coordination (BPBC) team provides direction to all City business units for the uniform creation of business plans and budgets to support City Council's priorities and direction. This three-year planning cycle process integrates strategic planning and budgeting as well as operating and capital impacts of growth.

Within the Fire Department, staff and divisions across the organization participated in the 2012-2014 business planning and budget process. The Fire Executive Team worked collaboratively to prioritize business plan goals and objectives and ensure the business plan moved the Fire Department towards the long-term vision set out in its 2011-2021 Sustainability Plan. In conjunction with the Fire Department's finance lead, the Fire Executive Team assessed budget impacts related to the goals and objectives in the business plan. Through this integrated business planning and budgeting process, the Fire Department ensures the goals and objectives stated in its business plan reflect its operating and capital budget allocations.

## **Performance Indicators:**

4A.1 The governing body and regulatory agencies give the agency appropriate direction in budget and planning matters within their scope of services.

### **Description**

The Province of Alberta *Municipal Government Act (MGA)* outlines in sections 242-246 the requirements for The City of Calgary (The City) to prepare and establish annual operating and capital budgets. Further, the *MGA* legislates that The City prepare its financial statements in accordance with principles and standards established by the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants.

The City Manager's Office is responsible for working with City Council and The City's Administrative Leadership Team to coordinate development of three-year business plans and budgets for Council approval. Council's Fiscal Plan for Calgary sets out Council's priorities for the planning cycle, which in turn guides the development of department business plans. The City's Business Planning & Budget Coordination (BPBC) team supports Council's direction by coordinating the citywide process of preparing and delivering an integrated system of multi-year plans and budgets for the 2012-2014 business cycle.

The BPBC team is responsible for preparing a suite of documents that outlines the priorities, plans, performance measures and resources that drive the provision of public service for citizens. The BPBC team coordinates with City business units to complete business plans and budgets based on these guidelines that are ultimately approved by City Council.

### **Appraisal**

The Fire Department has received the direction it requires to meet Council and City Administration planning expectations and has prepared its financials in accordance with the *MGA*.

## **Plan**

The Fire Department will continue to prepare its business plan and budget as part of The City's process and adhere to the governing legislation. In addition, the Fire Department will continue working on its own internal system of financial planning and accountability at a more detailed level than City requirements to allow it to better define its budget needs in future years. In 2014, the BPBC process of integrating business plans and budgets will evolve into a four-year business cycle running from 2015 to 2018.

## **References**

- 4A.1a. Province of Alberta, *Municipal Government Act, R.S.A. 2000*, Chapter M-26,  
Current as of June 17, 2013, Section 242-246, pp.138-140
- 4A.1b. Multi-Year Business Planning and Budgeting Policy for The City of Calgary,  
CFO004, amended April 9, 2012
- 4A.1c. City of Calgary Business plan & budget coordination 2012-2014
- 4A.1d. Council's Fiscal Plan for Calgary, C2011-65, June 28, 2011

**CC 4A.2 Policies, guidelines and processes for developing the annual budget are defined and followed.**

**Description**

For the 2012-2014 business planning and budget cycle, The City uses a three-year budget process, which also includes processes for annual budget adjustments. City Council establishes budget guidelines at the start of each three-year budget cycle and for each annual budget adjustment process. These guidelines outline any proposed adjustments for budget realignment, increases or decreases.

The Fire Department's Fire Executive Team follows the policies, guidelines and processes set out by Council to allocate base funding allotments to the appropriate divisions and accounts within the Fire Department, identify new spending requests and complete appropriate City budget submission requirements. The information is then entered into the corporate budget system and reporting templates. This information system is used by all City business units and is under the control of The City's Finance business unit. Once budgets are entered into the corporate budget system, Council reviews and approves the budget and the information is then added to The City's general ledger.

**Appraisal**

The Fire Department followed the budget policies, guidelines and processes for its three-year budget and annual adjustments. These guidelines, in conjunction with the Fire Department's internal processes, have provided a clear framework and process for developing the annual budget.

**Plan**

The Fire Department will continue to develop its budgets within the overall City budgeting structure, which outlines the policies, guidelines and processes to be followed. As outlined in Goal 10 of its 2012-2014 Business Plan, the Fire Department will continue to refine and implement comprehensive capital and operating strategies, including evolving its internal financial planning processes to improve accountability for operating budget data. The Fire Department will also continue to enhance the quality of information

used for its budget planning in conjunction with its Strategic Services and Finance sections.

### **References**

- 4A.2a. Multi-Year Business Planning and Budgeting Policy for The City of Calgary, CFO004, amended April 9, 2012
- 4A.2b. City of Calgary, Instructions for developing the 2012-2014 business plans and budgets
- 4A.2c. City of Calgary, Business planning, operating and capital budget adjustments instructions 2013 and 2014
- 4A.2d. Community Services & Protective Services 2012-2014 Business Plan
- 4A.2e. Calgary Fire Department 2012-2014 Business Plan, Goal 10, p. 25

4A.3 The budget process involves input from appropriate persons or groups, including staff officers and other members of the agency.

### **Description**

In conjunction with other members of the Fire Department, the finance lead coordinates its multi-year budget and annual budget adjustment process. Early in the budget process, the Fire Executive Team, with help from the Fire Department's Strategic Services section, prioritizes its needs based on its strategic result areas, which are translated into the goals and objectives in the Fire Department's 2012-2014 Business Plan.

Through Council's employee and public engagement process called *Our City, Our Budget, Our Future*, all staff are encouraged to participate in The City's business plan and budget development process. Once feedback is consolidated, the budget target is determined for the City and City Council prepares its guidelines. Following receipt of that information, the Fire Department then determines which programs and services can be adequately resourced within its target budget. The priority given to programs and services is reviewed several times throughout the budget process. Through the finance lead, the Fire Executive Team uses this information to coordinate development of the final budget.

### **Appraisal**

The current budget process has been successful in securing input from appropriate internal groups and enabling the Fire Department to meet its financial and business plan objectives. The Fire Executive Team was closely involved in planning and budget decisions for the 2012-2014 business planning cycle.

### **Plan**

Through the final year of The City's 2012-2014 business planning and budget cycle and in preparation for the 2015-2018 business planning and budget cycle, the Fire Executive Team will continue to be actively involved in the development of the overall capital and operating budget. In service of Objective 10.2 in the Fire Department's 2012-2014 Business Plan, the Fire Executive Team will work to improve understanding and accountability for operating budget data.

## References

4A.3a. Calgary Fire Department 2012-2014 Business Plan, Objective 10.2, p. 25

4A.3b. Budget 101, Shared drive, S:\FIREFinance\Rourke\Budget 101.docx

4A.3c. Calgary Fire Department Hot News, *Our City, Our Budget, Our Future*, March 28, 2011

4A.4 The annual budget, short and long-range financial planning, and capital expenditures are consistent with agency priorities and support achievement of the agency's strategic plan and goals and objectives.

### **Description**

The Fire Department's strategic, long-term vision is contained within its 2011-2021 Sustainability Plan and the short-range goals and objectives that support achievement of the Sustainability Plan are in its 2012-2014 Business Plan. The Business Plan provides incremental movement towards the long-term vision set out in the Sustainability Plan; therefore, the annual capital and operating budgets associated with each business plan cycle provide the resources necessary to deliver on the priorities set out by the Sustainability Plan.

### **Appraisal**

The current budget and financial planning process has been successful in enabling the Fire Department to meet its strategic, sustainability and business plan objectives. Capital and operating budgets have been developed to provide the resources necessary to accomplish the goals and objectives set out in the business plan. If circumstances changed or plans were not carried out within the identified timelines, priorities were reviewed and the budget was adjusted through City Council's annual budget adjustment process.

In 2013, the Fire Department created two additional capital finance positions, which specifically monitor the progress and priority of capital projects in order to adjust the budget needs as required.

### **Plan**

Deputy chiefs, in partnership with the Finance section, will continue to monitor assigned objectives in the Fire Department's three-year business plan and associated financial resources to ensure both elements remain aligned.

In 2014, the Fire Department will formulate the 2015-2018 business plan and budget to ensure continued alignment between the long-term vision set out in the Sustainability Plan, the shorter-term business plan and corresponding capital and operating budgets.

## **References**

4A.4a. Calgary Fire Department 2012-2014 Business Plan

4A.4b. Calgary Fire Department 2011-2021 Sustainability Plan

4A.4c. Community Services & Protective Services 2012-2014 Business Plan

4A.5 Budgeted expenditures are consistent with projected financial resources.

### **Description**

The Province of Alberta *Municipal Government Act (MGA)* legislates that all municipalities in the Province of Alberta are required to prepare balanced annual budgets. Given direction provided by City Council and The City's Administrative Leadership Team, individual City business units prepare their respective annual budgets based on the projected financial resources for the upcoming years. The City of Calgary prepares its audited financial statements in accordance with principles and standards established by the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants, as required by the *MGA*.

As part of the budget creation, actual revenues and expenditures are reviewed. This information is used to make any necessary budget adjustments and reallocations.

Deputy chiefs are accountable for delivering assigned objectives from the business plan within their existing budget allocations and identify where budget realignments are required. Deputy chiefs and assistant deputy chiefs manage their respective division budgets to ensure detailed line budgets appropriately reflect current realities. This information is then shared with the Fire Executive Team for realignment where needed.

### **Appraisal**

The Fire Department has consistently met the requirements of a balanced budget as outlined in the *MGA*. The current process has been successful in enabling the Fire Department to meet its financial and business plan objectives.

### **Plan**

The Fire Department will continue to follow The City's established budget processes to ensure expenditures balance against projected annual budgets and ensure that expenditures match the established resources.

### **References**

4A.5a. Province of Alberta, *Municipal Government Act, R.S.A. 2000*, Chapter M-26,  
Current as of June 17, 2013, Section 242-246, pp.138-140

4A.5b. Multi-Year Business Planning and Budgeting Policy for The City of Calgary,  
CFO004, amended April 9, 2012

4A.5c. Fire internal financial management report to December 31, 2012 (see Finance  
Lead)

4A.5d. City of Calgary 2012 Annual Report for the year ended December 31, 2012

#### **Criterion 4B: Financial Practices**

*Financial management of the agency exhibits sound budgeting and control, proper recording, reporting and auditing.*

*NOTE: An agency that has already received the Certificate of Achievement for Excellence in Financial Reporting (Certificate) from the **Government Finance Officers Association (GFOA)** for their **Comprehensive Annual Financial Report (CAFR)** may submit that certificate and their **Comprehensive Annual Financial Report** as prima facie compliance with this criterion. (The agency need not address performance indicators 4B.1 – 4B.8). Reciprocity for this is acknowledged by review of the GFOA's process for reviewing CAFRs submitted to its Certificate Program.*

#### **Summary:**

The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011. Presented by the Government of Finance Officers Association (GFOA), The City of Calgary has achieved the high program standards for Canadian Government accounting and financial reporting.

#### **References:**

- 4B.a. Government of Finance Officers Association (GFOA) Canadian Award for Financial Reporting (CAnFR), The City of Calgary, December 31, 2011
- 4B.b. The City of Calgary Annual Report 2011 for the year ended December 31, 2011

**Performance Indicators:**

4B.1 Financial resources management adheres to generally accepted accounting practices (GAAP) for budgeting and accounting. Appropriate safeguards are in place for expenditures, fiscal reports are provided for administrative decision making, and sufficient flexibility exists to meet contingencies.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.2 Financial administration responsibilities are organized into specific assignments, which are supported by specific clearly-defined policies.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.3 Any projected operating deficit (expenditures exceeding revenues in a budget year) is explained, and a plan developed to rectify the deficit.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.4 Periodic financial reports are reviewed by the agency.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

**CC 4B.5 Independent financial audits are conducted annually for the prior fiscal year. Deficiencies are noted and plans made to resolve audit exceptions.**

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.6 The agency and any subsidiary entities or auxiliaries have financial risk management policies and programs that protect the agency and its assets.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.7 Programs designed to develop financial support from outside sources are planned and coordinated to reflect the objectives of the agency. All fund-raising activities are governed by agency policy, comply with GAAP and/or other recognized financial principles, and are subject to public disclosure and periodic independent financial audits.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

4B.8 Any revenue producing organizations permitted to use the agency's name and/or reputation conform to agency principles of financial operation.

**Description**

The Fire Department has not addressed this performance indicator as The City of Calgary has received the Canadian Award for Financial Reporting (CAnFR) for its comprehensive Annual Financial Report (CAFR) for the fiscal year ended December 31, 2011.

**Appraisal**

Not applicable.

**Plan**

Not applicable.

**References**

None

#### **Criterion 4C: Resource Allocation**

*Financial resources are allocated appropriately to support the established organizational mission, the stated long-term plan, and goals and objectives, and to maintain the quality of programs and services.*

*Financial stability is a fundamental aspect of an agency's integrity. The agency must ensure that programs and services provided can be supported by the necessary fiscal resources using sound budgetary practices.*

#### **Summary:**

The Province of Alberta *Municipal Government Act R.S.A. 2000* legislates that all municipalities in the Province of Alberta are required to prepare balanced annual budgets.

Following the processes described in Criterion 4A, City Council and The City's Administrative Leadership Team set the budgetary constraints and priorities for the budget period. Individual City business units prepare their respective budgets within these constraints. Financial constraints and funding priorities are in accordance with principles and standards established by the Public Sector Accounting Board and are generally set out through The City's business planning and budget process. Council reviews and approves annual budgets in November of each year.

The Fire Department follows The City budget process and develops a three-year business plan in conjunction with a budget that supports the programs, services and service levels indicated in the plan. As part of its ongoing planning and budgeting process, the Fire Department regularly assesses its financial ability to meet the goals, objectives and service level benchmarks set out in the business plan. If funding is insufficient and cannot be reallocated internally by the Fire Department to meet the service levels outlined in its business plan, funding requests may be put forward to the general manager of Community Services & Protective Services, the department under which the Fire Department resides in The City's administrative structure, and City Council.

## **Performance Indicators:**

**CC 4C.1 Programs and activities based on current and anticipated revenues are adequate to maintain adopted levels of service.**

### **Description**

Through The City's business planning and budget process, every three years the Fire Department submits its business plan to City Council with an accompanying budget to meet the goals, objectives and service level benchmarks set out in the plan. Based on that budget request, Council provides the Fire Department the funding required to provide the programs and services at the indicated service level. To ensure the approved mill-rate revenues are sufficient to meet anticipated expenditures and identified service level benchmarks, the finance lead regularly monitors the financial information, prepares monthly financial statements and prepares projections of anticipated costs/revenues.

Significant deviations, such as identifying that current and anticipated funding is inadequate to achieve the indicated service level benchmarks, are discussed with the fire chief during monthly updates from the finance lead. If a discrepancy is noted, or additional funds are required, the Fire Department explores a variety of options, such as negotiating with Council to alter the expected level of service, transferring funding from other programs or removing individual program and services.

Some programs within the Fire Department are self-funded through sponsorships or fees and these programs are managed within the confines of their specific revenue streams.

### **Appraisal**

The Fire Department's current and anticipated revenues are adequate to maintain the programs, services and service level benchmarks as identified in its 2012-2014 Business Plan.

### **Plan**

As outlined in Objective 6.1 of its 2012-2014 Business Plan, the Fire Department will identify and develop opportunities for cost recovery or revenue generating activities including an analysis of cost recoveries. To advance this objective, the Fire Department

will adopt the recommendation of a fee review performed in 2013 and increase its user fees in 2014. The respective revenue increases have been included in the 2014 budget adjustments, and the Fire Department anticipates annual increases for the next five years. This will result in guidelines being included in the Fire Department's policies and procedures to ensure a consistent approach to fee increases in the future.

The Fire Department will continue to comply with City budget policies and guidelines. The Fire Department's Finance section will continue to work in partnership with the fire chief to monitor current year funding against service level benchmarks indicated in the business plan and implement mitigation strategies to ensure continued alignment of the two.

### **References**

4C.1a. Calgary Fire Department 2012-2014 Business Plan, Objective 6.1, p.20

4C.1b. Special Meeting of Council, Item 5.1 Proposed adjustments to the 2014 business plans and budgets C2013-0668, November 25, 2013,

<http://agendaminutes.calgary.ca/sirepub/cache/2/33fh2e5bjvshkrxyof3544tk/128003062014113435829.htm>

4C.1c. Internal management financial reports and year-end forecast (see Finance Lead)

4C.2 Plans exist for the payment of long-term liabilities and debts.

**Description**

Although debt attributable to the Fire Department is reflected on its annual statement of financial position, long-term liabilities and debt are managed at the broader City level.

Each year, as part of its financial statements, The City publishes a document outlining the payment schedules for long-term liabilities and debt. These payment schedules are audited annually by an independent third-party auditor and included in The City's mill-rate supported budget. The City's Finance business unit completes entries corresponding to these schedules.

**Appraisal**

The City has sufficient plans for the payment of long-term liabilities and debts.

**Plan**

The Fire Department will continue to participate in The City's process for payment of long-term liabilities and debts.

**References**

4C.2a. The City of Calgary PFC2013-0534, Report on reserves and long term liabilities, July 16, 2013

4C.3 Future asset maintenance costs are projected with related funding plans.

### **Description**

The City's operating budget provides funding for maintenance of the Fire Department's assets and infrastructure. The Fire Department's Logistics & Infrastructure division is responsible for identifying the future maintenance required on its assets, which includes fleet, equipment, facilities and technology. The division uses the Assetworks M5 computerized maintenance management system for fleet and equipment assets and the Enterprise Asset Management system for facilities and grounds, to assess how maintenance funding for the prior year was allocated. This information assists in developing trend forecasts for future years to predict future maintenance events and prioritize overall infrastructure needs. Funding is allocated in three-year increments, although reviewed annually with the Fire Department's finance lead.

The Logistics & Infrastructure division also identifies the rehabilitation requirements for the upcoming forecast period by using: information from condition assessments; data analysis; financial data; building, equipment and vehicle lifecycle preventative maintenance tracking programs; and infrastructure experience of staff. This multi-faceted approach allows the Fire Department to optimize its capital funding requirements through strategic planning. Projects identified over the next 10-year period are reported and ranked through The City's Emergency Response Infrastructure Investment Plan (ERIIP), which identifies all of the municipality's emergency service infrastructure needs and is part of the overall capital infrastructure plan integrated into The City's budget process.

### **Appraisal**

The Fire Department has established strategic planning and preventative maintenance programs to forecast and manage future maintenance costs. Through the ERIIP, ongoing improvements have been made to maintenance forecasting and the project ranking process. The Fire Department has been successful in leveraging this information to obtain maintenance funding increases, however, opportunities for improvement have been identified in how data is collected and mined as well as how distinctions are made between operating and capital maintenance projects.

## **Plan**

The Fire Department will continue to closely align its budget process with the ERIIP process to ensure critical projects are identified and prioritized to take advantage of opportunities if additional funding comes available outside of the standard three-year and annual City budget process. The Fire Department will also leverage two recently added staff positions to supplement the resources available for budgeting, strategic capital planning and forecasting.

As outlined in Goal 10 of its 2012-2014 Business Plan, the Fire Department will refine and implement comprehensive capital and operating strategies over the business planning cycle. Specifically, through an integrated asset management strategy, the Fire Department will develop processes to collect, maintain and analyze asset use, condition and maintenance data, and will develop a new and regenerated station strategy that includes the financial impact of delays and capital availability.

## **References**

- 4C.3a. SPC on Community and Protective Services, CPS2013-0802: Investing in community priorities, 2014-2023, November 2013
- 4C.3b. Calgary Fire Department 2012-2014 Business Plan, Goal 10, p. 25

4C.4 Financial plans avoid the use of one-time funding sources to cover ongoing costs unless plans are provided to ensure a means of continuity for personnel resources and capital assets.

**Description**

The City budget process allows one-time funding sources for pilot project operational funding requirements. Once a pilot is complete, an assessment is done to determine if the program warrants sustaining and whether resources are available. If funding is not contained within existing budgets, the Fire Department submits a request for additional funding to City Council during the annual budget adjustment process.

**Appraisal**

The Fire Department does not currently have any one-time funding sources for any of its core services.

**Plan**

The Fire Department will continue to adhere to The City’s budget guidelines for one-time funding sources, and will adjust its budget during the annual budget adjustment process if pilot programs warrant sustaining.

**References**

4C.4a. City of Calgary, Instructions for developing the 2012-2014 business plans and budgets, Section 5, pp. 16-26

4C.5 Contingency funds are maintained in accordance with GAAP recommendations and anticipate budgetary restrictions and/or shortfalls.

### **Description**

The City maintains contingency funds in the form of reserve accounts. All reserves are in accordance with Public Sector Accounting Standards and are included in The City's financial statements and subject to external audit. In addition, The City publishes an annual report on reserves. The report includes information about the authority under which the reserve was established and any restrictions in its use, as well as its funding sources, balance and current activity.

The Fire Department has only one self-funded reserve; all other reserves are held at The City level. The Fire Department's miscellaneous capital reserve is used to finance future capital expenditures. Contributions to the reserve are the result of the disposal of current assets.

### **Appraisal**

Contingency funds have been maintained in accordance with GAAP, managed to the satisfaction of the Fire Department and The City and reviewed by external auditors.

### **Plan**

The Fire Department will continue to participate in, and comply with, The City financial processes and policies on contingency funds.

### **References**

4C.5a The City of Calgary Chief Officer's Report to Priorities and Finance Committee: PFC2013-0534, Report on reserves and long term liabilities, July 16, 2013



## **Category V: Programs**

This category is defined as the services, activities and responses provided by the agency for the community or facility that are designed, organized, and operated in compliance with the agency's mission, goals and objectives. Category VIII – Training and Competency, however, appraises the level of proficiency with which personnel actually perform within these programs. The key elements used to evaluate these services are: adequacy, deficiency, effectiveness, methods, and results of programs. For purposes of accreditation, these terms are defined within the glossary.

The agency's mission, goals, and objectives should determine the applicability of all the listed programs. The agency should decide the relevancy of each criterion in their self-assessment report. For criterion in Category V, "Programs," that are not applicable to the agency; the agency should briefly explain why it does not provide this program.

## **Criterion 5A: Fire Suppression**

*The agency operates an adequate, effective, and efficient fire suppression program directed toward controlling and/or extinguishing fires for the purposes of protecting people from injury or death, and reducing property loss.*

### **Summary:**

The Fire Department's fire suppression program protects Calgarians from the injuries, fatalities and property loss associated with fires.

The Fire Department's first unit benchmark is to respond to fire suppression events in seven minutes or less total response time, 90 per cent of the time, and the Fire Department's effective response force (ERF) assembly benchmark for fire suppression events is to provide an initial ERF ranging from 12 to 16 personnel, depending on the incident type and risk.

The Fire Department met its fire suppression total response time objective 75.0 per cent of the time in 2012 with a 90th percentile response time of eight minutes and 27 seconds. In the first six months of 2013, the Fire Department met its total response time objective 73.6 per cent of the time with a 90th percentile response time of eight minutes and 37 seconds.

The Fire Department met its fire suppression total response time objective for effective response force for high risk incidents 52.2 per cent of the time in 2012 with a 90th percentile response time of 17 minutes and 28 seconds. In the first six months of 2013, the Fire Department met its total response time objective 60.1 per cent of the time with a 90th percentile response time of 16 minutes and 12 seconds.

The Fire Department's operations personnel are responsible for the delivery of emergency response and firefighting services. They rely on a heavy fleet consisting of engines deployed in all fire stations, plus various auxiliary units and other specialized vehicles to meet the fire suppression needs and risks in Calgary.

## **Performance Indicators:**

**CC 5A.1 Given the agency's standards of response coverage and emergency deployment objectives, the agency meets its staffing, response time, pumping capacity, apparatus and equipment deployment objectives for each type and magnitude of fire suppression emergency incidents.**

### **Description**

The Fire Department's first unit benchmark is to respond to fire suppression events in seven minutes or less total response time, 90 per cent of the time. At least one engine staffed with a minimum of four personnel is located in each fire station. Engines are the primary responding unit to all incidents, however, an auxiliary unit staffed with two personnel may be deployed as the initial responding unit as a result of the Fire Department's dynamic deployment model. All first-in units are capable of establishing initial incident command and initiating the critical tasks outlined in the Fire Department's Standards of Cover.

The Fire Department's fire suppression effective response force (ERF) assembly benchmark is to provide an initial ERF ranging from 12 to 16 personnel, depending on the incident type and risk. The ERF is capable of performing the critical tasks identified for each type and risk level of fire suppression incident as identified in the Fire Department's Standards of Cover.

The Fire Department has approximately 300 trained firefighters assigned per platoon with a minimum of 233 firefighters per shift to staff all apparatus on duty. Response apparatus includes auxiliary and specialized support units, and engines with a minimum pumping capacity of 6,000 litres per minute. As outlined in Performance Indicator 9A.2, additional pumping capacity of up to 8,500 litres per minute is available on quint apparatus, and water tenders carrying 11,000 to 12,500 litres of water each are dispatched as part of the first alarm complement to areas where there is known reduced municipal water supply.

As outlined in Performance Indicator 2B.5, the Fire Department developed a Performance Improvement Programme containing a series of strategies to improve response performance and reliability. These strategies included streamlining the call handling and

dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines introduced in late 2013 to manage resources based on risks, probability, reliability, and service demands.

### **Appraisal**

The Fire Department met its fire suppression total response time objective for first-in response 75.0 per cent of the time in 2012 with a 90th percentile response time of eight minutes and 27 seconds. In the first six months of 2013, the Fire Department met its total response time objective 73.6 per cent of the time with a 90th percentile response time of eight minutes and 37 seconds.

The Fire Department met its fire suppression total response time objective for effective response force for high risk fire incidents 52.2 per cent of the time in 2012 with a 90th percentile response time of 17 minutes and 28 seconds. In the first six months of 2013, the Fire Department met its total response time objective 60.1 per cent of the time with a 90th percentile response time of 16 minutes and 12 seconds.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on fire response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

### **Plan**

The Fire Department will continue to measure and report on its fire suppression deployment objectives. As data becomes available, the Fire Department will analyze the effectiveness of its dynamic deployment model and standardized turnout time processes on fire suppression total response time performance for its first-in units and effective response force.

### **References**

5A.1a. Calgary Fire Department 2014 Standards of Cover

5A.1b. FD Notice #176-2013: Dynamic deployment model - Apparatus redeployment guidelines, December 4, 2013

5A.1c. Calgary Fire Department, Performance Improvement Programme

5A.1d. Report to Fire Executive Team, Deployment working group annual deployment review, December 4, 2013

5A.2 The agency defines and provides appropriate and adequate equipment to accomplish the stated level of response for fire suppression and to be compliant with local, state/provincial and national standards.

### **Description**

The Fire Department has equipment tailored to its needs and standards and supports the stated level of response for its fire suppression program as outlined in Performance Indicator 5A.1. The Fire Department has standards for a variety of equipment including hoses, personal protective gear, technical rescue and miscellaneous tools and equipment used to perform fire suppression and rescue functions. All equipment is certified and meets the intent of the standards set out by the National Fire Protection Association and meets Underwriters' Laboratories of Canada, Canadian Standards Association, and *Alberta Occupational Health and Safety Act, Codes and Regulation* requirements.

Through regularly scheduled meetings, the Operations & Technical Team division evaluates operational needs and assesses new or modified firefighting tools and equipment. When the need for new equipment is identified, a working group of subject matter experts from across the Fire Department is set up to research and evaluate options and final results are presented to the division's deputy chief or to the Fire Executive Team for approval.

All response apparatus carry an apparatus/equipment check sheet that is used by firefighters at the start of every shift to conduct visual equipment and vehicle checks to ensure that appropriate and adequate equipment is available and in working order. Weekly checks are conducted on all mechanical equipment to ensure it is properly operating. Damaged, missing or lost equipment is reported to The Fire Department's Equipment & Supply section for repair and or replacement.

The Fire Department's Logistic & Infrastructure division is tasked with asset planning, procuring, testing, and maintaining all Fire Department equipment, including fire suppression and rescue program equipment.

## **Appraisal**

Appropriate and adequate equipment that meets industry and legislative requirements has been defined and made available to staff to accomplish the Fire Department's stated level of response for fire suppression incidents. The Fire Department has added defibrillators to all Fire Department vehicles as well as iMobile display terminals to further enhance citizen and firefighter safety.

As outlined in Performance Indicator 7B.9, throughout 2013, the Fire Department established working groups to engage frontline staff in evaluating safety equipment, including self-contained breathing apparatus and fire retardant clothing.

## **Plan**

The Fire Department will continue to provide equipment to meet its stated level of response for its fire suppression program. It will also continue to use subject-matter experts and working groups to research and evaluate technical advances in equipment to ensure equipment remains appropriate and adequate for its fire suppression program.

As outlined in Performance Indicator 6F.5, as part of Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the equipment needs of the fire suppression program.

## **References**

- 5A.2a. Calgary Fire Department, Apparatus/equipment check sheet sample, Apparatus # E0810 14 Engine, July 21, 2011
- 5A.2b. Calgary Fire Department, Equipment & Supply order form
- 5A.2c. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

5A.3 Supplies and materials allocation (e.g., foam, gasoline, fuel, batteries, etc.) is based on established objectives, is appropriate to meet fire suppression operational needs, and is compliant with local, state/provincial and national standards.

### **Description**

The Fire Department's operating budget provides for supplies and materials to meet its fire suppression needs. Supplies and materials are purchased in collaboration between the Operations & Technical Teams division and the Fire Department's Equipment & Supply section. The Operations & Technical Teams division is consulted on its operational needs and help set out the specifications and requirements for supplies and materials. The Equipment & Supply section identifies appropriate vendors and generally oversees the procurement process.

The Fire Department maintains an adequate supply of class A and B foam to meet operational needs, and as outlined in Performance Indicator 5H.8, plans are in place to ensure the supply chain remains robust, resilient and supportive of operational needs through large-scale events.

As outlined in Performance Indicator 6D.3, operational vehicles may obtain fuel from one of 17 City fuelling locations, which includes three fire stations, or crews may use a fleet fuel card at most gas stations in the city. At larger incidents, emergency fuel deliveries are provided by either the Fire Department's vehicle shop slip tank, or through a contract maintained with a fuel tanker truck service provider.

Other supplies, such as batteries and other consumables, are available from the Equipment & Supply section and are accessible to operations staff after hours. Equipment & Supply staff are available and can be requested to report to duty after hours to provide logistical support at incidents.

All supplies and materials meet the intent of the standards set out by the National Fire Protection Association and meet Canadian Standards Association and *Alberta Occupational Health and Safety Act, Code, and Regulation* requirements.

## **Appraisal**

The Fire Department has established a process for identifying operational needs of suppression crews and has had no significant issues in maintaining adequate materials and supplies to meet the operational needs and objectives of the fire suppression program.

## **Plan**

The Fire Department will continue to assess operational needs of its fire suppression program and provide the appropriate supplies and materials. It will also continue to monitor the safety, quality, function, inventory and maintenance of supplies and materials to ensure they are reliable and meet the ongoing operational needs of the fire suppression program.

## **References**

5A.3a. List of City fuelling stations

5A.3b. Calgary Fire Department, Equipment & Supply order form

5A.3c. Calgary Fire Department Procedure: Requesting goods & services, May 23, 2013

**CC 5A.4 Current standard operating procedures or general guidelines are in place to direct fire suppression activities.**

**Description**

Policies, procedures, training manuals and critical tasking are identified for each fire suppression incident type and risk level. These are designed to support achievement of the stated level of response for fire suppression response and ensure staffing and incident needs are addressed.

Policies and procedures are available through the Fire Department's Policy and Procedure Manager software, and training manuals for the fire suppression program are available online either through the Fire Department's Learning Management System or intranet. The Fire Department's policy, *Incident operations*, provides direction regarding response to various incident types to ensure appropriate and safe actions are employed.

As outlined in Criterion 8C, the Fire Department's Training section continually evaluates, updates and revises training manuals to ensure they reflect current and relevant practices, standards and legislation.

**Appraisal**

The Fire Department has established policies, procedures and training manuals for its fire suppression activities that are easily accessible by all staff. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

**Plan**

The Fire Department will continue to conduct regular reviews, evaluations and assessments of its policies, procedures, and training manuals to ensure they remain current and accomplish the stated level of response for fire suppression incidents.

**References**

5A.4a. Calgary Fire Department, Policy and Procedure Manager software (suggest live demonstration)

- 5A.4b. Calgary Fire Department, Policy and Procedure Manager software auto notification (sample), “Managing turnout response”, November 10, 2013
- 5A.4c. Calgary Fire Department, Training manuals and courses, Learning Management System (see Manager of Learning & Business Development)
- 5A.4d. List of Training and Tools on CFDNet
- 5A.4e. Calgary Fire Department policy: Incident Operations, October 19, 2010

**CC 5A.5 The agency uses a standardized incident command/management system.**

**Description**

The Fire Department uses an all-hazards incident management system that was developed internally based on proven and accepted internationally recognized industry practices. The incident management system includes an incident command system (ICS) organizational structure that is employed at all emergency incidents. The ICS structure contains all common concepts of incident command including unity of command, span of control, formal acceptance and transfer of command.

The Fire Department has implemented a training plan to ensure that all uniformed and civilian members have been trained to a minimum standard of ICS–200. In addition, various positions throughout the Fire Department have been identified to complete advanced training to increase staff knowledge and understanding of more complex incidents and command principals.

The Fire Department also delivers an incident management system (IMS) program to all members in positions of company officer and higher. This program is aligned with ICS principles but also covers management of all emergency events, giving fire officers the skills to apply fundamental incident management principles to all-hazards events. In addition, district chiefs routinely visit fire stations to conduct IMS tabletop exercises.

**Appraisal**

The Fire Department has implemented an ICS training plan and developed online training modules for all personnel, and a number of employees have completed advanced ICS training. During a large-scale flood in Calgary in 2013, the Fire Department’s IMS/ICS system proved to work well, facilitated interoperability with other agencies and positioned the Fire Department to effectively manage mitigation and response efforts.

**Plan**

The Fire Department will continue to use its ICS/IMS system, ensure all staff receive basic training and provide identified staff with advanced ICS training. IMS training will

continue to be provided to all company officers to ensure thorough understanding of use of the system, and district chiefs will continue to conduct tabletop exercises. In 2014, the Fire Department will develop a plan to ensure IMS principles and training efforts are sustained.

### **References**

- 5A.5a. Calgary Fire Department, Fire officer strategies and tactics for incident command training manual, January 2013
- 5A.5b. Calgary Fire Department, Incident command system (ICS), incident management system (IMS) & emergency management operations training matrix
- 5A.5c. Calgary Fire Department, Learning Management System, CFD course ICS 100 and ICS 200 (see Manager, Learning & Business Development for login)
- 5A.5d. Calgary Fire Department, Incident management system scenarios 1-15
- 5A.5e. Calgary Fire Department Policy: Incident command, August 16, 2010

5A.6 The agency's information system allows for documentation and analysis of its fire suppression response program and incident reporting capability.

### **Description**

Fire suppression activities are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional information. Officers are responsible for adding relevant fire suppression information to the incident record. Data is analyzed to provide statistics on fire suppression response time performance, deployment and resources and results are provided to the deputy chief of Operations & Technical Teams for evaluation and presentation to the Fire Executive Team.

Detailed incident data is downloaded nightly from FireRMS and the data is assigned a spatial dimension within the geographic information system (GIS) to ensure the most current response data is readily available. The data is analyzed using a variety of software programs to help assess the effectiveness of the Fire Department's fire suppression program.

### **Appraisal**

The Fire Department has an established system in place to record fire suppression incident information.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, including all incident and occupancy information.

**Plan**

The Fire Department will continue to use its current FireRMS to record fire suppression incident data until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. The Fire Department will also investigate upgrades and functionality of the CAD system to expand opportunities for data collection and analysis.

**References**

5A.6a. Calgary Fire Department FireRMS (suggest live demonstration)

5A.6b. CFDNet: FireHub

**CC 5A.7 An appraisal is conducted, at least annually, to determine the effectiveness of the fire suppression program.**

**Description**

The Fire Department's Operations & Technical Teams division and Strategic Services section regularly review performance data, response gaps and effective response force coverage. Upon analysis of this information, recommendations for deployment of new apparatus, redeployment of existing apparatus or a combination of both are made to the fire chief for approval.

Bi-monthly and monthly operational meetings between the deputy chief of the Operations & Technical Teams division, battalion chiefs, and chief officers occur to discuss operational issues of the fire suppression program. The Operations & Technical Teams division prepares a monthly report for the Fire Executive Team that includes: numbers of incidents and apparatus responses; number of fires; estimated fire losses; civilian injuries and fatalities; and response time performance.

Fire suppression response performance is assessed against the stated standards of response outlined in the Fire Department's Standards of Cover, and results are reported in its annual compliance report to the Commission on Fire Accreditation International. Furthermore, as outlined in Performance Indicator 1A.2, through The City's business planning and budget coordination process, the Fire Department completes semi-annual and annual reporting on the programs and services that support City Council's priorities and the service level benchmarks in its 2012-2014 Business Plan. Results are compared to the stated standard of response and relevant information on the contributions of the fire suppression program are included in these reports as appropriate.

**Appraisal**

The Fire Department has established several methods of formally and informally appraising its fire suppression program, including evaluating performance against stated standards of response.

## **Plan**

The Fire Department will continue to conduct formal and informal appraisals of its fire suppression program to ensure the program is supporting operational needs and meeting stated standards of response. The deployment working group will continue to meet at least twice a year to review results of deployment changes and analyze information to inform future deployment recommendations.

## **References**

5A.7a. Calgary Fire Department 2014 Standards of Cover

5A.7b. Calgary Fire Department 2012 Annual Report

5A.7c. City of Calgary executive information report, monthly economic/operational indicators, 2013

5A.7d. Calgary Fire Department Operations and Technical Teams, Monthly report to FET, December 2013

5A.7e. Calgary Fire Department operations meeting, sample minutes



## **Criterion 5B: Fire Prevention/Life Safety Program**

*The agency operates an adequate, effective, and efficient program directed toward fire prevention, life safety, hazard risk reduction, the detection, reporting, and control of fires and other emergencies, the provision of occupant safety and exiting, and the provisions for first aid fire fighting equipment<sup>1</sup>.*

*NOTE: Fire Investigations are covered in Criterion 5D.*

### **Summary:**

The Fire Department employs a series of systems, processes and measures that work together to provide a comprehensive fire prevention and life safety program.

The Fire Inspection section provides fire and safety code education and enforcement based on the *Alberta Fire Code*, the *Alberta Building Code* and the *Alberta Safety Codes Act*, as well as a series of other standards and bylaws. The Fire Department uses its broad base of fire suppression crews to complete compliance and hazard audits annually to familiarize themselves with occupancies and ensure fire and life safety systems are maintained.

Provincially certified fire safety codes officers inspect businesses and issue orders and summons as necessary to gain compliance.

Information related to occupancy, inspections and incidents at a location are recorded in the Fire Department's records management system, FireRMS, which allows for regular analysis and reporting of structure-related information as well as performance of the Fire Inspection section.

New buildings and infrastructure are reviewed by the Fire Department's Infrastructure Planning section and the Technical Services section, which are involved from start to finish in the building process, from reviewing early area structure plans through to approving final building permit applications.

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<sup>1</sup> For more information about "first aid firefighting equipment," reference NFPA 10 and the current International Fire Code

## **Performance Indicators:**

**CC 5B.1 The authority having jurisdiction has an adopted fire prevention code.**

### **Description**

Based on the authority of the *Alberta Safety Codes Act* Chapter S-1 RSA 2000, the Fire Technical Council, a sub-council of the Alberta Safety Codes Council, produces the *Alberta Fire Code* that every municipality in the province of Alberta must follow.

Pursuant to Section 26 of the *Safety Codes Act*, the Fire Department is an accredited municipality through application to the Safety Codes Council, which allows fire safety codes officers to be designated by the municipality and certified by the Alberta Safety Codes Council to enforce and provide education on the *Alberta Fire Code*.

Fire safety codes officers employed by The City are the authority having jurisdiction with provincial powers under the *Alberta Safety Codes Act*. The City also has powers under The City of Calgary Bylaw Number 37M84, *Operation of a Fire Department*, which specifies the fire chief is responsible for all fire protection matters.

### **Appraisal**

The City has been legislated to follow the *Alberta Fire Code*; as a result, the Fire Department has adopted the most current provincial fire codes. The *Alberta Safety Codes Act*, in conjunction with the *Alberta Fire Code*, has provided the Fire Department with an effective fire prevention code.

### **Plan**

As required by the Province of Alberta, the Fire Department will continue to follow the *Alberta Fire Code*. The Fire Department will continue to work with other fire departments and agencies in the development and revision of national and provincial fire codes to ensure any fire prevention concerns or issues are adequately addressed.

### **References**

5B.1a. *Alberta Safety Codes Act*, Chapter S-1 RSA 2000 (current as of December 10, 2012) <http://www.qp.alberta.ca/documents/acts/s01.pdf>

5B.1b. Alberta Safety Codes Council <http://www.safetycodes.ab.ca/>

- 5B.1c. *Alberta Fire Code*, 2006 (available for viewing in the Office of the Fire Marshal)
- 5B.1d. Safety Codes Council municipal accreditation City of Calgary certificate, March 10, 2006
- 5B.1e. City of Calgary Bylaw Number 37M84, *Operation of a Fire Department*, September 18, 1984

**CC 5B.2 The code enforcement program is designed to ensure compliance with applicable fire protection law and agency objectives.**

**Description**

The City's Quality Management Plan (QMP), approved by the Alberta Safety Codes Council, forms the basis for the Fire Department's code enforcement program and defines The City's commitment to the Province of Alberta with respect to fire inspections and investigations. The Fire Department assigns an annual inspection frequency to each occupancy classification as set out in the QMP. Firefighters and fire safety codes officers ensure compliance with applicable fire protection laws by conducting inspections of occupancies as per the timelines defined in the QMP.

Compliance and hazard audits are conducted by firefighters as a first step in the inspection process of reviewing fire and life safety system maintenance. Although these audits are not considered to be safety code inspections, any deficiencies or concerns are brought forward to the Fire Inspection section for follow up by a safety codes officer. The audits also help familiarize firefighters with buildings in their area.

Fire safety codes officers conduct approximately 25 types of inspections to ensure *Alberta Fire Code* requirements are met, and follow up with inspections of deficiencies identified during the fire crew audit and conduct new business license inspections to ensure compliance for occupancy. Failure to comply with the codes and standards in the *Alberta Fire Code* results in a written report that is presented to the occupancy owner identifying deficiencies and a timeframe for compliance. A second inspection is conducted after the designated date to check for compliance. Failure to comply on re-inspection results in a provincial order being placed against the owner of the occupancy. After 35 days, non-compliance with the order results in a charge being filed against the owner in provincial court, including a summons to appear in court.

Special task force groups, such as the Public Safety Task Force and Safe Housing Inspection Program, are comprised of representatives from the Fire Department and other business units within The City and target specific types of occupancies to ensure compliance with applicable fire protection and life safety laws.

## **Appraisal**

The Fire Department has established a code enforcement program to ensure compliance with the *Alberta Fire Code* and the administrative items outlined in the *Alberta Safety Codes Act*. The provincial order and summons processes have been effective and timely in gaining compliance. In 2013, the Fire Department issued 19 orders resulting in 10 charges being laid and 12 counts. The special task force groups have been effective in reducing the number of non-compliant occupancies through a multi-disciplinary approach that involves education as well as enforcement by several City business units.

The Fire Department has developed a ten-year Sustainability Plan that includes strategies to meet the city's growing demands for services including public safety education and managing the changing needs of businesses. These long-term strategies have guided the Fire Department's short-term business planning and decision-making processes, including continual improvement efforts to provide enhanced and efficient inspections and plan review services.

## **Plan**

The Fire Inspection section will continue to review and analyze the inspection program and compliance with the QMP, and will make updates to the QMP as required. In addition to the Alberta Safety Codes Council formal audit of the inspection program (as described in Performance Indicator 5B.8), per the Safety Codes Council, the Fire Department reviews its QMP on at least an annual basis. This was last conducted in November 2013 which resulted in draft revisions being made to the QMP. These draft revisions were approved by the Fire Chief and will be forwarded to The City's Mayor and The City Manager's Office for review and approval before being submitted to the Safety Codes Council for adoption

As outlined in Goal 5 of its 2012-2014 Business Plan, the Fire Department will increase its role in fire specific enforcement in order to educate the public and promote public safety. In addition, Objective 3.2 will see the Fire Department support safe business growth and development through a streamlined and simplified inspection and plan review process that facilitates and advances code compliance.

## References

- 5B.2a. City of Calgary, Uniform Quality Management Plan, Schedule A: Scope and administration, November 05, 2003
- 5B.2b. City of Calgary, Uniform Quality Management Plan, Schedule B: Minimum service delivery standards, November 5, 2003
- 5B.2c. Attachment 2: City of Calgary target service delivery standards, November 05, 2003
- 5B.2d. Calgary Fire Department, Compliance and hazards report guide
- 5B.2e. City of Calgary, Public Safety Task Force program information, <http://www.calgary.ca/CSPS/Fire/Pages/Programs/Bar-and-nightclub-safety/Public-safety-task-force.aspx>
- 5B.2f. City of Calgary, Safe Housing Inspection Program information, <http://www.calgary.ca/CSPS/Fire/Pages/Inspections-investigations-and-permitting/House-inspection.aspx>
- 5B.2g. Calgary Fire Department procedure: Inspecting occupancies for compliance with *Alberta Fire Code*, February 13, 2012
- 5B.2h. Calgary Fire Department 2012-2014 Business Plan, Objective 3.2 and Goal 5, p. 19 and 20
- 5B.2i. Calgary Fire Department, Standard operating guidelines for orders, November 2009

**CC 5B.3 The program has adequate staff with specific expertise to meet the fire prevention/life safety program goals and objectives.**

### **Description**

The Fire Inspection section coordinates the Fire Department's fire prevention/life safety program. The section consists of a fire marshal, an inspections coordinator, 17 fire safety codes officers, three technical services officers, two special event fire safety codes officers, three special project fire safety codes officers, a training officer and administrative staff. Further support is also received from the Fire Department's fire suppression crews, which conduct annual compliance and hazard audits on occupancies for fire and life safety systems maintenance requirements as outlined in Performance Indicator 5B.2.

Fire safety codes officers are trained to the required certificate of competency level according to the Fire Department's job position requirements and the specifications set out by the Fire Technical Council, a sub-council of the Alberta Safety Codes Council. The training required includes certification training in basic safety codes officer, inspector level 1 and inspector level 2. Courses are taught internally through the Fire Inspection training officer using approved material from Lakeland College's Emergency Training Centre, the Alberta Safety Codes Council and the National Fire Protection Association, and all course material and training is designed to meet professional requirements for fire inspectors as outlined by the Safety Codes Council and National Fire Protection Association standard 1031.

All section staff work in support of the fire prevention/life safety programs goals and objectives, as identified by: commitments made by The City in its Quality Management Plan (Performance Indicator 5B.2); the requirements for fire inspections as outlined by all current legislation and standards; and the goals and objectives set out for the Fire Department in its 2012-2014 Business Plan.

### **Appraisal**

The Fire Inspection section has established adequate staff with specific expertise to deliver on its goals and objectives. The inspections coordinator has maintained a file for each fire

safety code officer with copies of certifications and competencies earned and has tracked the types and levels of training each officer has received in a master spreadsheet. The Fire Department has effectively used its broad fire suppression base to conduct compliance and hazard audits. In 2013, fire crews visited and audited 23,107 businesses to ensure fire and life safety systems in buildings were operational and functioning in accordance with the *Alberta Fire Code*. In 2013, safety codes officers provided 10,469 fire inspections and responses to 3-1-1 requests, complaints or inquiries.

The Fire Department has developed a ten-year Sustainability Plan that includes the vision of continuing to provide community safety services to the changing and growing demands of citizens. In developing targets for this vision the Fire Department forecasted population growth rates, conducted a comparative study on the ratio of fire inspectors to population, and determined Calgary ranks lower than other municipalities in terms of full time personnel dedicated to inspections given the current program. In advancing sustainability, the Fire Department is developing a long-range strategy to optimize service delivery through the addition of resources and integrating frontline members in the delivery of services.

### **Plan**

The Fire Department will continue to monitor and balance staffing levels to ensure sufficient resources are in place to meet the goals and objectives set for its fire prevention and life safety programs.

As outlined in Objective 3.5 of its 2012-2014 Business Plan, the Fire Department will work to create a long-term strategy to move towards having one fire safety codes officer per 15,000 citizens.

### **References**

- 5B.3a. Calgary Fire Department 2012-2014 Business Plan, Objective 3.5, p. 19
- 5B.3b. Calgary Fire Department, Compliance and hazards report guide
- 5B.3c. Calgary Fire Department, Supplementary training manual, Completing compliance & hazards audits and reports, April 2011

- 5B.3d. Calgary Fire Department procedure: Training safety codes officers for investigations and inspections, April 8, 2013
- 5B.3e. Calgary Fire Department, 3-1-1 report, 2013
- 5B.3f. Calgary Fire Department, Position description- Safety Codes Officer 1, November 2013
- 5B.3g. Alberta Safety Codes Council, Fire safety codes officer certification, <http://www.safetycodes.ab.ca/SCO/Certification/Pages/default.aspx>
- 5B.3h. National Fire Protection Association 1031: Standard for professional qualifications for fire inspector and plan examiner
- 5B.3i. Safety Codes Council, Safety Codes Officer certificate of competency example
- 5B.3j. CFD Fire Safety Codes Officer completed training courses

5B.4 A plan review process is in place to ensure that buildings and infrastructure (e.g., hydrants, access, street width, etc.) are constructed in accordance with adopted codes and ordinances.

### **Description**

The Fire Department has three technical services officers assigned to review plans for accordance with adopted codes. One officer is located in the Fire Department's Community Standards office and two are embedded in The City's Development & Building Approvals (DBA) business unit.

The Logistics & Infrastructure division reviews initial area structure plans, area redevelopment plans, land use plans, subdivision plans, and development applications. Technical services officers review building permits, private hydrant drawings, plans for installation or removal of flammable and combustible storage tank systems and permit applications related to special events and tent structures. The officers are also responsible for the review of proposed building drawings for site access, building and water supply and fire and life safety systems as well as internal exiting patterns and egress routes. The technical services officer determines whether plans meet all Alberta building and fire codes as well as the intents and objective set out in the *Calgary Fire Department's Access Standard*.

### **Appraisal**

The Fire Department has established a plan review process to ensure buildings and infrastructure are constructed in accordance with adopted building and fire codes and other street and access guidelines identified by the Fire Department and City.

Procedures have been put in place for review of all planning and development permit applications from initial land use, outline and closure plans through to final building permits. The placement of technical service officers within the DBA office has resulted in an integrated, effective and efficient process for plan reviews. In 2013, technical services staff reviewed and evaluated 970 plans to ensure facilities and life safety systems were designed and installed in accordance with Alberta building and fire codes and the referenced documents within those codes.

## **Plan**

The Fire Department will continue to monitor and evaluate its current plan review process to ensure buildings and infrastructures continue to be constructed in accordance with adopted building and fire codes and municipal guidelines.

As outlined in Objective 3.1 of its 2012-2014 Business Plan, the Fire Department will develop a strategy for Fire Department representation with organizations to further influence urban planning, safety codes, public safety and emergency planning. In addition, Objective 3.2 will support safe business growth and development through a streamlined and simplified inspection and plan review process that facilitates and advances code compliance.

## **References**

- 5B.4a. Calgary Fire Department, Technical Services section statistics, 2013
- 5B.4b. Calgary Fire Department, Technical Services section library (see Technical Services Officer)
- 5B.4c. Calgary Fire Department procedure: Reviewing planning & development applications, December 22, 2011
- 5B.4d. Calgary Fire Department 2012-2014 Business Plan, Objective 3.1 and 3.2, p. 19
- 5B.4e. Calgary Fire Department Access Standard, amended September 15, 2008

5B.5 The agency defines and provides appropriate and adequate equipment, supplies and materials to meet the fire prevention/life safety program needs.

### **Description**

Fire Inspection section staff are fully equipped to perform all necessary fire prevention and life safety activities. Several fire stations across the city have district offices used by fire inspectors with the main fire prevention office located at the Fire Training Academy. The office spaces have stationery, a small library, computers and workstations. In the field, fire inspectors are assigned cellular telephones as well as safety gear such as hard hats, safety boots, safety vests, flashlights and cameras.

Fire safety codes officers receive a copy of the current *Alberta Fire Code* and access to electronic copies of the *Alberta Fire Code*, *Alberta Building Code* and National Fire Protection Association standards. In addition, several fire stations across the city have district offices used by fire inspectors that maintain print copies of current and previous editions of the *Alberta Building Code*. The Technical Services section also maintains a reference library of current materials for the Fire Inspection section and carries relevant copies of Canadian Standards Association and Underwriters Laboratories of Canada documents as referenced in the *Alberta Fire Code*.

The Fire Inspection section also has access to a fleet of Fire Department vehicles for use by staff in performing their job functions.

### **Appraisal**

Fire Inspection staff have been provided appropriate and adequate reference materials, personal safety equipment and other supplies to safely and effectively complete required fire prevention and life safety duties.

### **Plan**

The Fire Department will continue to regularly review all equipment and supplies issued to fire inspection staff and evaluate additional computer programs available within The City to enhance efficiencies of the fire inspectors.

## **References**

5B.5a. *Alberta Fire Code*, 2006 (available for viewing in the Office of the Fire Marshal)

5B.5b. *Alberta Building Code*, 2006, Volume 1 and Volume 2 (available for viewing in the Office of the Fire Marshal)

5B.6 Current standard operating procedures or general guidelines are in place to direct the fire prevention/life safety program.

### **Description**

The Fire Inspection section has general operating guidelines that direct the fire prevention and life safety program in accordance with the *Alberta Safety Codes Act* and The City's QMP.

Operating guidelines and instructions are in place outlining the review and inspection requirements through the entire building process, beginning with the initial plan review, permit application and pre-site inspections through to construction site requirements and final inspection for occupancy. Guidelines are also established for occupancy load calculations and special events, such as pyrotechnics, temporary tent structures and combustible/flammable liquid storage tanks. These guidelines are accessible to the Fire Inspection section from a secured area of the Fire Department's computer network. Annual fire and life safety maintenance compliance and hazard audits performed by fire suppression crews comply with the guidelines developed by the Fire Inspection section and are available to all staff on the Fire Department's intranet site.

In addition to the operating principles, administrative procedures have been developed to direct the fire prevention and life safety program and ensure building owners are compliant with the *Alberta Fire Code*. These procedures are available through the Fire Department's Policy and Procedure Manager software and accessible by all staff.

The Fire Department also makes available on its external website a business license pre-inspection checklist, a booklet outlining building owner responsibilities for fire safety equipment and the *Calgary Fire Department Access Standard*. These documents help building owners with fire and life safety system maintenance and guide planners on installing and maintaining adequate, unobstructed emergency or secondary access for emergency response requirements.

