Edmonton Police Service Staffing Audit

April 3, 2017

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

Edmonton Police Service Staffing Audit
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Executive Summary

In 2016, the Edmonton Police Service had a budget for personnel of $314 million and employed approximately 2,522 full time equivalent staff. At the request of the Edmonton Police Commission and Service, the Office of the City Auditor conducted this staffing audit.

We completed a risk assessment and decided to focus our work on three objectives:

1. To determine if the patrol function of the Community Policing Bureau has an effective process to determine staffing requirements and staff are used effectively.

2. To determine if the Investigative Support Bureau has an effective process to determine staffing requirements.

3. To determine if the current funding model is effective at supporting the objectives of the Edmonton Police Service.

Objective 1

To determine if the patrol function of the Community Policing Bureau has an effective process to determine staffing requirements and staff are used effectively, we assessed the appropriateness of the models the Service uses to determine patrol staffing requirements and whether constables are self-deploying to major events.

We found that the Service uses appropriate models to determine patrol staffing needs. The majority of the other Cities we surveyed use similar models and when compared to the other models available, the workload-based model used by the EPS appears superior and to better meet the needs of the Service and the City of Edmonton. We also found that the performance targets used in the models are appropriate and that the model appears to accurately calculate the required number of patrol constables to achieve the desired performance targets.

However, we determined that the Service could use the models more effectively. In order to do so, we made the following two recommendations relating to the patrol staffing models:

1. That the Chief ensure his staff perform an assessment of the patrol staffing models and the performance targets used in them. The assessments should include:

   - Ensuring the model accurately reflects patrol constable time.

   - Documenting the results of the assessments.

   - Documenting the rationale for the patrol performance targets.

   - Rerunning the models.

- Communicating the results to stakeholders.

  As well, they should set and document a formal schedule for assessing the models, the performance targets and the model inputs.

2. That the Chief ensure the reliability and accuracy of the data used in the patrol staffing models by:

   - Standardizing how patrol constables record time and communicating the requirements to all patrol constables;

   - Setting up and following a process to ensure time recording is reviewed; and

   - Periodically assessing the accuracy of the data used in the models.

We also found that patrol constables are self-deploying to major events. The Service has taken some steps to try to reduce self-deployment including post event reviews, increased supervision, and training. However, due to the increasing workloads of patrol constables, the Service should continue to develop strategies to reduce the amount of unwarranted self-deployment. This will help improve the effective use of patrol constables.

We recommend that the Chief of Police develop strategies for the reduction of unwarranted self-deployment by patrol constables. Management should communicate these strategies to the constables and follow-up to ensure they have reduced the number of constables self-deploying to events.

Objective 2

To assess if the Investigative Support Bureau has an effective process to determine staffing requirements we considered if they are periodically reviewing workload demands and staffing requirements. We also evaluated whether they have a process to prioritize the use of staffing resources and are addressing risks.

Overall, we found that the Bureau has an effective process to determine staffing requirements. The process focuses on mitigating and reducing risks to citizens and the Service. It includes a process to prioritize the use of staff to better achieve the objectives of the Service. However, the process involves the use of many reports, plans, and documents, which they could streamline to make the process more effective and efficient.

We recommend that the Chief ensures that the Investigative Support Bureau continue to develop the staffing decision-making process, to clarify the information and remove duplication of efforts. All documents prepared as part of the staffing decision-making process should be completed consistently to ensure the appropriate level of information is supplied in each one.

Objective 3

To determine if the current funding model is effective at supporting the objectives of the Edmonton Police Service we assessed if the City's Funding Formula is clearly defined and allows for long-term planning. As well, we assessed if the funding provided to the Service allows it to meet the demands placed on it.

We found that the use of some type of funding formula allows the Service to be more effective at supporting its objectives and is better aligned with the Police Act. However, to better allow for long-term planning there needs to be less uncertainty regarding the future application of the City's Funding Formula. This will allow the Service more flexibility to use its funding in the most effective manner. This is something that the Service will need to develop in conjunction with the Edmonton Police Commission and City Council.

We recommend that the Chief work with the Edmonton Police Commission to open a dialog with City Council on the issues and uncertainty of the future application of the City's Funding Formula.

Edmonton Police Service Staffing Audit

1.   Introduction

In November 2015, the Edmonton Police Commission (the Commission) passed a motion for the Office of the City Auditor to conduct a staffing audit of the Edmonton Police Service (the Service). We included this audit in our *2016 Annual Work Plan*.

The budgeted expenditures for the Service in 2016 were $377 million, which represents 15 percent of the City of Edmonton's total expenditures. Eighty three percent ($314 million) of the Service's expenditures relate to personnel.

2.   Background

2.1.   Overview and Structure

The Service is governed by the Commission. The Commission is a non-political body appointed by City Council to represent Edmontonians and act as a link between the Service and the provincial and municipal governments. The Commission is made up of 11 Commissioners including two City Councillors.

The Commission has four main functions: overseeing the police service, responding to citizens' concerns on policing matters, helping to develop the annual policing plan and budget, and building positive relationships with community partners.

The Service is made up of the Chief of Police, police officers and civilian staff who deliver policing services in Edmonton. Their responsibilities include law enforcement, crime prevention, maintaining social order and public safety.

Figure 1 provides a high-level overview of the organizational structure of the Service.

Figure 1 – Organizational Structure

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│                     Edmonton Police Commission                            │
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│                          Chief of Police                                  │
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Legal & Regulatory Services

Office of Strategy Management

Executive Officer

Investigative Support Bureau
- Specialized Investigations
- Criminal Investigations
- Operational Support

Community Policing Bureau
- Patrol Response
  - Downtown Division
  - Northeast Division
  - Northwest Division
  - Southeast Division
  - Southwest Division
  - West Division
- Coordinated Policing

Corporate Services Bureau
- Human Resources
- Informatics
- Supply Services
- Finance

Reporting to the Chief of Police are the Legal and Regulatory Services Division, the Executive Officer, the Office of Strategy Management Division, and the following three Bureaus:

The Community Policing Bureau – This Bureau has the largest number of staff in the Service (1,175 FTE's). It is divided into Patrol Response and Coordinated Policing. The Patrol Response component is divided into six geographic Divisions within the City. Patrol officers are assigned to each Division to enforce the law, maintain social order, help prevent crimes, and respond to community needs. Coordinated Policing Division includes related city-wide services such as:

- Duty Officers – oversight of city wide on street patrol responses and major incident.
- Integrated Community Safety Branch – including Violence Reduction Section comprised of Community Action Teams, Heavy Users of Service, LRT Beat teams, response to mental health calls and outstanding warrants, and Collaborative Policing Section comprised of Crime Prevention programs, Crimestoppers, Project Watch and volunteer management.

- Investigative Management and Approval Centre (IMAC) Branch – detainee management, on-line crime reporting, and the management, approval and disclosure of police reports resulting in charges.

The Investigative Support Bureau – This Bureau has the second largest number of staff in the Service (822 FTE's). It includes three specialized Divisions that provide skills, expertise, and operational and investigative support at any given time in any given location. The Divisions are:

- The Specialized Investigations Division which is comprised of the Intelligence Branch, the Investigative Support Branch, the Organized Crime Branch and the Combined Forces Special Enforcement Unit.
- The Criminal Investigations Division which is comprised of the Major Crimes Branch and the Serious Crimes Branch.
- The Operational Support Division which is comprised of the Field Response Branch (including Tactical, Disaster & Emergency Operations, Flight Operations and Canine Sections), Police Communications Branch and the Traffic Services Branch.

The Corporate Services Bureau – This Bureau has the least staff of the three Bureaus in the Service (402 FTE's). It provides administrative and technical expertise for the operations of the Service and is comprised of the following four divisions:

- The Finance Division;
- The Informatics Division (comprised of Information Technology, Information Management, and Security Management);
- The Supply Services Division (comprised of Materials Management, Fleet, Facilities, and Exhibit Management); and,
- The Human Resources Division (providing sworn and civilian recruiting, labour relations, training, occupational health and safety and employee assistance).

2.2. Edmonton Police Service Goals

The vision of the Service is to make Edmonton the safest major city in Canada and for the Edmonton Police Service to be recognized as a leader in policing. To achieve this vision the Service has established the following goals:

1. Commitment to professionalism
2. Reduced crime and victimization
3. Investigative excellence
4. Increased efficiency and effectiveness

2.3. Edmonton Police Service Resources

Table 1 shows the actual 2011 to 2015 revenues and expenses for the Service.

Table 1 – Edmonton Police Service 2011 to 2015 Actual Operating Revenue and Expenses

(in thousands of dollars)

	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual
Revenue	$61,852	$63,281	$63,809	$65,297	$85,575*
Expenses					
Salary & Benefits	237,865	251,246	266,738	273,761	283,594
Overtime	8,946	9,481	10,120	10,515	10,660
External Overtime	414	426	732	479	412
Total Personnel	*247,225*	*261,153*	*277,590*	*284,755*	*294,666*
Furniture, Equipment, IT, Materials & Supplies	11,710	15,503	12,516	13,790	14,964
Contracts & Services	20,253	18,753	20,347	18,565	20,941
Vehicles	7,720	7,663	7,600	7,960	7,143
Facilities	13,268	13,875	14,918	15,240	16,180
Other Expenditures	6,510	7,224	8,455	11,149	12,912
Total Non-Personnel	*59,461*	*63,018*	*63,836*	*66,704*	*72,140*
Total Expenses	306,686	324,171	341,426	351,459	366,806
Tax Levy	**$244,834**	**$260,890**	**$277,617**	**$286,162**	**$281,231****

*The increase in revenue from 2014 to 2015 is the result of the change in accounting policy where in 2015, the Service started recording a revenue transfer from the Automated Enforcement Reserve.
** Total does not include settlement amounts from the Collective Bargaining Agreement settlement that occurred in 2016.

