

SEARCH / RESCUE

FESA provides a variety of search and rescue services in support of the Western Australia Police who are the Hazard Management Agency for search and rescue.

These range from operation of the State's only dedicated emergency rescue helicopter service to marine search and rescue, in addition to a recently enhanced capability to deal with casualties of terrorist activities.

CONTENTS

AERIAL RESCUE	51
CLIFF AND CAVE RESCUE	53
LAND AND AIR SEARCH	54
MARINE SEARCH AND RESCUE	56
ROAD CRASH RESCUE	57
URBAN SEARCH AND RESCUE	59

AERIAL RESCUE

[RAC Rescue 1](#) is Western Australia's only dedicated emergency rescue helicopter.

The rescue helicopter service provides:

- Emergency rescues for victims in a range of circumstances including car crashes, cliff rescues and farming accidents;
- Ship to shore rescues including responding to Emergency Position Indicating Radio Beacons; and
- Hospital transfers for critically ill patients.

PREPAREDNESS

The Emergency Rescue Helicopter Service is managed by FESA and funded by the State Government and principal sponsor, the Royal Automobile Club of Western Australia (RAC).

RAC Rescue 1 and its highly trained crew are on standby 24 hours a day, 365 days a year. The helicopter is crewed by a pilot, rescue crewman (both supplied under contract by CHC Helicopters Australia) and a St John Ambulance Critical Care Paramedic. Stationed at Jandakot Airport, Perth, RAC Rescue 1 typically operates within a 200 kilometre radius, covering 90% of Western Australia's population or 1.8 million people.

Call outs are usually initiated by, or through, St John Ambulance or at the request of Western Australia Police. Critical life-saving missions take precedence before any other call out.

NEW FACILITIES

In March 2007, a \$1 million dedicated rescue helicopter base was opened at Jandakot Airport. The new facility provides a number of significant benefits to the service including additional hangar space to accommodate the back-up aircraft, a planning and operations room and enhanced crew accommodation. The base should improve operational coordination, crew effectiveness and reduce response times to emergency incidents.

PROMOTION

Demonstrations were provided at community events and for a number of emergency services, including:

- Opening of Northam Hospital Helipad;
- Australia Day Sky Show;
- Sir Charles Gairdner Hospital Nurses Study Program and Intensive Care Unit familiarisation;
- Wundowie Emergency Services Field Day;
- The Perth Royal Show; and
- Annual camp of the Emergency Services Cadet Corps.

RESPONSE

In 2006-07, RAC 1 undertook 288 missions. Of these:

- 61% (174) were primary taskings, attending on scene at rescue incidents.
- 21% (61) of missions were for retrievals of critically ill patients from regional hospitals to metropolitan tertiary hospitals.
- 18% (52) of missions were search and rescue, most often in response to the activation of an Emergency Positioning Indicating Radio Beacon. These missions were requested either by the Australian Maritime Safety Authority through the Australian Search and Rescue Coordination Centre in Canberra, or the Western Australia Police.

One mission was listed as 'other'. This was a FESA flight to gather data with the helicopter's infrared camera on the effectiveness of fire suppression over Kalamunda.

Of all missions, approximately 14% (41) were in response to motor vehicle and motorcycle crashes.

The average activation (response) time was 13.2 minutes against a target of 15 minutes. This was a 13% improvement on the previous year.

Flight time logged in the air for rescues was 331 hours as against an estimated 330 hours. Each mission averaged 1.15 hours as against 1.98 in 2005-06.

As response personnel involved in the rescue helicopter are provided through contractual arrangements, the cost of the service cannot be included as representative of the general cost of response. However, the service can be considered separately and be costed by its mission hours as an efficiency indicator.

AVERAGE COST PER MISSION HOUR WESTERN AUSTRALIAN EMERGENCY RESCUE HELICOPTER SERVICE

	2004-05	2005-06	2006-07
Number of mission hours ^{(a) (b)}	387	254	331
Total expenditure \$'000	3,921	3,950	3,870**
Average cost per mission hour \$ ^(c)	10,132	15,551	11,691

(a) Mission hours are actual hours in the air (ie. flight time) for rescues and other activities.

(b) Variance in mission Hours for 2005-2006: Fewer extended distance rescues were flown this year.

(c) Cost of helicopter service is linked to Consumer Price Index and will increase each year. Total expenditure includes time on the ground, even if no missions are activated.

**** Note: Excludes One off Capital payment of \$450,000 towards Rescue Helicopter Base.**

NOTABLE INCIDENTS

AUGUST 2006

The emergency helicopter winched a man to safety and took him to Royal Perth Hospital after he fell from the top of Oakley Dam near Pinjarra.

OCTOBER 2006

Survivors of a boating tragedy that left one man dead and another missing were rescued after being spotted by the RAC Rescue 1 after a three metre wave swamped their boat off Quinns Rock.