### **Appraisal**

The Fire Department has established policies, procedures and general operating guidelines, for its fire prevention and life safety program. The Fire Department's Policy

and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant.

### **Plan**

The Fire Inspection section will continue to conduct regular reviews, evaluations and assessments of its policies, procedures and operating guidelines to maintain alignment with legislation and standards and ensure its fire prevention and life safety goals are being met.

### **References**

- 5B.6a. Calgary Fire Department procedure: Inspecting occupancies for compliance with *Alberta Fire Code*, February 13, 2012
- 5B.6b. *Alberta Safety Codes Act*, RSA 2000 Chapter S-1, current as of December 10, 2010
- 5B.6c. Calgary Fire Department, Compliance and hazards report guide
- 5B.6d. Calgary Fire Department, Supplementary training manual, Completing compliance & hazards audits and reports, April 2011
- 5B.6e. Calgary Fire Department, Building Owner's Responsibilities for Fire Safety Equipment, January 2012
- 5B.6f. Calgary Fire Department, Business license pre-inspection checklist, April 2010
- 5B.6g. Calgary Fire Department Access Standard, amended September 15, 2008

5B.7 The agency's information system allows for documentation and analysis of the fire prevention program.

### **Description**

The Fire Inspection section uses two information systems: The City's 3-1-1 system and the Fire Department's record management system, known as FireRMS. The City's 3-1-1 call centre receives requests for fire inspections or general fire and life safety system inquiries and creates and assigns service requests to fire safety codes officers through its computer system. The system assigns the service request to the appropriate district fire safety codes officer, and tracks the time the service request is open and closed relative to established target turnaround times. FireRMS captures key information associated with an occupancy, including owner information, inspection history and outstanding deficiencies. Fire officers also record information on all incidents attended in FireRMS, which allows all incident and inspection information for an occupancy to be tracked and retrieved for analysis.

Together, The City's 3-1-1 system and FireRMS provide the Fire Department with trends, work volume and completed inspections per fire safety codes officer, as well as detailed information related to an occupancy. The system also provides information on the number of occupancy types within the city and all related building type and location information.

### **Appraisal**

The two information systems used by the Fire Department have been effective in tracking workload, activities and occupancy and incident information related to a structure.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems, a growing concern as the Fire Department moves to increasing reliance on electronic and web-based data systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, as well as information from other external sources, into a single repository. The review and needs

assessment also identified opportunities to improve the efficiency and effectiveness of fire safety code officers in the field including the provision of mobile devices that allow accessibility to occupancy and inspection information.

### **Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. Future phases of the new system will include support for the use of tablets to allow fire inspectors to perform data entry and access in their mobile work environments.

### **References**

- 5B.7a. Calgary Fire Department, FireRMS (suggest live demonstration)
- 5B.7b. City of Calgary 3-1-1 information system (suggest live demonstration)
- 5B.7c. Calgary Fire Department, FireRMS sample reports, 2013
- 5B.7d. CFDNet: FireHub

**CC 5B.8 An appraisal is conducted, at least annually, to determine the effectiveness of the fire prevention program and its efforts in risk reduction.**

**Description**

Under the *Alberta Safety Codes Act* and The City's QMP, specific benchmarks and criteria are in place to evaluate the Fire Department's fire prevention and life safety program. As outlined in Performance Indicator 5B.2, the QMP is a document that sets out The City's commitment to the Province of Alberta with respect to fire inspections and investigations. The QMP is reviewed and accepted by the Alberta Safety Codes Council, which also uses third-party reviewers to conduct a formal audit of the inspection program every two years and present results back to the Alberta Safety Codes Council and the fire chief.

The Community Standards division prepares a monthly report for the fire chief and Fire Executive Team that includes statistics related to the percentage of total properties inspected, number of structure fires, number of civilian injuries and fatalities, plus performance measures related to The City's 3-1-1 service request system, including service request counts and the percentage of service requests closed on time. The Operations & Technical Teams division also prepares a monthly report for the Fire Executive Team that includes statistics related to the number of annual compliance and hazard inspections completed by fire crews.

Monthly, the fire inspection coordinator reviews reports in the Fire Department's records management system, FireRMS, to identify property inspection deficiencies that have not been rectified for follow up by a fire safety code officer to ensure occupancies are in compliance with the *Alberta Fire Code*.

**Appraisal**

Monthly and annual analysis and appraisal of progress on the fire prevention program has been established.

The Fire Department's fire prevention activities have been a significant contributor to a 22.9 per cent reduction in the number of fires in Calgary over the 2008-2013 period.

**Plan**

The Fire Department will continue its regular evaluation and monitoring of the Fire Inspection section to ensure its effectiveness and ongoing compliance with the *Alberta Safety Codes Act* and The City's QMP.

**References**

- 5B.8a. Sample FireRMS reports (see Fire Inspection Coordinator)
- 5B.8b. Calgary Fire Department 2012 Annual Report
- 5B.8c. Calgary Fire Department, Community Standards monthly report to Fire Executive Team, November 2013
- 5B.8d. City of Calgary, Uniform Quality Management Plan, Schedule B: Minimum service delivery standards, November 5, 2003



## **Criterion 5C: Public Education Program**

*A public education program is in place and directed toward identifying and reducing specific risks in a manner consistent with the agency's mission.*

### **Summary:**

When not actively responding to emergencies, the Fire Department helps to reduce the risk of injury and death through proactive initiatives targeted at individuals, businesses and different communities. Initiatives are designed to educate citizens and businesses on fire safety, safe disposal of hazardous materials, health and injury and fire prevention.

The Community Safety section, comprised of a coordinator and five community safety officers, coordinates the Fire Department's public education program. The section coordinates and manages a number of core fire and injury prevention programs and leverages the broad base of firefighters to deliver a number of other safety initiatives.

Through data contained within the Fire Department's information systems and the community risk assessment process outlined in the Fire Department's Standards of Cover and Criterion 2B, the Fire Department identifies communities at higher risk of fire for targeted fire safety programming. The content, format and language of fire safety programs and materials are adapted to the demographics of high fire risk areas, and designed to improve the safety of vulnerable groups and communities.

## **Performance Indicators:**

5C.1 The diversity and delivery of the public education program includes individual, business, and community audiences.

### **Description**

When not actively responding to emergencies, the Fire Department helps to reduce the risk of injury and death through proactive initiatives targeted at individuals, businesses and different communities. Initiatives are designed to educate citizens and businesses on fire safety, safe disposal of hazardous materials, health and injury and fire prevention.

Fire prevention and life safety information is available through The City's 3-1-1 call centre, the Fire Department web site, public service announcements, media releases, fire station tours and the Community Safety section.

A series of programs are delivered in communities through local fire stations, including free blood pressure and cholesterol screening. Fire crews are also involved in delivering the Home Safety Program by visiting homes in their communities each year to test and install smoke alarms and provide fire and injury prevention information. The After the Emergency program involves firefighters going door-to-door providing timely information about incidents in neighborhoods and safety education in communities that have been affected by an emergency event.

Community safety officers and firefighters also deliver targeted education to specific individuals and communities of people most at risk of injury. Children and youth are taught through the Campus Calgary program and the Youth Firesetter Intervention Referral and Education Service. Seniors, low-income and mobility-impaired citizens are engaged within their homes through the Meals on Wheels program. In addition, community safety officers make presentations to various cultural and community groups regarding safety considerations specific to lifestyle, concerns and need, as well as attend a variety of trade shows, community events and open houses to discuss safety issues with attendees.

Within the business community, community safety officers make presentations to organizations and business associations regarding residential and commercial safety as well as provide fire extinguisher training. Fire safety codes officers provide fire warden presentations to businesses and, as outlined in Performance Indicator 5B.2, conduct inspections of occupancies to ensure understanding of, and compliance with, applicable fire protection laws. The Fire Department is also partnered with businesses that provide funding to support a number of its ongoing awareness and education programs.

### **Appraisal**

The Fire Department has established a public education program that address people at a individual, business and community level. In 2013, the Fire Department met its goal of reaching at least one in ten Calgarians in a non-emergency setting. Over 120,300 citizens received community safety programming and education, including initiatives targeted at those most at risk of injury, including children, disabled persons, low-income households, immigrant populations and seniors.

### **Plan**

As outlined in Goal 1 of its 2012-2014 Business Plan, the Fire Department will develop a and implement specific strategies to engage diverse community groups as part of the Fire Department's overall engagement activities. In addition, as noted in Objective 4.1, the Fire Department will refresh and implement appropriate recommendations from the Calgary Health and Safety Research Study prepared by Fire 20/20 on reducing safety risks to multicultural groups.

### **References**

5C.1a. Calgary Fire Department safety education programs

<http://www.calgary.ca/CSPS/Fire/Pages/home.aspx?redirect=/fire>

5C.1b. Calgary Fire Department, Organizational efficiencies, safety: Advancing community safety, Public education and community safety, November 2013

5C.1c. Calgary Fire Department 2012-2014 Business Plan, Goal 1 and Objective 4.1

5C.1d. Calgary Health and Safety Research Study (Fire 20/20), December 2006

5C.2 The program has staffing with specific expertise to accomplish the program goals and objectives.

### **Description**

The Community Safety section coordinates the Fire Department's public education program. The section is comprised of a coordinator and five community safety officers. Appointment to the position of community safety officer is open to all personnel who have attained permanent fourth year firefighter status with the Fire Department. Community safety officers must meet the job position requirements, which include proficiency in written and verbal communication skills and the ability to work independently and in a team environment. Officers use their related skills, firefighting experience, competencies and interpersonal qualities to develop public education programs and safety messaging for a variety of audiences. New officers entering the Community Safety Section shadow experienced officers to learn more about their role as community safety officers and to gain a better understanding of the public education programs delivered by the Fire Department. Community safety officers deliver key safety messaging through daily presentations given to community groups, private corporations, school groups, and internally to new recruits.

Community safety officers are responsible for public education programs and work collaboratively with fire crews, social workers, Calgary Police Service community liaison officers, other business units, and municipal community program coordinators, to deliver these programs.

All section staff work in support of the public safety education programs goals and objectives, as identified by the goals and objectives set out for the Fire Department in its 2012-2014 Business Plan.

### **Appraisal**

The Community Safety section has established adequate staffing to coordinate and manage the Fire Department's public safety education goals and objectives. The Fire Department has effectively used its broad fire suppression base to deliver public safety education and programs at a community level. Using key fire safety messaging and the

vast experiences gained through the delivery of daily presentations, community safety officers have attained the necessary expertise to accomplish the goals and objectives of the public education program.

The Fire Department has one community safety officer per 191,000 population. The Fire Department developed a ten-year Sustainability Plan vision of continuing to provide community safety services. In developing the plan, best practice research was conducted and a community safety officer per population ratio was identified to support a long-term community based programming model, and ensure that an optimal number of officers are in place to deliver safety education to the changing and growing demands of citizens.

### **Plan**

The Fire Department will continue to monitor and balance staffing levels to ensure sufficient resources are in place to meet the goals and objectives set for its public safety education programs.

As outlined in Objective 3.4 of its 2012-2014 Business Plan, the Fire Department will develop a long-term strategy to move the Fire Department towards one community safety officer per 50,000 citizens to further advance public education, introduction additional programming and meet the demands of the growing city.

### **References**

- 5C.2a. FD Notice #16-2011, Selection of community safety officer, January 28, 2011
- 5C.2b. Calgary Fire Department 2012-2014 Business Plan, Objective 3.4, p. 19

5C.3 The agency defines and provides appropriate adequate equipment, supplies and materials to meet the public education program needs.

### **Description**

Community Safety staff are fully equipped to perform all necessary public education activities. The section is provided with a dedicated work area at the Fire Training Academy where community safety officers can easily exchange information about programs and service delivery.

The section has a variety of educational materials to assist in the delivery of public education programs. All fire stations has a variety of print materials that the public can access when visiting the station, including pamphlets that have been translated into different languages. All frontline apparatus carry community care packs that contain smoke alarms, batteries and installation tools. They also contain fire safety educational materials and supplies that firefighters can reference or distribute to the public. Other supplies and materials available on apparatus include trauma puppies that are handed out to children involved in an emergency incident.

The Community Safety section has a variety of print and promotional materials distributed to citizens during emergency and non-emergency community events as well as safety materials posted on the Fire Department's web site. The section also houses display backdrops used at trade shows, open houses and school presentations as well as a variety of fire safety props. Several of the public education programs are funded through sponsorship programs established with businesses, which assists in the procurement of appropriate program equipment, supplies and educational materials.

Each community safety officer has access to a Fire Department vehicle for use in performing their job functions.

### **Appraisal**

Community Safety staff have been provided appropriate equipment, supplies and materials to deliver the Fire Department's public education programs. Annual monetary or in-kind sponsorship plus one-time sponsorship funding has helped the Fire Department cover costs for some of its community safety programs. Annually, the Fire Department has

leveraged approximately \$80,000 in private sector support for its public education programs, including Fire Prevention Week activities, the Youth Firesetter Intervention Referral and Education Service program, the Home Safety Program and Campus Calgary.

### **Plan**

The Fire Department will continue to regularly review all equipment and supplies issued to frontline apparatus and community safety staff to ensure an appropriate level of support for public education programs.

As outlined in Objective 6.5 of its 2012-2014 Business Plan, the Fire Department will investigate a sponsorship and partnership strategy to engage the private sector and other levels of government in funding public safety infrastructure, programs and initiatives. Using a combination of sponsorship and Fire Department funding, in 2014, the Fire Department will develop and purchase a fire safety education trailer to further help deliver fire and injury prevention education programs.

### **References**

- 5C.3a. Community Safety pamphlets, handouts and information (see Community Safety Coordinator)
- 5C.3b. Calgary Fire Department, Community care pack inventory sheet
- 5C.3c. Calgary Fire Department procedure: Managing sponsorships & fundraising, March 17, 2012
- 5C.3d. Calgary Fire Department, Organizational efficiencies, Partnering to enhance the health and safety of citizens, Leveraging support from the private sector, November 2013
- 5C.3e. Calgary Fire Department 2012-2014 Business Plan, Objective 6.5, p. 21

**CC 5C.4 The public education program targets specific risks and risk audiences as identified through incident, demographic, and program data analysis.**

**Description**

Through the community risk assessment process outlined in the Fire Department's Standards of Cover and Criteria 2B and 2C, the Fire Department identifies communities at higher risk of fire for targeted fire safety programming.

Through analysis of incident data contained within the Fire Department's records management system, FireRMS, the Community Safety section works with the Fire Department's Strategic Services section to review fire call volumes across the city. In communities with high fire call volumes, further analysis is conducted to determine the cause and origin of fire. For example, to identify higher-risk communities, the Fire Department conducted a statistical analysis on call volumes in Calgary's communities and analyzed the cause of the fires, noting that several communities experienced fires due to cooking, cigarette smoking and candle use.

Once high-risk communities are identified, the Fire Department partners with The City's Community and Neighborhood Services business unit to identify communities with strong liaison opportunities and develop and deliver fire safety programming that considers local demographics and interests. For example, one community with particularly high volumes of fire calls was identified and the primary cause of fire was determined to be cooking fires. Education programs in this community focus on that cause and take into consideration the practices and norms of the cultures living within the area as determined through demographic analysis.

**Appraisal**

As part of the work associated with Goal 19 of the Fire Department's 2012-2014 Business Plan, the Community Safety section has established the early phases of a public education program that targets specific risks and risk audiences as identified through incident, demographic and program data. Collaborating with cross-departmental partners, four primary communities and a secondary community were identified to pilot a resident-led

approach to building and delivering sustainable community safety programs and addressing local concerns and interests. The Community Safety section has started discussions with Strategic Services to leverage its analysis on non-fire risks in Calgary to further expand its targeted risk programming.

### **Plan**

The Community Safety section will continue to provide key safety messages and fire prevention programs to all citizens through the media and community partners and expand its use of community risk assessments to drive the creation and delivery of public education programming. It will employ the use of non-fire risk analysis to broaden its education and address those communities demonstrating the most need.

Throughout 2014, community safety officers will continue to establish relationships with community and civic partners in the four identified high-risk communities to deliver targeted fire safety education programs and messages that take into consideration the practices and norms of the cultures living within the area.

### **References**

- 5C.4a. Community Safety program database (see Community Safety Coordinator for viewing)
- 5C.4b. Calgary Fire Department, Community Safety performance improvement project, Frequency of fire by community district and community profiles, September 6, 2013
- 5C.4c. Calgary Fire Department programs  
<http://www.calgary.ca/CSPS/Fire/Pages/Programs/Programs.aspx>
- 5C.4d. Calgary Fire Department 2012-2014 Business Plan, Goal 19, p. 36

**CC 5C.5 Current standard operating procedures or general guidelines are in place to direct the public education program.**

**Description**

To direct the Fire Department's public education program, the Community Safety section has developed ten overarching principles to guide staff in their planning and decision making. These principles address operating procedures, collaboration, community self-activation, sustainability, local interests, workforce, innovation, service needs of citizens, environmental efficiency and inclusiveness.

In addition to the guiding principles, an administrative policy, procedures and guidelines for handling fire station tours and school visits has been developed, and guidelines are in place for fire stations to deliver the Home Safety Program. Policies and guidelines are available through the Fire Department's Policy and Procedure Manager software and accessible by all staff.

**Appraisal**

The Fire Department has established guiding principles and a policy for delivering community fire and injury prevention education. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

**Plan**

The Fire Department will periodically review its existing policy, procedures and guidelines to ensure public education program goals are being met. Throughout the 2015-2018 business planning cycle, the Community Safety section will develop additional general guidelines for the public education program based on its guiding principles.

**References**

5C.5a. Community Safety section guiding principles, September 2013

5C.5b. Calgary Fire Department policy: Community fire & injury prevention education, March 6, 2014

5C.5c. Calgary Fire Department procedure: Managing fire station tours, January 7, 2013

5C.5d. CFD Supplemental Training Manual, Fire prevention and public education,  
February 2014

5C.5e. Calgary Fire Department Home Safety Program binder (see Community Safety  
Coordinator)

5C.6 The agency's information system allows for documentation and analysis of its public education program.

### **Description**

The Community Safety section works with the Strategic Services section to analyze data and information stored in the Fire Department's records management system, FireRMS, to determine the incidence of fires by occupancy type, cause and origin. In addition, it uses the data analysis to determine trends in fire-related civilian injuries and fatalities, as well as non-fire trends. This information is used to identify targeted, risk-based public education programming in communities, as outlined in Performance Indicator 5C.4 and assist in the development of key fire safety and prevention messages during Fire Prevention Week, seasonal campaigns, and corporate training events.

The Community Safety section uses an electronic database to collect and analyze public education program data, including details on the type and number of programs delivered, events attended and people educated.

### **Appraisal**

The Community Safety has effectively used and analyzed data in the Fire Department's records management system to identify trends in fire and non-fire incidents to inform and direct its public education program. It has also established a method for collecting program-related information and statistics.

### **Plan**

The Community Safety section will continue to use its existing methods to document and analyze community need and the reach of its public education programs. As identified in Performance Indicator 2A.4, the FireRMS system will be replaced by a new database system, FireHub, in 2014, which will integrate all Fire Department data, as well as information from other external sources, into a single repository. Community Safety will rely on data from this new system for its future analysis of community risk and trends.

### **References**

5C.6a. Community Safety program database (see Community Safety Coordinator for viewing)

5C.6b. CFDNet: FireHub

**CC 5C.7 An appraisal is conducted, at least annually, to determine the effectiveness of the public education program and its effect on reducing identified risks.**

**Description**

Information about public education programs is evaluated by the Community Safety section to help understand the needs and preferences of the community.

To determine the effectiveness of the overall public education program, the Community Safety section prepares a report each month for the Fire Executive Team that includes the number of public education events and participation rates.

**Appraisal**

In 2013, community safety officers offered fire safety information to over 49,000 citizens during community safety events in non high fire risk areas, and provided targeted fire safety education to over 1,200 citizens in identified high fire risk communities.

Monthly and annual analysis and appraisal of progress on the public education program has been established.

The Fire Department's fire prevention activities have been a significant contributor to a 22.9 per cent reduction in the number of fires in Calgary over the 2008-2013 period. In addition, the Fire Department's ongoing public safety, prevention, and education activities, including initiatives targeted to groups most at risk and vulnerable to injury such as children, disabled persons, low income households, immigrant populations and seniors, has contributed to the fifth consecutive year of decline in civilian fire-related injuries. Between 2008 and 2013, there was a 76.5 per cent decrease in civilian injuries due to fire.

**Plan**

As outlined in Objective 19.3 of its 2012-2014 Business Plan, the Fire Department will develop evaluation techniques to measure citizen satisfaction and knowledge uptake of public education programming. This work will include developing a mechanism to gather participant feedback on knowledge gained following a presentation, and incorporating

measures related to behavioural changes resulting from public education programs and presentations.

In addition, as part of the work in Objective 19.4, the Fire Department will measure its contribution to overall social return on investment, which will examine the social, environmental and economic outcomes of the programs by assigning value to these qualitative gains.

### **References**

- 5C.7a. Community Safety program database (see Community Safety Coordinator)
- 5C.7b. Calgary Fire Department Annual Report 2012, p. 13
- 5C.7c. Community Safety section monthly report to Fire Executive Team, December 2013
- 5C.7d. Calgary Fire Department 2012-2014 Business Plan, Objectives 19.3 and 19.4, p. 36

5C.8 There are programs in place that enable improved fire protection and injury prevention for low income families (e.g. as free smoke alarm installation, free bicycle helmet program, etc.)

### **Description**

The Fire Department has a number of community programs to increase awareness and knowledge of fire and injury prevention for low income families and individuals. All public education programs offered by the Fire Department are free and delivered in locations where low income families, children and individuals attend, including schools and community events. A wide range of prevention materials are also available free of charge from the Fire Department's Community Safety section, its external web site, fire stations and fire apparatus.

As part of the Fire Department's Home Safety Program, firefighters visit homes in high fire risk areas, which are often also low income, and install free smoke alarms and batteries. During 2013 Fire Prevention Week activities, firefighters went door-to-door in high fire risk communities, shared fire safety tips, tested smoke alarms, and installed new smoke alarms and carbon monoxide detectors in homes that needed them. Community Safety Officers also accompany Meals on Wheels volunteers who deliver meals to elderly or mobility-impaired individuals unable to leave their homes and often are low income. Officers checks for, and installs if required, a smoke alarm, helps the resident develop an escape plan, identifies obvious fire safety hazards, and provides basic fire safety information.

The City has also formed the Safe House Inspection Program to perform multidisciplinary health and safety inspections of existing rental rooming houses and apartment buildings, which are often low income housing options. Teams, which include fire codes officers, conduct joint inspections and enforce the minimum standards of health and safety for these existing residential rental buildings. The coordinated proactive inspection improves the safety of housing for citizens.

## **Appraisal**

As identified in Performance Indicator, 5C.4, the Fire Department has identified high fire risk audiences, including low income and high rental property communities. The Community Safety section has developed public education initiatives to improve fire protection and injury prevention among low income individuals and families.

Of the over 100 homes visited by firefighters during the 2013 Fire Prevention Week, 87 smoke alarms and 70 carbon monoxide detectors were installed. Since the start of its Home Safety Program in 1996, the Fire Department has visited over 250,000 Calgary homes to check smoke alarms and carbon monoxide detectors, installed over 22,000 smoke alarms and changed more than 14,000 batteries.

## **Plan**

The Fire Department will continue to provide free public education programs and install smoke alarms and batteries at no charge. In 2014, the Community Safety section will use the community risk assessments outlined in Performance Indicator 5C.4 to focus its efforts on providing free smoke alarm installations in communities with lower income levels and higher proportions of rental properties.

As outlined in Objective 6.4 of its 2012-2014 Business Plan, the Fire Department will develop and enhance partnerships with external agencies to influence fire services and community safety, including those involved in serving low income Calgarians.

## **References**

5C.8a. Calgary Fire Department 2012-2014 Business Plan, Objective 6.4, p. 20

5C.8b. Safe Housing Inspection Program, Terms of reference



## **Criterion 5D: Fire Investigation Program**

*The agency operates an adequate, effective and efficient program directed toward origin and cause investigation and determination for fires, explosions, and other emergency situations that endanger life or property.*

### **Summary:**

Under the *Alberta Safety Codes Act*, R.S.A. 2000 Chapter S-1, 48(1), Administrative Items Regulation, Alberta Regulation 16/2004, Section 8 (1), the Fire Department has established a Fire Investigation section to conduct fire investigations within the city of Calgary to determine the origin, cause and circumstance of fires when there is a loss of life, serious injury that requires professional medical attention or property is damaged or destroyed. The section is staffed by fully trained professional firefighters who have completed safety codes officer investigator training and are designated by the Province of Alberta as fire safety codes officers. All fire investigators adhere to scientific methods outlined in manuals, standards, policies and procedures.

If fire investigations require additional expertise to help determine origin and cause, the fire investigator calls upon subject matter experts from the public and private sector. If a fire is proven to be suspicious or incendiary in nature, the Calgary Police Service Arson unit is called in to assist and/or take over for a criminal investigation.

Data and analysis related to the fire investigations program provides vital information that shapes the fire prevention and public education programs provided to Calgarians.

## **Performance Indicators:**

**CC 5D.1 The agency's fire investigation program is authorized by adopted statute, code, or ordinance.**

### **Description**

The Fire Department's Fire Investigation section is authorized under the provisions of the *Alberta Safety Codes Act*, Administrative Items Regulation, Alberta Regulation 16/2004, Section 8, to investigate all fires within its jurisdiction. As regulated by the *Alberta Safety Codes Act*, the Fire Investigation section conducts fire investigations within the city of Calgary to determine the origin, cause and circumstance of fires when there is a loss of life, serious injury that requires professional medical attention or property is damaged or destroyed. All Fire Investigation staff are accredited safety codes officers designated as fire investigators under the *Alberta Safety Codes Act*, R.S.A. 2000 Chapter S-1, 48(1).

The City's Quality Management Plan (QMP), approved by the Alberta Safety Codes Council, forms the basis for the Fire Department's code enforcement program and defines The City's commitment to the Province of Alberta with respect to fire inspections and investigations.

### **Appraisal**

The *Alberta Safety Codes Act* has provided the Fire Department the authority to investigate all fires and determine origin, cause and circumstances within Calgary.

### **Plan**

The Fire Department will continue to maintain its authority under the *Alberta Safety Codes Act* and accredit its safety codes officers to investigate fires to determine origin, cause and circumstances.

### **References**

5D.1a. *Alberta Safety Codes Act*, RSA 2000, Chapter S-1, 48(1), current as of December 20, 2012 <http://www.qp.alberta.ca/documents/acts/s01.pdf>

5D.1b. *Alberta Safety Codes Act*, Administrative Items Regulation, Alberta Regulation 16/2004, Section 8

5D.1c. City of Calgary, Uniform Quality Management Plan, Schedule A: Scope and administration, November 05, 2003

5D.1d. City of Calgary, Uniform Quality Management Plan, Schedule B: Minimum Service Delivery Standards, November 5, 2003

5D.1e. Attachment 2: City of Calgary target service delivery standards, November 05, 2003

**CC 5D.2 The scientific method (or an equivalent) is utilized to investigate and determine the origin and cause of all significant fires and explosions.**

**Description**

The fire investigation process begins with the first arriving operations officer is capable of establishing initial incident commander and carrying out the critical tasks identified in the Fire Department's Standard of Cover. The incident commander calls for a duty fire investigator to attend: all vehicle and structure fires; minor mischief fires that appear to be linked or part of a pattern; all fires resulting in death or a serious injury where hospitalization occurs; all fires resulting from the preparation of illegal drugs and hydroponic operations; all fires that include any incendiary device; and any fires that are of a suspicious nature.

It is the responsibility of the fire investigator to conduct a thorough fire origin and cause investigation as described in the *Fire Investigation Operation and Control Procedures* manual and administrative policies and procedures. If the fire scene requires additional expertise to help determine origin and cause, the fire investigator may call upon subject matter experts, such as ATCO Gas staff, City building engineers and inspectors, insurance company investigators and excavation firms. If a fire is proven to be suspicious or incendiary in nature, the Calgary Police Service Arson unit is called in to assist and/or take over for a criminal investigation.

The Fire Department's fire investigators are certified as fire and explosion investigators by the National Association of Fire Investigators, and the fire investigations coordinator reviews all fire reports to ensure they are completed in accordance with National Fire Protection Association standard 921, *Guide for fire and explosion investigations*.

**Appraisal**

The Fire Department has established scientific methods to investigate the cause and origin of fires and explosions through its *Fire Investigation Operation and Control Procedures* manual and administrative policies and procedures.

## **Plan**

The Fire Investigation section will continue to periodically review its scientific investigative methods for best practices.

## **References**

- 5D.2a. Calgary Fire Department procedure: Fire investigation operation and control, February 2009
- 5D.2b. Calgary Fire Department procedure: Conducting fire incident investigations, November 21, 2013
- 5D.2c. Calgary Fire Department policy: Fire incident investigations, August 10, 2010
- 5D.2d. Calgary Fire Department policy: Fire investigations bay, August 2, 2012
- 5D.2e. Calgary Fire Department procedure: Managing accelerant detection canine (CFD K9), September 26, 2012
- 5D.2f. National Fire Protection Association standard 921: Guide for fire and explosion investigations, 2014 Edition

**CC 5D.3 The program has adequate staff with specific expertise, training, and credentials to accomplish the program goals and objectives.**

**Description**

The Fire Investigation section coordinates the Fire Department's fire investigations. The section is comprised of a coordinator, eight on-shift investigators, and two accelerant detection canine units that have been sponsored by State Farm and trained through the Maine Accelerant Detection Canine program.

All personnel are accredited safety codes officers designated as fire investigators under the *Alberta Safety Codes Act*, R.S.A. 2000 Chapter S-1. All personnel are trained to level two safety codes officers and level two fire investigators, one investigator is certified in vehicle fire investigations and eight are certified as fire and explosion investigators by the National Association of Fire Investigators. All personnel are members of the Canadian Association of Fire Investigators, the International Association of Arson Investigators and the National Association of Fire Investigators.

All section staff work in support of the fire investigation programs goals and objectives, as identified by: commitments made by The City in its Quality Management Plan (Performance Indicator 5D.1); requirements outlined in the *Alberta Safety Codes Act*, Administrative Items Regulation, Alberta Regulation 16/2004, Section 8; and the goals and objectives set out for the Fire Department in its 2012-2014 Business Plan.

**Appraisal**

The Fire Investigation section has established adequate staff with specific expertise and certification to deliver its goals and objectives. The accelerant detection canine units have improved the section's ability to effectively and efficiently investigate fires as evidenced by the unit identifying 96 accelerants at the more than 120 fires it attended in 2013.

**Plan**

The Fire Department will continue to monitor and balance staffing and training levels to ensure sufficient resources are in place to meet the goals and objectives set for its fire investigation program. The Fire Department will annually recertify its accelerant detection canine units through the State Farm Arson Dog Program and examine the feasibility of

obtaining additional accelerant detection canines, bringing the total to four teams to provide 24/7 availability.

### **References**

5D.3a. *Alberta Safety Codes Act*, Chapter S-1 RSA 2000, Section 48: Investigation

5D.3b. Calgary Fire Department, Fire investigation staff and training, December 2013

5D.3c. Calgary Fire Department procedure: Training safety codes officers for investigations and inspections, April 8, 2013

5D.3d. City of Calgary Uniform Quality Management Plan, Schedule B: Minimum service delivery standards, November 5, 2003

5D.3e. Calgary Fire Department Fire Investigator position description, <http://cfdnet/FDNotices/Pages/209-2009-2.aspx>

5D.3f. Calgary Fire Department procedure: Managing accelerant detection canine (CFD K9), September 6, 2012

5D.4 The agency defines and provides appropriate and adequate equipment, supplies and materials to meet the fire investigation program needs.

### **Description**

Fire Investigation staff are fully equipped to perform all necessary fire investigation activities. The fire investigations coordinator has an office and two district offices are located in fire stations in the north and south parts of the city for the Fire Investigation section. These office spaces have stationery, computers and work stations.

Fire investigators receive cellular phones, mobile and portable radios, cameras, protective clothing, self-contained breathing apparatus, individual face pieces, hand tools, lights and hydrocarbon detectors. In addition, laptops are provided in fire investigation vehicles allowing remote access to the City computer network. Investigators may also use any equipment or supplies available from on-scene operation crews.

The Fire Department has one of North America's only secure dedicated fire investigation bays complete with specialized equipment and tools to examine evidence collected at fires. The Fire Investigation section has two vans that staff use to transport equipment and supplies for fire investigations, and two crew cab trucks with built-in kennels, supplies and materials for use by the accelerant detection canine units. At the start of each shift, fire investigators use an apparatus and equipment check sheet to ensure that equipment is present and in good working condition.

### **Appraisal**

Fire Investigation staff have been provided appropriate and adequate equipment, supplies and materials to safely and effectively complete fire investigations.

### **Plan**

The Fire Department will continue to regularly review all equipment, supplies and materials issued to fire investigation staff and examine new technologies to assist in the accurate determination of origin and cause of fires and explosions.

## **References**

- 5D.4a. Calgary Fire Department, Apparatus/equipment check sheet, Apparatus #AR0104,  
Investigator 2, September 20, 2012
- 5D.4b. Fire investigations bay - Station 39 (suggest tour)

5D.5 The agency establishes agreements for support from other agencies to aid in accomplishing the program goals and objectives.

### **Description**

The Fire Investigation section works collaboratively with the Calgary Police Service Arson unit in arson investigations. The Fire Department also works on an informal basis with many other agencies within the province to assist in investigations, including the Calgary Emergency Management Agency, the Alberta Fire Commissioner's Office, the Royal Canadian Mounted Police and Alberta Environment. Fire investigators also work closely with safety codes officers from other disciplines, such as electrical, plumbing, gas, and building, as well as insurance and private sector investigators.

### **Appraisal**

The Fire Department has established support and relationships with the Calgary Police Service and other agencies to assist in the fire investigation process.

### **Plan**

The Fire Department will continue its relationship with the Calgary Police Service Arson unit and other agencies to assist in fire investigations, and will work to identify others that may assist in the investigation process.

### **References**

5D.5a. Calgary Fire Department procedure: Fire investigation operation and control,  
February 2009

**CC 5D.6 Current standard operating procedures or general guidelines are in place to direct the fire cause and investigation program.**

**Description**

The Fire Investigation section has general operating guidelines that direct the fire investigation process in accordance with requirements set out in the *Alberta Safety Codes Act*, R.S.A. 2000 Chapter S-1, 48(1), The City's QMP and the scientific principles and guidelines of National Fire Protection Association standards.

The Fire Department's standard operating procedures and general guidelines for conducting fire investigations are outlined in the *Fire Investigation Operation and Control Procedures* manual. In addition, administrative policies, procedures and guidelines have been developed to direct the fire investigation program. These policies and procedures are available through the Fire Department's Policy and Procedure Manager software and accessible by all staff.

**Appraisal**

The Fire Department has established policies, procedures and general operating guidelines for its fire investigation program. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built in to the software notifying staff of changes or additions.

**Plan**

The Fire Investigation section will continue to conduct regular reviews, evaluations and assessments of its policies, procedures and operating guidelines to maintain alignment with legislation and standards and ensure its fire investigation goals are being met.

**References**

5D.6a. Calgary Fire Department procedure: Fire investigation operation and control, February 2009

5D.6b. Calgary Fire Department procedure: Conducting fire incident investigations, November 21, 2013

5D.6c. Calgary Fire Department policy: Fire incident investigations, August 10, 2010

- 5D.6d. Calgary Fire Department policy: Fire investigations bay, August 2, 2012
- 5D.6e. Calgary Fire Department procedure: Managing accelerant detection canine (CFD K9),  
September 26, 2012
- 5D.6f. *Alberta Safety Codes Act*, Chapter S-1 RSA 2000, Section 48: Investigation
- 5D.6g. National Fire Protection Association standard 921: Guide for Fire & Explosion  
Investigations, 201 Edition (see Fire Investigations Coordinator)

5D.7 The agency's information system allows for documentation and analysis of the fire investigation program.

### **Description**

Fire investigation activities are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional fire suppression information. The fire investigator then reviews all recorded data for the incident and enters a detailed fire scene examination. After a review of the entered data and sign off by the fire investigator, the incident is marked as complete.

Fire investigation data from FireRMS is analyzed by the Fire Department's Strategic Services section to identify total estimated loss, the value of property saved and numbers of fire injuries and fatalities. Other fire investigation information captured includes cause of ignition, fire origin, fire summary reports and fire incident maps, which provides the basis for an analysis of fire trends to direct future investigation and fire prevention activities. Fire reports are submitted monthly to the Alberta Fire Commissioners Office so the Province can tabulate and review results for future prevention measures.

The fire marshal and the fire investigations coordinator have access to information stored on FireRMS. They regularly review this data to ensure the Fire Investigation section is meeting its goals as well as municipal and provincial requirements.

### **Appraisal**

The Fire Department has an established information system in place to document fire investigation activities and provide data for analyzing program results.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems, a growing concern as the Fire Department moves to increasing reliance on electronic and web-based data systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS.

The database system, FireHub, will integrate all Fire Department data, as well as information from other external sources, into a single repository.

### **Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4.

### **References**

5D.7a. Calgary Fire Department, FireRMS (suggest live demonstration)

5D.7b. Calgary Fire Department, FireRMS report sample: Fire summary report (see Fire Investigations Coordinator)

5D.7c. Calgary Fire Department, FireRMS report sample: Fire investigations summary report (see Fire Investigations Coordinator)

5D.7d. Calgary Fire Department, Incident map sample

5D.7e. CFDNet: FireHub

**CC 5D.8 An appraisal is conducted, at least annually, to determine the effectiveness of the fire investigation program.**

**Description**

Under the *Alberta Safety Codes Act* and The City's QMP, specific benchmarks and criteria are in place to evaluate the Fire Department's fire prevention and life safety program. As outlined in Performance Indicator 5B.2, the QMP is a document that sets out The City's commitment to the Province of Alberta with respect to fire inspections and investigations. The QMP is reviewed and accepted by the Alberta Safety Codes Council, which also uses third-party reviewers to conduct a formal audit of the investigation program every two years and present results back to the Alberta Safety Codes Council and the fire chief.

As noted in Performance Indicator 5D.7, reports from FireRMS are regularly generated to assist in data analysis. The fire investigations coordinator reviews all fire incident reports daily to ensure the Fire Department is meeting its investigation objectives and requirements. The review is also used to identify patterns, trends and irregularities. If areas of concern are discovered, such as a regular pattern of a certain type of fire in a concentrated area, action is taken to rectify the issue, whether through public education programs, investigation by the Calgary Police Service Arson unit or other mitigation activities as determined in discussion with the fire marshal.

The Fire Investigation section also collects statistics on the fire investigation program and submits them for inclusion in a monthly report for the Fire Executive Team that includes the number of fires attended by investigators, types of fires investigated, fire loss, fatalities, injuries and canine accelerant detection team activities.

**Appraisal**

A regular review of fire investigation results has been established. The Fire Department's fire investigation activities have played a role in the 22.9 per cent reduction in the number of fires in Calgary over the 2008-2013 period.

## **Plan**

The Fire Department will continue its regular evaluation and monitoring of the Fire Investigation section to ensure its effectiveness and ongoing compliance with the *Alberta Safety Codes Act* and The City's QMP.

## **References**

- 5D.8a. City of Calgary, Uniform Quality Management Plan, Schedule B: Minimum service delivery standards, November 5, 2003
- 5D.8b. Calgary Fire Department, Structure fire incident map sample
- 5D.8c. Calgary Fire Department 2012 Annual Report
- 5D.8d. Calgary Fire Department, Community Standards monthly report to Fire Executive Team, November 2013
- 5D.8e. Community Standards statistics, 2013 (see Fire Investigations Coordinator for access)

## **Criterion 5E: Technical Rescue**

*NOTE: The program described in this section may also be called 'Heavy Rescue,' 'Extrication' and/or 'Urban Search and Rescue.'*

*The agency operates an adequate, effective, and efficient program directed toward rescuing trapped or endangered persons from any life-endangering cause, e.g., structural collapse, vehicle accidents, swift water or submersion, confined space, cave-in, trench collapse, fire, etc.*

### **Summary:**

The Fire Department employs three separate technical rescue teams: rope/high-angle rescue, aquatic rescue and heavy rescue.

All fire operation personnel are provided introductory training and awareness in a variety of different technical rescues. They are capable of establishing incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover. Critical tasking indicates that technical rescue teams are always dispatched for a known specialized rescue call and may also be dispatched after the first unit arrives on scene and discovers that a specialized rescue is required. Specialty-trained technical rescue personnel are available on each shift from a pool of 97 rope rescue Level II-trained technicians, 49 certified dive rescue and recovery personnel, 73 aquatics surface rescue specialists and 83 heavy rescue personnel.

The Fire Department's first unit benchmark is to respond to technical rescue events in seven minutes or less total response time, 90 per cent of the time, and the Fire Department effective response force (ERF) assembly benchmark for technical rescue events is to provide an initial ERF ranging from six to 16 personnel, depending on incident type and risk.

The Fire Department met its technical rescue total response time objective for first-in response 50 per cent of the time in 2012 with a 90th percentile response time of ten minutes and 19 seconds. In the first six months of 2013, the Fire Department met its total

response time objective 49 per cent of the time with a 90th percentile response time of 11 minutes and seven seconds.

## **Performance Indicators:**

**CC 5E.1 Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of technical rescue emergency incidents.**

### **Description**

The Fire Department employs three separate technical rescue teams: rope/high-angle rescue, aquatic rescue and heavy rescue.

The Fire Department's first unit benchmark is to respond to technical rescue events in seven minutes or less total response time, 90 per cent of the time. At least one engine staffed with a minimum of four personnel is located in each fire station. Engines are the primary responding unit to all incidents, however, an auxiliary unit staffed with two personnel may be deployed as the initial responding unit as a result of the Fire Department's dynamic deployment model. All first-in arriving units are capable of establishing initial incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover.

The Fire Department's technical rescue effective response force (ERF) assembly benchmark is to provide an initial ERF ranging from six to 16 personnel, depending on incident type and risk. The ERF is capable of performing the critical tasks identified for each type and risk level of technical rescue incident as identified in the Fire Department's Standards of Cover until additional specialized technical rescue resources arrive.

All fire operation members are provided introductory training and awareness in a variety of different rescues. There are approximately 300 trained firefighters assigned per platoon with a minimum staffing of 233 firefighters per shift to staff all apparatus on duty.

Response apparatus includes engines as well as auxiliary and specialized support units to respond to technical rescue incidents. Specialty apparatus used varies by technical rescue type: rope/high-angle rescue teams respond with a dedicated engine and emergency rescue unit; aquatic rescue teams respond with dedicated boat tows for jet and inflatable crafts; and heavy rescue teams respond with two dedicated apparatus.

As outlined in Performance Indicator 2C.5, the Fire Department developed a Performance Improvement Programme containing a series of strategies to improve response performance and reliability. These strategies included streamlining the call handling and dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines introduced in late 2013 to manage resources based on risks, probability, reliability, and service demands.

### **Appraisal**

The Fire Department met its technical rescue total response time objective for first-in response 50 per cent of the time in 2012 with a 90th percentile response time of ten minutes and 19 seconds. In the first six months of 2013, the Fire Department met its total response time objective 49 per cent of the time with a 90th percentile response time of 11 minutes and seven seconds.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on technical rescue response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

### **Plan**

The Fire Department will continue to measure and report on its technical rescue deployment objectives. As data becomes available, the Fire Department will analyze the effectiveness and of its dynamic deployment model and measure the impact of its standardized turnout time processes on technical rescue total response performance for its first-in units and effective response force.

In 2014, the Fire Department will develop an ERF total response time benchmark for technical rescue events to allow for improved evaluation of the program's effectiveness.

### **References**

5E.1a. Calgary Fire Department 2014 Standards of Cover

5E.1b. FD Notice #176-2013: Dynamic deployment model - Apparatus redeployment guidelines, December 4, 2013

5E.1c. Calgary Fire Department, Performance Improvement Programme

5E.1d. Report to Fire Executive Team, Deployment working group annual deployment review, December 4, 2013

5E.2 The agency defines and provides appropriate and adequate equipment to accomplish the stated level of response for technical rescue and to be compliant with local, state/provincial and national standards.

### **Description**

Each technical rescue program has equipment tailored to its needs and standards and supports the stated level of response for its technical rescue program as outlined in Performance Indicator 5E.1. Equipment is provided to both the technical rescue team members and stations that support technical rescue response. All equipment meets the intent of the standards set out by the National Fire Protection Association and meets Canadian Standards Association and *Alberta Occupational Health and Safety Act, Code, and Regulations* requirements.

The Fire Department's engines have basic equipment to be able to begin a rope/high-angle rescue, an aquatics surface rescue and a heavy rescue.

Rope/high-angle rescue team members have a dedicated engine and emergency rescue unit that contain equipment and materials to support the level of response outlined in the guidelines in the rope/high-angle rescue training manuals. Two stations have a jet boat, inflatable boat and dedicated boat tow vehicle for surface rescue responses. A third station has the same apparatus and equipment plus an aquatic rescue unit that carries dive rescue and recovery gear. Aquatic rescue responders are assigned personal equipment according to the level of rescue that they perform. All other equipment required to meet response objectives is located on the apparatus or in the aquatic rescue stations. The heavy rescue team has two dedicated apparatus that contain equipment and materials to support its level of response as set out in the guidelines in the heavy rescue training manuals.

All response apparatus carry an apparatus/equipment check sheet that is used by firefighters and technical team members at the start of every shift to conduct visual equipment and vehicle checks to ensure the appropriate and adequate equipment is available and in working order. Weekly checks are conducted on all mechanical equipment to ensure it is properly operating. Damaged, missing or lost equipment is reported to the Equipment & Supply section for repair and or replacement. The Fire

Department's Logistic & Infrastructure division is tasked with asset planning, procuring, testing and maintaining technical rescue program equipment.

Specialized equipment for each technical rescue program is purchased in collaboration between the technical teams coordinator and the Fire Department's Equipment & Supply section. Training officers and technical team members are consulted on their operational needs and help define specifications and requirements for equipment. When new equipment is needed, a working group of subject matter experts from across the Fire Department is set up to research and evaluate options and final results are presented to the division's deputy chief or Fire Executive Team for approval.

### **Appraisal**

Appropriate and adequate equipment that meets industry and legislative requirements has been defined and made available to staff to accomplish the Fire Department's stated level of response for technical rescue incidents.

### **Plan**

The technical teams coordinator and training officers will continue to research and evaluate technical advances in equipment used for the individual disciplines to ensure equipment remains appropriate and adequate for the technical rescue program.

As outlined in Performance Indicator 6F.5, as part of Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the equipment needs of the technical rescue program.

### **References**

- 5E.2a. Calgary Fire Department, Technical rescue team standards
- 5E.2b. Calgary Fire Department, Apparatus/equipment check sheet sample, Apparatus R0811 #09 Heavy Rescue Unit (February 11, 2013)
- 5E.2c. Calgary Fire Department, Equipment & Supply order form
- 5E.2d. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

5E.3 Supplies and materials allocation is based on established objectives, is appropriate to meet technical rescue operational needs, and is compliant with local, state/provincial and national standards.

### **Description**

The Fire Department's operating budget provides for adequate supplies and materials to meet its technical rescue needs. Supplies and materials for each technical rescue program are purchased in collaboration between the technical teams coordinator and the Fire Department's Equipment & Supply section. Training officers and technical team members are consulted on their operational needs and help set out the specifications and requirements for supplies and materials. Equipment & Supply identifies appropriate vendors and generally oversees the procurement process.

Other supplies and consumables for the technical rescue program are available from the Equipment & Supply section and are accessible to operations and technical teams after hours. Equipment & Supply staff can be requested to report to duty after hours to provide logistical support at large technical rescue incidents. In addition, as outlined in Performance Indicator 5H.8, plans are in place to ensure the supply chain remains robust, resilient and supportive of operational needs through large-scale events.

Specialized supplies are stocked at the stations where each technical rescue program is based. These stations maintain inventory check sheets and log books and items consumed on a frequent basis are reordered as required.

For the rope /high-angle rescue program, most supplies are maintained at a station in the downtown core with a complement located at the Fire Training Academy. Items regularly used for the aquatic rescue program are located at one of the three aquatic station locations. For the heavy rescue program, all necessary supplies required to complete any of the team's operations are housed at a station with quick access to major transportation corridors, including industrial and commercial areas in Calgary.

All supplies and materials meet the intent of the standards set out by the National Fire Protection Association and meet Canadian Standards Association and *Alberta Occupational Health and Safety Act, Code, and Regulations* requirements.

## **Appraisal**

The Fire Department has established a process for identifying operational needs of technical teams and has maintained adequate materials and supplies to meet the operational needs and objectives of the technical rescue programs.

## **Plan**

The Fire Department will continue to assess operational needs of the technical rescue program and provide the appropriate supplies and materials. It will also continue to monitor the safety, quality, function, inventory and maintenance of technical rescue supplies and materials to ensure they are reliable and meet the ongoing operational needs of the technical rescue programs.

## **References**

- 5E.3a. Calgary Fire Department, Equipment & Supply order form
- 5E.3b. Calgary Fire Department Procedure: Requesting goods & services, May 23, 2013
- 5E.3c. Calgary Fire Department, Apparatus/equipment check sheet sample, Apparatus R0811 #09 Heavy Rescue Unit (February 11, 2013)
- 5E.3d. Rope log book (see Rope/High-angle Rescue Training Officer)

**CC 5E.4 Current standard operating procedures or general guidelines are in place to accomplish the stated level of response for technical rescue incidents.**

**Description**

Policies, procedures, training manuals and critical tasking are identified for each technical rescue incident type and risk level. These are designed to support achievement of the stated level of response for technical rescue response and ensure staffing and incident needs are addressed.

Policies and procedures are available through the Fire Department's Policy and Procedure Manager software, and training manuals for the technical rescue program are available online either through the Fire Department's Learning Management System or intranet. The Fire Department's policy, *Incident operations*, provides direction regarding response to various incident types to ensure appropriate and safe actions are employed.

Each discipline of the Fire Department's technical rescue program has training manuals that reflect provincial and federal occupational health and safety regulations, Canadian Standards Association requirements, National Fire Protection Association (NFPA) standards and industry standards. The Fire Department's technical rescue training manuals are based in part on key standards and legislation pertaining to the technical rescue area:

- Rope/high-angle rescue: Guidelines based on NFPA and the *Alberta Occupational Health & Safety Act, Code and Regulations* (AOHSACR). Technicians are trained to function in incident-specific roles as per NFPA 1006 guidelines.
- Aquatic rescue: Guidelines based on AOHSACR Part 31 and Canadian Standards Association diver operation and training standards.
- Heavy rescue: Guidelines based on NFPA and AOHSACR, and also incorporate operational and communication responsibilities within the Fire Department's incident command system, incident management system and incident action plan procedures.

As outlined in Criterion 8C, the Fire Department's Training section continually evaluates, updates and revises training manuals to ensure they reflect current and relevant practices, standards and legislation.

## **Appraisal**

The Fire Department has established policies, procedures and training manuals for its technical rescue activities that are easily accessible by all staff. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

## **Plan**

The Fire Department will continue to conduct regular reviews, evaluations and assessments of its policies, procedures, and operational training manuals to ensure they remain current and accomplish the stated level of response for technical rescue incidents.

## **References**

- 5E.4a. List of training manuals, Technical Teams, January 2012
- 5E.4b. Calgary Fire Department policy: Incident operations, October 19, 2010
- 5E.4c. Calgary Fire Department, Policy and Procedure Manager software (suggest live demo)
- 5E.4d. Calgary Fire Department training manuals and courses, Learning Management System (see Manager of Learning & Business Development)
- 5E.4e. Calgary Fire Department, Policy and Procedure Manager software auto notification (sample), "Managing turnout response", November 10, 2013

5E.5 Minimum training and operational standards are established and met for all personnel who function in the technical rescue program.

### **Description**

All fire operation personnel are provided introductory training and awareness in a variety of different rescues. Personnel are capable of establishing initial incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover until specialized resources arrive. Specialty-trained technical rescue personnel are available on each shift from a pool of 97 rope rescue Level II-trained technicians, 49 certified dive rescue and recovery personnel, 73 aquatics surface rescue specialists and 83 heavy rescue personnel. As outlined in Performance Indicator 7D.4, the Fire Department's Scheduling and Workforce Management section keeps a record of the relevant technical rescue and specialty skills of personnel on each platoon to ensure adequate coverage of technically trained personnel on each shift.

The technical teams coordinator, who reports to the assistant deputy chief of Operations & Technical Teams, works with the Fire Department's training officers to ensure training standards are met and with battalion and district chiefs to ensure all technical rescue personnel adhere to operational standards.

Each discipline within the Fire Department's technical rescue program has minimum training requirements identified that reflect provincial and federal occupational health and safety regulations, Canadian Standards Association (CSA) requirements, National Fire Protection Association (NFPA) standards and industry standards.

Members of the rope/high-angle rescue team receive Rope Rescue Level I Operations and Rope Rescue Level II Technician training. The aquatics rescue program is fully resourced with surface rescue specialists trained to NFPA 1006 standards, boat operators designated with federal operating licenses and dive rescue and recovery personnel trained to CSA Z275. Operational standards are established and training includes surface rescue, dive rescue and recovery, ice rescue, boat operations and dive instructor. Members of the heavy rescue team are trained to NFPA 1006 standards in rope rescue, structural collapse,

confined space and trench collapse. Heavy rescue training includes two rope rescue courses, two structural collapse courses, and a confined space and trench rescue course.

Each technical rescue team uses training rosters to document on-shift recurrent training and skill development. The rosters document the skills and types of training completed and are used to identify the recertification and initial intake training requirements and demands. Training is recorded in the Fire Department's Learning Management System.

### **Appraisal**

The Fire Department has established minimum technical rescue training and operational standards for all staff within the technical rescue program. Technical rescue teams have been trained to meet the intent of identified standards and work with incident commanders at technical rescue incidents to develop action plans based on the specific incident.

Recertification guidelines and plans for technical teams have been established, but improvements are required to ensure staff recertifications are completed in a timely manner.

### **Plan**

The Fire Department will continue to establish and provide minimum training and operational standards for each of its technical rescue programs.

Based on Objective 18.2 of its 2012-2014 Business Plan, by the end of 2014, the Fire Department will determine enhancements to the methodology for ensuring the appropriate recertification of Fire Department members, including an improved system for centralized documentation of recertification timelines and needs for all technical rescue program areas.

### **References**

5E.5a. Rope rescue training roster

5E.5b. Aquatic rescue team training roster

5E.5c. Calgary Fire Department Learning Management System (see Manager of Learning & Business Development for login)

5E.5d. Calgary Fire Department 2012-2014 Business Plan, Objective 18.2, p. 32

5E.6 The agency's information system allows for documentation and analysis of the technical rescue program.