Personnel expenses represent the majority of the budgeted costs for the Service. They have increased by approximately 19 percent ($47.4 million) since 2011, but their share of total expenses has remained fairly constant (81 percent in 2011 and 80 percent in 2015).

The number of Full Time Equivalent staff (FTE's) has increased by approximately 13 percent (276 FTE's) from 2011 to 2015. Table 2 shows the number of FTE's in the Service from 2011 to 2015.

Table 2 – Edmonton Police Service Full-time Equivalent Staff

	2011	2012	2013	2014	2015
Sworn Officers	1,592.0	1,645.3	1,648.8	1,665.6	1,735.4
Civilians	588.4	603.3	674.1	685.2	721.0
Full Complement	**2,180.4**	**2,248.6**	**2,322.9**	**2,350.8**	**2,456.4**

The distribution between sworn officers and civilians has remained relatively stable over the past 5 years at around 71 percent sworn officers and 29 percent civilians.

3.   Audit Objectives

Based on the results of our risk assessment, we developed the following three objectives for this audit:

1. To determine if the patrol function of the Community Policing Bureau has an effective process to determine staffing requirements and staff are used effectively.

2. To determine if the Investigative Support Bureau has an effective process to determine staffing requirements.

3. To determine if the current funding model is effective at supporting the objectives of the Edmonton Police Service.

Appendix 1 contains a description of our risk assessment process, the audit scope, and the audit methodology.

4.   Observations and Recommendations

4.1.   Patrol Staffing

To determine if the patrol function of the Community Policing Bureau is staffed appropriately to meet workload demands and staff are used effectively we assessed:

1. The appropriateness of the models used by the Service to determine patrol staffing needs; and,

2. That patrol constables are following internal deployment procedures.

Overall, we found that the Service uses appropriate models to determine patrol staffing needs. However, we determined that the Service could use the models more effectively and that patrol constables do not always follow internal deployment procedures.

4.1.1.   Background

The patrol function is part of the Patrol Response area of the Community Policing Bureau and are assigned across the six Patrol Divisions to provide city-wide services. They provide a highly visible, uniformed, community-based presence across Edmonton. Their responsibilities include:

- Responding to calls for service (traffic incidents, break and enters, family violence, assaults, etc.).

- Maintaining social order.

- Keeping the peace.

- Enforcing municipal, provincial, and federal laws.

- Preventing crime.

- Addressing matters of public safety.

In 2015, there were 620 authorized Full Time Equivalent (FTE) patrol officers (547 patrol constables, 49 sergeants, and 24 staff sergeants) costing approximately $73.2 million. These numbers have not changed significantly since 2012.

The Service uses a workload-based approach to determine the number of patrol constables they require. They use two models to help determine this.

1. *The Managing Patrol Performance (MPP) Model*
    The Service uses the MPP model to <u>determine the number</u> of patrol constables they require to meet their workload demands and patrol performance targets. It is a mathematical model that calculates the amount of time calls of various priorities will wait until a patrol car or unit is available to be dispatched to it. In turn, it estimates the number of patrol constables the Service needs to achieve specific performance goals for response time (how quickly the patrol car gets to the call) and proactive or problem solving time (the time patrol constables can spend on crime prevention activities).

2. *The Geographic Deployment Model (GDM)*
    The Service uses this model to <u>determine how they should deploy</u> the patrol constables geographically to ensure a timely response to priority one calls (i.e., where to position the boundaries of the geographic divisions and districts). It is a method of assigning patrol constables within an area based on principles of district team policing and geographic ownership. The objectives of this model include maintaining consistent response times, equitably distributing workload both city-wide across all patrol divisions and within a division across all patrol districts, and ensuring an adequate amount of shift time is dedicated to proactive activities. Figure 2 shows the current geographic boundaries of the Service's Districts and Divisions.

Figure 2 – District and Division Boundries
(as at March 2017)
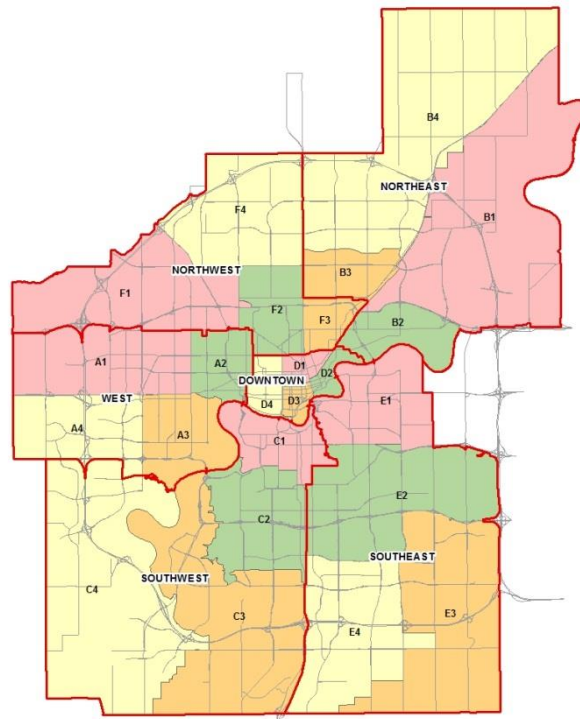
To determine if the Service has staffed the patrol function appropriately to meet workload demands we assessed the appropriateness of the models.

4.1.2.   Appropriateness of the patrol staffing models

To assess the appropriateness of the staffing models we:

1. Compared Edmonton's resourcing/deployment models to those used by other Canadian policing organizations.
2. Researched alternative models for determining patrol staffing requirements.
3. Assessed the reasonability of the patrol performance targets used in the models.
4. Compared 2015 actual results for the performance targets to the results calculated by the model when the number of patrol constables in the model is equal to the actual number of patrol constables working in 2015.
5. Assessed the accuracy and reliability of the data used to calculate the model inputs.

We found that the Service uses appropriate models to determine patrol staffing needs. However, they could improve the accuracy of the calculations for determining patrol staffing needs by:

- Improving the accuracy and reliability of the data used by the models; and,
- Re-evaluating the performance targets used in the models on a scheduled basis.

1. Comparison to other organizations

We asked 14 other Canadian policing organizations what methodology they use for determining patrol staffing requirements. Respondents had a few different methodologies for determining patrol staffing requirements, with the majority (10 out of 14) indicating that they take an approach that considers some aspects of workload (similar to Edmonton). The second most common approach was following minimum staffing prescribed in collective agreements or other employment contracts (3 out of 14).

2. Alternative approaches for determining patrol staffing requirements

We reviewed other staffing approaches (e.g., per capita, minimum staffing, and authorized level) and found that the workload-based approach used by the Service appears superior and is the most comprehensive approach available for the Service. We could not find another approach that would have been better suited. It allows the Service to consider the unique workload demands, environmental factors and agency-specific variables (such as expectations of citizens) more effectively than other approaches. While a workload-based approach requires significant resources, it appears to be the most suitable due to the relative complexity of policing a city as large as Edmonton, as well as the expertise and resources available to the Service.

However, the Service does not regularly assess whether their workload-based approach is the most appropriate for Edmonton. As well they do not have a formal schedule to run the models they use. They currently assess the models and re-run them as required. Having a formal schedule to assess and run the models will help ensure that the approach is appropriate (their methodology is the best fit at the time) and will prevent the Service from running or assessing them too frequently, which would be inefficient. **(Recommendation 1)**

3. Appropriateness and reasonability of patrol performance targets used in the model

The purpose of the models is to determine the number of patrol constables required to meet the workload demands of the Service (as they relate to the patrol function) and to meet the patrol performance targets set by the Service and the Commission.

The Service has two performance targets for patrol constables that they include in the model to calculate the number of patrol units or cars and subsequent number of patrol constables required to meet those targets.

1. The average response time for Priority 1 calls for service is no more than 7 minutes, 80 percent of the time (response time). A Priority 1 call is when a person is in immediate danger or harm.
2. Proactive time is at least 25 percent of patrol time. Proactive time is activities to help prevent or suppress future criminal activity. Examples include patrolling a drinking establishment for potential impaired drivers, locating an individual with outstanding criminal warrants, checking on a domestic violence offender to ensure they are complying with their court conditions, etc.

To assess the appropriateness and reasonability of the performance targets we:

1. Reviewed the rationale and support for the performance targets.

2. Compared the performance targets to the actual results for 2015.

Overall, we found that the use of these performance targets is appropriate, but that the actual target value may be unreasonable.

Rationale for performance targets used in the model:

The performance targets have a direct impact on the number of required patrol constables calculated by the models. The Service provided the following rationale for its two performance targets when they were first developed in 2007[1]:

- Response time target – "*Our goal is to meet this target as an average response everywhere and anytime. That is, within each division and district, at any time of the day or night, people will be able to expect an emergency response, on average, within seven minutes or less. Even though industry standards do not exist for police response to emergency calls, the seven-minute timeframe for the most serious, life-threatening emergencies is a best practice for most police agencies across North America.*"

- Proactive time target – "*Proactive time is for the most part supervisor-directed patrol time aimed at resolving underlying conditions that lead to violations of law and/or public order. Enabling a patrol officer to have meaningful time to really get to know community issues in an assigned area and catch the bad guys committing the crime and disorder is the foundation for community policing, and the only way of getting upstream of criminal activity and achieving specific public safety outcomes.*"

Based on the rationale provided, the use of these performance targets appears reasonable.