NOVEMBER 2006

Six people escaped a light plane crash on Rottnest Island. The plane crashed shortly after takeoff from Rottnest air strip. Two people were seriously injured and flown to Perth.

JANUARY 2007

A man in his 50s was pinned under a two tonne trestle in Nannup. He was airlifted to Perth.

FEBRUARY 2007

A Wagin man sustained serious injuries after becoming trapped under the blade of a piece of earthmoving equipment. The man was treated at the scene and was flown to Royal Perth Hospital.

APRIL 2007

RAC Rescue 1 airlifted a man who received 80% burns to his body after the car he was repairing erupted in flames outside his Northam home.

Two divers were rescued off Rottnest Island after they were hit by a boat while spear fishing. One of the men suffered serious wounds when he was slashed by the boat's propeller.

MAY 2007

After an amateur-built aircraft crashed RAC Rescue 1 evacuated a patient to Royal Perth Hospital with suspected spinal injuries and burns.

CLIFF AND CAVE RESCUE

Volunteers from State Emergency Service (SES) units and some Volunteer Emergency Service (VES) units are trained to undertake vertical rescues on cliffs and in caves. These volunteers provide a support role for Western Australia Police, the Hazard Management Agency for land search and rescue.

PREPAREDNESS

REGIONAL EXERCISES

Two exercises to test vertical cliff rescue in the Pilbara region were completed this year – Exercise Whaletail and Exercise Out of the Park.

Exercise Whaletail was a multi-agency response to a vertical rescue involving the Department of Environment and Conservation, Western Australia Police, St John Ambulance and SES volunteers. It tested team management, rope systems, individual chores, communications and reporting systems, and interagency cooperation. Response times and communications were identified as areas where improvements are desired.

Out of the Park exercised a range of SES volunteer skills, including teamwork, leadership, navigation, search and four wheel driving techniques.

RESPONSE

SES volunteers undertook six cliff rescues during the reporting period. No cave rescues were required. In total, 89 volunteer hours were spent in response.

NOTABLE INCIDENTS

SHIRE OF NORTHAMPTON – 29 NOVEMBER 2006

A man was severely injured and immobilised in an isolated location following a cliff top collapse. He was reported missing two days later. SES units and regional staff were deployed as part of a major search operation. That night the casualty was located and volunteers successfully conducted a complex three stage vertical rescue.

RECOVERY

PROGRESS ON KARIJINI REPORT RECOMMENDATIONS

A major incident review was undertaken following the tragic death of a SES volunteer during a cliff rescue operation in Karijini National Park in April 2004. As a result of the review, 65 recommendations were developed, of which 91% have been completed. Outstanding recommendations relate to training, qualifications, equipment and response standards, which were the subject of a separate independent review (Toomer Report).

Recommendations from the Toomer report are being considered by our internal Vertical Rescue Group, which is developing a common set of standards and equipment for all services undertaking vertical rescue.

Our responsibilities in relation to vertical rescue roles have been clarified by the *Emergency Management Act 2005*. Vertical rescue terminology has been clarified and development of training resources and competency standards has commenced.

We have also been working with other agencies including DEC and Western Australia Police to implement emergency response plans and test operational capabilities.

LAND AND AIR SEARCH

Western Australia Police is responsible for managing land and air search and rescue. Our State Emergency Service (SES) and Volunteer Emergency Service (VES) units provide a support role in these emergencies.

Assistance is provided by fully trained, self-contained teams of volunteers who work under the leadership of volunteer field search controllers. Most searches are for missing people but assistance has also been provided in locating criminal evidence such as murder weapons. Air search in support of marine rescue is also provided. Additional resources available to Western Australia Police through the SES include our horseback mounted section and tracker dogs.

PREPAREDNESS

TRACKER DOGS

The SES Tracker Dog Section has been in existence for many years and provides an additional resource to help locate missing persons in search operations.

In 2006-07 a full business review of the use of canines in search was undertaken. A report was completed in February 2007 after extensive research and consultation with all stakeholders and included ten recommendations on internal structural and management requirements.

The following outcomes have been achieved:

- Restructure of the team's management.
- Development of an ongoing partnership with the Western Australia Police Canine Section.
- Ongoing development of professional relationships with accredited Canine Search Organisations.
- Commencement of review of training standards and Standard Operating Procedures.
- Implementation of a volunteer Canine Training Coordinator to coordinate training opportunities and develop professional partnerships.
- Identification of additional training areas to diversify training opportunities.
- Development of a clear training progression pathway for both Trailing and Area Search training.

In late 2006, members of the Stirling SES tracker dog section visited local primary schools to teach children from a highly multicultural community with 39 different nationalities what to do if they become lost.

LAND SEARCH AND RESCUE GUIDELINE

A formal guideline has been developed for Metro Duty Regional Coordinators for the activation of an SES response to a Land Search. This will be particularly useful for coordinators who do not hold the national qualification of Field Search Controller.'