### **Description**

Technical rescue activities are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional information. Officers and technical team members are responsible for adding relevant technical rescue information to the incident record. Data is analyzed to provide statistics on technical team response times, deployment and resources and results are provided to the deputy chief of Operations & Technical Teams for evaluation and presentation to the Fire Executive Team.

Detailed incident data is downloaded nightly from FireRMS and the data is assigned a spatial dimension within the geographic information system (GIS) to ensure the most current response data is readily available. The data is analyzed using a variety of software programs to help assess the effectiveness of the Fire Department's technical rescue program. This includes statistically analyzing performance against response time goal to arrival on scene by type of technical rescue incident and apparatus, plus using GIS to plot and trend the location and type of technical rescue incidents using hot spot maps, to assist with deployment decision making.

In addition to standard incident reporting in FireRMS, aquatic rescue technical teams also capture additional information about particular aspects of its program on hard copy forms for use by training officers.

### **Appraisal**

The Fire Department has an established system in place to record technical rescue information.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems.

Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, including additional technical rescue information as well as all data currently entered in hard-copy reports, into a single repository.

### **Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. Enhanced reporting for technical rescue responses will be part of the new system to improve the data and feedback available for training and evaluation purposes.

### **References**

- 5E.6a. Calgary Fire Department FireRMS (suggest live demonstration)
- 5E.6b. Calgary Fire Department, Aquatic incident report, FD 1096
- 5E.6c. CFDNet: Fire Hub

**CC 5E.7 An appraisal is conducted, at least annually, to determine the effectiveness of the technical rescue program.**

**Description**

The Fire Department's Operations & Technical Teams division and Strategic Services section regularly reviews technical rescue performance data. Concerns with a particular technical rescue are brought forward through the chain of command to the technical team coordinator who consults with the assistant deputy chief of Operations & Technical Teams to assess methods for improving program safety and response effectiveness. Training officers within each technical team program review incident reports on a periodic basis to evaluate performance of teams and identify areas for further training.

Meetings that include the assistant deputy chief of Operations & Technical Teams, the technical teams coordinator and the captains of each technical team are held at least twice per year to assess program needs, evaluate training and communicate direction. Bi-monthly and monthly operational meetings between the deputy chief of Operations & Technical Teams division, battalion chiefs, and chief officers also occur to discuss operational issues of the technical rescue programs.

Technical rescue response performance is assessed against the stated standards of response outlined in the Fire Department's Standards of Cover and results are reported in its annual compliance report to the Commission on Fire Accreditation International. Furthermore, as outlined in Performance Indicator 1A.2, through The City's business planning and budget coordination process, the Fire Department completes semi-annual and annual reporting on the programs and services that support City Council's priorities and the service level benchmarks in its 2012-2014 Business Plan. Results are compared to the stated standard of response and relevant information on the contributions of the technical rescue program are included in these reports as appropriate.

**Appraisal**

The Fire Department has established several methods of formally and informally appraising its technical rescue programs, including evaluating performance against stated standards of response.

**Plan**

The Fire Department will continue to conduct formal and informal appraisals of its technical rescue program to ensure the program is supporting operational needs and meeting stated standards of response.

**References**

- 5E.7a. Calgary Fire Department 2014 Standards of Cover
- 5E.7b. Calgary Fire Department 2012 Annual Report
- 5E.7c. City of Calgary, Executive information report, Monthly economic/operational indicators, 2013
- 5E.7d. Calgary Fire Department, Operations & Technical Teams, Monthly report to FET, December 2013
- 5E.7e. Calgary Fire Department, Operations meeting, Sample minutes
- 5E.7f. Calgary Fire Department Policy: Post incident activities, January 21, 2014
- 5E.7g. Calgary Fire Department Procedure: Conducting an incident debrief, January 7, 2013



## **Criterion 5F: Hazardous Materials (Hazmat)**

*The agency operates an adequate, effective, and efficient hazardous materials program directed toward protecting the community from the hazards associated with fires and uncontrolled releases of hazardous and toxic materials.*

*NOTE: Hazardous material emergencies, spills, releases, or accidents have become a major function of fire service agency activity. Hazardous materials response is a complex undertaking, and considerable knowledge and resources are required to cope with these types of emergencies. Such incidents may require the integration or coordination of several agencies. The local fire agency has generally become the lead agency during the destabilized emergency portion of the incident.*

### **Summary:**

The Fire Department's hazardous materials program protects Calgarians from the hazards associated with large industrial fires, chemical spills, releases and unknown products.

The Fire Department's first unit benchmark is to respond to hazardous materials events in seven minutes or less total response time, 90 per cent of the time, and the Fire Department's hazardous materials effective response force (ERF) assembly benchmark is to provide an initial ERF ranging from six to 24 personnel, depending on incident type and risk.

The Fire Department met its hazardous materials total response time objective for first-in response 59.7 per cent of the time in 2012 with a 90th percentile response time of nine minutes and 18 seconds. In the first six months of 2013, the Fire Department met its total response time objective 60.9 per cent of the time with a 90th percentile response time of nine minutes and 41 seconds.

All fire operation personnel are provided introductory hazardous materials training and awareness and are capable of establishing incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover. Three hazardous materials response units located throughout the city are staffed with trained NFPA 472 hazardous

materials technicians who are assigned to each shift to provide specialized response based on the incident type and risk level.

## **Performance Indicators:**

**CC 5F.1 Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of hazardous materials emergency incidents.**

### **Description**

The Fire Department's first unit benchmark is to respond to hazardous materials events in seven minutes or less total response time, 90 per cent of the time. At least one engine staffed with a minimum of four personnel is located in each fire station. Engines are the primary responding unit to all incidents, however, an auxiliary unit staffed with two personnel may be deployed as the initial responding unit as a result of the Fire Department's dynamic deployment model. All first-in arriving units are capable of establishing initial incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover.

The Fire Department's hazardous materials effective response force (ERF) assembly benchmark is to provide an initial ERF ranging from six to 24 personnel, depending on incident type and risk. The ERF is capable of performing the critical tasks identified for each type and risk level of hazardous materials incident as outlined in the Fire Department's Standards of Cover until specialized hazardous materials resources arrive.

All fire operation members are provided awareness training in a variety of hazardous material incidents. There are approximately 300 firefighters assigned per platoon with a minimum staffing of 233 per shift to staff all apparatus on duty. Response apparatus includes engines as well as auxiliary and specialized support units to respond to hazardous material incidents. Three hazardous materials response units located throughout the city are staffed 24-hours a day with trained NFPA 472 hazardous materials technicians. An engine unit located at one of the stations is also staffed with trained hazardous materials technicians.

As outlined in Performance Indicator 2C.5, the Fire Department developed a performance improvement programme containing a series of strategies to improve response

performance and reliability. These strategies included streamlining the call handling and dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines in late 2013 to manage resources based on risks, probability, reliability, and service demands.

### **Appraisal**

The Fire Department met its hazardous materials total response time objective for first-in response 59.8 per cent of the time in 2012 with a 90th percentile response time of nine minutes and 19 seconds. In the first six months of 2013, the Fire Department met its total response time objective 60.8 per cent of the time with a 90th percentile response time of nine minutes and 41 seconds.

At the time of writing there was not enough data available to measure the impact and effectiveness of the performance improvement programme strategies implemented in late 2013 on hazardous materials response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

### **Plan**

The Fire Department will continue to measure and report on its hazardous materials deployment objectives. As data becomes available, the Fire Department will analyze the effectiveness and of its dynamic deployment model and measure the impact of its standardized turnout time processes on hazardous materials total response time for its first-in units and effective response force.

In 2014, the Fire Department will develop an ERF total response time service level benchmark for hazardous materials incidents to allow for improved evaluation of the program's effectiveness.

### **References**

- 5F.1a. Calgary Fire Department 2014 Standards of Cover
- 5F.1b. FD Notice #176-2013: Dynamic deployment model - Apparatus redeployment guidelines, December 4, 2013
- 5F.1c. Calgary Fire Department Performance Improvement Programme

5F.1d. Report to Fire Executive Team, Deployment working group annual deployment review, December 4, 2013

5F.2 The agency defines and provides appropriate and adequate equipment to accomplish the stated level of response for hazardous materials response and to be compliant with local, state/provincial and national standards.

### **Description**

The Fire Department has equipment tailored to its hazardous materials needs and standards and appropriate to accomplish the stated level of response outlined in Performance Indicator 5F.1. All equipment meets the intent of the standards set out by the National Fire Protection Association and meets Canadian Standards Association and *Alberta Occupational Health & Safety Act, Code and Regulation* requirements.

The Fire Department's engines have basic equipment to be able to begin hazardous materials response and containment. There are 14 dedicated apparatus and support vehicles that comprise the hazardous materials response team: three hazardous materials response units; a decontamination unit; a recovery and support unit; a haztech specialist response unit; a haztech chemical, biological, radiation, nuclear and enhanced conventional weapons (CBRNE) support unit and trailer; an air monitoring vehicle; a large area decontamination foam unit; two utility vehicles; and two support trailers.

Hazardous materials response units carry equipment specific to its needs and roles and are equipped the same to provide redundancy and backup. Equipment includes, but is not limited to: portable monitoring and detection instruments; personal protective equipment; spill containment and mitigation equipment; and decontamination equipment.

All apparatus carry an apparatus/equipment check sheet that is used by firefighters and hazardous materials team members at the start of every shift to conduct visual equipment and vehicle checks to ensure the appropriate and adequate equipment is available and in working order. Weekly checks are conducted on all mechanical equipment to ensure it is properly operating. Damaged, missing or lost equipment is reported to The Fire Department's Equipment & Supply section for repair and or replacement.

The Hazardous Materials Support section has a dedicated apparatus bay, instrumentation repair room and an inventory of advanced and specialized response equipment. It is responsible for managing equipment stock, and works collaboratively with the Fire

Department's Logistic & Infrastructure division to plan, procure and test hazardous materials equipment.

The hazardous materials coordinator is consulted on operational needs and helps define the specifications and requirements for equipment. When new equipment is needed, a working group of subject matter experts from across the Fire Department is set up to research and evaluate options and final results are presented to the division's deputy chief or Fire Executive Team for approval.

### **Appraisal**

Appropriate and adequate equipment that meets industry and legislative requirements has been defined and made available to staff to accomplish the Fire Department's stated level of response for hazardous materials incidents.

### **Plan**

The Fire Department will continue to provide equipment to meet its stated level of response for its hazardous materials program. The hazardous materials coordinator will continue to research and evaluate technical advances in equipment to ensure it remains appropriate and adequate for the Fire Department's hazardous materials program.

As outlined in Performance Indicator 6F.5, as part of Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the equipment needs of the hazardous materials program.

### **References**

- 5F.2a. Calgary Fire Department apparatus/equipment check sheet #HM0507: HazTech 3, October 11, 2012
- 5F.2b. Calgary Fire Department apparatus/equipment check sheet #HM0205, HazMat 4, March 19, 2013
- 5F.2c. Calgary Fire Department, Equipment & Supply order form
- 5F.2d. Hazardous Materials section apparatus bay (See Hazardous Materials Coordinator)

5F.3 Supplies and materials allocation is based on established objectives, is appropriate to meet hazardous materials response operational needs, and is compliant with local, state/provincial and national standards.

### **Description**

The Fire Department's operating budget provides for adequate supplies and materials to meet its hazardous materials response needs. Hazardous materials response units carry a full supply of materials and supplies, including absorbent materials, booms, neutralizing agents and personal protective equipment.

Specialized supplies and materials for the hazardous materials program are purchased in collaboration between the hazardous materials coordinator and The Fire Department's Equipment & Supply section. Equipment & Supply identifies appropriate vendors and generally oversees the procurement process, and the Hazardous Materials Support section maintains specialized inventory at its apparatus bay, including a larger cache of spill release supplies and materials that is available to all operational crews through a secure card system.

Other supplies, materials and consumables for the hazardous materials program are available from the Equipment & Supply section and are accessible to operations and hazardous materials teams after hours. Equipment & Supply staff can be requested to report to duty after hours to provide logistical support at large hazardous material incidents. In addition, as outlined in Performance Indicator 5H.8, the Fire Department has plans in place to ensure the supply chain remains robust, resilient and supportive of operational needs through large-scale events.

The Fire Department maintains informal agreements with a number of suppliers and manufacturers to provide 24-hour access to supplies and materials as may be required for large-scale hazardous materials incidents.

All supplies and materials meet the intent of the standards set out by the National Fire Protection Association and meet Canadian Standards Association and *Alberta Occupational Health and Safety Act, Code, and Regulations* requirements.

## **Appraisal**

The Fire Department has established a process for identifying operational needs for the hazardous materials program and has maintained adequate materials and supplies to meet the operational needs and objectives of the hazardous materials program.

## **Plan**

The Fire Department will continue to assess hazardous materials operational needs and provide the appropriate supplies and materials. It will also continue to monitor the safety, quality, function, inventory and maintenance of hazardous materials supplies and materials to ensure they are reliable and meet the ongoing operational needs of the hazardous materials program.

## **References**

- 5F.3a. Calgary Fire Department, Apparatus/equipment check sheet #HM0507: HazTech 3, October 11, 2012
- 5F.3b. Calgary Fire Department, Apparatus/equipment check sheet #HM0205, HazMat 4, March 19, 2013
- 5F.3c. Calgary Fire Department, Equipment & Supply order form

**CC 5F.4 Current standard operating procedures or general guidelines are in place to direct the hazardous materials response program.**

**Description**

Policies, procedures, training manuals, reference materials, and critical tasking are identified for each hazardous material incident type and risk level. These are designed to support achievement of the stated level of response for hazardous materials response and ensure staffing and incident needs are addressed.

Policies and procedures are available through the Fire Department's Policy and Procedure Manager software, and training manuals and reference materials for the hazardous materials program are available online either through the Fire Department's Learning Management System, intranet or apparatus iMobile units. The Fire Department's policy, *Incident operations*, provides direction for response to various incident types and includes 25 descriptive procedures to provide guidance and direction for response and mitigation actions.

As outlined in Criterion 8C, the Fire Department's Training section continually evaluates, updates and revises training manuals to ensure they reflect current and relevant practices, standards and legislation.

**Appraisal**

The Fire Department has established policies, procedures and training manuals for its hazardous materials activities that are easily accessible by all staff. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

As described in Performance Indicator 2C.4, the Fire Department conducted a critical task analysis and identified each level of non-fire incident risk and corresponding effective response force resource requirements. Through this work, the Fire Department identified the need to further review dispatch protocols related to deploying resources to hazardous material gas-related incidents.

## **Plan**

The Hazardous Materials Support section will continue to conduct regular reviews, evaluations and assessments of its policies, procedures, training manuals and reference materials to ensure they remain current and accomplish the stated level of response for hazardous materials incidents.

In 2014, the Fire Department will review the dispatch cards used by Public Safety Communications, the City of Calgary's emergency and non-emergency call answer, evaluation and dispatch centre, to ensure they appropriately reflect the critical tasking for hazardous material incidents as set out by the Fire Department.

## **References**

- 5F.4a. Calgary Fire Department Policy: Incident operations, October 19, 2010
- 5F.4b. Calgary Fire Department policies and procedures for hazardous materials response  
(see Hazardous Materials Coordinator for login to Policy and Procedures Manager software)
- 5F.4c. Calgary Fire Department training manuals and courses, Learning Management System (see Manager of Learning & Business Development)
- 5F.4d. List of hazardous materials training material available on CFDNet

5F.5 Minimum training and operational standards are established and met for all personnel who function in the hazardous materials response program, including for incidents involving weapons of mass destruction.

### **Description**

All fire operation personnel are provided introductory training and awareness in hazardous materials. Personnel are capable of establishing initial incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover. Specifically, firefighter recruits are trained to the National Fire Protection Association (NFPA) 472 standard, *Hazardous materials awareness*. All firefighters are required to complete the Fire Department's online hazardous materials course administered through the Learning Management System, which provides an awareness-level course as well as theory and knowledge components from NFPA 472. In addition, all firefighters are required to complete the chemical, biological, radiation, nuclear and enhanced conventional weapons (CBRNE) awareness and basic courses provided by the Canadian Emergency Management College. As outlined in Performance Indicator 7D.4, the Fire Department's Scheduling and Workforce Management section keeps a record of the relevant hazardous materials specialty skills of personnel on each platoon to ensure adequate coverage of technically trained personnel on each shift.

The Hazardous Materials Support section is comprised of a coordinator, four hazardous materials officers and an administrative assistant. Hazardous materials officers are required to be certified as NFPA 472 technicians and typically complete one or more NFPA 472 hazardous materials specialist courses. In addition, hazardous materials officers complete the Canadian CBRNE intermediate and advanced course series.

Members of the hazardous materials response team must complete a 160-hour course that includes the NFPA 472 technician curriculum. Hazardous materials response team members are required to maintain a minimum number of shifts operating hazardous material response apparatus within a two-year period.

## **Appraisal**

The Fire Department has established minimum hazardous materials training and operational standards for all staff, including for incidents involving weapons of mass destruction. All firefighters have received NFPA 472 awareness level training and the Fire Department has aimed to hold four CBRNE exercises annually, providing each platoon a day to practice a CBRNE team exercise. Hazardous material teams have been trained to meet the intent of identified standards and work with incident commanders at hazardous material incidents to develop action plans based on the specific incident.

Recertification guidelines and plans for hazardous materials response teams have been established, but improvements are required to ensure staff recertifications are completed in a timely manner.

## **Plan**

The Fire Department will continue to establish and provide minimum training and operational standards for its hazardous materials response. In 2014, the hazardous materials coordinator will develop a plan and schedule to train all firefighters to the NFPA 472 operations level standard.

Based on Objective 18.2 of its 2012-2014 Business Plan, the Fire Department will determine enhancements to the methodology for ensuring the appropriate recertification of Fire Department members, including an improved system for the centralized documentation of recertification timelines and needs for the hazardous materials response program.

## **References**

- 5F.5a. Calgary Fire Department Learning Management System (see Manager of Learning & Business Development for login)
- 5F.5b. Hazardous Materials station and apparatus assignment records (see Hazardous Materials Coordinator)
- 5F.5c. Hazardous materials on-shift training calendar, 2013
- 5F.5d. Calgary Fire Department 2012-2014 Business Plan, Objective 18.2, p. 32

5F.6 The agency's information system allows for documentation and analysis of the hazardous materials program.

### **Description**

Hazardous materials responses are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional hazardous materials information. Hazardous materials team members that attend an incident are responsible for providing additional relevant hazardous materials information to the incident record. Data is analyzed to provide statistics on hazardous materials response times, deployment and resources and results are provided to the deputy chief of Operations & Technical Teams for evaluation and presentation to the Fire Executive Team.

Detailed incident data is downloaded nightly from FireRMS and the data is assigned a spatial dimension within the geographic information system (GIS) to ensure the most current response data is readily available. The data is analyzed using a variety of software programs to help assess the effectiveness of the Fire Department's hazardous materials program.

### **Appraisal**

The Fire Department has an established system in place to record hazardous materials response information.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, including information from external sources, into a single repository.

**Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4.

**References**

5F.6a. Calgary Fire Department FireRMS (suggest live demonstration)

5F.6b. CFDNet: Fire Hub

**CC 5F.7 An appraisal is conducted, at least annually, to determine the effectiveness of the hazardous materials program.**

**Description**

Daily, hazardous materials officers review all incident reports where a hazardous materials response is indicated. To assess the effectiveness of the response, the officer verifies the hazardous materials information provided for compliance with regulatory reporting requirements and confirms the Transportation of Dangerous Goods identification is appropriate. Omissions in reporting are either rectified by the officer or are brought to the attention of the individual submitting the report for follow up.

Concerns with a particular hazardous materials incident are brought forward through the chain of command to the hazardous materials coordinator who consults with the assistant deputy chief of Operations & Technical Teams to assess methods for improving program safety and response effectiveness. Bi-monthly and monthly operational meetings between the deputy chief of operations, battalion chiefs, and chief officers also occur to discuss operational issues of the hazardous materials response program. The Operations & Technical Teams division prepares a monthly report for the Fire Executive Team that includes the number of incidents responded to and response time performance for the hazardous materials program.

Hazardous materials response performance is assessed against the stated standards of response outlined in the Fire Department's Standards of Cover and results are reported in its annual compliance report to the Commission on Fire Accreditation International. Furthermore, as outlined in Performance Indicator 1A.2, through The City's business planning and budget coordination process, the Fire Department completes semi-annual and annual reporting on the programs and services that support City Council's priorities and the service level benchmarks in its 2012-2014 Business Plan. Results are compared to the stated standard of response and relevant information on the contributions of the hazardous materials program are included in these reports as appropriate.

## **Appraisal**

The Fire Department has established several methods of formally and informally appraising its hazardous materials program, including evaluating performance against stated standards of response.

## **Plan**

The Fire Department will continue to conduct formal and informal appraisals of its hazardous materials program to ensure the program is supporting operational needs and meeting stated standards of response.

## **References**

- 5F.7a. Calgary Fire Department 2014 Standards of Cover
- 5F.7b. Calgary Fire Department 2012 Annual Report
- 5F.7c. Calgary Fire Department, Operations & Technical Teams, Monthly report to FET, December 2013
- 5F.7d. Calgary Fire Department, Monthly chief officers meeting, Sample minutes



## **Criterion 5G: Emergency Medical Services (EMS)**

*The agency operates an EMS program that provides the community with a designated level of out-of-hospital emergency medical care.*

*NOTE: EMS is a major element of many fire service agencies. Fire service personnel are frequently the first responder to medical emergencies. For that reason, emergency medical response can be organizationally integrated with fire suppression activity. Care should be exercised not to create a priority or resource allocation conflict between the two program activities. Agencies that only provide first responder services must also complete this criterion.*

### **Summary:**

The *Alberta Emergency Health Services Act* guides the governance and delivery of emergency medical services in the Province of Alberta. Ambulance services within Alberta is provided and governed by Alberta Health Services (AHS) and legislated by Alberta Health and Wellness, which sets and enforces standards and required practices for Alberta emergency medical and ambulance services. AHS emergency medical service personnel within Calgary are trained to the level of advanced life support paramedics, and medical direction is maintained by the Alberta Medical Control Board through local medical directors.

The Fire Department is a member of the Medical First Response Advisory Panel whose role is to advise and provide input to AHS on key decisions for medical response within Alberta. The Fire Department is also part of the Joint Medical Response Committee within the Calgary region whose role is to provide input on medical response within Calgary.

The Fire Department refers to its emergency medical services program as a Medical First Responder program. Its role in emergency medical services is to provide first response and supplemental medical support to AHS Emergency Medical Services in the form of basic life support non-transport response. The Fire Department's Medical First Responders are trained to a minimum emergency medical responder level based on identified competencies approved by the Province of Alberta, and are deployed to life-threatening,

time-dependent emergency medical calls, motor vehicle collisions and multi-casualty incidents.

The Fire Department's first unit benchmark is to respond to emergency medical events is six minutes and thirty seconds or less total response time, 90 per cent of the time. The Fire Department met its emergency medical total response time objective for first-in response 79.3 per cent of the time in 2012 with a 90th percentile response time of seven minutes and 30 seconds. In the first six months of 2013, the Fire Department met its total response time objective 80.8 per cent of the time with a 90th percentile response time of seven minutes and 20 seconds.

## **Performance Indicators:**

**CC 5G.1 Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of emergency medical incidents.**

### **Description**

The Fire Department refers to its emergency medical services program as a Medical First Responder (MFR) program. Its role in emergency medical services is to provide first response and supplemental medical support to Alberta Health Services (AHS) Emergency Medical Services in the form of basic life support (BLS) non-transport response. The Fire Department's MFR's are trained to a minimum emergency medical responder level based on identified competencies approved by the Province of Alberta, and are deployed to life-threatening, time-dependent emergency medical calls, motor vehicle collisions and multi-casualty incidents.

The Fire Department's first unit benchmark is to respond to emergency medical events is six minutes and 30 seconds or less total response time, 90 per cent of the time. At least one engine staffed with a minimum of four personnel is located in each fire station.

Although engines are the primary responding unit to all incidents, through its dynamic deployment model, an auxiliary unit staffed with two personnel may be deployed as the initial responding unit. All initial arriving units are capable of establishing initial incident command and initiating the critical tasks identified in the Fire Department's Standards of Cover until the arrival of Alberta Health Services.

As outlined in Performance Indicator 2C.5, the Fire Department developed a Performance Improvement Programme containing a series of strategies to improve response performance and reliability. These strategies included streamlining the call handling and dispatching processes for a number of call types, establishing an operational working group to review and standardize turnout processes and implementing a dynamic deployment model including apparatus redeployment guidelines in late 2013 to manage resources based on risks, probability, reliability, and service demands.

## **Appraisal**

The Fire Department met its emergency medical total response time objective for first-in response 79.3 per cent of the time in 2012 with a 90th percentile response time of seven minutes and 30 seconds. In the first six months of 2013, the Fire Department met its total response time objective 80.8 per cent of the time with a 90th percentile response time of seven minutes and 20 seconds.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on emergency medical response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

## **Plan**

The Fire Department will continue to measure and report on its emergency medical deployment objectives. As data becomes available, the Fire Department will analyze the effectiveness and of its dynamic deployment model and measure the impact of its standardized turnout time processes on emergency medical total response time.

## **References**

- 5G.1a. Calgary Fire Department 2014 Standards of Cover
- 5G.1b. FD Notice #176-2013: Dynamic deployment model - Apparatus redeployment guidelines, December 4, 2013
- 5G.1c. Calgary Fire Department, Performance Improvement Programme

5G.2 The agency defines and provides appropriate and adequate equipment to accomplish the stated level of response for EMS incidents and to be compliant with applicable local, state/provincial and national standards and mandates.

### **Description**

The Fire Department's MFR program has equipment tailored to its needs and standards and appropriate to accomplish the stated level of response outlined in Performance Indicator 5G.1. All equipment is certified and meets the intent of all applicable provincial medical control requirements as set out by the *Alberta Health Professions Act* and Alberta College of Paramedic regulations and meets Underwriters' Laboratories of Canada, Canadian Standards Association and *Alberta Occupational Health and Safety Act, Codes and Regulation* requirements for BLS non-transport response.

All apparatus have equipment to provide BLS, including a BLS trauma bag, oxygen delivery devices and an automated external defibrillator. Each BLS trauma bag includes equipment required to perform c-spine control, airway and oxygen management, bleeding control and obstetrics response.

During regularly scheduled meetings, the Operations & Technical Team division works in collaboration with the Fire Department's medical director and medical training officer to evaluate operational needs and assess new or modified BLS tools and equipment. When new equipment is needed, a working group consisting of the medical training officer, the medical director and subject matter experts from across the Fire Department is set up to research and evaluate options and final results are presented to the division's deputy chief or Fire Executive Team for approval.

All response apparatus carry an apparatus/equipment check sheet that is used by firefighters at the start of every shift to conduct visual equipment and vehicle checks to ensure the appropriate and adequate equipment is available and in working order. Weekly checks are conducted on all mechanical equipment to ensure it is properly operating. Damaged, missing or lost equipment is reported to The Fire Department's Equipment & Supply section for repair and or replacement.

The Fire Department's Logistic & Infrastructure division is tasked with asset planning, procuring, testing, and maintaining all Fire Department equipment, including MFR equipment.

### **Appraisal**

Appropriate and adequate equipment that meets industry, provincial and legislative requirements has been defined and made available to staff to accomplish the Fire Department's stated level of response for emergency medical incidents. BLS trauma bags, oxygen delivery devices and automated external defibrillators are carried on all apparatus to enhance the safety of citizens.

### **Plan**

The Fire Department will continue to provide equipment to meet the stated level of response for its MFR program. The Fire Department's medical training officer and medical director will continue to research and evaluate technical advances in equipment used for emergency medical incidents to ensure equipment remains appropriate and adequate for the Fire Department's MFR program.

As outlined in Performance Indicator 6F.5, as part of Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the equipment needs of the MFR program.

### **References**

- 5G.2a. List of items contained in pump trauma bag, November 29, 2006
- 5G.2b. Calgary Fire Department, Apparatus/equipment check sheet sample, #E0710, December 2, 2011
- 5G.2c. *Alberta Health Professions Act*, Revised Statutes of Alberta 2000, Chapter H-7, December 11, 2013 <http://www.qp.alberta.ca/documents/acts/h07.pdf>
- 5G.2d. Alberta College of Paramedics
- 5G.2e. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

5G.3 Supplies and materials allocation is based on established objectives, is appropriate to meet EMS operational needs, and is compliant with local, state/provincial and national standards.

### **Description**

The Fire Department's operating budget provides for adequate supplies and materials to support its BLS non-transport response. Specialized supplies and materials for the MFR program are purchased in collaboration between the medical training officer, the Operations & Technical Teams division and the Fire Department's Equipment & Supply section. The medical director and medical training officer are consulted on operational needs and help define the specifications and requirements for supplies and materials. Equipment & Supply identifies appropriate vendors and generally oversees the procurement process.

The BLS trauma bag, oxygen delivery device and automatic external defibrillator on each apparatus allow firefighters to deliver BLS non-transport service to several patients simultaneously or attend back-to-back responses before replenishment.

Each fire station has a medical supply locker that is used to replenish medical supplies following an emergency medical call. Medical supply lockers are replenished on a bi-monthly basis, and if defibrillator pads, batteries or other medical supplies are required outside the two-week period, they can be ordered online from the Equipment & Supply section.

All supplies and materials meets the intent of all applicable provincial medical control requirements as set out by the *Alberta Health Professions Act*, Alberta College of Paramedic regulations, and *Alberta Occupational Health & Safety Act, Code and Regulation* requirements for BLS non-transport response.

### **Appraisal**

The Fire Department has established a process for identifying operational needs of its MFR program and has maintained adequate materials and supplies to meet the operational needs and objectives of the MFR program.

**Plan**

The Fire Department will continue to assess operational needs of its MFR program and provide the appropriate supplies and materials. It will also continue to monitor the safety, quality, function, inventory and maintenance of supplies and materials to ensure they are reliable and meet the ongoing operational needs of the MFR program.

**References**

- 5G.3a. Calgary Fire Department, Apparatus/equipment check sheet #E0710, December 2, 2011
- 5G.3b. List of items contained in pump trauma bag, November 29, 2006
- 5G.3c. Calgary Fire Department, Equipment & Supply order form

**CC 5G.4 Standard operating procedures or general guidelines, and standing orders/protocols, are in place to direct EMS response activities and to meet the stated level of EMS response.**

**Description**

Policies, procedures, training manuals, medical control protocols and critical tasking are identified for emergency medical incidents. These are designed to support achievement of the stated level of response for BLS non-transport response and ensure staffing and incident needs are addressed.

Policies and procedures are available through the Fire Department's Policy and Procedure Manager software, and training manuals and medical control protocols are available online either through the Fire Department's Learning Management System or intranet.

The Fire Department's MFR training manuals are based on medical control protocols adopted by AHS for use across the Province of Alberta. Responsibility for overseeing the standards of care for the Fire Department falls upon the medical director who reports to the deputy chief of the Administration division. The same physician provides medical direction to 13 other fire departments in the areas surrounding Calgary. The medical director periodically reviews protocols to ensure the standards of care of the MFR program adhere to current medical trends and accepted community practice.

As outlined in Criterion 8C, the Fire Department's Training section continually evaluates, updates and revises training manuals to ensure they reflect current and relevant practices, standards and legislation.

**Appraisal**

The Fire Department has established policies and procedures for its MFR program and training manuals and reference materials based on medical control protocols are easily accessible by all staff. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

**Plan**

The Fire Department will continue to conduct regular reviews, evaluations and assessments of its MFR policies, procedures, and training manuals to ensure they remain current and accomplish the stated level of response for emergency medical incidents.

**References**

- 5G.4a. Calgary Fire Department, First medical response protocols, December 2011
- 5G.4b. Calgary Fire Department, Policy and Procedure Manager software (suggest live demo)
- 5G.4c. Calgary Fire Department, Medical manuals on CFDNet

5G.5 Online and offline medical control is available to the agency.

### **Description**

Medical control is designated to the highest medical authority on scene. When the Fire Department is on scene providing BLS service, it is responsible for managing medical control. When a higher medical authority arrives, such as Alberta Health Services Emergency Medical Services (AHS/EMS), it assumes medical control.

Responding fire crews have online medical control by way of radio or phone communication with Public Safety Communications, the City of Calgary's emergency and non-emergency call answer, evaluation and dispatch centre, and can request communication with the incoming AHS/EMS unit.

The medical director reviews the provision of emergency medical service by MFRs as a means of providing offline medical control. In addition, the medical director is a member of the Alberta Medical Control Board, and provides assessment and feedback on the Fire Department's medical services as appropriate.

### **Appraisal**

The Fire Department has established effective online and offline medical control.

### **Plan**

The Fire Department will continue to use its existing online and offline medical control.

### **References**

No references

**CC 5G.6 A patient care record is created and maintained for each patient encountered by the EMS system. This report contains patient history, incident history, data regarding treatment rendered, and the patient disposition recorded. The agency must make reasonable efforts to protect reports from public access and maintain them as per local and state/provincial records retention requirements.**

### **Description**

An electronic web-based patient care report (PCR) is completed by MFRs after a medical response and contains information related to patient history, incident history, treatment provided and automated external defibrillator (AED) use. Data from the AED is downloaded when the crew returns to the station for review by the medical training officer. All records are stored in a Fire Department database that is managed by the Fire Department's medical training officer.

All PCRs are protected under Section 33(c) of the *Alberta Freedom of Information and Protection of Privacy (FOIP) Act* and the *Alberta Health Information Act*, and are maintained by the Fire Department's medical training officer in accordance with The City's records retention policy.

### **Appraisal**

The Fire Department has established a patient care record for each of its medical responses in accordance with all mandated municipal and provincial requirements, acts and regulations.

### **Plan**

The Fire Department will continue to record, monitor and protect patient care data to identify possible opportunities for improvement.

### **References**

5G.6a. *Alberta Freedom of Information and Protection of Privacy Act*, Revised Statutes of Alberta 2000 Chapter F-25, current as of November 1, 2013

5G.6b. *Alberta Health Information Act*, Revised Statutes of Alberta 2000 Chapter H-5, Current as of November 1, 2013

- 5G.6c. Calgary Fire Department, Online PCR user guide, May 2012
- 5G.6d. Calgary Fire Department, Patient care report manual, December 2012
- 5G.6e. Patient care report database (see Medical Training Officer for viewing)
- 5G.6f. Calgary Fire Department, PCR codes 2012
- 5G.6g. Automated external defibrillator call review report (see Medical Training Officer for viewing)

**CC 5G.7 The agency has a HIPAA<sup>1</sup> compliance program in place for the EMS program that meets with federal guidelines and all personnel have been properly trained in HIPAA regulations and procedures.**

### **Description**

The Province of Alberta protects the health information and personal privacy of its citizens through the *Freedom of Information and Protection of Privacy (FOIP) Act*. The City and Fire Department adhere to the Act, which is administered through a FOIP coordinator located in The City Clerk's office. All information gathered for the purpose of quality assurance and data control is collected under the authority of this Act, as well as the *Alberta Safety Codes Act*, Part 6, Section 63(1) and the *Alberta Health Information Act*.

The Fire Department has a policy *Freedom of Information & Protection of Privacy* that all staff must read to ensure compliance with the *Freedom of Information and Protection of Privacy Act*.

### **Appraisal**

The Fire Department has established a PCR process that protects the health information and personal privacy of patients through compliance with all relevant provincial legislation and requirements.

### **Plan**

The Fire Department will continue to work with The City Clerk's office to ensure that all Fire Department policies and practices pertaining to patient care remain compliant with relevant privacy acts.

### **References**

- 5G.7a. *Alberta Freedom of Information and Protection of Privacy Act*, Revised Statutes of Alberta 2000 Chapter F-25, current as of November 1, 2013
- 5G.7b. *Alberta Health Information Act*, Revised Statutes of Alberta 2000 Chapter H-5, Current as of November 1, 2013

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<sup>1</sup> HIPAA=Health Insurance Portability and Accountability Act

5G.7c. *Alberta Safety Codes Act*, Chapter S-1 RSA 2000, Part 6, Section 63(1), Release of Information (p.40)

5G.8 Patient care records receive an independent review and the agency has a quality assurance program in place.

### **Description**

Electronic PCRs are completed when the Fire Department responds to an incident and medical care or assistance is provided. The Fire Department's medical training officer conducts an audit sampling of PCRs to ensure they are properly completed and comply with medical treatment protocols. In all circumstances where an automatic external defibrillator (AED) is used, the results are downloaded to a database and reviewed by the medical training officer. These reviews look at cardiac rhythm, CPR delivery, actions taken and adherence to medical protocols. In a case where there is critical patient care concern, the medical training officer forwards information regarding the incident to the medical director for independent review and feedback.

### **Appraisal**

The Fire Department has established an internal review of PCRs and quality assurance program for its medical response program. The medical director is a member of the Alberta Medical Control Board, and provides an independent assessment and feedback on the Fire Department's medical services as appropriate.

### **Plan**

The Fire Department will continue its process for reviewing PCRs for adherence with protocols and maintain its quality assurance program. Over the 2015-2018 business planning cycle, the Fire Department will develop a four-tiered PCR audit process to ensure PCRs are completed in accordance with all mandated municipal and provincial requirements, acts and regulations.

### **References**

5G.8a. Patient care report database (see Medical Training Officer for viewing)

5G.9 The agency's information system allows for documentation and analysis of the EMS program.

### **Description**

Emergency medical responses are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional information. Officers are responsible for adding basic emergency medical response information to the incident record. Data is analyzed to provide statistics on the MFR program, including emergency medical response times, deployment and resources, and the information is provided to the deputy chief of Operations & Technical Teams for further evaluation and presentation to the Fire Executive Team.

Detailed incident data is downloaded nightly from FireRMS and the data is assigned a spatial dimension within the geographic information system (GIS) to ensure the most current response data is readily available. The data is analyzed using a variety of software programs to help assess the effectiveness of the Fire Department's emergency medical program.

More detailed emergency medical information is provided by MFRs through a PCR as outlined in Performance Indicator 5G.6, which is a web-based form containing details on the patient and care provided.

### **Appraisal**

The current web-based system used to record PCRs is a separate system from the Fire Department's FireRMS. In addition to requiring additional work by officers to enter data in two databases, there have been challenges in analyzing data contained in the current PCR database.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems. Following a September 2010 business process review and needs assessment, the Fire

Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data, including emergency medical information and PCRs.

### **Plan**

The Fire Department will continue to use its current FireRMS to record emergency medical incident information until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. Due to the limitations of analyzing PCR data from its current database, in early 2014, the Fire Department will evaluate activating the built-in medical tab within its current FireRMS to record PCR information. Future phases of the Fire Department's new customized records management system will include the integration of electronic PCRs.

The Fire Department will also work with AHS to obtain additional AHS-specific CAD information for its medical incident records in order to conduct more in-depth analysis of the Fire Department's MFR program.

### **References**

- 5G.9a. Calgary Fire Department FireRMS (suggest live demonstration)
- 5G.9b. CFDNet: FireHub

**CC 5G.10 An appraisal is conducted, at least annually, to determine the effectiveness of the EMS program.**

**Description**

The Fire Department's Operations & Technical Teams division and Strategic Services section regularly reviews emergency medical response performance data. Concerns with a particular emergency medical incident are brought forward through the chain of command to the assistant deputy chief of Operations & Technical Teams to assess methods for improving program safety and response effectiveness.

Bi-monthly and monthly operational meetings between the deputy chief of Operations & Technical Teams, battalion chiefs and chief officers occur to discuss operational issues associated with the emergency medical services program. The Operations & Technical Teams division prepares a monthly report for the Fire Executive Team that includes the number of life-threatening emergency medical incidents responded to and response time performance. The Operations & Technical Team division notes trends or issues in overall emergency medical response performance and provides recommendations for improvement. Recommendations for deployment of new apparatus, redeployment of existing apparatus or a combination of both are made to the fire chief for approval.

Emergency medical response performance is assessed against the stated standards of response outlined in the Fire Department's Standards of Cover and results are reported in its annual compliance report to the Commission on Fire Accreditation International. Furthermore, as outlined in Performance Indicator 1A.2, through The City's business planning and budget coordination process, the Fire Department completes semi-annual and annual reporting on the programs and services that support City Council's priorities and the service level benchmarks in its 2012-2014 Business Plan. Results are compared to the stated standard of response and relevant information on the contributions of the emergency medical program are included in these reports as appropriate.

As a member of the Medical First Response Advisory Panel, the Fire Department provides input to AHS on key decisions for medical response within Alberta. The Fire Department

is also part of the Joint Medical Response Committee within the Calgary region whose role is to provide input on medical response within Calgary.

### **Appraisal**

The Fire Department has established several methods of periodic appraisal for its MFR program, including evaluating performance against stated standards of response.

### **Plan**

The Fire Department will continue to conduct formal and informal appraisals of its emergency medical program to ensure the program is supporting operational needs and meeting stated standards of response.

The Fire Department will continue to participate in advisory panels and committees to set the strategic vision of the provision of medical first response in Alberta.

As outlined in Objective 2.5 of its 2012-2014 Business Plan, the Fire Department will maximize the effectiveness of its delivery of medical first response under the AHS delivery model to ensure the health and wellness of citizens. Through this work, the Fire Department will perform an extensive system review and analysis of the delivery of medical services to further refine the delivery of care to citizens. Results and recommendations stemming from the analysis will be presented to the Fire Executive Team.

### **References**

- 5G.10a. Calgary Fire Department 2014 Standards of Cover
- 5G.10b. Calgary Fire Department 2012 Annual Report
- 5G.10c. Calgary Fire Department, Operations & Technical Teams, Monthly report to FET, December 2013
- 5G.10d. Calgary Fire Department, Monthly chief officers meeting, Sample minutes
- 5G.10e. Calgary Fire Department 2012-2014 Business Plan, Objective 2.5, p. 19

## **Criterion 5H: Domestic Preparedness Planning and Response**

*The agency operates an all-hazards preparedness program that includes a coordinated multi-agency response plan, designed to protect the community from terrorist threats or attacks, major disasters, and other large-scale emergencies occurring at or in the immediate area.*

### **Summary:**

Under prevailing provincial and municipal requirements, the civic entity responsible for emergency management is the Fire Department. The City of Calgary Bylaw Number 25M2002, *Emergency Management Bylaw*, affects its authority from the *Alberta Emergency Management Act*. The bylaw designates the Calgary Emergency Management Agency (CEMA) as the civic body responsible for the coordination of disaster planning, response and recovery within The City of Calgary. The bylaw also designates the fire chief as the director of CEMA, and assigns responsibility for all City of Calgary emergency operations to the director. CEMA is comprised of representatives from City of Calgary business units and relevant external agencies, including school boards, utility companies and the health region. The bylaw also assigns civic disaster planning responsibilities to the Fire Department's Emergency Management division and outlines accountabilities that include annual reporting to a committee of City Council.

Under the authority described above, an all-hazards plan, referred to as the Municipal Emergency Plan (MEP), is in place for The City of Calgary and outlines all business unit roles and responsibilities in the event of a large-scale emergency, including those of the Fire Department. The MEP is based on Canadian Standards Association CAN/CSA-Z731-03: *Emergency Preparedness and Response*, CAN/CSA-Z1600: *Emergency Management and Business Continuity Programs* and NFPA 1600: *Standards on Disaster/Emergency Management and Business Continuity Programs*.

The Fire Department has developed its own domestic preparedness plans and response that align with the MEP. It has an all-hazards business continuity plan to guide internal operations during a large-scale emergency, which includes a robust set of operating policies and procedures for dealing with major emergencies, including terrorist attacks and

disasters, that could occur within the municipality and impact the operations of the Fire Department. Hazard-specific plans are in place for events with the highest probability to occur and outline specific response considerations.

## Performance Indicators:

**CC 5H.1 The agency publishes an all-hazards plan that defines roles and responsibilities of all participating departments and/or external agencies. An appropriate multi-agency organizational structure is identified and authorized to carry out the all-hazards plan predetermined functions and duties.**

### Description

Through the Calgary Emergency Management Agency (CEMA) and in compliance with provincial and municipal legislation, an all-hazards plan referred to as the Municipal Emergency Plan (MEP) is in place for The City. The MEP adheres to the *Alberta Emergency Management Act*, RSA 2000 and The City of Calgary Bylaw Number 25M2002, *Emergency Management Bylaw*. The MEP outlines the Fire Department's roles and responsibilities, as well as the roles and responsibilities for other City business units and external agencies in the event of a major emergency. The MEP is a secured document with restricted distribution; however a public version of the plan is published and available for general viewing.

Internally, the Fire Department has an all-hazards business continuity plan to guide internal operations during a large-scale emergency. This plan includes a robust set of operating policies and procedures for dealing with major emergencies, including terrorist attacks and disasters that could occur within the municipality and impact the operations of the Fire Department.

Hazard-specific plans are annexes to the business plan continuity plan and outline specific response considerations for events with the highest probability to occur.

### Appraisal

An all-hazards plan for The City has been established through the MEP and defines the roles and responsibilities of all participating business units and agencies, including the Fire Department.

An all-hazards business continuity plan has been initiated for the Fire Department with components in varying stages of completion. During a large-scale flood in Calgary in June 2013, the Fire Department successfully implemented components of the plan to guide continuity of its operations. The Fire Department recently hired a part-time business continuity and recovery planner to assist with completing the remainder of the plan and maintaining other existing plans.

### **Plan**

As outlined in Objective 7.4 of its 2012-2014 Business Plan, by the end of 2014, the Fire Department will finalize its business continuity plan, operational pre-plans for weather-related events and any hazard-specific annexes that remain in draft format.

To support the work set out by Objective 7.1, the Fire Department will also establish where the role of CEMA starts and stops in the internal operations of the Fire Department in the event of a large-scale emergency. Changes to Fire Department plans, policies and procedures will be made as required to appropriately reflect these responsibility delineations.

### **References**

- 5H.1a. *Alberta Emergency Management Act*, RSA 2000 Chapter E-6.8, Current as of May 13, 2011
- 5H.1b. Bylaw Number 25M2002, *Emergency Management Bylaw*, April 14, 2008
- 5H.1c. The City of Calgary, *Municipal Emergency Plan*, Revision 004, September 8, 2010
- 5H.1d. Calgary Fire Department, *Business continuity plan & business impact analysis – Draft*, October 23, 2013
- 5H.1e. Calgary Fire Department, *Natural hazard response – Draft*, January 31, 2013
- 5H.1f. Calgary Fire Department policy: *Incident operations*, October 19, 2010
- 5H.1g. Calgary Fire Department, *Manual & reference material*, CBRNE
- 5H.1h. Calgary Fire Department 2012-2014 Business Plan, Objective 7.1 and 7.4, p. 21

5H.2 The agency is compliant with the National Incident Management System<sup>1</sup>(NIMS) and its operational methods are compatible with all external response agencies.

### **Description**

While NIMS is not currently mandated in Canada, as outlined in Performance Indicator 5A.5, the Fire Department has adopted and implemented an all-hazards Incident Management System that employs a widely used and recognized incident command system (ICS). The Fire Department has implemented a training plan to ensure that all uniformed and civilian members have been trained to a minimum standard of ICS-200. This training ensures employees understand the basics of ICS and how they integrate within the command/organizational structure used to manage incidents or events, allowing for increased resiliency for various positions within the Fire Department.

In addition, various positions throughout the Fire Department have been identified to complete advanced training to increase staff knowledge and understanding of more complex incidents and command principals.

### **Appraisal**

An ICS training plan has been implemented, online training modules have been developed for personnel and some key employees have completed advanced ICS training. During a large-scale flood in Calgary in June 2013, the Fire Department used personnel with basic ICS training to support its tactical operations centre and The City's Emergency Operations Centre (EOC).

### **Plan**

The Fire Department will continue to implement basic and advanced incident command system training for staff.

As outlined in Objective 12.3 of its 2012-2014 Business Plan, the Fire Department will identify and implement emergency management training requirements for Fire Executive Team and chief officers to fulfill roles and responsibilities at incident sites, The City's

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<sup>1</sup> Federal Emergency Management Agency, Retrieved May 26, 2009 from About the National Incident Management System (NIMS) Web Site: <http://www.fema.gov/emergency/nims/AboutNIMS.shtm>

EOC and the Fire Department's tactical operations centre. This training will provide more in-depth and specialized skill sets for the each position these personnel would be required to fill.

### **References**

- 5H.2a. Calgary Fire Department, Incident Command System (ICS), Incident Management System (IMS) & Emergency management operations training proposal, Version #4, December 6, 2012
- 5H.2b. Calgary Fire Department, FD Notice #144-2013, ISC 100 & 200 Training for all CFD members (uniformed & civilian), October 11, 2013
- 5H.2c. Calgary Fire Department Learning Management System, CFD course ICS 100 and ICS 200 (see Manager, Learning & Business Development for login)
- 5H.2d. Calgary Fire Department Incident Command System (ICS), Incident Management System (IMS) & Emergency management operations training matrix
- 5H.2e. Calgary Fire Department 2012-2014 Business Plan, Objective 12.3, p. 30

### 5H.3 The necessary outside agency support is identified and documented.

#### **Description**

The Fire Department partners with other protective services, other fire departments, and CEMA to provide shared resources during a large-scale emergency. The Fire Department has a mutual aid agreement with Edmonton Fire Rescue Services, the only other large urban fire service in Alberta that has the level of resources available to assist the Fire Department in a major event. The Fire Department also has a verbal agreement with the Vancouver Fire Department to provide support as needed in the event of a large-scale disaster in either city.

Through the MEP, CEMA coordinates City business units, including the Fire Department, and external agencies during a large-scale event. External partners of CEMA, which are available to the Fire Department during activation of the MEP, include Alberta Health Services, public and separate school boards, utility companies and private contractors. These agreements through CEMA ensure access to resources beyond the scope of what the municipality owns.

In addition, the Alberta Emergency Management Agency can be engaged to access resources from the provincial and federal governments. Many of these agencies are regularly involved in CEMA-led exercise, which helps refine understanding of available support as well as roles and responsibilities.

The Fire Department also has partnerships with utility companies and building inspectors to provide expertise on potential hazards and structural assessments of damaged buildings following a large-scale emergency. Additionally, the Fire Department partners with non-governmental organizations to assist with post-incident support. The resources and capabilities from each partnership are documented with established methods of contact during emergencies.

#### **Appraisal**

The Fire Department has identified its needs during and following a large-scale incident and established appropriate formal and informal relationships with agencies to ensure that the necessary resources are provided. Resources and supplies including foam, fuel, PPE,

medical and firefighting supplies are outlined in the Fire Department's draft Supply Chain Procurement & Resiliency Plan. Emergency procurement, external suppliers and vendor contact information is listed in Appendix 1 of the draft plan and includes after-hour callout information.

The feasibility and the effectiveness of providing the necessary supports has been tested and evaluated through tabletop exercises as well as during large-scale emergencies.

### **Plan**

The Fire Department will continue its partnership with CEMA with the goal of fostering and maintaining the necessary support from internal and external agencies.

As outlined in Objective 12.4 of its 2012-2014 Business Plan, the Fire Department will continue to identify emerging issues in the area of specialized response and collaborate with appropriate agencies and levels of government to develop strategies to mitigate risk. In support of this work by the end of 2014, the Fire Department will work to formalize an agreement with Vancouver Fire Rescue Services to ensure availability of resources in the event of a major incident.

### **References**

- 5H.3a. The City of Calgary, Municipal Emergency Plan, Revision 004, September 8, 2010
- 5H.3b. Mutual aid agreement – The City of Calgary and The City of Edmonton, January 11, 2010
- 5H.3c. Calgary Fire Department 2012-2014 Business Plan, Objective 12.4, p. 30

**CC 5H.4 Current standard operating procedures or general guidelines are in place to direct domestic preparedness planning and response activities.**

**Description**

The MEP is an all-hazards emergency plan for The City and serves as standard operating guidelines for disasters and major emergency events and encompasses manmade, natural and technological hazards, including domestic terrorist attacks. The MEP also outlines the roles and responsibilities of City business units during a major emergency, including the Fire Department, to provide appropriate coordination throughout The City. The MEP is activated during major emergencies and may result in the opening of The City's Emergency Operations Centre (EOC).

An overarching Fire Department policy to address emergency management and business continuity planning directs that appropriate plans are in place to operate or return to normal operations during and following an event that impacts its ability to deliver service. The Fire Department also has hazard-specific plans, as annexes to its all-hazards business continuity plan, that detail operating procedures and guidelines to specifically manage these events with a high probability of occurrence. All Fire Department policies and procedures work within the framework of the MEP.

The Fire Department also has policies and procedures in place to direct its response to various emergency situations, including response to a domestic or foreign terrorist attack. These policies and procedures cover operational activities such as response to suspicious packages/powders, mass decontamination and radiological incidents and all firefighters receive basic training in these operations. The Fire Department's Hazardous Materials Support section, in conjunction with the Operations & Technical Teams division, develops, updates and maintains policies and procedures relating to hazardous materials and chemical, biological, radiological, nuclear and explosive (CBRNE) response. Policies and procedures are available through the Fire Department's Policy and Procedures Manager software and accessible by all staff.

## **Appraisal**

The Fire Department has established a robust set of operating policies and procedures to address preparedness and planning for emergencies that may occur within the municipality. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant. Plans, associated procedures and guidelines have been regularly tested during tabletop scenarios and exercises as well as during numerous emergency incidents.

To provide a more collaborative response to CBRNE events and terrorist attacks, draft procedures have been developed for a joint response team that consists of the Fire Department, Calgary Police Service and Alberta Health Service emergency medical service responders.

## **Plan**

The Fire Department will continue to monitor best practices in disaster, major emergency and terrorist response and modify and update procedures and guidelines as needed. CEMA will review and revise the MEP with a target date of completing this by August 2014.

## **References**

- 5H.4a. The City of Calgary, Municipal Emergency Plan, Revision 004, September 8, 2010
- 5H.4b. Calgary Fire Department policy: Incident operations, October 19, 2010
- 5H.4c. Calgary Fire Department, Manual & reference material, CBRNE
- 5H.4d. Calgary Fire Department, Fire officer strategies and tactics for incident command training manual, January 2013
- 5H.4e. Calgary Fire Department, Natural hazard response – draft, January 31, 2013
- 5H.4f. CEMA Idle No More Peace Protests, Post event action report, February

**CC 5H.5 Processes are in place to provide for interoperability with other public safety agencies in the field including portable, mobile, and fixed communications systems, tools, and equipment.**

**Description**

Communication interoperability across the municipality is ensured through a variety of systems, roles and responsibilities as outlined in The City's MEP.

