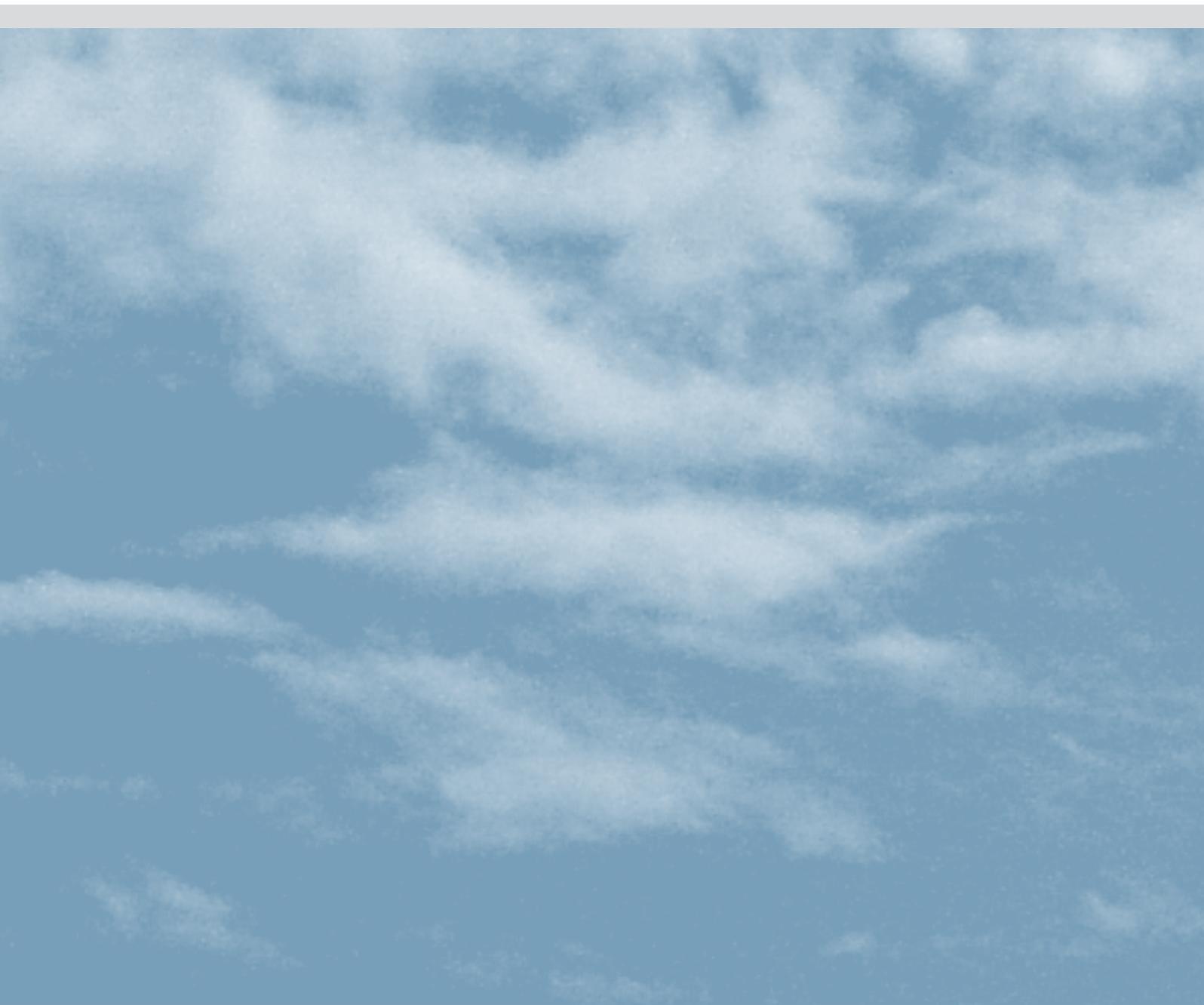




**Australian Government**  
**Bureau of Meteorology**

# Report to Queensland Floods Commission of Inquiry:

provided in response to a request for information from the Queensland Floods Commission of Inquiry received by the Bureau of Meteorology on 4 March 2011.



March 2011

**\*Notes:**

All times are in EST unless stated.

The wet season in Queensland is normally defined by the Bureau as occurring from 1 October to 30 April of the next year.

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# Introduction

- [1] This Report by the Bureau of Meteorology (Bureau) is provided in response to a request for information from the Queensland Floods Commission of Inquiry (Commission) received by the Bureau on 4 March 2011. In seeking information on the extensive heavy rainfall and consequential flooding across Queensland during December 2010 and January 2011, the Commission posed a series of questions which are set out and responded to within this Report.<sup>1</sup>
- [2] This Report outlines important elements of the climate, weather and flooding experienced in Queensland during December 2010 and January 2011 and the manner in which the Bureau responded to extreme events, including via warnings and advice to the community, emergency managers and all levels of government. It should be read together with the Provision of Preliminary Meteorological and Hydrological Information: Background briefing for the Queensland Floods Commission of Inquiry dated 17 March 2011.

## Overview

- [3] From mid 2010, a number of regional climate events being monitored by the Bureau's climate specialists pointed to an active summer season for the Bureau, emergency managers and the public across Queensland. La Niña, the periodic cooling of waters in the eastern Pacific, was developing rapidly. Confirmation of an unusually high Indian Ocean sea surface temperature pattern and record sea surface temperatures in the western Pacific Ocean led the Bureau to take early action by alerting relevant authorities.
- [4] Knowledge of the seasonal climate and catchment conditions is vital to an understanding of the confluence of environmental conditions conducive to the extreme weather and flooding events of 2010/11. During 2010/11, Australia experienced one of the strongest La Niña events on record. Previous strong La Niña events, such as those of 1974 and 1955, were associated with widespread and severe flooding in eastern Australia. Queensland had substantial rainfall from July 2010. It was Australia's wettest July to December on record, the effect of which was to wet catchments and make them more conducive to flooding from heavy rainfall. Queensland also recorded its wettest December ever. A series of major rain events across December and into January resulted in widespread flooding of many rivers across Queensland.
- [5] Flooding during the 2010-11 wet season was widespread, sustained and exceeded all previous meteorological and hydrological records in many areas of Queensland.
- [6] Section 2.1 of this Report provides an outline of the scale, severity and duration of the Queensland flood events of 2010-2011.

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<sup>1</sup> Notes:

All times are in EST unless stated. The wet season in Queensland is normally defined by the Bureau as occurring from 1 October to 30 April of the next year.

# Questions posed by the Commission of Inquiry

## 1 General Information

### 1.1 Q1.1 What, in general terms, are the role and responsibilities of the Bureau?

[7] The Bureau is Australia's national weather, climate and water agency. Its expertise and services assist Australians in dealing with the realities of their natural environment, including drought, floods, fires, storms, tsunami and tropical cyclones. Through regular forecasts, warnings, monitoring and advice spanning the Australian region and Antarctic territory, the Bureau provides one of the most fundamental and widely used services of government.

[8] The Bureau operates under the authority of the *Meteorology Act 1955* (Cth) and the *Water Act 2007* (Cth), the former providing the legal basis for its activities in disaster mitigation. In addition, it is responsible for maintaining the national climate record, and advancing scientific understanding of Australian weather, climate and water. The Bureau must also fulfil Australia's international obligations under the Convention of the World Meteorological Organization (WMO) and related international meteorological treaties and agreements.

[9] The Bureau contributes to all aspects of disaster management including planning, preparation, response and recovery. In all phases, the Bureau (as a Commonwealth agency) works with state disaster managers and state and local government agencies in order to provide the best possible meteorological and hydrological advice. Section 3.1 of this Report outlines the communication channels that the Bureau maintains during a disaster.

[10] It is important to note that Bureau services are not confined to just formal warnings to the community and agencies during an event. From September 2010 onwards, the Bureau embarked on a campaign of briefings, meetings and media releases to raise awareness of the upcoming summer with emergency management staff, workshops with relevant agencies, media preparedness exercises, disaster management system exercises and public education. Additionally, community preparedness was established throughout the lead up via general forecasts and radio briefings.

#### 1.1.1 Monitoring

[11] The Bureau:

- a. operates a range of instruments that measure meteorological and hydrological data; and
- b. receives and records data from instruments that are operated by government agencies and third parties other than the Bureau.

#### 1.1.2 Planning

[12] With regard to planning, the Bureau works with a range of government agencies to assist in their establishment of networks, emergency alert systems and communication protocols. In the Preparation phase the Bureau provides seasonal climate outlooks to assist emergency managers to be ready for extreme events. The Bureau issues a three-month seasonal outlook statement at the end of every month.

[13] For example, on 4 October the Bureau issued its seasonal outlook for Queensland. The Regional Director Mr Jim Davidson said in a public media release:

*“prepare early not only for cyclones but also for floods as we have already experienced record September rainfalls across the state.”*

*“Preparation is the key to safety, and we encourage communities to factor in the possibility of a destructive cyclone or major flood into their pre-season planning.”*

[14] In September and October of 2010, the Bureau conducted numerous briefings to the Queensland state government and disaster management officials, state and territory government agencies and the federal government. Paragraph [107] and Appendix J of this report outline the briefings that the Bureau provided during the Queensland flood events of 2010-11. For example, the Regional Director Mr Davidson provided a special briefing to Queensland Department of Premier and Cabinet on the 18 October warning that the very strong La Niña would feed extremely moist air masses over Queensland and potentially result in extensive flooding and above average tropical cyclone activity.

[15] Paragraph [107] of this Report outlines the pre-season briefings that the Bureau provided to a range of agencies.

### **1.1.3 Response**

[16] The response phase is the most visible to the community. In this phase, the Bureau provides:

- a wide range of forecasts and warnings for meteorological and hydrological (flood services) conditions;
- advice to emergency managers, state water agencies, local governments and dam operators;
- public forecasts and warnings;
- meteorological and hydrologic forecasts to emergency services agencies who manage community messaging and the emergency response.

[17] During the wet season of 2010-2011, the Bureau provided vital warning services right across the country with seven tropical cyclones across the Australian region, severe flooding across Queensland, New South Wales, Tasmania and Victoria, destructive bushfires around Perth and heat wave conditions across South Australia. In Queensland alone, four major meteorological events occurred over a two month period. Refer to Table 2.1.

[18] The Bureau’s authority for issuing warnings comes from the Meteorology Act and subsequent Commonwealth Government decisions in cooperation with state/territory governments.

[19] Specific roles regarding warnings are discussed in Q 1.2 below.

[20] Appendices A, B, C and D of this Report outline the warnings that the Bureau issued during the Queensland flood events of 2010-11.

### **1.1.4 Recovery**

[21] The Bureau works with state disaster managers and government agencies to provide services throughout the recovery phase.

### 1.1.5 *Bureau Personnel*

[22] All forecasts and warnings issued by the Bureau are prepared by qualified and experienced meteorologists and hydrologists. Meteorologists involved in delivering forecasts and warnings have, in line with the World Meteorological Organisation standards and guidelines, relevant degrees or higher qualifications and have successfully completed the Bureau's accredited Graduate Diploma in Meteorology course or an equivalent qualification. Hydrologists are graduates in either engineering or a relevant natural resources area that incorporates hydrology as part of the curriculum. The technical officers assisting with data management tasks are highly experienced, including in the operation and field maintenance of rainfall and water level monitoring systems. Additionally, staff build further competency through a combination of on-the-job development, specialised in-house training courses and involvement in relevant external activities such as conferences and technical workshops.

## 1.2 Q1.2 What is the Bureau's role in relation to forecasting and flood estimation?

### 1.2.1 *Weather forecasting*

[23] For weather forecasting and Severe Weather Warning in Queensland, services are provided through the Regional Forecasting Centre (RFC) under the direction of the Regional Director. The RFC is permanently established and continuously staffed. It is supplemented with additional staff during significant weather events. In particular, a dedicated Severe Weather Desk operates within the Queensland RFC from October through to March, and a Tropical Cyclone Warning Centre (TCWC) is activated as required. During flood episodes, the Flood Warning Centre (FWC) also operates and works in close coordination with the RFC, and the TCWC.

