

# KEY PERFORMANCE INDICATORS – OUR FOUR OUTCOMES

KEY	
✓	We are achieving our goals
✗	Desired result not achieved – taking action

To keep track of how we're performing, we have a series of Key Performance Indicators (KPIs), which are linked to each of our four outcomes. The following table summarises how we performed against each effectiveness KPI during 2017-18. Further information is provided in the Key Performance Indicators section of this report.

	Target	Achieved	Status	Explanatory notes page
<b>Outcome 1: Minimised occurrence and impact of preventable emergencies</b>				
Number of accidental residential structure fires per 100,000 households	65	56.2	✓	147
Proportion of dangerous goods sites with current Fire and Emergency Services Emergency Response Guide (FES ERG)	90%	99.12%	✓	148
Proportion of building plans assessed within specified timeframe	95%	97.58%	✓	149
<b>Outcome 2: Minimised impact of natural hazard emergencies</b>				
Number of community based Bushfire Ready Groups established	257	270	✓	151
<b>Outcome 3: An operational workforce that is trained and equipped to respond</b>				
Number of operational personnel endorsed as L3 Incident Managers	22	23	✓	154
Proportion of DFES operational volunteers actively engaged in Pathways training	43.5%	46.62%	✓	155

	Target	Achieved	Status	Explanatory notes page
Proportion of assets within specified replacement period parameters	85%	85%	✓	156
Proportion of first round Local Government Grant Scheme offers accepted	70%	71.71%	✓	157
<b>Outcome 4: Minimised impact from emergencies through timely and effective response</b>				
Proportion of responses to ESL 1 and ESL 2 incidents within target timeframes	90%	90.84%	✓	159
Proportion of DFES volunteer turnouts within target timeframes	90%	92.27%	✓	160
Proportion of structure fires confined to object or room of origin	72%	75.76%	✓	161
Proportion of Level 2 and Level 3 bushfires where no structures are lost or significantly damaged	95%	96.08%	✓	162

## KEY PERFORMANCE INDICATORS – OUR FOUR SERVICES

### KEY

- ✓ We are achieving our goals
- ✗ Desired result not achieved – taking action

As well as measuring our performance against the four outcomes, our objective is to provide services in a prudent and cost-effective manner. The following table summarises how DFES performed against each efficiency KPI during 2017-18. Further information is provided in the Financial Statements and Key Performance Indicators section of this report.

	Target	Achieved	Status	Explanatory notes page
<b>Service 1: Community Awareness, Education and Information Services</b>				
Average cost per household to deliver emergency hazard information and awareness programs	\$8.66	\$8.17	✓	150
<b>Service 2: Compliance and Technical Advisory Services</b>				
Average cost per building plan assessed	\$305	\$255.78	✓	152
Average cost per engaged local government to support Bushfire Risk Management programs	\$26,870	\$125,663.74	✗	153
<b>Service 3: Training and Organisational Resourcing Services</b>				
Average cost per participant to deliver operational Pathways training	\$1,733	\$1,102.32	✓	158
<b>Service 4: Frontline Services</b>				
Average cost to deliver frontline services per Western Australian	\$102.18	\$102.26	✗	163

## OUR OPERATIONS

DFES focuses on preventing, preparing for and responding to emergencies.

Every year DFES personnel respond to more than 28,000 incidents, as well as helping to prevent many more. We also work hard to prepare for emergencies should they happen.

Whether on land, sea or by air, we are proud to be able to help make WA a safer State, and we constantly strive to improve our services, putting the community at the heart of everything we do.

Our report on operations provides a snapshot of how we are performing. It includes operational and financial targets, as well as some of the year's highlights and challenges.



# OUR FOCUS

Our aim is to help build a safer and more resilient WA community. To help achieve this and to see how we're tracking, we have four outcome areas that we focus on and measure our performance.

## **1. Minimised occurrence and impact of preventable emergencies**

Our work helps prevent emergencies from occurring. We do this by engaging with communities to raise awareness about how to prepare for emergencies and prevent them from happening. Our activities include education sessions, awareness raising campaigns, information services and regular inspections.

## **2. Minimised impact of natural hazard emergencies**

We live in an environment with many natural hazards. The diverse WA landscape presents a variety of natural hazards and challenges including bushfire, flood, storm, tsunami, cyclones as well as earthquake.

Our aim is to help reduce the impact of hazards to build resilient WA communities that are better able to recover from natural disasters should they occur. Our activities include bushfire mitigation support, compliance and technical advice, and inter-agency knowledge sharing.

## **3. An operational workforce that is trained and equipped to respond**

Our frontline teams are on standby 24/7. It's vital they have the right equipment and training to enable them to effectively respond and support the WA community before, during and after an emergency event or incident. That's why we invest time and resources to make sure our career and volunteer workforce are fully trained, equipped and operationally ready to meet the needs of our state.

## **4. Minimised impact from emergencies through timely and effective response**

When emergencies happen, we are there to respond quickly to help the affected communities. We measure our response times, the effectiveness of our response and constantly look for ways our frontline teams and other agencies can work together to best support the community in times of crisis.

## OUR KEY ACHIEVEMENTS

- Established a new Rural Fire Division.
- Re-launched the Home Fire Safety Program, reaching more than 9,000 Year 3 students.
- Rolled-out fire risk management workshops for strata property owners.
- A renewed focus on enforcing total fire bans through actively targeting and recording breaches.
- Launched the 'Are You Bushfire Ready?' campaign.
- Introduced 'Fire Chat' – a new suite of bushfire planning and preparation tools for the community.
- Undertook flooding research to develop new community preparedness initiatives.
- Commenced a firefighting training partnership with Newmont's Boddington Gold Mine.
- Recognised a record 91 businesses for supporting emergency service volunteers.
- Won the OpenGov Australasia award for Excellence in Digital Transformation for our pioneering collaboration work with WA Police to deliver an integrated Computer Aided Dispatch system.
- Won the IPAA Best Practice in Health and Wellbeing Award for the DFES Mental Health First Aid program.
- Received commendations for the following IPAA awards:
  - Finance Practitioner of the Year Award.
  - Information Technology Practitioner of the Year Award.
- Shortlisted finalists for the Best Practice in Collaboration Between Government and Non-Government Organisations, for the following programs:
  - DFES Computer Aided Dispatch Replacement Program.
  - 2017 WA Fire and Emergency Services Conference.