Public Safety Communications (PSC) answers, evaluates and dispatches 9-1-1 emergency calls and non-emergency calls for the Fire Department, Calgary Police Service and Alberta Health Services for emergency medical services in Calgary and areas outside city limits. PSC's single call answer and evaluation point, along with The City's 800 MHz radio system, provides overall communications interoperability with all public safety agencies in the field. The radio system has six dedicated interoperability channels for these three agencies to use when responding to multi-agency events. Talk groups are provided for shared radio communications between the public safety agencies as well as provincial sheriffs, the Calgary Airport Authority and the city's electrical utility company, Enmax. Backup channels are in place if the main system is unavailable. There are three backup channels for the Fire Department (two located in Bankers Hall in downtown Calgary and one in Forest Lawn in southeast Calgary). These backup channels have been used very infrequently, and are generally only utilized during maintenance on the radio system. PSC and the radio system also provide communications interoperability between the Fire Department and other fire departments from municipalities and districts surrounding the city.

The Fire Department's multi-agency mobile command unit (MCU) has radio, phone, internet and computer-aided dispatch (CAD) access. Personnel working at a scene within the MCU maintain direct communications with crews and PSC while also being able to access The City network as well as the Common Operating Picture (COP) and the Calgary Emergency Management System (CEMS) used by CEMA in The City's Emergency Operations Centre as outlined in Performance Indicator 5H.6. The COP and CEMS allow the Fire Department to assign and track resources and manage external information

requests. They also give the Fire Department the ability to post information to be shared with appropriate City business units involved in an emergency event response.

### **Appraisal**

Through PSC and the current radio system, the Fire Department has an established system of interoperability with other public safety agencies in the field, including communications with portable, mobile, and fixed communications systems, dispatch systems and supporting equipment. The upgraded and updated MCU has provided the Fire Department with sustained communication and command links with other responding agencies.

### **Plan**

As outlined in Performance Indicator 9B.10, the Fire Department and PSC will continue work with the Province of Alberta on a provincewide radio communications system that will link 700 agencies and nearly 30,000 emergency responders. To be completed in 2015, the Alberta First Responders Radio Communications System will enable emergency personnel from different agencies and jurisdictions in Alberta to quickly connect and coordinate responses as required.

The Fire Department will also continue to support its representatives who are working on a Canadian Interoperability Group to enhance overall interoperability between public safety agencies across Canada as well as in collaboration with the United States when appropriate.

### **References**

- 5H.5a. The City of Calgary, Municipal Emergency Plan, Revision 004, September 8, 2010
- 5H.5b. Public Safety Communications (suggest site visit)
- 5H.5c. City of Calgary Emergency Operations Centre (suggest site visit)
- 5H.5d. Calgary Fire Department Multi-Agency Mobile Command Unit (suggest tour)

5H.6 A process is in place to record information and provide data on needed resources, scope, nature of the event, and field resources deployment.

### **Description**

All incidents to which the Fire Department responds are documented in its records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional information. Data is analyzed to plot response coverage and provide statistics on response times, deployment and resources.

During large-scale events, CEMA uses the Common Operating Picture (COP) and the Calgary Emergency Management System (CEMS) to support real-time information sharing and documentation. These systems allow all business units and agency partners within The City's Emergency Operations Centre (EOC) to see all existing information and mapping related to an emergency event to assist with decision making and deployment of resources, as well as add relevant information from their organization's response. Both of these systems store the information and files associated with the emergency to support debrief, review and analysis work after each incident.

The Fire Department's tactical operations centre is equipped with technology and interfaces with the multi-agency mobile command unit as well as The City's EOC. Within this facility, personnel can access additional real-time information and share information with other locations and agencies as necessary.

### **Appraisal**

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS. The database system, FireHub, will integrate all Fire Department data into a single repository.

The Fire Department has established the ability to access data and information from the COP and CEMS to support real-time decision-making and deployment decisions during a large-scale emergency as well as use historical data for domestic preparedness planning and response. During response to a flood in Calgary in June 2013, CEMA and its partner organizations identified challenges obtaining real-time, custom mapping with the CEMS system during a large-scale event.

### **Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. The Fire Department will continue to use the COP system during large-scale events to track its response and deployment. It will increase in the number of individuals trained on the system to ensure resiliency and the ability to use the system on a more frequent basis.

In 2014, CEMA will evaluate the capabilities of CEMS and the Fire Department will adjust its training and practices as necessary to accommodate any changes resulting from CEMA's review.

Additional opportunities for improvement to information systems that support incident understanding, resource allocation and deployment will be identified through regular tabletop exercises conducted by the Fire Department's Emergency Management section.

### **References**

- 5H.6a. CEMA Common Operating Picture and Calgary Emergency Management System  
(suggest Emergency Operations Centre site visit)
- 5H.6b. Fire Tactical Operations Centre (suggest site visit)
- 5H.6c. CFDNet: Fire Hub

5H.7 The agency periodically conducts operational tests of and evaluates the all-hazards plan and the domestic preparedness program.

### **Description**

The City's MEP includes requirements for regular training and evaluation. The Fire Department's integration into The City plan is tested through these regular CEMA exercises. Following exercises and emergency events, action reports are completed to identify strengths and areas for improvement. The Fire Department participates in these debrief reports and sessions to refine and improve its internal plans and processes.

The Fire Department evaluates its all-hazards business continuity plan and hazard-specific response plans, processes, policies and procedures after each response to such events by crews. Modifications to any plans, policies or procedures are incorporated as appropriate based on response results and performance as well as feedback from commanding officers and crews.

### **Appraisal**

The Fire Department has participated in a variety of multi-agency exercises to evaluate its all-hazards and hazard-specific plans, including a full scale exercise with Compton Petroleum in 2011 and two major exercises with the Calgary Airport Authority in 2010 (Operation Soteria) and 2012 (Operation Paratus). In 2011, the Fire Department also hosted a crisis communications exercise to practice and test its crisis communications plan.

Additionally, over the course of 2012 and 2013, the Fire Department has taken part in exercises and training sessions hosted by CEMA, including six training sessions on EOC operations and Calgary Emergency Management System use and capabilities. CEMA has documented these training sessions which included duty log procedures and situation report procedures.

### **Plan**

The Fire Department will continue to participate in CEMA exercises and training sessions to ensure personnel have ongoing exposure to the MEP and evaluate its own internal all-hazards business continuity plan and hazard-specific plans in conjunction with the MEP. It

will continue to participate in the post-event action reports and debriefs to identify, correct and update any plans or processes as required.

As outlined in Objective 7.3 of its 2012-2014 Business Plan, the Fire Department will establish a process to identify strengths and weaknesses related to its emergency management role in managing large-scale incidents within and outside of Calgary. In support of this, the Fire Department will continue to conduct its own periodic exercise program of its all-hazards and hazard-specific plans.

### **References**

- 5H.7a. The City of Calgary, Municipal Emergency Plan, Revision 004, September 8, 2010
- 5H.7b. Calgary Fire Department, Business Continuity Plan & Business Impact Analysis – draft, October 23, 2013
- 5H.7c. Calgary Emergency Management Agency, Exercise and training schedule, 2012-2013
- 5H.7d. Calgary Fire Department 2012-2014 Business Plan, Objective 7.3, p. 21
- 5H.7e. Calgary Fire Department, Crisis Communications Plan, V1: 5/11/2011
- 5H.7f. CEMA Training, Duty log procedures, March 2013
- 5H.7g. CEMA Training, Situation reports (SitReps) procedures, May 2013
- 5H.7h. Calgary Airport Authority, Full-scale YYC emergency exercise, Operation Soteria final report, September 2010
- 5H.7i. Calgary Airport Authority, Full-scale YYC emergency exercise, Operation Paratus final report, September 2012

5H.8 The agency conducts and documents a vulnerability assessment and has operational plans to protect and secure the agency's specific critical infrastructure, including but not limited to materials and supplies, apparatus and facilities security, fuel, and information systems.

### **Description**

Through the Corporate Hazard Identification & Risk Assessment (HIRA) program, led by CEMA, the Fire Department and other City business units evaluate the probability of identified hazards occurring using Fire Department and city historical incident data. The hazard probability is combined with the anticipated impact of the hazard to determine a risk rating. The Fire Department's all-hazards business continuity plan incorporates the HIRA and provides corresponding mitigation strategies to manage the risks.

As a result of the HIRA, the Fire Department has identified its critical infrastructure as well as the financial, operational, reputational and property impacts of an event on this infrastructure. Plans are in place to ensure the Fire Department's supply chain remains robust, resilient and reflective of its operational needs through any large-scale event.

The Fire Department's all-hazards business continuity plan also incorporates The City's vulnerability assessment and operational plan, which are designed to protect and secure City-specific critical infrastructure, including but not limited to materials, supplies, apparatus and facilities security, fuel and information systems. Through this vulnerability planning, the Fire Department has established a priority level for each fire station in the city to ensure appropriate coverage is maintained in the event that a high-priority station has been impacted. The Fire Department has consolidated all necessary critical technology required into a portable unit to allow it to establish temporary fire stations at any location as required. In addition, the business continuity plan includes a radio loss plan and supply chain and procurement resiliency strategy to ensure continuous, uninterrupted communications and supplies.

### **Appraisal**

The Fire Department has incorporated the HIRA into its all-hazards business continuity plan and developed multiple annexes to address specific hazards. Annexes have been

completed to varying stages. In addition, through inclusion of The City's vulnerability assessment and operational plan in its business continuity plan, the Fire Department has established, to varying degrees of completion, planning to address loss of stations, communications and standard supply and procurement processes during a large-scale emergency.

### **Plan**

The Fire Department will finalize its business continuity plan by the end of 2014, including supporting station, communication and supply management plans that remain in draft format.

### **References**

- 5H.8a. Calgary Fire Department, Business Continuity Plan & Business Impact Analysis – Draft, October 23, 2013
- 5H.8b. Calgary Fire Department, Natural hazard response – Draft, January 31, 2013
- 5H.8c. City of Calgary, 2012 Hazard Identification & Risk Assessment

## **Criterion 5I: Aviation Rescue and Fire Fighting Services**

*The agency operates an adequate, effective and efficient program directed toward an aviation accident or incident occurring at, or in the immediate area.*

*This criterion report should be completed by agencies that have direct responsibility for operating programs that provide aircraft crash/rescue protection on airfields, or that have identified an aircraft emergency in the immediate area as a highly probable hazard in Category II, "Assessment and Planning." Simply because aircraft fly over the jurisdiction is not reason enough to require this criterion be completed.*

*If the agency determines this criterion is not applicable, the agency should still provide a brief explanation of why it does not provide this program.*

### **Summary:**

The Fire Department and Calgary Airport Authority (CAA) have established a service agreement for the provision of aircraft rescue and firefighting services. Through this agreement, the Fire Department provides personnel for emergency response services and the CAA provides the necessary facilities, apparatus and equipment. The service agreement and a variety of standards and regulations also set out response and preparedness requirements for the aircraft rescue and firefighting services.

In addition to standard firefighter training, airport emergency response services personnel receive specialized training in accordance with Canadian Aviation Regulations 303, 323, 343 and the standards set forth by Transport Canada. Airport emergency response service firefighters are also trained to meet requirements set out by the International Fire Service Training Association and the National Fire Protection Association. These standards are followed in conjunction with the policies and procedures established by the CAA and the Fire Department.

Appropriate, specialized apparatus, equipment and extinguishing agents are provided to airport emergency response services to ensure effective and safe response to airport a variety of aircraft incidents.

Incidents are reported and tracked to allow the CAA and Fire Department to monitor performance and address concerns. To ensure the aviation firefighting and rescue program continues to evolve, it is regularly assessed through annual evaluations of both personnel and apparatus.

## **Performance Indicators:**

**CC 5I.1 Given the agency's standards of cover and emergency deployment objectives, the agency meets its staffing, response time, apparatus and equipment deployment objectives for each type and magnitude of aviation emergencies.**

### **Description**

The Fire Department provides the Calgary Airport Authority (CAA) emergency response services through a service agreement that outlines response requirements. The Fire Department provides personnel for emergency response services and the CAA provides the necessary facilities, apparatus and equipment. The service agreement establishes the required staffing, apparatus and equipment for each type and magnitude of aviation incident, which is reflected in the Fire Department's critical tasking for aircraft rescue and firefighting outlined in Performance Indicator 5I.4.

Canadian Aviation Regulations (CARs) are the regulations, standards and advisory materials issued under the authority of the federal Minister of Transport pursuant to the *Aeronautics Act* and its associated regulations. CARs sets out deployment and response readiness objectives. As a Category 9 airport, per Transport Canada standards and as set forth by CARs 303, under the authority of the CAA the Fire Department carries out response tests to evaluate the response time and effectiveness of its aircraft firefighting services. Response tests are conducted every 12 months and are satisfactory if aircraft firefighting vehicles carrying a minimum of 24,300 litres of water and 450 kilograms of complementary extinguishing agent reach the midpoint of the farthest runway within three minutes of an alarm being sounded. Other aircraft firefighting vehicles are required to reach the location within four minutes of the alarm being sounded.

Airport emergency response service is staffed by four personnel per platoon and three of the four primary aircraft rescue and firefighting (ARFF) vehicles are operated at all times, providing coverage to active runways and around the restricted area of the airport. Additional trained personnel are on duty in surrounding fire stations to provide support and perform the critical tasks identified in the Fire Department's Standards of Cover.

## **Appraisal**

In 2013, the Fire Department met its staffing, response time, apparatus and equipment deployment objectives according to the established service agreement and standards set out by CARs. ARFF apparatus were tested for capacity and quality of extinguishing agent and their response times were timed twice in 2013, with times ranging from two minutes and 31 seconds to two minutes and 55 seconds.

## **Plan**

As per its service agreement with CAA, the Fire Department will continue to maintain the required CARs standard for response times, staffing and deployment of apparatus and equipment for airport emergency response services. The Fire Department, in partnership with the CAA, will continue to evaluate and measure all response times and routes to meet the response objectives for all incidents at the airport.

## **References**

- 5I.1a. Calgary Fire Department 2014 Standards of Cover
- 5I.1b. Calgary Airport Authority Contract No. P2011-1781, March 1, 2011
- 5I.1c. YYC Calgary International Airport, Timed trials, September 21-22, 2013
- 5I.1d YYC Calgary International Airport, Crash rescue map, January 2013
- 5I.1e. Canadian Aviation Regulations, Standard 303 – Part III, Subpart 3: Aircraft rescue and fire fighting at airports and aerodromes
- 5I.1f. Canadian Aviation Regulations, Standard 323 – Aircraft fire fighting at airports and aerodromes, 323.14

5I.2 The agency defines and provides appropriate and adequate equipment to accomplish the stated level of aviation rescue and fire fighting response and to be compliant with local, state/provincial and national standards.

### **Description**

The service agreement between the CAA and Fire Department identifies, and provides for, the appropriate equipment and response apparatus required to respond to an incident or accident in or around the restricted area of the airport. The CAA provides ARFF apparatus, facilities, an environmental clean-up trailer and all necessary consumables for training purposes. All equipment required for airport operations is carried on ARFF apparatus and available to crews at all times. The CAA also supplies all equipment required to meet response objectives, including fixed and portable radios and computer and communications equipment.

The City is responsible for all janitorial services for the airport emergency response services facility while the CAA provides structural maintenance services, including HVAC systems and auxiliary power plants of the station.

### **Appraisal**

Per Transport Canada standards and as set forth by CARs 323.09, the CAA has provided the minimum number of ARFF vehicles for a Category 9 airport. Appropriate and adequate equipment that meets industry and legislative requirements as outlined in CARs has been defined and made available to staff to accomplish the stated level of response indicated in the service agreement between the CAA and Fire Department.

### **Plan**

CAA will continue to provide equipment to meet the stated level of aircraft rescue and firefighting as outlined in the service agreement with the Fire Department. The Fire Department will continue to work in collaboration with the CAA to research and evaluate technical advances in equipment used for aircraft rescue and firefighting to ensure equipment remains appropriate and adequate for the program.

### **References**

5I.2a. Calgary Airport Authority, Contract no. P2011-1781, March 1, 2011

5I.3 Supplies and materials allocation is based on established objectives, is appropriate to meet aviation rescue and fire fighting operational needs, and is compliant with local, state/provincial and national standards.

### **Description**

The service agreement between the CAA and Fire Department identifies, and provides for, supplies and materials required for response to an accident or incident in or around the restricted area of the airport. The Fire Department provides other supplies and materials as needed.

CAA provides fuel, extinguishing agents and access to live burn training opportunities in order for the Fire Department to meet CARs certification requirements. The airport emergency response services maintain 24,300 litres of water at all times to provide the rapid suppression of fire due to an aircraft incident. ARFF vehicles carry enough foam concentrate to supply a minimum of two complete tanks of water. As a Category 9 airport, the CAA must provide a complementary extinguishing agent of 450 kilograms of dry chemical. The airport emergency response service also maintains reserve/complementary extinguishing agent at all times in amounts deemed to be 200 per cent of what would normally be required for an aircraft emergency.

Foams and complementary extinguishing agents comply with appropriate Underwriters' Laboratories of Canada performance specifications. A reserve supply log is maintained for all extinguishing product and reserve stocks of fire extinguishing agents are in accordance with CARs requirements. As outlined in Performance Indicator 5I.1, ARFF apparatus are tested twice annually for their capacity and quality of extinguishing agent.

### **Appraisal**

The service agreement between the CAA and Fire Department has established adequate materials and supplies to meet the operational needs and objectives of the airport rescue and firefighting program.

**Plan**

The Fire Department will continue to monitor the use and inventorying of extinguishing agents. New or improved extinguishing supplies and materials will be evaluated and changes to the service agreement made as appropriate.

**References**

- 5I.3a. Calgary Airport Authority, Contract no. P2011-1781, March 1, 2011
- 5I.3b. Calgary Fire Department, Emergency response service extinguishing agents, Reserve ARFF monthly foam requirements
- 5I.3c. Weekly foam, dry chem, N2 cylinders inventory form

**CC 5I.4 Current standard operating procedures or general guidelines are in place to direct aviation rescue and fire fighting activities.**

**Description**

Policies, procedures, training manuals and critical tasking are identified for each aircraft incident type and risk level. These are designed to support achievement of the stated level of response for aircraft rescue and firefighting response and ensure staffing and incident needs are addressed. Critical tasking indicates that for low risk incidents, airport emergency response services are deployed. For moderate and high-risk incidents, including a confirmed aircraft crash, additional Fire Department resources are deployed to perform the critical tasks as outlined in the Fire Department's Standards of Cover.

Standard operating procedures and guidelines for airport emergency response services provided by the CAA and Transport Canada are based on National Fire Prevention Association guidelines and CARs.

Airport emergency response services personnel are trained to meet Canadian Aviation Regulations 303, 323 and 343, and the standards set forth by Transport Canada. These personnel also meet the aircraft rescue and firefighting training requirements as per the International Fire Service Training Association and the National Fire Protection Association. Airport emergency response services personnel are also required to adhere to Fire Department policies and procedures related to incident operations and management at the airport. Fire Department policies and procedures are available through the Fire Department's Policy and Procedure Manager software and accessible by all staff.

**Appraisal**

The Fire Department and the CAA have established policies, procedures and training manuals for aircraft rescue and firefighting activities that are easily accessible by all staff. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

## **Plan**

In 2014, the CAA will implement a new standardized competency-based training program that includes site-specific training. The Fire Department will continue to conduct regular reviews, evaluations and assessments of its policies and procedures to ensure they remain current and accomplish the stated level of response for aircraft rescue and firefighting.

## **References**

- 5I.4a. Calgary Airport Authority, Contract no. P2011-1781, March 1, 2011
- 5I.4b. Calgary Airport Authority, Aircraft Incident Command and Staging Guide, October 2013
- 5I.4c. Canadian Aviation Regulations, Standard 303 – Subpart 3: Aircraft rescue and fire fighting at airports and aerodromes
- 5I.4d. Canadian Aviation Regulations, Standard 323 – Aircraft fire fighting at airports and aerodromes
- 5I.4e. Canadian Aviation Regulations, Advisory 343 – Advisory Document 343
- 5I.4f. Calgary Fire Department procedure: Managing YYC incidents, January 8, 2013
- 5I.4g. Calgary Fire Department policy: Incident operations, October 29, 2010
- 5I.4h. Calgary International Airport, Emergency response plan, July 2013
- 5I.4i. Calgary Airport Authority, Terminal evacuation plan, 2013

5I.5 The agency's information system allows for documentation and analysis of the aviation rescue and fire fighting services program.

### **Description**

The CAA requires firefighters stationed at the airport to complete reports following each response attended in or around the restricted area of the airport as well as following all training. These individual reports are tabulated monthly and sent to the CAA's director of airside operations.

Aircraft rescue and firefighting activities are documented in the Fire Department's records management system, known as FireRMS. As outlined in Performance Indicator 2A.4, FireRMS creates a new record for each incident into which the computer-aided dispatch (CAD) automatically downloads certain data for crews to verify and supplement with additional information. Officers in the airport emergency response services are responsible for adding relevant aircraft rescue and firefighting information to the incident record. Data is analyzed to provide statistics on aircraft rescue and firefighting response times, deployment and resources.

### **Appraisal**

The Fire Department has an established system in place to record aircraft rescue and firefighting information.

As identified in Performance Indicator 2A.4, while FireRMS has adequately met the needs for recording and storing occupancy and incident information, it has been determined to be lacking in functionality for linking all Fire Department data across multiple systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to replace FireRMS.

### **Plan**

The Fire Department will continue to use its current FireRMS until the new customized and integrated database system is implemented in late 2014, as outlined in Performance Indicator 2A.4. Airport emergency response service firefighters will continue to complete monthly reports and submit them to the CAA's director of airside operations.

## **References**

- 5I.5a. Calgary Airport Authority, Contract no. P2011-1781, March 1, 2011
- 5I.5b. Calgary Fire Department FireRMS (suggest live demonstration)
- 5I.5c. Calgary Airport Authority, Monthly response stats report

**CC 5I.6 An appraisal is conducted, at least annually, to determine the effectiveness of the aviation fire fighting and rescue program.**

**Description**

Through the service agreement between the CAA and Fire Department, periodic appraisals are required for the aircraft rescue and firefighting program. Airport emergency response services firefighters are required to be evaluated annually to ensure continued compliance with regulations. They participate in one or more live fire demonstrations and, as set out by CARs 302, participate in at least one tabletop exercise annually to meet requirements pertaining to use and operation of airport rescue and firefighting vehicles.

CARs 302 also requires airport emergency response services firefighters to demonstrate required skills through a periodic mock exercise designed to test overall procedures at the airport. The CAA, Calgary International Airport, emergency response services and a variety of other support agencies conduct a demonstration and evaluation of airport emergency procedures once every two years. Ongoing evaluation of the aircraft rescue and firefighting program is also completed following incidents, training, concerns or changes to factors influencing airport response activities.

Additionally, as outlined in Performance Indicator 5I.1, in accordance with CARs, under the authority of the CAA the Fire Department carries out response tests every 12 months to evaluate the response time and effectiveness of its aircraft firefighting services.

**Appraisal**

The Fire Department and CAA have established appraisals of the aircraft rescue and firefighting program that fulfill the requirements of the service agreement and other industry regulations.

In September 2012, airport emergency services participated in Operation Paratus, a simulated aircraft crash scenario along with a security-related incident. The exercise was one of the largest airport emergency exercises in Calgary's airport history and provided multiple agencies the opportunity to practice their emergency response.

**Plan**

The Fire Department will continue to participate in annual personnel skills evaluations with the CAA as well as tabletop and mock disaster exercises, including one scheduled for September 2014 to test aircraft rescue and firefighting response. As per its service agreement with CAA, the Fire Department will continue to carry out response tests at least once annually to evaluate its response times and effectiveness of its aircraft rescue and firefighting services.

**References**

- 5I.6a. Calgary Airport Authority, Contract no. P2011-1781, March 1, 2011
- 5I.6b. YYC Calgary International Airport, Timed trials, September 21-22, 2013
- 5I.6c. Live fire training records (available for viewing at Airport Station)



## **Criterion 5J: Marine and Shipboard Rescue and Fire Fighting Services**

*The agency operates an adequate, effective and efficient program directed toward a marine or shipboard fire or incident occurring at, or in the immediate area.*

*This criterion report should be completed by agencies that have direct responsibility for operating programs that provide marine and shipboard firefighting and /or rescue services, or that have identified a marine emergency in the immediate area as a highly probable hazard in Category II, Assessment and Planning.*

*If the agency determines this criterion is not applicable, the agency should still provide a brief explanation of why it does not provide this program.*

### **Summary:**

The Fire Department has no Marine and Shipboard Rescue and Fire Fighting Service commitments, therefore, this criterion is not applicable.



## **Category VI: Physical Resources**

Physical resources are defined as the fire stations, training facilities, fire apparatus and other capital expenditures and outlays that make up the property assets of an agency. Special attention is required to obtain and maintain appropriate quality physical resources.

Facilities that are leased and/or jointly operated may also be considered for agency use if this is accomplished in accordance with properly adopted and clearly established policies.

If work is contracted outside the agency and/or to another department within the a parent agency, it is incumbent on the agency to ensure that facilities, equipment, staff, record keeping, and procedures are consistent with the performance indicators and core competencies listed herein.

## **Criterion 6A: Physical Resources Plan**

*Development and use of physical resources is consistent with the agency's established plans. A systematic and planned approach to the future development of facilities is in place.*

### **Summary:**

The Fire Department's 10-year capital plan is contained within The City of Calgary's Emergency Response and Infrastructure Plan (ERIIP), a prioritized list of all funded and unfunded capital plans for The City's emergency services. The capital plan supports the long-term vision set out in the Fire Department's 2011-2021 Sustainability Plan as well as the short-term goals and objectives of its 2012-2014 Business Plan. The ERIIP sets the goals, objectives and direction of all the Fire Department's capital resources, including forecasting the need for prospective hard infrastructure, mix of apparatus and deployment and location and number of future stations.

In planning for the development and use of capital infrastructure, the Fire Department uses a collaborative process that involves subject matter experts from various functions across the Fire Department to identify the need for, and location of, physical resources and facilities.

The ERIIP is reviewed and either modified or approved by City Council during The City's three-year business planning and budgeting.

## **Performance Indicators:**

6A.1 The development, construction, or purchase of physical resources is consistent with the agency's goals and the strategic plan.

### **Description**

The Fire Department's 2011-2021 Sustainability Plan is the strategic plan for the organization and outlines its long-term vision and strategies. The Fire Department's 2012-2014 Business Plan identify the short-term goals and objectives required to move it towards the long-term vision. As outlined in Category 3 and 4, the Fire Department's budget, including all revenues and expenditures, must align with the business plan and be approved by City Council.

The Fire Department uses an asset planning model grounded in a 10-year capital Emergency Response Infrastructure Investment Plan (ERIIP) that is built from asset inventory and information and incorporates the Fire Department's lifecycle standards and service goals as well as urban planning indicators and demand drivers. The ERIIP sets the goals, objectives and direction of the Fire Department's capital resources, including forecasting the need for prospective hard infrastructure, mix of apparatus and deployment, location and number of future stations and activities in those stations. Projects within the ERIIP are consistent with, and support, the Fire Department's long-term vision and strategies as set out in the Sustainability Plan as well as the short-term goals and objectives outlined in the Fire Department's 2012-2014 business plan.

### **Appraisal**

The development, construction or purchase of physical resources has been consistent with the Fire Department's long-term vision and short-term goals. The collaborative planning process, which includes input from several stakeholder groups across the Fire Department, has improved the level of capital planning detail and accuracy, ensured that the Fire Department's physical resources meet serviceability demands and supported the delivery of required physical resources to realize the goals and objectives its Sustainability Plan and business plan.

## **Plan**

The Fire Department will continue to develop its business plans in accordance with The City of Calgary's (The City's) business planning and budget coordination process and align capital resource planning and acquisition with the vision of the Sustainability Plan and goals of the business plan. In 2014, the Fire Department will formalize the priority and sequencing of new and replacement stations in conjunction with The City's Growth Management Strategy. Improvements from this pilot will be incorporated into an overall capital planning strategy and become part of the Fire Department's ongoing financial planning toolkit.

## **References**

6A.1a. Calgary Fire Department 2012-2014 Business Plan

6A.1b. SPC on Community and Protective Services, CPS2013-0802: Investing in community priorities, 2014-2023, November 2013

6A.1c. City of Calgary Framework for Growth and Change, December 8, 2011,  
<http://www.calgary.ca/PDA/DBA/Pages/Corporate-Framework-for-Growth-and-Change.aspx>

6A.1d. Calgary Fire Department 2011-2021 Sustainability Plan

**CC 6A.2 The governing body, administration and staff are involved in the planning for physical facilities.**

**Description**

The Fire Department's capital planning is led by its Logistics & Infrastructure division, which uses a collaborative process that involves subject matter experts from various functions, such as strategic planning, capital planning, technology, operations and finance. Through community risk assessments, planning and budgeting, these groups identify the demand for new growth stations, needed repairs and maintenance to existing facilities, construction costs and benchmarks, service risks, facility design standards and facility requirements.

The Fire Executive Team reviews all proposed facility plans and prepares recommendations. The fire chief approves, rejects or proposes modifications to the plans. Capital plans approved by the fire chief are then approved by the general manager of Community Services & Protective Services, the department under which the Fire Department falls in The City's administrative structure. If approved, the project is added to the Emergency Response Infrastructure Investment Plan (ERIIP). The ERIIP contains a prioritized list of all capital plans for emergency services for The City.

The ERIIP and its process is approved by the governing body, City Council, and once established is considered to be official verification of emergency services requirements. During The City's three-year business planning and budgeting process and its annual review, the general manager of Community Services & Protective Services presents the ERIIP to Council as part of the request for capital funding. Once approved, the ERIIP is incorporated into The City's growth management process where timing and alignment of infrastructure budget requirements from all City business units is coordinated.

**Appraisal**

The Fire Department has involved staff, City Administration and Council in the identification, planning and approval process for physical facilities to ensure facilities meet service needs and are constructed and repaired in appropriate timeframes.

**Plan**

The Fire Department will continue to use its current process for involving staff, City Administration and Council in planning for its facilities. The ERIIP will continue to be used to identify and prioritize funded and unfunded capital projects for Council funding consideration.

**References**

6A.2a. SPC on Community and Protective Services, CPS2013-0802: Investing in community priorities, 2014-2023, November 2013

## **Criterion 6B: Fixed Facilities**

*Fixed facility resources are designed, maintained, managed, and adequate to meet the agency's goals and objectives.*

### **Summary:**

The Fire Department operates 46 facilities, which includes 39 fire stations and seven other facilities that provide fire prevention, training, support, emergency operations and administration services. Current facilities provide adequate space for staff and effective delivery of services to personnel and citizens. Lifecycle maintenance for these facilities is planned and managed, in large part, through a computerized software program for preventative maintenance, asset management and inventory control.

The Fire Department's 39 fire stations are distributed across the city to meet the service level benchmarks in the Fire Department's 2012-2014 Business Plan as well as a series of additional service level benchmarks used by the Fire Executive Team for operational planning. With a minimum of one engine in each station, the Fire Department is positioned to meet its distribution-related service level objective for first-in units, which is a travel time of four minutes and 30 seconds. The Fire Department maintains a ten-year tactical view of land and facility requirements and a 20-year strategic view of long-term city development to assist in meeting service level benchmarks and maintain standards of response coverage.

All Fire Department facilities comply with local, provincial and federal codes and safety regulations. Fire stations and facilities are designed and constructed to comply with the building and fire codes applicable at the time of construction. Existing stations undergoing significant renovations are upgraded to meet current code requirements

## **Performance Indicators:**

6B.1 Each facility has adequate space for agency functions (e.g., operations, fire prevention, training, support services, administration, etc.)

### **Description**

The Fire Department operates 46 facilities, which includes 39 fire stations and seven other facilities that provide fire prevention, training, support, emergency operations and administration services.

Emergency response stations vary in size from single-bay to three-bay halls that can house up to six pieces of heavy apparatus, and all contain living quarters and common areas. Several stations throughout the city also provide office space for health and wellness, community safety and fire prevention activities.

The Fire Headquarters building houses administrative functions including the Office of the Chief, finance, human resources, recruitment, public affairs, records management, hazardous materials and facilities management. It is over 30,000 square feet and includes common areas, meeting rooms, office space and storage space.

The Fire Department's apparatus and equipment maintenance facility, totaling over 64,500 square feet, includes 18 service bays, a small equipment repair area, a parts centre, an equipment and supply warehouse, vehicle storage facilities and administrative offices. It also houses the administrative functions of information technology, respiratory protection, facilities maintenance, fleet management and equipment and supply management.

The Fire Department's Training Academy has two buildings totaling 75,000 square feet. The facility supports the Fire Department's training needs with a large indoor training area, numerous classrooms, administrative offices, a driving track and a five-storey smoke tower. Co-located in the facility are numerous Fire Department sections, including Fire Inspections, Fire Investigations, Community Safety, Strategic Services and Legal and Risk Management.

The Fire Department's Wellness Centre, which provides firefighter wellness and medical services, shares a 12,000 square foot facility with the Health, Safety & Environment section.

### **Appraisal**

While space allocations are adequate to support its existing emergency and non-emergency functions, the Fire Department conducted a feasibility study on consolidating its administrative office space into a single campus location to accommodate future demand. The study identified the Fire Department did not have adequate space for administrative and support functions, and as a result, a headquarters master plan was developed. Phased renovations of the existing headquarters building started in 2013 and a master concept for the remaining headquarters site was developed.

### **Plan**

The Fire Department will continue to ensure that space allocations are adequate for its emergency and non-emergency functions through the ERIIP process outlined in Performance Indicator 6A.1. In 2014, it will continue construction of one new fire station, two renovated stations and the headquarters expansion project.

### **References**

- 6B.1a List of Calgary Fire Department stations and facilities, December 2013
- 6B.1b. Calgary Fire Department, Headquarters master concept plan (see Deputy Chief of Capital & Technical Programming)

6B.2 Buildings and outbuildings are clean and in good repair and the surrounding grounds are well kept. Maintenance is conducted in a systematic and planned manner.

### **Description**

The Fire Department has a building lifecycle maintenance program managed, in part, through Enterprise Asset Management, a City of Calgary computerized maintenance management software program (CMMS) for planning preventative maintenance, asset management and inventory control. Using EAM, the Fire Department manages the entire lifecycle of its buildings and grounds in a systematic and planned fashion, including design, construction, commissioning, operations, maintenance and decommissioning/replacement of facilities. Utilizing the CMMS, the Fire Department plans for and schedules all preventative maintenance on an annual basis and engages professional contractors and consultants to ensure that the work is performed according to all relevant codes, standards and operational requirements.

Day-to-day cleaning, care and maintenance of fire stations is scheduled and carried out by fire crews, and janitorial service contracts are in place for the cleaning of support buildings. Fire suppression staff contribute to ground maintenance at stations by cutting grass, clearing snow and performing other general maintenance. The Fire Department hires contractors to perform maintenance above and beyond that required by crews on station buildings and grounds. District chiefs perform monthly inspections to assess general housekeeping and maintenance of fire stations. The Facilities Management section has a process and planning in place for reporting, and response to, emergency maintenance requests.

### **Appraisal**

The Fire Department has maintained its extensive network of buildings and grounds in good repair. It has an established scheduled preventative maintenance and lifecycle program to ensure systematic and planned building and ground maintenance.

**Plan**

The Fire Department will continue to monitor its building and grounds maintenance schedules through its CMMS program. Building and grounds maintenance will continue to be incorporated into its long-term integrated asset management plan, which analyzes asset detail, maintenance cost history and asset reliability data to determine replacement plans and future funding requirements.

**References**

- 6B.2a. Enterprise Asset Management (see Facilities Management for system review)
- 6B.2b. Calgary Fire Department, Audits and assessments overview, December 2013
- 6B.2c. Logistics & Infrastructure division, Senior-man information guide, October 2012,  
p. 3

**CC 6B.3 Physical facilities are adequate and properly distributed in accordance with stated service level objectives and standards of cover.**

**Description**

The Fire Department has 39 fire stations distributed across the city that support its standards of cover as well as the service level benchmarks identified in its 2012-2014 Business Plan and those used by the Fire Executive Team for operational planning. Stations vary in size from single-bay to three-bay halls that can house up to six pieces of heavy apparatus. With a minimum of one engine in each station, the Fire Department is positioned to meet its distribution-related service level objective for first-in units, which is a travel time of four minutes and 30 seconds.

The Fire Department's Infrastructure Planning section maintains a ten-year tactical view of land and facility requirements and a 20-year strategic view of long-term city development to assist in meeting service level benchmarks and maintain standards of response coverage. The Fire Department also maintains a 10-year Emergency Response Infrastructure Investment Plan, outlined in Performance Indicator 6A.1, to identify and prioritize future capital investments, including growth and upgrade emergency response stations.

**Appraisal**

The Fire Department's physical facilities have been adequate and appropriately distributed in accordance with its service level benchmarks and standards of response coverage as set out in its Standards of Cover. In 2013, the projected first-due travel time coverage of four minutes and 30 seconds covered approximately 546 square kilometres of the 636 square kilometres of developed area in Calgary, which is approximately 85.8 per cent of the total city area. Once future approved and funded stations are in operation, an additional 35 square kilometres will be covered.

Two existing stations, Station 11 in Windsor Park and Station 7 in Mount Pleasant, have been approved for redevelopment. Funding for a permanent station in Royal Vista and three new stations to be constructed by the end of 2015 have been approved by City Council to provide emergency protection and response to growth areas in southeast,

northeast and northwest Calgary. Future station location planning has been developed to improve the Fire Department's response time performance and the additional approved stations will assist in expanding distribution coverage in accordance with stated service level objectives.

### **Plan**

The Fire Department will continue to consider distribution-related service level objectives when planning future stations.

As outlined in Goal 10 of its 2012-2014 Business Plan, the Fire Department will refine and implement comprehensive capital and operating strategies, including developing a new and regenerated station strategy. Through the direction set out in Goal 2, the Fire Department will develop a holistic strategic plan for growth in order to provide optimal and sustainable service delivery, which includes adopting infrastructure practices that balance the future demand for services in both intensified and new growth communities.

### **References**

- 6B.3a. Calgary Fire Department 2014 Standards of Cover (see Service Level Benchmarks and Baseline Performance section)
- 6B.3b. SPC on Community and Protective Services, CPS2013-0802: Investing in community priorities, 2014-2023, November 2013
- 6B.3c. Calgary Fire Department projected response coverage (4.5 minute travel time), current stations, February 5, 2014
- 6B.3d. Calgary Fire Department 2012-2014 Business Plan, Goal 10 and Goal 2, p. 25 and 18-19

**CC 6B.4 Facilities comply with federal, state/provincial and local codes and regulations.**

**Description**

The Fire Department's facilities comply with local, provincial and federal codes and safety regulations. Through The City of Calgary's Development & Building Approvals (DBA) and Building Regulations business units, Fire Department facilities, like all commercial developments, must apply for and adhere to all relevant permits and approvals. Building Regulations examines all plans, issues permits, performs inspections and provides approvals in accordance with federal, provincial and municipal regulations for all new construction and renovations. In concert with Building Regulations, DBA regulates the use and development of land; the safety, health, occupancy, and use of buildings; and the licensing of businesses and business activities. Fire stations and all other Fire Department facilities are designed and constructed to comply with the building and fire codes applicable at the time of construction, and existing facilities undergoing significant renovations are upgraded to meet current code requirements.

The Fire Department's Facility Management section coordinates all building maintenance and construction processes and ensures facilities maintain compliance with all pertinent requirements, including the *Alberta Occupational Health and Safety Act, Code and Regulations*. Where feasible, Facility Management institutes systems that consider staff health and safety beyond required regulations, such as installation of Nederman diesel emission exhaust systems. To ensure compliance, safety codes officers from various disciplines inspect Fire Department buildings during construction or renovations.

The Fire Department also adheres to The City's Sustainable Building Policy, which specifies the Leadership in Energy and Environmental Design (LEED) green building rating system gold level certification for new construction.

**Appraisal**

The Fire Department has complied with all relevant local, provincial and federal regulations related to its facilities. Facility Management has effectively managed all

aspects of new building construction and renovations to ensure all related building, fire and safety codes have been met.

### **Plan**

The Fire Department will continue to monitor regulations as they pertain to its facilities and adjust construction and renovations as required to maintain compliance.

### **References**

6B.4a. *Alberta Building Code*, 2006, Volume 1 and 2 (see Office of the Fire Marshal)

6B.4b. *Alberta Fire Code*, 2006 (see Office of the Fire Marshal)

6B.4c. The Province of Alberta Occupational Health and Safety Act, RSA 2000 Chapter O-2, current version in effect since October 1, 2013

6B.4d. Calgary Fire Department, Audits and assessments overview, December 2013

6B.4.e City of Calgary, Sustainable Building Policy CS005, February 25, 2008

## **Criterion 6C: Apparatus and Vehicles**

*Apparatus resources are designed and purchased to be adequate to meet the agency's goals and objectives.*

### **Summary:**

To meet the Fire Department's standards of response coverage and service level benchmarks, it operates a frontline response fleet of 102 apparatus consisting of engines, quints, aerial units, rescue units, tenders and other auxiliary and specialized response units out of 39 stations across the city. Distribution of apparatus across the city considers the apparatus, equipment and personnel required to assemble an effective response force for all risk levels and incident types as defined by the Fire Department's critical task analysis outlined in its Standards of Cover.

The fleet manager is responsible for oversight of the apparatus design, specification and acquisition process to ensure apparatus meets its intended purpose and fulfill the necessary job functions. Specifications are developed using a cross-functional team of subject matter experts, including the chief motor mechanic, fire operations staff, training officers, chief officers, maintenance technicians and a representative from The City's Supply Management buyer group, to ensure all needs and requirements are considered.

The Fire Department employs a fleet management framework that contains principles for optimizing and enhancing its apparatus and equipment lifecycle replacement schedule. Capital replacement budgets have been prepared based on The City of Calgary's three-year budget cycle, with a long-term forecast developed as part of the 10-year Emergency Response Infrastructure Investment Plan that is approved by City Council.

## **Performance Indicators:**

### **CC 6C.1 Apparatus are located strategically to accomplish the stated standards of cover and service level objectives.**

#### **Description**

The Fire Department has a fleet of 102 apparatus based out of 38 fire stations across the city plus specialized aircraft rescue and firefighting apparatus at its airport station that support its standards of cover as well as the service level benchmarks identified in its 2012-2014 Business Plan and those used by the Fire Executive Team for operational planning. The Fire Department utilizes various apparatus types to meet its service level benchmarks, including engines, quints, aerials units, rescue units, hazardous materials units, water tenders, a high-rise support unit, air/light support unit, incident command unit and other specialized support units.

The Fire Department currently deploys a minimum of one engine in every station, and based on performance data and community risk assessments, has strategically placed two engines in five high-demand areas. Strategic deployment of apparatus throughout the city supports coverage and reliability of performance through availability and capability of resources.

Distribution of apparatus across the city also considers the apparatus, equipment and personnel required to assemble an effective response force for all risk levels and incident types as defined by the Fire Department's critical task analysis outlined in its Standards of Cover.

As described in Performance Indicators 2B.5 and 2C.5, the Fire Department has developed a Performance Improvement Programme that identifies a number of short, medium- and long-term strategies to improve system performance and reliability, including strategies targeted at enhancing resource deployment. The Fire Department implemented a dynamic deployment model including apparatus redeployment guidelines in late 2013 to manage resources based on risks, probability, reliability and service demands. A deployment working group was also formed in 2013 to support an ongoing deployment review process

that considers the critical tasking discussed in Performance Indicators 2B.4 and 2C.4 to ensure deployment decisions reflect expected incident types and risk levels.

### **Appraisal**

The Fire Department's apparatus has been strategically placed to assist in accomplishing its stated standards of response coverage and service level benchmarks.

In 2013, the projected effective response force coverage for assembling 14 personnel within eight minutes and 30 seconds travel time covered approximately 669 square kilometres of the 848 total square kilometres of Calgary, which is approximately 79 per cent of the total city area.

At the time of writing there was not enough data available to measure the impact and effectiveness of the Performance Improvement Programme strategies implemented in late 2013 on response performance, however, the Fire Department expects to see improvements in response performance, coverage and service to citizens.

### **Plan**

The Fire Department's deployment working group will continue to meet at least twice a year to conduct ongoing deployment analysis, review results of deployment changes and assess information to inform future deployment recommendations. As data becomes available, the Fire Department will analyze the effectiveness of its dynamic deployment model on response time performance.

### **References**

- 6C.1a. Calgary Fire Department, Active units inventory, December 2013
- 6C.1b. Calgary Fire Department, Performance Improvement Programme, [http://pispwfe01/LIBRARY/PROG\\_PROJ/PIP/Pages/Default.aspx](http://pispwfe01/LIBRARY/PROG_PROJ/PIP/Pages/Default.aspx)
- 6C.1c. Calgary Fire Department 2012-2014 Business Plan, Objective 2.2 and 11.1, p. 18 and 26
- 6C.1d. Calgary Fire Department 2014 Standards of Cover (see Service Level Benchmarks and Baseline Performance section)
- 6C.1e. Calgary Fire Department projected response coverage (8.5 minute travel time), current stations, February 5, 2014

6C.1f. Report to Fire Executive Team, Annual deployment review, December 4, 2013

6C.2 Apparatus types are appropriate for the functions served, e.g., operations, staff support services, specialized services, and administration.

### **Description**

The Fire Department performs ongoing fleet evaluations that look at job function and the needs of specific areas to ensure the appropriate types of apparatus and support vehicles are implemented. The fleet manager is responsible for apparatus and vehicle design as well as the specification and acquisition process, which includes input from stakeholder groups as required, including the chief motor mechanic, fire operations staff, training officers, chief officers, maintenance technicians and a representative from The City's Supply Management buyer group. Working together, the fleet manager and stakeholder groups identify the appropriate functions that apparatus and support vehicles need to perform. These functional assessments form the basis for specifications.

The 102 heavy frontline apparatus are comprised of Type 1 1901-compliant engines, aerial units, rescue units, water tenders, specialized units and other response apparatus. These apparatus are used within stations as initial response vehicles, support vehicles and spare units. A few apparatus from this pool are dedicated for use at the Fire Department's Training Academy to ensure staff is trained on the same apparatus they will be using in the field. The Fire Department's light fleet consists of cars, trucks and vans for administrative and specialized support services, and aircraft rescue and firefighting apparatus is housed at the fire station located at the Calgary International Airport.

### **Appraisal**

The Fire Department has established a fleet of apparatus and vehicle types appropriate for the functions served. With input from key stakeholder groups, the fleet manager has an effective process for assessing the functions performed by the Fire Department and aligning those with apparatus and vehicle specifications and acquisitions. For example, the Fire Department acquired a fleet of eight new quint units in 2011 and 2012. These multi-functional units support more dynamic deployment and greater flexibility in resource allocation.

**Plan**

The Fire Department will continue using its process of selecting apparatus and vehicles based on an evaluation of the job functions they will need to support. In 2014, the fleet manager will conduct an in-depth appraisal of the current fleet evaluation and specification development process to ensure it remains effective and continues to align with the Fire Department's operational and administrative needs.

**References**

6C.2a. Calgary Fire Department, Active units inventory, 2013

6C.2b. Calgary Fire Department, Apparatus specifications (see Fleet Manager)

### 6C.3 A current replacement schedule exists for all apparatus

#### **Description**

The Fire Department employs a fleet management plan that contains principles for optimizing and enhancing its lifecycle replacement schedule based on historical data and average utilization. The Fire Department's fleet lifecycle replacement guidelines recommend: engines and specialized vehicles be used for 12 years of frontline response and three years as spares; tenders and aerials be used for 15 years of frontline response and three years as spares; quints, rescues and hazardous materials units be used for eight years of frontline response and three years as spares; boats be used for frontline response for nine years; and light vehicles be used for five to ten years depending on type and utilization.

The budgeting and replacement of tools and equipment is also done through a lifecycle replacement schedule maintained by the Fire Department's Equipment & Supply section. New and replacement apparatus are equipped with new tools and equipment that are budgeted for replacement at the same time as the apparatus itself. Replacement schedules for tools and equipment vary depending on the tool. Power tools, personal protective equipment and hazardous materials equipment are replaced every five years while small hand tools are replaced as needed. Extrication and self-contained breathing apparatus are replaced every ten years

The Fire Department has made a significant investment in the procurement of replacement apparatus and associated equipment over the last several years. Capital replacement budgets have been prepared based on The City's three-year budget cycle, with a long-term forecast developed as part of the 10-year Emergency Response Infrastructure Investment Plan (ERIIP) that is approved by City Council.

#### **Appraisal**

By hiring an industry-certified professional fleet manager, the Fire Department has demonstrated a commitment to optimizing fleet utilization and lifecycle management. It has an established replacement schedule for apparatus and other tools and equipment based on an extensive set of guidelines. Effective use and communication of the lifecycle

replacement schedule to Council has resulted in securing the capital budget funds required to meet its lifecycle replacement schedule.

As outlined in Performance Indicator 9C.3, the Fire Department also completed an asset management gap and needs analysis to inform a comprehensive asset management improvement strategy designed to sustain the performance of its infrastructure.

### **Plan**

As outlined in Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will establish formal asset management principles and frameworks to enhance and refine its long-term asset management plan and associated lifecycle replacement schedule review. In 2014, the fleet manager will conduct a review of current lifecycle schedules for all vehicle and apparatus classifications, using industry recognized asset management principles and lifecycle modeling. This asset management process will be aligned with the broader scope asset management framework being developed Fire Department wide.

Through Objective 10.4, the Fire Department will also develop a fleet management strategy and processes to collect, maintain and analyze asset use, condition and maintenance data to determine replacement plans and future funding requirements.

### **References**

- 6C.3a. Protective Services Report to the SPC on Community and Protective Services, CPS2008-64, Calgary Fire Department Fleet Status, July 16, 2008
- 6C.3b. Protective Services Report to the SPC on Community and Protective Services, CPS2008-64, Attachment 1: CFD Service Level Benchmarks for Fleet Lifecycle Maintenance, July 16, 2008
- 6C.3c. SPC on Community and Protective Services, CPS2013-0802: Investing In Community Priorities (2014-2023), November 2013
- 6C.3d. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1 and 10.4, p. 25

6C.4 A process is in place for writing apparatus replacement specifications that allows for employee input.

### **Description**

The chief motor mechanic, with guidance from the fleet manager, works with representatives from stakeholder groups to develop design criteria and specifications for all new and replacement apparatus. Stakeholder groups include fire operations staff, training officers, chief officers, maintenance technicians and a representative from The City's Supply Management buyer group. Together, the stakeholder groups determine apparatus functional needs, physical layout and equipment placement. With the guidance of engineers and manufacturer representatives, the chief motor mechanic determines power train specifications.

When writing apparatus specifications, the Fire Department takes into consideration manufacturers' expertise in design and engineering, and ensures that specifications comply with all relevant standards, including the Underwriters Laboratory of Canada, the National Fire Protection Association, the Canadian Standards Association, Canadian Motor Vehicle Safety Standards and the Alberta Traffic Safety Act regulations.

### **Appraisal**

The Fire Department has established an effective program for writing new and replacement apparatus specifications that include input from fire operations, training officers, and maintenance technicians. Through this program, the Fire Department has received apparatus best suited to its needs, functions and requirements.

### **Plan**

The Fire Department will continue to use employee input in its program for writing apparatus replacement specifications. As part of an overall fleet management program, in 2014 the fleet manager will review current processes for creating apparatus specifications to identify increased efficiencies and effectiveness, and to ensure alignment with best practices in fleet management.

### **References**

6C.4a. Calgary Fire Department, Apparatus specification sheets (see Fleet Manager)

## **Criterion 6D: Apparatus Maintenance**

*The inspection, testing, preventive maintenance, replacement schedule, and emergency repair of all apparatus is well established and meets the emergency apparatus service and reliability needs.*

### **Summary:**

Led by the fleet manager, the Fire Department's Fleet Maintenance section is staffed with a chief motor mechanic, a shop foreman, 15 fire apparatus technicians, a control clerk, a service writer and a shop laborer. The Fleet Maintenance section manages all vehicle and apparatus inspections, testing, preventative maintenance, repairs, acquisitions and disposals.

The Fleet Maintenance section has an effective preventative maintenance program, administered by the fleet manager, that follows manufacturer's recommendations, legislated requirements and industry best practices. Using Assetworks M5 computerized fleet management information system, Fleet Maintenance can forecast, schedule, record and track all maintenance activities for apparatus and support vehicles. The Assetworks M5 system provides data and reports to analyze asset information, maintenance cost history and reliability, which assists in the development of replacement strategies and future funding and maintenance requirements.

The Fire Department maintains a fleet of spare apparatus to ensure continuity in emergency response even when vehicles are out of commission due to repairs. To provide emergency and after-hours repairs, Fleet Maintenance is equipped with two fully stocked field service trucks and maintains on-call technicians available on a 24/7 rotational basis.

## **Performance Indicators:**

**CC 6D.1 An apparatus maintenance program is established. Apparatus maintenance is conducted in accordance with the manufacturer's recommendations and federal and/or state/provincial regulations. Attention is given to the safety, health, and security aspects of equipment operation and maintenance.**

### **Description**

The Fire Department's Fleet Management section has an established vehicle and apparatus maintenance program that is administered by the fleet manager and follows manufacturer's recommendations, legislated requirements and industry best practices. Emergency apparatus are considered commercial vehicles under the *Canadian National Safety Code* and adhere to all standards set out in this federal regulation. The Alberta Commercial Vehicle Inspection Program (CVIP) reflects these federal standards, and all journeyman heavy-duty mechanics and technicians within the Fire Department are fully trained and certified with CVIP licenses.

The Fire Department's emergency vehicle equipment maintenance facility is a provincially licensed inspection facility under the CVIP program and the maintenance program aligns with requirements under National Fire Protection Association Standard 1901, *Standard for Automotive Fire Apparatus*.

Through the Alberta Municipal Health and Safety Association, the Fire Department's health and safety management system and processes at the vehicle maintenance facility are in compliance with the regulations and industry standards for achieving and maintaining a Certificate of Recognition (COR).

### **Appraisal**

The apparatus maintenance program has been developed in accordance with manufacturer's recommendations and all relevant health and safety acts, regulations and codes. The Fire Department's preventative maintenance program has been monitored for effectiveness and compliance using key performance indicators that include monthly

reporting on preventative maintenance inspections, workflow management and apparatus availability rates.

### **Plan**

The Fire Department will continue to provide an apparatus maintenance program that is in accordance with the manufacturer's recommendations and meets health and safety acts, regulations and codes. Ongoing monitoring and evaluation of changes in technology, maintenance requirements and legislation by the fleet manager will ensure continued compliance and effectiveness of the program.

### **References**

6D.1a. Assetworks M5 computerized maintenance management system demonstration  
(see Fleet Manager)

6D.1b. *Canadian National Safety Code* Standard 11, Part B, Alberta Infrastructure and  
Transportation: Commercial Vehicle Inspection in Alberta (see Fleet Manager)

6D.1c. Assetworks M5 system, Sample monthly report (see Fleet Manager)

6D.1d. Calgary Fire Department, Audits and assessments overview, December 2013

6D.2 The maintenance and repair facility is provided with sufficient space and equipped with appropriate tools.