[24] The RFC is supported by sub-regional forecast offices located at Cairns, Townsville and Rockhampton. Information to the media and public is also provided through Observing Offices located at Weipa, Mount Isa, Cairns, Townsville, Mackay, Rockhampton, Longreach and Charleville. Services to the Australian Defence Forces are provided through offices at RAAF Base Amberley and Army Base Oakey.

[25] Publicly available forecast services produced by the RFC for Queensland include:

- a. weather forecasts suite comprising forecasts of weather for 17 Districts and 38 locations around Queensland;
- b. a Queensland state forecast describing the expected evolution of the weather pattern over the next 4 days
- c. Marine Forecasts for six areas; and
- d. Tropical Cyclone outlooks.

[26] Publicly available warning services produced by the Queensland RFC include:

- a. Tropical Cyclone Warning Services;
- b. Fire Weather Warning Services;
- c. Severe Thunderstorm Warning Services;
- d. Severe Weather Warning Services;
- e. Flood Warning Services;
- f. Coastal Waters and High Seas marine weather warning services, and
- g. Other Warnings and Alerts (such as warnings for Farmers/Sheep Graziers Warning).

[27] Other specialised advices, forecasts and warnings are provided by special arrangement to specific clients through "Registered User" services. This primarily includes warnings for the aviation industry and defence organisations, but also includes the State Disaster Coordination Centre for access to specific Bureau information for disaster management, and operators of dams and some local governments for access to flood forecasting model results.

- [28] The Bureau works to provide emergency management authorities and other emergency service organisations with detailed routine and operational forecasts, climatological advice and pre-season briefing to assist with the development of appropriate management strategies.
- [29] At the end of each season the Bureau also undertakes post-event analysis (especially for tropical cyclones, severe weather and flood events) and post-season debriefs with relevant agencies.
- [30] Importantly, the Bureau also conducts community awareness campaigns, and develops awareness material and brochures to help communities and individuals understand weather phenomena and the services provided by the Bureau, in partnership with emergency managers and local governments.

### 1.2.2 Flood forecasting

- [31] The provision of flood forecasting and warning services in Australia is a cooperative arrangement between all three levels of government, which describe the responsibilities of agencies for the establishment and operation of flood warning and forecasting systems. Under this arrangement, a distinction is made between flash flood warnings (described as situations where the rain-to-flood time is less than 6<sup>2</sup> hours ) and other (non-flash flood or riverine) warnings. While the Bureau is responsible for forecasting floods, predicting river height levels, and forecasting heavy rain that is conducive to flash flooding, the Bureau is not responsible for forecasting flash flooding in specific locations or individual creeks.

### 1.2.3 Flood warning service

- [32] The flood warning service is part of the Bureau's basic warning service and provides warning information to the public through the broadcast media (radio and television) and to relevant State and Local Government bodies including emergency services organisations. The Bureau performs its flood forecasting and warning role within the context of a *total warning system*<sup>3</sup> and in partnership with other agencies at all three levels of government.
- [33] Flood warning services are provided through the Flood Warning Centre (FWC), a part of the RFC, managed by the Regional Hydrology Manager. The FWC is a permanently established and designated operational area that is staffed during flood periods and is the focus of operational flood warning activities. The FWC is staffed by hydrologists, meteorologists and technical officers, who work closely with the meteorologists in the RFC.
- [34] The primary roles for the Bureau in the total flood warning system are:
- a. to prepare and issue flood warnings on a river basin scale;
  - b. to make predictions of future flood levels at locations within designated basins; and
  - c. to provide these warnings and predictions in the form of flood warning messages direct to a range of stakeholder agencies involved in disaster management and response, as well as to the general public through the media and the Bureau website.

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<sup>2</sup>The threshold of six hours to distinguish flash floods is what is widely accepted internationally and by organisations such as WMO and US National Weather Service. It is related in general to a minimum time required for mobilisation of resources for emergency response.

<sup>3</sup>The concept of a Total Warning System to encompass all aspects of a warning system including Monitoring and Prediction, Interpretation, Message Construction, Communication, Protective behaviour and Review (Reference Australian Emergency Manual 21: Flood Warning, published by the Attorney General's Department, 2009)

- [35] The flood warning system for each basin is described in a brochure that is made available on the Bureau's website at <<http://www.bom.gov.au/hydro/flood/qld/brochures/index.shtml>>.
- [36] Under the disaster management arrangements that the Bureau has with state agencies and local governments, the Bureau has no role in:
- the issuance of flash flood warnings for specific locations or individual creeks.
  - the interpretation of the impact of the expected flooding and predicted flood levels on people and infrastructure in the floodplain; and
  - the further dissemination of this more targeted information down to individual affected parties sits within the overall disaster management arrangements of the state.
- [37] Almost 800 Flood Warnings were prepared and issued by hydrologists in the Flood Warning Centre for the two month period of December 2010 and January 2011 which compares with a long term average of about 350 per year.

#### 1.2.4 Flood warning network

- [38] The Queensland FWC has access to about 2,200 stations owned by the Bureau and various partner agencies providing rainfall and/or water level information. Information from almost all of these stations is made available to the public by the Bureau with prior agreement from partner agencies.
- [39] There has been sustained growth of the automated flood warning networks in Queensland for the past two decades, 1990 to 2010, as illustrated in Figure 1.2.4.1.

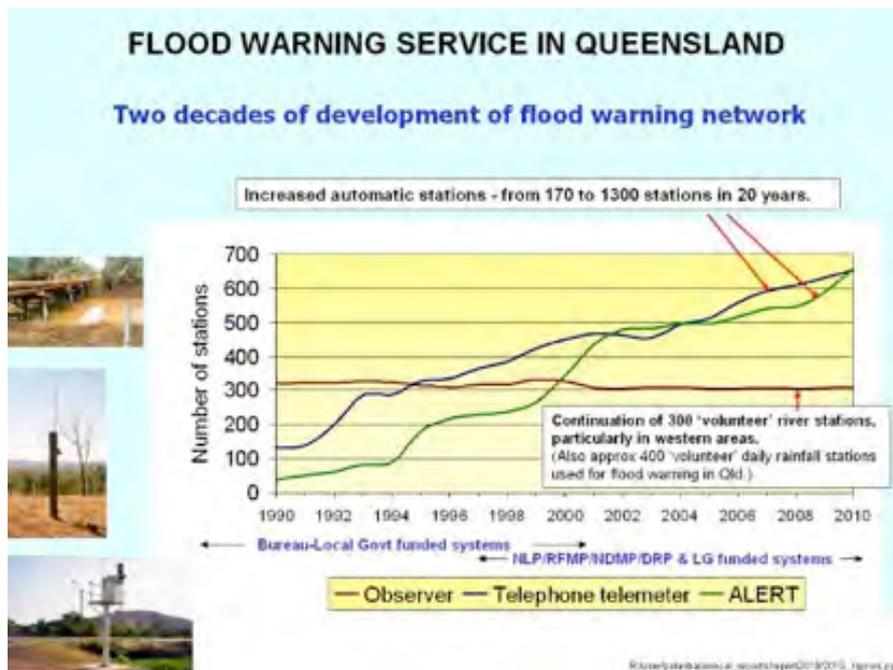


Figure 1.2.4.1: Flood warning service in Queensland

- [40] Of the 2,200 stations currently used in the flood warning service, about 1,370 stations automatically transmit the data to the Bureau operations centre. The remaining stations are either manually read or have loggers that store the data for later retrieval. Figure 1.2.4.2 is a graphical representation of the river height and rainfall stations that are either used for real time operations (orange) or post-event analysis (blue and orange). Table 1.2.1 provides the number of stations in the network.

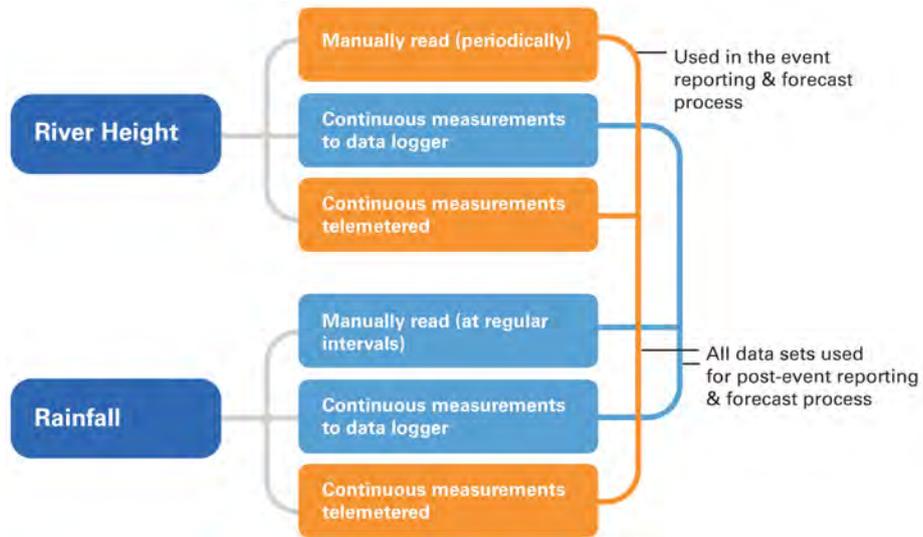


Figure 1.2.4.2 Shows a graphical representation of the data flow for real time operations (orange) or post-event analysis (blue and orange).

- [41] Some of the flood warning stations are duplicated at key sites to provide increased security of information for flood warning operations.
- [42] The flood warning service relies on the cooperative sharing of rainfall and water level data from stations owned and operated by many agencies in Queensland. Table 1.2.1 summarises the number of stations owned and operated by the Bureau, either wholly or in a shared arrangement (typically with local governments) and other agencies (primarily Queensland Department of Environment and Resource Management (DERM), SunWater, SEQwater and local governments).

Table 1.2.1: Stations currently used in the flood warning service

	ALL STATIONS	BUREAU OWNED	SHARED BUREAU & OTHER AGENCY STATION	OTHER AGENCY STATION
Rainfall station	401	72	96	233
Water level station	591	193	94	304
Combined rainfall & water level	654	10	138	506
<b>Total Flood Warning Network</b>	<b>1646</b>	<b>275</b>	<b>328</b>	<b>1043</b>
Plus selected stations from Bureau rainfall network	540	540		
<b>TOTAL</b>	<b>2186</b>	<b>815</b>	<b>328</b>	<b>1043</b>

[43] Figure 1.2.4.3 shows a graphical representation of the types of information received and used by the Bureau to generate forecasts and warnings.

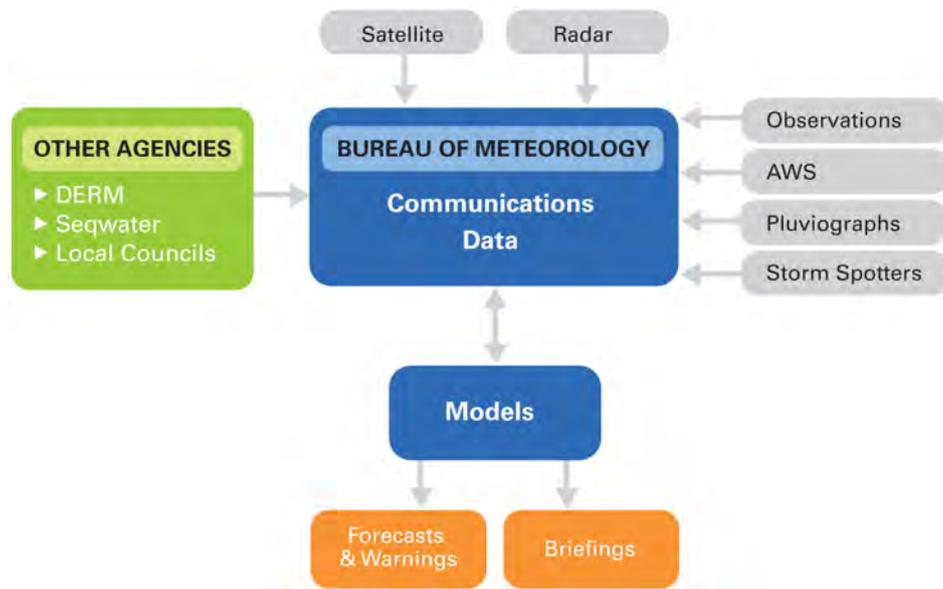


Figure 1.2.4.3 Information flows to generate forecasts and warning services

### 1.2.5 Flood estimation

[44] Flood estimation' is the term that describes the estimation of the "design" flood required for the design of small and large infrastructure and the establishment of designated flood levels for land use planning and zoning. Design floods are estimated for various return periods through to estimation of the *Probable Maximum Flood*. The Bureau has no direct role in flood estimation but plays a vital indirect role as a significant provider of data and analysis used by engineers as input to flood estimation studies. The chief input is the provision of design rainfall data from the Bureau's *Hydrometeorological Advisory Service*. In this regard, the Bureau is currently leading a revision of design rainfall estimates of rainfall intensity, frequency and duration curves provided by the industry manual *Australian Rainfall and Runoff*<sup>4</sup>.

