

# KEY PERFORMANCE INDICATORS

## EFFECTIVENESS INDICATORS

### KEY PERFORMANCE INDICATOR 1

#### Number of accidental residential fires per 100,000 households

*Through provision of prevention services FESA aims to raise awareness of natural and human hazards in order to minimise their impact on the community, including the environment, and to build community resilience in dealing with emergency events when they do arise.*

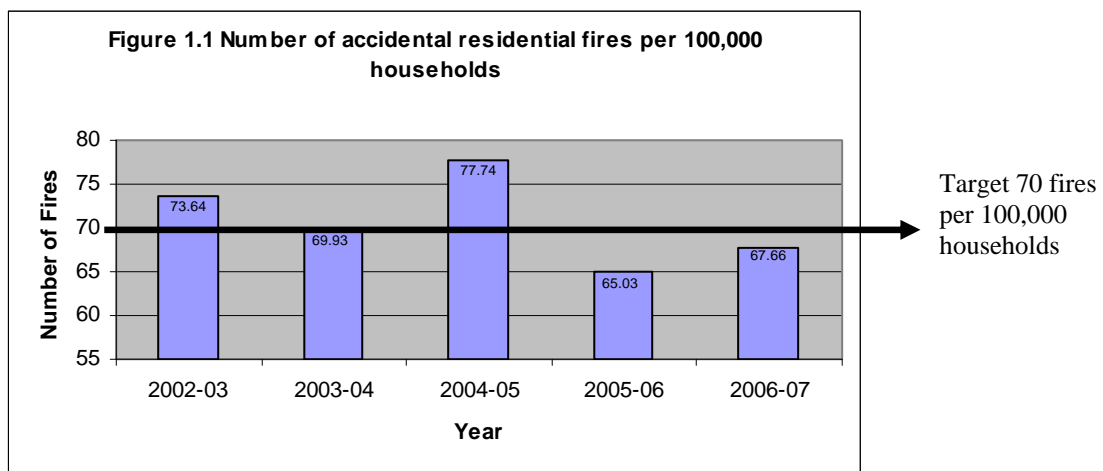
*The effectiveness of prevention services increases the more the community is engaged in managing potential threats and is the reason FESA takes a community centred approach to the delivery of prevention services.*

Due to the complex variables that affect the incidence of fires, a direct relationship cannot be made between the number of fires and the effectiveness of services in any given year. However, effective prevention services, can have a positive impact over time on the incidence of residential fires.

In the past, we reported the number of residential fires per 100,000 persons with a target of 50 fires per 100,000 persons or less. This indicator has been aligned to the national performance indicator from the Report on Government Services and is now based on the number of residential fires per 100,000 households. The change in the definition of this indicator also requires a change in the target as there are fewer households than persons. The new target is 70 fires per 100,000 households or less.

In 2006-2007, more than 26,500 primary incidents were attended by Fire and Rescue Service brigades and bush fire brigades. Of these incidents, 1,450 were structure fires of which 542 are classified as “accidental residential”<sup>1</sup> by service personnel.

Figure 1.1 shows time series data for the past five years. For comparative purposes we have recalculated 2002-2003 to 2005-2006 data based on the new definition and target of 70 fires per 100,000 households.



<sup>1</sup> Accidental residential fires include fires in residential property, including apartments, rooming and lodging houses that are not considered to have started as a result of deliberate lighting (arson activity).

## KEY PERFORMANCE INDICATOR 2

### Response times

#### Scope of response indicators

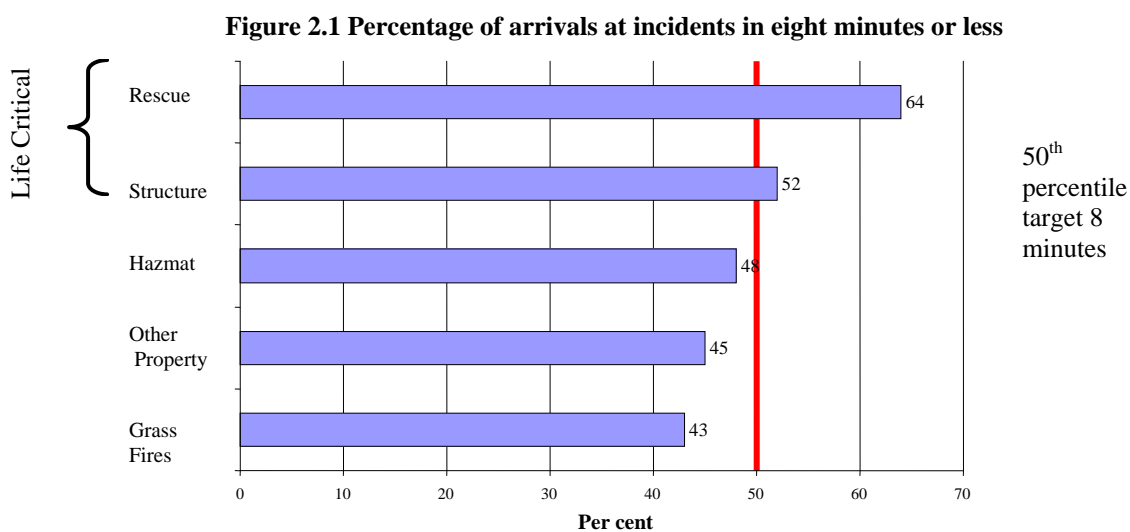
This indicator currently relates to incidents within the metropolitan area<sup>2</sup> where the primary response is provided by a career Fire and Rescue Service brigade. As response time statistics for incidents in country areas are heavily influenced by geographical location, these are not included in the assessment.

The Report on Government Services issued by the Commonwealth in January of each year is beginning to develop response time indicators for career responses in non-metropolitan areas but is limited by the relatively small number of incidents.

It is not practical to set response time targets for services provided by volunteers, however other performance indicators for State Emergency Services, volunteer fire response and Volunteer Marine Services are being developed.