### **Description**

Totaling over 64,500 square feet, the Fire Department's emergency vehicle and equipment maintenance facility consists of 18 service bays fully equipped with pits, vehicle hoists and overhead cranes. The facility also includes administrative offices, a parts centre, a technical library, wash bay, an equipment and supply warehouse and an onsite vehicle storage and pump test facility. Industry standard tools, diagnostic equipment, service literature and specialized shop equipment is furnished and available to apparatus technicians for repair and maintenance functions undertaken at the facility.

### **Appraisal**

The Fire Department's emergency vehicle and equipment maintenance facility has more than adequate space, allowing vehicle maintenance staff to provide reliable, safely functioning emergency apparatus and equipment to support the work of frontline emergency responders. Specialized tools and equipment used by the Fleet Management section have met industry standards, are well maintained and are sufficient for carrying out small equipment, heavy- and light-duty apparatus repair and maintenance.

### **Plan**

The Fire Department will continue to use its emergency vehicle and equipment maintenance facility. Vehicle maintenance tools and equipment will continue to be inspected at regular intervals and new requirements will be evaluated and budgeted for on an annual basis. Due to rapidly changing technology, diagnostic laptop computers are a priority for replacement with plans in place to phase in new computers and software through 2014.

### **References**

6D.2a. Calgary Fire Department, Emergency vehicle and equipment maintenance facility (suggest site visit)

6D.3 A system is in place to ensure the regular inspection, testing, fueling, preventive maintenance, and emergency repair for all fire apparatus and equipment.

### **Description**

The Fleet Maintenance section's service writer, in consultation with the shop foreman, coordinates all workflow and planning of vehicle and apparatus preventative maintenance activities. To facilitate this, the Assetworks M5 fleet management information system provides a weekly forecast report of all system generated and manually logged work request, which includes all maintenance work recommended by manufacturers. In addition to annual Alberta Commercial Vehicle Inspection (CVIP) inspections, service and safety inspections are conducted at each 200-hour engine interval. When apparatus is in the vehicle maintenance facility for preventative inspection or service, any defects found by the apparatus technician or reported by the apparatus operator are noted and repaired accordingly. Prior to returning units to service, the apparatus technician functionally tests all inspected and repaired units.

To handle emergency breakdown service and repairs, the Fleet Maintenance section utilizes two fully equipped mobile service trucks and provides apparatus technicians on an on-call basis. To ensure apparatus are operating in a safe and effective manner, apparatus technicians can perform emergency repairs after hours in either the vehicle maintenance facility, at fire stations or at the scene of an emergency.

Operational vehicles may obtain fuel from one of 17 City fuelling locations, which includes three fire stations, or crews may use a fleet fuel card at most gas stations in the city. At larger incidents, emergency fuel deliveries are provided by either the Fire Department's vehicle shop slip tank, or through a contract maintained with a fuel tanker truck service provider.

Equipment maintenance is also recorded and tracked in Assetworks M5. Preventative maintenance is performed annually on equipment and all maintenance is outsourced to qualified vendors, as outlined in Performance Indicator 6E.3.

## **Appraisal**

The Fire Department has an effective system in place for the preventative maintenance, inspection, testing, fuelling and emergency repair of its apparatus and equipment.

## **Plan**

In 2014, the fleet manager will conduct a strategic organizational review of vehicle and apparatus maintenance activities and position profiles/employee responsibilities.

Outcomes of the review will be evaluated and plans developed to ensure the ongoing effectiveness of the Fleet Maintenance section.

## **References**

- 6D.3a. Assetworks M5 fleet management information system (see Fleet Manager)
- 6D.3b. Assetworks M5 system, sample report: Calgary Fire Department job forecast report (see Fleet Manager)
- 6D.3c. List of City fuelling stations

6D.4 An adequate number of trained and certified maintenance personnel are available to meet the program needs.

### **Description**

The Fire Department's Fleet Maintenance section is staffed by a chief motor mechanic, a shop foreman, 15 fire apparatus technicians, a control clerk, a service writer and a shop laborer. All fire apparatus technicians are provincially certified journeyman heavy-duty or automotive technicians, and many technicians hold emergency vehicle technician certification. Training for specialized areas, such as engine diagnostics, fire pump repair, multiplexing and aerial devices, is provided for by the Fire Department.

### **Appraisal**

The Fleet Maintenance section has an adequate number of trained and certified apparatus maintenance personnel available to administer its apparatus maintenance program and perform emergency repair services. The Fleet Maintenance section reviews industry standards related to technician productivity and establishes benchmarks to help assess optimal staffing levels. At times, staff retirements and turnover have reduced staffing levels for short periods during recent years; however, the Fire Department has mitigation strategies in place to address these reduced staffing levels by outsourcing some non-core vehicle maintenance functions.

### **Plan**

The Fleet Maintenance section will continue to review industry standards related to technician productivity and further identify benchmarks to establish optimal staffing levels. The Fire Department will continue to evaluate its training and certification requirements for maintenance personnel to ensure staff can perform the job safely and effectively. Training and development opportunities for new staff will be evaluated on a case-by-case basis, and development plans will be created to ensure all apparatus technicians receive competency-focused training and/or mentoring opportunities for skill development. To build resiliency against a shortage of skilled mechanical tradespersons, the fleet manager will investigate the feasibility of implementing an apprenticeship program within the Fleet Maintenance section.

## References

- 6D.4a. List of Calgary Fire Department apparatus technicians,  
<http://cfdnet/org/LI/evem/Pages/Default.aspx>

**CC 6D.5 Current standard operating procedures or general guidelines are in place to direct the apparatus maintenance program.**

**Description**

The Fleet Maintenance section maintains a series of policies and operational procedures to direct the Fire Department's apparatus maintenance program. They are documented in the Fire Department's policies and procedures management software and changes or additions to policies and procedures are communicated to all personnel through automatic notifications built into the management software. Policies and operating procedures include: requesting vehicle repairs; performing inspections of Fire Department fleet; performing pump testing; and maintaining and repairing fleet.

Additional written procedures relating to the management and use of Fire Department fleet address areas such as fleet identification standards, acquisition and disposal of vehicles and apparatus and the safe use, care and cleaning of Fire Department vehicles.

**Appraisal**

The Fire Department's policies and procedures management software has incorporated policies and operational procedures related to the apparatus maintenance program. The system has been made accessible to all Fire Department staff and a search engine has provided easy reference to policies and procedures. The Fire Department completed a review of fleet-related policies and procedures in 2013 and it was determined they meet the needs of the Fire Department's maintenance program.

**Plan**

The Fire Department will continue to use the current policies and procedures management software to house fleet-related policies and operational procedures. Additional fleet-specific procedures will be published as required to reflect changes to applicable legislation or practices. In 2014, the fleet manager will complete a strategic review of current fleet procedures and policies to ensure they continue to reflect the needs of the apparatus maintenance program.

## **References**

- 6D.5a. List of Calgary Fire Department apparatus maintenance standard operating procedures and general guidelines (see Fleet Manager)
- 6D.5b. Calgary Fire Department Policies and Procedure Manager software (suggest live demonstration)

6D.6 The level of supervision is adequate to manage the program.

### **Description**

Reporting to the deputy chief of the Logistics & Infrastructure division, the fleet manager oversees the management of all fleet functions. Reporting to the fleet manager, the chief motor mechanic is responsible for the day-to-day supervision of the Fleet Maintenance section, including staffing and administration functions. The shop foreman is responsible for the execution of the preventative maintenance program, including all shop activities, employee productivity and unit serviceability levels.

The control clerk and service writer support these functions by forecasting work requests, generating work orders, providing vendor dispatch and invoice reconciliation, coordinating unit moves with the Operations & Technical Teams division and working with The City's Supply Management business unit on special order parts.

### **Appraisal**

The Fire Department has established adequate supervision for its apparatus maintenance and repair functions. The addition of a fleet manager in January 2013 has provided strategic leadership and ensured that fleet management functions and maintenance operations continued to evolve in alignment with changing industry standards and fire service requirements.

### **Plan**

The Fleet Management section will continue with its current supervisory structure and monitor and adjust workloads as required to ensure effective oversight and management.

### **References**

6D.6a. Calgary Fire Department Logistics & Infrastructure division organizational chart, January 2014

6D.7 The agency's information system allows for documentation and analysis of the apparatus maintenance program.

### **Description**

The Fleet Maintenance section uses Assetworks M5 software as its fleet management information system. This system allows the Fleet Maintenance section to forecast, schedule, track and report on all preventative maintenance and repair activities.

Through Assetworks M5 reporting, the Fire Department can analyze details of vehicle and apparatus assets, maintenance cost history, failure trend analysis and asset reliability data to assist in the planning of lifecycle replacement of apparatus and future funding and maintenance requirements.

### **Appraisal**

The Fire Department has an established and effective fleet management information system in place to support its apparatus maintenance program and provide detailed data analysis on the effectiveness of the program.

### **Plan**

The Department will continue to use the Assetworks M5 fleet information management system for its apparatus maintenance program. Regular software updates provided by Assetworks will ensure the system is updated as necessary and additional system functionality will be explored to provide enhancements and automation to asset lifecycle modeling and replacement planning.

As outlined in Objective 10.4 of its 2012-2014 Business Plan, the Fire Department will develop a fleet management strategy and processes to collect, maintain and analyze asset use, condition and maintenance data. In support of this objective, a telematic data solution known as the Common Fleet Operating System will be piloted in conjunction with other City fleet. The system will provide automated meter information collection from apparatus in the field including vehicle location, fuel consumption information and remote malfunction warning indicator for vehicle systems.

## **References**

- 6D.7a. Assetworks M5 computerized maintenance management system demonstration  
(see Fleet Manager)
- 6D.7b. Calgary Fire Department 2012-2014 Business Plan, Objective 10.4, p. 25
- 6D.7c. Common Fleet Operating System demonstration (see Fleet Manager)

6D.8 The reserve vehicle fleet is adequate or a documented contingency plan with another agency is in place for the event that apparatus must be taken out of service.

### **Description**

The Fire Department maintains a fleet of spare apparatus for all classes of response units. It uses its spare apparatus to allow frontline apparatus to be taken out of service for maintenance or repair and not impact emergency response levels. Spare apparatus are either housed the Emergency Vehicle and Maintenance Facility or used at the Fire Training Academy when not required for operations.

Spare units are also deployed during major incidents that require additional response. The percentage of total units in a class deemed spare are: 21 per cent of engines; 25 per cent of quints; 21 per cent of rescue units; 20 per cent of hazardous materials units; 33 per cent of water tenders; and 28 per cent of bush buggies.

As identified in Performance Indicator 10A.1, the Fire Department has a mutual aid agreement with The City of Edmonton Fire and Rescue Services to provide significant and appropriate resources in the event of a large-scale emergency event, such as a natural disaster or terrorist act. If needed, the Fire Department also requests additional tender support from fire agencies in surrounding districts and municipalities.

### **Appraisal**

The Fire Department has adequate spare apparatus in its fleet to accommodate units taken out of service for repair or to support large-scale events. Apparatus availability has been monitored daily and reported on monthly. A mutual aid agreement has been established that provides a contingency plan should the Fire Department not be able to meet adequate apparatus service levels during large-scale emergency events.

### **Plan**

The Fire Department will maintain current or greater spare ratios as deemed necessary to provide adequate apparatus capacity at all times. The fleet manager will maintain ongoing monitoring of unit serviceability and continue consultation with the Operations & Technical Teams division to ensure spare apparatus requirements are being met.

## **References**

6D.8a. Mutual aid agreement – City of Calgary and Edmonton, January 2010

6D.8b. Monthly apparatus availability report, December 2013 (See Fleet Manager)

## **Criterion 6E: Tools and Small Equipment**

*Equipment resources are adequate and designed and maintained to meet the agencies goals and objectives.*

### **Summary:**

All Fire Department apparatus are equipped with a standardized list of tools and equipment depending on the type of apparatus. All tools and small equipment meet industry standards and are maintained to Fire Department, manufacturer and Alberta Occupational Health & Safety requirements.

The Fire Department's Equipment & Supply section is responsible for tracking, scheduling and monitoring of all tool and equipment testing, maintenance and replacement using the Assetworks M5 computerized maintenance management system. Equipment & Supply is also responsible for inventory control and distribution of firefighting tools and equipment. An equipment check sheet has been developed for each type of apparatus and is used by firefighters at every shift change to verify all equipment is available and functioning properly. Missing, damaged or defective tools and equipment are reported by firefighters and temporary replacements are issued to ensure no disruption in emergency response abilities.

Maintenance on small hand tools and hose testing is typically performed by firefighters using well-defined procedures and guidelines. Outsourced vendors certified in the maintenance and/or repair of the equipment conduct all specialized equipment maintenance.

## **Performance Indicators:**

6E.1 Tools and equipment are distributed appropriately in sufficient quantities.

### **Description**

The Operations & Technical Teams division identifies the types and quantities of tools and equipment required to effectively support job functions. The Fire Department's Equipment & Supply section is responsible for inventory control using the Assetworks M5 computerized maintenance management system and distribution of firefighting tools and equipment. Each fire apparatus, including spare units, has an individualized equipment check sheet that provides a detailed inventory of all the tools and equipment carried on that apparatus. Check sheets are reviewed by firefighters at every shift change to verify all tools and equipment are available in the amounts indicated and are functioning properly.

If tools or equipment are damaged or lost, firefighters send a report to the Fire Department's Equipment & Supply section. Temporary replacements are provided to ensure continued availability of tools and equipment for response. Requests for small firefighting supplies and hand tools are submitted to Equipment & Supply using an online order form located on the Fire Department's intranet.

### **Appraisal**

The Fire Department has provided all necessary tools and equipment in sufficient quantities. The Operations & Technical Teams division and Equipment & Supply section have determined sufficient types and quantities of tools and equipment for each type of apparatus. The system has ensured all tools and equipment are regularly examined and replaced when necessary or according to lifecycle.

### **Plan**

The Fire Department will continue with its system for distribution of tools and equipment. As outlined in Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procedure and review recommendations on any changes to better meet the tool and equipment needs of Operations.

## **References**

- 6E.1a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)
- 6E.1b. Calgary Fire Department, Apparatus/equipment check sheet, apparatus #E04010,  
July 21, 2011
- 6E.1c. Equipment & Supply order form
- 6E.1d. Damaged, missing or lost equipment report, FD 1205 (R2012-04)
- 6E.1e. Equipment repair tag FD 923 (1998-07)
- 6E.1f. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

6E.2 Tools and equipment replacement is scheduled, budgeted, and implemented, and is adequate to meet the agency's needs.

### **Description**

The Fire Department's Equipment & Supply section is responsible for replacing tools and equipment. This is done on an as-needed basis when tools or equipment are lost or when repair is no longer feasible. Equipment & Supply uses its Assetworks M5 computerized maintenance management system to track the lifecycle, forecast replacement schedule and budgeting of its equipment.

The lifecycle replacement schedule for tools and equipment vary depending on the item: ladders are replaced at 15 years; extrication equipment, self-contained breathing apparatus, hoses, nozzles, automatic defibrillators and thermal imaging cameras are replaced every 10 years; and hazardous materials equipment, personal protective equipment and power equipment are replaced every five years.

### **Appraisal**

The Fire Department has an established tool and equipment replacement program that meets the needs of Operations. The Assetworks M5 system has been effective in forecasting equipment lifecycle requirements and providing scheduling and cost analysis for the Fire Department's operating and capital budgets. Replacement needs have been captured in the 10-year Emergency Response Infrastructure Investment Plan reviewed and approved by City Council.

### **Plan**

The Fire Department will continue its current tools and equipment replacement program and continue to use Assetworks M5 to schedule and budget for equipment replacement.

### **References**

6E.2a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)

6E.2b. Calgary Fire Department Capital Budget 2013 (see Deputy Chief of Logistics & Infrastructure)

**CC 6E.3 Equipment maintenance, testing, and inspections are conducted by qualified personnel and appropriate records are kept.**

**Description**

The Fire Department outsources all of its equipment maintenance, repair and testing to approved vendors certified in the maintenance and/or repair of the specialized equipment. Equipment service contracts established between the Fire Department and vendors require all service technicians that might perform maintenance or testing for the Fire Department submit the appropriate qualifications and industry accreditation/certificates for approval. These documents are kept on file with the contract as proof of competence.

The exceptions are the basic maintenance procedures for small hand tools and annual hose testing, which are completed by firefighters. Firefighters are provided guidelines from the manufacturer on how to perform these tests. Any hose that fails testing is sent to the Equipment & Supply section for replacement or repair through an approved and qualified hose supplier.

The Assetworks M5 computerized maintenance management system is used to record, inventory and track all maintenance and testing of equipment. Weekly reports are generated identifying equipment due for maintenance or testing as well as any equipment identified by crews as requiring repair.

**Appraisal**

The Fire Department has retained qualified personnel responsible for the maintenance, inspection and testing of equipment. Approved vendors certified in the maintenance and/or repair of the specialized equipment have been used to ensure proper care. Detailed records of maintenance schedules and activities have been recorded in the Assetworks M5 computerized maintenance management program.

**Plan**

The Fire Department will continue its current process of using qualified outsourced vendors for the majority of maintenance, testing and repair of its specialized equipment. The Fire Department will also continue to use Assetworks M5 as the scheduling and tracking system for all maintenance and testing performed on equipment.

## **References**

- 6E.3a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)
- 6E.3b. Calgary Fire Department, Hose testing form
- 6E.3c. Calgary Fire Department, Hose testing schedule for 2010-2014
- 6E.3d. CFD Supplementary Training Manual, Hoses (August 2012), Hose Service Testing  
Procedure (pp. 7-10)

6E.4 An inventory control and maintenance tracking system is in place and is current.

### **Description**

The Fire Department's Equipment & Supply section is responsible for inventory control, tracking and maintenance of tools and equipment. Tools and equipment over \$1,000 and all safety equipment is inventoried in the Assetworks M5 computerized maintenance management system. The system is also used to track repairs and testing, including all associated costs.

Crews are required to check apparatus equipment at the start of each shift, which provides a daily inventory control check. The check sheets that must be completed are located on the Fire Department's intranet site.

### **Appraisal**

The Fire Department has an established and effective inventory control and maintenance tracking system in place. Through the Equipment & Supply section, the Fire Department has inventoried all tools and equipment and recorded all maintenance in its Assetworks M5 system.

### **Plan**

The Fire Department will continue to use Assetworks M5 to inventory and track equipment including any maintenance and testing requirements. The system will be updated as additional information becomes available or changes to equipment maintenance and testing requirements are implemented. The Fire Department's Equipment & Supply section will also evaluate and implement an asset management software program to improve tracking of equipment.

As outlined in Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will also conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the tool and equipment needs of Operations.

### **References**

6E.4a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)

6E.4b. Calgary Fire Department, Apparatus/equipment check sheet, apparatus #E04010,  
July 21, 2011

6E.4c. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

## **Criterion 6F: Safety Equipment**

*Safety equipment is adequate and designed to meet the agency goals and objectives. For the purposes of this criterion, safety equipment includes personal protective equipment (PPE) and related equipment (e.g., SCBA).*

### **Summary:**

Every firefighter is provided with appropriate personal protective equipment including a self-contained breathing apparatus face piece, two sets of full turnout gear, medical gloves, medical masks, and hearing protection. Where applicable, all safety equipment is certified to National Fire Protection Association, Underwriter's Laboratory of Canada or Canadian Standards Association standards. The Fire Department identifies new safety standards and equipment on an ongoing basis through its Operations & Technical Teams division, Fire Executive Team, Equipment & Supply section and the Health, Safety & Environment section. Working closely with Equipment & Supply, the Health, Safety & Environment section conduct trials of new safety equipment and assist in determining safety equipment is appropriate and adequate for its intended purpose.

The Fire Department's Equipment & Supply section is responsible for administering the procurement, inventorying, tracking, maintenance and testing of all safety equipment. All repair and testing is outsourced and performed by approved vendors certified in the repair of the specialized equipment.

Equipment & Supply uses the Assetworks M5 computerized maintenance management system to identify the replacement schedules and budgeting requirements for all safety equipment. Equipment & Supply utilizes data from Assetworks M5 to analyze safety equipment details, maintenance cost history and asset reliability data to assist in the planning of replacement equipment and future funding and maintenance requirements.

## **Performance Indicators:**

### **CC 6F.1 Safety equipment is identified and distributed to appropriate personnel.**

#### **Description**

Every firefighter is provided with appropriate personal protective equipment (PPE), including a self-contained breathing apparatus (SCBA) face piece, full turnout gear, medical gloves, medical masks and hearing protection. Where applicable, all safety equipment is certified to National Fire Protection Association, Underwriter's Laboratory of Canada or Canadian Standards Association standards. New safety standards and equipment are identified on an ongoing basis through the Operations & Technical Teams division, Fire Executive Team, Equipment & Supply section and the Occupational Health, Safety & Environment section. The Occupational Health, Safety & Environment section works closely with Equipment & Supply to ensure all safety equipment is appropriate and all personnel have proper access to the safety equipment.

To enhance firefighter safety, in 2012, the Fire Department began purchasing a second set of duty gear for all firefighters. In addition, more than 1,100 sets of PPE were replaced after reaching a lifecycle age of five years, which is a shorter lifecycle than the National Fire Protection Association's recommended replacement schedule of 10 years.

Lost or damaged safety equipment is reported to the Equipment & Supply section. Temporary replacements are provided to ensure continued availability of safety equipment and some PPE and safety equipment is available directly from on-duty district chiefs.

Technical rescue teams, such as aquatic, rope/high angle and heavy rescue, identify safety equipment needs through a combination of *Alberta Occupational Health & Safe* industry best practices and team input. All technical team safety equipment is certified to National Fire Protection Association, Underwriter's Laboratory of Canada or Canadian Standards Association standards.

#### **Appraisal**

The Fire Department has identified and distributed safety equipment to appropriate personnel. Operations & Technical Teams, the Fire Executive Team, Equipment & Supply

and Health, Safety & Environment all have important roles in identifying appropriate PPE and safety equipment needs, as well as new standards and technology. Equipment & Supply, along with the district chiefs, are responsible for the appropriate distribution and replacement of safety equipment. Having a second set of duty gear has allowed firefighters to send in their gear for cleaning after incidents, and still have a full set of gear available for duty.

Although the Fire Department's SCBA has been a highly effective and valuable piece of equipment over the past eight years, it is nearing the end of its lifecycle. In January 2014, the Fire Department initiated a project to replace its SCBA with a new inventory to better meet operational needs and maintain adherence to all current industry standards. The project was launched with a questionnaire to personnel asking for feedback on a number of SCBA factors to help develop evaluation criteria to be used when selecting the new SCBA.

### **Plan**

The Fire Department will continue its safety equipment identification and distribution process. It will also continue to consult with key stakeholder groups within the Fire Department to research and evaluate new safety equipment and technology and distribute suitable quantities as required to meet safety requirements.

In 2014 and 2015, the SCBA project will investigate current technologies and support models, set out detailed operational testing and evaluation procedures, identify the process for selection and procurement, and develop appropriate training for personnel. By the end of 2015, the new SCBA will be purchased and distributed, and staff will be trained on its use.

### **References**

- 6F.1a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)
- 6F.1b. Calgary Fire Department, Apparatus/equipment check sheet, apparatus #E04010,  
July 21, 2011
- 6F.1c. Damaged, missing or lost equipment report FD 1205 (R2012-04)

6F.1d. Calgary Fire Department Equipment concern form

6F.1e. Calgary Fire Department FD Notice #3-2014, SCBA kick off and firefighter questionnaire on importance of SCBA factors, January 2014

6F.2 Distributed safety equipment is sufficient for the functions performed.

### **Description**

The Operations & Technical Teams division, Fire Executive Team, Equipment & Supply section and the Health, Safety & Environment section work collaboratively to identify specifications for safety equipment. Prior to distribution of safety equipment, the Fire Department conducts research and trial periods to ensure identified safety equipment is sufficient for the functions they are expected to perform.

Working closely with Equipment & Supply, the Health, Safety & Environment section conducts research into the suitability of new and existing safety equipment. These sections consult industry standards, solicit firefighter feedback and ensure safety equipment used by firefighters is being used for the purpose for which it was intended and meets or exceeds all legal requirements.

### **Appraisal**

The Fire Department has distributed safety equipment appropriate and sufficient for the functions performed.

### **Plan**

The selection and distribution of safety equipment will continue to be reviewed collaboratively by Operations & Technical Teams, the Fire Executive Team, Health, Safety & Environment and Equipment & Supply. The Equipment & Supply section will continue to work closely with the Health, Safety & Environment section to test and trial all safety equipment prior to it being distributed for regular use by firefighters.

### **References**

6F.2a. Calgary Fire Department, Fire retardant clothing wear testing

6F.3 Safety equipment replacement is scheduled, budgeted and implemented, and is adequate to meet the agency's needs.

### **Description**

The Fire Department's Equipment & Supply section is responsible for replacing safety equipment. This is done on an as-needed basis when safety equipment is lost or when repair is no longer feasible. Equipment & Supply uses its Assetworks M5 computerized maintenance management system to track the lifecycle, forecast replacement schedule and budgeting of its safety equipment.

The lifecycle replacement schedule for safety equipment varies depending on the item: self-contained breathing apparatus and self-contained underwater breathing apparatus is replaced every ten years; and personal protective equipment is replaced every five years. This information is entered into Assetworks M5 for budgeting and replacement scheduling. Other safety equipment is replaced on an as-required basis.

Analysis of the maintenance cost and asset reliability data related to safety equipment that is housed within Assetworks M5 assists the Fire Department with planning and budgeting for future replacement of the equipment.

### **Appraisal**

The Fire Department has an established safety equipment replacement program. The Assetworks M5 system has been effective in forecasting safety equipment lifecycle requirements and providing scheduling and cost analysis for the Fire Department's operating and capital budgets. Replacement needs have been captured in the 10-year Emergency Response Infrastructure Investment Plan reviewed and approved by City Council.

### **Plan**

The Fire Department will continue its current safety equipment replacement program and continue to use Assetworks M5 to schedule and budget for equipment replacement.

### **References**

6F.3a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)

6F.3b. Calgary Fire Department Capital Budget 2013 (see Deputy Chief of Logistics & Infrastructure)

6F.4 Safety equipment maintenance, testing, and inspections are conducted by trained qualified personnel and appropriate records are kept.

### **Description**

Maintenance on all safety equipment, including self-contained breathing apparatus and self-contained underwater breathing apparatus, is outsourced to vendors certified in the repair of the specialized equipment. Equipment service contracts established between the Fire Department and vendors require all service technicians that might perform maintenance or testing for the Fire Department submit the appropriate qualifications and industry accreditation/certificates for approval. These documents are kept on file with the contract as proof of competence.

The Assetworks M5 computerized maintenance management system is used to record, inventory and track all maintenance and testing of safety equipment. Weekly reports are generated identifying equipment due for maintenance or testing as well as any equipment identified by crews as requiring repair.

The Fire Department and its members are jointly accountable in ensuring the care and use of personal protective equipment (PPE) is performed in a manner that affords the highest degree of personal safety. Each member is responsible for inspecting PPE for damage or any condition that may render the equipment unsafe or unsightly. This is done at the beginning of each shift and after every use where damage or contamination may have occurred.

### **Appraisal**

The Fire Department has retained qualified personnel responsible for the maintenance, inspection and testing of safety equipment. Approved vendors certified in the maintenance and/or repair of the specialized equipment have been used to ensure proper care. Detailed records of maintenance schedules and activities have been recorded in the Assetworks M5 computerized maintenance management program.

The Fire Department has established a policy and related procedures for the care and use of personal protective equipment that outlines firefighter inspection and cleaning standards.

**Plan**

The Fire Department will continue its current process of using qualified outsourced vendors for the maintenance, testing and repair of its safety equipment. The Fire Department will also continue to use Assetworks M5 as the scheduling and tracking system for all maintenance and testing performed on safety equipment.

**References**

- 6F.4.a Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)
- 6F.4b. Calgary Fire Department policy: Care & use of personal protective equipment,  
February 10, 2011

6F.5 A safety equipment inventory control and maintenance tracking system is in place and current.

### **Description**

The Fire Department's Equipment & Supply section is responsible for inventory control, tracking and maintenance of safety equipment. All safety equipment is inventoried in the Assetworks M5 computerized maintenance management system. The system is also used to track repairs and testing, including all associated costs.

Firefighters are required to check safety equipment at the start of each shift, which provides a daily inventory control check. The check sheets that must be completed are located on the Fire Department's intranet site.

### **Appraisal**

The Fire Department has an established and effective inventory control and maintenance tracking system in place. Through the Equipment & Supply section, the Fire Department has inventoried all safety equipment and recorded all maintenance in its Assetworks M5 system.

### **Plan**

The Fire Department will continue to use Assetworks M5 to inventory and track safety equipment including any maintenance and testing requirements. The system will be updated as additional information becomes available or changes to equipment maintenance and testing requirements are implemented. The Fire Department's Equipment & Supply section will also evaluate and implement an asset management software program to improve tracking of equipment.

As outlined in Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will also conduct an internal control audit on tangible capital asset procurement and review recommendations on any changes to better meet the safety equipment needs of Operations.

### **References**

6F.5a. Assetworks M5 computerized maintenance management system demonstration  
(see Supervisor, Equipment & Supply)

6F.5b. Calgary Fire Department, Apparatus/equipment check sheet, apparatus #E04010,  
July 21, 2011

6F.5c. Calgary Fire Department 2012-2014 Business Plan, Objective 10.1, p. 25

## **Category VII: Human Resources**

Human resources are defined as all aspects of personnel administration except those of training and competency, which are addressed in Category VIII. The heart of any organization is its people and this category is designed to appraise the importance and results of the human resources program. It is recognized that the completion of this human resources section may involve members from other governing entities or other elements of the community.

## **Criterion 7A: Human Resources Administration**

*General human resources administration practices are in place and are consistent with local, state/provincial, and federal statutory and regulatory requirements.*

### **Summary:**

The City of Calgary's (The City's) administrative support is maintained through a centralized model for services, referred to as enabling services, and includes functions such as law, finance, labour relations, information technology and human resources. The Fire Department is designated a human resources manager through this centralized model.

A human resources advisor is situated within the Fire Department and provides general assistance in strategic and transactional human resources work, and an additional human resources specialist who reports to and works within the Fire Department provides support to the Recruitment section. There are also numerous positions within The City's centralized HR function that support the Fire Department based on their service, specialty or line of business, including compensation, total rewards, health and wellness, corporate talent acquisition and planning, labour relations and organizational effectiveness.

The City's centralized human resources function develops and maintains, on behalf of the City Manager's Office, all personnel policies for The City. It is also charged with ensuring that The City's human resources practices and the administration policies are compliant with legislation, standards, and regulations at the federal, provincial and municipal level, including individual requirements of applicable collective agreements. The Fire Department's human resource policies, procedures and practices adhere to the broader City direction.

## **Performance Indicators:**

### **CC 7A.1 A human resources manager is designated.**

#### **Description**

The City's administrative support is maintained through a centralized model for services, referred to as enabling services, and includes functions such as law, finance, labour relations, information technology and human resources. Through this centralized model, the Fire Department is designated a human resources manager, called a business partner, who is also assigned to support several other business units, including Animal & Bylaw Services and Public Safety Communications.

The position reports to The City's director of human resources while being co-accountable to the fire chief. A human resources advisor, located in the Fire Department, reports to the human resources manager and is responsible for strategic and transactional human resources work for the Fire Department including: pay services; total rewards; business strategy process and system planning; business advisory services; workforce strategy; and service delivery planning.

#### **Appraisal**

The Fire Department has a designated human resources manager who has actively contributed to the development of human resources strategies, goals and objectives within the Fire Department's business and sustainability plans.

#### **Plan**

The Fire Department will continue to evaluate in conjunction with The City's Human Resources, the effectiveness of the centralized human resources model, overall structure and processes in supporting its business and operational needs.

#### **References**

7A.1a. City of Calgary Human Resources, Business advisory services: Business partner/HR advisor by department

<http://mycity/MyHr/Contacts/Pages/BusAdvisoryServices.aspx>

7A.1b. City of Calgary Human Resources, 2013 priorities

7A.2 The human resources program has adequate staffing to accomplish the human resources administrative functions.

### **Description**

In addition to the human resources manager and advisor noted in Performance Indicator 7A.1, there is an additional human resources specialist who reports to and works within the Fire Department's Recruitment section. There are also numerous positions within The City's centralized human resources function that support the Fire Department based on their service, specialty or line of business, including compensation, total rewards, health and wellness, corporate talent acquisition and planning, labour relations and organizational effectiveness.

### **Appraisal**

The human resources program, which consists of staff available immediately within the Fire Department and available through The City's centralized human resources function, has provided adequate support for the Fire Department's human resource administrative functions.

### **Plan**

The Fire Department will continue to rely on its human resources model and staffing functions provided by The City to support its human resource administrative functions.

### **References**

7A.2a. The City of Calgary Human Resources, Corporate organizational chart

7A.2b. City of Calgary human resources service centre

<http://mycity/MyHr/Contacts/Pages/HRServiceCentre.aspx>

7A.3 Policies are established to direct the human resources administrative practices in accordance with local, state/provincial, and federal requirements.

### **Description**

The City develops its administrative policies and practices for human resources based on provincial and federal legislation and statutes, and within the confines of local bargaining agreements. Provincial and federal requirements include the *Alberta Employment Standards Code*, *Alberta Employment Standards Regulation*, the *Alberta Human Rights, Citizenship and Multiculturalism Act*, *Alberta Labour Relations Code*, and the *Freedom of Information and Protection of Privacy Act*.

The City's centralized human resources business unit develops and maintains, on behalf of the City Manager's Office, all personnel policies for The City. In addition, the Fire Department has policies and procedures that encompass facets of human resources administration. The human resources advisors assigned to the Fire Department ensure that Fire Department policies and procedures align with existing City policies and adhere to municipal and collective agreement requirements.

The Fire Department's policies and procedures are available through its Policy and Procedures Manager software and accessible by all staff.

### **Appraisal**

The City and Fire Department have established policies and practices for human resources administration based on municipal, provincial and federal requirements. The City's human resources policies have been updated in response to applicable legislative changes and scheduled for review on a regular basis. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

### **Plan**

The Fire Department will continue to develop human resources administrative practices in compliance with all relevant municipal, provincial and federal legislation and aligned with City policies.

## References

- 7A.3a. The City of Calgary, City Manager's Office, Administration policy library,  
<http://mycity/OurOrg/Dept/CorporateAdmin/ManagerOffice/AdministrationPolicy/Pages/Administrationpolicylibrary.aspx>
- 7A.3b. *Alberta Employment Standards Code*, Chapter E-9, current as of November 1, 2010 <http://www.qp.alberta.ca/documents/acts/e09.pdf>
- 7A.3c. *Alberta Employment Standards Regulation*, Alberta Regulation 14/97, With amendments up to and including Alberta Regulation 84/2013  
[http://www.qp.alberta.ca/documents/Regs/1997\\_014.pdf](http://www.qp.alberta.ca/documents/Regs/1997_014.pdf)
- 7A.3d. *Alberta Labor Relations Code*, Revised Statutes of Alberta 2000 Chapter L-1, current as of June 12, 2013 <http://www.qp.alberta.ca/documents/acts/l01.pdf>
- 7A.3e. Calgary Fire Department, Policies and Procedures Manager software (suggest live demonstration)

## **Criterion 7B: Recruitment, Selection, Retention and Promotion**

*Systems are established to attract, select, retain, and promote qualified personnel in accordance with applicable local, state/provincial, and federal statutory requirements.*

### **Summary:**

The Fire Department's recruitment, selection, retention and promotional processes encourage hiring, appointment or promotion of qualified candidates for available positions. All recruiting and promotional processes comply with legislative and legal requirements, applicable collective agreements and align with relevant City of Calgary and Fire Department policies and practices. Recruitment initiatives support application by members of diverse communities to create a workforce reflective of the community the Fire Department services.

Qualifying processes used for new recruits and promotional candidates as well as the probationary process use job-related, objective evaluations of performance to help the Fire Department select the most appropriate candidates for any job. A variety of programs are in place to prepare employees for their positions, seek feedback on opportunities for organizational improvement and recognize staff who have made outstanding contributions through their years of service and accomplishments.

Low average annual turnover rates at the Fire Department indicate general staff satisfaction and provide a strong foundation for maintaining service delivery levels.

## **Performance Indicators:**

7B.1 A mechanism is in place to identify and announce potential entry level, lateral, and promotional positions.

### **Description**

To recruit new firefighters, Fire Department recruitment information is provided on The City's website and provides extensive information regarding firefighter positions, timelines, application requirements and the hiring process. The Fire Department's Recruitment section attends post-secondary and career fairs and presentations throughout the year, hosts recruitment information sessions and provides updated hiring information to fire schools and volunteer firefighter groups throughout the province.

Promotional and lateral opportunities for incumbent firefighters are announced by an internal FD Notice, which is distributed to all Fire Department members and posted on the intranet. All promotional positions are posted in accordance with the current International Association of Fire Fighters (IAFF) Local 255 Agreement, Article 30 and 31. Some promotions within the Fire Department do not require posting and are based on performance and seniority, such as captain positions and others in the Community Standards & Training division as outlined in Article 31 of the current IAFF Local 255 Agreement.

For exempt and other non-IAFF unionized positions, vacancies are posted in accordance with applicable collective agreements and recruitment procedures. All available Fire Department positions are advertised on The City's online career opportunities page and in hard copy on the job board located in the Municipal Building. Additionally, The City maintains overarching, broad employment recruitment campaigns that use media, such as print and online ads, social media sites, brochures, posters and radio, to promote The City as an employer and advertise job vacancies.

### **Appraisal**

The Fire Department has established mechanisms in place for the identification and announcement of potential entry level, promotional and lateral positions. Recruitment for

internal day staff positions has been a challenge and additional effort is required to ensure an adequate pool of candidates.

### **Plan**

As outlined in Objective 16.1 of its 2012-2014 Business Plan, the Fire Department will develop a strategy to increase awareness of opportunities within all Fire Department divisions.

### **References**

- 7B.1a. Calgary Fire Department, Firefighter recruitment,  
<http://www.calgary.ca/CSPS/Fire/Pages/Recruitment/Firefighter-recruitment.aspx>
- 7B.1b. City of Calgary, Career opportunities,  
<http://www.calgary.ca/CS/HR/Pages/Careers/Career-Opportunities.aspx>
- 7B.1c. CFDNET: FD Notices, <http://cfdnet/NewsEvents/Pages/Default.aspx>
- 7B.1d. I.A.F.F. Local 255 Agreement (2009-2010), Article 30 – Promotions, pp. 32-44
- 7B.1e. I.A.F.F. Local 255 Agreement (2009-2010), Article 31 – Community Standards  
Division – Transfers and Promotions, pp. 44-46
- 7B.1f. C.U.P.E. Local 38 Agreement 2011-2014, Article 110, pp.11-13
- 7B.1g. C.U.P.E. Local 37 Agreement 2006-2008, Article 4
- 7B.1h. City of Calgary Human Resources, Recruitment and selection,  
<http://mycity/MyHr/ForSupps/RandS/Pages/Default.aspx>
- 7B.1i. Calgary Fire Department 2012-2014 Business Plan, Objective 16.1, p. 31

7B.2 The agency and its members are part of the recruiting process.

### **Description**

The Fire Department's Recruitment section, which manages recruiting for entry-level firefighters, consists of a combination of unionized and exempt staff. The deputy chief of the Administration division oversees the Recruitment section, which is comprised of a human resources advisor, a recruitment coordinator, two recruitment officers and an administrative assistant. All members of the team participate in the recruiting process, including coordinating applicants, screening applications, meeting with candidates, conducting testing, reviewing results of each step in the selection process and making hiring recommendations. Both unionized and exempt members from other divisions are used in recruitment interview panels. Fire Department Wellness section staff conduct pre-hire physical ability testing and medical examinations. A selection committee consisting of deputy chiefs and assistant deputy chiefs make recommendations for all new hires that are given to the fire chief for final approval.

Supervisors and managers coordinate the hiring for exempt and non-IAFF unionized positions within their respective areas. Guidelines for non-IAFF union member participation are outlined in the applicable collective agreements or in human resources section of The City's website.

### **Appraisal**

The Fire Department has effectively included appropriate staff from different levels and areas of the organization in its recruiting process for firefighter, exempt and non-IAFF union positions.

### **Plan**

The Fire Department will monitor and adjust its recruiting processes and member participation as necessary.

### **References**

7B.2a. Calgary Fire Department firefighter selection process,  
<http://www.calgary.ca/CSPS/Fire/Pages/Recruitment/Firefighter-selection-process.aspx>

7B.2b. City of Calgary Human Resources, Recruitment and selection,  
<http://mycity/MyHr/ForSups/RandS/Pages/Default.aspx>

**CC 7B.3 Processes and screening/qualifying devices<sup>1</sup> used for recruitment and selection of initial, lateral, and promotional candidates are job related and comply with all local, state/provincial, and federal requirements including equal opportunity and discriminations statutes.**

### **Description**

The Fire Department uses a variety of job-related screening/qualifying devices for initial selection of firefighters, including a firefighter aptitude test, a behaviour-based interview, a Candidate Physical Ability Test (CPAT), a pre-employment polygraph, background checks and a comprehensive medical and fitness assessment.

Members seeking promotion to company officer positions must successfully complete the Company Officer Examination, which tests for job-related knowledge, skills and abilities. Chief officer promotions involve a job-related selection process that includes demonstrating competency in incident command through a written examination, behaviour-based interview and scenario assessment.

Testing processes for all other positions consist of a behaviour-based interview process, which may be combined with other job-related tests such as a computer skills assessment, presentation and technical questions.

The Fire Department's recruiting, selection and promotion processes operate under the guidelines set out in two of its policies, *Recruitment and selection* and *Human rights*, as well as The City's employment policy, *HR Administration Policy*, Chapter 31. As identified in Performance Indicator 7A.3, all human resource policies, which encompasses all recruitment and selection policies, are compliant with relevant provincial and federal legislation.

### **Appraisal**

The City has used behaviour-based interviews for over 25 years and the competencies assessed during the recruitment interview have been identified as those required by entry-level firefighters. The CPAT, which simulates actual fire ground job duties, was

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<sup>1</sup>Examples of screening/qualifying devices: Application forms, written exams, ability tests, physical exams, psychological exams, background checks, etc.

developed jointly by the International Association of Firefighters and the International Association of Fire Chiefs, and has provided an accurate indication of an individual's physical ability for the job. The pre-employment polygraph and background checks have helped to select individuals who are reliable, trustworthy and demonstrate good conduct.

### **Plan**

The Fire Department will continue to periodically evaluate all testing processes used in the initial selection and promotion of personnel to ensure they remain job related, objective and valid and maintain compliance with all applicable legislation and collective agreement provisions.

### **References**

- 7B.3a. City of Calgary firefighter selection process,  
<http://www.calgary.ca/CSPS/Fire/Pages/Recruitment/Firefighter-selection-process.aspx>
- 7B.3b. Calgary Fire Department policy: Recruitment & selection, February 10, 2011
- 7B.3c. Calgary Fire Department policy: Human rights, August 16, 2010
- 7B.3d. City of Calgary employment policy HR-031 (B), February 6, 2006

7B.4 The agency's workforce composition is reflective of the service area demographics or the agency has a recruitment plan to achieve the desired workforce composition.

### **Description**

The Fire Department's Recruitment Inclusion Action Plan identifies several initiatives that extend its recruitment outreach to people of different cultures, genders and backgrounds, specifically qualified women, visible minorities and Aboriginal people.

The Fire Department also has an Aboriginal Inclusion Initiative that leverages the Fire Department's experience and expertise to help Aboriginal communities build capacity and increase employment by providing community members with education, knowledge and job opportunities. Two external inclusion consultants support the initiative by establishing relationships with Aboriginal community members, government and private sector organizations.

### **Appraisal**

The Fire Department's current workforce composition has not been reflective of city demographics, however, it has defined strategies in place to achieve the desired composition. By the end of 2012, 51 per cent of initiatives in the Recruitment Inclusion Action Plan were achieved. By the end of 2013, substantial progress had been made on the Aboriginal Inclusion Initiative, including the development and implementation of a pilot program. During the last three firefighter application intake periods, applications from members of diverse communities increased from eight per cent in March 2011 to 11 per cent in December 2012.

### **Plan**

As outlined in Objective 16.4 of its 2012-2014 Business Plan, the Fire Department will enhance attraction and recruitment practices to access a broad range of skilled talent that exists in the market and build a workforce more reflective of city demographics. It will continue its efforts in building relationships with Aboriginal communities to achieve the objectives set out in its Aboriginal Inclusion Initiative.

### **References**

7B.4a. Calgary Fire Department Recruitment Inclusion Action Plan, December 2010

- 7B.4b. Calgary Fire Department Aboriginal Inclusion Initiative – Overview, 2013
- 7B.4c. Calgary Fire Department Aboriginal Inclusion Initiative – Community, 2013
- 7B.4d. Calgary Fire Department Aboriginal Inclusion Initiative – Industry, 2013
- 7B.4e. Calgary Fire Department, Inclusion initiative municipal business case 1, August 2013
- 7B.4f. Calgary Fire Department 2012-2014 Business Plan, Objective 16.4, p. 31

7B.5 A new member orientation program is in place.

### **Description**

New employee orientation at The City is a shared responsibility between the hiring supervisor, staff members, the new employee and The City's Human Resources business unit.

The orientation for new probationary firefighters occurs during recruit training. This orientation includes: information on payroll; benefit and pension; Fire Department policies and procedures; a site tour; an introduction to diversity, customer service and Fire Department values; and as outlined in Performance Indicator 7F.5, an overview of the Fire Department's occupational health, safety and environment program. New firefighters receive access to Fire Department online learning modules, which include City policies, as well as access to The City's online new employee orientations.

The Fire Department uses The City of Calgary Corporate Orientation process for exempt and non-IAFF unionized members. Each new employee receives a copy of The City's Orientation Handbook with his or her letter of offer, which includes information on what to expect from the orientation process. Orientation occurs over the first weeks of employment. Supervisors and managers guide new employees through policies, procedures and information and follow a new employee checklist to ensure the new staff member has the necessary equipment and resources. New employees also receive access to The City's online new employee orientations.

### **Appraisal**

The Fire Department and The City have established employee orientation processes that include the basics of job functions, key policies and procedures and general practices.

### **Plan**

As outlined in Objective 16.3 of its 2012-2014 Business Plan, the Fire Department will work to establish on/out boarding procedures for all Fire Department employees. This work will better prepare employees with information on how the various divisions and sections work and interrelate, ensure staff have access to information and resources

needed to perform jobs effectively and identify how the Fire Department fits within the broader City organization.

### **References**

7B.5a. The City of Calgary Human Resources, Orientation,  
<http://mycity/MYHR/Pages/Default.aspx>

7B.5b. The City of Calgary, Orientation handbook

7B.5c. New Calgary Fire Department member checklist, April 2010

7B.5d. Calgary Fire Department 2012-2014 Business Plan, Objective 16.3, p. 31

**CC 7B.6 A supervised probationary process is used to evaluate new and promoted members based on the candidates' demonstrated knowledge, skills and abilities.**

**Description**

Following recruit training, new firefighters enter a probationary period from the date of hire until either the end of their first year or when they have completed all of the requirements of a probationary firefighter. During this time, probationary firefighters are assigned to three fire halls and their evaluation is guided by Fire Department procedures. Station captains complete monthly performance evaluations on probationary firefighters based on station activities, drills, practical skill assessments and fire ground performance. If the captain determines required skill standards are not being met, a probationary firefighter receives weekly performance evaluations that set clear improvement goals. Probationary firefighters are further evaluated through written and practical examinations that occur at the six- and eleven-month mark to test for job-related knowledge, skills and abilities as outlined in the Probationary Firefighter Handbook.

At the end of the probationary period, the captains' evaluations and recommendations and exam results are reviewed to confirm suitability for employment. If a firefighter is deemed not suitable for continued employment, the district or battalion chief is notified and appropriate steps are taken through the chain of command to terminate employment. If the probationary firefighter is continually unable to meet the required standards and coaching efforts are unsuccessful in improving performance, the firefighter may be deemed unsuitable at an earlier point during their probationary period.

Members hired or promoted into non-IAFF union positions are subject to either a three- or six-month trial period, depending on the applicable collective agreement or policy, during which their performance is assessed against objectives, competencies and criteria determined based to the role and job requirements. Evaluation of staff during this time is guided by City and Fire Department procedures.

## **Appraisal**

The Fire Department has established an effective supervised probationary process used in the evaluation of new and promoted members. Probationary processes have provided greater reliability, reduced subjectivity and increased quality control through use of evaluation standards based on the knowledge, skills and abilities required for the position.

## **Plan**

The Fire Department will continue to monitor and evaluate its current probationary periods and evaluation methods for all positions, and will adjust as needed.

## **References**

- 7B.6a. Calgary Fire Department, Recruit and probationary firefighter evaluation guide, September 2012
- 7B.6b. Calgary Fire Department procedure: Conducting probationary performance reviews for firefighters, June 12, 2013
- 7B.6c. Calgary Fire Department procedure: Conducting probationary performance reviews for exempt & non-exempt CFD members, June 12, 2013
- 7B.6d. Calgary Fire Department form: Monthly performance evaluation probationary firefighter FD1139
- 7B.6e. City of Calgary, Probationary/permanency status reviews and recommendations Form X79 (R2011-07)
- 7B.6f. I.A.F.F. Local 255 Agreement (2009-2010), Article 30.05.02, p.36,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1)
- 7B.6g. C.U.P.E. Local 38 Agreement (2011-2014), Article 109, pp. 9-10,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1)
- 7B.6h. C.U.P.E. Local 37 Collective Agreement (2011-2014), Article 4, pp. 21-28,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-37.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-37.pdf&noredirect=1&sf=1)

2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-  
CUPE-Local37.pdf&noredirect=1&sf=1

7B.7 An employee/member recognition program is in place.

### **Description**

The City and Fire Department have several formal and informal employee recognition programs in place that celebrate length of service, promotions, accomplishments and outstanding acts. Formal City programs include the Recognition & Reward Program while formal Fire Department programs include the Annual Promotion and Retirement Banquet, the Kevin Brown Memorial Award and service pay awards. The Fire Department's Extra Mile Program also recognizes both citizens and members, both on and off duty, who receive medals for providing outstanding assistance at emergency scenes. In addition, there are several municipal, provincial and federal service medals.

Informal recognition from supervisors and managers include appreciation letters, phone calls and recognition for accomplishments at team meetings. All leaders within the Fire Department are expected to recognize their employees' performance when appropriate; however, the formal programs are designed to encourage employee recognition by both supervisors and peers.

### **Appraisal**

The Fire Department has developed an employee recognition committee and has participated in a variety of forms of employee recognition. The current employee programs have provided recognition and acknowledgement of employees who not only provide long-term service, but also for those who have gone above and beyond their normal job duties.

### **Plan**

The Fire Department will continue to use its formal and informal employee recognition programs, ensuring staff are acknowledged for their ongoing contributions.

### **References**

7B.7a. City of Calgary, Recognition & rewards program guidelines

7B.7b. Calgary Fire Department, Extra Mile Program,

[http://cfdnet/Library/prog\\_proj/Pages/ExtraMileProgram.aspx](http://cfdnet/Library/prog_proj/Pages/ExtraMileProgram.aspx)

7B.7c. Calgary Fire Department, Recognition Committee terms of reference, December 2013

7B.8 The working conditions and environment are such that the agency attracts diverse and qualified applicants and retains a tenured workforce.

### **Description**

Management and labour of the Fire Department work collaboratively to create working conditions and an environment that appeals to both applicants and the workforce.

Comprehensive pay and benefits packages, an in-depth health and wellness program and Fire Department and City policies all contribute to creating a healthy and respectful work environment that attracts and retains qualified personnel. Employees are provided opportunities to work in divisions across the Fire Department, participate in secondments to other business units within The City and contribute to working groups, task forces and special projects to expand their knowledge and experience.

### **Appraisal**

Since March 2012, the Fire Department has held four firefighter recruitment application intake periods and received more than 5,000 applications.

The Fire Department has retained qualified personnel as evidenced by its low annual average turnover rate of six per cent over the past six years. In 2012, 85 per cent of total staff departures were due to retirements, and in 2013, about 72 per cent of departing staff had an average of 30 years or more service with the Fire Department.

### **Plan**

As outlined in Goals 13, 14, 15 and 16 of its 2012-2014 Business Plan, the Fire Department will develop an effective approach to employee development, provide a safe work environment, support and advocate for the health and wellness of employees and attract and retain employees in all divisions of the Fire Department, respectively. This work will contribute to enhanced working conditions and a workplace environment that continues to attract and retain qualified staff.

### **References**

7B.8a. Calgary Fire Department, Applicant tracking system and employee departure database (see Recruitment Human Resources Advisor)

7B.8b. Calgary Fire Department 2012-2014 Business Plan, Goals 13, 14, 15 and 16, pp.  
30-31

7B.9 Exit interviews or periodic employee surveys, or other mechanisms are used to acquire feedback and improve agency policies and procedures.

### **Description**

The Fire Department uses The City's exit interview and employee surveying processes to acquire feedback from staff. Exit interviews are an employee-driven process whereby departing employees are encouraged to participate, though participation is not mandatory. Questionnaires are completed and reviewed by the Fire Department and The City's Human Resources business unit and shared with only those individuals the employee has noted.

Each year, The City conducts an employee survey to gather information on satisfaction levels and in 2013 approximately 30 per cent of Fire Department employees participated in the survey. The survey examines satisfaction in a number of areas, including workplace safety, direction, management and employee involvement. The Fire Executive Team reviews results specific to the Fire Department, prepares strategies to address any areas of concern and shares results with staff. The fire chief also holds regular meetings with crews throughout the year to share results of The City's employee survey, and solicit feedback and input on issues and identify staff concerns.

### **Appraisal**

The Fire Department has not received much participation in, or information from, The City's exit interview process. Results from The City's annual employee survey have been used to frame discussions with Fire Department staff, open dialogue with groups and acquire more in-depth feedback.

In 2013, senior executive of the Fire Department and IAFF Local 255 established a mutual interest problem-solving process to collaboratively resolve issues concerning organizational effectiveness and business relationships. Throughout 2013, the Fire Department formed many working groups to engage frontline staff in operational issues, including self-contained breathing apparatus procurement, fire retardant clothing, awards and recognition, FireHub (new Fire Department records management system) and training.

## **Plan**

The Fire Department will continue to participate in The City's annual employee survey and conduct follow-up meetings between the fire chief and staff.

As outlined in Objective 16.3 of its 2012-2014 Business Plan, the Fire Department will work to establish on/out boarding procedures for all Fire Department employees to gain better insight into feedback from staff who are leaving the organization. In addition, through the mutual interest problem-solving group, and as noted in Objective 16.5, the Fire Department will continue to increase opportunities to secure and incorporate employee input and feedback on workplace and service delivery issues to improve policies, procedures and employee satisfaction.