[45] Bureau hydrologists can be involved in local government steering or reference groups for flood studies to provide hydrological expertise in flood modelling. It is considered highly desirable that the flood forecast modelling undertaken by the Bureau be consistent with the design flood estimation studies (and vice versa) to maximise the opportunity for using the Bureau's predicted flood heights and flows to identify flood inundation areas and other impacts effectively during events.

## 1.3 Q1.3 What role does the Bureau play in relation to Flood Modelling?

[46] The Bureau operates a hydrologic forecasting system involving the real-time collection of rainfall and water level data from a network of stations operated in partnership with State and other agencies. This data is used in hydrologic forecasting models which, combined with forecast rainfalls when required enable the predictions of future flood levels to be made.

<sup>4</sup> Australian Rainfall and Runoff (Institution of Engineers Australia, last full revision in 1987, now being published as a sequence of revised chapters)

- [47] The Bureau uses hydrologic models for catchments in most major Queensland river basins except those in Cape York, where quantitative flood prediction services have not been developed so far. The Bureau maintains these models, updates them as new data from additional stations becomes available and revises them following flood events to make use of new data. Hydrologic models are more accurate in areas where the rainfall and water level monitoring network is reasonably dense. Flood model results can be made available to local council engineers for technical discussion with the Bureau's flood forecasters.
- [48] The hydrologic models simulate runoff production from observed and forecast rainfall. Bureau hydrologists cross-check model results with a variety of empirical data analysis techniques.
- [49] The models assist the hydrologists in the preparation of flood warnings and river height predictions but provide guidance only. Flood forecasting models have recognised sources of error, including in the inputs (for example, in estimating the amount of rain which has fallen in the catchment together with its temporal and spatial variation, and in specifying accurately the expected or forecast rain) and in the simplified representation of processes to convert rainfall into runoff and to simulate the movement of runoff through catchments and river channels.
- [50] Hydrologic models do not simulate the full range of processes involved in translating rainfall to runoff. Hydrologic behaviour is influenced by topography and ground conditions. The rainfall amounts observed or sampled at a limited number of stations provide only an approximation of the intensity, timing and distribution of catchment wide rainfall required to model the runoff. The estimation of forecast rainfall based on the output of Numerical Weather Prediction (NWP) models is limited not only by difficulties in representing complex physical processes but also by imperfectly observed boundary and initial conditions for the models. The hydrologic models normally work with streamflow volumes, but observations and predictions are usually expressed in terms of the heights at the forecast locations. For extreme floods, the conversion of height to streamflow volume through a *rating curve* may contain errors, as it is typical with floods that the conversion is required at the extremes of the rating curve which is often extrapolated or based on very few measurements.
- [51] Furthermore, the forecast lead times for river height predictions varies according to the characteristics of the catchment (its size, shape, steepness etc); the characteristics of the rainfall event (e.g. the location, movement and intensity of rainfall), and the ability to forecast the rainfall (which depends on catchment scale and the rainfall causing mechanisms at the time). For any given catchment, predicted river heights with longer forecast times will generally have inherent higher uncertainty. In Queensland, in significant flood events such as occurred in 2010-11, the intensity of rainfall can generate high levels of runoff from only part of the catchment which often results in much shorter rainfall to flood peak response times than is normally expected.
- [52] The models assume that previous catchment behaviour will be replicated in the river. However, when catchment and/or river conditions change for a variety of reasons such as land use change, construction or modification of online storages, catchment behaviour during floods may change and it is not always possible to anticipate this changed behaviour in the model.
- [53] The hydrologic flood modelling undertaken by the Bureau involves the estimation of a time series of values of future streamflows or river heights at individual locations on a river. Flood inundation modelling involving the estimation of the spread of flood waters across the floodplain is not part of the Bureau modelling operations.

[54] Other agencies, particularly local government in Queensland, use the predicted heights to interpret the expected inundation and movement of flood waters on the floodplain (i.e. in the horizontal dimension). For this, pre-developed flood impact information related to observed and predicted river heights at the flood warning gauge, is used. Flood maps where available, are often an effective tool for determining inundation areas (including depths of water and velocities). The production of flood maps suitable for flood response operations can be developed from specific flood hazard-response studies or as a by-product of traditional design flood studies using design rainfall scenarios undertaken for planning purposes (e.g. for land use planning).

#### 1.4 Q1.4 What role does the Bureau play in relation to the management of large dams?

[55] In some catchments flood behaviour is influenced by the existence, and in some cases the operation of, water storages (dams). To effectively model flood behaviour it is essential that Bureau modelling take account of these influences, requiring close liaison with the dam operators. This liaison may involve the Bureau receiving direct advice of observed and projected releases (in the case of Wivenhoe Dam, for example) and sharing hydrological data and catchment modelling results with the dam operators, but only in so far as this is necessary to refine Bureau warnings and predictions for downstream locations.

[56] The Bureau can be included in Emergency Action Plans (EAPs) as a receiver of information from dam operators. Furthermore, the Bureau is likely to be listed as a point of contact for advice regarding forecast rainfalls in emergency flood situations. The Bureau can be nominated in the contact register for emergencies and flood information. For Seqwater dams, the Bureau is issued with a controlled copy of the EAPs.

[57] In late 2010, the draft 'Protocol for the Communication of Flooding Information for the Brisbane River Catchment - including Floodwater Releases from Wivenhoe and Somerset Dams' was developed by stakeholders in a committee that was chaired by DERM. The draft protocol details the responsibilities and cooperation between the various state and local government stakeholders for the provision of harmonised information during Brisbane River floods. Whilst the Bureau is not a signatory, the Bureau was consulted during the drafting to ensure the role of the Bureau in providing flood warning and forecasting services for the Brisbane River was articulated.

[58] The Bureau provides a variety of information including Quantitative Precipitation Forecasts (QPF) to dam operators of the Wivenhoe, Somerset, North Pine and Ross River Dams. Dam owners and/or operators also typically directly access data from their own or other agencies' flood warning rainfall and water level monitoring networks in the dam catchment. During rain-flood events, the Bureau's Flood Warning Centre provides advice and model results to dam owners and/or operators (primarily SunWater and Seqwater) as requested. Section 7.1 of this Report details the information that the Bureau provided to dam operators during the Queensland floods of 2010-11.

[59] Also, in response to requests from dam owners and operators to better manage the operation of their storage, the Bureau recently commenced a seasonal streamflow forecasting service providing a three month forecast of streamflow for selected locations initially in the Murray Darling Basin.

1.5 Q1.5 Is there a way to receive personalised warnings through Bureau without checking the website i.e. email/text and have Bureau considered implementing that as a service. Is registering as an individual and paying a small fee or a free service feasible?

[60] The Bureau currently provides email and SMS text based alerts to emergency services and a few commercial customers as part of a contractual agreement.

[61] Recently the Bureau enabled Really Simple Syndication (RSS) warning services whereby the user can be alerted to the existence of one of the Bureau’s warnings via the internet without having to check the website directly. Smart phones have the capability of automatically alerting the user to new and existing Bureau warnings via this RSS service.

## 2 High Level Chronological Overview

### 2.1 Q2.1 An outline of the geographic scale, severity and duration of the flood events during the 2010/2011 wet season.

[62] The state-wide flooding during December 2010 and January 2011 was widespread, sustained and exceeded all previous records in many areas of Queensland.

[63] An extensive report of the meteorological conditions over the two months of December 2010 and January 2011 is contained in Appendix E.

[64] In brief, the flooding across Queensland consisted of a number of different types of rainfall and flooding events, which are listed in Table 2.1.

Table 2.1. The major rainfall events leading to the Queensland floods.

<b>Event one: 28 November 2010 – 22 December 2011</b>	A sequence of large scale rain events across the state.	Major flooding of rivers of rivers across the Southern half of the State.
<b>Event two: 23 -28 December 2010</b>	A single 6 day event covering almost the entire state. Record rainfalls.	Record flooding in central and Southern Queensland. Inundation of the cities of Bundaberg, Rockhampton and Emerald and many other towns.
<b>Event three: 10-12 January 2011</b>	A concentrated rainfall event on the scale of several hundred kilometres, occurring directly over several small river basins.	Flooding of the cities of Brisbane and Ipswich and many other towns.
<b>Event four: 10 January 2011</b>	Intense rainfall from a thunderstorm complex over several hours directly over a region with steep topography channelling the flow.	The flash floods in Toowoomba and the Lockyer Valley.

[65] As will be described in Section 2.1.1 of this Report, the flooding was widespread through December 2010 and into January 2011 in response to the rain events occurring across Queensland. The large scale rainfall at the end of December brought about record flooding in many rivers across central and southern Queensland. The next major event led to the Brisbane and Ipswich floods and the Toowoomba and Lockyer Valley flash floods. High flood levels remained in many of the rivers in the southeast through to the end of January. This progression is shown in Figure 2.1.1, which contains snapshot maps of river conditions at various dates through the two month period.

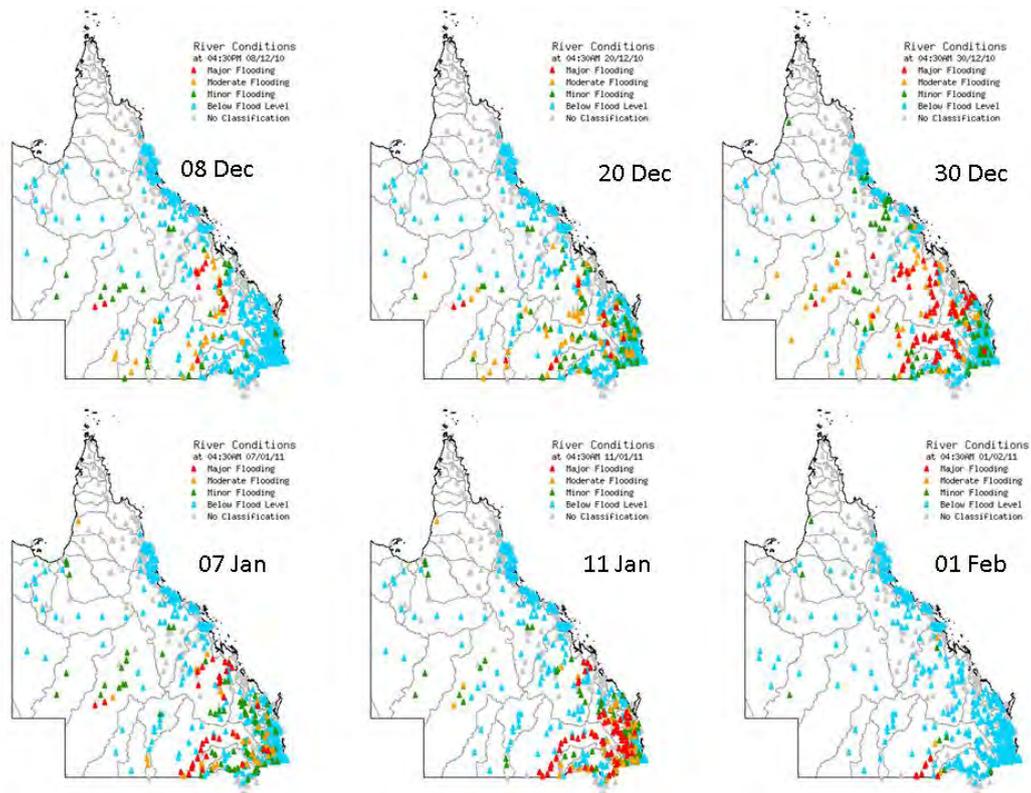


Figure 2.1.1 Snapshot maps of river conditions from the continuously-updated Bureau of Meteorology monitoring website: [www.bom.gov.au/qld/flood/index.shtml](http://www.bom.gov.au/qld/flood/index.shtml).