Further information on these achievements, as well as other activities we undertook to deliver the four outcomes during 2017-18, is provided on pages 31 to 52.

## OUTCOME 1

### Minimised occurrence and impact of preventable emergencies



Our Home Fire Safety Program for Year 3 students

#### Bringing fire safety home from school

More than 1,200 home fires occur across WA each year. To help promote fire safety in the home, and to help families understand what to do in the event of a fire, we have re-launched our popular Home Fire Safety Program for schools.

Targeting students in Year 3, firefighters have visited schools to talk with children and their teachers about how to prevent and respond to home fires. During 2017-18, career firefighters visited 216 schools, reaching more than 9,000 students from across the State. This is a 15% increase compared with 2016-17.

Developed by DFES' education team, the refreshed program links to the WA curriculum and encourages children to share what they have learned with their families and prepare a home fire escape plan. This approach helps increase fire safety awareness and preparedness throughout the household, building safer and more resilient communities.

Teachers who sign up for the Home Fire Safety Program receive free resources and support to help students become better prepared to prevent and respond to home fires, including:

- knowing what to do in a fire drill
- making choices and decisions to prevent a fire from occurring
- understanding the actions to take if there is a fire in their home.

*“The children were so very excited and enthusiastic and you ‘made their day’. I am sure that now they will all go home and spread the word to their families about how they must keep safe and what to do.”*

*Kerry King, Infant Jesus School Morley*

To support all school aged education programs, in October 2017 the DFES education team began conducting professional development sessions for all school staff. So far they have held 10 sessions for 167 people from the Metropolitan, Lower South West, South West, Midwest Gascoyne, Kimberley and Great Southern regions.

To organise a firefighter visit, teaching staff can visit the DFES school education website or email [educationandheritage@dfes.wa.gov.au](mailto:educationandheritage@dfes.wa.gov.au).

### **Bushfire patrol comes to Kimberley schools**

More than 60% of bushfires in the Kimberley during 2016-17 were deliberate, suspicious, or caused by human activity.

To help combat this issue, we have developed a new school education program designed for the unique challenges posed by the harsh yet beautiful Kimberley environment.

Developed in collaboration with local Aboriginal ranger groups and the Parks and Wildlife Service, the 'North West Bushfire Patrol' program provides teachers in the Kimberley region with geographically and culturally appropriate resources to teach students about bushfires and how to prevent them.



Bushfire Patrol to combat bushfires in the Kimberley

The program includes a multimedia resource pack containing hands-on activities to help school students:

- know how to identify safe and unsafe fire behaviour and unsafe fire times and risks
- develop a range of skills to help them respond to bushfire when it occurs
- develop personal behaviours and strategies for staying safe when there is a fire
- understand the impact of deliberate fires on their communities and the environment.

Launched in April 2018, the North West Bushfire Patrol program aims to reduce the number of preventable bushfires in the region.

### **Fire risk management for strata property owners**

In September 2017, DFES commenced a series of workshops designed to help strata property owners identify fire hazards at their properties and understand what ongoing action they must take to manage risk.

The workshops are particularly poignant following the June 2017 Grenfell Tower fire in London, which highlighted the danger of non-compliant cladding and combustible material in building structures.

Working with the WA Building Commission, the September workshop, discussed:

- the issue of non-compliant cladding and how insurers are responding to it
- general risk management and factors to be considered
- planning for an emergency.

The session was attended by strata managers and owners and industry professionals.



Additional workshops were held throughout the year, posing two key questions:

*“Are you concerned about the cladding on your building or a building that you manage”?*

*“Do you think you’re doing everything you can to minimise fire risk and satisfy your duty of care”?*

The workshops were well received and we will continue to work with the WA Building Commission and Strata Title Australia to deliver similar training throughout 2018-19.

### **Getting tough on total fire ban breaches**

Our records show that almost one third of out of control fires on total fire ban declared days (TFBs) start as a result of banned fire activity.

People who ignore TFBs are being targeted under a new scheme aimed at educating Western Australians on the dangers of breaching a ban, as well as identifying serious offenders and where appropriate, prosecuting.

To combat the threat of an out of control fire, DFES is proactively investigating TFB breaches, issuing warning notices and taking action to prosecute serious offences.

During 2017-18, we identified five potential TFB prosecutions, issuing two warning notices and one exemption breach notice. We also pursued one TFB breach prosecutions and issued two infringements.

While this was the first year we have actively been targeting and recording TFB breaches and sanctions, we believe that our greater focus will help reduce the number of TFB incidents.

Notably, the number of incidents on TFB days identified by DFES reduced by 36% during the 2017-18 bushfire season compared with 2016-17, despite there being more TFB days declared during 2017-18. Though this reduction in incidents cannot be entirely attributed to our proactive investigations, our renewed focus on TFBs will help continue this downward trend.



We are also collaborating with the Parks and Wildlife Service, WA Police, and local governments, who have the authority to enforce TFB breaches to ensure repeat offenders are dealt with.

TFBs are broadcast the day before they come into effect on [emergency.wa.gov.au](https://www.emergency.wa.gov.au) but can be declared at any time. The ban prohibits lighting of any open air fires and includes deliberately lit fires, burn offs, cooking with open fire appliances, campfires, or carrying out business activities that could start a fire including the use of incinerators, welding, grinding, soldering or gas cutting.

