Key performance indicators

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STATEMENT OF CERTIFICATION

We hereby certify that the performance indicators are based on proper records, are relevant and appropriate for assisting users to assess the Fire and Emergency Services Authority of Western Australia performance and fairly represent the performance of the Fire and Emergency Services Authority of Western Australia for the financial year ended 30 June 2006.

M Barnett AM
FESA BOARD CHAIR

J Harrison-Ward
FESA CHIEF EXECUTIVE OFFICER

20 September 2006
Key performance indicators

FESA’s vision is to achieve a safer community through:

- **Its mission:**
  Working in partnership with the people of Western Australia to:
  - improve community safety practices
  - provide timely, quality and effective emergency services.

- **Meeting its strategic intentions:**
  - *Community-centred emergency management* (composed of prevention, preparedness, response and recovery initiatives)
  - Sound business practices
  - Quality people services.

- ensuring that its services (prevention services and emergency services) produce FESA’s agreed outcome for the Western Australian community.

**FESA’S OUTCOME STATEMENT**
The impact of human and natural hazards on the community of Western Australia is minimised.
EFFECTIVENESS INDICATORS

KEY PERFORMANCE INDICATOR 1

Number of accidental residential fires per 100,000 households

One of FESA’s two principal services is Prevention Services. Through FESA’s focus on community-centred emergency management, the public becomes aware of natural hazards. Prevention Services becomes more effective as the community becomes involved in minimising the impact of these hazards.

These measures have the potential to not only decrease or eliminate the impact of an emergency event on the community, but also on the environment. Due to the complex variables including many external factors involved in fires, a direct relationship cannot be made between the number of fires and the effectiveness of services.

However, effective prevention services do have a positive impact on the incidence of residential fires. In the past, FESA has reported the number of residential fires per 100,000 persons. This acted as a control for population changes, which in Western Australia, comprise an annual increase generally between 1-2%. Over the past 10 years, a level has been maintained in the order of 46 to 55 fires in any one period. Figure 1 indicates this steady level of fires per 100,000 people. This year there were 47.3 fires per 100,000 for the WA population which is now estimated at over two million.

Figure 1. Number of residential fires per 100,000 people

NOTE: Comparison is based on estimated population as at December quarter of each year, published by Australian Bureau of Statistics.

In 2005-2006, more than 24,400 primary incidents were attended by Fire and Rescue Service brigades and bush fire brigades. Of these incidents, 1,357 were structure fires of which 491 are classified as “accidental residential,” as determined and classified by service personnel.

In 2005-2006 and for years to come, this indicator will be aligned to national performance indicator ‘accidental residential fires per 100,000 households’, which is published in January every year in the chapter on Emergency Management in Report on Government Services. The term ‘households’, defined by the Australian Bureau of Statistics (ABS), serves as a better measure for residential fires. There is one residence per household. The data series for the estimated number of households is currently under review by the ABS. As a result, the estimated number of households in Western Australia (755,000) has not been updated for four years (Source: ABS Australian Demographic Statistics, Cat, No 3101.0 – unpublished). Due to the national census in August 2006, it is anticipated that a new figure for households will be issued in mid-year 2007.
If the new standards were applied to 2005-2006 data, the actual result would be 65 accidental residential fires (per 100,000 households), which is below the target of 70 fires (per 100,000 households) recorded in the budget statements.

For comparative purposes, 1996 to 2005 have been shown graphically for the reader to gain a trend over time.

**KEY PERFORMANCE INDICATOR 2**

**Response times**

**Scope of response indicators**

As most Fire Services emergencies occur in the Perth metropolitan area, reported response times are for incidents within FESA metropolitan brigade areas where career brigades of firefighters provided the primary response. As response time statistics for incidents in country areas and those attended by volunteer firefighters are subject to different control procedures, 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 an indicator for non-metropolitan areas but is limited by the relatively small number of incidents.

Response time indicators are provided for four major classes of emergencies: property fires, grass, scrub, bush and rubbish, as well as hazardous conditions and rescues. Quick response is expected by the community to emergency incidents so that their impact can be minimised. Community satisfaction with our services increases when we provide prompt services. Figure 2 and Table 1 indicate that all response times for all four classes met or exceeded target in 2005-2006.