Response time indicators are provided for five major classes of emergencies: rescue, structure<sup>3</sup>, hazardous materials incidents, other property<sup>4</sup> and grass fires. The community expects quick response to emergency incidents so that their impact can be minimised. Total response times are measured from the time the request for attendance is received to the time that emergency crews arrive at the scene of the incident.

FESA has set a 50<sup>th</sup> percentile target response time of eight minutes for incidents in the metropolitan area where there is a potential threat to life (structure and rescue). Figure 2.1 shows the percentage of arrivals to incidents in eight minutes or less and indicates that for structure and rescue FESA has met or exceeded its target. Reported response times for hazardous materials incidents and grass fires may be affected by the time taken for crews to assess the situation. Figures 2.2 to 2.6 provide a comprehensive assessment of response times to FESA's five major classes of emergencies.

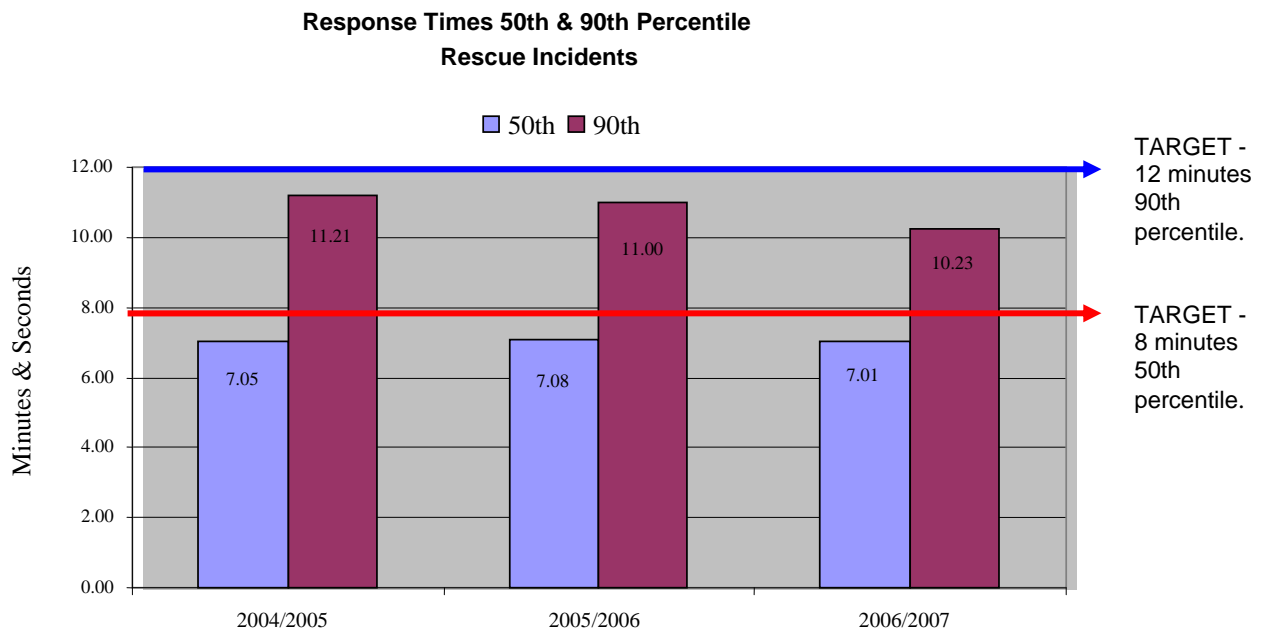
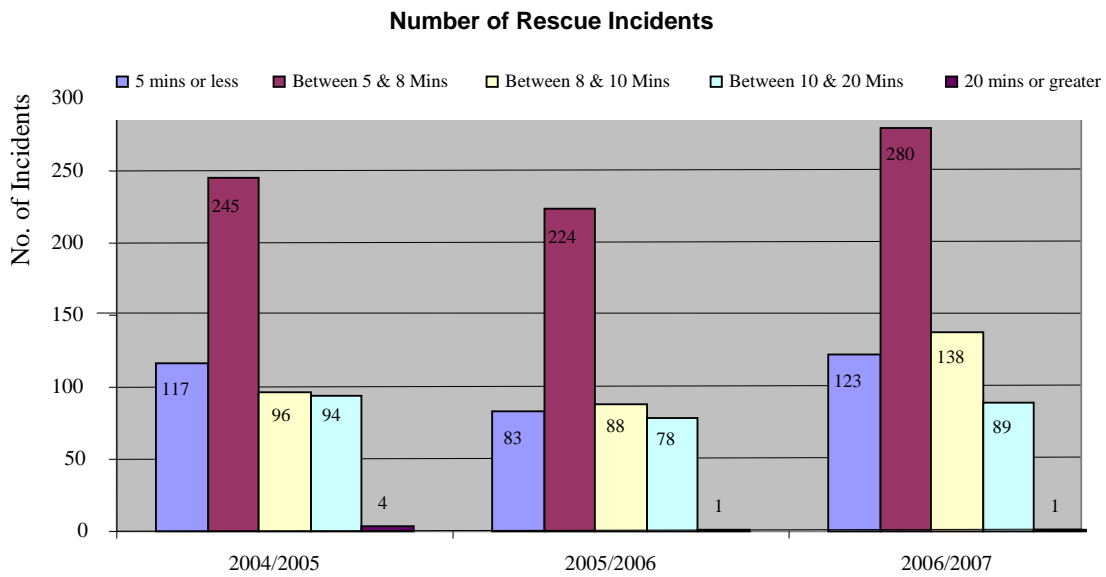


<sup>2</sup> For the purposes of this indicator, the definition of metropolitan area is based on the ABS "Major Cities" classification, which includes Mandurah.

<sup>3</sup> Structure fires are those fires in housing and other buildings (Source: RoGS)

<sup>4</sup> Other Property refers to fires in special structures including but not limited to piers, bridges, or tunnels, outside storage facilities and mobile property for example buses, aircraft and rail.