### **Changing lives – the 2017 WAFES Conference**

September 2017 saw the WA Fire and Emergency Services Conference take industry collaboration to new levels, as we increased our focus on working with other agencies to prevent and better respond to emergencies.

Themed around changing lives, the seventh annual conference offered a diverse array of speakers including the Director General of Emergency Management Australia Mark Crossweller AFSM.

The program included facility tours, workshops, demonstrations and an exhibition hall filled with interactive booths and the latest in appliance technology, including the RAC Rescue virtual reality experience.

As always, the ceremonies for the VMRS, SES Awards and Firefighting Awards were a highlight of the conference, celebrating the outstanding efforts of dedicated emergency service volunteers in protecting WA communities.



Emergency services volunteers at the WAFES Conference

The importance of knowledge-sharing to help prevent emergencies was highlighted though the conference's nomination for an IPAA Award for Best Practice in Collaboration Between Government and Non-Government Organisations.

Designed in partnership with emergency services volunteers, the conference attracted more than 700 delegates and provided volunteers with an opportunity to enhance their knowledge and skills, as well as meet with their peers from across the State.

### **Changing false alarm fire behaviour**

2017-18 saw the continued push to reduce the number of false fire alarms from properties with a Direct Brigade Alarm (DBA) connection. Around one-third of incidents our firefighters attend are false alarms – that's about 10,000 incidents per year.

It is vital emergency services are able to focus on real emergencies, which is why in 2015-16 DFES commenced charging for false fire alarm attendances. Notifications are issued to property owners for the first three attendances, before an invoice is sent upon the fourth and consecutive attendances. This helps reduce the number of false fire alarms.

Since the scheme began we have issued more than 7,000 invoices. We have also been working proactively with property owners and managers to identify ways to reduce false alarms. These can range from behavioural change to fixing system faults that may be causing the alarms.

The scheme has been successful, with the number of false DBAs reducing by 5% over the past year.

### How we performed against the KPIs

Put simply, preventing emergencies is the best way we can help protect and build more resilient communities.

Over the past year we have seen progress against some of the key measures of how we can help prevent emergencies.

There have been fewer accidental residential structure fires per 100,000 households than our target, which is testament to the proactive work in schools and the community to help people be fire safe in the home.

We are also outperforming our other proactive emergency prevention measures, with more than 99% of dangerous goods sites having a current FES ERG, and more than 97% of building plans assessed within specified timeframes.

These KPIs measure some of the activities we undertake to help minimise the occurrence and impact of preventable emergencies. While progress has been positive, we will remain vigilant and continue to focus on proactive emergency prevention.

### Indicator



## OUTCOME 2

### Minimised impact of natural hazard emergencies



The Rural Fire Division will support volunteers to reduce bushfire risk. Photographer – Sean Bockside.

#### **New Rural Fire Division established**

In April 2018, the State Government announced the provision of \$80 million for the creation of a Rural Fire Division within DFES. The new Division includes the establishment of a new \$18 million Bushfire Centre of Excellence, additional funding for bushfire mitigation activities, plus a range of new support measures for volunteers.

The reform package includes substantial new investment in bushfire prevention, with an additional \$15 million to extend the Bushfire Risk Management Planning Program and \$35 million to fund bushfire mitigation activities.

The Division has been created in response to the Report of the [Special Inquiry into the January 2016 Waroona Fire](#) and community feedback, which highlighted the value of decentralising rural fire management when supporting regional communities.

It aims to reduce WA's bushfire risk across the State, increase community resilience and forge stronger relationships with the State's bushfire volunteers.

Led by Executive Director Murray Carter, who has more than 30 years' experience in rural fire management, the new Division incorporates OBRM, the Bushfire Centre of Excellence, Bushfire Risk Management Program and its related activities, Land Use Planning and Bushfire Technical Services.

The Bushfire Centre of Excellence aims to improve rural fire management outcomes through leadership, collaboration and innovation across the sector. The initial and primary focus of the Bushfire Centre of Excellence will be to enhance the coordination and delivery of rural fire management training in WA. It will draw together the significant expertise of volunteers and local communities, along with state and local government, industry and research organisations. OBRM's Assurance Program continues to provide oversight in the management of risk for conducting planned burning activities. This will become more important as organisations engage in planned burning as part the Bushfire Risk Management Planning Program.

In March 2018, the Kimberley Land Council were formally endorsed by OBRM and commenced involvement in the Assurance Program. The Council are the third organisation to be endorsed by OBRM. Others are DFES and Parks and Wildlife Service.

To make sure local volunteers have more input into bushfire management, Volunteer Liaison Officers will facilitate communication with DFES and the State Government. Volunteer Support Officers will be established in the regions to help volunteers with administrative duties.

Establishing better links with regional volunteers means communities benefit from the vast knowledge and experience of local volunteers, who understand the unique characteristics of their environment and how to support their communities.

Working together in this way will help make sure we are doing all we can to prepare for the hotter, drier summers ahead.

### Are You Bushfire Ready?

In October, we launched the 2017 'Are You Bushfire Ready?' campaign, urging people living near bushland in metropolitan and regional areas not to be complacent when it comes to preparing for bushfire.

[Fire Chat site link](#) ►

The 'Are You Bushfire Ready?' campaign was run by DFES and supported by the Department of the Premier and Cabinet reinforcing the message that bushfire is a shared responsibility. Preparing for and responding to bushfires is very much a team effort and everyone needs to play their part.

The campaign launch was held in Argyle-Irishtown, in the Shire of Donnybrook-Balingup, where the community has faced two major bushfires in the last three years.

The campaign highlights that one of the best ways to be prepared for bushfires is to have good relationships with neighbours and an understanding that you will contact each other in an emergency and keep each other safe.

It also aims to encourage people in regional communities to sit down with their families, or talk to neighbours, and have a chat about what they will do if threatened by bushfire.

Encouraging people to have a plan helps members of the community understand the actions they all need to take and helps to avoid making last minute decisions that could end up being deadly.