To show the effect of changes in the target value, we ran the model under different scenarios to calculate patrol constable staffing requirements. We ran the model using 2015 data for 6, 7, 8, 9 and 10 minute response time targets and proactive time targets ranging from 10 to 40 percent. Figures 3 and 4 illustrate how changes to response time and proactive time targets affect the required number of patrol constables (the models do not calculate the number of supervisory positions required).
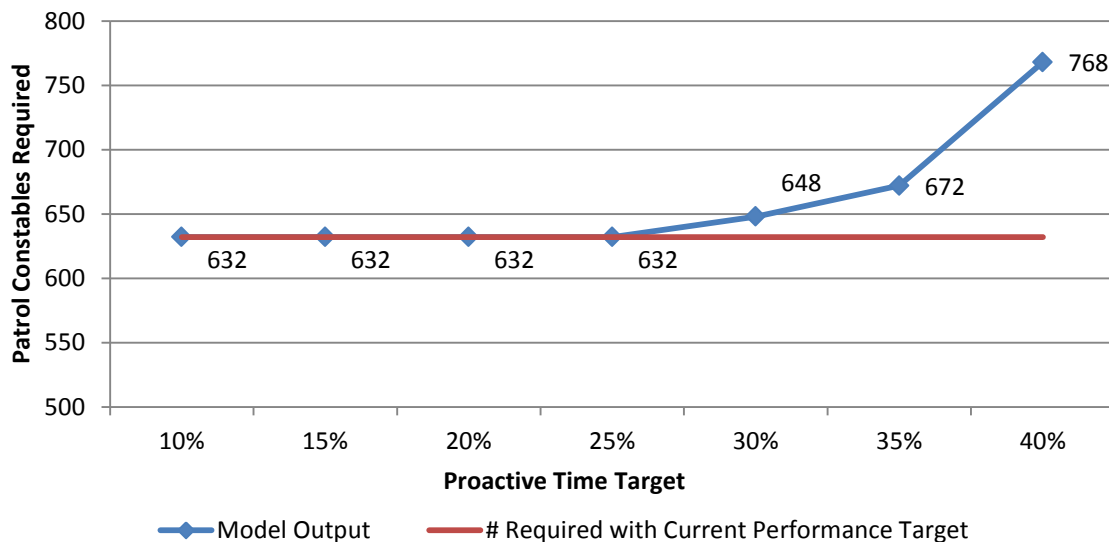
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[1] Edmonton Police Service "Delivering Service, Achieving Results," A New Patrol Service Delivery Model April 30, 2007

Figure 3 – Staffing Requirement Changes - Response Time
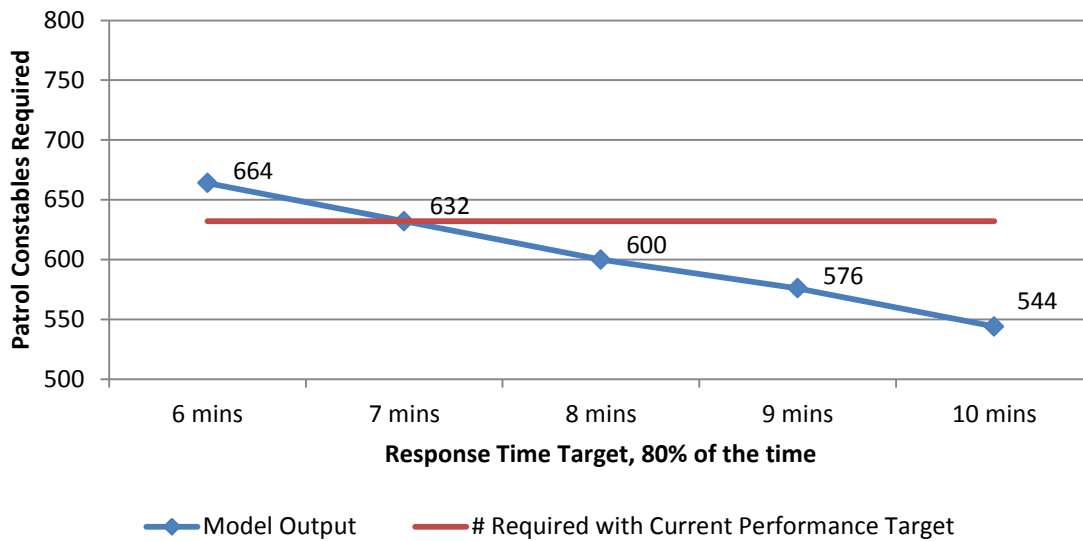
Note: In 2015 the actual number of full time equivalent patrol constables was 547.

Figure 4 – Staffing Requirement Changes - Proactive Time

Note: In 2015 the actual number of full time equivalent patrol constables was 547.

As shown by Figures 3 and 4, changing the target value can have a significant impact on the number of required patrol constables determined by the model. The difference in required patrol constables between response time targets of 6 and 10 minutes was 120 patrol constables. The difference in required patrol constables between proactive time targets of 25 and 40 percent was 136 patrol constables [2].

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[2] The number of required patrol constables was consistent between 10 and 25 percent, because the number of patrol constables required to achieve the proactive time target was less than the number of patrol constables required to achieve the response time target.

Targets vs. actuals

To assess the reasonability of the performance targets used by the models we compared them to the 2015 actual results for patrol constables. We found the targets to be unreasonable. Table 3 shows the comparison of targets to actual.

Table 3 – Performance Targets vs Actual Results Achieved by Patrol Constables

	Response Time	Proactive time
Performance Targets	80%	25%
2015 Actual Results	48%	11%
Difference	**32%**	**14%**

In 2015, patrol constables met the response time target of arriving at a priority 1 call in 7 minutes or less only 48 percent of time. They also only recorded that they spent 11 percent of their time performing proactive work.

The Service publically reports response time and proactive time results. For Quarter 4 of 2015, they reported a priority 1 response time of 7 minutes or less 71.5 percent of the time. This result is different from the actual result included in Table 3 (48 percent) because it measures the percent of time a Service first-responder arrives on scene in 7 minutes or less. A Service first responder includes the patrol constable calculated by the model, but also other EPS units such as Beats Constables, Canine Units, Tactical Units, Patrol Supervisors, etc. The proactive time publically reported by the Service is based on only patrol constables.

The Service should review its patrol constable performance targets to ensure they are still appropriate (especially given budgetary constraints). It is also important for the Service to document the results of their review in case key people leave the Service. We found that the Service last reviewed the performance targets in 2013/2014 as part of the creation of the Sixth Division; however, the documentation relating to the rationale for the performance targets is from 2007, when they first started using the models.

The potential risks of not reviewing the performance targets on a regular basis are:

- The Service's ability to achieve the targets is constantly changing; without regular review, performance targets may drift from what is achievable or what is required/expected of them, potentially setting the Service up to fail.
- Running the model with performance targets that are inappropriate for the Service and relying on the outputs may result in inappropriate staffing and budgeting decisions.

(Recommendation 1)

4. Model outputs vs. actual results

To assess the appropriateness of the model we compared 2015 actual results for the performance targets to the results calculated by the model when the number of patrol constables used in the model is equal to the actual number working in 2015. Table 4 shows the actual versus expected performance.

Table 4 – Actual vs Expected Performance for Patrol Constables (2015)

	Response Time	Proactive Time
Model Output	57%[3]	19%
Actual	48%[4]	11%
Difference	9	8

The difference in response time performance is reasonable since the models assume a random distribution of call locations and in reality, calls are concentrated in a few high-activity areas. These results show that the model appears to accurately calculate the required number of patrol constables to achieve the response time performance target.

The difference in proactive times is also reasonable. We found that the model output for proactive time also allows for the time when patrol constables are not logged into the dispatch system, but are on their shift (for example, in pre-shift briefings or preparing equipment at the beginning or end of their shift). In 2015, this was 9 percent of all patrol constables total time. If we add this time to the actual proactive time, the total is 20 percent. The difference between the model output and actual is now only 1 percentage points.

However, by accounting for the time not logged into the dispatch system in this way, the model is likely underestimating patrol staffing requirements. The model assumes that the patrol constable is logged in for the entire shift, when they are actually only logged in for about 90 percent of the shift. The Service should consider making changes to the model to better reflect the impact of the time when patrol constables are not logged into the dispatch system. (**Recommendation 1)**

5. Accuracy and reliability of data

The Service collects data on the actual workload hours of patrol constables, which they use to calculate the number of workload hours and administrative hours to input into the model. When a patrol constable is on shift they are required to record their status in the dispatch system using a mobile work station in their car. Once a constable is logged into the dispatch system their status is tracked mainly in the following categories:

- Available to take a call.

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[3] Calculation of model output is a city-wide weighting by the number of emergency calls for each division.
[4] The actual response time is lower than publicly reported result of 72 percent because this includes the impact of all units, not just patrol constables.

- Assigned to a call. If they are assigned to a call the dispatch system will record, among other things, their unit number, the division and district of the call, the priority of the call, and the type of call.
- Performing proactive work.
- Performing administrative work. Administrative time is broken into different categories including: attending court, training, writing reports, coffee breaks, lunch breaks, etc.

To assess the accuracy and reliability of the data used in the models we:

1. Interviewed and observed seven patrol constables from the six Divisions using the system while on duty.
2. Compared the administrative time logged by patrol constables for 2012 to 2015.
3. Validated the response times that management relies on to assess the performance of patrol, by comparing them to GPS data collected in each unit.

We found that the data used in the models may not be completely accurate and reliable.

During our ride-a-longs with the seven patrol constables we observed the following instances of inaccurate or inconsistent time tracking:

- A constable remained logged as "en route" to a call but stopped to perform a traffic stop without changing their status, thereby under reporting their proactive time.
- A constable remained logged as "out of service - court" while they went back to police headquarters with a colleague who needed to replace equipment, and then went on a coffee break without changing their status. Although all actions were administrative, the specifics for the type of administrative time were not tracked.
- A constable remained logged as "available for calls" while they went for coffee rather than changing their status thereby underestimating administrative time.
- A constable remained logged on a call for service while they went back to the police station and had lunch, thereby underestimating administrative time.