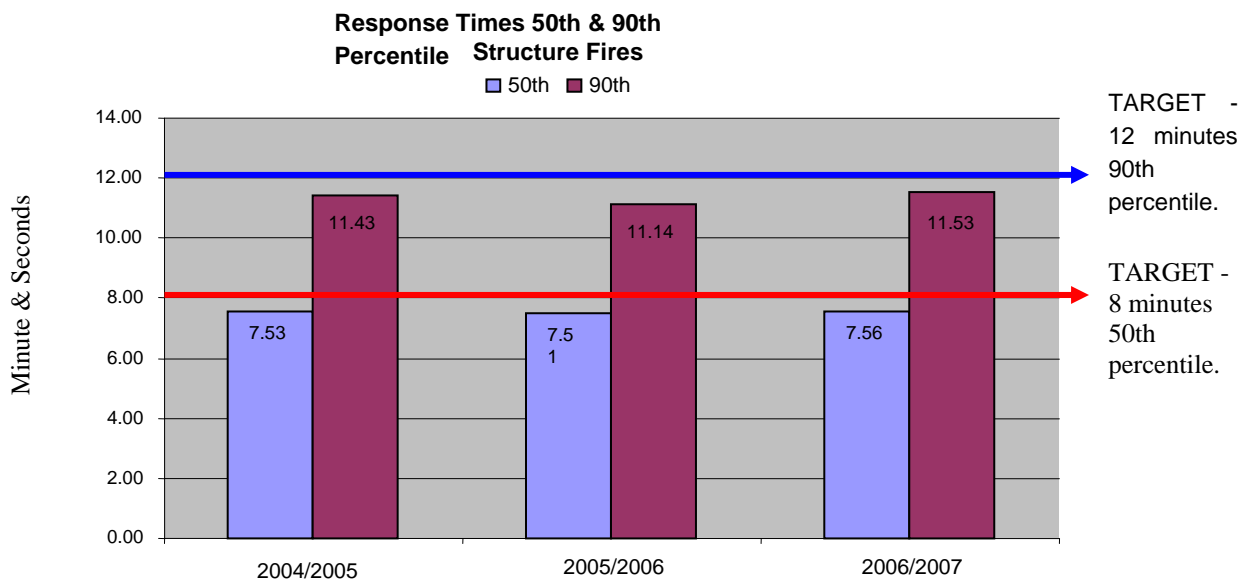
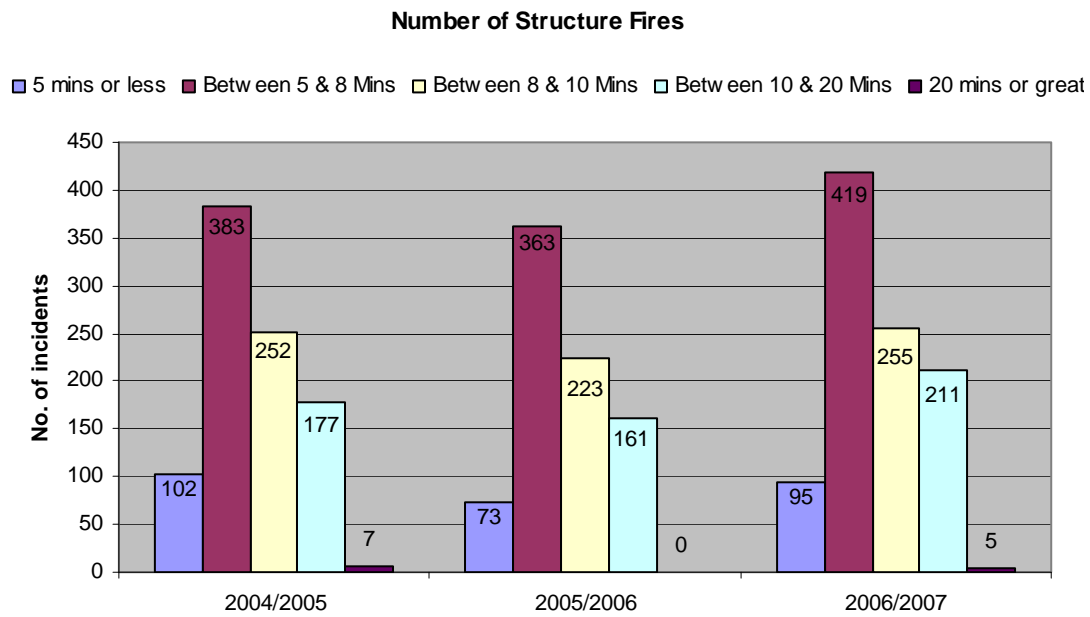
**Figure 2.2 - RESCUE**



| The times expressed in this table are in minutes & seconds | Total Rescue Incidents | Minimum Total Response Time | Maximum Total Response Time | Median Response Time (50 <sup>th</sup> Percentile) | Median Response Time (90 <sup>th</sup> Percentile) | Number of incidents above 12 minutes |
|--|------------------------|-----------------------------|-----------------------------|--|--|--------------------------------------|
| 2004/2005  | 556                    | 0.02                        | 23.37                       | 7.05   | 11.21  | 56                                   |
| 2005/2006  | 474                    | 0.04                        | 24.47                       | 7.08   | 11.00  | 49                                   |
| 2006/2007  | 631                    | 0.01                        | 20.23                       | 7.01   | 10.23  | 66                                   |

FESA's response to rescue incidents over the three year reporting period has decreased slightly in both the 50<sup>th</sup> (8 minute response time) and 90<sup>th</sup> percentile (12 minute response time). The total number of rescue incidents for 2006/2007 is 631, with 63.86% of rescue incidents responded to in eight minutes or less.