### Fire Chat

To help residents be better prepared for the bushfire season, we have introduced a new online suite of bushfire planning and preparation tools called Fire Chat, available at [www.dfes.wa.gov.au/firechat](http://www.dfes.wa.gov.au/firechat).

The first step of the five-minute 'Fire Chat', asks people who live in a high bushfire risk area to have a quick chat at home with their families and friends and answer three key questions about what they will do in the event of a bushfire:

- When will you know to leave?
- Where will you go?
- Which way will you go?



The next step is to view and download the Bushfire Preparation Toolkit, which includes a series of action plans and advice for either leaving or defending properties, including how to prepare your property and emergency equipment.

The website also prompts people to consider some “what if” scenarios. These include questions such as:

- What if your children are at home and you’re at work when a bushfire starts?
- What if you’re hosting a barbeque with lots of people and there’s a bushfire in the area?
- What if you need to leave but the road is cut off by fallen trees?

Many people tend to wait and see before they make a decision to leave. This can have devastating consequences, as was tragically evident in Victoria’s 2009 Black Saturday fires, which tragically killed 173 people.

By encouraging people to have a fire chat, and developing a plan for what they will do in a number of bushfire emergency scenarios, we are helping to reduce the potential impact of bushfires and providing the tools to keep individuals and their loved ones safe.

We continue to reinforce the message that if you see smoke and flames act immediately – don’t wait for an emergency warning.

### **DFES’ Research Committee**

DFES recognises the value of acquiring, applying and sharing knowledge and expertise from research. A Research Committee has been established to drive and coordinate research initiatives across the organisation. It ensures individual research projects are working towards overarching business and strategic objectives.

The Committee meets quarterly to endorse new research proposals, review research underway and promote the inclusion of outcomes into emergency management across the State. The research aims to address key challenges for emergency service providers and the community and often includes developing cooperative relationships with research institutions to enhance research capacity and perspective.

It seeks to improve the uptake and nurture the growth of research activities across DFES. It has introduced a scholarship program to encourage research into specific areas by monitoring knowledge gaps and learning synergies. The Committee ultimately aims to develop a culture where innovative solutions are matched to a better understanding of the emergency service needs of the community.

### **Severe Winds Assessment Project**

DFES has commenced work to better understand the potential impact of cyclones and major storms on population centres and critical infrastructure, to help minimise their impact and build community resilience.

The Severe Winds Assessment Project is a joint project between DFES and Geoscience Australia, with support from the National Disaster Resilience Program. The aim of the project is to provide DFES and other emergency management agencies with information required to prepare for tropical cyclones and help WA communities recover from them.

The project, which commenced in July 2017, will run over two and a half years. Phase 1 (2017-18) focuses on the Kimberley and Pilbara regions, Phase 2 (2018-19) will focus on the



Storm impacts to be reduced through research

Midwest – Gascoyne and Metropolitan regions, and Phase 3 will be training in the use of the Tropical Cyclone Risk Model, which is being developed as part of the project.

The project will model a number of scenarios of cyclone impact for Carnarvon, Geraldton, Perth, Broome, Port Hedland, Karratha/Dampier, and Exmouth. Information from the project will also be applied to other DFES modelling tools for other communities and emergency scenarios.

### Flood research to aid community preparedness

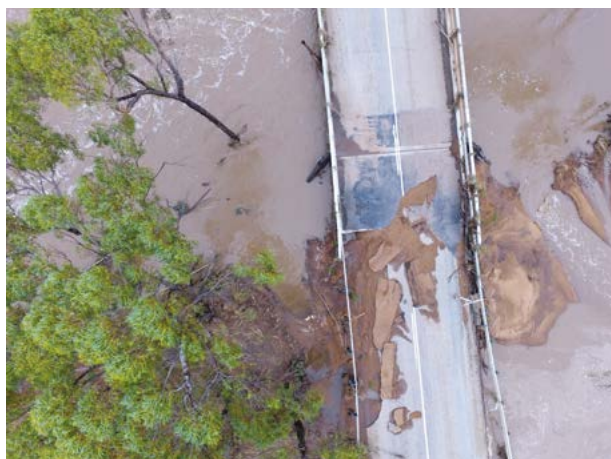
During the summer and wet season of early 2017, the Kimberley and Pilbara regions experienced severe flooding, resulting in four fatalities. To help understand what more can be done to reduce the risk of flooding, in 2017-18 DFES commissioned research to:

- understand community and key stakeholder behaviours and thinking in relation to risks due to flood
- provide sound data on which to base community engagement initiatives to reduce flood fatalities in WA.

The research provided insights into people's behaviour around floodwater, particularly young people and motorists who attempt to enter floodwater.

Based on this research DFES has commenced working in partnership with Royal Life Saving Australia WA to develop a pilot program in the Fitzroy Crossing community that focuses on teaching young people about safety around waterways, especially rivers.

We aim to launch the pilot in 2019 and plan to expand and replicate the program across the Kimberley.



Flood water damage at Fitzroy Crossing

### State Hazard Plans

The *Emergency Management Act 2005* provides that the State Emergency Management Committee (SEMC) must arrange for the preparation of State Emergency Management Plans. In WA, these are known as State Hazard Plans (SHPs) (formerly Westplans) and provide strategic, State-level arrangements for managing the particular hazards to which they apply. DFES is responsible for nine SHPs, covering a range of natural and man-made hazards.

SHPs are reviewed every five years, or as required. DFES consults with relevant stakeholders to ensure the plans are current and meet community and emergency service agency needs.

SHPs are tested through incident activation or inter-agency operational exercises. The exercises provide opportunity to improve how the WA emergency services, government agencies and the community can respond to and recover from major emergencies by clarifying legislative responsibilities, testing systems and procedures, identifying gaps and improving inter-agency co-operation.