Our discussions with constables during the ride-a-longs (7 constables) identified multiple inconsistencies in practices around time tracking, especially with proactive and administrative time. For example:

- Two constables indicated there may be a tendency not to record that they are "out of service" for fear of looking lazy or because of peer pressure.
- Two constables indicated that officers may stay assigned to calls or other events while having lunch or working on reports back at the station and may not switch their status in the system, thus under-reporting administrative time.

- Four constables indicated that while the system can track proactive time, officers will sometimes do proactive work while not assigned as proactive in the system, often while available for calls, thus under-reporting proactive time.
- Three constables indicated concerns about the accuracy of proactive time tracking.

There is a risk that administrative time and proactive time results are understated and the amount of time spent on calls is overstated.

To further test this, we reviewed the administrative data recorded in the system from 2012 to 2015 and found that administrative time as a percent of logged time has been steadily declining. Figure 5 illustrates the decline.

Figure 5 – Administrative Time as a Percent of Logged Time (2012 to 2015)
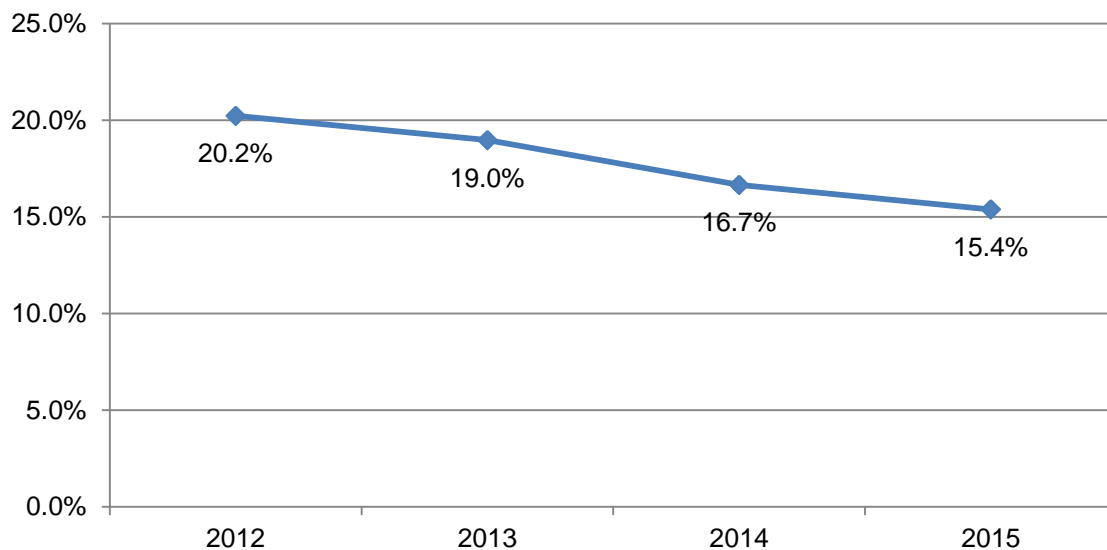
Of the administrative time categories, we found the ones with the largest decrease as a percent of total logged time were reporting (decreased by 2.8 percentage points), lunch breaks (decreased by 0.9 percentage points), and coffee breaks (decreased by 0.6 percentage points). The Service does not expect administrative time to be decreasing. The issues we observed during our ride-a-longs may be a potential cause of this.

Another test we performed to assess the accuracy of system data was to compare the response time information calculated by the system to the GPS data obtained from the police vehicle. We did this for a sample of 20 days from October 2015 to September 2016.

We found that the time a unit arrived at a call, as recorded in the system, did not match the actual time it arrived at the call for approximately 11 percent of the units responding to calls on the 20 days we tested (1,930/17,384). When looking at Priority 1 calls for the

days we sampled (these are the highest priority calls where there is risk of imminent harm), we also found that 12 percent (49/401) had arrival times not accurately recorded in the system. There is a risk that Priority 1 Response Time results are understated or overstated. Management indicated that the priority for the responding constable will be ensuring that they and the public are safe. This may not always allow them to change their status upon arriving at a Priority 1 call.

As this data is used in the models to determine divisional and district boundaries and the number of patrol constables required to manage the workload in each, it is important that it be as accurate as possible. This will ensure the models are not under or over estimating the number of patrol constables required. It will also help ensure that the Service has staffed each division appropriately.

Our work identified a lack of formal, standardized procedural documentation around how to track patrol service time correctly. As well we identified that time tracking controls and review may be weak or inconsistent and officers may not understand that it is important to accurately record time. **(Recommendation 2)**

4.1.3.   Self-deployment

In 2015, the Service deployed officers to approximately 256,500 calls for service. They deployed one car to the majority of calls (58 percent) and two cars to another 27 percent of the calls. The remainder of the calls had more than two cars dispatched to them.

The Service does not document procedures for deploying officers to calls because there are so many factors that can affect the number of cars deployed to a call (such as the location of the call, the nature of the call, the location/subject history, the equipment required, the availability of units, etc.).

However, they do have certain roles (senior officers and communication dispatchers) that have the right experience and are trained to make decisions regarding the deployment of officers. Officers usually should not decide on their own which calls they will attend (self-deploy). This ensures that the officers in charge (Duty Officer, Watch Commander, On-Street Monitor – Supervisor), as well as the officers working in Communications, are always aware of which cars are available and which ones have been assigned to calls. The Service always tries to have at least one car in each Division readily available to respond to a call.

A key control to ensure the Service is using staff effectively is to ensure patrol constables are not deciding on their own to attend a call (except in cases where it is acceptable such as they witness a suspected crime in progress or when there is a lot of radio traffic and an officer is in distress). As formal procedures for deployment do not exist, we decided to test this control.

In conversation with management, we determined that officers are more likely to self-deploy to major events (calls with a high numbers of cars already deployed to them).

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We identified the 11 events with the most officially deployed cars (40 or more) out of the 453,760 events in 2015 and quarters 1 to 3 of 2016. Then we determined how many units self-deployed[5] to those 11 major events. Table 5 shows the results of our tests.

Table 5 – Self-Deployment at Major Events

Sample #	Total Cars at Call	# of Officially Deployed Cars	# of Self-deployed Cars
1	117	114	3
2	94	70	24
3	71	55	16
4	71	52	19
5	51	50	1
6	46	46	0
7	45	44	1
8	53	42	11
9	40	40	0
10	54	40	14
11	50	40	10

We found that officers are self-deploying to major events. For the top 11 major events in the timeframe reviewed, the number of self-deployed cars ranged from 0 to 24. The risk of self-deployment is that a car is no longer available to take a call. In these situations the cars that self-deployed are no longer doing the work they were originally deployed to do, and this could leave the rest of the city in a more vulnerable situation.

The Service has taken some steps to try to reduce self-deployment. They are:

1. Including a review of excess cars at an event in Operational Reviews. Operational Reviews provide recommendations to the Service to improve equipment, policy, and/or training in order to mitigate future risks related to similar incidents or events. (Operational Reviews were performed on two of the calls in our sample.)
2. Developing training initiatives to address deployment, self-deployment and over-deployment. (As part of training to address patrol response to critical incidents, included in supervisor training and commander courses.)
3. Reviewing communication protocols and handling of high-risk events.

However, due to the increasing workloads of patrol constables, the Service should continue to develop strategies to reduce the amount of unwarranted self-deployment. This will help improve the effective use of patrol constables. **(Recommendation 3)**

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[5] Based on GPS data. We counted patrol units as self-deployed if: 1) It was not assigned to the call, and 2) It was stopped in the general vicinity of the call for longer than 3 minutes.

4.2. Investigative Support Bureau Staffing Process

To determine if the Investigative Support Bureau (the Bureau) has an effective process to determine staffing requirements we considered if they:

1. Periodically review workload demands and staffing requirements;

2. Have a process to prioritize the use of staffing resources; and,

3. Are addressing risks.

Overall, we found that the Bureau has an effective process to determine staffing requirements. However, we did find areas where they could streamline the process to make it more effective and efficient.

4.2.1. Background

The Bureau provides direct support to frontline policing and the community through the delivery of specialized investigative and support services, intelligence services, and prevention activities. There are approximately 822 full time equivalent staff working in the Bureau. It is divided into three divisions, which are further divided into nine branches, which are further divided into 30 areas. The 30 areas are also divided into specialized units, sections, teams or programs of related work. See Table 6 for the organizational structure of the Bureau.