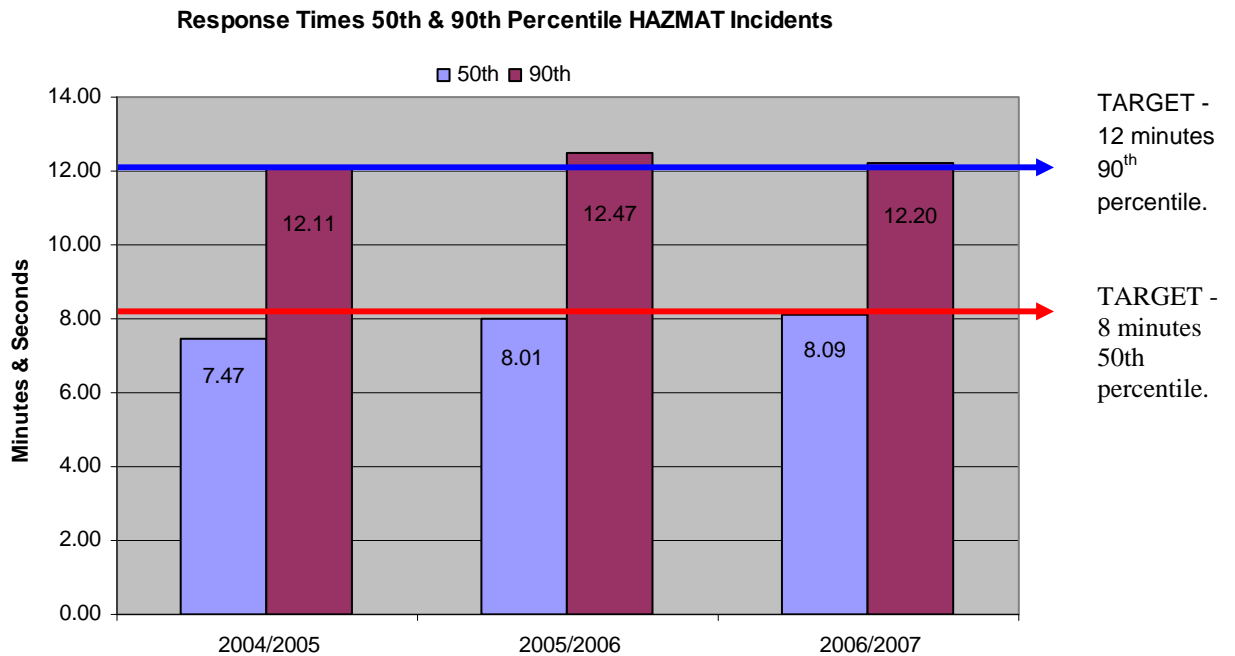
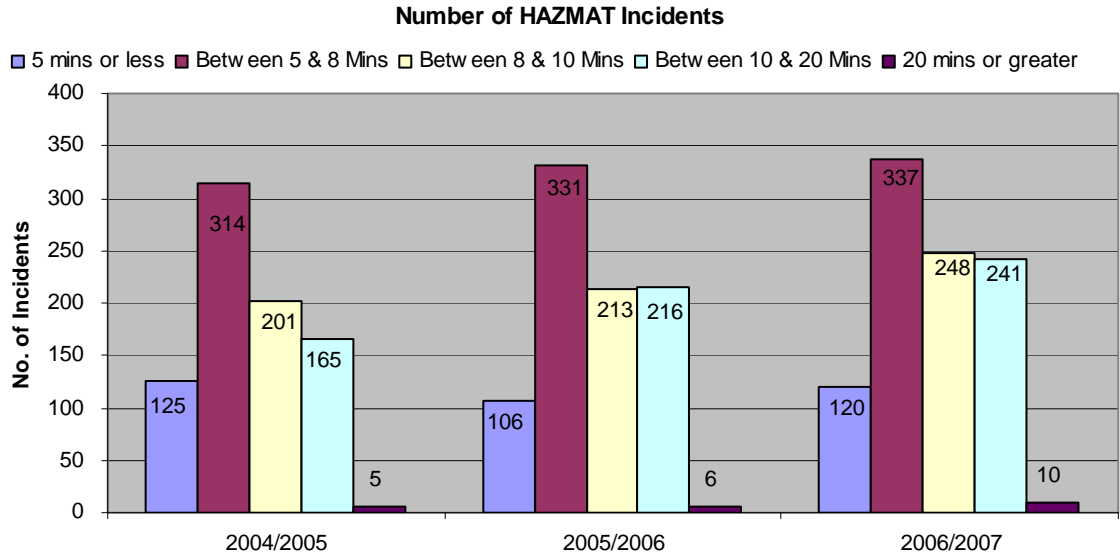
**Figure 2.3 – STRUCTURE FIRES**



| The times expressed in this table are in minutes & seconds | Total Structure Fire Incidents | Minimum Total Response Time | Maximum Total Response Time | Median Response Time (50 <sup>th</sup> Percentile) | Median Response Time (90 <sup>th</sup> Percentile) | Number of incidents above 12 minutes |
|--|--------------------------------|-----------------------------|-----------------------------|--|--|--------------------------------------|
| 2004/2005  | 921                            | 0.05                        | 26.16                       | 7.53   | 11.43  | 92                                   |
| 2005/2006  | 820                            | 0.03                        | 18.13                       | 7.51   | 11.14  | 82                                   |
| 2006/2007  | 985                            | 0.27                        | 27.45                       | 7.56   | 11.53  | 98                                   |

FESA's response to structure fires has risen slightly over the past three years in both the 50<sup>th</sup> (8 minute response time) and 90<sup>th</sup> percentile (12 minute response time). The total number of structure fire incidents for 2006-07 totals 985, with 52.18% of structure fires responded to in eight minutes or less.