The frequency of operational exercises is determined by the SEMC. The following table shows the operational exercises (or actual incidents) where DFES' plans were tested during 2017-18.

## All State Hazards Plans are current



Cyclone



Flood



Storm



Tsunami



Structure Collapse



Chemical Biological Radiological and Nuclear



Earthquake



Fire

### SHP tested

### Activation / Exercises

### Date



Exercise Jaguar State level multi-hazard earthquake, building collapse and hazardous material exercise

19 August 2017



Exercise Centum Metropolitan multi-agency response to a weaponised chemical agent exercise

1 May 2018



Exercise Ember State level multi-agency bushfire exercise

21 July – 2 August 2017



Exercise Nimbus State level natural hazard exercise, based on an extreme weather event across Western Australia

11 May 2018



Heath Ledger Theatre Metropolitan multi-agency exercise

21 September 2017



Canning Dam Exercise Metropolitan multi-agency exercise with Perth water supply under threat

27 September 2017



Exercise Air Utility Bravo field deployment in support of regional ground crews exercise

7 February 2018



HEAT18 State level multi-agency exercise of transportation of hazardous materials

3 May 2018



Tropical Cyclone Joyce  
Tropical Cyclone Kelvin  
Tropical Cyclone Marcus

8-16 January 2018  
15-19 February 2018  
17-20 March 2018



### How we performed against the KPIs

Natural hazards such as bushfire, storms and flooding are unavoidable, but we can mitigate their impact. We do this by working with the WA community to make sure we are prepared, respond to and recover from them in the best way possible.

An important measure of preparedness is the number of community-based Bushfire Ready Groups established.

In 2017-18 we saw 34 groups established, more than a 12% increase compared to the previous year.

This brings the total number of community-based Bushfire Ready Groups in WA to 270.

This is excellent progress, but we will continue to encourage better community preparedness over the coming year, introducing education on flood and cyclone preparation to community groups.

### Indicator



## OUTCOME 3

### An operational workforce that is trained and equipped to respond



The new Jandakot Air Operations Base

#### Aerial operations capability takes flight

During 2017, DFES established the new Jandakot Air Operations Base. This unique facility at Jandakot Airport incorporates a leased hangar with an aircraft parking apron, significantly improving our aerial operations capability. It enables accommodation of a fluid range of aircraft number and type depending on seasonal bushfire risk, with increased capacity for storage of rapidly air-deployable equipment caches for heavy rescue, urban search and rescue (USAR) and hazmat response.

The base is occupied year-round by DFES air operations and aviation contract management staff and accommodates seasonal aircrew and logistics personnel from DFES, Parks and Wildlife and private contractors. The base has provided briefing and training facilities for up to 100 people including staff, volunteers and contractor groups.

While at a slower operational tempo than three of the previous four southern bushfire seasons, 2017-18 was not insignificant.

In November 2017 the Dauphin joined the fleet. This light utility helicopter (LUH) was the busiest aircraft in the fleet during 2017-18. Its tasks during bushfires included air attack supervision, transport logistics and Helitak duties.

In May 2018, a high altitude Learjet 35 with infrared Linescanner for wide area fire mapping was undergoing tests to assess its effectiveness in the WA terrain. Coincidentally, on the same day, unseasonal bushfires in Augusta, Albany, Stirling Ranges and Peaceful Bay allowed the Learjet 35 and sensors to be tested operationally. The Learjet Linescanner was able to demonstrate its rapid deployment ability by responding from Perth to Albany in less than 30 minutes while seamlessly transferring incident data to DFES.

## Volunteers help shape the future more than 20,000 times

Over the last 12 months DFES has implemented new approaches, tools and mechanisms to engage volunteers in meaningful and accessible ways. We believe volunteers' knowledge, ideas and perspectives are crucial in ensuring that we develop resources, policies and services appropriate for the job, wherever that may be. Our new focus has meant that volunteers have had the opportunity to be actively involved in the design and development of projects, programs and resources that are relevant and directly impact them.

There has been some excellent examples of volunteers helping us shape the future over the last 12 months.

The Volunteer Hub project has involved an intensive co-design methodology, including Moray testing, involving approximately 300 volunteers who have provided input through a range of ways including:

replace with

- team visits to both metropolitan and regional volunteer brigades, groups and units to collect feedback and discuss proposed changes and improvements
- online surveys and phone interviews to identify problem areas in the Volunteer Portal that can be fixed through the proposed Hub design

- first click testing to see how volunteers would complete specific tasks. This allowed us to evaluate the usability of the Portal and proposed Hub
- usability testing through using observation software to 'see' and 'hear' how easy or difficult it was to complete tasks through the portal and to understand how volunteers could see the Hub being designed and structured
- online card sorting to evaluate how information should be presented in the Hub
- workshops to develop the structure, page layouts and visual design of the Hub
- prototype testing to make sure the proposed Hub design works in the way volunteers need it to.



Volunteers are helping shape our future

These strategies enabled volunteers from every region in the State to actively participate in the design of the new Volunteer Hub. Through their input, early testing of the Hub shows a high degree of user satisfaction and acceptance with the emerging product. All those who have actively participated in the project will continue to develop the Hub through to its release.

The Marine Next Gen project aims to address the aging volunteer base within VMRS. By engaging volunteers through a variety of mechanisms including telephone interviews, targeted surveys and a series of workshops/ focus groups to identify issues and strategies, the project was able to identify opportunities to attract a younger cohort to the Service. Strategies are now being developed from all the information gathered.

From volunteer engagement campaigns across a multitude of issues including Child Friendly, Child Safe Organisation policy, the 400MHz radio transition project and development of operational doctrine, more than 20,000 instances of volunteer engagement underpin our commitment to strengthening ties with our volunteers and to learning from their unique local knowledge and experience.

### **Bushfire training at Boddington Gold Mine**

Over the past year, firefighters have benefitted from hands-on training in a safe environment thanks to a new partnership between DFES and Newmont's Boddington Gold Mine.