Table 6 – Investigative Support Bureau Organizational Structure

Division	Branch	Section	Unit
Criminal Investigations Division	Major Crimes Branch	Economic Crimes	- Economic Crimes Section - Auto Theft Unit
		Homicide	- Homicide Section - Historical Homicide Unit - Disclosure - Missing Persons Unit - Polygraph Unit - Interview Support Team
		Robbery	- Robbery Section - Arson Unit
	Serious Crimes Branch	Child Protection	- Child Protection Section - Child at Risk Response Team
		Domestic Offender Crimes	- Domestic Abuse High Risk Team - Police and Crisis Team - Senior Protection
		Integrated Threat and Risk Assessment Centre (I-TRAC – Externally Funded)	
		Internet Child Exploitation (ICE – Externally Funded)	
		Sexual Assault	
Operational Support Division	Field Response Branch	Canine / Flight Operations	- Canine Unit - Flight Operations Unit
		Disaster and Emergency Operations Planning Section (DEOPS)	- Disaster and Emergency Operations Planning Section
		Tactical	- Tactical Unit - Crisis Negotiator Unit - Bomb Unit - Diarist Program

Division	Branch	Section	Unit
	Police Communication Branch	Logistics	- Quality Assurance and Training Unit - Technical Support Unit - Operations Support Unit
		Operations	- 911 Team - Call Evaluation Team - Dispatch Team - Communications Administrative Assistants - Switchboard
	Traffic Services Branch	Major Collision Investigations	- Major Collisions Investigative Unit - Impaired Driving Unit - Hit and Run Unit - Police Vehicle Audit Detail - Traffic Complaints Coordinator
		Specialized Traffic Operations	- Specialized Traffic Apprehension Team - Selective Enforcement Unit - Commercial Vehicle Inspection Detail
Specialized Investigation Division	Intelligence Branch	Security and Intelligence Services	- Source Management / Witness Protection Unit - Crime Analysis Unit - Strategic Intelligence Unit - Organizational Security / Threat Assessment Unit
		Integrated National Security Enforcement Team (INSET – Externally Funded)	
		Specialized Support Services	- Surveillance Unit - Wiretap Centre - Warrant and Privacy Unit - Technological Crimes Unit - Electronic Surveillance Detail
	Combined Forces Special Enforcement Unit	Combined Forces Special Enforcement Unit (CFSEU – Externally funded)	
		Operational Support (Externally Funded)	
		Alberta Law Enforcement Response Teams (ALERT)	
		Organized Crime and Gang Enforcement (Externally Funded)	
	Investigative Support Branch	Collaborative Policing Section	- Crime Prevention Unit - Crime Free Multi-Housing - Crime Prevention Through Environmental Design - Crime Stoppers - Ride Along Program - Cooperative Policing / Merchant Crime Alert - Neighbourhood Empowerment Team (NET) - Volunteer Coordination Unit
		Document Services	
		Equity, Diversity and Human Rights	- Community Operations Support Unit - Aboriginal Relations Unit - Victim Services Unit
		Forensic Identification Services	- Crime Scenes Investigation Unit - Criminal History Unit
		Police Information Check	- Police Information Check & Alarm Bylaw Section
		Youth Service Section	- School Resource Officer Unit - Y:FIVE-0 - Youth Offender Management Unit - EPS Cadet Corp. - Youth Education / Safe in 6 Program

Division	Branch	Section	Unit
	Organized Crime Branch	Edmonton Drug and Gang Enforcement	- *Edmonton Drug and Gang Enforcement Unit* - *Hate Crimes Unit*
		Targeted Offender	- *Targeted Offender Enforcement Unit* - *Behavioural Assessment Unit* - *Sex Offender Registry Unit* - *Priority Prolific Offender Program* - *Firearms Reduction Initiative Program*
		Covert Operations	- *Vice Unit*

As shown in Table 6, the Bureau performs a wide range of work for the Service and the citizens of Edmonton. This is made more difficult by the fact that the workload and resource needs of the units in the Bureau are continuously changing due to changing natures and causes of crime in Edmonton.

We assessed the Bureau's process for determining staffing requirements.

4.2.2.   Process to determine staffing requirements

The Bureau does not have a documented process for determining staffing needs. Models similar to those used to determine patrol staffing requirements are not available for the areas of the Bureau. Management makes decisions on where to increase and where to decrease staff on a daily basis, in order to address the highest risks to citizens. They are constantly moving resources in order to meet the Service's priorities, which are to deal with violent crime and injury first then property crime.

As well, throughout the year, managers completed the following documents to help identify staffing needs:

1. Workload Analysis Documents – These provide an environmental scan of the program area.
2. Budget Requests Forms – These are required if areas are asking for additional resources.
3. Operational Plans – The purpose of these plans is to look forward, and is an opportunity for the programs to propose resource requirements and what they want to accomplish.

The Bureau has also recently documented the staffing capacity key risk indicators for the units or sections in each area (approximately 70 work units). Some examples of the key risk indicators include annual caseload per detective, annual calls per constable, and annual Canine calls attended per constable. They also identified resource deficits and developed treatment plans for those units deemed to be outside of their tolerable workload risk level.

The Bureau could improve the efficiency and effectiveness of their process for determining staffing requirements if they combined the processes for completion of the Workload Reports, budget request forms, and Operational Plans with the completion of Key Risk Indicators work.

Currently, the Bureau is using four reports to track actual staff and staffing needs. Each report also has other uses, some overlapping, some not. We reviewed the information provided on each of the reports and found many discrepancies and inconsistencies with how the units are reporting information relating to actual staffing numbers, staffing needs, and workload requirements.

Due to their nature, there are differences in the timing of report preparation, with some being prepared as at year-end, while some may be prepared at other points in the year. In addition, Operational Plans provide an opportunity for the programs to "pitch" for resource requirements, which could be different from what is officially asked for through the Budget Request Forms.

The Key Risk Indicator process and documentation includes staffing information and risks for all units in one document. The Service should continue to develop its processes to improve on staffing decision-making. There is a risk that different users could perceive the current state of staffing levels to be different depending on the source of information. As well, they should prepare all documents for the staffing decision-making process consistently to ensure they have supplied the appropriate level of information in each one. **(Recommendation 4)**

4.2.3.   High risk areas

The results of the Key Risk Indicator process identified 18 areas that were at a high risk of not having the staffing capacity to meet their workload demands. To understand the risks associated with not being able to meet workload demands we talked to the officers in-charge of five of these areas:

1. *Historical Homicide Unit*
   There are approximately 170 unsolved homicide cases (cold cases) and 2 detectives assigned to this area. Cold case investigations are time consuming to review and require analytical assistance to prepare timelines, linkage charts, database checks, etc. Without proper analytical assistance, there is a risk that an investigator may miss an investigative task and therefore a file will remain unsolved, thus creating unnecessary risk to public safety. Also, some of these cold cases may contain DNA samples and with the improvements in DNA technology there is the possibility of solving them.

   Unsolved homicides present a risk to the public as the offenders may still be at-large and could commit further crimes. When the Service solves a historical homicide, the public's confidence in the police is maintained and enhanced. Also, the Service believes that by solving cold cases they are dissuading potential offenders, as the offenders now believe that the police continue to investigate despite the age or the complexity of the homicide.

2. *Tactical Unit*

Tactical is a specialized unit dealing with high-risk occurrences such as apprehending dangerous criminals, executing high risk warrant searches, hostage negotiations and explosive disposal. There are currently three 10-person teams in this unit. This allows for tactical response and support about 59 percent of the time. The remaining coverage is through the use of overtime, on-call or with patrol staff, which increases cost for the Service since overtime is paid at double time. Covering for the tactical team may also reduce the ability of patrol officers to respond to other calls for service.

3. *Call Evaluation Team*

There are currently 42 Call Evaluators who receive emergency and non-emergency calls from the 911 operators. In 2015, they received 10,483 emergency calls per evaluator and 48,880 non-emergency calls per evaluator.

The risks of not having sufficient staff in this area are:

- The time to evaluate 911 calls transferred to police takes too long.
- The staffing levels necessary to meet the provincial standard costs the Service over $1 million dollars a year more than what was budgeted for.
- The team lacks time to perform quality assurance role, which could lead to an increase in performance-related complaints against call evaluators.

4. *Behavioural Assessment Unit*

The intent of the Behavioral Assessment Unit is to monitor offenders that pose a risk to the public, and in certain cases, to inform the public of their release or presence in the community. To do this the unit performs risk assessments on offenders prior to release and parolee's prior to the expiration of their parole, to determine if they require a peace bond (a court order to keep the peace and be of good behaviour for a specified period of time) and/or public notification. There are currently three members working in this unit.

In some circumstances, the unit may not receive appropriate notice of release or expiration of parole. The Detectives in the unit will then reschedule their appointments, which include the monitoring of offenders who have been released on conditions in the community, to ensure Peace Bond/Notification issues are addressed. This leaves some offenders who pose a significant risk to the community potentially unchecked for periods of time.

5. *Document Services Section*

The Document Services Section is responsible for receiving, tracking, serving and concluding all criminal and traffic related documents for the City of Edmonton. The majority of the documents are subpoenas received from Alberta Justice and to a lesser extent Public Prosecutions Service of Canada. There are currently 11 full time equivalents working in the area. In 2015 they received approximately 25,000 documents and served approximately 21,000 documents.

The risks of not having sufficient staff in this area are:

- Increased overtime costs.
- There is a potential that documents (specifically last minute ones that come in from the court house) do not get served. This may result in withdrawals of charges ranging from theft to homicide.
- They might have to stop serving bylaw and mandatory court summonses for photo radar documents, as these are seen as less important than criminal documents. This may result in significant financial implications to the City of Edmonton.

Management constantly evaluates the risks associated with staffing capacity and moves staff around to meet the priorities of the Service. However, if they move staff from one area to reduce risk in another it may lead to increased risk in the area that lost the staff.

4.3.   Funding Model Effectiveness

To determine if the current funding model is effective we assessed:

1. If the funding formula is clearly defined;
2. If the funding formula allows for long-term planning; and,
3. If the funding provided to the Service allows it to meet the demands placed on it.

We found that the use of some type of funding formula allows the Service to be more effective at supporting its objectives and is better aligned with the Police Act. However, to better allow for long-term planning details of the on-going application of the City's formula are required. The Commission and the Service will need to open a dialog with City Council. Once the application of the formula is clearly defined and documented, the formula will allow the Service more flexibility to use its funding in the most effective manner.

4.3.1.   Background

During the 2016 to 2018 Operating Budget deliberations, Edmonton City Council approved the use of a funding formula (the City's Funding Formula) for determining the net operating budget of the Service. The City now determines the Service's budget through a mathematical formula based on population growth and inflation.