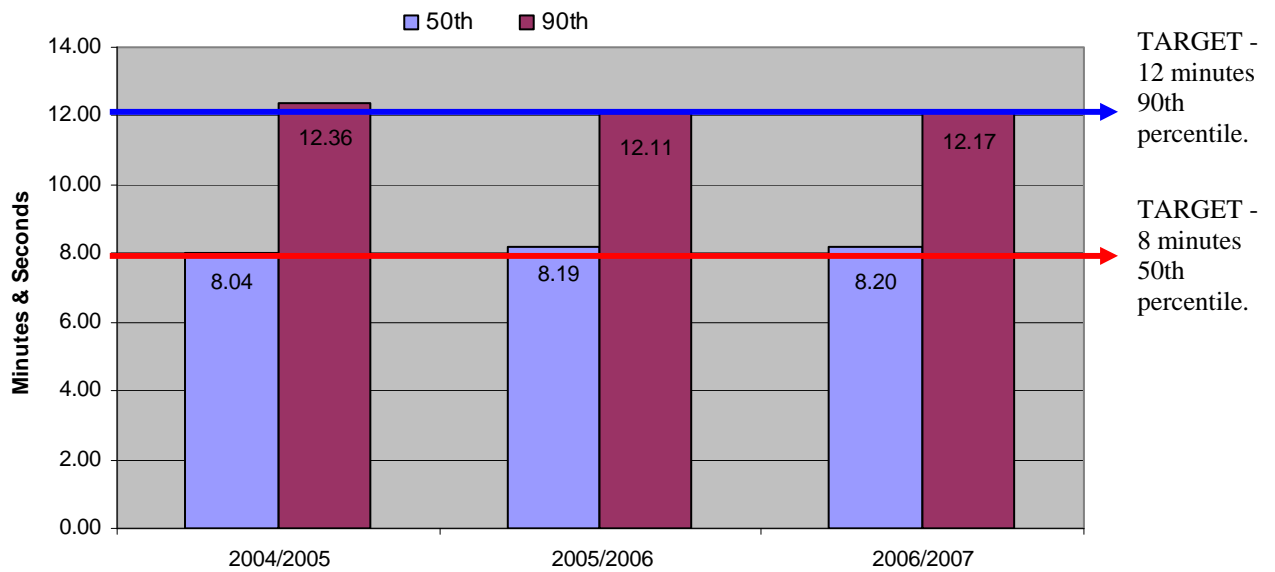
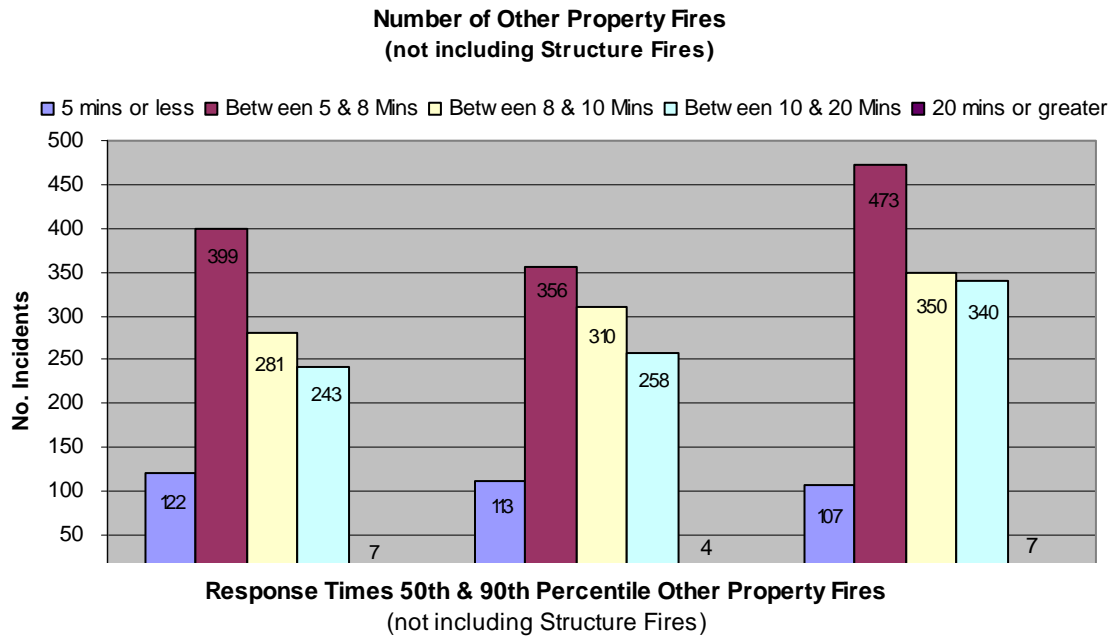
**Figure 2.4 – HAZARDOUS MATERIALS (HAZMAT)**



| The times expressed in this table are in minutes & seconds | Total HAZMAT Incidents | Minimum Total Response Time | Maximum Total Response Time | Median Response Time (50th Percentile) | Median Response Time (90th Percentile) | Number of Incidents above 12 minutes |
|--|------------------------|-----------------------------|-----------------------------|--|--|--------------------------------------|
| 2004/2005  | 810                    | 0.03                        | 47.42                       | 7.47                                   | 12.11                                  | 82                                   |
| 2005/2006  | 872                    | 0.04                        | 28.09                       | 8.01                                   | 12.47                                  | 87                                   |
| 2006/2007  | 956                    | 0.03                        | 24.40                       | 8.09                                   | 12.20                                  | 95                                   |

FESA's response to hazmat incidents over the three year reporting period has risen slightly in the 50<sup>th</sup> (8 minute response time) and decreased in the 90<sup>th</sup> percentile (12 minute response time). The total number of hazmat incidents for 2006/2007 totals 956, with 47.80% of hazmat incidents responded to in eight minutes or less.