In September 2017, a group of firefighters from DFES' Station Officer Development Program got a chance to put theory into practice at a five day training camp at the mine site.

The mine is set on 35,000 hectares of jarrah forest and is separated into areas that can be used for back-burning strategies and tactics.

The camp's program gave officers the chance to operate in a realistic bushfire environment and gain experience in supervising crews, aerial firefighting resources and earth moving machinery.

The training exercises tested their ability to apply strategy while managing resources. It equipped them with the knowledge and skills they'll need to effectively combat bushfires as a station officer in the future.

Earlier in the year we used the same location to deliver an Advanced Bushfire Firefighting course to local government Community Emergency Services Managers, Bushfire Risk Mitigation Officers and local volunteers.

In return for hosting DFES, the Emergency Response Teams from Newmont Boddington mine will receive specialised training in bushfire suppression and incident management from subject matter experts from DFES and Parks and Wildlife Services.

The Western Australia Fire and Emergency Services (WAFES) Academy is planning more courses at the mine site in 2018-19.

### **Earthquake drill shakes up emergency services**

What would happen if a 5.6 magnitude earthquake struck Perth?

Being prepared to respond effectively and efficiently to a range of emergencies is critical to keeping WA communities safe. In August 2017, Exercise Jaguar was held at the WAFES Academy, in which more than 200 emergency services personnel responded to a simulated 5.6 magnitude earthquake in Guildford.

In the scenario, buildings collapsed, vital infrastructure was damaged, more than 30,000 people were left homeless, ten people died and thousands were injured or missing. Throughout the day, realistic events including aftershocks and chemical spills added to the challenge.

According to Geoscience Australia, WA is an earthquake hotspot, with more earthquakes each year than all other Australian states and territories combined. This makes it vital for emergency services personnel to test their skills and training in simulated scenarios such as this.



Exercise Jaguar provides an opportunity for rescue training

DFES USAR personnel and firefighters who have undergone specialist training to rescue casualties trapped by buildings and landfalls, worked with dogs and surveyors to locate and remove survivors from collapsed buildings.

The emergency rescue helicopter, managed by DFES, also took part in the drill, using the winch to rescue a trapped person.

Overall it was a successful exercise which tested emergency services functions in a realistic environment.

### **State-of-the art communications vehicle for volunteers**

A state-of-the-art communications support vehicle (CSV), giving emergency responders valuable intelligence during bushfires and other major incidents, was handed over for permanent assignment to the SES Communications Support Unit in July 2017.

The new \$500,000 CSV, was commissioned for a trial by the State Wide Operational Response Division (SWORD) in Kewdale. It is a more advanced version of the vehicles currently in use by volunteers and staff. Its satellite equipment operates independently of established mobile network infrastructure, enabling communications in isolated areas or where networks are congested or not available.

For example, the vehicle's satellite technology can act as a 4G Wi-Fi hotspot, giving other emergency responders including WA Police, the ability to access the internet in reception black spots.

The CSV includes an internal office space with two workstations, its own power supply and a video camera allowing various operations centres across the State to view real time images at the frontline.

Dependable network infrastructure is vital to responding to and recovering from emergencies. Following SWORD's successful trial of the new CSV, there are plans to introduce a similar vehicle in the Kimberley region. The rural CSV will feature the same satellite technology, but will be modified for use in rough terrain and isolated areas. It will include features such as four-wheel drive, a shorter wheel base and more comprehensive first aid facilities.

In addition to these new CSVs, DFES has 14 standard communications vehicles, located in Belmont, O'Connor, Geraldton, Manjimup, Kalgoorlie, Bunbury, Rockingham, Swan, Wanneroo, Serpentine, Mundaring, Chittering and the Great Southern Region.

Many people are involved in responding to emergencies, both on the frontline and in support roles, and being able to share information during emergencies is crucial in protecting the community. We will continue to review our CSV fleet and how we can best aid communication between DFES, volunteer groups and other agencies.



The new communications support vehicle

### Award winners

The 2018 Institute of Public Administration Australia (IPAA) WA Achievement Awards were announced at a ceremony in June 2018 recognising both individual and organisational excellence in the public service. DFES had the second highest number of shortlisted finalists.

DFES' Mental Health First Aid Program won the Best Practice in Health and Wellbeing Award reflecting the value DFES places on the importance of creating and maintaining a mentally healthy workplace.

At the Sheraton Hotel in December 2017, DFES received an OpenGov 'Recognition of Excellence' Award. The award recognises DFES as a leading WA Government agency for digital transformation, collaborating with other agencies to create better outcomes for the community.

OpenGov reports on digital transformation projects throughout south east Asia and highlights successful initiatives where technology based solutions deliver more efficient, agile, transparent and secure services to the community.

The new computer aided dispatch (CAD) system, integrates critical information between agency databases, command centres and frontline officers.

DFES joins WA Police in using the same technology platform, creating more opportunities for collaboration between the state's fire and emergency services and police for coordinated incident response in the future.