The components of the City's Funding Formula are:

a) Prior year net operating requirement – This is the prior year's revenue less expenses.
b) Municipal Price Index (MPI) growth percentage – This is a measure of inflation for the City of Edmonton that uses 17 weighted expenditure categories. Two of these categories relate to personnel (Wages and Salaries and Employee Benefits) and represent 55 percent of the total municipal expenditures. The Services actual 2016 personnel costs made up 83 percent of their expenditures.

c) Population growth percentage – This is the percent increase in the City of Edmonton's population from the prior year to the current year based on the City of Edmonton census.

d) Efficiency factor – Council sets this and it implies that the Service will find annual efficiencies of $1.6 million for 2016 to 2018 (about 0.5 percent of its budget).

Table 7 shows the City's Funding Formula and the funding calculations for 2016 to 2018.

Table 7 – 2016 to 2018 City's Funding Formula Calculation

City's Funding Formula:		
Prior Year Budgeted Net Operating Requirement * (1 + MPI Growth % + Population Growth %) – Efficiency Factor = Current Year Budgeted Net Operating Requirement		

Calculation:		
Year	*Calculation*	*Budgeted Net Operating Requirement*
2016	$310.9 million * (1 + 2.8% + 1.6%) - $1.6 million	$323.0 million
2017	$323.0 million * (1 + 2.5% + 1.8%) - $1.6 million	$335.3 million
2018	$335.3 million * (1 + 2.9% + 2.0%) - $1.6 million	$350.1 million

In prior years the Service received their funding in the same way as City Departments, through single year budget requests. The use of a multi-year funding formula allows for better long-term planning. However, if the City's Funding Formula was in place since the inception of the Municipal Price Index in 2008 the Service would have received $17.9 million less than what they actually received from 2009 to 2015. This equates to approximately 137 positions. Table 8 shows the difference for each year.

Table 8 – Net Operating Requirement Budget Approved vs City's Funding Formula (2009 – 2015)
(in millions of dollars)

	2009	2010	2011	2012	2013	2014*	2015*	Total
Funding Formula	209.5	220.1	230.1	237.1	251.8	269.5	301.2	1,719.3
Approved Budget	202.0	221.2	227.0	239.3	262.6	274.3	310.8	1,737.2
Difference	**7.5**	**(1.1)**	**3.1**	**(2.2)**	**(10.8)**	**(4.8)**	**(9.6)**	**(17.9)**

*2014 and 2015 numbers were adjusted to include collective bargaining agreement salary settlement. 2015 was also adjusted to add back the revenue transfer from the Automated Enforcement Reserve.

To determine their budget prior to the use of the City's Funding Formula, the Service would consider inflationary adjustments such as building costs, utilities, and cost of living changes. As well, they would request funding for additional resources through the approval of service packages. The Service's original budget request for 2016 to 2018

included seven service packages. One of these was a request for additional front line officers to reduce crime and victimization.

If Council approved all the service packages the Service would have received $39.5 million more than what was actually approved using the City's Funding Formula for 2016 to 2018. Table 9 shows the differences.

Table 9 – Original Long-term Budget Request vs City's Funding Formula Budget (2016-2018)
(in millions of dollars)

	2016	2017	2018	Total
Original Budget Request	$336.9	$349.2	$361.8	**$1,047.9**
Actual (Funding Formula)	323.0	335.3	350.1	**1,008.4**
Difference	**13.9**	**13.9**	**11.7**	**39.5**

However, Council normally would not approve all the service package requests. The budget process prior to the use of the City's Funding Formula had the Service and the Commission identifying, proposing, justifying, and negotiating with Council for incremental operating growth funding. Once Council approved a service package, the Commission and the Service would only use that money to pay for what they requested.

4.3.2. Alignment with the Police Act

Section 29 of the Police Act limits Council's involvement with the police service to providing funding for the total budget. This is designed to ensure that Council cannot improperly direct law enforcement (i.e., Police policy and operations should be independent of Council to avoid any bias/favouritism, and to allow the Commission and Service to ensure they are as effective in meeting their objectives.) The new funding formula process better aligns with the intent of the Police Act as the Commission and the Service decide on how they spend the funds.

To ensure transparency with Council, the Commission and the Service have only used service package funding in accordance with what Council approved it for. The new funding method allows the Commission to retain full control over funding which is in better alignment with the Police Act and this allows them the flexibility to spend the money where it is needed based on their understanding of policing needs.

However, there is a some uncertainty with the new formula. This diminishes the Service's ability to plan long-term.

4.3.3. The City's Funding Formula uncertainty

The City's actual Funding Formula is defined; however, the future application of the formula is not clearly defined and documented. This has resulted in many unanswered questions regarding the application of the formula. Such as:

- Is there a mechanism for the Service to suggest changes to the formula (i.e., replace the Municipal Price Index growth percentage with an index that better reflects policing costs)?

- Council based the formula on population growth. What happens if the City's boundaries grow, but not its population? Will Council allocate additional funds to ensure the Service can police new areas as effectively as the rest of the City?

- If the Service and the Unions have not agreed on wage increases when their collective bargaining agreements expire, the Service sets aside money to pay the wage increases once the City has negotiated them with the unions. What happens if they do not set aside enough money? Who will be expected to pay the difference (the Service or the City)?

- How will surpluses be dealt with? Will there be leeway for the Service to carry forward surpluses?

- Is the Service still required to present the business plan to Council? How much information does Council require during budget deliberations?

- Will the formula stay in place when a new Council is elected?

In our discussions with Service staff they are not aware of any formal documentation (i.e., policy, process documentation, or methodology) that describes the City's Funding Formula and the different variables considered in the formula. We also spoke with some members of the City Administration. We found that the Service and the City Administration had different understandings of what Council intended the City's Funding Formula to cover in regards to the 2016 collective bargaining agreement settlements. This issue has since been resolved.

Overall, having a funding formula allows the Service to be more effective at supporting its objectives. However, uncertainty in how the City's Funding Formula will be used and changed over time does not allow for effective long-term planning. Without the ability to plan for the long-term, the Service will not be able to ensure that it will meet the demands placed on it.

We found that the use of some type of funding formula allows the Service to be more effective at supporting its objectives and is better aligned with the Police Act. However, to better allow for long-term planning there needs to be less uncertainty regarding the use of the City's Funding Formula. This will allow the Service more flexibility to use its funding in the most effective manner. This is something that the Service will need to develop in conjunction with the Commission and City Council. **(Recommendation 5)**

5.   Conclusion and Recommendations

The first objective of this audit was to determine if the patrol function of the Community Policing Bureau has an effective process to determine staffing requirements and staff are used effectively.

To determine this we assessed the appropriateness of the models the Service uses to determine patrol staffing requirements as they take into account the workload. We found that the models are appropriate. The majority of the other Cities we heard from use similar models and when compared to the other models available, the workload-based model appears superior and to better meet the needs of the Service and the City of Edmonton.

However, we did find areas where the Service could improve the effectiveness of the models.

- They should be assessing the appropriateness of the models to meet their needs. It is possible that something better will be developed.

- They should ensure that the model is accurately reflecting patrol constable time. This model input helps determine the number of required patrol constables and should reflect reality.

- They should assess the performance targets used in the models and document the rationale for using them. Changes to these will impact the number of required patrol constables.

- They should document the results of their assessments so the next time they do the assessment they can understand the decisions made in the past.

- They need to improve the accuracy and reliability of the data used by the model by standardizing how patrol constables record their service time, how supervisors review recorded service time, and doing their own periodic reviews of the accuracy of the data.

We made the following two recommendations relating to the patrol staffing models:

Recommendation 1 – Assess patrol staffing models

We recommend that the Chief of Police ensures his staff:
 	
1. Perform an assessment of the patrol staffing models and the performance targets used in them. The assessments should include:
 	
    • Ensuring the model accurately reflects patrol constable time.
    • Documenting the results of the assessments.
    • Documenting the rationale for the patrol performance targets.
    • Rerunning the models.
    • Communicating the results to stakeholders.
 	
2. Set and document a formal schedule for assessing the models, the performance targets and the model inputs.

Management Response and Action Plan

Accepted

Action Plan:

The Edmonton Police Service has already taken steps with respect to this recommendation.

From a historical perspective, in 2009, an evaluation[6] was conducted of the Geographic Deployment Model which was aimed at evaluating the effectiveness of the model in terms of the EPS's desired strategic outcomes. It was achieved using internal data generated through just over two years of the model's operation as well as comparisons with external data sources. The rationale for the defined performance indicators was outlined and assessed within the report as well as consideration given for refining the divisional boundaries and other options in contemplation of planning for the expansion to six divisions. Ongoing running of the model was conducted in 2014 in conjunction with the expansion to six divisions which occurred in 2015.

In Q4 of 2016, the Office of Strategy Management Division made recommendations to Chief's Committee addressing the need to perform ongoing assessment of the patrol staffing model, the related performance targets and inputs into them. The recommendations were approved at the December 22nd, 2016 Chief's Committee Meeting and has been recorded in the related minutes for future reference (EPS Internal Tracking Sheet 9220 Refers).

A formal schedule was established which coincides with other related staffing, planning and budgeting processes. These recommendations were specifically identified and approved as follows:

1. The Managing Patrol Performance (MPP) mathematical model and subsequent patrol staffing requirements be calculated annually in the first quarter commencing in Q1 2017 using the calculated workload from the previous calendar year and in conjunction with the Corporate Risk Profile update.

2. An environmental scan of police patrol staffing models be conducted every four years, commencing in the first quarter of 2018, to ensure that the Edmonton Police Service is employing the most effective and suitable patrol staffing model.

