Natural hazards

Exposure to natural hazards has the potential to cause serious harm. Western Australia is subject to severe weather events such as tropical cyclones, extreme temperatures and severe thunderstorms. In remote areas, bushfires started by lightning can burn for weeks or months, particularly during periods of drought, and may affect mining operations. Serious and fatal injuries can result from inadequate identification, planning and preparation for these hazards.

This snapshot covers natural hazard incidents for the period from 1 August 2016 to 31 July 2017.

For more information about occupational safety and health, visit our website [www.dmirs.wa.gov.au](http://www.dmirs.wa.gov.au)

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Department of Mines, Industry Regulation and Safety Resources Safety

Injuries by employment type

6 Contract
8 Permanent

Injuries by severity

11 of the 14 injuries identified as natural hazard injuries were classified as serious
6 of the 14 injuries were caused by strong winds

Notifiable incidents by top three contributory factors

61% rain
14% lightning and thunderstorms
11% wind

The remaining 14% consists of wildlife, fire and ice formation.

Injuries by nature

9 of the 14 injuries were musculoskeletal
4 of the musculoskeletal injuries were classified as strains

Notifiable incidents by reporting category

n = 76
Serious or appears to be serious injury (including fatality) 11%
Electric shock or burn or dangerous occurrence involving electricity 17%

13% Potentially serious occurrence

13% Outbreak of fire above or below ground
14% Loss of control, failure of braking or steering of heavy earth moving equipment
4% Inrush of water

24% Extensive subsidence, settlement or fall of ground or any major collapse
3% Incidents affecting registered plant

Notifiable incidents by area

88% of the 76 notifiable incidents occurred during surface operations
12% of the 76 notifiable incidents occurred during underground operations

Note: The information in this snapshot has come from a keyword search of incident reports.
Spotlight on 2016 Yarloop fire
the impact on mine sites

Road closed

Road closure
- Transportation of product interrupted
- Workers unable to access sites

Evacuation
- Sites evacuated for days
- Workers unable to access sites as homes evacuated

Fire
- Buildings burnt down and equipment destroyed
- Water, power and sewerage shut down or damaged
- Air quality affected

Clean up
- Time and personnel allocated to clean up of site and ensuring safety

Yarloop lessons learned

Preparation
- Emergency response plans and procedures need to be up to date, readily available and easily accessible in an emergency (e.g. electronic linking of documents could improve availability and response time)
- Emergency response plans should include a specific and detailed bushfire checklist
- Clear and concise criteria for defining a ‘crisis’ are needed
- Muster points must be appropriately located, clearly communicated and accessible to all personnel
- Previous scenario training and exercises can be beneficial for preparation

Response
- Dead spots in phone and radio communication should be identified and covered by an alternate method of communication
- Have a system in place to account for all people entering or leaving site (e.g. after evacuation, seek registered mine manager approval before entering site)
- Make sure road and site closures are in place and communicated to all stakeholders, including external suppliers (e.g. during the Yarloop fires, a truck carrying explosives tried to make a delivery through the fire exclusion zone)

Recovery
- Confirm the site and surrounding areas are safe for re-entry (e.g. restrict access to structurally damaged infrastructure; check that smoke levels will not affect workers)

Stay alert

Stay up to date with the latest emergency warnings at www.emergency.wa.gov.au

Are you travelling during bushfire season? Prepare using the DFES Travelling During a Bushfire fact sheet. Go to www.dfes.wa.gov.au

For more information see our safety alerts and summaries for industry awareness at www.dmirr.wa.gov.au/ResourcesSafety
Past issues of monthly safety and health snapshot series can be viewed at www.dmp.wa.gov.au/SafetySnapshots