Mental Health First Aid staff



DFES and WA Police collaborate for the CAD project

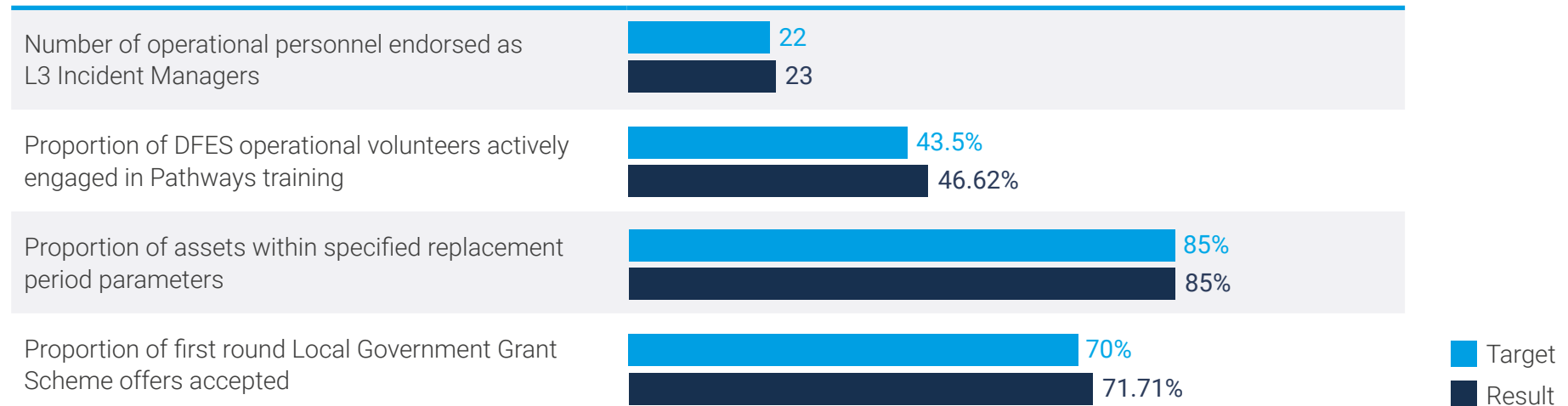
### How we performed against the KPIs

To be able to best serve and protect the WA community, it is important our staff and volunteers are fully trained and equipped. We have several KPIs in place that help us measure how we are performing in this area and where we can improve.

During 2017-18 we performed well against KPIs relating to training and provision of equipment. Almost half of DFES operational volunteers are actively engaged in Pathways training, while 85% of assets are within specified replacement period parameters.

While we are outperforming our targets, we continually look for ways to deliver training more effectively and ensure our assets and equipment are fit for purpose and available.

### Indicator



## OUTCOME 4

### Minimised impact from emergencies through timely and effective response

#### Record number of businesses recognised for supporting emergency services

Our volunteers are invaluable in ensuring we can respond to incidents in a timely and effective way.

Without the support of the businesses who employ these volunteers in their day jobs we simply would not have the volunteer manpower we need to do our job.

In November 2017, a record 91 businesses were recognised for their vital role in supporting emergency service volunteers.

The DFES Volunteer Employer Recognition Awards recognise businesses which go above and beyond to provide flexible work arrangements, enabling their staff to respond to emergencies during work hours.

In 2017-18 there was a 35% increase in the number of organisations acknowledged with nearly half of the recipients recognised in the gold category and 18 self-employed volunteers honoured.

Defence ship building company ASC, a gold category recipient, received multiple nominations from employees who volunteer with Baldivis VFES.

The support from ASC included paid time off to attend incidents, trade assistance in manufacturing equipment for the station and fundraising support for emergency services.



#### Air intelligence to combat bushfires

DFES is getting ahead of the fire from above.

Throughout the bushfire season we operate a fleet of aircraft out of Jandakot and Serpentine airports, and several regional areas, to boost firefighting operations.

The fleet is part of the air operations division and is made up of specially trained firefighters who work as Air Attack Supervisors and Air Intelligence Officers.



Their job is to map the fire zone, outline the length of the fire front, the direction it's travelling in, and how fast it's going.

They can see if there are any structures in the path of the fire or if there are any crews under threat then communicate that information to the team on the ground.

The aerial intelligence helicopter operates at 2,500 feet and is equipped with state-of-the-art technology. This includes a defence grade camera which shows what's happening on the ground in detail.

Thermal imaging equipment and geospatial computers allow the crew to see the fire, people, animals and structures on the ground and record and store that vision.

The work of the crew continues well after the bushfire is contained and clean-up has started.

After an incident, they fly across the incident area to locate any hotspots. They are radioed to ground crews who are able to respond and prevent fires starting up again.

### **How inter-agency team work freed trapped child**

Inter-agency cooperation is vital in any emergency situation we face. November 2017 was no exception, when an eight-year-old boy was successfully rescued after more than four hours trapped in a collapsed trench.

DFES career firefighters and St John Ambulance (SJA) paramedics arrived at a Jandabup property around 3pm on Sunday 19 November to find the young boy covered in sand up to his neck.

Crews began immediately working to provide protection to ensure more sand didn't cave in.

They were joined by the USAR team who assessed the unstable area before starting to shore up the walls of the trench.

The boy was at the apex of the trench and the loose dry soil meant movement sent more sand on top of him.

The USAR team has specialist trained capability to locate and remove people who have been trapped by buildings, landfalls or slippages. The team acquired state-of-the-art extraction equipment in July 2016 – this is the first incident they've used it where a human life was at risk.

There was six tonnes of sand sitting on the edge of the trench and the team was conscious that it could come down on everyone working at any time.

Local SES volunteers provided essential lighting and assisted career Fire and Rescue to form a human chain to carry the boy out of the trench once freed, while the SJA paramedics administered vital medical care. The emergency rescue helicopter took him to Sir Charles Gairdner Hospital.

The young boy kept calling for 'Snow' his teddy bear, but he was unable to hold it because of the instability of the sand. To help keep him calm, the firefighter in the trench with him wore Snow strapped to their harness.



USAR officers providing protection against more sand slippage

The boy spent the night in hospital with minor injuries and was well enough to go home the next day.

Over the years, DFES has built strong relationships with these other agencies. The strength of these relationships enabled everyone on scene to work seamlessly.

## Mandurah VMRS aids *Finistere* search and rescue

In February 2018, the Mandurah VMRS played a leading role in the search and rescue of crew from the stricken yacht *Finistere*. The *Finistere* had been participating in the Fremantle to Bunbury return ocean race hosted by the Royal Freshwater Bay Yacht Club, when its distress beacon was detected shortly before midnight on 23 February.

Aided by air support, the Mandurah VMRS vessels *Spirit of Mandurah* and *West Wide 1*, reached the *Finistere*, which had capsized 11 nautical miles south west of Mandurah, at around 2am.