[66] The first two maps are for 8 December and 20 December, and represent conditions during the sequence of rainfall events across the State during the first 3 weeks of December. The map for 30 December shows the response of rivers to the six day record large scale rainfall event from 23 – 28 December. The 7 January map represents conditions immediately prior to the Brisbane floods/ Toowoomba event. The 11 January map represents conditions the day following the Toowoomba flood and two days prior to the flood peak of the Brisbane River, whilst the 1 February map shows conditions at the end of January.

**2.1.1 Q2.1.1. What were the precipitating events leading up to the specific flood events (e.g. Cyclone Tasha)?**

**2.1.1.1 The climate drivers**

[67] The rainfall and wide-spread flooding resulted from longer time-scale influences (or “climate drivers”). The primary large scale drivers were:

- a. Heavy rainfall in the prior months;
- b. The monsoonal wet season;
- c. The La Niña event; and
- d. The Madden Julian Oscillation.

**(a) Heavy rainfall in the prior months**

[68] A major contributor to the December and January floods across the state was the record rainfall that occurred through the preceding four months. This was characterised by large areas of the state receiving more than double their long-term average rainfall for each month over the sequence from August through November. In particular, in September 2010 most of the state received more than four times the normal monthly rainfall.

*(b) Monsoonal wet season*

[69] Queensland experiences a “monsoonal climate” with a summer wet season and winter dry season, which means that heavy rain, is not unusual in the summer. The Australian monsoon is part of the global monsoon system whereby the intertropical convergence zone (ITCZ) or global belt of heavy equatorial rainfall is located over northern Australia. The strength of the north Australian monsoon is monitored through the westerly component of the 850 hPa wind at Darwin. By this measure there was an active monsoon from 20 December through all of January. Thus, the active monsoon contributed directly to events two and three.

*(c) The La Niña event*

[70] It is well established that the major climate influence on Australia’s rainfall is the El Niño-Southern Oscillation phenomenon (ENSO). ENSO has two extreme phases, each lasting approximately 9 months: the El Niño phase which generally causes large scale drought across Australia, and the La Niña phase which often brings about major flooding events. The period from August 2010 to February 2011 was one of the strongest La Niña events on record, as measured by the Southern Oscillation Index (SOI) used by the Bureau to monitor ENSO activity.

*(d) The Madden Julian Oscillation*

[71] The major global weather pattern influencing tropical rainfall on the sub-seasonal time scale is known as the Madden Julian Oscillation (MJO). This is monitored by an index classifying the MJO into phases, such that when the pattern is in phases 4, 5 and 6 (out of a possible 8). These active phases enhance the strength of the Australian monsoon and brings an increased probability of high rainfall across northern Australia. During the first two weeks of December and from 9 January onwards the MJO was in an active phase and would have enhanced the strength of the monsoon. Thus it was a climate driver of the rainfall during event one (28 November – 22 December) and could also have contributed to event three (the Brisbane floods).

**2.1.1.2 The weather events**

[72] Within the envelope of these large scale drivers, a number of specific weather events led to the rainfall directly on the catchments in the days immediately preceding the major floods. A discussion paper on the meteorology of the rainfall associated with the December - January floods across the state is included as Appendix E. However, in simple terms, there were four major synoptic or “weather” events.

*(a) Event one: 28 November to 22 December 2010*

[73] Through the first two weeks of December an inland trough lay over the state with a supply of moisture from the trade winds extending along the east coast. A succession of rainfall events occurred across the State with the passage of a sequence of upper level westerly troughs. In the period from 15 through 20 December, a monsoon low off Western Australia brought about a current of monsoon westerlies across northern Queensland with an inland trough across the south of the State. The passage of an upper level westerly trough brought extensive rainfall to the southern half of the State. These weather components: monsoon westerlies, inland trough etc are described in detail in the Appendix E.

[74] The first three weeks of December were characterised by a continuous sequence of large-scale rainfall events occurring across the state. While no individual event in this period was unusual for the time of year, the cumulative effect was one of record rainfall for the month. To show the nature of the rainfall during this period, Figure 2.1.2 shows the one-day rainfall totals for the first two weeks of the period. For illustrative purposes, separate rainfall events each lasting 1-3 days are outlined and marked by the letters A, B, C and D.

[75] This sequence of heavy December rain followed four prior months of record state-wide rainfall. Thus the catchments were already wet with high levels of flow. The added rainfall over the state led to many rivers having high flood levels. At the end of this sequence, there was major flooding over a number of rivers across the central and southeast of the state including the Barcoo, Dawson, Comet, Condamine, Balonne, Warrego, and the Boyne. The river conditions on 8 December (half-way through) and 20 December (at the end of this sequence) can be seen in the first and second panels of Figure 2.1.1, respectively.

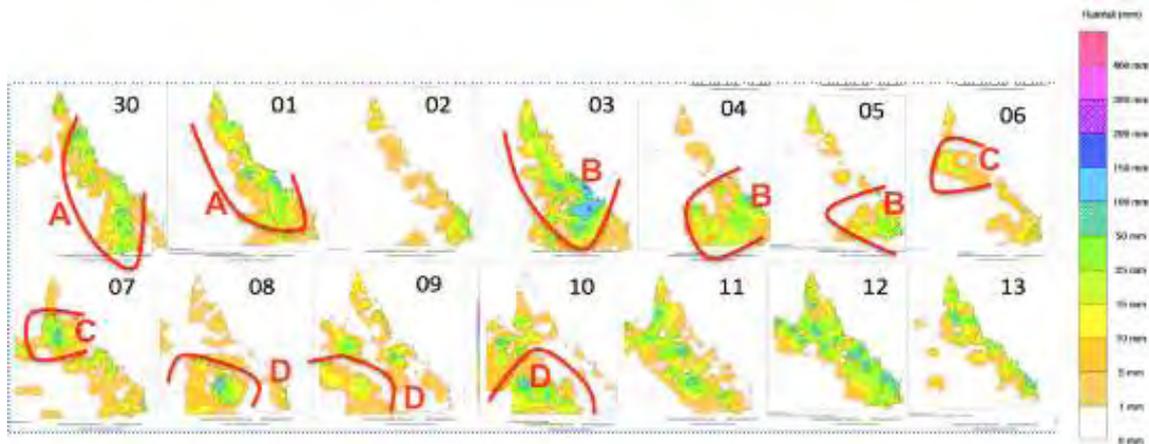


Figure 2.1.2 Map of daily rainfall for the 24 hours ending at 9 am 30 November, 9 am 1 December, through to 9 am 13 December 2010. The maps show the character of the rain during the first weeks of December with widespread rainfall on most days, and a number of separate rain events (A, B, C, and D), each lasting several days.

*(b) Event two: 23 December 2010 to 28 December 2010*

[76] This six-day sequence of heavy rainfall involved the landfall of Tropical Cyclone Tasha which transformed into a monsoon low or rain depression in the days after landfall. This low accentuated the structure of the monsoon trough in which it was embedded. An upper level westerly trough interacted with the depression and brought about large scale ascent of tropical air rising ahead of the trough as it moved to higher latitude, as illustrated in Figure 16 of Appendix E.

[77] This sequence of six days was one of record rainfall across Queensland. As shown in Figure 2.1.3, this was a large scale rainfall event with more than 200 mm falling over central eastern Queensland and extending up the coast as far as Cairns. Falls exceeded 400 mm in many parts of the State. The rains from 23 to 28 December resulted in exceptional flooding in many parts of central and southern Queensland with many rivers reaching record levels. Properties were inundated in at least 17 towns in Queensland and adjacent border areas of New South Wales, with the largest impacts in the towns of Theodore, Dalby, Chinchilla, Emerald, Bundaberg and Rockhampton. The most widespread intense rainfall was on the 27 December, where a number of stations in the Carnarvon Range area set all-time daily records with daily totals in excess of 200 mm, peaking at 273.6 mm at Carnarvon Station. Except for the southeast coastal fringe south of Maryborough, almost every river in Queensland that is south of the Tropic of Capricorn and east of Charleville and Longreach reached major flood level at some stage during the period from 26 November to 7 January, mostly between 23 December and 4 January. This demonstrates the very large spatial scale of this event and the intensity of the rain.

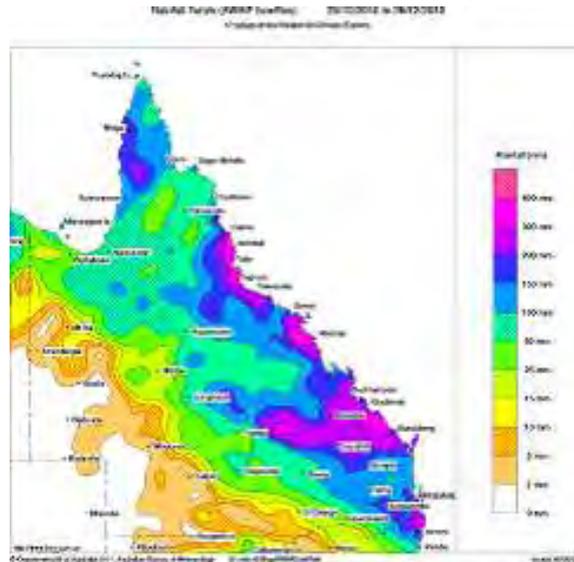


Figure 2.1.3 Rainfall across Queensland during the record large scale event over the six days from 23 to 28 December 2010

*(c) Event three: 10 to 12 January 2011*

[78] The rainfall over these three days was largely responsible for the flooding of the cities of Brisbane and Ipswich as well as for the flash floods in Toowoomba and the Lockyer Valley. This was an unusual type of rainfall event with the major rain system having a scale of only several hundred kilometres, in this case over a concentrated region of south eastern Queensland. This can be seen in the rainfall map accumulated over the three days on the left panel of Figure 2.1.4. Despite the regional scales of the rainfall, it occurred in the location of the catchments feeding the Brisbane River.

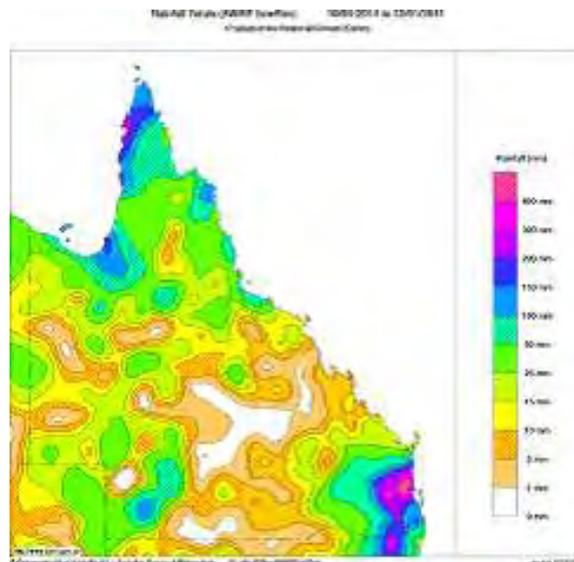


Figure 2.1.4 Rainfall over the three days leading to the flooding of the cities of Brisbane and Ipswich and to the Toowoomba and Lockyer Valley flash floods.

[79] The rainfall event leading to the Brisbane and Ipswich floods was caused by an onshore moist easterly trade wind flow in Southern Queensland interacting with an upper level cut-off low. A cut-off low of this nature is an unusual event at this latitude at this time of year. It was caused by global scale dynamics (known as Rossby-wave breaking) at higher latitudes along the interface between the troposphere and the stratosphere. In the Australian monsoon context, it is not well understood and will be the subject of further research. It is an example, however, of a major rainfall event resulting from an interaction between the moist tropical flow and the higher latitude westerly weather systems. The low level easterly flow and the cut-off low are shown in Figure 2.1.1.1.