3. The environmental scan includes an internal assessment and testing of the model suitability and changes to the model as required.

4. A report to the Community Policing Bureau and Chief's Committee be developed for each of the aforementioned activities within 30 days of the completion of each activity.

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[6] BENT, Andrew (2009), Evaluation Review of the Geographic Deployment Model. Edmonton Police Service, Version 1.1. p.1-177.

Additionally, in conjunction with the related planned analysis above, the Strategic Planning, Evaluation and Research Unit (SPERU) has recommended that:

1. During the scheduled Q1 2018 review of the MPP model, SPERU will assist Business Performance Section in a comprehensive review, rationale, and proposal of what the MPP performance targets should be. (This will include assessment of undefined time and the impact of non-patrol constable response to priority one calls as identified in the audit.)

2. The MPP 7 minute average response time performance target will be evaluated and potentially revised, based on:
   a. An environmental scan of Canadian police agencies' patrol staffing model response time objectives, and actual performance statistics.
   b. Undertaking a late 2017 survey on Edmontonians response time expectations via the City of Edmonton Community Insight Panel. Survey questions will take a form that can directly support whether the current response time objective meets citizen expectations, and if not, what it would need to change to.

3. The MPP 25% proactive time performance target will be evaluated and potentially revised, based on:
   a. An exhaustive environmental scan of Canadian police agencies' patrol staffing model proactive time objectives, and actual performance statistics. (This will include the impact of proactive work performed by non-patrol constables and its relationship and relevance to this performance target.)

4. As the EPS Annual Policing Plan is developed for each upcoming year, how actual response time and proactive time are measured and targeted, will be revised and updated as necessary to align with MPP model performance objectives. (Based on the findings of the audit, the EPS will be reviewing the reporting and rationale to ensure that the Annual Policing Plan reporting reflects the MPP's assumptions or explains any differences.)

The basic recommendations were tracked and recorded (EPS Internal Tracking Sheet 9221 refers) and were subsequently approved at the February 23rd, 2017 Chief's Committee Meeting.

Planned Implementation Date: Ongoing with anticipated completion date for review by December 31, 2018.

Responsible Party: Chief of Police, Edmonton Police Service

Recommendation 2 – Improve patrol staffing model data reliability and accuracy

We recommend that the Chief of Police ensure the reliability and accuracy of the data used in the patrol staffing models by:

1. Standardizing how patrol constables record time and communicating the requirements to all patrol constables;
2. Setting up and following a process to ensure time recording is reviewed; and
3. Periodically assessing the accuracy of the data used in the models.

Management Response and Action Plan

Accepted

Action Plan:
The Edmonton Police Service has already taken steps with respect to this recommendation. The EPS has clearly defined categories for the various time codes including Calls For Service (CFS) Time, Proactive Time (various categories), Administrative Time and Undefined Time. As well, the service has reports for the use by management to monitor and report on the various categories and the ability to analyze the related data. These are automated business intelligence reports and provide comprehensive detail on patrol performance and are readily available to management and the Command Teams within Patrol Divisions.

The importance of accurate time tracking and data quality will be further emphasized through internal messaging from the Deputy Chief in Community Policing Bureau through the chains of command to all patrol members. This activity has been tracked through the Office of the Chief of Police (EPS Internal Tracking Sheet 9198 refers). This is planned to be re-emphasized in Q1 of 2017.

To meet this audit recommendation, the EPS intends to:

1. Develop communication, education and messaging to emphasize the need for accurate time tracking and its relationship to data quality,
2. Continue to measure and assess the various time codes,
3. Develop quality assurance processes to ensure that time is properly recorded and corrected if necessary and possible, and
4. Develop quality assurance processes to ensure that data utilized for the models is reviewed and conforms to data quality standards as established.

Planned Implementation Date: Ongoing with anticipated completion date for review by December 31, 2018.

Responsible Party: Deputy Chief i/c Community Policing Bureau

We also found that the Service could improve its effectiveness in using patrol constables by developing additional strategies to reduce the amount of unwarranted self-deployment. We made the following recommendation relating to the reduction of self-deployment:

Recommendation 3 – Reduce patrol constable self-deployment
We recommend that the Chief of Police develop strategies for the reduction of unwarranted self-deployment by patrol constables. Management should communicate these strategies to the constables and follow-up to ensure they have reduced the number of constables self-deploying to events.
Management Response and Action Plan
Accepted **Action Plan:** The EPS continues to monitor deployment of units to calls for service based upon a risk management approach. Adherence to the Geographical Deployment Model principles, including requiring permission for cross-district dispatching has continued to be emphasized. As acknowledged within the audit report, there are times where self-deployment would in fact be deemed appropriate. Oftentimes, these circumstances involve major incidents where there could be imminent danger to life and due to the volume of radio traffic; it may be impractical to wait for that opportunity prior to responding to the call. In those situations, self-deployment would be practical with appropriate supervisory oversight once those situations have been determined to be stabilized. Decision making regarding the deployment of patrol constables is managed by Police Communications Dispatchers, overseen by the On-Street Monitors (OSM's) and Divisional Watch Commanders who are field supervisors and make decisions to deploy and/or redeploy resources. Citywide oversight is governed by the Duty Officer, the highest ranking officer in operations on a 24 hour basis. Efforts have been made to monitor situations where self-deployment may have been considered an issue and this has been emphasized through Operational Review Recommendations which focus on relevant policy, training and equipment. Training has been provided specifically addressing this topic inclusive of: - Geographical Deployment Model (GDM) Training – GDM I 2016   - T/A Course for Constables (for when they take on Acting Sergeant roles)   - Course for Newly Promoted Sergeants   - Commander Level I Course   This training has been incorporated and will continue to be delivered in conjunction with these courses with modifications to meet this recommendation. The EPS continues to develop strategies to assist in addressing this potential issue.

In 2016, the EPS has submitted a business case (19-60-1494) for the Capital Investment Agenda for 2019-2022 which would assist in addressing this recommendation. The Operations and Intelligence Command Centre (OICC) is planned to provide the operational oversight from a citywide perspective and would see the implementation of situational awareness software which would prompt the Duty Officer when situations such as this occur. The OICC is planned to assist in ensuring the efficient and effective deployment of resources citywide as well as provide an intelligence led approach which would assist in the determination of required resources as well as lead to expedited conclusion of events and investigations which could free additional resources.

Planned Implementation Date: Ongoing with anticipated completion date for review by December 31, 2018. The implementation of an OICC will be a multi-year project. If funding is approved for the 2019-2022 Capital Plan, then a fully functioning OICC is anticipated to be operational by December 31, 2021.

Responsible Party: Deputy Chief i/c Community Policing Bureau and Deputy Chief i/c Investigative Support Bureau

The second objective of this audit was to determine if the Investigative Support Bureau has an effective process to determine staffing requirements.

We found that the Bureau has an effective process for determining staffing requirements. The process focuses on mitigating and reducing risks to citizens and the Service. It includes a process to prioritize the use of staff to better achieve the objectives of the Service. The process involves the use of many reports, plans, and documents. The Bureau's new Key Risk Indicator process and documentation appear to combine a lot of the information provided in the other documents and identifies the areas of highest risk. The Service should continue to develop its processes to improve on staffing decision-making.

We made the following recommendation to improve the effectiveness and efficiency of the Bureau's process for determining staffing requirements:

Recommendation 4 – Investigative Support Bureau staffing process
We recommend that the Chief of Police ensures that the Investigative Support Bureau continue to develop the staffing decision-making process, to clarify the information and remove duplication of efforts. All documents prepared as part of the staffing decision-making process should be completed consistently to ensure the appropriate level of information is supplied in each one.
Management Response and Action Plan
Accepted **Action Plan:** The Investigative Support Bureau (ISB) has taken considerable steps over the

course of the past year to develop the staffing decision-making process. In 2016, ISB established the key risk indicators for all work areas in order to identify the areas of greatest risk. This was based upon information arising from the Workload Reports that traditionally had been completed as well as the Operational Plans. Although not specifically mentioned within the audit report, it is believed that few organizations have established a comprehensive methodology to assess staffing levels for investigative areas like ISB. The EPS key risk indicator review process which was implemented in 2016 is believed to be an industry leading methodology in this area and will continue to be matured over time.

A review of the processes has been completed by ISB and it has been determined that the Workload Reports & Operational Plans will not be required going forward. The Risk Assessment Model will be the roadmap. The EPS Risk Management and Quality Assurance Branch will continue to work with ISB to discuss the Risk Assessment Model, next steps in refining the process, and timelines. It was emphasized that the Risk Assessment Model must align with budget planning. The Key Risk Indicators for ISB will be reviewed and assessed on a set schedule in relation to the Corporate Risk Profile and will allow for staffing adjustments to be addressed in line with pre-determined risk appetites and tolerance levels for each area. This process will be aligned with the assessment of staffing levels within Patrol through the MPP and GDM model so as to ensure a comprehensive approach to staffing assessment. (EPS Internal Tracking Sheet 9197 refers)

Planned Implementation Date: Ongoing with anticipated completion date for review by December 31, 2018.

Responsible Party: Deputy Chief i/c Investigative Support Bureau

The third objective of the audit was to determine if the current funding model is effective at supporting the objectives of the Edmonton Police Service.

We found that the use of some type of funding formula allows the Service to be more effective at supporting its objectives and is better aligned with the Police Act. However, to better allow for long-term planning there needs to be less uncertainty regarding the application of the City's Funding Formula. This will allow the Commission and the Service more flexibility to use the funding in the most effective manner. This is something that the Service will need to develop in conjunction with the Commission and City Council.

We made the following recommendation to help the Service clarify it's understanding of the funding formula.