Four of the six crew were rescued and taken to safety. The volunteers commenced the search for the two missing crew.



Mandurah VMRS played a leading role in the search and rescue

Unfortunately, the missing crew were discovered deceased, the volunteer crews working with WA Police, air operations, and the Australian Maritime Safety Authority to locate and recover the bodies.

Despite the tragic loss of life, the *Finistere* incident demonstrated the importance and capacity of volunteers in search and rescue missions. With more than 40 volunteers participating over 14 hours, the mission required intensive collaboration and ongoing communication.

The Mandurah VMRS is one of 39 Volunteer Marine Rescue Services located in WA and supported by DFES. Their dedication and expertise is crucial to our capability to respond to emergencies, and like the thousands of fellow volunteers throughout our State, we could not serve WA community without them.

## New helicopter enhances Air Operations' emergency response capabilities

November 2017 saw the addition of a new light utility helicopter (LUH) to the aerial firefighting fleet at Jandakot Air Operations. Previously engaged on an ad-hoc basis, the new LUH's tasks include air attack supervision, transport and tactical duties when required. The new LUH was the most utilised aircraft in the fleet during 2017-18.



The new light utility helicopter based at Jandakot

In addition to its primary function as a bushfire response craft, during 2017-18 the LUH was deployed to the Nullarbor to provide emergency flood relief to the remote Tjuntjunjara community, conducting a rescue.

The LUH also assisted in the search and rescue of the crew of the sunk yacht *Finistere*, transported firefighter reinforcements from Perth to a major fire at Geraldton Port, and participated in Hazmat and heavy rescue exercises.

The aerial firefighting fleet as a whole performed well during the 2017-18 bushfire season, performing direct attack and reducing bushfire rate of spread to help keep fires manageable for firefighters on the ground.

The Air Operations team helped turn the January 2018 Sawyers Valley bushfire towards lower fuel areas through firebombing, and one air attack

helicopter performed a daring extraction of a bush walker from the path of the fire.

During 2017-18, the team conducted aerial intelligence surveillance and reconnaissance services. While conducting routine digital fire mapping and video broadcast of a fire in the Gngara pine plantations, the helicopter crew located and tracked a suspicious vehicle, which resulted in the arrest of two persons subsequently charged with arson.

### South West rescue helicopter helps improve response times

In February 2016, WA's second emergency rescue helicopter began operating from Bunbury.

The two emergency rescue helicopters, based in Perth and Bunbury, cover 95% of the State's population.

Together, they flew more than 650 missions last year, providing critical medical and transport services to people involved in road crashes, farming accidents and marine incidents.

Since the inaugural flight in August 2003, the two emergency rescue helicopters have completed more than 6,000 missions and have flown more than 1.2 million kilometres.

The crews include a pilot, air crew officer and St John Ambulance critical care paramedic. During critical hospital transfers, a doctor may also be on board.

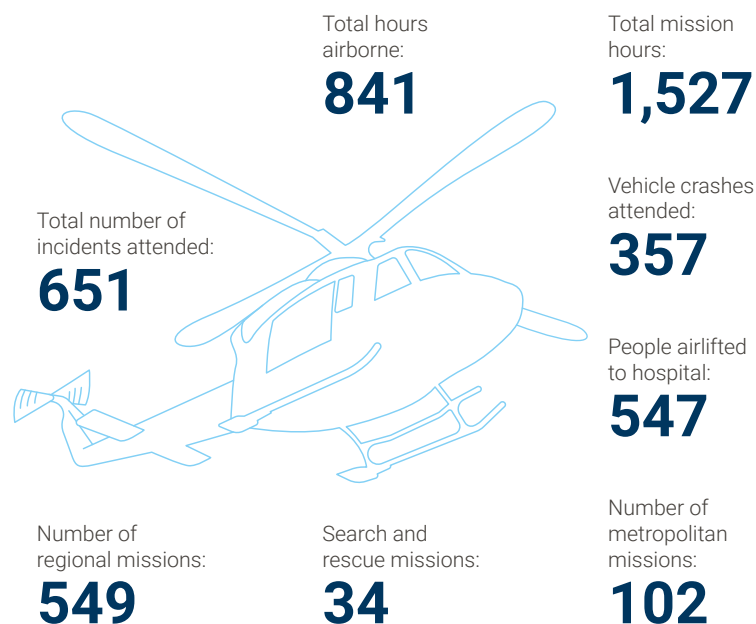
This vital air service transports critical care specialists to an incident and airlifts the injured to the nearest or most suitable hospital. Together, they significantly reduce the time taken to transport meaning higher survival rates, reduced hospitalisation periods, shorter rehabilitation times, and better patient and community outcomes.

Introduction of the Bunbury helicopter has had a huge impact on the level of support we can provide the community.

Having a second helicopter based at the gateway to the south west means response times to incidents in Margaret River and beyond have reduced by more than 25%.

Whereas previously, the rescue helicopter in Jandakot would have taken around 6 hours to fly to Margaret River and transport the patient to hospital, the Bunbury helicopter takes just 4.5 hours, dramatically improving the time it takes to get urgent care to the people who need our help.

### Emergency rescue helicopters 2017-18 performance (Jandakot and Bunbury combined):



## How we performed against the KPIs

When emergencies happen, we will respond quickly and effectively. We are very proud of our frontline teams and we constantly strive to improve and learn from every incident we face.

We have outperformed all our emergency response KPIs during 2017-18. We are proud our volunteers continue to exceed their turnout target, with more than 92% of incident turnouts being within the target timeframe.

Response times to ESL 1 and ESL 2 incidents remain ahead of target, while over 96% of level 2 and 3 bushfires have been contained with no structures lost or significantly damaged.

Though we have met our emergency response KPIs, we will remain vigilant and continue to focus on providing timely and effective response.

### Indicator