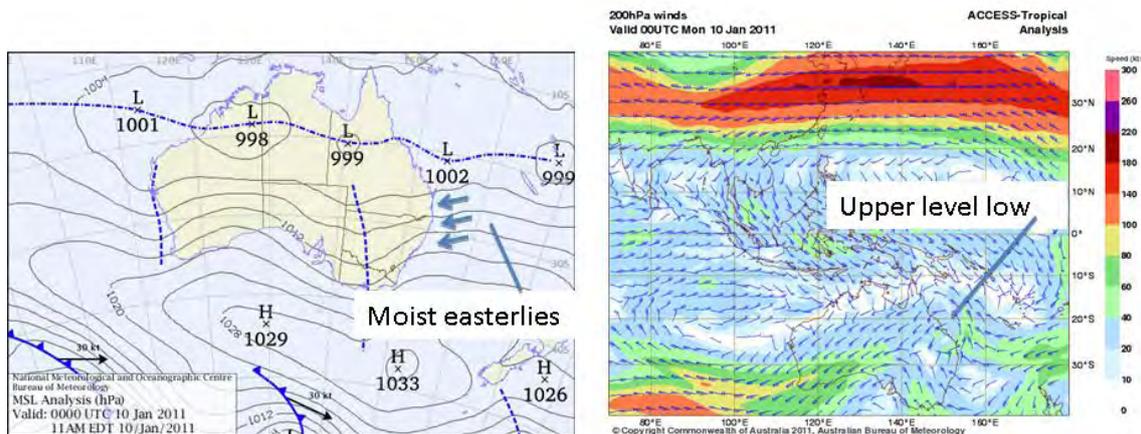


Figure 2.1.1.1 Mean sea level pressure analysis (left) and upper level 200 hPa analysis for 10 January 2011, coincident with the Brisbane and Ipswich floods and Toowoomba and Lockyer Creek flash floods event.

*(d) Event four: The flash floods in Toowoomba and the Lockyer Valley on 10 January 2011*

[80] A flash flood is a weather event over a small spatial area, occurring on the scale of an individual thunderstorm complex. It is typically caused by heavy rainfall of the order of 50 to 200 mm occurring over a period of one to two hours. It occurs over regions with topography that channels the runoff from the rainfall into local creek and river systems, leading to flooding occurring within hours of the rain falling. The small scale but persistent heavy rainfall for the thunderstorm complex causing the flash flood is discussed in detail in Section 6.

[81] The easterly flow and upper level cut-off described above brought about an atypical rain system along the south east Queensland coast consisting of a sequence of thunderstorms forming within the easterlies and moving slowly inland towards the coastal mountain range. The meteorological cause of the flash floods was a thunderstorm complex that formed within this easterly stream. The thunderstorm cell moved southward and westward. Radar imagery suggests it slowed in speed and increased in intensity due to the enhanced uplift as the easterly flow approached the escarpment and a complex interaction between neighbouring storms and low level changes in wind. The lifetime of the thunderstorm was several hours, with intense rainfalls over a one to two hour period over Toowoomba and the Lockyer Valley catchment.

2.1.2 Q2.1.2 Which river catchments, towns and regional areas were flood affected?

[82] As discussed in section 2.1 of this Report, a large number of areas had already been affected by flooding or heavy rain leading up to the period December 2010.

[83] The map in Figure 2.1.2.1 shows the location of gauging stations that reached at least minor flood level during December 2010 and January 2011. Sites where major flooding was recorded are presented as a red triangle and the map highlights how wide spread the flooding was during this period. The only area of Queensland that was not significantly affected was the far west and western gulf rivers but these areas have been significantly affected in March 2011 and floods are on-going at the time of preparing this report.

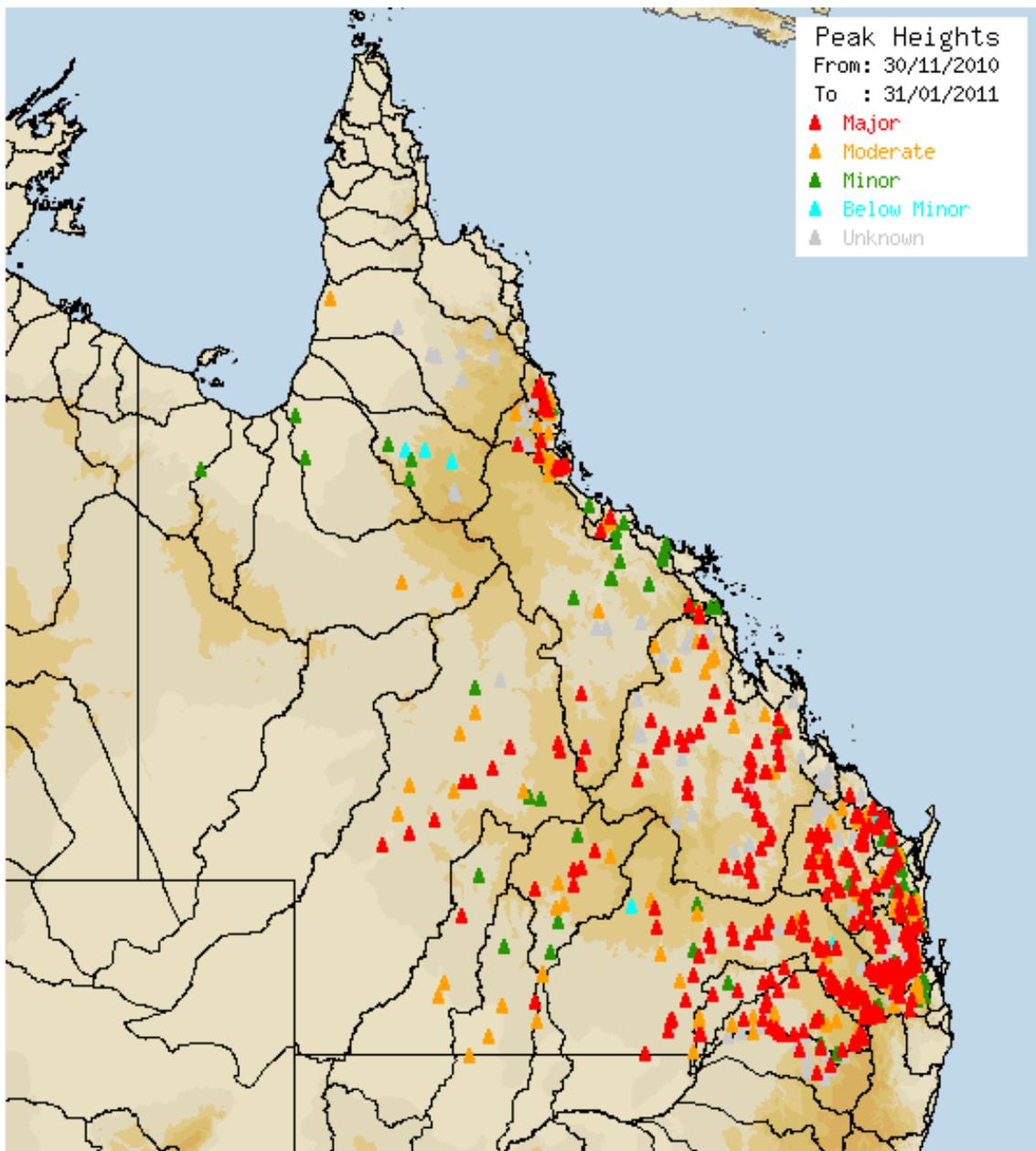


Figure 2.1.2.1 Map of the highest flood level reached at gauging stations in Queensland between 30/11/2010 and 31/01/2011.

[84] Table 2.1.2.1 summarises the areas and catchments in Queensland that were affected in the months of December 2010 and January 2011. The regional area names are based on areas used in the Bureau warning and data display systems.

Table 2.1.2.1 Regional areas and catchments that were flood affected during December 2010 and January 2011.

REGIONAL AREA	CATCHMENTS
North Tropical Coast	Johnstone, Herbert, Tully, Murray, Russell-Mulgrave
Central Coast	Haughton, Pioneer, Don, Lower Burdekin, Belyando
Coastal Streams Mackay to Maryborough	Nogoa, Mackenzie, Connors/Isaac, Dawson, Fitzroy, Kolan, Burnett, Baffle Creek, Burrum
Coastal streams Maryborough to the Gold Coast	Mary, Caboolture, Brisbane, Bremer, Lockyer Creek, Pine, Mooloolah, Maroochy, Noosa, Logan-Albert
Border Rivers including the Darling Downs	Upper Condamine, Myall Creek, Charleys Creek, Condamine, Balonne, Maranoa, Moonie, Macintyre
South West	Warrego, Paroo, Bulloo, Barcoo, Cooper Creek, Thompson

[85] Figure 2.1.2.2 is a map showing the towns that were flood affected overlaid on catchment boundaries. It also highlights in red the towns reported to have suffered inundation of some properties, either commercial or housing. This is provided based on the best knowledge available to the Bureau at this time and there are likely to be towns affected for which the Bureau has no information to date and are not shown on the map.

### 2.1.3 Q2.1.3 What flooding was generated as a result (described if possible in terms of Local Government areas)?

[86] A summary of flood affected towns, catchments and local government areas is included in Appendix F. This summary should be read in conjunction with the map that is included in Appendix F. This map shows the flood affected towns overlaid on the local government boundaries. It also highlights in red the towns reported to have suffered some inundation of properties, either commercial or housing. This is provided based on the best knowledge available to the Bureau at this time and there are likely to be towns that are missing.

### 2.1.4 Q2.1.4 How severely affected were the relevant river catchments and their surrounding areas?

[87] The Bureau does not receive or monitor comprehensive information on flood effects and severity as experienced on the ground. During floods the Bureau receives some reports of inundation from the media, emergency services and local disaster groups. These reports are noted and are used in some of the maps and tables in this report but will not be comprehensive.

[88] For most river height stations in Queensland, a flood classification has been established to define the river height at which minor, moderate and major flooding commences. These flood classifications are *unique to each station* and have been developed over the decades from experience of past flooding, and for many locations, with the advice of local people (e.g. the landholder or agency providing the river readings) and from local government. Some local governments regularly provide the Bureau with adjustments and updates to the flood classification for stations within their jurisdiction, and especially following flood events.