![Figure 2. Percentage of arrivals to incidents in eight minutes or less](image-url)
TABLE 1: TIMELINESS OF RESPONSE TIME TO INCIDENTS

<table>
<thead>
<tr>
<th>Type of Incident Attended</th>
<th>Percent Response: in Eight Minutes or Less</th>
<th>Attend 50% of Incidents in Eight Minutes or Less</th>
<th>Other Measures of Timeliness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Fires</td>
<td>64%</td>
<td>Exceeded target by 14%</td>
<td>90% in 12 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.5% of incidents were attended in 19 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Only nine incidents were 20 minutes or over; nearly 10% were attended in four minutes or under</td>
</tr>
<tr>
<td>Grass, Scrub, Bush and Rubbish</td>
<td>56%</td>
<td>Exceeded target by 6%</td>
<td>90% in 12 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>99.2% of incidents were attended in 19 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>116 incidents were attended in two minutes or under</td>
</tr>
<tr>
<td>Hazardous Conditions</td>
<td>61%</td>
<td>Exceeded target by 11%</td>
<td>90% in 12.5 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>98.7% in 19 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20% in five minutes or under</td>
</tr>
<tr>
<td>Rescue Incidents</td>
<td>71%</td>
<td>Exceeded target by 21%</td>
<td>90% in 12 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>98.7% in 19 minutes or under</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60% in seven minutes or under</td>
</tr>
</tbody>
</table>

Response times for property fires were further analysed to see if they changed by time of day or date of the year. Neither factor appears to impact on the ability of the metropolitan career fire-fighters to meet response time targets.

Trends for response times are provided for the four major classes of emergencies:
- Property fires (Figure 3)
- Grass, scrub, bush and rubbish fires (Figure 4)
- Hazardous materials (HAZMAT) incidents (Figure 5)
- Rescues (Figure 6).

For the most part, our prompt response times have been maintained for all types of incident over the past three years.
Figure 3. Response time to property fires

Figure 4. Response time to grass, scrub, bush and rubbish fires

Figure 5. Response time to Hazmat
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 percentage of fires where damage is confined to room / object of origin measures the effectiveness of combating property fires. Response and mitigation strategies reduce the adverse effects of such fires on the community.

Although a higher proportion of containment is desirable, 100% containment can never be met due to uncontrollable factors. For example, variables include weather conditions, traffic conditions, type of household furnishings, chemicals stored on site, time elapsed before notification of an emergency and many other factors.

However, effective and appropriate firefighting techniques, as well as prompt detection and rapid response, make a significant difference in the percentage of fires contained. FESA is this year aligning its definition of this indicator to the national performance indicator from the Report on Government Services. This means that both object and room of origin are considered when calculating the percentage of structure fires contained.

Figure 7 indicates the proportion of containment since 1994-1995. In 2003-2004 and 2004-2005, 68.5% of structure fires had damage confined to the room of origin. Using the national definition this year, the result was similar at 66.4% containment.

NOTE: Response time is measured as the duration from the time stamping of an incident by a FESA Communications Centre operator (ie. the incident is confirmed as an emergency) to the arrival at the scene of the emergency.
Figure 7. Proportion of structure fires with damage confined to object / room of origin

NOTE: Comparison possible for 1994-1995 to 2005-2006 as same definition ‘confined to room of origin’ is used. This time series is now finished. For 2005-2006 annual report, definition conforms to national indicator ‘confined to object / room of origin’ (Report on Government Services).

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 by reporting deaths and serious injuries is a partial indicator of the effectiveness of emergency services. In particular, it relates to the preparedness and response activities undertaken in partnership with local communities. The total number of events each year is combined in Table 2.