Recommendation 5 – Funding formula clarity
We recommend that the Chief of Police work with the Edmonton Police Commission to open a dialog with City Council on the issues and uncertainty of the future application of the City's Funding Formula.

Management Response and Action Plan
Accepted **Action Plan:** The EPS has conducted a significant analysis of the Funding Formula and has identified a number of concerns with the current formula as currently defined. These concerns have been brought forward to the Edmonton Police Commission and a plan is being established to bring them forward to the City of Edmonton. The Service's goal is to establish a funding formula that will allow for the ability to conduct long term planning but also be in a position to respond to potential unique circumstances that can arise such as the impacts of potential annexation and major legislative changes (i.e. Legalization and Regulation of Marijuana). Areas to be addressed include: • the long term framework for the funding formula including rules and mechanisms, • the impacts of forecasting errors, and • the use of an "efficiency factor" within the funding formula. It is also recognized that the EPS needs to consider other budget impacts internally such dealing with inflation and purchasing contract factors and the impacts of Collective Agreement salary settlements. Information regarding the implications of the Funding Formula has been provided to the Edmonton Police Commission in contemplation of future discussions with the City of Edmonton (EPS Internal Tracking Sheet 9122 refers). **Planned Implementation Date:** As the action plan will involve consultation with the EPC and the City of Edmonton and will likely fall in line with the 2019-2022 budget process, this is anticipated to be completed by December 31, 2018. **Responsible Party:** Chief Administrative Officer i/c Corporate Services Bureau

We would like to thank the members of the Service who worked with us on this audit for their cooperation and assistance.

Appendix 1 – Risk Assessment, Audit Scope, and Audit Methodology

Risk Assessment
The Commission specifically asked that the Office of the City Auditor to conduct a staffing audit of the Service. However, as the Service is such a large and complex organization, we still needed to determine where to focus the efforts of our audit in order to add the most value. We conducted a variety of risk identification and assessment activities including:

- Risk identification interviews with management and staff of the Service and the Commission;
- Ride-a-longs with police constables;
- Research into relevant topics; and,
- Review of studies and research conducted by the Service.

As a result of this risk assessment, we developed the audit objectives and criteria.

Scope
The scope of this audit covered the staffing for the Community Policing Bureau and Investigative Support Bureau (as they make up the majority of staff in the Service). Specifically we assessed the models or processes used by the Service to determine staffing needs in each of these Bureaus.

We performed the field work for this audit from September until December 2016.

This audit did not cover the operations of the Service and whether they are effective or efficient.

Methodology
We used the following methods to gather evidence to conclude on the audit objectives:

- Review of documentation;
- Discussions with management and supervisory staff;
- Ride-a-longs with patrol constables;
- Analysis of data; and,
- Obtaining information from other Canadian policing organizations.

Responses to Edmonton Police Service Staffing Audit

Approved by Special Meeting of the Commission

April 5, 2017

On November 19, 2015, the Edmonton Police Commission requested the City Auditor to conduct a review of Edmonton Police Service staffing and produce a report for the Commission. On March 16, the City Auditor presented its draft report to the Commission outlining recommendations. The first available opportunity for the Commission to review and provide responses to the report is at a Special Meeting on April 5, 2017. This report provides the Commission's responses to the Staffing Audit review report prepared by the City Auditor.

Overall Edmonton Police Commission Comments

The Commission thanks the City Auditor and staff for their work on this audit. The recommendations are of value in looking at the current model of service provision. Five of the recommendations may have significant budget implications. We wish to emphasize that while this audit is a useful tool for current day analysis, the Commission, in conjunction with the Service, will be undertaking a strategic planning process in the very near future that will broadly consider innovative directions for policing and the broader context of community safety in the City of Edmonton. The findings of this audit will be one input into that process.

Recommendation 1 – Assess patrol staffing models

We recommend that the Chief of Police ensures his staff:

1. Perform an assessment of the patrol staffing models and the performance targets used in them. The assessments should include:

   - Ensuring the model accurately reflects patrol constable time.
   - Documenting the results of the assessments.
   - Documenting the rationale for the patrol performance targets.
   - Rerunning the models.
   - Communicating the results to stakeholders.

2. Set and document a formal schedule for assessing the models, the performance targets and the model inputs.

Edmonton Police Commission Response

Staffing Police departments is a continuous challenge and one that has become more complex in recent years as there are many considerations such as, funding for the Service, number and types of calls for service, crime levels, response time expectations from the Community, shift distribution, geographic disbursement, expectations and increases in administrative duties, and the population of the City to take into consideration.

In 2015, the Commission requested and received an internal review on EPS

response times and dispatch call volumes. Edmontonian's were then asked to complete a survey between February 22-28, 2016, in conjunction with the EPS Biennial Citizen Survey regarding their perceived importance of a variety of EPS programs and Services. Overall 3,189 people completed the survey and the participants were asked questions regarding expected response times, community policing services, and police operational services. Overall, 77% of the respondents indicated that police should respond to a high priority call in less than 7 minutes. Over the last 5 years the Service has met priority one response time targets 71.1% – 77.2% of the time, priority two response time targets 92.9% - 96.2% of the time, and priority three response time targets were met 92.1% - 94.7% of the time. The Commission in collaboration with the Service will review the rationale and methodology to support all response time targets to ensure that Public and Officer safety is paramount. The Commission will ensure that the target response times consider the results from the citizen survey and the response times other emergency services require (Fire and EMS) to provide a coordinated emergency response service to the Community.

The Commission also had oversight over the Service's risk management function which included monitoring risk tolerance levels for staffing capacity. As a result of that review the Commission requested the City Auditors assistance for an in-depth review of staffing. As a result of this audit, the Commission will request that targets and results for all priority calls for the Community are provided to the Commission and included in the Annual Policing Plan. The Commission will request that the Service provide actual performance for response times for each Division to ensure that risks are identified and mitigated in a timely manner. We will also request that the Service provide an analysis of the distribution of calls for service by hour of the day, day of the week, and month to ensure that staffing is appropriate and that areas where performance targets are not met are analyzed in order to make staffing decisions. In addition, The Commission will request our independent Auditor to annually validate the Service's publicly reported performance measures to ensure accuracy and transparency for the public.

Recommendation 2 – Improve patrol staffing model data reliability and accuracy

We recommend that the Chief of Police ensure the reliability and accuracy of the data used in the patrol staffing models by:

1. Standardizing how patrol constables record time and communicating the requirements to all patrol constables;
2. Setting up and following a process to ensure time recording is reviewed; and
3. Periodically assessing the accuracy of the data used in the models.

Edmonton Police Commission Response

The importance of collecting and reporting robust and good quality data is to inform Management and the Commission to make improvements to service delivery and to promote accountability to stakeholders and residents of the community. The Commission, in its oversight role, will ensure that the Service develops and implements the appropriate time tracking policies that take into consideration the safety of Officers and the Public. An important component of data analysis is the ability to review the amount of time consumed on a call, specifically the time from when an Officer is dispatched to the time the Officer clears the scene. The Commission will direct the Chief to establish relevant performance standards and guidelines for Members as well as stress the importance of the quality of data.

Recommendation 3 – Reduce patrol constable self-deployment

We recommend that the Chief of Police develop strategies for the reduction of unwarranted self-deployment by patrol constables. Management should communicate these strategies to the constables and follow-up to ensure they have reduced the number of constables self-deploying to events.

Edmonton Police Commission Response

The Auditor has emphasized that there were 11 instances identified out of 453,760 dispatched calls. The Commission in its oversight role will ensure that the Service develops appropriate deployment policies and that they are implemented and communicated to the Service. These policies will take into consideration the risk identified by the City Auditor as well as the Public and Officer safety considerations the Service has articulated. The Commission will also request a follow up review that will entail the review of the controls over deployment organizational wide (not just restricted to major events) to ensure the deployment processes are operating as intended.

Recommendation 4 – Investigative Support Bureau staffing process

We recommend that the Chief of Police ensures that the Investigative Support Bureau continue to develop the staffing decision-making process, to clarify the information and remove duplication of efforts. All documents prepared as part of the staffing decision-making process should be completed consistently to ensure the appropriate level of information is supplied in each one.

Edmonton Police Commission Response

During 2015, the Commission identified a gap with the staffing model within the Investigative Support Bureau and directed the development and implementation of the staffing capacity risk assessment model. This work was finalized and reported to the Commission in September 2016. We are pleased that the Auditor has endorsed this methodology and find this risk based methodology addresses the future needs of the Service as well as the Community. During 2016, the Commission in its oversight role had directed the Service to provide periodic updates on the key risk indicators identified organizational wide. The Commission will continue to review and monitor risks to ensure that Police resources are used effectively and efficiently and that high risk areas of concern are appropriately addressed by the Service.

Recommendation 5 – Funding formula clarity

We recommend that the Chief of Police work with the Edmonton Police Commission to open a dialog with City Council on the issues and uncertainty of the future application of the City's Funding Formula.

Edmonton Police Commission Response

The economics of policing and community safety is about the evolution and sustainability of policing. It is about keeping people safe in an environment regardless of the challenges. As communities continue to change, policing must adapt and evolve, and new approaches must be found to meet the safety and security needs of the citizens of Edmonton. Within the area of governance, the Commission has and will continue to focus on oversight and strategic direction, roles and responsibilities, the policy framework governing budgeting & forecasting activities, and reporting mechanisms used to inform key stakeholders of financial results. Forecasting is a critical activity in financial management as it provides for the identification of financial pressures and potential surpluses at an early stage so that adjustments can be made in order to align funds with priorities. The Commission is committed to ensuring that there are sufficient and adequate controls in place to facilitate effective budgeting and forecasting practices. The Commission supports the concept of a predictable funding formula.