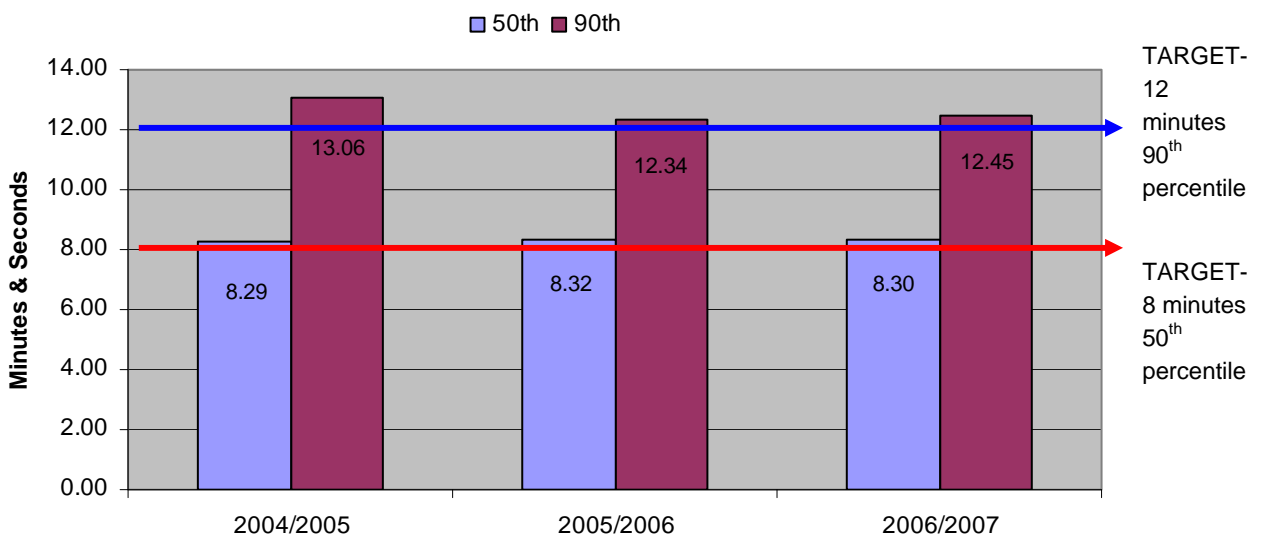
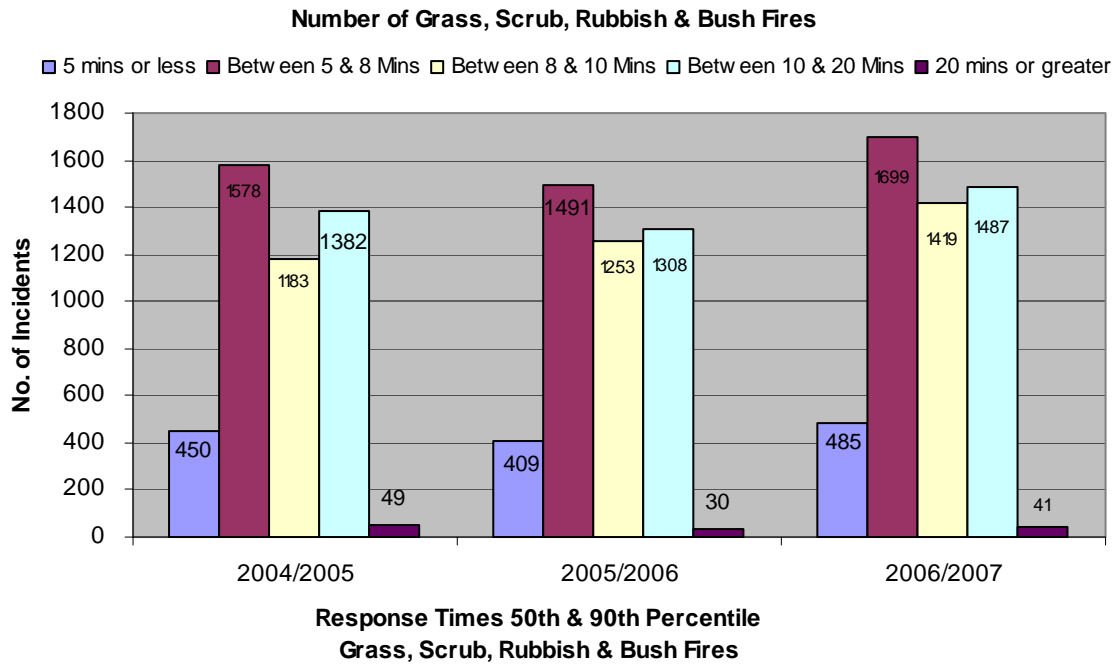
**Figure 2.5 – OTHER PROPERTY FIRES**



| The times expressed in this table are in minutes & seconds | Total Property Fire Incidents | Minimum Total Response Time | Maximum Total Response Time | Median Response Time (50th Percentile) | Median Response Time (90th Percentile) | Number of incidents above 12 minutes |
|--|-------------------------------|-----------------------------|-----------------------------|--|--|--------------------------------------|
| 2004/2005  | 1052                          | 0.03                        | 29.14                       | 8.04                                   | 12.36                                  | 105                                  |
| 2005/2006  | 1041                          | 0.03                        | 25.28                       | 8.19                                   | 12.11                                  | 103                                  |
| 2006/2007  | 1277                          | 0.04                        | 27.51                       | 8.20                                   | 12.17                                  | 128                                  |

FESA's response to other property fires over the three year reporting period has risen slightly in both the 50th (8 minute response time) and 90th percentile (12 minute response time). The total number of other property fire incidents for 2006/2007 is 1277, with 45.41% of other property fires responded to in eight minutes or less.

**Figure 2.6 – Grass, Scrub, Rubbish & Bush Fires**



| The times expressed in this table are in minutes & seconds | Total G,S,R & B Fire Incidents | Minimum Total Response Time | Maximum Total Response Time | Median Response Time (50 <sup>th</sup> Percentile) | Median Response Time (90 <sup>th</sup> Percentile) | Number of incidents above 12 minutes |
|--|--------------------------------|-----------------------------|-----------------------------|--|--|--------------------------------------|
| 2004/2005  | 4642                           | 0.02                        | 28.17                       | 8.29   | 13.06  | 466                                  |
| 2005/2006  | 4491                           | 0.02                        | 30.00                       | 8.32   | 12.34  | 449                                  |
| 2006/2007  | 5131                           | 0.03                        | 29.42                       | 8.30   | 12.45  | 513                                  |

FESA's response to grass, scrub, rubbish and bush fire over the three year reporting period has decreased slightly in the 50<sup>th</sup> (8 minute response time) and increased 90<sup>th</sup> percentile (12 minute response time). The total number of grass, scrub rubbish and bush fire incidents for 2006/2007 is 5131, with 42.56% of grass, scrub rubbish and bush fire incidents responded to in eight minutes or less.