## **References**

- 7B.9a The City of Calgary Human Resources, Exit interview,  
<http://mycity/MyHr/LeavingTheCity/Pages/ExitInterview.aspx>
- 7B.9b. City of Calgary 2013 Employee Satisfaction Survey
- 7B.9c. Calgary Fire Department 2012-2014 Business Plan, Objective 16.3 and 16.5, p. 31
- 7B.9d. CFD-IAFF Mutual Interest Problem Solving (MIPS) Terms of Reference,  
December 11, 2013

7B.10 The agency conducts workforce assessments and has a plan to address projected personnel resource needs including retention and attrition of tenured and experienced employee/members.

### **Description**

The Fire Department conducts an analysis of IAFF Local 255 workplace demographics to assist with the human resource planning. The methodology used is based on historical voluntary and involuntary departure rates in conjunction with first-year turnover rates. The methodology also takes into consideration the full-time growth positions approved by City Council, funded fire stations for the current three-year business planning cycle and unfunded fire stations for years beyond the current business planning cycle. The Fire Executive Team is updated on actual departures versus forecasted to affirm the validity of proposed annual forecasts.

Annual departure forecasts occur in the first quarter of each year and include forecasts for the next four years.

### **Appraisal**

The Fire Department has regularly conducted workforce assessments and developed plans to address projected personnel resource needs resulting from attrition and new growth positions. This analysis has proved useful in forecasting recruitment needs, budgets, capital plans and wellness medical evaluations.

The Fire Department's workforce assessment methodology has been proven accurate and reliable. At the end of 2013, 100 per cent of the retirements forecasted for the age cohort 50 to 60 had occurred; 69 personnel in this age group were forecasted to retire, and 70 actually retired.

### **Plan**

The Fire Department will continue to update and maintain workplace demographic data to support strategic decision-making and planning.

### **References**

7B.10a. Calgary Fire Department forecasting departures, Retirements and recruitment,  
March 2013

7B.10b. Calgary Fire Department workplace demographic forecast, retirements and  
recruitment update, October 2013

## **Criterion 7C: Personnel Policies and Procedures**

*Personnel policies and procedures are in place, documented, and guiding both administrative and personnel behavior.*

### **Summary:**

As part of the orientation provided to all new employees, including firefighter recruits, a review of The City of Calgary's and Fire Department's personnel policies and procedures is provided. All Fire Department personnel are provided electronic access to these policies and procedures through the Policy and Procedure Manager software, which also automatically notifies staff of additions and revisions to any policies and procedures.

The City's Code of Conduct guides employee expectations and behaviour through eight key policies, including the Respectful Workplace Policy. This policy consists of a series of guidelines and responsibilities that prohibit inappropriate behavior in the workplace, which includes but is not limited to sexual, racial, disability and related harassment. The Code of Conduct also contains a Conflict of Interest Policy, which provides rules, guiding principles, information and examples regarding various types of conflicts of interest.

The Fire Department subscribes to The City's philosophy regarding use of counseling and progressive discipline for the timely correction of real or perceived problems in job performance or employee behavior. Disciplinary action is outlined in each collective agreement and initiated when there is just cause. Grievance procedures for unionized and exempt employees are in place for staff to resolve complaints and disciplinary disagreements.

## **Performance Indicators:**

**CC 7C.1 Personnel policies, procedures and rules are current, written, and communicated to all personnel.**

### **Description**

During their first few weeks of employment, new employees, including all firefighter recruits, are provided an orientation that includes The City's and Fire Department's policies, procedures and rules, as outlined in Performance Indicator 7B.5. Every Fire Department staff member is provided access to policies, procedures and rules through its Policy and Procedure Manager software.

Automatic notifications are built into the Policy and Procedure Manager software so all staff receive notice of updates and changes. In addition, an Administration Order may be issued to notify staff when there are procedural changes, modifications to standard operating procedures, reports or forms, or when there is contravention of policies and procedures. The Fire Department's policy, *Accountability for policies and procedures*, makes all members accountable for reading and acknowledging all Fire Department and applicable City policies and procedures.

### **Appraisal**

The Fire Department has standardized current and written personnel policies, procedures and rules. The Policy and Procedure Manager software has established review schedules for all policies and procedures to ensure they are regularly assessed and updated as required. Staff have been advised of additions and revisions to policies, procedures and rules and, through automatic notifications within the software, are required to acknowledge and mark as read all policies and procedures

### **Plan**

As outlined in Objective 8.1 of its 2012-2014 Business Plan, the Fire Department will maintain existing policies and procedures and manage the overall process for all outstanding policies and procedures.

## **References**

- 7C.1a. Calgary Fire Department Policy & Procedure Manager software (suggest live demonstration)
- 7C.1b. CFD Administration Order #11-2013: Notification of outstanding “Reader tasks” of approved CFD policy & procedures, September 4, 2013
- 7C.1c. Calgary Fire Department 2012-2014 Business Plan, Objective 8.1, p. 24

**CC 7C.2 A specific policy defines and prohibits sexual, racial, disability or other forms of harassment, bias, and unlawful discrimination of employees/members and describes the related reporting procedures. The policy and organizational expectations specific to employee behavior are communicated formally to all members/employees and are enforced.**

### **Description**

The City's Code of Conduct combines eight key policies governing employee conduct, including the Respectful Workplace Policy. This policy consists of a series of guidelines and responsibilities that prohibit inappropriate behaviour in the workplace, which includes but is not limited to sexual, racial, disability and related harassment. It provides an overview of supervisor and employee responsibilities and the consequences of policy non-compliance up to and including termination of employment. A companion document, *A guide to the respectful workplace policy*, provides an overview of the policy and options for dealing with workplace concerns. In support of The City's policies, the Fire Department has several policies on general conduct, including *Behaviour expectations*, *Code of conduct* and *Human rights*.

Policies in accordance with Alberta's Human Rights Law that define and prohibit discrimination or related harassment are also outlined in the collective agreements applicable to unionized staff within the Fire Department: IAFF Local 255, Canadian Union of Public Employees (CUPE) Local 38 and CUPE Local 37. The *Alberta Human Rights Citizenship and Multiculturalism Act* prohibits discrimination in the area of employment on the protected grounds of race, color, ancestry, place of origin, religious beliefs, gender, age, physical disability, marital status, family status, source of income and sexual orientation. The City's policies adhere to all tenants of the Act.

### **Appraisal**

The Fire Department established clear policies defining and prohibiting sexual, racial, disability, or related harassment, bias and unlawful discrimination of employees. Fire Department and City policies have met or exceeded provincial and federal legislation requirements, been communicated and made available through the Fire Department's

Policy and Procedure Manager software. As outlined in Performance Indicator 7C.1, all members are accountable for reading and acknowledging all Fire Department and applicable City policies and procedures.

### **Plan**

The Fire Department will continue to evaluate and enforce all policies related to discrimination or harassment of any kind.

### **References**

- 7C.2a. City of Calgary, Administration Policy Code of Conduct HR-LR-005 (A), September 21, 2004
- 7C.2b. City of Calgary, Respectful Workplace Administrative Policy HR-LR-001 (B), November 29, 2010
- 7C.2c. City of Calgary, A guide to the respectful workplace policy
- 7C.2d. Calgary Fire Department policy: Behaviour expectations, February 10, 2011
- 7C.2e. Calgary Fire Department policy: Human rights, August 16, 2010
- 7C.2f. Calgary Fire Department policy: Respectful workplace, August 25, 2010
- 7C.2g. I.A.F.F. Local 255 Agreement 2009-2010, Article 16,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1)
- 7C.2h. C.U.P.E. Local 38 Agreement 2011–2014, Article 106,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1)
- 7C.2i. C.U.P.E. Local 37 Collective Agreement 2011–2014, Article 2.10,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local37.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local37.pdf&noredirect=1&sf=1)

### 7C.3 A disciplinary system is in place and enforced.

#### **Description**

The City adheres to a philosophy of using counseling and discipline for the timely correction of real or perceived problems in job performance or employee behaviour. The intent of the philosophy is to seek corrected behaviour and deter any future behaviour of a similar nature. Initial corrective steps may include counseling, which is considered a non-disciplinary step in the process where union representation is not required.

Disciplinary action is outlined in each collective agreement and initiated when there is just cause. Typically, there are four steps to progressive discipline, including written warning, short suspension, long suspension and dismissal. Depending on the nature and degree of severity of the offence, steps in this process may be bypassed or repeated where circumstances warrant. The City and Fire Department management reserve the right to choose the step and severity of the discipline dependent on the nature of employee misconduct. While the final decision lies with Fire Department management, advice is sought from The City's Labour Relations business unit.

To evaluate trends in personnel behaviour that may identify where additional policy or education is required, the Fire Department's Employee Relations section tracks disciplinary issues and actions.

#### **Appraisal**

The Fire Department has an established progressive disciplinary system. All of the collective agreements representing the Fire Department's personnel have clauses pertaining to discipline and dismissal and the Fire Department has followed all required terms and conditions.

#### **Plan**

The Fire Department will continue to exercise its fundamental right to manage and direct the workforce, subject to the terms and conditions of the various collective agreements, and will impose the appropriate level of counseling and progressive discipline as required

## References

- 7C.3a. The City of Calgary Labour Relations Administrative Policy HR-LR-002 (A), 2004 September 21, Section 4: Counselling, discipline and suspension pending investigations, pp. 7-12
- 7C.3b. I.A.F.F. Local 255 Agreement (2009-2010), Article 14: Discipline and Dismissals, pp.12-13, Article 24: Grievance procedure, pp. 21-22,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-IAFF-Local255.pdf&noredirect=1&sf=1)
- 7C.3c. C.U.P.E. Local 38 Agreement (2011-2014), Section 103 Grievances, pp. 4-5, Section 116 Warnings and suspensions, pp. 15-16,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local-38.pdf&noredirect=1&sf=1)
- 7C.3d. C.U.P.E. Local 37 Collective Agreement (2011-2014), Section 2.00 Union security and employee rights, pp. 13-14, Section 3.00 Grievance procedure, pp. 16-19,  
[http://www.calgary.ca/\\_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local37.pdf&noredirect=1&sf=1](http://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fCS%2fHR%2fDocuments%2fUnion%2fUnionAgreement-CUPE-Local37.pdf&noredirect=1&sf=1)
- 7C.3e. Calgary Fire Department policy: CFD discipline, July 21, 2010
- 7C.3f. Calgary Fire Department disciplinary action tracking spreadsheet (see Deputy Chief of Employee Relations)

7C.4 An internal ethics and conflict of interest policy is published and communicated to employees/members.

### **Description**

The City's Code of Conduct is a published, written guide outlining the ethical behavior expected of every employee. It references eight key policies The City expects employees to abide by in their daily activities and personal conduct. The Conflict of Interest Policy is one of these eight policies and provides rules, guiding principles, information and examples regarding various types of conflicts of interest. It describes what The City expects regarding avoidance of conflicts of interest in relation to outside interests, gifts, favors and services, political activity, confidential information and furthering of private interests. The Code of Conduct and general conduct is found on The City's website and in the Fire Department's Policy and Procedure Manager software, which automatically notifies all members when changes or updates are made to a policy or procedure.

### **Appraisal**

The Fire Department has published and adopted internal ethics and conflict of interest policies established by it and The City. The Policy and Procedure Manager software has established review schedules for all policies and procedures to ensure they are regularly assessed and updated as required.

### **Plan**

The Fire Department will continue to comply with existing policies on internal ethics and conflict of interest.

### **References**

- 7C.4a. City of Calgary Administration Policy HR-LR-005 (A) Code of Conduct, September 21, 2004
- 7C.4b. City of Calgary Administration Policy HR-LR-004 (B) Conflict of Interest, September 21, 2004
- 7C.4.c. Calgary Fire Department policy, Conflict of policies or direction, February 14, 2014
- 7C.4d. Calgary Fire Department policy: Behaviour expectations, February 10, 2011

7C.5 A grievance/complaint procedure is published and communicated to employees/members.

### **Description**

The City has published and adopted grievance procedures for both unionized and exempt employees as referenced in Section 5 of its Labour Relations Policy.

For unionized employees, grievance procedures are outlined in the three collective agreements representing Fire Department personnel: IAFF Local 255, CUPE Local 38 and CUPE Local 37. With the exception of the IAFF Local 255 collective agreement, the grievance procedures are worded slightly differently but are similar in that they recommend the parties first attempt to resolve differences on their own. If that is not possible, then a four- or five-step resolution process is initiated with arbitration as the final step. The IAFF Local 255 contract provides for immediate arbitration if the parties are unable to come to a resolution on their own. All collective agreements outline timelines for notification of the grievance, the parties to be involved and the procedural processes to be followed.

For exempt employees, the grievance procedure is known as an appeal procedure and is outlined in the Exempt Staff Policy Statement, Section 11.03.

### **Appraisal**

The Fire Department has published and adopted grievance and appeal procedures that clearly outline initiation of a grievance, complaint or appeal. Employees have full access to the procedures and unionized employees have been directed to consult with their union representatives for assistance and advice.

### **Plan**

The Fire Department will continue to follow all existing grievance and appeal procedures and, whenever possible, encourage resolution outside of the formal grievance processes.

### **References**

7C.5a. The City of Calgary Administration Policy HR-LR-002, Labour Relations Policy, Section 5: Grievances and Appeals, 2004 September 21

- 7C.5b. C.U.P.E. Local 38 Agreement (2011-2014), Articles 103 and 104
- 7C.5c. C.U.P.E. Local 37 Collective Agreement (2011-2014), Section 3
- 7C.5d. I.A.F.F. Local 255 Agreement (2009-2010), Article 24
- 7C.5e. City of Calgary, Exempt staff policy statement HR-LR-006, Section 11.03 Appeals of discipline and dismissal, 2007 December 11
- 7C.5f. City of Calgary, Grievance handling guidelines, November 14, 2005

**Criterion 7D: Use of Human Resources**

*Human resources development and utilization is consistent with the agency's established mission, goals, and objectives.*

**Summary:**

Position classifications are detailed in each of the three collective agreements representing Fire Department staff: IAFF Local 255, CUPE Local 37 and CUPE Local 38. Position evaluations for exempt staff are outlined within the Exempt Staff Policy Statement. If it is determined that existing jobs require modification, including those to be recruited for, there are job evaluation processes in place that provide an opportunity for personnel to have input into job description revisions. Performance appraisal processes are in place for unionized and exempt staff, which generally involves a review of work performance as well as career development planning.

Employees are invited to provide input and suggestions on a range of issues, through meetings with supervisors and senior management, surveys and participation in advisory and working groups. Goals and objectives for staff development play a significant role in the Fire Department's 2012-2014 Business Plan and provide the basis for a number of improvements targeted at engaging and developing staff and optimizing work performance.

## **Performance Indicators:**

**CC 7D.1 A position classification system and a process by which jobs are audited and modified are in place.**

### **Description**

The City's Human Resources business unit ensures that the classifications of all positions within The City are fair and equitable. Fire Department management is responsible for ensuring the appropriateness and accuracy of job classifications within its areas.

Position classifications are detailed in each of the three collective agreements representing Fire Department staff: IAFF Local 255, CUPE Local 37 and CUPE Local 38. Position reviews and re-evaluations for CUPE Local 37 and Local 38 staff are covered under job evaluation processes as outlined in their collective agreements. For IAFF Local 255 staff, position classifications must be agreed to by the union and are usually negotiated through the bargaining process. Position evaluation for exempt staff is described in Section 7 of the Exempt Staff Policy Statement.

When changes are made to the organization, members of the management team determine if existing positions continue to meet the needs of the Fire Department. If it is determined that existing jobs require modification, including those to be recruited for, there are two processes available to the Fire Department depending on whether employees are exempt or unionized. For exempt employees, the job evaluation process, which involves The City's Human Resources business unit and involved Fire Department managers, assesses job functions, compensation for new positions, significant modifications to existing positions, new work for a position or position implications resulting from a structural reorganization. For unionized employees, the job evaluation process is conducted through the collective bargaining process or through interim bargaining using letters of understanding.

### **Appraisal**

The Fire Department has established an appropriate position classification system, and has an adequate process by which unionized and exempt positions are audited and modified.

## **Plan**

The Fire Department will continue to use the current position classification system and job evaluation processes.

## **References**

- 7D.1a. City of Calgary Administrative Policy HR-TR-004, Compensation Policy - Section 5, Position review and evaluation - Section 6, Position Verification Policy, 2007 December 11
- 7D.1b. City of Calgary Administration Policy HR-LR-006 Exempt Staff Policy Statement Section 7 – Position evaluation, 2007 December 11
- 7D.1c. City of Calgary Job Evaluation – Unionized employees,  
<http://mycity/MyHr/PayBenefits/Union%20EE/JobEvaluation/Pages/Default.aspx>
- 7D.1d. City of Calgary Job Evaluation - Exempt,  
<http://mycity/MyHr/PayBenefits/Exempt/Pages/jobevaluationexempt.aspx>

7D.2 Current written job descriptions exist for all positions and incumbent personnel have input into revisions.

### **Description**

Within the Fire Department, current written job descriptions for all employee groups are stored in hard copy format in the accreditation library. Non-IAFF union and exempt position file are located in The City's Records Centre on the 11<sup>th</sup> floor of the Municipal Building. For positions that have been reviewed through the job evaluation process, the current job descriptions are stored electronically and accessible by human resources staff within the Fire Department. Managers may also keep a copy of the job descriptions for employees on file in their areas.

Personnel have input into revisions to the job description through the job evaluation processes outlined in Performance Indicator 7D.1. As noted, job descriptions are updated when significant changes occur and the supervisor or employee initiates a review of the position through the job evaluation process, or when a job posting is being developed for recruitment into that position.

### **Appraisal**

The Fire Department has an established practice of keeping electronic and/or hard copy copies of all job descriptions. Personnel have input into job description revisions through the job evaluation processes as outlined in Performance Indicator 7D.1. Since significant changes to IAFF Local 255 positions have not often occurred, some job descriptions have not been updated for several years.

### **Plan**

The Fire Department will continue to review all IAFF Local 255 job descriptions to ensure they reflect current responsibilities and qualifications as well as the language of position titles set out within the collective agreement.

### **References**

7D.2a. Calgary Fire Department job description binder

7D.3 A personnel appraisal system is in place.

### **Description**

Performance evaluations for exempt staff, which includes the Fire Executive Team, are linked to pay-for-performance increases as outlined in The City's Exempt Performance Development & Career Guide. Goals and objectives from the Fire Department's 2012-2014 Business Plan form the basis of the fire chief's and each deputy chief's annual performance evaluations. For members of the Fire Executive Team, the fire chief completes their annual appraisals, and the general manager of Community Services & Protective Services, the department under which the Fire Department falls in The City's administrative structure, completes the fire chief's annual appraisal.

Beyond the probationary reviews for firefighters as described in Performance Indicator 7B.6, performance evaluations are conducted annually for all firefighters. The Department also uses a performance dialogue process for its non-IAFF positions as a means for providing employee appraisals.

### **Appraisal**

Exempt positions with links to pay-for-performance increases have been effective in allowing managers to establish clear links between Fire Department goals and objectives and how employee performance supports them. Annual firefighter performance evaluations have been referenced during the company officer promotional process. Procedures for personnel appraisals have been developed and made available through the Fire Department's Policy and Procedure Manager software.

### **Plan**

The Fire Department will continue to use its existing appraisal systems.

### **References**

7D.3a. Calgary Fire Department procedure: Conducting performance & career development reviews for exempt members, June 12, 2013

7D.3b. Calgary Fire Department procedure: Conducting probationary performance reviews for exempt & non-exempt CFD members, June 12, 2013

7D.3c. Performance evaluation company officer FD1138 (R2013-04)

- 7D.3d. Calgary Fire Department performance dialogue process,  
<http://cfdnet/Library/manualsrefmaterials/org/Pages/PerformanceDialogue.aspx>
- 7D.3e. Calgary Fire Department procedure: Conducting probationary performance reviews for firefighters, June 12, 2013
- 7D.3f. Calgary Fire Department procedure: Conducting recruit performance reviews, June 12, 2013

7D.4 The agency maintains a current list of the special knowledge, skills, and abilities of each employee/member.

### **Description**

As outlined in Performance Indicator 8B.5, training records for all staff, whether training is delivered at the Fire Training Academy, online or in-station, are tracked in the Fire Department's Learning Management System (LMS). LMS tracks completed training courses and existing certifications.

The Fire Department's Scheduling and Workforce Management section also keeps a record of the relevant technical rescue, hazardous materials and specialty skills of personnel on each platoon to ensure adequate coverage of trained personnel on each shift.

The City's Human Resources business unit tracks employee participation in City specific programs, including its Learning for Municipal Excellence program. The employee's supervisor maintains records of other courses and personal development.

### **Appraisal**

The Fire Department has established various methods for maintaining current lists of the special knowledge, skills, and abilities of each employee. Employee personal training and development records have not been consolidated to a single, centralized system for tracking but are available through The City's Human Resources business unit.

### **Plan**

As outlined in Objective 8.5 of its 2012-2014 business plan, the Fire Department will review the scheduling effectiveness and evaluate additional functionality of the Learning Management System to ensure that all Fire Department-delivered training records are stored in the Learning Management System.

In addition, through work set out in Objective 13.3, the Fire Department will evaluate the value/need of a skills inventory strategy to better track all specialized skills available within its employee base.

## **References**

- 7D.4a. Learning Management System (see Manager of Learning and Business Development for login)
- 7D.4b. Calgary Fire Department, Telestaff scheduling software (see Manager of Scheduling & Workforce Planning for login)
- 7D.4c. Calgary Fire Department 2012-2014 Business Plan, Objective 8.5 and 13.3, p. 24, 30

7D.5 Methods for employee/member input or a suggestion program are in place.

### **Description**

The City's annual employee survey, as outlined in Performance Indicator 7B.9, is intended to be the primary means by which employee input or suggestions are acquired, although the Fire Department also pursues other opportunities for employee input or suggestions:

- Monthly management team meetings, section meetings, chief officer meetings and bi-monthly battalion chief meetings provide a forum where supervisors can bring forward suggestions for discussion.
- Deputy chiefs and managers host regular staff meetings for their respective divisions and sections.
- The Training section distributes a survey to recruits to solicit their feedback on the level and importance of practical skill experiences gained during recruit training to guide future changes to course offerings.
- The fire chief meets with each recruit class and leadership training class.
- The fire chief holds regular rotating meetings with crews from each fire hall.
- Deputy chiefs and assistant deputy chiefs visit stations to encourage input and feedback from suppression members.
- Staff are encouraged to participate in committees and working groups to provide input on a variety of issues, which currently include occupational health and safety, self-contained breathing apparatus replacement, turnout time processes, mobile computer terminals in apparatus upgrades, and fire retardant uniforms.
- Fire Department management maintains an open door policy and employees are encouraged to bring forward issues or suggestions. Employees are able to meet personally with the fire chief to provide input or suggestions.

### **Appraisal**

The Fire Department has established a number of methods to solicit employee input and suggestions.

**Plan**

As noted in Objective 16.5 of its 2012-2014 Business Plan, the Fire Department will increase opportunities to secure and incorporate employee input and feedback on workplace and service delivery issues.

**References**

7D.5a. City of Calgary, 2013 employee satisfaction survey

7D.5b. Calgary Fire Department 2012-2014 Business Plan, Objective 16.5, p. 31

7D.6 Career development programs are made available to all employees/members.

### **Description**

As outlined in Performance Indicator 8A.5, The City and Fire Department provide staff with professional and personal development opportunities to increase their knowledge, skills and abilities throughout all aspects of their careers.

All staff have access to learning opportunities relative to their division or section, such as certificate programs, workshop participation conferences and forums. Deputy Chiefs, managers, coordinators and supervisors are responsible for setting out and managing the development plans for staff in their sections. Deputy chiefs work with the fire chief to create development plans as part of their annual performance requirements.

For staff in supervisory positions, The City provides Learning for Municipal Excellence and Supervisory Leadership Development programs. These programs cover a broad base of management topics such as communication, culture, budget, finance, human resources, labour relations and leadership. The Fire Department is also partnered with the Canadian Management Centre to deliver a four-day supervisory leadership development program to personnel in the rank of senior firefighter who are eligible to write the company officer exam and higher that addresses coaching, conflict resolution and communications based on personalities and generational norms.

### **Appraisal**

The City and Fire Department have established a variety of career development program opportunities for all staff. Since the inception of the supervisory leadership development program in 2012, 417 lieutenants, captains, district chiefs, battalion chiefs and non-IAFF managers and supervisors have completed the program.

### **Plan**

As outlined in Goal 13 of its 2012-2014 Business Plan, the Fire Department will develop an effective approach to employee development, including encouraging management participation in continuous learning programs and extending opportunities for non-uniformed and uniformed staff to participate in special projects and assignments.

## **References**

- 7D.6a. Calgary Fire Department procedure: Conducting performance & career development reviews for exempt members, June 12, 2013
- 7D.6b. City of Calgary, Learning & training opportunities,  
<http://mycity/MyHr/Learning/LearningOpp/Pages/Default.aspx>
- 7D.6c. Calgary Fire Department 2012-2014 Business Plan, Goal 13, p. 30

## **Criterion 7E: Personnel Compensation**

*A system and practices for providing employee/member compensation are in place.*

### **Summary:**

The City of Calgary has collective bargaining agreements in place with all unions representing staff within the Fire Department and an Administrative Policy to address exempt staff. Each collective agreement and policy statement outlines the rates of pay and level of compensation for each position and outlines the system used in determining compensation. This information is published in print and online, and is widely distributed so that staff are kept well informed and updated on any changes.

In addition to base salary, The City offers comprehensive health and pension benefits. It employs a total compensation strategy, which covers the development and management of compensation strategies, policies and practices. These include:

- General compensation principles and philosophy;
- Compensation plans, classification, processes and systems;
- Job analysis, job evaluation methods, application and processes;
- Pension and benefit consulting and program management;
- Pension governance support;
- Recognition and rewards program management;
- Salary surveys and market data analysis; and
- Corporate policy development on issues that address The City's need to attract, engage and retain employees.

## **Performance Indicators:**

**CC 7E.1 Rates of pay and compensation are published and available to all employees/members.**

### **Description**

The City's Administration Policy HR-TR-004 provides guidelines for exempt manager and employee compensation as determined through the job evaluation process outlined in Performance Indicator 7D.1 and other considerations.

Information regarding rates of pay and compensation levels is available to all City employees through myCity, the human resources section on The City's intranet. Employees can obtain total compensation package information including rates of pay, pension and benefits, vacation, health and wellness, flexible work options and City recognition and rewards.

In addition, employees can contact The City's human resources service centre, their supervisor or their human resource advisor for details on pay rates and compensation. Unionized employees can also consult their collective agreement or contact their local union representative if further clarification is required.

All City personnel are provided with annual personalized total reward statements. These statements provide information to the employee about the total monetary value of his or her pay and benefits.

### **Appraisal**

The City has published rates of pay and compensation that have been made accessible to all Fire Department staff.

### **Plan**

The City will continue with its present system of publishing pay rates and compensation levels, and the Fire Department will direct staff to these resources for additional information. Any future changes to rates of pay resulting from annual pay increases or collective bargaining will be updated and communicated to employees accordingly.

## **References**

- 7E.1a. The City of Calgary Administrative Policy HR-TR-004: Compensation, 2007  
December 11
- 7E.1b. Exempt/CMT compensation salary structures & total rewards packages,  
<http://mycity/MyHr/PayBenefits/Exempt/Pages/ExemptCMTCompensation.aspx>
- 7E.1c. Unionized Employees – Pay & benefits, Total reward packages  
<http://mycity/MyHr/PayBenefits/Union%20EE/Pages/Default.aspx>

7E.2 Member benefits are defined, published and communicated to all employees/members.

### **Description**

The City has three benefits programs: the Municipal Employees Benefit Association of Calgary (MEBAC), IAFF benefits and the Retiree program. IAFF members participate in The City's IAFF benefits program, while all other union and non-union staff participate in MEBAC. Program information is provided to new employees as part of their new hire package and distributed upon program enrolment.

IAFF members participate in the Local Authorities Pension Plan (LAPP) and Calgary Firefighters Supplementary Pension Plan (FSP). Other union and non-unionized staff who are eligible to participate in the LAPP, and eligible exempt senior levels of administration, also have the option of participating in the Supplementary Pension Plan (SPP) and/or Overcap Pension Plan (OCPP).

Updated and renewed options for employee-funded enhanced benefits exist, and updated benefits and pension information is disseminated to existing employees through benefits newsletters. Detailed information on benefits and pension plans can be found on The City's internal and external websites, within existing collective agreements or on the related pension websites. Employees can also contact the human resources service centre regarding benefits and pension information.

### **Appraisal**

The Fire Department has an established benefits program that has been defined, published and distributed by The City.

### **Plan**

The Fire Department will continue its practice of providing employees with benefits information defined, published and distributed by The City.

### **References**

7E.2a. The City of Calgary Human Resources, Pay & benefits  
<http://mycity/MyHr/PayBenefits/Pages/Default.aspx>

7E.2b. MEBAC employee benefits booklet, November 18, 2013

7E.2c. Calgary Firefighters (IAFF 255) benefits

<http://www.calgary.ca/CS/HR/Pages/Benefits/IAFF-Benefits.aspx>

## **Criterion 7F: Occupational Health and Safety and Risk Management**

*Occupational health and safety and risk management programs are established and designed to protect the organization and personnel from unnecessary injuries or losses from accidents or liability.*

### **Summary:**

The Fire Department's Health, Safety & Environment section oversees the reporting of all injuries, exposures and hazardous conditions and administers and develops health and safety programs to mitigate workplace risks to staff. Health and safety is guided by a well-established set of policies and procedures pertaining to the reporting, evaluation and communication of workplace health and safety hazards work practices. Efforts extend directly to the fireground where Incident Safety Officers are provided the responsibility and authority to stop, alter or suspend any unsafe activities involving imminent health and safety hazards to suppression personnel. New staff and recruits are trained in health and safety considerations, and health and safety training takes place throughout their careers as responsibilities, equipment and practices change.

Risk and workplace hazards are identified and mitigated through an extensive series of programs ranging from ongoing, regular workplace inspections to position-based hazard assessments that give both employees and supervisors responsibility for identifying job-related hazards. Injuries, accidents, illnesses, hazardous conditions and near misses are reported, recorded and tracked to identify trends that require further staff training, additional education or changes to policies and procedures.

## **Performance Indicators:**

7F.1 A specific person or persons are assigned responsibility for implementing the occupational health and safety and risk management programs.

### **Description**

The Fire Department's risk management program is a broad-based program that identifies, manages and mitigates all possible risk across the organization. The Fire Department's executive officer oversees the overall risk management program, which encapsulates: 1) community fire risk assessments developed by the Strategic Services section, 2) community non-fire risk assessments developed by the Emergency Management section, 3) The City's integrated risk management program directed by City Council and managed by the Fire Department's legal and risk leader, and 4) The City's Risk and Liability Insurance programs overseen by The City's Law Department.

Responsibility for occupational health and safety are assigned to the Fire Department's Health, Safety & Environment section, which manages all programs related to occupational health and safety as well as environmental protection. The deputy and assistant deputy chief of the Administration division oversee the section, which includes a manager of compliance and four staff. There is also a manager of the collision investigation program who works closely with the manager of compliance on workplace injuries and motor vehicle collision incidents. In 2011, the Fire Department initiated the formation of the Alberta Fire Department Health and Safety Working Committee. The committee is comprised of fire department health and safety professionals and is a forum for identifying and sharing best practices to address workplace health and safety hazards.

### **Appraisal**

The Fire Department has assigned specific persons responsible for implementing its occupational health and safety and risk management programs. Communication has been shared effectively with the executive officer to ensure occupational health and safety risks are considered where appropriate in the broader Fire Department risk management program and consistent principles have been applied to the occupational health and safety programs.

## **Plan**

The Fire Department will continue to assign specific staff with responsibility for its occupational health and safety and risk management programs to ensure proper identification, coordination and implementation of mitigation strategies. Where applicable, the Fire Department will develop cross-functional risk management strategies to minimize overall risks.

As outlined its Objective 14.1 of its 2012-2014 Business Plan, the Fire Department will evaluate health and safety practices in Canadian emergency response departments through its continued participation in the Alberta Fire Department Health and Safety Working Committee.

## **References**

- 7F.1a. City of Calgary Integrated Risk Management Council Policy CC011, July 6, 2004  
<http://www.calgary.ca/CA/city-clerks/Documents/Council-policy-library/cc011.pdf?noredirect=1>
- 7F.1b. Alberta Fire Department Health & Safety Committee meeting minutes, November 18, 2013
- 7F.1c. Calgary Fire Department 2012-2014 Business Plan, Objective 14.1, p. 31

7F.2 Procedures are established for reporting, evaluating, addressing, and communicating workplace hazards as well as unsafe/unhealthy conditions and work practices.

### **Description**

The City's Environmental & Safety Management (ESM) program is responsible for setting health, safety and environmental policies, directives and procedures for The City as a whole, and all business units are expected to incorporate these policies, directives and procedures into their health, safety and environmental programming.

The Fire Department's policies and procedures outline the reporting, evaluation and communication of workplace hazards and unsafe and unhealthy conditions and work practices. There are two procedures in place for reporting and investigating workplace injuries, illnesses hazardous conditions and near misses, as well as a series of City and Fire Department forms to document and report health, safety and environmental hazards, accidents and incidents. These policies, procedures and forms are available through the Fire Department's Policy and Procedure Manager software and accessible by all staff. To assist staff responsible for completing accident investigations, a mandatory online learning module must be completed by all chief officers, company officers, training officers, coordinators, day staff officers, team leaders, managers and supervisors.

Informal hazard assessments take place at all emergency incident scenes. The Incident Safety Officer (ISO) program provides a dedicated officer at the scene of a working fire, at high-risk emergencies, and at significant out of city incidents that the Fire Department attends. The ISO reports to the Incident Commander, anticipates unsafe conditions and recommends measures for ensuring the safety of Fire Department members. The ISO has the responsibility and authority to stop, alter or suspend any unsafe activities involving imminent health and safety hazards and may request Health and Safety Officers to attend the emergency event to assist with various on-scene duties.

### **Appraisal**

The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant.

Policies and procedures have been updated whenever there is a change in process activities, equipment or the work environment or as a result of recommendations made from workplace inspection activities and incident investigation findings.

Workplace inspections, as identified in Fire Department policy, have been carried out regularly and all positions have undergone a health and safety review every three years. Staff have been involved in carrying out field level hazard assessments whenever activities or processes change so new hazards are identified and controlled.

The Fire Department has undergone an external Certificate of Recognition (COR) audit and an external ISO environmental audit every three years, and every other year has had a City internal maintenance COR and ISO environmental audit to ensure ongoing compliance with regulations, policies and procedures.

### **Plan**

In 2014, the Health, Safety & Environment section will work more closely with the Wellness Centre to expand personnel reporting of hazards and injuries related to fitness activities and general fire station duties. As lessons are learned and best practices identified, the Health, Safety & Environment section will expand policies, procedures and practices to improve the identification, reporting, investigation and control of health and safety concerns associated with fitness activities and station duties.

### **References**

- 7F.2a. CFDNet: Health, Safety & Environment section internal site  
<http://pispwfe01/org/admin/safety/Pages/Default.aspx>
- 7F.2b. City of Calgary Environmental & Safety Management,  
<http://mycity/OurOrg/Dept/UEP/EnvSafetyMgmt/Pages/Default.aspx>
- 7F.2c. Calgary Fire Department health, safety and environment policies and procedures  
(see Manager of Compliance)
- 7F.2d. Calgary Fire Department health, safety and environment online training modules  
(see Manager of Compliance)
- 7F.2e. Calgary Fire Department health, safety and environment forms (see Manager of Compliance)

7F.2f. Calgary Fire Department, Audits and assessments overview, 2013

7F.3 The agency documents steps taken to implement risk reduction and address identified workplace hazards.

### **Description**

The Fire Department's Health, Safety & Environment section reduces risk and workplace hazards through a variety of programs: workplace inspections; field-level hazard assessments; position-based hazard assessments; and reporting of workplace injuries, illnesses, hazardous conditions and near misses. All incidents are investigated to ensure remedial measures are put in place. There are mandatory training programs in place to educate staff on health, safety and environmental hazards they may encounter in the workplace. This includes mandatory EnviroSystem training which is an introduction to the Environmental Management System used in the Fire Department based on the ISO 14001 Standard, Spill Containment and Release Reporting training which outlines how to manage chemical spills in the workplace that may pose an environmental hazard to the environment. Mandatory training also includes the Workplace Hazardous Material Information System (WHMIS), which is an introduction on how to identify and manage controlled products and harmful substances in the workplace.

The Fire Department employs a position-based hazard assessment process where staff are trained and equipped to identify hazards associated with their job. Both employees and managers are responsible for identifying hazards before a job is started through the use of field-level hazard assessments.

As outlined in Performance Indicator 7F.7, the Health, Safety & Environment section receives reports related to workplace inspection findings, incidents, near misses, hazardous conditions, field-level hazard assessments and position-based hazard assessments. All risks identified through this reporting are managed by the employee's supervisor who is responsible for carrying out investigations and putting remedial actions in place. Hazards that cannot be addressed by the supervisor are escalated to the Health, Safety & Environment section for resolution.

## **Appraisal**

The Fire Department has established a range of programs to identify and address risk and workplace hazards, including making risk identification and mitigation a joint effort between supervisors and staff.

## **Plan**

In 2014, the Fire Department will explore options for conducting a root cause analysis of injuries associated with fitness activities.

As outlined in Objective 15.1 of its Business Plan, the Fire Department will establish an occupational injury index based on the severity and duration of injuries in order to assess the impact of different interventions on employee health. This will include developing a mechanism to extract and analyze non-confidential medical related data to further identify occupational trends and risks.

## **References**

- 7F.3a. Calgary Fire Department procedure: Reporting workplace injuries and illnesses, November 29, 2012
- 7F.3b. Calgary Fire Department procedure: Investigating workplace injuries & illnesses, April 22, 2013
- 7F.3c. CFDNet: Position hazard assessments, [http://cfdnet/org/admin/Pages/position\\_hazard\\_assessments.aspx](http://cfdnet/org/admin/Pages/position_hazard_assessments.aspx)
- 7F.3d. Calgary Fire Department, Field level hazard assessment form FD1229 (R2012-07)
- 7F.3e. Field level hazard assessment sample, vehicle extrication, Version (1) 07-2012
- 7F.3f. Calgary Fire Department 2012-2014 Business Plan, Objective 15.1, p. 31

7F.4 Procedures are established and communicated specific to minimizing occupational exposure to communicable diseases or chemicals.

### **Description**

As reflected in the roles and responsibilities under the *Alberta Occupational Health & Safety Act* and The City's and Fire Department's health and safety policies and procedures, employees are responsible for reporting health and safety concerns to their supervisor if they cannot control or mitigate it themselves. All procedures relating to occupational exposures to communicable disease and chemicals are contained in the Fire Department's Policy and Procedure Manager software, which is accessible to all staff.

Communication of health and safety information, including information specific to communicable disease and chemical exposures, is typically done through the Fire Department's intranet, FD Notices, bulletin board postings, e-mail, Safety Matters bulletins, and the Fire Department's monthly newsletter, FUEL. Information and current concerns on injury trends and mitigation strategies, including those involving communicable disease and chemical exposure, is also discussed at battalion chief, chief officer and Fire Executive Team meetings.

### **Appraisal**

The Fire Department has established procedures for minimizing occupational exposure to communicable diseases or chemicals. Its Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

### **Plan**

During the 2015-2018 business plan cycle, the Health, Safety & Environment section will develop and implement a health and safety communications plan to enhance awareness and understanding of responsibilities, policies and procedures, including those related to communicable disease and chemical exposure.

**References**

7F.4a. CFDNet: Health, Safety & Environment section, <http://cfdnet/Safety/index.asp>

7F.4b. Calgary Fire Department, Safety Matters bulletin sample: Handling Sharps,  
December 31, 2013

7F.4.c. Calgary Fire Department procedure: Managing bio-hazard & communicable  
disease exposures, January 9, 2013

**CC 7F.5 An occupational health and safety training program is established and designed to instruct the workforce in general safe work practices, from point of initial employment through each job assignment and/or whenever new substances, new processes, procedures, or equipment are introduced. It provides specific instructions on operations and hazards specific to the agency.**

### **Description**

New Fire Department civilian employees undergo an employee orientation training program as outlined in Performance Indicator 7B.5. As part of this orientation process, the Fire Department's Health, Safety & Environment section provides an overview of all health and safety requirements including: related policies, procedures and legislation applicable to their duties; accountabilities and responsibilities for safety; chemical hazards; the use of material safety data sheet documents; and incident and injury reporting and documentation.

Throughout recruit training, all skill exercises are pre-empted by a safety discussion that uses the position-based and field-level hazard assessments to communicate hazards, procedures, personal protective equipment requirements and emergency procedures.

All employees must complete and pass five mandatory health, safety and environment training programs on the Fire Department's Learning Management System including: workplace inspections; field-level hazard assessments; spill containment and reporting; EnviroSystem (outlined in Performance Indicator 7F.3) and Workplace Hazardous Materials Information System (WHMIS) (outlined in Performance Indicator 7F.3). WHMIS training is refreshed every three years. As part of career advancement within the Fire Department, health and safety training is integrated into all training programs. Employees are expected to demonstrate understanding and compliance with safety requirements to successfully complete each training program.

Training and instruction is conducted prior to, or simultaneously with, the introduction of new substances, equipment, processes or procedures that may have an impact on safety. It is compulsory for all personnel to be trained on any new equipment prior to its use. When

a new piece of equipment is introduced, Health, Safety & Environment section staff work in conjunction with the Equipment & Supply section to develop a training program for personnel, as outlined in Performance Indicator 6F.1. Health, Safety & Environment section staff also work in parallel with Training section staff to identify hazards associated with new training programs and develop appropriate mitigation strategies to reduce risk to staff during training and when the new skills are employed in the field.

To help manage medical issues that first responders may be exposed to during high-risk training and emergency events, in early 2014, the Fire Department hired eight paramedics for a two-year pilot project. A component of their role is to provide training to firefighters regarding working safely around fireground and technical team operations.

### **Appraisal**

The Fire Department has established a health and safety training program designed to instruct the workforce safe work practices throughout their careers and any time new substances, processes, procedures or equipment introduced.

### **Plan**

The Fire Department will continue to use its health, safety and environmental programming it presently has in place, and will develop and implement training programs when new substances, procedures or equipment is introduced.

### **References**

- 7F.5a. Calgary Fire Department, Health, Safety & Environment orientation session (see Manager of Compliance)
- 7F.5b. Field-level hazard assessment sample, vehicle extrication, Version (1) 07-2012
- 7F.5c. Calgary Fire Department Procedure: Commissioning of apparatus equipment, March 02, 2012

7F.6 The agency uses near miss reporting to elevate the level of situational awareness in an effort to teach and share lessons learned from events that, except for a fortunate break in the chain of events, could have resulted in a fatality, injury or property damage.

### **Description**

The Fire Department procedure, *Reporting workplace injuries, illnesses, hazardous conditions and near misses*, requires all workplace injuries and illnesses to be reported. New recruits are educated during their training on what a near miss is and how it is to be reported.

All hazardous condition and near miss reports must be reported to the immediate supervisor for investigation. The result of the investigation either triggers adoption of a new policy or procedure to mitigate further near misses and/or an educational or training program for appropriate staff. All reports are forwarded to the Health, Safety & Environment section for review, analysis and filing. Based on the data collected, a more thorough investigation may be performed by the Health, Safety & Environment section.

All health, safety and environmental incidents, including near misses and hazardous conditions, are investigated under the direction of either the manager of compliance and the deputy chief and/or assistant deputy chief of the Administration division. The Health, Safety & Environment section tracks all incidents and investigations to identify trends, verify remedial measures are implemented and ensure the Fire Department and personnel are in compliance with applicable legislation. The manager of collision investigation programs carries out a similar role ensuring all motor vehicle incidents are fully investigated.

Injury, near miss and hazardous conditions incidents are reviewed at monthly chief officer meetings and some near miss incident lessons are shared through the Fire Department's intranet, FD Notices, bulletin board postings, e-mail, Safety Matters bulletins and the Fire Department's monthly newsletter, FUEL. Information and current concerns on injury trends and mitigation strategies is also discussed at battalion chief, chief officer and Fire Executive Team meetings.

## **Appraisal**

The results of hazardous condition, injury and near miss investigations has allowed the Fire Department to develop remedial measures, educate staff and share lessons learned through a variety of means. In March 2012, the Fire Department implemented a proactive campaign for the reporting of near misses. The campaign reinforced the need to identify, report and investigate near misses and ensure appropriate remedial measures are implemented and communicated to staff.

## **Plan**

The Fire Department will continue to reinforce and increase the overall understanding of employee safety accountabilities and responsibilities, especially as it pertains to near miss and hazardous condition reporting.

In 2014, the Health, Safety & Environment section will execute strategies to achieve safety excellence through continued consistent application of health and safety policies, practices and procedures across the Fire Department. The section will encourage and support the active participation of all employees in building a safety culture that focuses on increasing the quality of reporting and documentation of near miss reports to ensure proper investigations are carried out, corrective measure are prioritized and remedial measures are implemented.

## **References**

- 7F.6a. City of Calgary, Occupational Health & Safety hazardous condition or near miss report/follow-up X-519 (R2012-10)
- 7F.6b. CFD Safety Matters bulletin, Near miss investigation results SCBA cylinder storage locker, December 2013
- 7F.6c. Calgary Fire Department FD Notice #45-2012, March safety topic – Reporting safety concerns, March 23, 2012

7F.7 A process is in place to investigate and document accidents, injuries, legal actions, etc., which is supported by the agency's information management system.

### **Description**

PeopleSoft is a City database the Fire Department uses to record all reports on injuries and exposures. Reporting includes all exposures to chemicals, inhalation of smoke and fumes, extreme temperatures, noise, biohazards and hearing loss, as well as self-contained breathing apparatus and personal protective equipment malfunctions. These reports are also entered into a separate Fire Department spreadsheet to assist with tracking and identifying health and safety trends. Both systems adhere to the *Alberta Freedom of Information and Protection of Privacy Act*.

Injury and exposure reports are forwarded to both the Fire Department's Disability & Attendance Management and Health, Safety & Environment sections so they can track trends in incidents and prepare reporting for the Workers' Compensation Board and Alberta Occupational Health and Safety. Based on the data collected, a more thorough investigation may be performed by the Health, Safety & Environment or Disability & Attendance Management sections.

PeopleSoft is also used to track people working in accommodated capacity and tracks rehabilitation of injured personnel. Legal actions related to an accident or injury are tracked by the Health, Safety & Environment section, Fire Department Executive Office and City Claims department.

Each month, health and safety trending information is provided to the Fire Executive Team to allow for ongoing monitoring and evaluation of the health and safety program.

### **Appraisal**

The Fire Department has established several management information systems to investigate and document accidents and lost time injuries that may result in claims or legal actions. Systems used help identify staff injury trends and incorporate Workers' Compensation Board data and costs to allow the Fire Department to assess trending and costs associated with different injuries and ensure injury reduction programs can be implemented when they are most needed.

## **Plan**

The Fire Department will continue to work to ensure efficient, effective communication regarding accident and incident information between its Wellness Centre and Health, Safety & Environment and Disability & Attendance Management sections to track trends and devise programs to improve employee safety, health and wellness.

As outlined in Objective 15.2 of its 2012-2014 Business Plan, the Fire Department will establish an occupational injury index based on severity and duration of injury in order to assess the impact of different interventions on employee health. This will involve the ongoing updating and addition of information to the injury incident database to track and trend injury types, severity, frequency and duration.

## **References**

- 7F.7a. Calgary Fire Department, Injury/exposure report and investigation form FD 1220, May 2013
- 7F.7b. Health, Safety & Environment section monthly report to Fire Executive Team, December 2013
- 7F.7c. Calgary Fire Department 2012-2014 Business Plan, Objective 15.2, p. 31

## **Criterion 7G: Wellness/Fitness Programs**

*The agency has a wellness/fitness program for recruit and incumbent personnel and provisions for noncompliance by employees/members are written and communicated.*

### **Summary:**

The Fire Department provides pre-employment and annual medical and physical fitness evaluations for firefighters. Mandatory annual wellness medicals and fitness evaluations are set out in Fire Department policies and procedures, and among many tests include comprehensive, detailed physiological screening for uniformed members who are at higher risk of various illnesses due to fire-specific occupational exposures. Records of wellness and physical evaluations are maintained to help track participation rates and annual wellness medical targets are in place and assessed each month to help evaluate the success of the program.

All Fire Department stations and facilities are provided with fitness equipment which is available to all employees. The Fire Department has trained 30 peer fitness trainers across various platoons that are available to provide personnel with fitness, motivation, exercise and nutritional advice. All employees are also supported with a variety of wellness and fitness education provided by The City of Calgary and Fire Department, including free workshops.

Mental wellness is as important as physical wellness, and staff are supported by a range of critical incident stress services and counseling services through the Fire Department, City and third-party providers.

## **Performance Indicators:**

**CC 7G.1 The agency provides for initial, regular, and rehabilitative medical and physical fitness evaluations.**

### **Description**

Through its Health and Wellness Services section, the Fire Department provides initial (pre-employment) and annual medical and physical fitness evaluations. As part of the Fire Department's health and wellness program, uniformed members receive annual wellness medical and physical fitness evaluations during regular work hours. Designed to be positive and non-punitive in nature, the Fire Department's wellness medicals and fitness evaluations are comprehensive and include detailed physiological screening for uniformed members who are at higher risk of various illnesses due to fire-specific occupational exposures. Mandatory medical components are performed and include regulatory requirements based on Canadian Standards Association standards, National Fire Protection Association standards and Alberta Occupational Health & Safety regulations.

Annually, the Fire Department conducts the following on each uniformed staff member: physical examination; vision screening; audiometric screening; resting ECG screening; pulmonary function screening; cardiovascular assessment; musculoskeletal assessment; and mask fit testing and education. Additionally, members receive occupational risk education and support services that are deemed necessary to complete the screening process.

The Fire Department's Health and Wellness Services section is licensed through International Association of Fire Fighters/International Association of Fire Chiefs (IAFF/IAFC) to administer the Candidate Physical Ability Test (CPAT). The section provides CPAT testing for all recruits, which includes a medical and fitness evaluation that they must pass.

### **Appraisal**

As the first fire service in Canada to implement a comprehensive wellness and fitness initiative, the Fire Department has established an effective health and wellness program for its uniformed staff that provides initial and annual medical and physical fitness

evaluations. It has taken a holistic approach to mental and physical fitness in the workplace and, through early interventions in its program, has identified problems such as heart disease and other life-threatening illnesses.

### **Plan**

As outlined in Objective 15.1 of its 2012-2014 Business Plan, the Fire Department will continue to support and advocate for the health and wellness of its employees by exploring the costs and efficiencies of offering additional health and wellness services, and introducing a case management strategy that follows members during recovery and post-recovery, allowing members to return to work faster.

### **References**

7G.1a. Calgary Fire Department procedure: Complying to mandatory medical components, April 27, 2012

7G.1b. IAFF/IAFC Joint Labor Management Wellness Fitness Initiative, Third Edition

7G.1c. Calgary Fire Department 2012-2014 Business Plan, Objective 15.1, p. 31

7G.2 The agency provides personnel with access to fitness facilities and equipment as well as exercise instruction.

### **Description**

Through an agreement with IAFF Local 255, all firefighters are provided with fitness components that include: equipment and facilities; exercise specialists and peer training; fitness evaluations for aerobic capacity, muscular flexibility and endurance; fitness assessments; exercise prescriptions; and the incorporation of fitness into the fire service philosophy.

All Fire Department stations and facilities are provided with fitness equipment that is available to all personnel. The Fire Department has trained 30 peer fitness trainers across various platoons that are available to provide personnel with fitness, motivation, exercise and nutritional advice. Personnel also receive some exercise instruction during their annual wellness medical and physical fitness evaluations.

### **Appraisal**

The Fire Department has provided and maintained fitness equipment for each of its facilities, including all fire stations. Fitness facilities and equipment is available to all personnel, and provisions have been put in place for uniformed members to exercise on duty, and recruits have a formalized fitness regimen incorporated into their daily routine.

### **Plan**

The Fire Department will continue to provide all personnel with access to fitness facilities and equipment and participate in the wellness ambassador network. Through the 2015-2018 business planning cycle, the Fire Department will work to standardize its fitness equipment. The Fire Department's wellness/fitness coordinator and exercise physiology supervisor will establish a new peer fitness training program and develop an outreach program to encourage health and fitness participation. Additionally, the Fire Department will develop fitness programs and recommend exercise equipment to meet the occupational job demands of firefighting.

## **References**

7G.2a. Calgary Fire Department procedure: Providing & maintaining fitness equipment,  
August 1, 2012

7G.2b. IAFF Local 255 Agreement, 2009-2010, Letter #1 Health and wellness program

7G.3 The agency provides wellness/fitness education to all employees/members.

### **Description**

The Fire Department's Wellness Centre provides educational services and programs to support the health, wellness and fitness for all members. All Fire Department members and their families have access to health services provided through the Wellness Centre, and physicians provide wellness, nutrition and fitness education and advice to uniformed members during annual medical examinations.

As part of The City of Calgary's health and wellness ambassador network (WOW! Wellness Opportunities at Work), the Fire Department distributes monthly wellness e-bulletins to all staff that include information and tips on wellness, nutrition and fitness programs. In addition, the network hosts free wellness sessions for all City staff. The Fire Department also has a dedicated section on its intranet with health, wellness and fitness information related to nutrition, resistance training and special communication bulletins from the American College of Sports Medicine on exercise performance.

### **Appraisal**

The annual wellness medical and fitness evaluation for firefighters has afforded the ability for Wellness Centre staff to provide wellness and fitness education to staff, including information on a holistic approach to health, including nutrition and mental wellness. These annual discussions have been supported by additional information available on the Fire Department's intranet.

The Fire Department identified that the health and wellness of civilian staff required additional focus, so in late 2013, as part of its Day Staff Wellness Initiative, civilian staff were polled to learn more about their health and wellness interests and educational needs.

### **Plan**

As outlined in Objective 14.1 of its 2012-2014 Business Plan, the Fire Department will evaluate health and safety best practices in Canadian emergency response departments to incorporate enhancements to areas such as education into its health and wellness program.

As part of its Day Staff Wellness Initiative and to support The City's Wellness Opportunities at Work (WOW!) , in 2014, the Fire Department will introduce two new wellness and fitness programs for civilian staff. Free lunch and learn sessions will be offered that include health professionals attending to discuss healthy lifestyle and wellness initiatives, and cardio programs and yoga stretching classes will be offered to day staff at reduced rates.

Through the 2015-2018 business planning cycle, the Fire Department's Health and Wellness Services section will develop a business case to add an expanded nutrition component to the Fire Department's health and wellness program and, as outlined in Performance Indicator 7G.2, will establish a new peer fitness training program and develop an outreach program to encourage health and fitness participation.