The guidelines ensure a systematic, controlled and professional response in the initiation of a Land Search.

REGIONAL EXERCISES

SES volunteers from the Karratha, Onslow, Port Hedland, Tom Price, Newman and Pilbara Regional Operations units took part in a major regional exercise in the Karijini National Park to test their skills in land search, communications, maps and navigation and cliff rescue.

RESPONSE

SES volunteers spent a total 8,162 hours undertaking 87 searches during 2006-07.

NOTABLE INCIDENTS

MUNDARING – 5-10 OCTOBER 2006

An intellectually handicapped 42 year-old male was reported missing in the Mundaring area. A multi-agency response was undertaken by Western Australia Police, SES, Fire and Department of Environment and Conservation personnel. All metropolitan SES units were represented and the Mandurah and Murray units also assisted. 4,660 hours were logged by volunteers during the search operation. Unfortunately, the missing person has not been found to date.

COONAN – 11 JANUARY 2007

SES crews and FESA managers worked in conjunction with Western Australia Police to search a large area between Kalgoorlie and the South Australian border along the Trans Rail line for two missing persons. The two persons were eventually discovered deceased.

WILYABRUP – 27 MAY 2007

A search was undertaken in the South West region for two missing children. It involved 120 SES volunteers and approximately 400 other searchers. The missing children were located alive and well after spending a cold night under a bush.

MARINE SEARCH AND RESCUE

Western Australia Police is the Hazard Management Agency for marine emergencies. 33 volunteer marine rescue groups, formally approved under legislation, provide support services including response to marine emergencies. We also have a service delivery arrangement with the Metropolitan Volunteer Sea Rescue Group which has three member groups operating in the Perth metropolitan region.

The approved Volunteer Marine Rescue Services (VMRS) groups are involved in a wide variety of marine emergency management activities including:

- Assisting Western Australia Police to search for missing people or vessels;
- Providing help to drifting vessels;
- Assisting in the removal of grounded or submerged vessels;
- Providing a 'sail plan' notification service for boat owners;
- Monitoring marine radio services;
- Providing training in small-craft proficiency, communications and safety; and
- Providing information to boat owners on appropriate actions during emergencies at sea.

PREPAREDNESS

TRAINING

This year 142 VMRS Volunteers have undertaken courses including Senior First Aid, Radio Operators Ticket, Marine Search and Rescue Coordination, Coxswains, Certificate III in Administration and National Power Boat Instructor. Assessment of volunteer skill levels is ongoing and recognises prior learning.

NEW AND REPLACEMENT VESSELS

The Consultative Committee considered and endorsed 17 grant applications from VMRS groups totalling \$1,347,000. Lotterywest Emergency Services Funds provided a further \$251,300 in grants.

Three new purpose-built rescue vessels replaced existing vessels in Hopetoun, Exmouth and Jurien Bay. Leeman's rescue vessel received a major refit and a further two vessels, built specifically for the 2000 Sydney Olympics, were purchased to replace ageing vessels at Albany and Busselton.

BLACK SPOT COMMUNICATIONS

The State Government has allocated funds to address 'black spot' marine VHF communication areas along the coastline of Western Australia.

This year repeaters were installed at Esperance, Mt Lesure, Abrolhos Islands, Koolan Island, resulting in significant improvement to the radio network. A further four sites will be upgraded next year.

ANNUAL CONFERENCE

Groups from across Western Australia attended the second VMRS conference in August 2006. The conference provided the opportunity to learn about new developments in the marine industry, research into emergency incidents at sea and new strategies for recruitment of volunteer members. We also recognised volunteer achievement through the presentation of Annual and VMRS Service Awards.

RESPONSE

Marine rescue volunteers committed 3,279 hours to 1,003 rescue incidents during 2006-2007.

NOTABLE INCIDENTS

Carnarvon and Shark Bay VMRS groups provided coordination and support to 27 vessels involved in the search for crewmen missing overboard in two separate incidents in the Shark Bay area.

ROAD CRASH RESCUE

Western Australia Police is the Hazard Management Agency for road transport emergencies; however, the extrication of casualties of vehicle crashes is undertaken by emergency services supported by FESA.

This service is predominantly provided by career and volunteer firefighters from the Fire and Rescue Service (FRS) throughout Western Australia. State Emergency Service (SES), Volunteer Fire Services (VFS) and Volunteer Emergency Service (VES) units also undertake this often lifesaving task in areas where FRS are unavailable.

PREPAREDNESS

WESTERN RESCUE 2007

At the end of June 2007, we hosted the 2007 Annual Road Rescue Challenge and Conference on behalf of the Australasian Road Rescue Organisation Inc.