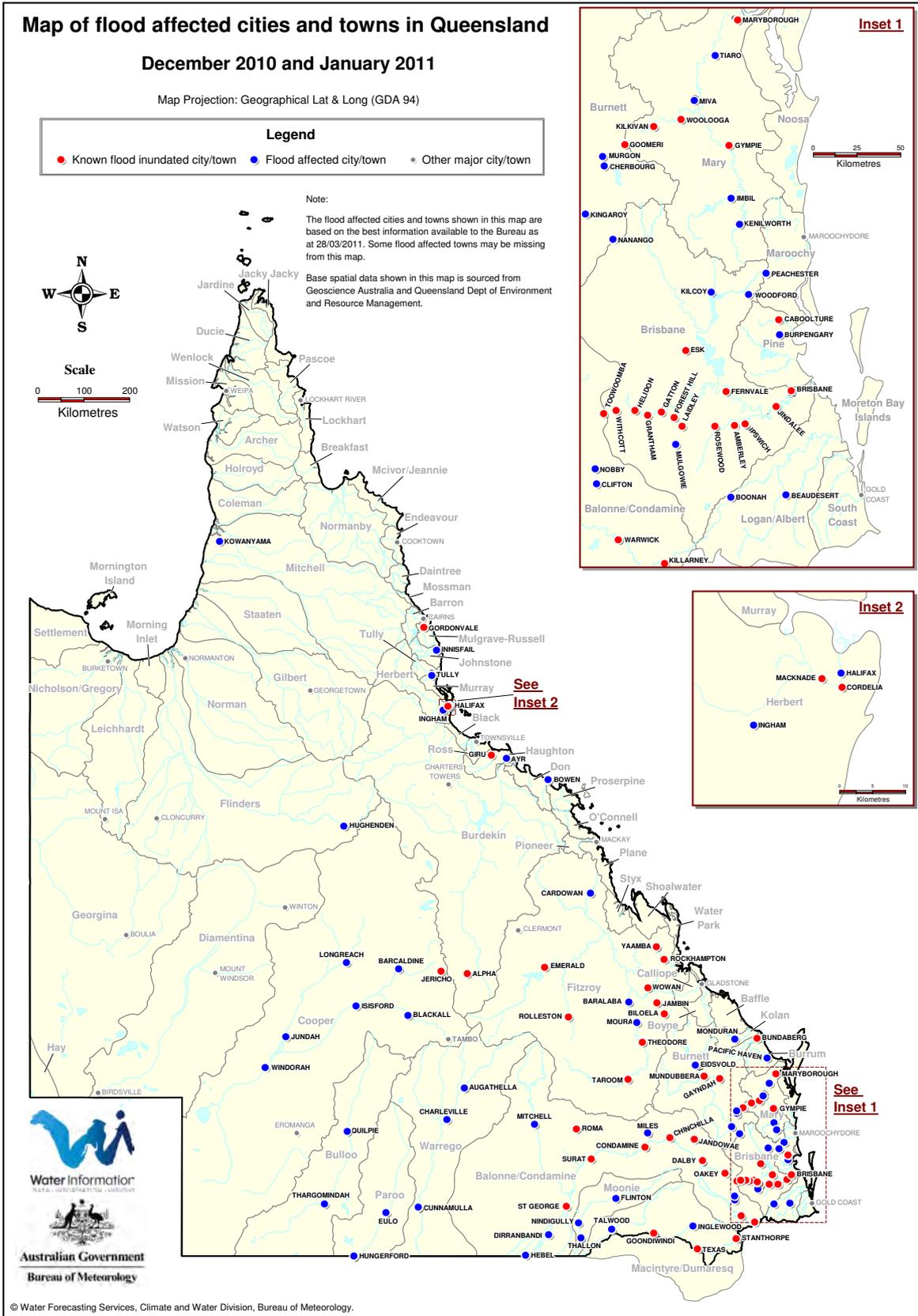


Figure 2.1.2.2 Map of Queensland flood affected towns overlaid on catchment boundaries.

- [89] The Bureau uses the following definitions for each of the flood classifications:
- Minor flooding:** Causes inconvenience. Low-lying areas next to watercourses are inundated which may require the removal of stock and equipment. Minor roads may be closed and low-level bridges submerged.
  - Moderate flooding:** In addition to the above, the evacuation of some houses may be required. Main traffic routes may be covered. The area of inundation is substantial in rural areas requiring the removal of stock.
  - Major flooding:** In addition to the above, extensive rural areas and/or urban areas are inundated. Properties and towns are likely to be isolated and major traffic routes likely to be closed. Evacuation of people from flood affected areas may be required.

Figure 2.1.4.1 shows a diagrammatic representation of flood classifications at a flood warning gauge.

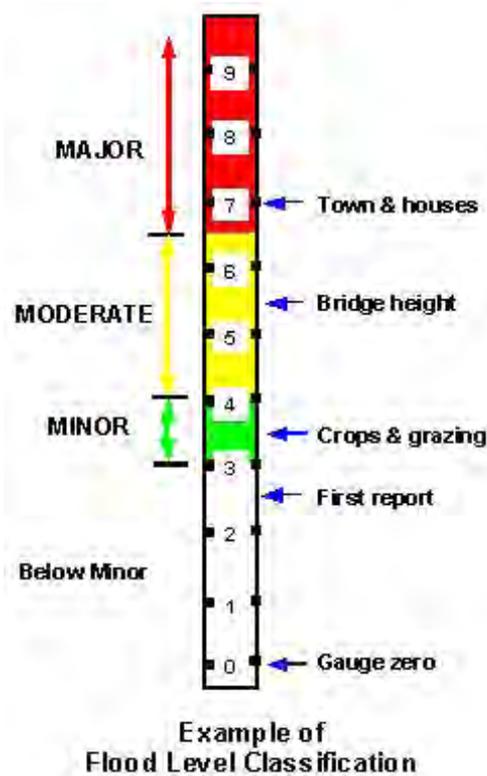


Figure 2.1.4.1 Example of flood classification at a flood warning river height gauge.

[90] In this example, the threshold of minor flooding at this station is 2 metres; moderate flooding is 4 metres and major flooding is 6 metres.

[91] The Bureau in Queensland maintains an historical flood peak height database for each river station, often incorporating information from other water and local agencies. For many river height stations, the Bureau in Queensland also maintains details of the flood height at which a bridge or road crossing is affected and includes this information when providing latest river heights (for example, as depths above or below the bridge or road crossing). For key river locations, for example at towns and cities, other more detailed information regarding flood heights and the likely impact ("probable flood effect") is recorded by the Bureau to assist in flood warning operations. The primary purpose for collecting flood effects is so the Bureau Flood Warning Centre hydrologists understand more about the severity/impact of the floods being observed or predicted.

[92] A simple example for Theodore is listed below:

Station: THEODORE      BOM No: 039315

GAUGE Ht (m)      PROBABLE FLOOD EFFECT

7.00	FIRST REPORT
8.00	MINOR FLOOD LEVEL
8.00	Water over Dawson River Bridge, on the Leichhardt Highway, Theodore
10.00	Crops/Grazing
11.00	MODERATE FLOOD LEVEL
12.00	MAJOR FLOOD LEVEL
12.20	Town/Houses
13.24	Mar 2010 flood.

[93] Appendix G outlines the regions, catchments and flood effects (using the flood classification of minor, moderate, major). The flood effects column is based on the highest flood classifications reached at the gauging stations within a catchment.

[94] An alternative simple assessment of flood severity is based on a comparison of the 2010-2011 flood peaks at each location with the historical flood heights at that location. At over 100 river height stations used for flood warning in Queensland, the peak flood height experienced in the 2010-11 floods was the highest on record. In many cases the recent floods were the highest in living memory, and in several cases, the highest in 50 to 100 years of records. A selection of these locations at which a record flood was experienced are summarised in Appendix H.

### 2.1.5 Q2.1.5 What was the duration of the flooding?

[95] The duration of flooding is dependent on the hydrology, geology and geography of the catchment and also the meteorology of the event (ie, how long the rain stays in the catchment or how often it returns to the catchment while flooding continues).

[96] Table 2.1.5.1 provides a summary of the start and finish dates and times of the flood warnings issued by the Bureau for each river basin. This provides an indication of the duration of the flood events in these catchments.

Table 2.1.5.1 Summary of start and finish dates of flood warnings to indicate flood duration.

CATCHMENT / WARNING AREA	PERIOD OF WARNINGS	NUMBER OF DAYS WITH WARNINGS	TOTAL DAYS
Logan-Albert	27/12/2010 to 29/12/2010	3	6
	12/01/2011 to 14/01/2011	3	
Brisbane	12/10/2010 to 19/10/2011	8	29
	05/12/2010	1	
	27/12/2010 to 30/12/2010	4	
	06/01/2011 to 21/01/2011	16	
Pine	11/01/2011 to 13/01/2011	3	3
Maroochy	09/01/2011 to 11/01/2011	3	4
	20/01/2011	1	
Noosa	11/1/2011	1	1

<b>CATCHMENT / WARNING AREA</b>	<b>PERIOD OF WARNINGS</b>	<b>NUMBER OF DAYS WITH WARNINGS</b>	<b>TOTAL DAYS</b>
Mary	12/12/2010 to 14/12/2010 29/12/2010 to 30/12/2010 06/01/2011 to 15/01/2011	3 2 10	15
Burrum	12/12/2010 to 13/12/2010	2	2
Burnett	12/12/2010 to 15/12/2010 24/12/2010 to 02/01/2011 06/01/2011 to 15/01/2011	4 10 10	24
Kolan	12/12/2010 to 13/12/2010 27/12/2010 to 01/01/2011	2 5	7
Baffle	14/12/2010 to 16/12/2010 26/12/2010 to 31/12/2010	3 6	9
Fitzroy (including Nogoia, Mackenzie, Dawson, Connors, Isaac)	25/11/2010 to 19/01/2011 24/12/2010 to 01/02/2011	19 38	57
Pioneer	02/12/2010 to 03/12/2010 24/12/2010 to 26/12/2010 31/01/2011	2 3 1	6
Don	03/12/2010 to 04/12/2010 12/12/2010 to 13/12/2010 24/12/2010 to 28/12/2010 03/01/2011 to 04/01/2011 18/01/2011 to 20/01/2011 30/01/2011 to 31/01/2011	2 2 4 2 3 2	15
Burdekin	26/12/2010 to 01/01/2011	7	7
Haughton	25/12/2010 to 27/12/2010 30/01/2011	3 1	4
Ross	25/12/2010 to 28/12/2010	4	4
Tully	24/12/2010 to 28/12/2010	5	5
Johnstone	25/12/2010	1	1
Mulgrave-Russell	24/12/2010 to 25/12/2010	2	2
Condamine-Balonne (mayall Ck, Charleys Ck, Maranoa)	05/12/2010 to 01/02/2011	57	57
Border Rivers (Macintyre and Weir)	11/12/2010 to 30/01/2011	50	50
Moonie River	14/12/2010 to 19/12/2011 27/12/2010 to 22/01/2011	6 27	33
Warrego River	25/11/2010 to 01/01/2011	7	7
Paroo River	03/12/2010 to 19/12/2011	17	17
Bulloo River	16/11/2010 to 24/12/2010	9	9
Cooper Creek	30/11/2010 to 20/01/2011	51	51
Flinders	13/12/2010 to 14/12/2010 19/01/2010 to 25/01/2011	2 7	9

[97] The duration of flooding at individual sites can also be viewed using a plot of the river heights versus date/time – known as a (stage) hydrograph. These are provided in Appendix B of this Report for many key locations and towns. Examples are provided below for Rockhampton in Figure 2.1.5.1 and Gympie in Figure 2.1.5.2.

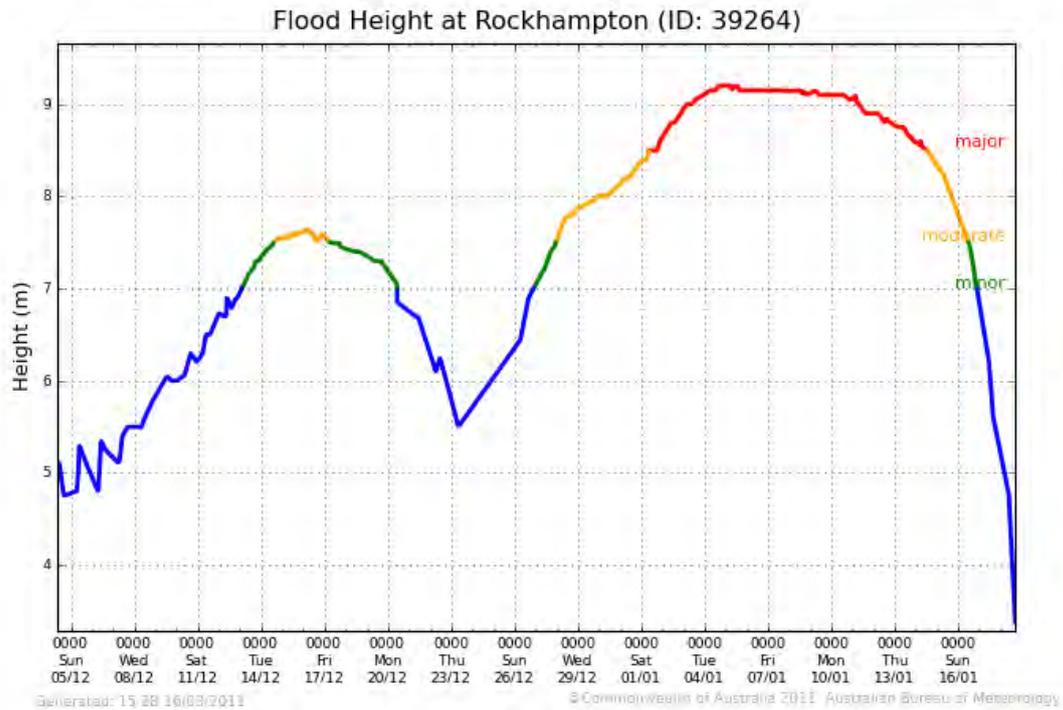


Figure 2.1.5.1 Hydrograph for Rockhampton showing the duration of flooding in that area.