### **References**

7G.3a. City of Calgary EWAN eBulletins

<http://mycity/MyHr/Health/Pages/EWANeBulletins.aspx>

7G.3b. Calgary Fire Department WOW! wellness sessions, sample invite January 2014

7G.3c. Calgary Fire Department, Day Staff Wellness Initiative, December 2013

7G.3d. Calgary Fire Department 2012-2014 Business Plan, Objective 14.1, p. 31

7G.4 The agency provides an employee/member assistance program with timely access to critical incident stress debriefing and behavioral counseling resources.

### **Description**

Employee and Family Assistance Program (EFAP) services are provided to all City of Calgary employees and their eligible family members via an external third-party provider. EFAP offers work-life solutions and well-being programs with access to a variety of resources and services to assist employees in resolving a range of problems that may impact work performance, wellness and behavior. The EFAP includes critical incident stress management, comprehensive counseling, health promotion, online services, life balance solutions, career counseling and health coaching. Areas of counseling include childcare, eldercare, legal, financial, nutritional, shift work support, smoking cessation and substance abuse.

The Fire Department also has an internal critical incident stress management (CISM) program. This program has members on each platoon that represent all seniority levels. These members are trained to deliver critical incident services and one-on-one peer support. The CISM program is rankless, meaning, members are not required to follow their chain of command to contact members of the CISM team or request team services. CISM education is also provided to recruits during their training.

Employees can make an appointment with one of the Fire Department's Wellness Centre physicians, who have the ability to refer members to various counseling services as well as emergency hospital admitting for urgent situations.

### **Appraisal**

Through a combination of City and Fire Department resources, staff have been provided access to timely critical incident stress management and behavioural counseling. Staff have regularly received communications regarding EFAP and CISM through the Fire Department's intranet as well as internal notices issued after large-scale events reminding staff about the services available and providing contact information. Supervisors have been made aware of the services and provide guidance to staff experiencing difficulties.

The CISM team has quarterly training sessions and increased its number of members from 12 to 36 over the past four years, including three chaplains trained in CISM.

The Fire Department has also provided in-depth confidential counseling support to staff members experiencing severe mental wellness issues.

### **Plan**

In 2014, the CISM team will deliver more education to frontline firefighters on topics such as EFAP programs, suicide, substance abuse and shift work directly. An emphasis will be placed on tracking CISM activities and providing accurate statistics on the activities of the team. CISM training sessions will continue on a quarterly basis and be enhanced to provide a higher level of education and training to CISM team members. In addition, during the 2015-2018 business plan cycle, the Fire Department will develop criteria to automatically deploy CISM staff to stations after stressful incidents.

### **References**

- 7G.4a. The City of Calgary Human Resources, Health & wellness  
<http://mycity/MyHr/Health/Pages/Default.aspx>
- 7G.4b. The City of Calgary Employee & Family Assistance Program (EFAP) & Critical Incident Stress Management (CISM)
- 7G.4c. The City of Calgary Human Resources, Substance use policy/ guidelines (HR-TR-005)
- 7G.4d. Calgary Fire Department, Critical Incident Stress Management
- 7G.4e. Calgary Fire Department, Critical Incident Stress Management team, January 15, 2014
- 7G.4f. Calgary Fire Department CISM team meeting agenda and minutes, September 20, 2013

**CC 7G.5 Current policies and standard operating procedures or general guidelines are in place to direct the wellness/fitness programs.**

**Description**

As outlined in the IAFF Local 255 collective agreement and the Fire Department's policies and procedures, all uniformed members are required to participate in the health and wellness program, which is considered a key component in supporting firefighter well being.

The Fire Department has a policy on the use of the Wellness Centre, which provides resources to develop and deliver a holistic, preventative, rehabilitative and educational approach to health and wellness for all members. Supporting this policy, the Fire Department has a number of procedures in place that provide detailed instructions and guidelines that direct the health and wellness programs including: performing drivers license medicals; fitness assessments; mask fit tests; medicals for wellness program; occupational assessments; administering the CPAT; and complying to mandatory medical components. These policies and procedures are available through the Fire Department's Policy and Procedures Manager software and accessible by all staff.

**Appraisal**

The Fire Department has established policies, procedures and guidelines to direct its wellness and fitness programs. Policies and procedures have been effective in ensuring that mandatory health screening, medical components and regulatory requirements are being met. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant.

**Plan**

In 2014, the Fire Department will evaluate its return to work program and related procedures for members returning to duty following a serious injury or surgery.

**References**

7G.5a. Calgary Fire Department policy: Utilization of Wellness Clinic, August 27, 2010

7G.5b. Calgary Fire Department Policy and Procedures Manager software (suggest live demonstration)

7G.6 The agency's information system allows for documentation and analysis of the wellness/fitness programs.

### **Description**

The Fire Department's Wellness Centre currently uses electronic medical record software to manage patient information, including pre-screening results of firefighter-related diseases. The Alberta Privacy Commissioner approves the software for use and a privacy impact assessment has been completed with regards to all wellness clinic operations and use of the medical record software. Information contained in the electronic system is stored in a highly secure off-site data centre that meets the requirements set out by the Alberta Privacy Commission.

The Fire Department uses a spreadsheet to record and track uniformed member annual wellness and physical fitness assessment participation rates. For annual self-contained breathing apparatus mask fit and bi-annual N95 mask fit testing, the Fire Department's Wellness Centre uses a PortaccountPro Respirator Fit Tester to capture test results and relevant data. This data is downloaded to a database that is checked by wellness medical administrators to ensure that uniformed members have completed appropriate mask fit tests.

To further evaluate the effectiveness of the health and wellness program, the Fire Department's Disability & Attendance Management section uses a database to record near misses, first aid, medical lost time, and untreated incidents by work unit, injury type, location where the injury occurred, and the activity the member was performing when the injury occurred.

### **Appraisal**

The Fire Department has established secure and appropriate information and data systems to analyze the effectiveness of different facets of its health and wellness program.

### **Plan**

Over the next two to three years, the Wellness Centre will work to reduce its paper records and migrate over to a fully digital medical record management system.

As outlined in Objective 15.1 of its Business Plan, the Fire Department will establish an occupational injury index based on the severity and duration of injuries in order to assess the impact of different interventions on employee health. This will include developing a mechanism to extract and analyze non-confidential medical related data to further identify occupational trends and risks.

### **References**

- 7G.6a. PortaccountPro 8038 respirator fit testers operation and service manual – Revision F (available in hard copy only located at the Wellness Centre)
- 7G.6b. Calgary Fire Department procedure: Maintaining medical records, January 23, 2012
- 7G.6c. Calgary Fire Department 2012-2014 Business Plan, Objective 15.1, p. 31

7G.7 An appraisal is conducted, at least annually, to determine the effectiveness of the wellness/fitness programs.

### **Description**

To evaluate the effectiveness of its health and wellness program, the Fire Department's Administration division prepares a monthly and annual report for the Fire Executive Team. The monthly and annual report includes rates of early detection of occupational-related illnesses and annual wellness medical participation as well as the number of specific wellness tests conducted.

Annual wellness medical targets are in place and monitored monthly to ensure that all staff receive medicals by the end of each year. The collective agreement with IAFF Local 255 establishes a 100 per cent annual compliance target.

The Fire Department participates in the Fire Service Joint Labor Management Wellness-Fitness Initiative and also contributes to a number of Canadian and American research initiatives, including cardiovascular disease studies, aerobic capacity fitness, occupational work capacity assessments and back health studies. Participation in these programs provides comparative statistics against which the Fire Department can measure the effectiveness of its health and wellness program.

### **Appraisal**

Monthly and annual reporting by the Fire Department's health and wellness section has been appropriate to monitor the effectiveness of its health and wellness program. In 2013, 96 per cent of all wellness medicals were performed. Incomplete medicals were due to staff leave of absence, sickness and accident and lack of availability due to a prolonged response to a large-scale June flood.

### **Plan**

In 2014, the Fire Department will explore options for conducting a root cause analysis of injuries associated with fitness activities. During the 2015-2018 business planning cycle, the Fire Department will analyze data collected to identify high-risk trends and develop preventative injury programs.

## **References**

7G.7a. Calgary Fire Department, Administration division monthly report to the Fire Executive Team, September 2013

## **Category VIII: Training and Competency**

Training and educational resource programs express the philosophy of the organization they serve and are central to its mission. Learning resources should include a library, other collections of materials that support teaching and learning, instructional methodologies and technologies, support services, distribution and maintenance systems for equipment and materials, instructional information systems, such as computers and software, telecommunications, other audio visual media, and the facilities to utilize such equipment and services.

Central to success of the training and educational process is a learning resources organizational structure and a technically proficient support staff. The training staff should provide services that encourage and stimulate competency, innovation, and increased effectiveness. The agency or system should provide those learning resources necessary to support quality training. The agency should depict their approach to recognized state/provincial and national fire service professional standards programs within their written responses to the performance indicators in this section as adherence to those programs will be considered as *prima facie* compliance with the intent of this section.

## **Criterion 8A: Training and Education Program Requirements**

*A training and education program is established to support the agency's needs.*

### **Summary:**

In order to identify the training needs of the Fire Department, the Training section, which falls within the Community Standards & Training division, employs a process that incorporates a variety of elements, including the review of applicable standards and legislation, analysis of job performance requirements, consultation with internal stakeholder groups and assessment of the vision and goals set out by the Fire Department's 2011-2021 Sustainability Plan and 2012-2014 Business Plan.

To ensure the Training section supports the mission, goals and objectives of the Fire Department, its work is determined, in large part, by the Fire Department's 2012-2014 Business Plan. New initiatives created under the business plan and all training programs are consistent with all relevant legal requirements and are designed to incorporate the minimum level of training required for each position. A variety of programs are also in place to support command and staff development across all levels of the organization.

## **Performance Indicators:**

**CC 8A.1 The organization has a process in place to identify training needs, which identifies the tasks, activities, knowledge, skills, and abilities required to deal with anticipated emergency conditions.**

### **Description**

The Training section, which falls under the Fire Department's Community Standards & Training division, incorporates a number of elements into its process of identifying training needs, including the review of applicable standards and legislation, analysis of job performance requirements, consultation with internal stakeholder groups and assessment of the vision and goals set out by the Fire Department's 2011-2021 Sustainability Plan and 2012-2014 Business Plan.

The Training section reviews all applicable standards and legislation related to operational program areas, including those set out by the National Fire Protection Association, the Canadian Standards Association, the *Alberta Occupational Health & Safety Act, Code and Regulations*, and the Alberta Code of Practice for Firefighters. Collectively, these standards outline the pre-requisite knowledge and minimum job performance requirements for different positions, which are used to identify training needs for each position within the Fire Department. These requirements are combined with a Design a Curriculum (DACUM) approach, which is a method used by the Fire Department to analyze each position and create a list of duties, tasks, and related information about the job. Together, these form the foundation that helps the Training section identify the tasks, activities, knowledge, skills and abilities staff require in order to comply with legislation and be able to perform the functions of the job. As standards change, Training assesses the impact on staff and operations, adjusts its existing curriculum to reflect updates and determines if additional or new training is required.

The Training Advisory Working Group, consisting of members from Operations & Technical Teams, technical teams and the Community Standards & Training division, is also used to collaboratively identify operational training needs and priorities.

The Fire Department's 2011-2021 Sustainability Plan sets out the long-range vision for the Fire Department, including the nature of fire and community safety services expected to be required over the next decade. Through this vision, the Training section identifies the enhanced and new skills required for staff to support future service delivery. For example:

- To advance the Fire Department's ten-year sustainability vision of having a comprehensive emergency management program with uninterrupted critical fire and community safety services during large-scale emergency incidents, the Training section, in collaboration with other Fire Department sections, developed and implemented a training plan and online training modules to train all uniformed and civilian personnel to a minimum standard of ICS-200.
- To advance and support the sustainability strategy of integrating frontline firefighters into the delivery of preparedness and prevention education, and to build organizational capacity, encourage community resiliency and foster increased well-being, the Fire Department's Training section in collaboration with the Community Standards and Community Safety sections, have storyboarded two online training modules that cover inspections and community safety programming. Once finalized, the training modules will be delivered to all frontline staff.
- To advance supporting a community safety mandate through integration of change management strategies into education, training and community safety service delivery, the Training section is developing a learning strategy and educational principles.
- To enhance the medical first response program, in early 2014, the Fire Department's Training section began revising its medical training program. In addition to meeting the Provincial guidelines as set out Alberta College of Paramedics, revisions to the program address the Fire Department's sustainability priority of ensuring safe communities and its strategy of becoming a national leader in medical first response and community safety practice.

In addition, the Fire Department's 2012-2014 Business Plan sets out a series of goals and objectives related to new initiatives that must be supported by staff training.

## **Appraisal**

The Fire Department has established processes to identify training needs associated with different positions and anticipated emergency conditions.

## **Plan**

The Fire Department's Training section will continue ongoing review of relevant standards, legislation and practices as well as consultation through the training advisory working group to ensure new or modified training needs are identified.

The Training section will also assess training needs related to several objectives within the 2012-2014 Business Plan:

- Objective 2.5: Maximize the effectiveness of the Fire Department in the delivery of medical first response under the new Alberta Health Service delivery model to ensure the health and wellness of citizens.
- Objective 4.2: Determine and provide appropriate inclusiveness training for Fire Department staff

## **References**

- 8A.1a. Calgary Fire Department Training Advisory Working Group, FD Notice #152-2013, October 28, 2013
- 8A.1b. Calgary Fire Department Training Advisory Working Group process chart
- 8A.1c. Training and education program list of standards and legislation
- 8A.1d. Calgary Fire Department 2012-2014 Business Plan, Objective 2.5 and 4.2, pp. 19-20
- 8A.1e. Calgary Fire Department, Company officer DACUM chart

8A.2 The training program is consistent with the agency's mission statement and published goals and objectives, and meets the agency's needs.

### **Description**

The Community Standards & Training division supports the Fire Department's mission, *To serve the community through excellence in prevention, education, protection and safety*, through training personnel in safe and appropriate emergency protection.

To advance its mission as well as the long-term vision outlined in its 2011-2021 Sustainability Plan, the Fire Department set out a series of goals and objectives in its 2012-2014 Business Plan. A series of objectives are assigned to the Community Standards & Training division and the deputy chief for the division is responsible for ensuring they are completed within the three-year cycle. Implementation plans are developed for each objective setting out the timelines, risk and tasks to be undertaken to achieve the objective.

In addition, the Training section is typically involved in supporting a number of other objectives assigned to other divisions. New programs, initiatives and services identified in the 2012-2014 Business Plan must be supported by appropriate staff education and training. The Training section works in collaboration with other divisions across the organization to develop education and training to support their objectives.

### **Appraisal**

The Fire Department's training program has been developed to align with, and support, the mission, goals and objectives set out in its 2012-2014 Business Plan.

### **Plan**

The Community Standards & Training division will continue to deliver on the goals and objectives assigned to it through the 2012-2014 Business Plan. The division will also ensure appropriate goals and objectives for the training program are included in the 2015-2018 Business Plan, which will be developed in 2014.

## **References**

8A.2a. Calgary Fire Department 2011-2021 Sustainability Plan

8A.2b. Calgary Fire Department 2012-2014 Business Plan

8A.3 The training program is consistent with legal requirements for performing mandatory training.

### **Description**

Although the Province of Alberta does not have a legal standard for firefighter training, the *Alberta Occupational Health & Safety Act, Code and Regulations* indicates that employees must be adequately and suitably trained for the job they are expected to perform. As a result, the Fire Department identifies qualifications, credentials and competencies set out by applicable standards and legislation, such as the National Fire Protection Association, the Canadian Standards Association and the Alberta Safety Codes Council, which are then integrated into its training program.

While not legislatively required, the Fire Department's recruit training program mirrors or meets the intent of the National Fire Protection Association Standard 1001, *Standard of Fire Fighter Professional Qualifications*.

Additional legal mandatory training required for technical rescue, hazardous materials and environmental protection and airport firefighting is identified and provided by assigned training officers, the hazardous materials coordinator and the Calgary Airport Authority, respectively.

### **Appraisal**

The Fire Department's training programs have been established to be consistent with the legal requirements for mandatory training.

### **Plan**

The Training section will continue to monitor legislation, standards and regulations to ensure the Fire Department is meeting the legal requirements for mandatory training.

### **References**

8A.3a. National Fire Protection Association 1001: Standard of Fire Fighter Professional Qualifications, 2013 Edition

8A.3b. A Code of Practice for Firefighters, Application of Alberta's Occupational Health and Safety Code 2006 to Emergency Operations of the Fire Service in Alberta

8A.3c. The Province of Alberta Occupational Health and Safety Act, RSA 2000 Chapter O-2, current version in effect since October 1, 2013

8A.3d. The Province of Alberta Occupational Health and Safety, OHS Code explanation guide, <http://humanservices.alberta.ca/SearchAARC/37.html>

8A.4 The agency has identified minimum levels of training required for all positions in the organization.

### **Description**

The Training section regularly reviews all applicable standards and legislation to identify its minimum levels of training required for all positions. The minimum level of training for recruit firefighters before they report as probationary firefighters is the Fire Department's recruit training program. The minimum level of training to become an officer is the Fire Department's company officer exam.

Technical rescue teams, hazardous materials and airport firefighting positions have identified minimum training requirements, as outlined in Performance Indicators 5E.5, 5F.5 and 5I.4, respectively. The *Alberta Safety Codes Act* outlines the minimum level of training for all fire safety codes officers and fire investigators.

The remaining workforce, comprised of management and civilian staff, use job evaluation processes, outlined in Performance Indicators 7D.1, that identify minimum levels of training and competencies required for their positions.

### **Appraisal**

The Fire Department has identified the minimum levels of training required for all positions. The ongoing review of applicable standards and legislation has been comprehensive in its identification of minimum levels of training competencies, and The City's processes have identified minimum levels of training and competencies for management and civilian positions.

### **Plan**

The Training section will continue to review all applicable standards and legislation to identify minimum levels of training. The Fire Department will continue to follow The City's job evaluation processes to ensure that positions have identified minimum training levels.

## References

- 8A.4a. Calgary Fire Department Training Academy Fire Tactics Refresher Course Outline, December 12, 2013
- 8A.4b. City of Calgary job evaluation – unionized employees,  
<http://mycity/MyHr/PayBenefits/Union%20EE/JobEvaluation/Pages/Default.aspx>
- 8A.4c. City of Calgary job evaluation – exempt employees,  
<http://mycity/MyHr/PayBenefits/Exempt/Pages/jobevaluationexempt.aspx>
- 8A.4d. The Province of Alberta Occupational Health and Safety Act, RSA 2000 Chapter O-2, current version in effect since October 1, 2013
- 8A.4e. Recruit training program objectives (see Training Coordinator)

8A.5 A command and staff development program is in place.

### **Description**

The City of Calgary and the Fire Department provide all staff with opportunities for professional and personal development to increase their knowledge, skills and abilities. To enhance the management acumen and relationship skills of those in leadership roles, the Fire Department partners with the Canadian Management Centre to deliver the Supervisory Leadership Development program. A Learning for Municipal Excellence program is available to senior and supervisory positions in The City, and provides professionally delivered courses covering a range of interdisciplinary topics, including communication/culture, budget/finance, human resources/labour relations and management/leadership. Staff are also provided other development opportunities relative to their divisions or sections, such as certificate programs, workshop participation and conference attendance. Examples of certificate programs include:

- Certificates of completion from the Canadian Management Centre for the Supervisory Leadership Development Program;
- Bow Valley College, after reviewing the Fire Department's Company Officer curriculum, grants credit for two courses (6 post-secondary credits) towards their online Management Development certificate program;
- The Fire Department's Community Standards section receives certificates as Fire Safety Codes Officer Level I and II, Fire Investigations Level I and II, NFPA Plans Examiner certification, NAFI Fire & Explosion Investigator certification, and certification in the Arson Canine Accelerant Dog Program;
- As noted in Performance Indicator 8B.1, training officers hold National Fire Protection Association standard training certifications, including 1001 and 1041 Level 1 and 2; and

- The University of Alberta's Occupational Health & Safety program, Basic Emergency Management certificate course through the Government of Alberta, and project management through the Corporate Project Management Centre.

As described in Performance Indicator 5A.5, the Fire Department has adopted and implemented an Incident Command System (ICS) training plan to ensure all members, including uniformed and civilian, have been trained to a minimum standard of ICS-200. The Fire Department also delivers an Incident Management System program to all members in positions of company officer and higher. This program is aligned with ICS principles but also covers management of all emergency events.

Deputy chiefs work with the fire chief to create personal development plans as part of their annual performance requirements, and assistant deputy chiefs, managers and all managerial staff work with their respective deputy chief on annual personal development plans.

### **Appraisal**

The City and Fire Department have established a variety of staff and command development program opportunities.

### **Plan**

The Fire Department will continue to review, assess and provide various staff and command development programs and identify opportunities for improvement.

As outlined in Goal 13 of its 2012-2014 Business Plan, the Fire Department will develop an effective approach to employee development, including encouraging management participation in continuous learning programs, extending opportunities for non-uniformed and uniformed staff to participate in special projects and assignments and evaluating the need for a skills inventory strategy.

### **References**

8A.5a. City of Calgary Learning for Municipal Excellence,  
<http://mycity/MyHr/Learning/LFME/CitySpecific/Pages/Default.aspx>

- 8A.5b. City of Calgary Supervisory Leadership Development Program,  
<http://mycity/MyHr/Learning/LFME/Leadership/Pages/Supervisors.aspx>
- 8A.5c. Calgary Fire Department performance dialogue,  
<http://cfdnet/Library/manualsrefmaterials/org/Pages/PerformanceDialogue.aspx>
- 8A.5d. City of Calgary exempt performance and career development process form P994  
(2010-03)
- 8A.5e. CFD emergency management training matrix, 2013
- 8A.5f. Calgary Fire Department 2012-2014 Business Plan, Goal 13, p. 30
- 8A.5g. CFDNet: Working Groups, <http://cfdnet/org/Pages/WorkingGroups.aspx>

## **Criterion 8B: Training and Education Program Performance**

*Training and education programs are provided to support the agency's needs.*

### **Summary:**

Fire Department policy ensures all staff participates in training to maintain identified competencies and meet regulatory compliance requirements for their job functions. Operational staff, which comprises the majority of the Fire Department's workforce, receives training based on the training needs and minimum requirements set out by the Fire Department. Minimum standards are also set out for technical teams, hazardous materials and airport firefighting personnel to ensure specialized knowledge, competency and preparedness.

An evaluation component is part of the curriculum development process for every course developed, and evaluations take place at the individual, crew and multi-company level to ensure competencies across a spectrum of situations. Evaluations may take the form of written exams or practical skills assessments to ensure personnel understand and/or have the ability to apply the information and skills taught. Measures used to evaluate learning are either identified in applicable standards and legislation or mirror industry standards.

The Training staff that delivers programs to Fire Department personnel complete instructional programs to build knowledge of effective training techniques and ensure training is delivered accurately and appropriately.

## **Performance Indicators:**

8B.1 A process is in place to ensure that personnel are appropriately trained.

### **Description**

The Fire Department policy, *CFD member training*, ensures all staff participate in training to maintain identified competencies and meet regulatory compliance requirements for their job functions.

Training staff, who deliver programs to Fire Department personnel, complete instructional programs to build knowledge of effective training techniques and ensure training is delivered accurately and appropriately. All Fire Department training officers hold National Fire Protection Association standard training certifications, including 1001, 1041 (Level 1) and 1041 (Level 2). All training officers complete an internationally recognized instructional skills workshop for the professional development of adult educators.

Operational staff, which comprises the majority of the Fire Department's workforce, receives training based on the training needs (Performance Indicator 8A.1) and minimum requirements (Performance Indicator 8A.4) set out by the Fire Department.

An evaluation component is part of the curriculum development process for every course developed. Evaluations may take the form of written exams or practical skills assessments to ensure personnel understand and/or have the ability to apply the information and skills taught.

### **Appraisal**

The Fire Department has an established process to ensure personnel are appropriately trained for their job functions and positions. Curriculum has been developed to address training needs and minimum requirements, and processes are in place to ensure the design, delivery and evaluation of training is appropriate.

**Plan**

The Fire Department will continue to incorporate training needs and minimum requirements into curriculum to ensure staff are appropriately trained for positions. It will also continue to assess evaluative and delivery techniques to ensure staff receive appropriate training.

**References**

- 8B.1a. Calgary Fire Department policy: CFD Member Training, August 12, 2010
- 8B.1b. Sample check sheet: Self-contained breathing apparatus practical skills assessment marking sheet, November 12, 2013

8B.2 The agency provides both short and long-range training schedules.

### **Description**

Long-range training requirements over the three-year business planning cycle are considered to help project anticipated resource demand on the Fire Training Academy. The Training section works with the Operations & Technical Teams division to determine future staffing plans based on funded new stations and the corresponding training requirements, expected changes in standards or practices that will require training support and required firefighter and company officer training. The long-range planning also includes identification of future certification and recertification requirements.

Short-range training schedules are developed incorporating the anticipated training needs of the Fire Department for the upcoming year. They identify all training to be delivered at the Training Academy, including on-shift training to be delivered by field trainers and online modules, plus weekend training shifts for each technical team discipline. Short-range schedules also allocate resources – from facilities to apparatus to training staff – that will be required to deliver the planned training. These short-range schedules allow for a holistic look at workload for training staff and ensure necessary resources are available when needed. As the Training Advisory Working Group identifies emerging training needs, occasionally immediate training is required to address key issues. The short-range training schedule is modified, when possible, to accommodate these priority training programs.

### **Appraisal**

The Fire Department has developed long-range training requirements and short-term schedules. The process has been effective in identifying what training is required to meet staff job requirements, when delivery is needed and what resources need to be allocated. Pre-assigning days on weekends for each of the technical disciplines has assisted operational crews, district chiefs, and battalion chiefs in forecasting operational coverage and minimize scheduling conflicts.

## **Plan**

As identified in Objective 8.5 of its 2012-2014 Business Plan, the Fire Department will review scheduling effectiveness and evaluate additional functionality of its scheduling software system to make it more effective and accurate.

## **References**

8B.2a. Calgary Fire Department training calendar,

[http://www.huntcal.com/cal/view/crstraining/fire?\\_sid=b5561fa00aae05&vm=r](http://www.huntcal.com/cal/view/crstraining/fire?_sid=b5561fa00aae05&vm=r)

8B.2b. Calgary Fire Department, FD Notice #12-2013 Technical teams monthly training coverage, February 6, 2013

8B.2c. Calgary Fire Department 2012-2014 Business Plan, Objective 8.5, p. 24

8B.3 The agency has a process for developing performance-based measurements.

### **Description**

The process for developing performance-based measurements related to training is embedded in training program development. Training programs are developed based on training needs (as outlined in Performance Indicator 8A.1) and minimum required skills for each position (as outlined in Performance Indicator 8A.4). Written examinations and practical evolutions serve as evidence of learning created by the training programs. The measures to be used to evaluate learning are either identified in applicable standards and legislation or mirror industry standards.

### **Appraisal**

The Fire Department has implemented an effective process for developing performance-based measurements. Performance-based evaluations have resulted in greater reliability, reduced subjectivity and improved quality control.

### **Plan**

The Fire Department will continue to develop and revise performance-based evaluations based on its existing training program development process.

### **References**

- 8B.3a. Sample check sheet: Self-contained breathing apparatus practical skills assessment marking sheet, November 12, 2013
- 8B.3b. Performance evaluation, company officer, FD1138 (R2013-04)
- 8B.3c. Performance evaluation, firefighter/senior firefighter, FD1139 (1997-12)

**CC 8B.4 The agency provides for evaluation of individual, company, or crew, and multi-company or crew performance through performance-based measurements.**

**Description**

As outlined in Performance Indicator 8B.3, performance-based measurements are developed as part of the overall curriculum development process and included in every training course to assess understanding and/or skill application. Performance-based measurement of individuals begins at recruit training through to, and including, an 11-month practical and theoretical examination. Individual assessment for measurable, practical skills occurs at identified milestones in a firefighter's career, and includes the 102% index exam, 104% fire tactics refresher program and company officer training program. In addition to practical skill assessments, supervisors in the Fire Department complete annual individual performance appraisals of staff.

Some training courses identify crew evaluations as the means of assessing performance in the course, such as rope/high-angle rescue. Crew evaluations are also conducted by the station company officer as part of monthly training assignments. Rosters of those evaluated are forwarded to the Training section and tracked in the Fire Department's Learning Management System.

Multi-company performance-based measurements occur annually when crews participate in scenario-based training exercises organized and are evaluated by battalion chiefs. In 2012-2013, a joint International Association of Fire Chiefs/International Association of Fire Fighters training program on fire ground survival was delivered. Assessments for this program evaluate crew skills, incident command, safety, accountability and other core competencies and skills.

In addition to regular on-shift training, the Fire Department assigns weekend training shifts for each technical team discipline. This training is outlined in a monthly training calendar denoting different skills and competencies to be covered, and includes both individual and team performance-based measurements.

## **Appraisal**

The Fire Department has provided effective evaluation of individual, company and multi-company performance through the use of performance-based measurements that include annual performance appraisals. The combination of individual and company assessments has resulted in career-wide performance-based assessment for firefighters.

## **Plan**

The Fire Department will continue to evaluate individual, company and multi-company performance with the use of performance-based measurements.

## **References**

- 8B.4a. Performance evaluation, company officer, FD1138 (R2013-04)
- 8B.4b. Performance evaluation, firefighter/senior firefighter, FD1139 (1997-12)
- 8B.4c. Calgary Fire Department, 6-month and 11-month exam (confidential - see Manager of Learning & Business Development)
- 8B.4d. Calgary Fire Department 102% and 104% exam (confidential - see Manager of Learning & Business Development)
- 8B.4e. Calgary Fire Department chief officers examination (confidential - see Manager of Learning & Business Development)
- 8B.4f. Calgary Fire Department Learning Management System demonstration (see Manager of Learning & Business Development)
- 8B.4g. Calgary Fire Department, FD Notice #12-2013 Technical teams monthly training coverage, February 6, 2013

8B.5 The agency maintains individual/member training records.

### **Description**

Training records for all staff are tracked in the Fire Department's Learning Management System. The system stores information on all training delivered by the Training section, in-service training completed by crews, instructor-led training provided by training officers, station officers and field trainers, and online reading and training completed by individuals. All training records since 2005 have been entered into the Learning Management System while records prior to 2005 are maintained in an older database and are still accessible.

The City of Calgary's Human Resources business unit tracks employee participation in City-specific training and programs, including its Learning for Municipal Excellence program. Other personnel development and training is reported through a form and maintained by the employee's supervisor.

### **Appraisal**

The Fire Department has established an adequate system for the maintenance of individual training records. Employee personal training and development records have not been consolidated to a single, centralized system for tracking but are available through The City's Human Resources business unit

### **Plan**

The Fire Department will continue to document and track training records of all members in its Learning Management System.

As outlined in Objective 8.5 of its 2012-2014 business plan, the Fire Department will review the scheduling effectiveness and evaluate additional functionality of the Learning Management System to ensure that all training records from Fire Department-delivered training are stored in the Learning Management System.

### **References**

8B.5a. Calgary Fire Department 2012-2014 Business Plan, Objective 8.5, p. 24

8B.5b. Calgary Fire Department Learning Management System (see Manager of Learning & Business Development for login)

## **Criterion 8C: Training and Education Resources**

*Training and education resources, printed and non-printed library materials, media equipment, facilities, and staff are available in sufficient quantity, relevancy, diversity, and are current.*

### **Summary:**

The Fire Department's Training Academy is located on over 40 acres of land and includes buildings that provide 75,000 square feet of indoor training space, classrooms equipped with multimedia technologies and a large indoor training facility that contains a variety of props including a four-storey building façade used for rope rescue, ladder training and search and rescue training as well as an extensive trench rescue training area. Outside there is a five-storey smoke tower, flashover simulator, driving track, urban catastrophic event site, natural gas props, a housing compound for search and rescue activities, ventilation simulator and rail car prop.

There are sufficient dedicated apparatus, equipment and training materials to deliver current, relevant training to meet the Fire Department's training needs. All apparatus and equipment dedicated to training is the same as what is used by frontline personnel and is inventoried and maintained according to the same maintenance and lifecycle replacement schedules used for operational apparatus and equipment.

A trained instructional staff is available to conduct analysis, design, development, implementation and evaluation of training programs, materials and delivery. Instructional materials, consisting of texts, supplemental manuals and online materials, are validated against a review of applicable standards and legislation to ensure they remain current. Training materials are regularly evaluated by Training section staff as well as personnel to ensure they reflect current and best practices.

## **Performance Indicators:**

**CC 8C.1 Available training facilities and apparatus are provided to support the training needs of the agency.**

### **Description**

The Fire Training Academy is located on over 40 acres of land in southeast Calgary. There are two, two-storey buildings providing 75,000 square feet of indoor training space. In addition to numerous classrooms, including six which are multimedia equipped, there is an indoor training floor with a tower, trench rescue area, confined space area, search and rescue maze, self-contained breathing apparatus classroom and forcible entry props. Outside of the buildings there is a five-storey smoke tower, flashover simulator, driving track, urban catastrophic event site, trench rescue area, underground confined space tunnels, a housing compound for search and rescue activities, a vehicle extrication area, a ventilation simulator and a rail car prop.

The Training Academy routinely has two engines, one rescue unit, a driving simulator unit and an ambulance located onsite as well as miscellaneous fleet vehicles dedicated for training purposes. There is also a light fleet consisting of cars, trucks, vans and trailers for administrative and specialized support services. Additional apparatus is provided by the Operations & Technical Teams division for use in training exercises, as required.

In addition to the facilities located at the Training Academy, two fire stations are designated as satellite training sites and house Sea-can structures that can be used for search exercises as well as pads for vehicle extrication training.

### **Appraisal**

The Fire Department has established adequate training facilities and apparatus to support its training needs. The use of satellite training sites and the driving simulator unit has increased the facilities and apparatus available for training.

## **Plan**

The Fire Department will monitor capacity and resources to ensure that the training facilities and apparatus are appropriate to support training needs. Through the 10-year Emergency Response Infrastructure Investment Plan (ERIIP) outlined in Performance Indicator 6A.1, the Fire Department will continue to evaluate and identify its strategic long-range capital needs for the Training section on an annual basis.

## **References**

- 8C.1a. Calgary Fire Department active units inventory, December 9, 2013
- 8C.1b. Calgary Fire Department Training Academy and Multi-Agency Training Centre  
(suggest site visit)
- 8C.1c. SPC on Community and Protective Services, CPS2013-0802: Investing In  
Community Priorities (2014-2023), November 2013

8C.2 Instructional personnel are available to meet the needs of the agency.

**Description**

The Fire Department’s instructional personnel include a manager of learning and business development, manager of education, technical writer, multimedia developer, training coordinator, 16 training officers and over 170 field trainers who provide on-shift training across all platoons in thirteen disciplines. With the exception of field trainers, instructional personnel conduct analysis, design, development, implementation and evaluation of training programs, materials and delivery.

**Appraisal**

The Training section has adequate number of instructional personnel available to meet the training needs of the Fire Department. The use of field trainers and online training has expanded the reach, frequency and regularity of training and reduced barriers to training that previously resulted from reliance primarily on Training Academy infrastructure.

**Plan**

The Fire Department will continue to develop its training programs to ensure adequate instructional personnel are available and have the capacity to maintain and deliver training programs.

**References**

8C.2a. List of Calgary Fire Department training officers and field trainers, January 2014

8C.3 Instructional materials are current, support the training program, and are easily accessible.

### **Description**

The Training section continually validates, updates and revises its training materials. The revision process is documented using revision logs and version control and is validated by training staff, subject-matter experts and the Training Advisory Working Group.

Instructional materials used to support training programs are also regularly evaluated by the training coordinator and training officers and revised to reflect changes to standards or practices. All relevant training manuals are available online, either through the Fire Department's Learning Management System or intranet.

The Training section uses the most recent editions of *Fire Fighter Skills* and *Fire Officer: Principles and Practice* from the International Association of Fire Chiefs/National Fire Protection Association. These form the basis for the Fire Department's firefighter and company officer training programs along with associated materials produced by the Training section.

### **Appraisal**

The Fire Department has established a current, easily accessible set of instructional materials that support the training program.

### **Plan**

The Fire Department will continue to provide current instructional materials through existing methods and review relevance and timeliness of instructional materials prior to each course delivery. New editions of current texts will be procured in 2014 to support the continued relevancy and currency of the training program.

### **References**

8C.3a. Calgary Fire Department training manuals, Learning Management System (see Manager, Learning & Business Development)

8C.3b. List of training manuals and tools listed on CFDNet

8C.3c. International Association of Fire Chiefs/National Fire Protection Association, Fire Officer: Principles and Practice, Second Edition

8C.3d. International Association of Fire Chiefs/National Fire Protection Association, Fundamentals of Fire Fighting Skills, Third Edition

8C.3e. International Association of Fire Chiefs/International Society of Fire Service Instructors/National Fire Protection Association, Fire Service Instructor: Principles and Practice

8C.4 Apparatus and equipment utilized for training are properly maintained in accordance with the agency's operational procedures, and are readily accessible to trainers and employees.

### **Description**

Apparatus and equipment assigned to the Training Academy is available at all times for training purposes. To provide an effective fire service, the Fire Department recognizes that fire apparatus used for training must meet industry and other recognized standards for equipment maintenance, lifecycle and safety. As such, the Fire Department has a fleet management plan that contains principles for optimizing and enhancing the lifecycle of its apparatus.

As outlined in Performance Indicator 6D.3, through the Fire Department's Assetworks M5 computerized maintenance management system, the Fleet Maintenance section forecasts, schedules, tracks and reports on all preventative maintenance and repair activities of its vehicle and apparatus assets, including those used at the Training Academy. As outlined in Performance Indicator 6E.2, the Equipment & Supply section is responsible for inventory control and distribution of tools and equipment, and has a lifecycle replacement schedules for tools and equipment that vary depending on the item.

Training personnel follow the same procedures as Operations & Technical Teams staff and complete regular checks using an apparatus and equipment check sheet to verify all tools and equipment are available in the amounts indicated and are functioning properly. Training staff report equipment and supply deficiencies to the Equipment & Supply section. Should a piece of equipment require maintenance or repair, it is sent to Equipment & Supply for repair or replacement.

Equipment and supplies for in-station training are ordered through Equipment & Supply and then distributed directly to stations.

### **Appraisal**

Apparatus and equipment dedicated to the Training Academy have been properly maintained in accordance with the Fire Department's operational procedures and maintenance and lifecycle replacement guidelines. As noted in Performance Indicator

6D.1, the Fire Department's apparatus maintenance program has been established in accordance with manufacturer's recommendations and health and safety acts, regulations and codes. Apparatus and equipment have been dedicated to the Training Academy to ensure they are readily accessible to trainers and personnel.

### **Plan**

The Fire Department will continue to dedicate properly maintained and appropriate apparatus and equipment to the Training section to ensure staff receive training on apparatus and equipment they will be using in the field.

### **References**

- 8C.4a. Calgary Fire Department, Equipment/apparatus check sheet, apparatus #E4402, Training Engine
- 8C.4b. Equipment & Supply order form
- 8C.4c. Damaged, missing or lost equipment report FD 1205 (R2012-04)
- 8C.4d. Equipment repair tag FD 923 (1998-07)

8C.5 The agency maintains a current inventory of all training equipment and resources.

### **Description**

The Training section maintains an inventory of its dedicated apparatus, equipment and resources. Assigned training officers track on-site inventory while all training equipment is inventoried and tracked by the Equipment & Supply section as described in Performance Indicator 8C.4.

### **Appraisal**

The Fire Department has established a system for tracking the Training section's inventory of training equipment and resources.

### **Plan**

The Fire Department will continue to maintain and review the inventory practices used at the Training Academy.

As outlined in Performance Indicator 6F.5, as part of Objective 10.1 of its 2012-2014 Business Plan, the Fire Department will conduct an internal control audit on tangible capital asset procurement. Through this work, the Training section will work with the Fire Department's Logistic and Infrastructure division to ensure efficient tracking of the maintenance of apparatus and small equipment assigned to the Training Academy.

### **References**

8C.5a. Training Academy on-site inventory list (see Manager, Learning & Business Development)

8C.6 A selection process is in place for training and educational resource materials.

### **Description**

Training and educational materials are selected to support curriculum that is developed to address the training needs identified in Performance Indicator 8A.1 and minimum learning requirements set through Performance Indicator 8A.4. Materials are selected to align with the identified need, delivery methodology and adult-learning principles.

To ensure alignment with industry standards and practices, the Fire Department has shifted from solely developing in-house training materials to use of industry-recognized textbooks. Textbooks are selected based on timeliness, quality and the extent to which they align with curriculum requirements and applicable industry standards. After a text is chosen and acquired, it is reviewed to determine if any local competencies are missing. If key local information or competencies are missing, supplemental training materials are developed in-house.

### **Appraisal**

The Fire Department has established an effective process for the selection of training and educational resource materials that support its curriculum. Materials have been reviewed and approved by the Training section to ensure alignment with learning objectives.

### **Plan**

The Fire Department will continue to select and use industry-standard published resource materials, review content and develop supplemental materials if needed to ensure local needs and learning requirements are reflected in its training materials.

### **References**

- 8C.6a. International Association of Fire Chiefs/National Fire Protection Association, Fire Officer: Principles and Practice, Second Edition
- 8C.6b. International Association of Fire Chiefs/National Fire Protection Association, Fundamentals of Fire Fighting Skills, Third Edition

8C.6c. International Association of Fire Chiefs/International Society of Fire Service  
Instructors/National Fire Protection Association, Fire Service Instructor: Principles  
and Practice

8C.6d. Training Advisory Working Group process chart

**CC 8C.7 Training materials are evaluated on a continuing basis, and reflect current practices.**

**Description**

As part of the Training section's training development process, training materials, which include the proposed curriculum, performance-based measures, evaluation techniques, instructional materials and delivery method, are evaluated prior to the delivery of training to ensure they are current and reflect applicable standards, legislation and best practices. Subject matter experts and technical writers review all training materials to ensure they are valid, current, educationally sound and easy to understand. Documentation is either through a version control that includes revision number, date, subject matter expert/instructional designer/editor, and description of revision, or documentation is captured on form FD 1265 – Training Material or Course Content Request which includes the type of change, reason for change, who the change impacts, and the risks considered for making the change.

In addition to the training material evaluation noted in Performance Indicator 8C.6, the Training section reviews all new curriculum to ensure alignment with current practices, standards and legislation, and the Training Advisory Working Group ensures alignment with operational practices. The Training Advisory Working Group can also approve significant changes in curriculum, and may chose to submit major changes to training programs to the Fire Executive Team for approval.

The Fire Department recognizes that participant satisfaction is an essential part of a continuous improvement and evaluation program. As a result, feedback from participants is obtained through a course evaluation form following every training course and every recruit class is interviewed to assess and identify areas for improvement, including training materials. In 2013, the Training section distributed an electronic survey to six 2012-2013 graduated recruit classes soliciting feedback on the level and importance of practical skill experiences gained during recruit training, and the application of practical skills used in the field. These qualitative evaluations are compiled and the training program and associated materials are adapted as necessary.

## **Appraisal**

The Fire Department has established an effective process for evaluating its training materials on a continual basis to ensure they reflect current and relevant practices, applicable standards and legislation. Training materials are evaluated by Training section staff for validity, educational merit and alignment with training needs and minimum skill requirements, and personnel for relevancy and applicability.

## **Plan**

The Fire Department will continue to use both internal and external groups to evaluate the currency, relevancy and merit of its training programs and materials and will investigate the use of electronic methods to solicit participant feedback to better analyze results and identify trends.

## **References**

- 8C.7a. Calgary Fire Department Training Academy course evaluation
- 8C.7b. Calgary Fire Department recruit training survey, December 2013



## **Category IX: Essential Resources**

Essential resources are defined as those mandatory services or systems required for the agency's operational programs to function. They may be given the same value of importance as a primary program. Appropriate adjustments may be necessary in the self analysis to adapt the typical components listed below to the local situation.

For example, when reviewing a water supply system, the evaluation may not be limited to conventional resources such as water lines and hydrants, but may include alternative resources, such as tankers, ponds, streams, lakes, etc.

## **Criterion 9A: Water Supply**

*The water supply resources are reliable and capable of distributing adequate volumes of water and pressures to all areas of agency responsibility. All areas meet fire flow requirements for emergencies.*

### **Summary:**

The City of Calgary's Water Services and Water Resources business units provide the community with a safe and reliable source of water for consumption and fire protection purposes. They supply about 950 megalitres per day of potable water into a citywide network of 46 pump stations, 21 reservoirs and almost 5,000 kilometers of water distribution piping of various sizes. At least 50 per cent of the potable water supply is dedicated for emergency firefighting use.

There are over 15,400 public fire hydrants located throughout the city on a water grid system supplied by various reservoirs. Hydrants are accessible and appropriately located to support firefighting operations, and in areas where water supply is inadequate, the Fire Department employs water tenders. A formalized hydrant inspection program is in place to ensure adequate and reliable water service for firefighting operations, and all water-related information is documented, centralized and available for reference by fire crews through mobile computer systems in apparatus and hard-copy maps.

The City meets or exceeds water storage, distribution and fire flow requirements from the American Water Works Association, Fire Underwriter's Survey and the *Alberta Building Code*.

## **Performance Indicators:**

**CC 9A.1 The agency establishes minimum fire flow requirements and total water supply needed for existing representative structures and other potential fire locations. This information should also be included in the fire risk evaluation and pre-fire planning process.**

### **Description**

The City references fire flow guidelines identified in the American Water Works Association (AWWA) M31 manual and by the Fire Underwriter's Survey (FUS). The Fire Department has established minimum fire flow targets of 5,000 litres per minute from city hydrants with 150 kilopascals residual pressure, which matches the output flows of its engines. Hydrant spacing for commercial zones and residential communities is 150 metres and 300 metres, respectively. Fire flow requirements in conjunction with approved hydrant spacing provides for an anticipated fire flow of 15,000 litres per minute using three hydrants for existing structures.

The Water Resources business unit, part of The City's Utilities & Environmental Protection department, provides at least 475 megalitres of water per day dedicated for emergency fire flow and is only limited by the size of the distribution network, which uses 150mm or larger water mains. Fire crews access water main information through the iMobile systems located in Fire Department apparatus or hard copies of water distribution maps carried on district chief command vehicles.

The water supply system and anticipated fire flows form one of the risk layers the Fire Department uses to conduct fire risk evaluations for its Standards of Cover.

### **Appraisal**

The Fire Department has established minimum fire flow requirements and total water supply available for existing structures that meets or exceeds guidelines set out by AWWA and FUS. Water supply information has been included in the Fire Department's community risk assessment process and incident planning process.

## **Plan**

The City's Water Services will continue to conduct fire flow tests and compare data to modeling outcomes to ensure consistency and data reliance. The Fire Department will continue to use expected fire flow data as part of its community risk assessment and incident planning process.

## **References**

- 9A.1a. Distribution System Requirements for Fire Protection, American Water Works Association (M31) Fourth Edition
- 9A.1b. Water Supply for Public Fire Protection, Fire Underwriter's Survey, 1999
- 9A.1c. Water distribution map book (scanned page)

**CC 9A.2 An adequate and reliable fixed or portable water supply is available for fire fighting purposes. The identified water supply sources are sufficient in volume and pressure to control and extinguish fires.**

**Description**

The City currently produces about 950 megalitres of potable water per day that is dispersed through a distribution network comprised of 46 pump stations, 21 reservoirs basins, almost 5,000 kilometres of piping and over 15,400 city fire hydrants. Hydrants are located throughout the city and spaced a minimum of 300 metres apart in residential communities and a minimum of 150 metres apart in commercial areas.

The water distribution system in Calgary is very reliable based on an established grid system that supplies hydrants from various basins and reservoirs throughout the city. Approximately 50 per cent of The City's treated water, or about 475 megalitres, is stored for emergency reserve. Each pumping station has an emergency backup power supply to ensure it will continue working in the event of a power failure. All city hydrants are three-port hydrants with steamer ports to allow maximum flow. Fire flows of 5,000 litres per minute from each hydrant with service pressures between 280 and 700 kilopascal (kPa) and a residual pressure of 150 kPa is a good match to the Fire Department's engine capabilities. The flow rates and residual pressure provides sufficient water volume and pressure to control and extinguish fires using a variety of firefighting tactics.

In areas where there are no suitably located hydrants, the Fire Department augments its response with water tenders that carry between 11,000 and 12,500 litres of water each and, if needed, can request additional tender support from fire agencies in surrounding districts and municipalities through an established memorandum of understanding.

**Appraisal**

The Fire Department has an adequate and reliable fixed or portable water supply available for firefighting purposes. An emergency water supply distributed through a grid system with an emergency backup power supply to all pumping stations has ensured an adequate and reliable water supply is available for firefighting purposes. The volume of water available for emergency fire flow and hydrant spacing has been deemed consistent with

American Water Works Association guidelines and has resulted in sufficient pressure to control and extinguish fires. When required, water tenders with portable pools have been dispatched to augment water supply for firefighting purposes.

### **Plan**

To accommodate city growth while meeting demands for water availability and reliability for firefighting purposes, the Fire Department will continue to maintain its working relationship with The City's Water Resources and Water Services business units.

### **References**

- 9A.2a. Distribution System Requirements for Fire Protection, American Water Works Association (M31) Fourth Edition
- 9A.2b. Waterfront application (<http://waterfront>)

9A.3 The fire agency evaluates fire suppression water flow requirements for proposed projects involving structures or complexes of structures within their jurisdiction. Significant reductions in required fire flow granted by the installation of an approved sprinkler system in buildings are documented.

### **Description**

Applications for building permits are submitted to The City's Development & Building Approvals business unit and are subject to a review process to ensure compliance with the *Alberta Building Code*, the *Alberta Fire Code*, and referenced documents within these codes. *Alberta Building Code*, Article 3.2.5.7 specifies that additional water supply for firefighting is required in buildings greater than 600 square metres or more than three storeys in height. The Fire Department's Technical Services section reviews applications with building officials to ensure water supply meets code requirements. This review process ensures that water available for firefighting purposes is not less than the quantity derived from the formula specified in Article 3.2.5.7.

A city hydrant meeting the fire flow requirements and distance from the building may be acceptable; however, should a city hydrant not meet the minimum requirements, a private hydrant may need to be supplied as set out in the *Alberta Building Code*. Proposed building projects on undeveloped areas with no municipal water supply must provide a firefighting water supply for buildings as specified above.

The City or third-party contractors verify adequate fire flows when required by a project, and Development & Building Approvals maintains all records. It is possible to have significant reductions in the fire flow requirements if approved sprinkler systems are installed as per the *Alberta Building Code*. Projects where installed sprinkler systems reduce fire flow requirements are documented on building permits and maintained by Development & Building Approvals. As outlined in Division B of the *Alberta Fire Code* (2006), building owners are responsible for inspecting, testing, operating and maintaining water-based fire protection systems and retaining written records for a period of two years.

## **Appraisal**

The Fire Department has supported the *Alberta Building Code*, Article 3.2.5.7 calculation of fire flow requirements and has an established process for verification of water flow requirements for proposed structures. Variances have been granted related to fire flow requirements due to approved sprinkler systems installations and The City's Development & Building Approvals maintains such records.

## **Plan**

The Fire Department will continue using *Alberta Building Code* calculations for fire flow requirements. The Fire Department will continue to have its Technical Services section review all new building applications and work to ensure their review occurs as early as possible in the building approval process.

The City's Water Services will continue to conduct fire flow testing to ensure planning and design guidelines are consistent with best practice during construction, repair and installation of new infrastructure.

## **References**

- 9A.3a. *Alberta Building Code* (2006), Division B, Part 3, 3.2.5.7
- 9A.3b. *Alberta Building Code* Standata 06-BCV-014R1 Water supply for fire fighting for industrial buildings, June 2010
- 9A.3c. Calgary Fire Department, Building owner's responsibilities for fire safety equipment brochure, January 2012

9A.4 The agency maintains regular contact with the managers of public and private water systems to stay informed about all sources of water available for fighting fires.

### **Description**

Various meetings and communications regularly take place between the Fire Department and The City's Water Resources and Water Services personnel at all levels within both organizations. At the operations level, a district chief is assigned responsibility for maintaining contact with Water Services personnel regarding operational water supply issues and hydrant testing. At least once a year, senior water managers attend a Fire Department chief officer's meeting to discuss emergency operational issues. This provides new chief officers a better understanding of how Water Services personnel can assist during an emergency incident. Water Services operates an emergency dispatch centre that can provide emergency assistance to fire incidents around the clock.

The fire marshal and the Fire Department's technical services officers have good working relationships with Water Services personnel and the deputy chief of the Operations & Technical Teams division is in frequent communication with senior Water Resources and Water Services personnel on strategic planning matters and legal issues. The Fire Department's mapping personnel also work with Water Services staff to produce hydrant mapping used by emergency personnel.

Regular contact occurs regarding maintenance and repair of the hydrant distribution system. Occasionally, hydrants are placed out of service for short periods of time for upgrade or repair. Through a request of the Fire Department, Water Services has adopted a standard operating procedure to provide reports of all out of service hydrants to the Fire Department so suppression crews are aware alternative hydrants may be required.

The Fire Department and Water Services also share access to a web-based hydrant database known as WaterFront, which provides information on hydrant testing results and water assets, including hydrant locations and water system attributes.

## **Appraisal**

The Fire Department has established working relationships and contact with staff at all levels of The City's Water Resources and Water Services business units to stay informed about water sources available for firefighting and address water-related issues.

## **Plan**

The Fire Department will continue to meet regularly with managers and staff of Water Resources and Water Services. A district chief will continue to be assigned responsibility for regular contact with Water Services regarding any day-to-day operational issues concerning water supply for firefighting purposes.

## **References**

9A.4a. Waterfront application (<http://waterfront>)

9A.4b. CFDNet Training & Tools, Software resources, Waterfront demo  
[http://cfdnet/training\\_tools/Pages/SoftwareResources.aspx](http://cfdnet/training_tools/Pages/SoftwareResources.aspx)

9A.4c. City of Calgary Water Services, Hydrant out of service list, November 7, 2013

9A.5 The agency maintains copies of current water supply and hydrant maps for its service area.

### **Description**

Hydrant maps used by the Fire Department are schematic maps based on square kilometre sections that show street names, addresses and fire hydrant locations. They are available as both a digital computer-aided design (CAD) layer on mobile display terminals installed in apparatus, known as iMobile, and in paper back-up format on all frontline apparatus. In addition to hydrant maps, there is an electronic water distribution map available as a CAD layer on iMobile with a hard-copy backup in all district chief vans. All Fire Department personnel have access to the WaterFront web-based application to view information on water assets, including hydrant locations and water system attributes.

All frontline apparatus and district chief vans are equipped with the iMobile system, which assists with command functions including water management. A utility display map can be displayed showing locations of all water-related information, including both public and privately owned hydrants, valve locations and detailed water main, feeder, and local supply pipeline infrastructure. Clicking on the color-coded water mains displays the main size and the anticipated fire flow values.

