



# Detailed Severe Thunderstorm Warnings

From December 2017, detailed severe thunderstorm warnings will be issued for Perth and Hobart completing a national roll out to all capital cities in Australia

## What is a detailed severe thunderstorm warning?

A detailed severe thunderstorm warning is a highly detailed warning that graphically identifies where severe thunderstorms are currently located, where they will be over the next hour, and what locations will be affected.

Storms are classified as severe if they have the potential to generate wind gusts generally exceeding 90 km/h, large hail greater than two centimetres in diameter, heavy rainfall that could lead to flash flooding, or tornadoes. Only the storms that have the potential to generate one or more of these severe attributes will be identified in the detailed warning; all non-severe storms will not be identified.

## Is this a new service?

The detailed severe thunderstorm warning service is a new service for Perth and Hobart; all other capital cities around Australia are using this service.

The Bureau currently provides a graphical broad-based statewide severe thunderstorm warning service for all of Western Australia and Tasmania, which highlights broad areas where severe storms may occur within the next three hours. The broad-based statewide warning does not identify individual severe storms and their forecast tracks.

## How often will detailed warnings be issued?

When severe thunderstorms are occurring, a dedicated meteorologist based in Perth or Hobart will monitor the situation and update warnings at least every hour.

## How does it work?

Severe thunderstorms will be monitored using satellite and radar images in conjunction with the Bureau's observation network. As soon as severe storms are forecast to reach the Perth or Hobart warning areas within the next hour, a detailed warning will be issued. Sometimes severe storms can rapidly generate in situ, which may result in a shorter warning lead-time.

The detailed warning is only provided for the greater Perth metro and Hobart and surrounding areas. The warning may identify severe storms outside of these warning areas, but will only be included in warning products when they are expected to impact the warning area within the next hour.

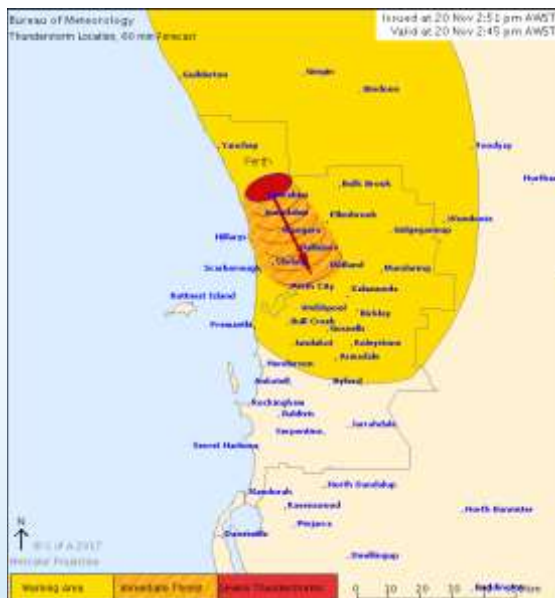
## How do I interpret the detailed warning?

The graphical detailed warning depicts a **yellow** 'Warning Area' indicating where severe storms may form within the next three hours. This is the same area covered by the broad-based statewide severe thunderstorm warning. The **orange-hashed** 'Immediate Threat' indicates the area that is expected to be impacted by the severe storm within the hour. The **red ellipse** indicates the position of the storm at the time the warning was issued. The arrow indicates the motion of the storm and the red contours indicate where the storm will be at 10 minute increments (from the time the warning was issued).

## Why isn't there a longer warning lead-time?

Standard public forecasts will include information when there is a reasonable risk of severe storms. This information will allow people to prepare for the potential severe weather. As it is difficult to forecast the precise location and movement of severe storms before they have started to develop, detailed warnings will generally be provided once they have been observed or detected. This means only a short lead-time is possible.

For more information on severe weather services, go to [www.bom.gov.au/weather-services/severe-weather-knowledge-centre/](http://www.bom.gov.au/weather-services/severe-weather-knowledge-centre/)



**Left:** An example of the detailed Severe Thunderstorm Warning for Perth. This service shows the area covered by the broad-based severe thunderstorm warning in yellow, the areas under immediate threat (usually within the next 60 minutes) in orange hash, and the location of the severe thunderstorm as a red ellipse.

Arrows highlight the forecast direction of the thunderstorm's movement, while the arcs show the forecast position of the thunderstorm at 10 minute intervals.