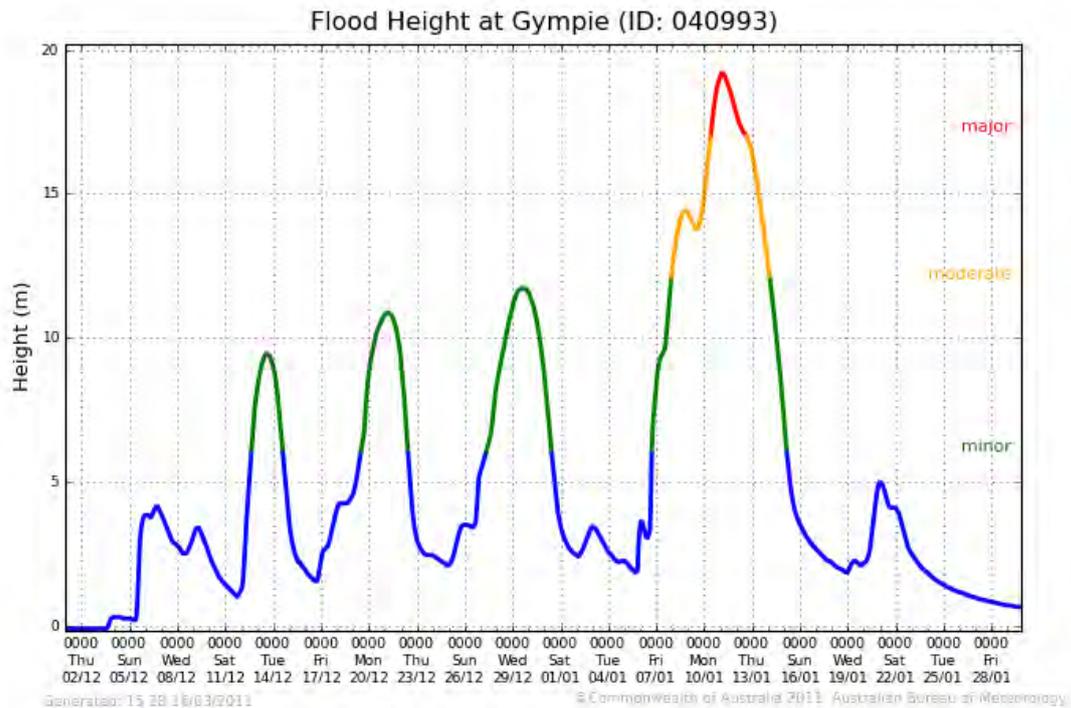


Figure 2.1.5.2 Hydrograph for Gympie showing the duration of flooding in that area.

[98] Table 2.1.5.2 is a timeline of when the rivers peaked in key locations/towns in Queensland. It highlights the main towns that were known to be inundated in red. It should be noted that the dates are based on the time of the peak and many of the towns were inundated for many days leading up to and following the peak and many towns were flooded multiple times during the two months. Where the Bureau doesn't have a record of the peak flood height, the date has been estimated based on information provided in emergency management situation reports and the media.

Table 2.1.5.2 - Flood affected locations/towns in Queensland (peak shown in red)

FLOOD AFFECTED QLD CITIES/TOWNS DECEMBER 2010		FLOOD AFFECTED QLD CITIES/TOWNS JANUARY 2011	
Wed 1/12/2010	Charleville	Sat 1/01/2011	Charleville, <b>Condamine Town</b> , Isisford, <b>Theodore</b> , Longreach
Thur 2/12/2010		Sun 2/01/2011	Flinton, Jundah
Fri 3/12/2010	Bowen , Cardowan, Emerald, Jundah	Mon 3/01/2011	Bowen
Sat 4/12/2010	Cunnamulla, Mitchell, Mulgowie, Yaamba	Tue 4/01/2011	<b>Rockhampton, Surat, Yaamba</b>
Sun 5/12/2010	Eulo, Gatton, Roma, Rosewood, Taroom	Wed 5/01/2011	
Mon 6/12/2010	Emerald, Isisford, Windorah	Thur 6/01/2011	Gatton, Helidon, Mulgowie, Nindigully
Tue 7/12/2010		Fri 7/01/2011	<b>Dalby</b> , Eidsvold, <b>Goomeri</b> , Helidon, Imbil, Inglewood, Kenilworth, <b>Kilkivan</b> , Rosewood, Taroom, Windorah, Woodford
Wed 8/12/2010	Charleville	Sat 8/01/2011	Amberley, <b>St George</b> , Talwood, Taroom, Tiaro, <b>Woolooga</b>
Thur 9/12/2010	Eulo, Surat, Thargomindah	Sun 9/01/2011	Goondiwindi, <b>Grantham</b> , Helidon, Imbil, Kenilworth, Mundubbera, Peachester, Thallon, Kilcoy
Fri 10/12/2010	Hungerford, Theodore	Mon 10/01/2011	Boonah, Clifton, <b>Bundaberg</b> , <b>Dalby</b> , <b>Esk</b> , <b>Toowoomba</b> , <b>Withcott</b> , <b>Helidon</b> , <b>Grantham</b> , <b>Gatton</b> , <b>Laidley</b> , Kenilworth, <b>Killarney</b> , Mulgowie, Nobby, <b>Stanthorpe</b> , Woodford
Sat 11/12/2010	St George	Tue 11/01/2011	Beaudesert, Boonah, Burpengary, <b>Caboolture</b> , Cherbourg, <b>Fernvale</b> , <b>Forest Hills</b> , <b>Grantham</b> , <b>Gympie</b> , Inglewood, <b>Kilkivan</b> , Kingaroy, <b>Laidley</b> , Mundubbera, Murgon, Nanango, Peachester, <b>Rosewood</b> , <b>Stanthorpe</b> , <b>Warwick</b> , Woodford, Miva

FLOOD AFFECTED QLD CITIES/TOWNS DECEMBER 2010		FLOOD AFFECTED QLD CITIES/TOWNS JANUARY 2011	
Sun 12/12/2010	Moura, Pacific Haven	Wed 12/01/2011	Amberley, Chinchilla, Dalby, Dirranbandi, Flinton, Inglewood, Ipswich, Jindalee, Maryborough, Oakey, Texas, Tiaro, Jandowae
Mon 13/12/2010	Augathella, Baralaba, Gympie, Isisford, Mitchell, Quilpie, Roma, Windorah	Thur 13/01/2011	Brisbane City, Bundaberg
Tue 14/12/2010	Amberley, Quilpie, Yaamba	Fri 14/01/2011	Eidsvold, Goondiwindi
Wed 15/12/2010	Charleville, Rosewood, Thargomindah	Sat 15/01/2011	Windorah
Thur 16/12/2010	Eulo, Flinton, Helidon, Rockhampton	Sun 16/01/2011	Condamine Town, Hebel, Nindigully
Fri 17/12/2010	Amberley, Rosewood, St George, Theodore	Mon 17/01/2011	Flinton
Sat 18/12/2010		Tue 18/01/2011	Surat
Sun 19/12/2010	Cunnamulla, Helidon, Mitchell, Moura, Surat	Wed 19/01/2011	Bowen, Hughenden, Laidley
Mon 20/12/2010	Alpha, Amberley, Blackall, Dalby, Gatton, Gympie, Kenilworth, Peachester, Roma, Rosewood, Taroom, Windorah, Woodford	Thur 20/01/2011	Amberley, Rosewood
Tue 21/12/2010	Augathella, Baralaba, Eidsvold, Isisford, Mundubbera	Fri 21/01/2011	
Wed 22/12/2010	Brisbane City, Hungerford, Jindalee	Sat 22/01/2011	
Thur 23/12/2010	Charleville, Euramo, Gatton, Halifax, Ingham, Surat, Thargomindah	Sun 23/01/2011	St George
Fri 24/12/2010	Amberley, Bowen, Chinchilla, Gayndah, Isisford, Mundubbera, Rosewood	Mon 24/01/2011	
Sat 25/12/2010	Flinton, Gordonvale, Innisfail, Theodore	Tue 25/01/2011	Dirranbandi
Sun 26/12/2010	Euramo, Giru, Halifax, Helidon, Ingham, Cordelia, Macknade, Laidley, Mulgowie	Wed 26/01/2011	
Mon 27/12/2010	Ayr, Biloela, Dalby, Gatton, Helidon, Ipswich, Jambin, Killarney, Laidley, Mulgowie, Warwick, Wowan	Thur 27/01/2011	
Tue 28/12/2010	Alpha, Amberley, Chinchilla, Eidsvold, Gayndah, Inglewood, Ipswich, Jericho, Kowanyama, Moura, Mundubbera, Miles, Pacific Haven, Roma, Theodore, Rolleston	Fri 28/01/2011	

FLOOD AFFECTED QLD CITIES/TOWNS DECEMBER 2010		FLOOD AFFECTED QLD CITIES/TOWNS JANUARY 2011	
Wed 29/12/2010	Baralaba, Barcaldine, Cunnamulla, Flinton, Gympie, Mitchell, Monduran, <b>Taroom</b>	Sat 29/01/2011	Hebel
Thur 30/12/2010	Augathella, Blackall, Bundaberg, Goondiwindi	Sun 30/01/2011	
Fri 31/12/2010	<b>Emerald</b>	Mon 31/01/2011	Bowen, Cardowan

Note:

1. City/Town names in red are when the flood peak was associated with significant effects, for example notable inundation above floor level or near levee overtopping.
2. The date shown is based on the time of the peak river height. Flood effects are likely to have occurred before and after the dates listed above.
3. This list is based on the best information available at the Bureau as at **09/03/2011**. There may be other towns that have been affected that are not on this list

### 3 Communications between the Bureau and disaster management

#### 3.1 Q3.1 The Bureau of Meteorology and Disaster Management interface.

[99] Note: In answering question 3, this Report focuses on the Bureau's emergency management procedures. Specific details relating to events in December 2010 and January 2011 are described in Sections 4, 5 and 6 of this Report.

[100] The Bureau has a role in all aspects of Disaster Management including Planning, Preparation, Response and Recovery. These are summarised in Figure 3.1.1. In all phases, the Bureau (as a Commonwealth agency) works with state disaster managers, state agencies and local governments in order to provide the best possible meteorological and hydrological advice.



Figure 3.1.1 The role of the Bureau of Meteorology in Disaster Risk Management

**3.1.1 Q3.1.1 Who was the responsible/point of contact in Bureau for personnel performing a role in a disaster management plan? e.g. Forecasting/Hydrology.**

[101] The main interface between the Bureau and the disaster management agencies in Queensland is the Regional Director and his executive staff, underpinned by a team of operational meteorologists and hydrologists. This interaction is supported according to the situation by the full team of operational meteorologists and hydrologists involved in the warning and forecasting operations.

**3.1.2 Q3.1.2 What were the communication/information flows?**

[102] The communication flows take the form of routine briefings as part of (for example):

- a. pre-wet season awareness raising activities;
- b. formal disaster exercises;
- c. daily (and more frequent if required) briefings through teleconferences with disaster management agencies during critical periods;
- d. live media crosses;
- e. direct telephone communication with key client groups; and
- f. the continual flow of warning and related information through the web, facsimile dissemination, emails, SMS messaging to selected emergency management personnel and recorded telephone services.

[103] The targets for the information are the key stakeholders in the disaster management system. For Queensland this includes:

- a. Emergency Management Queensland;
- b. the Queensland Police Service;
- c. local governments;
- d. members of the State Disaster Coordination Group (SDCG); and
- e. directors of key agencies , who are briefed at the State Disaster Management Group (SDMG).

[104] In addition to the communication flows discussed above at paragraphs [101] to [103] of this Report, there is:

- a. a dedicated telephone hotline between the Bureau's Flood and Tropical Cyclone Warning Centres and the State Disaster Coordination Centre to provide direct, secure, and rapid transfer of key information; and
- b. a special email group that is available to share important information among and between Bureau and key clients.