### KEY PERFORMANCE INDICATOR 3

#### Proportion of structure fires contained to room / object of origin

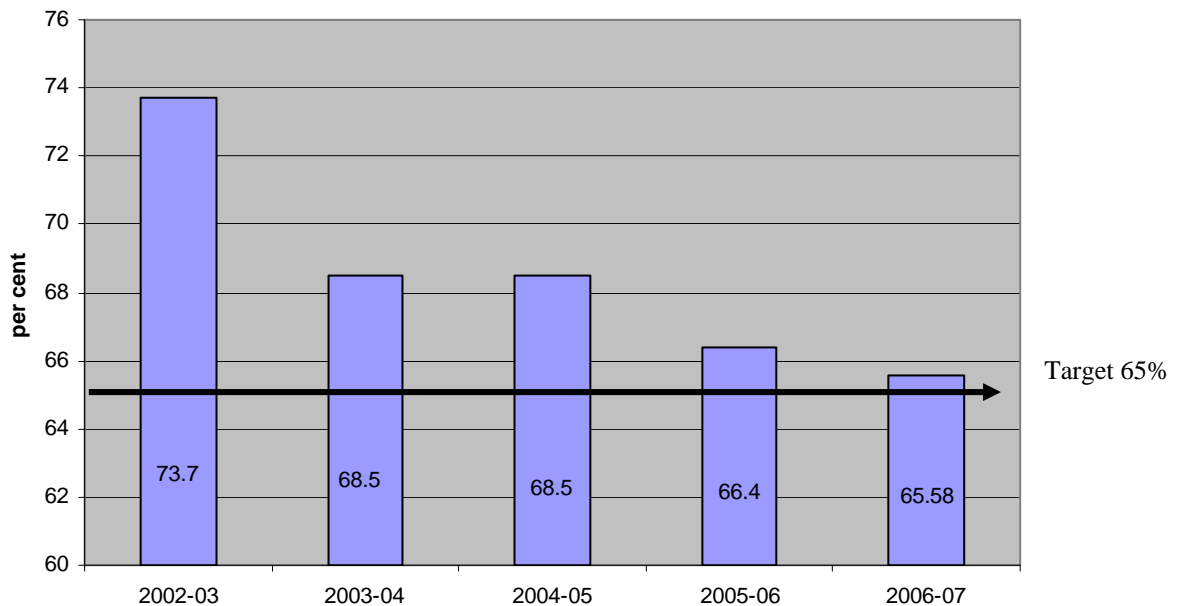
Structure fires are those fires which occur in housing and other buildings. The effectiveness of combating property fires can be measured by the proportion of fires where damage is confined to room or object of origin. Response and mitigation strategies reduce the adverse effects of structure fires on the community.

Although a higher proportion of containment is desirable, 100% containment can never be met due to uncontrollable factors. For example, weather conditions, different types of household furnishings and chemicals stored on site can all affect the rate at which fire spreads. In addition, traffic conditions and the time taken to report the emergency will affect the time between the fire's ignition and arrival of emergency service crews. Effective and appropriate firefighting techniques, as well as prompt detection and rapid response, make a significant difference in the percentage of fires contained.

In 2005-06 FESA aligned this indicator to the national performance indicator from the *Report on Government Services* to include both object and room of origin when calculating the percentage of structure fires contained.

Figure 3.1 shows the proportion of containment since 2002-2003. In 2003-2004 and 2004-2005, 68.5% of structure fires had damage confined to the room of origin. Since we have used the national definition, there has been a slight decrease in containment from 66.4% in 2006-2006 to 65.58% in 2006/2007.

**Figure 3.1 Proportion of structure fires contained to room/object of origin**





## KEY PERFORMANCE INDICATOR 4

### Human costs of flood, tropical cyclone, storm, earthquake and tsunami hazards

The State Emergency Service responds to five major natural hazards – flood, tropical cyclone, storm, earthquake and tsunami. The human cost of these hazards in respect of deaths and serious injuries is a partial indicator of the effectiveness of emergency services. In particular, it relates to preparedness and response activities undertaken in partnership with local communities. The total number of events each year is combined in Table 4.1.

In 2006-2007 there were a number of significant natural emergency events.

Three cyclones were officially recorded by the Bureau of Meteorology for WA - Tropical Cyclones George, Jacob, and Kara. Tropical Cyclone Isobel was a WA named system that was declared a tropical low after the event. Notably, Tropical Cyclone George resulted in a number of reported impacts including three fatalities and numerous injuries at mining camps south of Port Hedland. Considerable damage was reported from Port Hedland and nearby pastoral stations with at least 10 houses losing roofs, despite solid construction practices in the Region.

In January 2007 the Great Southern region, particularly Esperance and Ravensthorpe, experienced the full impact of the storm fronts associated with the tropical low originally named TC Isobel. Storms and flood threats were also experienced throughout the Metropolitan area, Midlands, South West, Great Southern and Goldfields regions when this system interacted with another remarkably deep mid-latitude trough.

As the natural environment is unpredictable, the number of events varies from year to year.

The Bureau of Meteorology provides the standard definitions for natural emergency events. A cyclone or similar natural emergency may result in a number of consequential emergency incidents. For example, Tropical Cyclone George although primarily categorised as a Tropical Cyclone resulted a number of associated storm and flood events.

FESA recorded the total number of natural emergency incidents for the current year as 126. This is a slight increase compared to 2005-2006 with 116 incidents. However, it is significantly lower than in 2004-2005 when the number of events peaked at 199 incidents.

Although there is not a direct cause and effect relationship between natural hazard frequency and the incidence of deaths or injuries, better preparedness and prevention measures have lessened the human cost of natural hazards. For example, preparedness activities such as response planning and evacuation planning significantly mitigate the outcome of natural emergencies resulting from flood, cyclone, storm and other natural hazards.

Table 4.1 – Five (5) year report of deaths and serious injuries by number of hazard events

| Year                | Number of events <sup>5</sup> | Deaths <sup>6</sup> | Serious Injuries <sup>6</sup> |
|---------------------|-------------------------------|---------------------|-------------------------------|
| 2002-2003           | 133                           | 0                   | 0                             |
| 2003-2004           | 93                            | 0                   | 0                             |
| 2004-2005           | 199                           | 0                   | 0                             |
| 2005-2006           | 116                           | 0                   | 0                             |
| 2006-2007           | 126                           | Not available       | Not available                 |
| <b>5-year total</b> | <b>667</b>                    | <b>0</b>            | <b>0</b>                      |

<sup>5</sup> Number of event types is determined by data published by Geoscience Australia (Earthquakes) and the Bureau of Meteorology.