In 2005-2006 there were many natural hazards. Six cyclones were officially recorded by the Bureau of Meteorology for WA. A seventh cyclone put us on ‘blue alert’, but was recorded by the Bureau of Meteorology for the Northern Territory. Monsoonal heavy rains caused road outages in the Kimberley. In addition, much of the state experienced flooding: the Kimberley, Pilbara, Gascoyne, Murchison and the South-West land division at Greenough / Lake Grace. Even the Goldfields / Eucla experienced flooding over the New Year. Despite all these natural events, no deaths or serious injuries were recorded in 2005-2006. Moreover, for the nine years prior, there were no serious injuries and the number of recorded deaths was either one or zero.

As the natural environment is variable, the number of events varies from year to year. Whereas there were only 21 hazard events in financial year 2000-2001, numbers peaked at 199 incidents in 2004-2005, falling to 116 for the current year. The number of events is also dependent on definitions used. For example, using Bureau of Meteorology definitions, Cyclone Clare as a hazard was not only a ‘cyclone event’ but also a ‘rain event’, which resulted in a ‘flood event’.

Although there is not a direct cause and effect relationship between hazard frequency and the incidence of deaths/injuries, better preparedness for hazards lessens the impact of the hazard. For example, preparedness activities such as undertaking response planning and evacuation procedures significantly mitigate the outcome of events such as flood, cyclone, storm and other natural hazards.
Table 2. 10-year report of deaths and serious injuries by number of hazard events

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of events</th>
<th>Deaths</th>
<th>Serious Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-1997</td>
<td>40</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1997-1998</td>
<td>58</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1998-1999</td>
<td>105</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1999-2000</td>
<td>126</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2000-2001</td>
<td>21</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2001-2002</td>
<td>104</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2002-2003</td>
<td>133</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2003-2004</td>
<td>93</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2004-2005</td>
<td>199</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2005-2006</td>
<td>116</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10-year total</td>
<td>995</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

NOTE: Number of event types is determined by data published by GeoScience Australia (earthquakes) and the Bureau of Meteorology. One death was recorded in 1996-1997 and 1998-1999. Data on deaths is from FESA internal database EM2000.

EFFICIENCY INDICATORS

SERVICE 1 PREVENTION SERVICES
Provision of prevention services to increase community awareness of human and natural hazards, and involvement in minimising their impact.

KEY PERFORMANCE INDICATOR 5
Weighted average cost per prevention service

To cover the majority of FESA’s prevention related activities, a composite performance measure is needed. Output-based efficiency measures were originally selected and weighted. 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, the smaller weightings for emergency management services training and explosive inspections represented the difference in unit cost of these services. For the year 2002-2003 explosive inspections were outsourced and are no longer part of the equation. They are, hence, reported as a zero factor. Redevelopment of this indicator to reflect changes in organisational structure and services is anticipated in 2006-2007. Table 3 indicates the average cost over seven years.

Table 3. Average cost per prevention service

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Average cost per prevention service $'000</td>
<td>555.675</td>
<td>573.214</td>
<td>639.004</td>
<td>626.238</td>
<td>658.913</td>
<td>740.826</td>
<td>823.288</td>
<td>823.24</td>
</tr>
</tbody>
</table>

NOTE: as per the formal change to the organisation’s output measures, the average cost per prevention service for 2000-2001 and 1999-2000 are different to those reported in the 2000-2001 FESA Annual Report.
SERVICE 2: EMERGENCY SERVICES
Provision of emergency services to enable rapid and effective response to emergency incidents to minimise their impact.

KEY PERFORMANCE INDICATOR 6
Emergency Services: Average cost per operational personnel ready to respond to an emergency

The service quantity measure used to determine emergency services efficiency is formed by the number of operational personnel ready to respond to an emergency. In total, operational staff and volunteers numbered 30,699 in 2005-2006.

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 a more precise picture.

Table 4 shows this fluctuation in numbers as well as the fluctuations in the average cost per personnel over the past seven years.

Table 4. Average cost per operational personnel ready to respond to an emergency

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Average cost per operational personnel $</td>
<td>3,515.16</td>
<td>3,443.82</td>
<td>3,505.54</td>
<td>3,446.02</td>
<td>4,722.49</td>
<td>4,471.45</td>
<td>5,335.84</td>
<td>5,796</td>
</tr>
</tbody>
</table>