Hydrant location data supplied by The City's Water Services for new or removed hydrants is augmented by fire crew field reports. All hydrant locations are confirmed or revised following fire crew district familiarization and during bi-annual hydrant testing and inspections performed by fire crew. This process helps the Fire Department maintain accurate and verified hydrant locations for the more than 15,400 hydrants throughout the city. Fire Department mapping personnel are responsible for keeping hydrant maps current and provide revised information reported by fire crews to Water Services.

### **Appraisal**

Hydrant maps and current water supply information have been effectively and reliably established for emergency response purposes. The process for updating this information has been timely and appropriate.

**Plan**

The Fire Department will continue to keep current electronic and hard copy maps containing hydrant locations and water supply information.

**References**

9A.5a. City of Calgary hydrant locations

9A.5b. Calgary Fire Department utility display map

9A.5c. Paper Water Service utility map book (scanned page sample)

9A.6 Hydrant adequacy and placement reflects the locality's known hazards and the agency's needs for dealing with those hazards.

### **Description**

The American Water Works Association (AWWA) provides guidelines for appropriate fire flow requirements and hydrant spacing. AWWA also sets out that communities may establish their own hydrant placement objectives provided the fire department carries sufficient hose to reach potential fire incidents. Calgary has over 15,400 public hydrants placed throughout the city spaced a minimum of 150 metres and 300 metres apart for commercial zones and residential areas, respectively. Hydrant spacing aligns with the 300 metre length of high-volume hose carried on Fire Department engines.

As part of the building planning and approval process, the Fire Department's technical services officers work with The City's building approval officials to review building applications and ensure adequate fire flow is available from the water distribution system. If additional flow is required, private hydrants may be required to be installed as a condition of approval.

### **Appraisal**

Hydrant adequacy and placement has been appropriately established to address the hazards identified for Calgary.

### **Plan**

The Fire Department will continue to review and evaluate hydrant placement as part of the building approval process. To ensure any concerns regarding hydrant adequacy and placement are dealt with quickly, the Fire Department will continue to identify issues or concerns in post-incident debriefings.

### **References**

- 9A.6a. The City of Calgary, Subdivision construction and design standards, Part D
- 9A.6b. Distribution System Requirements for Fire Protection, American Water Works Association (M31), Fourth Edition
- 9A.6c. City subdivision construction and design standards, Section D2, Hydrant coverage

9A.7 Fire hydrants are located so that each is visible and accessible at all times. Hydrant locations are documented.

### **Description**

The City's Water Services business unit establishes hydrant locations in accordance with the guidelines outlined by the American Water Works Association (AWWA) and the Fire Department. All hydrants are painted either red or bright yellow for easy identification and are located on corners or mid-block of street fronts. As part of The City of Calgary Bylaw Number 40M2006, *The Water Utility Bylaw*, all owners and occupants of properties on which a fire hydrant is located must ensure hydrants are free from obstructions and their operation is not interfered with.

Hydrant locations are documented in the Waterfront web-based application shared by the Fire Department and Water Services. In addition, the Water Services documents the location of water assets, including hydrants, in an integrated geospatial database environment that is available to the Fire Department and other City business units for use in risk analysis and planning.

### **Appraisal**

Fire hydrants have been located so they are visible and accessible at all times and their locations are documented in a web-based application available to all Fire Department personnel as well as an integrated geospatial database available for Fire Department risk assessments and planning.

### **Plan**

The Fire Department will continue to ensure that fire hydrant locations are documented, and during its annual hydrant inspection program, outlined in Performance Indicator 9A.8, will ensure that hydrants are visible, free from obstructions and their operation is not interfered with.

### **References**

9A.7a. City of Calgary Bylaw Number 40M2006: *The Water Utility Bylaw*

9A.7b. Geospatial database environment (see Supervisor, GIS Mapping and Analysis)

9A.8 Fire hydrants are inspected, tested and maintained and the agency's related processes are evaluated periodically to ensure adequate and readily available public or private water for fire protection.

### **Description**

All City fire hydrants are tested as set out in the *Alberta Fire Code*. Every public hydrant is tested and inspected twice a year and flush-tested annually by fire crews. As part of the inspection process, all port and cap threads are lubricated, gaskets are replaced as needed and spindle operations are tested. Fall inspections include checks to ensure water is drained from the barrel to avoid frozen spindles.

All hydrant data, including pressure readings, are recorded in the web-based application, WaterFront, used by both Water Services and the Fire Department. All identified deficiencies, including insufficient water pressure, broken parts or improper operation, are entered into the application and placed onto work orders. All work orders are followed up by The City's Water Services.

At the beginning of each year, the district chief assigned responsibility for the hydrant inspection program meets with The City's Water Services personnel to review the maintenance and inspection process to ensure it continues to be effective and reliable.

As per the *Alberta Fire Code* Article 6.4.1.1 and National Fire Protection Association Standard 25, owners of private hydrants are required to test and annually inspect their hydrants. Maintenance records are to be kept for a minimum of two years and may be requested for examination by a fire safety codes officer.

### **Appraisal**

The Fire Department has an established, effective process for periodically evaluating the maintenance, inspection and testing of hydrants to ensure the adequacy and availability of public or private water for fire protection.

## **Plan**

The Fire Department will continue to inspect and test hydrants to ensure they are adequate and readily available for fire protection, and share the information with Water Services to ensure any concerns are promptly addressed.

## **References**

- 9A.8a. Calgary Fire Department, Hydrant Inspection and Testing Manual, August 2013
- 9A.8b. WaterFront v3.3 Hydrant Inspections Web Application User Manual, March 2013
- 9A.8c. Calgary Fire Department, Business license pre-inspection and annual checklist, April 2010
- 9A.8d. *Alberta Fire Code, 2006* (available for viewing in the Office of the Fire Marshal)
- 9A.8e. National Fire Protection Association standard 25: *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2014 Edition (see Office of the Fire Marshal for NFPA Member ID and password)

9A.9 The agency identifies and plans for alternate sources of water supply for those areas without hydrants, where hydrant flows are insufficient, or in the event of a major disruption in public water supply capabilities.

### **Description**

If alternative water sources are required for areas without hydrants, hydrant flows are insufficient or a major disruption occurs in the public water supply, the Fire Department uses its own water tenders or those of a fire agency in a surrounding district or municipality, depending on the incident location. Water tenders are automatically assigned through dispatch protocols to addresses where it is known hydrants do not exist or there is insufficient water supply, including water provided from a pond. The Fire Department has two water tenders that carry between 11,000 and 12,500 litres of water each. Water tenders can directly supply Fire Department engines or empty their water loads into portable reservoirs that are quickly set up for firefighting water supply.

The Fire Department also has two large portable pumps and numerous smaller ones that can supply water from alternative sources, such as pools, ponds and rivers.

### **Appraisal**

The Fire Department has identified areas where there are no hydrants or where flow is insufficient, and has developed plans to obtain alternate sources of water for firefighting operations when required.

### **Plan**

The Fire Department will continue to identify areas requiring alternative water supply for firefighting purposes and will ensure the dispatching agency, Public Safety Communications, is aware of these areas so dispatch protocols reflect this information.

As outlined in Vision 10, Strategy B of its 2011-2021 Sustainability Plan, the Fire Department will be exploring options to reduce reliance on the potable water supply through the next two business planning cycles (2015-2018, 2019-2022).

## **References**

9A.9a. City of Calgary Public Safety Communications CAD system (see Deputy Chief of Operations & Technical Teams, suggest site visit)

9A.9b. Calgary Fire Department 2011-2021 Sustainability Plan, Vision 10, p. 32

9A.10 The agency has operational procedures in place outlining the utilization of available water supply.

### **Description**

The Fire Department has a standard operating procedure for all engines to ensure they secure an uninterrupted, adequate supply of water for firefighting purposes. Standard operating procedures require a high-volume hose of 130mm when establishing a supply line between a hydrant and engine. Every engine carries a minimum of 300 metres of high-volume hose to provide an uninterrupted water supply to the attack engine. An exception to this may occur when crews are in a tactical mode as set out in the Fire Department's *Strategies and Tactics for Incident Command* manual. In addition, several of the Fire Department's aerial units carry their own 130mm hose complement and have the ability to deliver water through their own pump, reducing the need for a supply engine.

### **Appraisal**

The Fire Department has established standard operating procedures outlining use of available water supply to ensure an uninterrupted, adequate supply of water for firefighting purposes. The Fire Department has provided all company officers with training in water management and options on how to deliver and supply water during emergency events. Through a variety of evolutions and delivery options, pump operators have been trained to maximize water supply.

### **Plan**

The Fire Department will continue to maintain and update its standard operating procedures related to the use of water supply. It will also continue to train company officers in these standard operating procedures and the Fire Department's incident command water management practices.

### **References**

9A.10a. Calgary Fire Department, *Strategies and Tactics for Incident Command Manual*, January 2013

## **Criterion 9B: Communication Systems**

*The public and the agency have an adequate, effective, and efficient emergency communications system. The system is reliable and able to meet the demands of major operations, including command and control within fire/rescue services during emergency operations, and meets the needs of other public safety agencies having the need for distribution of information.*

### **Summary:**

As the largest public safety answering point in the Province of Alberta, and one of the largest in Canada in terms of call volumes and number of people served, The City of Calgary's Public Safety Communications (PSC) provides the Fire Department's emergency communications system. It answers, evaluates and dispatches 9-1-1 emergency calls and non-emergency calls for the Fire Department, Calgary Police Service and Alberta Health Services for emergency medical services in Calgary and areas outside city limits.

Emergency communications systems that support the Fire Department includes radio, paging, fire station alerting, mobile computer systems, logging recording and a range of other systems to ensure timely, effective and efficient communication. The network that supports PSC spans both its primary operations centre and backup facility. PSC has constructed an advanced systems architecture that includes computer-aided dispatch systems, automatic vehicle locator technology, computer hardware, networks and redundancy systems to ensure operational continuity. Over 300 professionally trained emergency communications officers - supported by a well-defined governance and management model, standard operating procedures, processes, standards and quality improvement programs - allow the centre to evaluate and dispatch resources for over 55,600 9-1-1 and non-emergency calls received for the Fire Department each year.

## **Performance Indicators:**

**CC 9B.1 A system is in place to ensure communications with portable, mobile, and fixed communications systems in the field.**

### **Description**

The City's Public Safety Communications (PSC) answers, evaluates and dispatches 9-1-1 emergency calls and non-emergency calls for the Fire Department, Calgary Police Service and Alberta Health Services for emergency medical services in Calgary and areas outside city limits. It uses a sophisticated communications system comprised of multiple technologies, equipment and resources to ensure continuous, effective and reliable communications with frontline responders. This system includes:

- City 800 megahertz Motorola digital trunked radio system
- Intergraph computer-aided dispatch (CAD) software
- City Information Technology Services computers, servers and networks
- Locution fire station alerting system
- Telus EVDO public data infrastructure (SIPA) HSPA cellular network
- Ruggedized laptop computers with vehicular mounting systems (iMobile)
- Mobile data transceivers equipped with geographic positioning system (GPS)
- Telus MIKE paging infrastructure
- Nice Systems digital audio recording/retrieval hardware and software
- Automated vehicle locator system
- Telus MIKE province-wide public access radio network

All Fire Department apparatus have 15-25 watt fixed mobile radios operating on an 800-megahertz (MHz) trunked radio system with the ability to communicate with PSC and each other. All firefighter positions assigned to an apparatus and group to support an event response are assigned an 800 MHz Motorola portable radio. There are 12 primary tactical talk groups and nine simplex channels. Twenty-three apparatus are equipped with mobile repeaters to extend the coverage of radio communication areas with poor signal reception. The mobile repeater bridges the simplex channels to the trunked radio system, and extends some functionality of the trunked radio system to the simplex channels (e.g. transmitting

emergency signals, recording simplex channel). Every response apparatus also has a cellular phone for additional communications, and satellite phones are deployed in district chief vehicles in the event of a communications blackout.

All apparatus are equipped with mobile computer systems, known as iMobile, to receive dispatch calls and status updates in real time. In apparatus equipped with iMobile, transmissions are integrated with the standard practice of dispatching and updating by voice radio. Apparatus equipped with global positioning systems receive navigation instructions to the call location via Intergraph software installed on iMobile. Throughout the Fire Department's response, personnel and PSC dispatch can communicate by voice on mobile and portable radios and/or by narrative text messaging through the iMobile.

PSC also uses a trunked 800 MHz and conventional 400 MHz radio for dispatch voice announcements and as a backup toning system during fire station alerting. The Fire Department uses the Telus MIKE network to page personnel in the field, which is done at the request of Fire Department personnel or as required to meet dispatch protocols.

### **Appraisal**

PSC has established a comprehensive system for ensuring communication with portable, mobile and fixed communications systems in the field. It has effectively supported communications within the Fire Department and between other agencies as required, both in transit and onsite.

### **Plan**

The Fire Department and PSC will continue work with the Province of Alberta on a provincewide radio communications system that will link 700 agencies and nearly 30,000 emergency responders. To be completed in 2015, the Alberta First Responders Radio Communications System will enable emergency personnel from different agencies and jurisdictions in Alberta to quickly connect and coordinate responses as required.

### **References**

9B.1a. Public Safety Communications, Standard Operating Procedure: AHS and Fire dispatch-radio channel assignments, March 23, 2012

9B.2 The emergency communications system is capable of receiving automatic and manual early warning and other emergency reporting signals.

### **Description**

The primary method for the public to contact the Fire Department is through Public Safety Communications (PSC) and its public switched telephone network and Provincial Enhanced 9-1-1 (E911) system.

Automatic Number Information and Automatic Location Information (ANI/ALI) is fed directly from the E911 network to the computer-aided dispatch (CAD). This allows the precise location of any alarms reported by a traditional landline telephone service to be displayed on the CAD system and facilitates the immediate dispatch of the closest available unit(s). New telephone services such as VoIP are dependent on both the service provider and end user for the accurate address to be relayed to the CAD system.

Commercial alarm companies have access to a ten-digit number that allows them to dial directly into the 9-1-1 call queue.

Wireless E911 Phase II capability exists for all wireless service providers in Alberta, which means emergency communication officers are provided with the caller's cell phone number and approximate location according to the cell tower transmitting the call. This ensures that a callback can be made if the connection is terminated. Deaf, hard of hearing and speech impaired (DHHSI) citizens can converse with PSC using Text with 9-1-1 (T9-1-1) service.

### **Appraisal**

Through PSC, the Fire Department has established an effective emergency communication system capable of receiving automatic and manual early warning and emergency reporting signals. The PSC is the second 9-1-1 centre in Canada and the first in Alberta to offer T9-1-1 service specifically for the DHHSI community.

### **Plan**

As outlined in Objective 9.4 of its 2012-2014 Business Plan, PSC will continue to participate in the Emergency Services Working Group, established by the Canadian

Radio-television Telecommunications Commission, to develop service infrastructure standards and implement a next generation 9-1-1 capable telephone system.

**References**

9B.2a. Public Safety Communications (suggested site visit)

9B.2b. Canadian Radio-television and Telecommunications Commission, Task identification forms for 9-1-1 and in-call location update

<http://www.crtc.gc.ca/cisc/eng/cisf3e4c.htm>

9B.2c. Public Safety Communications 2012-2014 Business Plan, Objective 9.4

9B.3 The agency's communications center(s) is/are adequately equipped and designed, e.g., telephones, radios, equipment status, alarm devices, computers, address files, dispatching circuits, playback devices, recording systems, printers, consoles, desks, chairs, lighting and map displays, etc.

### **Description**

PSC has computers, display monitors, printers, radios and telephones in place at 70 fully adjustable and ergonomically designed workstations. As outlined in Performance Indicator 9B.1, PSC is equipped with a range of systems that provide for effective, timely and reliable communications with emergency responders. These technologies are either duplicated for redundancy or have backup systems in place to ensure service is not interrupted by equipment failure or adverse conditions.

The telephone system is based on a Centrex automatic call distribution service that has both overflow and backup capabilities. The recording system records all incoming and outgoing audio telephone and voice radio dispatch calls and stores them in digital format in a backed-up data storage array network.

The computer-aided dispatch (CAD) system is equipped with dual servers and hard copy maps are available as backup. The CAD is integrated with the Enhanced 9-1-1 (E911) system and the fire station alerting system, enabling automated apparatus recommendations and fire station alerting based on Automatic Number Information and Automatic Location Information (ANI/ALI) data. In the event of a network failure, fire station alerting is accomplished using the 800 and 400 megahertz (MHz) radio system.

There is a fully equipped secondary (backup) communications centre in the event of an evacuation of PSC's primary facility. Located in a secure location within The City's Emergency Operations Centre, it provides full dispatch console and CAD functions, full 9-1-1 telephone system capabilities and mobile desktop radios. The secondary centre is a multi-functional space providing backup to PSC's primary centre, an area for major emergency event management, accommodations for staff training and space for potential temporary expansion of PSC's primary facility.

The City's Emergency Operation Centre also houses the southern hub of the Provincial First Responders Radio Communication System, providing redundant functionality, capacity and backup capabilities.

### **Appraisal**

The PSC facility has been adequately equipped and designed with significant fault tolerance and redundancies to provide reliable communications support.

### **Plan**

PSC will continue to ensure the communications centre is well equipped and updated as required, and will continue to perform exercises to regularly test redundant systems and the backup facility.

### **References**

- 9B.3a. Public Safety Communications (suggest site visit)
- 9B.3b. City of Calgary Emergency Operations Centre (suggest site visit)

9B.4 The uninterrupted electrical power supply for the communications center is reliable and has automatic backup capability.

### **Description**

PSC has an uninterruptible power supply (UPS) and two generators that provide backup in the event of an interruption to the commercial power system. All of the critical onsite electrical systems are connected to the protected power system. The commercial power and generator are behind the UPS and there is a transfer switch to handle the switching.

In the event of a power loss or interruption, the generator is activated and the load is automatically switched to the generator supply. The UPS can provide battery backup for 20 minutes allowing for a safe transition to the generator. The generators can provide power for 24 hours on a single tank of fuel. The City's Corporate Properties & Buildings business unit has an agreement with a supplier for hot refueling to ensure communications continue to function indefinitely on generator power.

The transfer from commercial power to the generators is tested monthly. The test procedure specifies that the communication centre should operate on generator power for a period of one hour.

### **Appraisal**

PSC has established a reliable uninterrupted electrical power supply with automatic backup capability. Periodic interruptions to the main power supply have been experienced with no effects to operations or damages to equipment.

### **Plan**

PSC will continue to test its backup power monthly to ensure it works properly and effectively.

### **References**

9B.4a. Public Safety Communications monthly generator testing log (available for viewing at PSC)

9B.4b. Public Safety Communications emergency and business continuity plans (available for viewing at PSC)

9B.4c. Public Safety Communications emergency response plan (available for viewing at PSC)

**CC 9B.5 Standard operating procedures or general guidelines are in place to direct all types of dispatching services provided to the agency by the communications center(s).**

**Description**

PSC evaluates and dispatches emergency and non-emergency events for the Fire Department. The duties and responsibilities of emergency communication officers and emergency communication leads are described in PSC's standard operating procedures, and detailed dispatch procedures are described in the PSC training dispatch manual. Emergency communication leads are responsible for making sure that proper procedures are followed at all times.

Detailed call handling and dispatching of resource procedures are contained in a set of fire dispatch cards developed by the Fire Department in conjunction with PSC subject matter experts. The cards outline a mandatory set of questions emergency communication officers use to collect pertinent information from a caller in a timely fashion. The cards also include safety instructions to be given to the caller according to the situation.

Emergency communication officers learn standard operating procedures and related processes through an extensive training program, and additional training is provided when standard operating procedures undergo major changes. Standard operating procedures are changed as required to resolve problems, adapt to new technology or incorporate new partnerships. When changes are made, documentation is updated and staff is alerted via email using the PSC Policy and Procedures Manager software system.

A comprehensive quality improvement program is in place to monitor individual and team performance. The results of quality improvement assessments serve to inform emergency communication officers of any non-compliance issues and identify trends in performance gaps that may require group retraining.

**Appraisal**

PSC has established effective standard operating procedures and methods for all types of services provided, including call evaluation and dispatching. A comprehensive quality improvement program has been implemented and a team comprised of two full-time

quality improvement lead specialists and eight quality improvement reviewers have regularly conducted performance evaluations to monitor compliance with standard operating procedures. Quality improvement evaluations have shown that PSC has exceeded its compliance target of 90 per cent with a score of 94.3 per cent in 2012.

### **Plan**

The Fire Department will continue to work with PSC to ensure dispatching standard operating procedures are in place and working appropriately.

As outlined in Strategy C-1 of its Performance Improvement Programme, the Fire Department will review fire dispatch cards and work with PSC to streamline the process and ease of questioning to optimize information gathering and determine resource requirements. Recommendations will be presented to the Fire Executive Team and changes or new processes resulting from the review will be incorporated into standard operating procedures for PSC and the Fire Department as appropriate.

### **References**

- 9B.5a. Public Safety Communications, Standard Operating Procedures (available for viewing at PSC)
- 9B.5b. Public Safety Communications, Training Dispatch Manual (available for viewing at PSC)
- 9B.5c. Public Safety Communications, Fire Department dispatch cards, February 2013
- 9B.5d. Public Safety Communications, Training calendar (2013)
- 9B.5e. Public Safety Communications, Quality improvement program
- 9B.5f. Public Safety Communications, Quality improvement compliance report, 2012
- 9B.5g. Public Safety Communications Policy and Procedures Manager software (available for viewing at PSC)
- 9B.5h. Calgary Fire Department, Performance Improvement Programme, C-1 Project plan call 1: Revised call evaluation and dispatch system, March 2013

9B.6 Adequate numbers of fire or emergency dispatchers are on duty to handle the anticipated call volume.

### **Description**

PSC is a 24-hour, seven day a week operation with seven to thirteen emergency communication officers on duty depending on the time of day. There are always at least two emergency communication leads and three fire dispatchers dedicated to fire operations on duty at all times. PSC uses call volume statistics from its Telus ACD VU/100 reports to match staffing levels to call demand. If call volumes peak as a result of emergent conditions, additional emergency communication officers are called in at the discretion of the emergency communication lead.

Many emergency communication officers are cross-trained to perform multiple functions within PSC's integrated operations. This allows PSC to quickly adapt to changing conditions by moving cross-trained staff to critical functions as required.

### **Appraisal**

PSC has placed adequate numbers of fire dispatchers on duty to handle anticipated call volumes based on historical data, and has demonstrated the ability to increase staffing if necessary. Compliance with call answer time, grade of service and quality assurance results have been regularly monitored to ensure a high level of service is maintained. PSC has implemented TeleStaff, an automated scheduling and workforce management system designed to improve effectiveness and productivity.

### **Plan**

PSC will focus on continuous improvement including ongoing monitoring of factors that influence call volumes, such as scheduled public events, extreme weather conditions and population growth, to ensure adequate staffing and shift scheduling. As outlined in Goal 4 of its 2012-2014 Business Plan, PSC will continue to update its long-term staffing plan and align its master schedule and five-year staffing forecasts with The City's budget process.

## **References**

- 9B.6a. Telus VU-ACD/100 manual preface, version 3 (full manual available for viewing at PSC)
- 9B.6b. Public Safety Communications master shift schedule, sample: Monday Feb 02, 2013 to Sat Feb 28, 2013
- 9B.6c. Public Safety Communications performance dashboard
- 9B.6d. Public Safety Communications 2012-2014 Business Plan, Goal 4

9B.7 An adequate maintenance program is in place with regularly scheduled system tests.

### **Description**

In addition to backup power supply testing outlined in Performance Indicator 9B.4, PSC performs a range of ongoing system monitoring, regularly scheduled testing procedures and preventative maintenance activities:

- The City's radio system is regularly tested according to standard operating procedures.
- All radio ID information is updated in the Alias database manager.
- The service contract with Motorola includes regular, routine preventive maintenance on all towers, repeaters and the central controller.
- Data networks are continuously monitored and any errors or faults detected are reported to The City's Information Technology business unit for timely correction.
- There is a maintenance agreement in place for the voice logging system and PSC supports this system 24 hours a day, seven days a week.

### **Appraisal**

PSC has established an adequate maintenance program with regularly scheduled system tests in place.

### **Plan**

PSC will continue to ensure its maintenance programs and system tests are adequate, perform routine testing where appropriate and use new methods of testing to ensure reliability of the systems and equipment within its control. PSC will also review contracts and select service and technology providers based on a combination of performance, qualifications and cost. In 2015, PSC will upgrade its CAD software solution to a more current supported version.

### **References**

9B.7a. Public Safety Communications, Standard Operating Procedures (available for viewing at PSC)

9B.8 The communications center(s) has/have adequate supervision and management.

### **Description**

PSC is directed by a Board of Governors, which is comprised of two representatives from the Fire Department, two from the Calgary Police Service and one nominated by the general manager of Community Services & Protective Services, the department under which PSC falls in The City's administrative structure. The Board of Governors of PSC is accountable to City Council, City Administration, the fire chief, the police chief and the Calgary Police Commission for all matters relating to the governance of the PSC and the achievement of its mandate within relevant legislation and performance standards.

The PSC commander reports to the Board of Governors and is responsible for overall management and leadership of the centre. The PSC commander implements and optimizes the integrated service model through effective managing, planning and budgeting of all PSC services. The deputy commander is responsible for the day-to-day operation of PSC by providing direction and leadership to over 300 emergency communications officers and support staff. Administrative functions are overseen by a strategic services manager, client services manager and a systems support manager. Emergency communications officers are assigned to one of four teams with one emergency communication manager and four emergency communication leads per team.

### **Appraisal**

PSC has an established structure that provides adequate governance, management and supervision of the communications center.

### **Plan**

As outlined in Goal 6 of its 2012-2014 Business Plan, PSC will develop a sustainable succession plan and foster a leadership culture for employee success. This will include ongoing training for emergency communications managers, and the implementation of succession planning and development for emergency communications leads to position them for further career growth.

In 2014, the Fire Department will plan for additional resources to support fire operations at the PSC. This will include the hiring of a deployment manager to bridge operations with

the deployment of fire fleet and resources and support PSC quality improvement processes. The Fire Department will also review the current PSC charter and governing model to ensure the stewardship and oversight of PSC is still valid.

### **References**

- 9B.8a. Public Safety Communications, Board of Governors charter
- 9B.8b. Public Safety Communications 2012-2014 Business Plan, Goal 6
- 9B.8c. Public Safety Communications organizational chart, November 2013
- 9B.8d. Public Safety Communications, Manager job posting, April 27, 2007
- 9B.8e. Public Safety Communications, Emergency communications manager job posting, October 2013
- 9B.8f. Public Safety Communications, Emergency communications lead fire/medical job description
- 9B.8g. Public Safety Communications, Emergency communications officer job posting, April 30, 2013

9B.9 A communications training program for emergency dispatchers is in place that ensures adequate, timely, and reliable fire agency emergency response.

### **Description**

Candidates for PSC positions go through an extensive recruiting process, which includes security clearances, targeted selection interviews and polygraph testing.

Once hired, employees undergo a comprehensive nine-week classroom-training program, which includes an overall orientation of employment with The City as well as communications training specific to public safety answering point (PSAP) operations and evaluation of fire and emergency medical service calls. This training is followed by an officer-coaching period customized according to individual needs and conducted in the operations centre with live calls. Formal reviews occur after six months and one year. Additional training and refresher courses are provided on an as needed basis, and on-the-job coaching is available.

New staff are trained on all aspects of fire call evaluation, including the use of custom card sets, fire apparatus, specialty teams, fire station locations, protocols, standard operating procedures, computer-aided dispatch (CAD) use and mapping. Fire and emergency medical service call evaluation is fully integrated into PSAP operations, so PSC trains call evaluators for the fire and emergency medical service function. There is an ongoing quality improvement program that audits calls from all functions within PSC every month and feedback is provided to individual emergency communications officers based on their performance.

### **Appraisal**

PSC has established a communications training program that supports adequate and reliable fire emergency response. The recruitment process, training program and coaching model has proven effective in selecting the right people and in developing their skills to perform their work.

### **Plan**

PSC will continue to review training content and evaluation processes to ensure it evolves to meet the changing needs of callers and frontline responders.

As outlined in the Goal 5 of its 2012-2014 business plan, PSC will cultivate a healthy, vibrant and achievement-oriented workplace. Objectives include establishing a recognized and certified training program, developing learning management training tools and creating a long-term employee development plan.

### **References**

- 9B.9a. Public Safety Communications training modules (available for viewing at PSC)
- 9B.9b. Public Safety Communications training calendar, 2013
- 9B.9c. Public Safety Communications 2012-2014 Business Plan, Goal 5
- 9B.9d. Public Safety Communication Learning Management System (live demonstration available at PSC)

9B.10 The interoperability of the communications system is evaluated and documented. Appropriate procedures are implemented to provide for communications between the agency and other emergency responders.

### **Description**

The City's 800 megahertz (MHz) trunked radio system has a high degree of interoperability, allowing for effective cross-communication between the Fire Department and other emergency responder personnel. There is interoperability with the Calgary Airport Authority and an interface to the province-wide public access radio network, known as MIKE, provided by Telus. There is also a designated radio channel for interoperability between the Fire Department and Calgary Police Service. Interoperability procedures for communication systems are set out in the PSC standard operating procedures.

In addition to the inherent interoperability between City agencies, the system can cross-patch with fire, police and emergency medical services agencies operating in areas outside of Calgary city limits.

### **Appraisal**

Through PSC, the Fire Department has implemented effective systems and procedures for communications between its personnel and other emergency responders.

### **Plan**

As part of its rolling review schedule, PSC will conduct a full review of its Alberta Health Services and Fire Department dispatch radio channel assignment procedure. It will make changes as necessary to ensure for the interoperability of communication systems between emergency responders.

The Fire Department and PSC will also continue work with the Province of Alberta on a provincewide radio communications system that will link 700 agencies and nearly 30,000 emergency responders. To be completed in 2015, the Alberta First Responders Radio Communications System will enable emergency personnel from different agencies and jurisdictions in Alberta to quickly connect and coordinate responses as required.

## **References**

- 9B.10a. Public Safety Communications Standard Operating Procedures (available for viewing at PSC)

## **Criterion 9C: Administrative Support Services and Office Systems**

*Administrative support services and general office systems are in place with adequate staff to efficiently and effectively conduct and manage the agency's administrative functions, such as organizational planning and assessment, resource coordination, data analysis/research, records keeping, reporting, business communications, public interaction, and purchasing.*

### **Summary:**

The administrative support processes for the Fire Department are a combination of Fire Department and City of Calgary resources. City of Calgary administrative support is maintained through a centralized model for services, referred to as enabling services, and includes functions such as law, finance, labour relations, information technology and human resources. The Fire Department has a variety of in-house administrative support services including research, planning, communications, equipment and supply, inventory, records management, administrative assistants and clerical staff. Resources are determined and provided for through The City of Calgary's business planning and budget coordination process.

Staff across the Fire Department are supported by a variety of technology resources and information management systems, including extensive telecommunications and computer systems. Information management systems are in place to support data collection and analysis related to incidents and occupancy, as well as functions such as records management, staffing/scheduling, policies and procedures, asset management, capital budgeting and fleet and equipment maintenance. Data contained within these systems is essential to ongoing analysis that supports Fire Department planning, budgeting, risk assessment and evidence-based decision-making.

**CC 9C.1 The administrative support services are appropriate for the agency's size, function, complexity, and mission, and are adequately staffed and managed.**

**Description**

The administrative support processes for the Fire Department are a combination of Fire Department and City resources. City administrative support is maintained through a centralized model for services, referred to as enabling services, and includes functions such as law, finance, labour relations, information technology and human resources. Some of these enabling services have dedicated staff assigned to work within the Fire Department while others use a pool of staff to assist all City business units on an as-needed basis.

The Fire Department has a variety of in-house administrative support services including research, planning, communications, equipment and supply, inventory, records management, administrative assistants and clerical staff. These support functions reside in various Fire Department divisions managed by deputy chiefs, managers, coordinators and an administrative supervisor. The deputy chiefs and assistant deputy chiefs rotate through divisions approximately every 12 to 18 months to build experience in all facets of the Fire Department, develop necessary skills and knowledge for future senior positions and sustain administrative support processes for fire service operations.

The Fire Department has the ability to adjust budget and staffing within its various divisions to meet its administrative support needs. When the Fire Department identifies a need for additional support over and above that provided from either its own divisions or The City's enabling services, a job equivalent questionnaire is developed to establish and request new positions.

**Appraisal**

The Fire Department has an established administrative support model appropriate to its size, function, complexity and mission. To enhance the efficiency and effectiveness of administrative operations, the Fire Department conducted an administrative support review in 2011 that identified a number of recommendations to provide a consistent,

reliable level of administrative support to divisions and management.

### **Plan**

The Fire Department will continue to review the effectiveness of the administrative support processes in all divisions, realign services and functions as needed and continue to rotate deputy chiefs and assistant deputy chiefs through divisions to build executive capacity and support succession planning.

By the end of 2014, the Fire Department will implement the recommendations in the 2011 administrative support review deemed as a priority to enhance administrative capacity and improve efficiencies.

### **References**

9C.1a. City of Calgary C.U.P.E. Local 38 job evaluation questionnaire

9C.1b. Calgary Fire Department administrative support review, December 2, 2011

9C.2 Sufficient general office equipment, supplies and resources are in place to support departmental needs.

### **Description**

The Fire Department has a range of administrative and clerical resources, records systems, business communications equipment, computers, workstations and other general office supplies to support its needs. Through The City's business planning and budget coordination process, the Fire Department assesses the administrative support requirements needed to deliver on its business plan goals and objectives, and then allocates sufficient budget to ensure that general office resources can support Fire Department needs.

The Fire Department has a policy in place to ensure new employees receive an orientation and are equipped to perform their duties upon starting their position. Supporting procedures outline activities to be completed to ensure new employees have the technology and work space tools required to perform their jobs.

### **Appraisal**

The Fire Department has established adequate general office equipment, supplies and resources to support its needs.

### **Plan**

The Fire Department will continue to use The City's business planning and budget process to identify and secure the appropriate types and levels of office equipment, supplies and resources.

### **References**

9C.2a. Calgary Fire Department policy: Orientation of new CFD member, August 27, 2010

9C.2b. Calgary Fire Department procedure: Orientating & preparing work environment for new CFD members in non-operations, December 31, 2013

9C.2c. New CFD member checklist, FD 1266 (November 2013)

9C.3 Technological resources (e.g., telecommunications equipment, computer systems, general business software, etc.) and the information management system are appropriate to support the needs of the agency. Access is available to technical support personnel with expertise in the systems deployed by the agency.

### **Description**

The Fire Department has a variety of technology resources and information management systems to support its critical and administrative needs. Technology regularly used by administrative and operations staff includes telecommunications equipment outlined in Performance Indicator 9B.1 and computer systems, including mobile computer systems known as iMobile that are installed in apparatus. Computers are installed at every fire station to allow all personnel to online training, internal communications, intranet and information systems essential for their roles.

Information management systems are in place to support functions such as staffing/scheduling, policies and procedures, records management, learning management (Performance Indicator 8B.5), capital budgeting, asset management, accounting, payroll, purchasing, facilities management, inventory reporting and control, fleet and equipment maintenance (Performance Indicator 6D.7) and established position management. The Fire Department also uses a electronic fire records management system, known as FireRMS, to record and store all incident and occupancy information, as outlined in Performance Indicator 2A.4.

All members have 24-hour access to technical support personnel with training, knowledge and expertise in all the resources and systems employed by the Fire Department.

### **Appraisal**

While FireRMS has adequately met the needs for recording and storing incident information, it was determined to be lacking in functionality for linking all Fire Department data, a growing concern as the Fire Department moves to increasing reliance on electronic and web-based data systems. Following a September 2010 business process review and needs assessment, the Fire Department purchased a software application to

replace FireRMS. The database system, FireHub, will integrate all Fire Department data, as well as information from other external sources, into a single repository.

In 2013, the Fire Department completed an asset management gap and needs analysis that informed a comprehensive asset management improvement strategy designed to sustain the performance of its infrastructure. It also assessed its current state of technology and technical capabilities, including its public safety technologies, infrastructure and business resilience capabilities.

### **Plan**

As outlined in Goal 8 of its 2012-2014 Business Plan, the Fire Department will improve information and knowledge management systems and processes to increase organizational efficiency and effectiveness. Enhancements and changes will be identified for information systems across the organization, including those for technology service issue identification and resolution, capital assets, learning management, scheduling and records management. The Fire Department will continue to use its current FireRMS until the new customized and integrated database system known as Fire Hub is implemented in late 2014, as outlined in Performance Indicator 2A.4.

In 2014, the Fire Department will develop a strategic roadmap that incorporate best practices, objectivity and expertise in technology resources into its public safety information technology.

### **References**

- 9C.3a. City of Calgary PeopleSoft system demonstration (See Deputy Chief of Administration)
- 9C.3b. Calgary Fire Department FireRMS demonstration (See Strategic Services Division)
- 9C.3c. Assetworks M5 maintenance computer system demonstration (See Logistics & Infrastructure Division)
- 9C.3d. Calgary Fire Department 2012-2014 Business Plan, Goal 8
- 9C.3e. CFDNet: FireHub
- 9C.3f. Critical Technology Services Program (see Information Systems Bureau Chief)

9C.4 Public reception and public information components support the customer service needs of the agency.

### **Description**

The Fire Department has administrative assistants that serve as reception in all public-facing areas. In key public areas, staff is on a rotation schedule to ensure reception coverage is maintained throughout business hours.

Public may contact the Fire Department either directly through its main telephone line or through The City's 3-1-1 information line. Telephone inquiries to the Fire Department's main telephone line are directed to specific sections of the Fire Department that provide public with the information and assistance they require. The City's 3-1-1 information line receives inquiries from the public that are either directly transferred to the appropriate section for immediate service or logged as work requests for follow up by the appropriate section. In 2013, The City's 3-1-1 information line received over 13,800 inquiries and service requests for the Fire Department.

The Fire Department's Public Affairs section has a full-time public information officer who receives and redirects inquiries as needed, handles all media inquiries during regular business hours and works with on-duty battalion chiefs to manage media inquiries after hours and on weekends. The public information officer, with assistance from staff within the Public Affairs section, issues news releases and coordinates press conferences, media-related events and requests for appearances at community or public events.

Community safety and fire safety code personnel also provide frontline customer service by answering calls from citizens and businesses regarding safety concerns, code compliance questions or fire prevention information requests. These sections develop education and awareness materials for the public, which are distributed online, at all fire stations or on apparatus.

### **Appraisal**

The Fire Department has established an extensive network of public reception and public information resources to support customer service needs. Citizens have expressed approval of the Fire Department's public service efforts as reflected by 99 per cent

satisfaction rating received in The City's 2013 citizen satisfaction survey, the highest rating of any City service. In addition, the Fire Department achieved a 100 per cent importance rating from citizens surveyed on the programs and services the Fire Department provides.

### **Plan**

The Fire Department will continue to monitor public reception and public information components of its business and adjust its service delivery to provide customer service that meets the expectations of the citizens and businesses it serves.

### **References**

- 9C.4.a. The City of Calgary 2013 citizen satisfaction survey (final report), p. 28, 33
- 9C.4b. City of Calgary 3-1-1 Fire Department on time completion by business unit trending report (from December 1, 2012, to December 31, 2013)

9C.5 Organizational documents, forms, and manuals are maintained and current.

**Description**

Documents for the Fire Department are maintained and stored by the business unit records coordinator as part of its records management program governed by The City's records management policies and bylaw. These policies control the lifecycle of all records, regardless of their medium, and includes all required classification and retention schedules. Official hard copy records are indexed into, and managed by, iRIMS, The City's records management system, and are stored in either the Fire Department's Freedom of Information and Protection of Privacy (FOIP) file room or a secure offsite storage facility.

The most recent versions of the Fire Department's policies and procedures are contained within its policies and procedures management software, which is accessible to all staff from all Fire Department computers. This software contains links to current forms and the associated documentation to properly complete them. Commonly used forms are also available for download or viewing on the Fire Department's or City's intranet.

Fire Department manuals are kept current and typically available on the Fire Department's intranet. As noted in Performance Indicator 8C.3, training manuals are updated on a continual basis and available from the Fire Department's Learning Management System and/or the intranet.

**Appraisal**

The Fire Department has established a current series of documents, forms and manuals that have been made readily available to staff. The Fire Department's records management program has been established in compliance with City policies and programs.

**Plan**

The Department will continue to comply with The City's records management program and maintain its existing policies and procedures manager software to ensure the most recent versions of documents, forms and manuals are available to staff.

As outlined in Objective 8.1 of its 2012-2014 Business Plan, the Fire Department will maintain existing policies and procedures and manage the overall process for all outstanding policies and procedures to ensure the most recent versions are available for staff.

### **References**

- 9C.5a. City of Calgary administration policy GN-011 (B): Records management program mandate and responsibilities, May 2007
- 9C.5b. City of Calgary Bylaw Number 53M99, *Records Management Bylaw*
- 9C.5c. The City of Calgary records classification and retention schedule, November 2012
- 9C.5d. CFDNet forms,  
<http://cfdnet/Library/manualsrefmaterials/forms/Pages/Default.aspx>
- 9C.5e. CFDNet Training & Tools, [http://cfdnet/training\\_tools/Pages/Default.aspx](http://cfdnet/training_tools/Pages/Default.aspx)
- 9C.5f. Calgary Fire Department Policy and Procedure Manager software (suggest live demonstration)
- 9C.5g. Calgary Fire Department 2012-2014 Business Plan, Objective 8.1, p. 24



## **Category X: External Systems Relationships**

External systems relationships are defined as the relationships with agencies that act together as an integrated system. The growth of multi-unit systems and the increase of interagency agreements between various types of government necessitate increasing attention to these relationships and the agreements between legally autonomous operating units.

## **Criterion 10A: External Agency Relationships**

*The agency's operations and planning efforts include relationships with external agencies and operational systems that affect or may influence the agency's mission, operations, or cost effectiveness.*

### **Summary:**

Through the Calgary Regional Partnership and Calgary Metropolitan Plan, the Fire Department is involved early in the community planning process, ensuring communities surrounding and impacting Calgary are created where the safety risks of current and planned infrastructure and use patterns are understood. The plan also ensures emergency response is considered in advance when more affordable and elective options are available to provide fire service.

The Fire Department has a reciprocal mutual aid agreement with The City of Edmonton Fire Rescue Services to provide for adequate resource deployment to either city as needed for large-scale emergencies or disasters. While the Fire Department does not currently provide primary fire response to surrounding areas, it is currently in negotiation with Rocky View County, the Municipal District of Foothills, Town of Cochrane and city of Airdrie, to provide fee-for-service secondary fire response support.

As set out in its 2011-2021 Sustainability Plan, the Fire Department will establish other external agency relationships that advance its sustainability, resiliency and community safety goals. Currently, the Fire Department is evaluating the potential for establishing reciprocal secondary response agreements with surrounding areas to support the provision of effective, affordable fire service within Calgary.

## **Performance Indicators:**

**CC 10A.1 The agency develops and maintains outside relationships that support its mission, operations, or cost effectiveness.**

### **Description**

Through The City, the Fire Department participates in the Calgary Regional Partnership (CRP), a cooperative between 14 municipalities in the greater Calgary area that deals with growth and planning issues. The Calgary Metropolitan Plan (CMP) is the collective result and roadmap developed by the partnership that determines how and where growth will take place, and how to plan ahead to manage growth. As a result of the CRP and CMP, the Fire Department is involved early in the community planning process, ensuring communities are created where the safety risks of current and planned infrastructure and use patterns are understood. The CRP and CMP also ensures emergency response is considered in advance when more affordable and elective options are available to provide fire service.

Given Calgary has no large municipalities on its borders, and nearby communities operate relatively small fire departments, the Fire Department has a reciprocal mutual aid agreement with The City of Edmonton Fire Rescue Services. This agreement provides for adequate resource deployment to either city as needed for large-scale emergencies or disasters. Edmonton, located 300 kilometers (186 miles) north of Calgary, provides emergency fire rescue services to a similar population base as Calgary with a similarly sized and operated fire department.

Following a 2008 regional emergency servicing review, City Council directed the Fire Department to renegotiate the provision of regional fire services with the goal of encouraging surrounding areas to increase their own primary response capabilities. As a result, the Fire Department does not currently provide primary fire response to surrounding areas as they have established and enhanced their own fire service capabilities. However, the Fire Department is currently in negotiation with the neighbouring areas of Rocky View County, Municipal District of Foothills, the Town of Cochrane and the city of Airdrie, to provide secondary fire response support.

## **Appraisal**

The Fire Department has contributed to the design of regional communities and infrastructure through early involvement in land use, community, mobility and building design planning, which has supported advanced, cost effective planning for emergency service provision.

The reciprocal mutual aid agreement with Edmonton Fire Rescue Services has provided continuity of operations in the event of a large-scale event.

## **Plan**

As outlined in Goal 2 of its 2012-2014 Business Plan, the Fire Department will develop a holistic strategic plan for growth in order to provide optimal and sustainable service delivery, which includes participating in regional partnership groups to help identify emergency response issues and needs early in the planning process.

In addition, the Fire Department will evaluate the potential for establishing reciprocal secondary response agreements with surrounding areas to support the provision of effective, affordable fire service within Calgary.

## **References**

10A.1a. Calgary Regional Partnership <http://www.calgaryregion.ca/crp/>

10A.1b. IGA2008, Attachment 1: The City of Calgary Regional Emergency Servicing Review, February 07, 2008

10A.1c. Calgary Fire Department 2012-2014 Business Plan, Goal 2, p. 18

10A.2 The agency's strategic plan identifies relationships with external agencies/systems and their anticipated impact or benefit to the mission or cost effectiveness of the agency.

### **Description**

The Fire Department's 2011-2021 Sustainability Plan, outlined in Performance Indicator 2D.1, identifies external agencies and partnerships essential to supporting the long-term sustainability and cost effectiveness of the organization. Visions set out in the plan that direct establishing external agency relationships include:

- We cooperate, collaborate and partner to secure public and private resources for capital investment, service provision and education;
- Through collaboration with the leading thinkers in the field of fire and community safety, we help drive innovation that reduces risk to lives and property and supports efficient operations;
- We develop partnerships for environmental safety to support a reduction in fire and hazardous materials risks; and
- We achieve public safety resiliency through partnerships locally, regionally, provincially, nationally and internationally.

### **Appraisal**

The Fire Department has identified external agency relationships important to its sustainability, resiliency and community safety role within its strategic plan, the 2011-2012 Sustainability Plan.

### **Plan**

Through the 2015 to 2018 business planning cycle, the Fire Department will set out goals and objectives that continue to advance the long-term external agency relationships identified in its 2011-2021 Sustainability Plan.

### **References**

10A.2a. Calgary Fire Department 2011-2021 Sustainability Plan

10A.3 A process is in place for developing, implementing, and revising interagency policies and agreements.

### **Description**

All interagency agreements follow a similar process of development, implementation and regular review, and all are subject to the Fire Department policy, *Regional response contracts*. For fire service provision agreements with other agencies, a small cross-departmental team of subject matter experts is established, typically consisting of the deputy chief of the Operations & Technical Team division, the Fire Department Executive Officer and a City Law Department representative.

Each agreement outlines the rationale for response assistance, agency roles and responsibilities, terms and conditions, procedures, fee structure and general provisions. Once all terms have been established, the fire chief, City Law Department and City Manager must approve the agreement. All agreements contain terms related to when the agreement will be reviewed, when it will expire and how it may be terminated.

Provision of regional fire service is guided by procedures, and all policies and procedures related to the interagency contract development and service delivery are available to staff through the Fire Department's Policy and Procedure Manager software.

### **Appraisal**

The Fire Department has an established process in place for the development, implementation and revision of interagency policies and agreements. The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions to policies or procedures housed in the software.

### **Plan**

The Fire Department will finalize its secondary response agreement with Rocky View County in 2014 using its defined process, policies and procedures.

## **References**

- 10A.3a. The Rocky View County and The City of Calgary, Secondary emergency response fire services agreement, Draft, October 21, 2013
- 10A.3b. Calgary Fire Department policy: Regional response contracts, August 25, 2010
- 10A.3c. Calgary Fire Department procedure: Providing regional response, November 20, 2012

10A.4 A conflict resolution process exists between the organization and external agencies with whom it has a defined relationship.

### **Description**

The Fire Department's mutual aid and draft secondary fire response agreements contain clauses specific to conflict resolution. Any disputes between the parties as to the interpretation of, subject matter of, or in any way related to the agreement are resolved by the two parties using one or more of the following means, in the order listed, until a resolution is arrived at:

- Negotiation;
- Mediation;
- Arbitration;
- Legal proceedings in a court of competent jurisdiction.

### **Appraisal**

The Fire Department's reciprocal mutual aid agreement with Edmonton Fire Rescue Services and the draft secondary fire response agreement with Rocky View County have established processes for dispute resolution.

### **Plan**

The Fire Department will continue to include a formalized conflict resolution process in all future agreements related to mutual aid and secondary fire response service provision.

### **References**

10A.4a. The Rocky View County and The City of Calgary, Secondary emergency response fire services agreement, Draft, October 21, 2013

10A.4b. City of Calgary & City of Edmonton, Mutual Aid Agreement, January 2010

## **Criterion 10B: External Agency Agreements**

*The fire service agency has well-developed and functioning external agency agreements. The system is synergistic and is taking advantage of all operational and cost effective benefits that may be derived from external agency agreements.*

### **Summary:**

The Fire Department currently maintains one mutual aid agreement with Edmonton Fire Rescue Services and no agreements for fire response to areas surrounding Calgary. An agreement for secondary fire service response is currently being drafted with the neighbouring area of Rocky View County, and negotiations are underway with the Municipal District of Foothills, Town of Cochrane and city of Airdrie.

The Fire Department recognizes the potential benefits available from leveraging fire services available from neighboring districts and municipalities. It is actively pursuing reciprocal secondary fire response agreements that reduce service redundancy, maximize use of resources and demonstrate financial feasibility. This approach supports several of the Fire Department's short- and long-term objectives set out in its Business Plan and Sustainability Plan to reduce costs, enhance sustainability and build resiliency. Such agreements also allow it to focus on responding to urban service demands in the most effective and efficient manner.

The Fire Department is also currently in discussion with Alberta Health Services, the provincial agency that oversees emergency medical services, to develop an urban fire medical response model that clearly defines first responder roles and responsibilities and supports patient-centered care.

## **Performance Indicators:**

### **CC 10B.1 External agency agreements are current and support organizational objectives.**

#### **Description**

The Fire Department currently maintains one mutual aid agreement with Edmonton Fire Rescue Services and no agreements for primary fire response to areas surrounding Calgary. An agreement for secondary fire service response is currently being drafted with the neighbouring area of Rocky View County, and negotiations are underway with the Municipal District of Foothills, Town of Cochrane and city of Airdrie.

The mutual aid and draft secondary fire service response agreements support the Fire Department's vision set out in its 2011-2021 Sustainability Plan to achieve public safety resiliency through partnerships.

#### **Appraisal**

The Fire Department's existing external agency agreements have been determined to be current or are currently under development. These agreements have been designed to support the Fire Department's long-term sustainability priorities as set out in its 2011-2021 Sustainability Plan.

#### **Plan**

As outlined in Vision 16, Strategy E. of its 2011-2021 Sustainability Plan, the Fire Department will establish relationships with other fire departments to provide support and redundancy in the event of a large-scale incident.

#### **References**

- 10B.1a. City of Calgary & City of Edmonton, Mutual Aid Agreement, January 2010
- 10B.1b. Calgary Fire Department 2011-2021 Sustainability Plan, Vision 16, Strategy E

**10B.2 The agency researches, analyzes and gives consideration to all types of functional agreements that may aid in the achievement of the goals and objectives of the agency.**

**Description**

The Fire Department recognizes the potential benefits available from leveraging fire services available from neighboring districts and municipalities. It is actively pursuing reciprocal secondary fire response agreements that reduce service redundancy, maximize use of resources and demonstrate financial feasibility. This approach supports several of the Fire Department's short- and long-term objectives set out in its Business Plan and Sustainability Plan to reduce costs, enhance sustainability and build resiliency. Such agreements also allow it to focus on responding to urban service demands in the most effective and efficient manner.

The Fire Department is also currently in discussion with Alberta Health Services, the provincial agency that oversees emergency medical services, to develop an urban fire medical response model that clearly defines first responder roles and responsibilities and supports patient-centered care. This effort is in support of Objective 2.5 of the Fire Department's 2012-2014 Business Plan that directs it to maximize its effectiveness in the delivery of medical first response to ensure the health and wellness of citizens.

**Appraisal**

Following a 2008 regional emergency servicing review, City Council directed the Fire Department to renegotiate the provision of regional fire services with the goal of encouraging surrounding areas to increase their own primary response capabilities. The decision to reduce its primary fire response agreements has allowed the Fire Department to focus its efforts on the growing fire service demands within Calgary.

**Plan**

The Fire Department will continue to explore other functional agreement opportunities that will assist in achieving the goals and objectives set out in its upcoming 2015-2018 Business Plan and within its 2011-2021 Sustainability Plan.

## **References**

10B.2a. Calgary Fire Department 2011-2021 Sustainability Plan

10B.2b. Calgary Fire Department 2012-2014 Business Plan, Objective 2.5, p. 19

### **10B.3 The agency has a process by which their agreements are managed, reviewed, and revised.**

#### **Description**

The Fire Department's Executive Officer oversees all Fire Department contracts and agreements, manages regional issues and leads all external agency negotiations. The Executive Officer works with, and advises, all senior Fire Department personnel developing agreements. Assistance includes providing counsel through negotiations, obtaining legal guidance, producing draft agreements and securing final approval. Following the recommendation of the Executive Officer, all contracts, including external agency agreements, require approval by the Fire Chief and The City's Law Department prior to authorization by the City Manager.

Agreements are subject to Fire Department policies and procedures that are accessible from its Policy and Procedure Manager software.

#### **Appraisal**

The Fire Department has established processes, policies and procedures for managing, reviewing and revising external agency agreements. When agreements are negotiated, the parties involved set out terms for its review.

The Fire Department's Policy and Procedure Manager software has an established, regular review period to ensure all related policies and procedures remain current and relevant, and an automatic notification has been built into the software notifying staff of changes or additions.

#### **Plan**

In 2014, an annual review of all agreements will be instituted to ensure they are regularly examined for alignment with Fire Department goals and objectives as well as impact on operations.

#### **References**

10B.3a. The Rocky View County and The City of Calgary, Secondary emergency response fire services agreement, Draft, October 21, 2013

10B.3b. City of Calgary & City of Edmonton, Mutual Aid Agreement, January 2010

10B.3c. Calgary Fire Department policy: Regional response contracts, August 25, 2010

10B.3d. Calgary Fire Department procedure: Providing regional response, November 20,  
2012