<sup>6</sup> Statistical data relating to deaths and serious injuries is provided by the Department of Health. FESA is aware of a number of deaths and serious injuries that may have resulted from Tropical Cyclone George; however at this stage data is unavailable due to impending coronial inquiries.

## EFFICIENCY INDICATORS

### KEY PERFORMANCE INDICATOR 5

#### Weighted average cost per prevention service

FESA's prevention related activities are measured on a composite performance measure based on output-based efficiency. Weightings were established from costs for 1999-2000 as supplied in the 2000-2001 budget papers. Current measures correspond with prevention services reporting in the 2006-2007 budget papers.

The weighting system is proportional. As the majority of prevention expenditure is directed towards community prevention/awareness campaigns, a weighting of one was applied to this output. Comparatively, smaller weightings are applied to emergency management services training.

Table 5.1 indicates the number of prevention programs, nominal contact hours for emergency management training and the average cost over five years.

Expenditure on prevention services has increased in line with FESA's commitment to community engagement and building resilience at the local level.

**Table 5.1 Weighted average cost per prevention service**

|  | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | 2006-2007 |
|--|-----------|-----------|-----------|-----------|-----------|
| Number of Prevention/Awareness Programs<br>Weighting = 1   | 20        | 21        | 21        | 21        | 20        |
| Nominal contact hours for participants undertaking emergency management services training programs | 8,936.5   | 9,902.7   | 10,061    | 7,364     | 8,709.5   |
| Weighting = 0.0002   | 1.8       | 2.0       | 2.0       | 1.5       | 1.7       |
| Average cost per prevention service \$'000   | 626.238   | 658.913   | 740.826   | 823.288   | 939.216   |

## KEY PERFORMANCE INDICATOR 6

### Emergency Services: Average cost per operational personnel ready to respond to an emergency

The measure used to determine emergency services efficiency is based on the number of operational personnel ready to respond to an emergency. In total, operational staff and volunteers numbered 31,146 in 2006-07.

For the past three years, FESA has made enhancements to reporting in order to improve the accuracy of our records. Although volunteer numbers will remain dynamic, continuous improvement to personnel records systems and the ongoing review of volunteer status will enable more precise reporting.

The increase in total emergency services expenditure of \$38 million compared to 2005-06 shown in Table 6.1 is due largely to payments made under the National Disaster Relief Arrangements associated with recovery following major emergencies and payment of increases in salaries and awards resulting from the recently finalised firefighter EBA negotiations.

Table 6.1 Average cost per operational personnel ready to respond to an emergency

|   | 2002-2003 | 2003-2004 | 2004-2005 | 2005-06  | 2006-07  |
|---|-----------|-----------|-----------|----------|----------|
| Number of personnel ready to respond to emergencies | 29,120    | 27,451    | 34,593    | 30,699   | 31,146   |
| Total Expenditure \$,000s                           | 100,348   | 129,637   | 154,680   | 163,805  | 201,836  |
| Average cost per operational personnel              | 3,466.02  | 4,722.49  | 4,471.45  | 5,335.84 | 6,480.32 |

# AUDITOR'S OPINION



## AUDITOR GENERAL

### INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

#### **FIRE AND EMERGENCY SERVICES AUTHORITY OF WESTERN AUSTRALIA FINANCIAL STATEMENTS AND KEY PERFORMANCE INDICATORS FOR THE YEAR ENDED 30 JUNE 2007**

I have audited the accounts, financial statements, controls and key performance indicators of the Fire and Emergency Services Authority of Western Australia.

The financial statements comprise the Balance Sheet as at 30 June 2007, and the Income Statement, Statement of Changes in Equity and Cash Flow Statement for the year then ended, a summary of significant accounting policies and other explanatory Notes.

The key performance indicators consist of key indicators of effectiveness and efficiency.

#### **Board's Responsibility for the Financial Statements and Key Performance Indicators**

The Board is responsible for keeping proper accounts, and the preparation and fair presentation of the financial statements in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Treasurer's Instructions, and the key performance indicators. This responsibility includes establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial statements and key performance indicators that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; making accounting estimates that are reasonable in the circumstances; and complying with the Financial Management Act 2006 and other relevant written law.

#### **Summary of my Role**

As required by the Auditor General Act 2006, my responsibility is to express an opinion on the financial statements, controls and key performance indicators based on my audit. This was done by testing selected samples of the audit evidence. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion. Further information on my audit approach is provided in my audit practice statement. Refer "<http://www.audit.wa.gov.au/pubs/Audit-Practice-Statement.pdf>".

An audit does not guarantee that every amount and disclosure in the financial statements and key performance indicators is error free. The term "reasonable assurance" recognises that an audit does not examine all evidence and every transaction. However, my audit procedures should identify errors or omissions significant enough to adversely affect the decisions of users of the financial statements and key performance indicators.

**Fire and Emergency Services Authority of Western Australia**  
**Financial Statements and Key Performance Indicators for the year ended 30 June 2007**

**Audit Opinion**

In my opinion,

- (i) the financial statements are based on proper accounts and present fairly the financial position of the Fire and Emergency Services Authority of Western Australia at 30 June 2007 and its financial performance and cash flows for the year ended on that date. They are in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Treasurer's Instructions;
- (ii) the controls exercised by the Authority provide reasonable assurance that the receipt, expenditure and investment of money, the acquisition and disposal of property, and the incurring of liabilities have been in accordance with legislative provisions; and
- (iii) the key performance indicators of the Authority are relevant and appropriate to help users assess the Authority's performance and fairly represent the indicated performance for the year ended 30 June 2007.



COLIN MURPHY  
AUDITOR GENERAL  
12 September 2007