Named *Western Rescue 2007* and with the theme '*Road Safety – Are we prepared for the future?*' it attracted 20 teams of rescuers from across Australia, as well as New Zealand, Hong Kong and Singapore.

Industry and road safety stakeholders from Australia and New Zealand joined the teams for a learning symposium, with keynote speakers from Holland and Melbourne.

UPGRADE RESCUE CAPABILITY AT COUNTRY CAREER FIRE AND RESCUE STATIONS

The risk of road crash incidents involving heavy road transport vehicles is greater in regional areas of Western Australia.

Rescue capability at country career fire stations has been upgraded to improve response to this and other risks such as industrial accidents and incidents involving rail transport. New equipment for heavy duty hydraulic cutting, spreading and lifting, plus quick cut saws, reciprocating saws, air lifting bags and heavy duty hydraulic jacks have been provided. To accommodate the new equipment, additional trailers have been acquired and existing fire appliances and rescue trailers modified.

Career fire stations at Kalgoorlie, Albany, Bunbury and Geraldton are now better equipped as first responders to deal with a wider range of accident/incident scenarios in their local communities. Responding fire fighters are also better able to safely complete their work, with fit-for-purpose, designated equipment.

STATEWIDE ROAD CRASH RESCUE REPLACEMENT PROGRAM

We have commenced the first stage of a replacement strategy for identified hydraulic rescue tools.

General improvements in materials, design and manufacturing technologies adopted by vehicle manufacturers globally have resulted in significant changes in motor vehicle extrication techniques and hydraulic rescue tool design. An internal review has identified that firefighters and SES personnel in some locations are equipped with older rescue equipment and may find it difficult to operate effectively in removing casualties from certain modern vehicles.

The equipment replacement strategy will ensure that rescuers have the appropriate tools to undertake their role.

MAJOR EXERCISES

Perth North Coastal personnel were actively involved in the multi-agency Exercise Cooperation, a simulated bus crash involving multiple casualties including non-English speaking people.

The aim of the exercise was to evaluate multi-agency response, management and coordination of a major traffic crash resulting in loss of life, and injured and missing persons. It allowed participants to:

- Practice agency/stakeholder local emergency plans;
- Practice inter-agency liaison and cooperation;
- Evaluate local registration procedures; and
- Practice traffic crash procedures.

The aim of the exercise was achieved. All participating agencies have reviewed, and where necessary amended, their procedures to maximise their response and effectiveness.

RESPONSE

In 2006-2007, emergency services in Western Australia attended 583 road crashes.

Of the total missions undertaken by the RAC Rescue 1 helicopter, approximately 14% (41) were in response to motor vehicle and motorcycle crashes.

URBAN SEARCH AND RESCUE

(INCORPORATING CONFINED SPACE)

FESA supports the Western Australia Police as a combat authority for urban search and rescue. We have developed a capability to deal with the rescue of casualties trapped by buildings, landfall or slippage which collapse as a result of industrial accidents, explosions, natural disasters and terrorist activity.

Additional funding in the past three years has allowed significant advances to be made in the Western Australia's preparedness, response and recovery capabilities for urban search and rescue (USAR).

Career and volunteer Fire and Rescue Service (FRS), volunteers from State Emergency Service (SES), Volunteer Fire Brigades (VFS) and multi-skilled Volunteer Emergency Service (VES) units provide this service throughout the State.

PREPAREDNESS

IMPROVED CAPABILITY

Western Australia's urban search and rescue (USAR) capability has been significantly increased with the purchase of equipment funded by State and Australian Governments. Our capability is now widely recognised, and we have close associations in place both nationally and internationally with the Singapore Civil Defence Force.

USAR responders are trained to three levels – Category 1, which qualifies the responder to provide initial response and conduct above ground search, Category 2, which qualifies the responder as a technician with the competencies to conduct underground searches and Category 3, which qualifies the responder to lead a USAR taskforce.

To date, all career firefighters are trained to Category 1 (CAT 1) and there are 42 Category 2 (CAT2) technicians available to respond to incidents requiring the specialised skills of the USAR Task Force.

Western Australia now has a basic-qualified USAR Canine Team to enhance our operational capacity and is the only State with an integrated canine team in its USAR Task Force. Canine teams are an important part of an integrated approach in locating victims, assisting in rapid location and prioritisation of potential survivors.

INTERNATIONAL COOPERATION

The relationship between FESA and the Singapore Civil Defence Force was consolidated further through:

- continued mutual training and professional development exchange opportunities – six career firefighters visited Singapore in December 2006 to undertake USAR CAT2 training.
- exchange of information and ideas in regard to operational procedures, research and development, equipment and training simulations.

RESPONSE

NOTABLE INCIDENTS

ADELAIDE STREET, FREMANTLE – MAY 2007

A building collapse resulted from the impact of machinery on structural columns. One machine operator was trapped and rescued by the FESA USAR team.