The warnings are dispatched by fax and email automatically and directly to nominated disaster managers by the Bureau's computing and communication system.

[105] The frequency of information dissemination varies to match the nature of the warning situation and the requirements of disaster managers. For example, the briefings given in relation to the Queensland wet season of 2010-11 are summarised in paragraphs [107] and [108]. This list shows that the frequency of briefings varied from several days in the pre-season awareness period to more than once a day during the peak of the event in January,

[106] In the preparation phase of disaster management, the Bureau provides pre-season briefings to all levels of government and to the public. For the 2010-11 wet season the Bureau provided detailed briefing of a very wet La Niña season and record sea surface temperatures in the Coral Sea. The briefing said that it would feed extremely moist air masses over Queensland and potentially result in extensive flooding and above average tropical cyclone activity.

- [107] Specific activities and briefings included:
- a. In the week commencing 7 June 2010, the Bureau participated in Exercise Poseidon which was organised by EMQ in association with the Far Northern District Disaster Management Group (DDMG) that covers the Far North Tropical Coast north of Ingham, and the numerous Local Disaster Management Groups (LDMG's) between Cooktown and Cardwell. The Bureau undertook significant work to prepare the scenario and exercise warnings.
  - b. On 3 September, the Bureau gave a briefing to Minister Roberts, Queensland Minister for Community Safety, highlighting the potentially extreme seasonal outlook.
  - c. In September 2010, the Bureau participated in two southwest Queensland flood workshops - Charleville (7 September) and St George (9 September) - involving representatives from state and local government, including a number of Mayors (A follow-up activity to the severe flooding in March 2010).
  - d. In October 2010, the Bureau participated in the pre-season severe weather/flood and seasonal outlook workshops held in numerous locations around Queensland including Gympie, Kowanyana, Charters Towers, Innisfail, Mackay, Beenleigh, Gladstone and Rockhampton.
  - e. Two routine State Disaster Management Group (SDMG) meetings on 12 October and 8 December.
  - f. Two briefings of the Queensland Department of Premier and Cabinet (18 October and 5 January).
  - g. During October-November 2010, the Bureau participated in meetings with state and local government agencies to develop a 'protocol for the communication of flooding information for the Brisbane River catchment, including flood water releases from Wivenhoe and Somerset Dams'.
  - h. During October-November 2010, the Bureau participated in meetings with Seqwater and Brisbane City Council to discuss and refine technical capabilities and arrangements in flood prediction and warning for the Brisbane River.
  - i. Between 1 and 3 November 2010, Exercise Orko was carried out and involved flood warnings for the area covering Toowoomba Regional Council and Lockyer Valley. The exercise was organised by Emergency Management Queensland in Toowoomba and was based around the scenario of a tropical cyclone coming ashore and causing flooding in the region. The Bureau providing "exercise" warnings commencing 28 October as a part of the exercise buildup. Severe Weather Warnings covering flash flooding and flood warnings were prepared by the Bureau for the exercise.
  - j. In November 2010, upon request from EMQ, the Bureau prepared guidance material for rainfall amounts likely to cause severe riverine flooding and rainfall amounts likely to cause local and severe flash flooding in coastal areas from Maryborough to the NSW border. This information was used as the basis for a flood preparation seminar that was delivered on 6 December 2010 and attended by Seqwater and local governments. (The Bureau was unable to attend due to the significant flood warning operations at the time.)
  - k. November 2010: Meeting between Bureau and ABC Radio Content Managers (managers from all areas of Queensland) and specially requested briefing to Suncorp insurance group.
  - l. December 2010: Meeting & presentation to ABC Radio Brisbane (managers & broadcasters/ hosts) and specially requested briefing to Energex. The Bureau also presented at the Institute of Public Administration Australia's seminar "Disaster Management Systems in Queensland" where the seasonal outlook message was stressed.
  - m. Fourteen extraordinary SDMG (State Disaster Management Group) Meetings. (The Prime Minister was briefed at 2 of these meetings and the Premier at the majority of meetings).
  - n. Twenty-eight extraordinary State Disaster Coordination Group (SDCG) Teleconferences.
  - o. Three routine State Disaster Coordination Group (SDCG) Meetings.
  - p. One routine Brisbane LDMG (Local Disaster Management Group) Meeting on 28 October (chaired by Lord Mayor Newman).

- q. Four extraordinary Brisbane LDMG meetings on 11, 13, 19 and 20 January (with the Honourable Queensland Deputy Premier Lucas, the Honourable Queensland Treasurer Fraser and the Honourable Leader of the Federal Opposition Abbott present at various times)

[108] During the floods, the RFC and FWC received numerous ad hoc telephone requests for elaboration on forecasts and warnings issued. The FWC also provided direct briefings and advice to agencies detailed in Appendix J.

### **3.1.3 Q3.1.3 How was the information disseminated?**

[109] As outlined in paragraphs [102] and [104] of this Report, information relating to forecasts and warnings is disseminated in a variety of means including web, email, telephone, fax, radio, special briefings, SMS.

### **3.1.4 Q3.1.4 When was the information disseminated?**

[110] Forecast and warning information is disseminated and updated on a regular basis depending on its importance and the requirements of users, as well as whenever thresholds for amendments are met.

[111] When a Severe Weather Warning is issued, it is updated at least every six hours and sooner if there is significant change during that period. Additional information is also provided to emergency services throughout the validity period of the warning.

[112] Severe Thunderstorm Warnings are issued when required and updated every three hours, or more frequently for southeast Queensland warnings.

[113] Flood warnings are issued for each river basin when required, and updated at least daily and more frequently (for example, 3 to 6 hours) for more serious flooding and when flood conditions are changing. Other flood warning products are also provided publicly (e.g. through the web, recorded phone services, the media and many other agencies involved in disaster management operations) as well as regular (updated hourly and more frequently in some cases) consolidated reports of hydrologic data (rainfall and water level) through the Bureau web pages.

[114] Similarly, the media has access to most of the Bureau's information for use in regular public broadcasts. Additional reports specially tailored to suit radio broadcasts are sent directly to the media. The ABC has special arrangements with the Bureau to invoke special broadcasts during significant crisis. Supplementing this, Bureau officials are frequently engaged in direct media crosses aimed at communicating key information to the public.

[115] During the flood events across Queensland flood and weather information was updated regularly (hourly in some cases) throughout the event and was continuously available on the web as well as (on-demand) through telephone weather services.

### **3.1.5 Q3.1.5 To whom was the information disseminated?**

[116] As paragraphs [101] to [103] of this Report outline, the Bureau engages with a broad range of agencies whilst fulfilling its role in the planning, preparation, response and recovery to significant weather related events. Figure 3.1.5.1 shows a graphical representation of the range of agencies that the Bureau regularly provides information and briefings.



Figure 3.1.5.1 Range of agencies and organisations that receive Bureau information and briefings

[117] It can be seen from Figure 3.1.5.1 that the Bureau provides information and briefings to the general public through two major avenues: the Bureau’s web site and the media. The web site has developed significantly in recent years and, as demonstrated through regular public surveys, is now a major source of information for members of the public in making everyday decisions (including those related to flooding, tropical cyclones). Figure 3.1.5.2 demonstrates the extraordinary use of the Bureau’s web site by the public, especially during major weather event. Indeed, for the December 2010 to January 2011 period, the Bureau website received over 9.4 billion hits. The information is extensive and includes climate information, weather forecasts and warnings, radar displays, flood forecasts and warnings and background information on catchments. During the period the Bureau provided a special link on its front page to assist users. The system was 100% operational during that period. For those who do not have access, the Bureau provides regularly updated telephone recordings as well as dissemination to media outlets for TV, Radio etc.

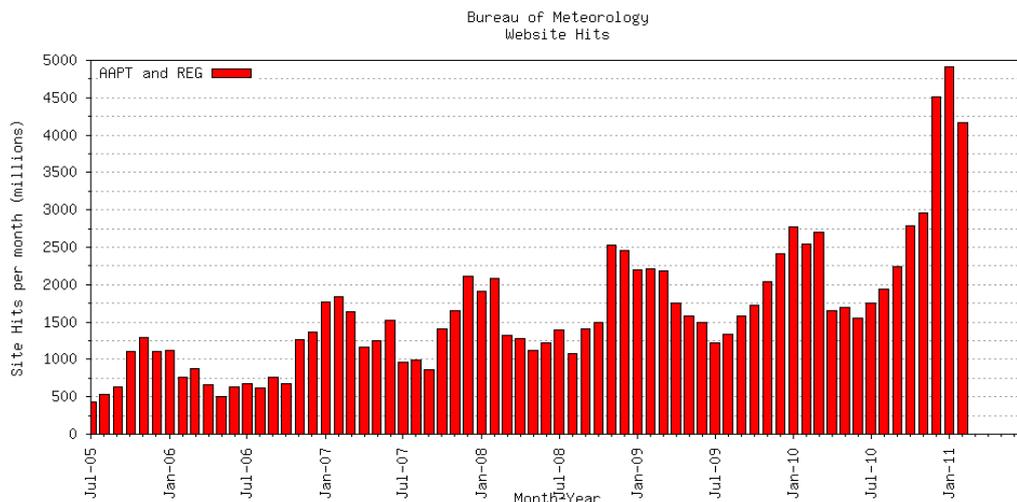


Figure 3.1.5.2 Demonstration of the growing use of the Bureau’s web site by members of the public, especially during major events such as the December 2010 and January 2011 events.

**3.1.6 Q3.1.6 What access was provided to the Bureau by individual stakeholders down the disaster management chain, e.g. DDCs, LDCs, etc.**

[118] The Bureau actively enables direct telephone contact into the Bureau by disaster managers at all levels operating in the state system. Email can also be used to communicate with the Bureau (for example, flood.qld@bom.gov.au connects to the Flood Warning Centre). The Bureau's website is updated regularly with relevant information for managers. There is also a dedicated telephone for use for direct communication between the Bureau and the SDCC watch desk. The Bureau also participates in formal teleconference briefings at the state level and, for some areas, at the local level, in meetings of the local disaster management groups.

**3.1.7 Q3.1.7 What regular updates or trigger points were provided to alert particular stakeholders?**

[119] In addition to regular updates of forecasts and warnings through normal promulgation channels, as well as teleconferences and media reports, triggers for providing alerts and updating information flows to stakeholders are based on the river levels exceeding predetermined threshold levels of flooding based on previous events, and response agency advice of important impacts.

[120] Categories of flooding (minor, moderate, major) are used in warnings to indicate the significance of predicted flood levels which initiates responses appropriate to each category. Paragraph [89] of this Report defines those categories.

[121] When severe weather or severe thunderstorm warnings are issued or amended, it is routine practice to ring the State Disaster Coordination Centre to alert them to those amendments.

[122] Specific details relating to thresholds for updating or amending warnings and forecasts are included in Sections 4, 5 and 6 of this Report.

**3.1.8 Q3.1.8 Were there any communications logistics/problems in the provision of the information?**

[123] The Bureau works hard to ensure the effectiveness of our services even during high operational periods. There were no significant technical communication problems evident in the transmission of essential information flows during the flood events in December 2010-January 2011. While some incoming phone calls on the morning of the 13 January 2011 were disrupted, the backup analogue telephone connections (retained for this purpose) continued to function. Outgoing phone lines continued to work throughout.

[124] An important component of the Bureau's planning and preparation is the Business Continuity Management (BCM) and the associated contingency planning, which came into play during the Queensland events. The Bureau has a formal BCM process for its national operations and its State based operations. These were activated during the Queensland floods (as well as the NSW and Victorian floods over similar timeframes). In particular, with reference to Queensland, where the majority of additional support was provided from other national, state and territory offices, the following was undertaken:

- a. Internet and web based services had available back up from the Disaster Recovery Centre in Canberra. During the period the system was 100% operational;
- b. Networks of instrumentation had redundancy in communication protocols (ie, an alternative and back-up technology by which to transmit data) such as satellite, 3G, VHF and PSTN;
- c. Forecasts and warnings provided through a range of channels, including web, Fax, Recorded telephone, radio, free to air and pay TV, media interviews by operational staff, via State Emergency liaison, via VHF and HF marine broadcasting;
- d. Flying squad arrangements where interstate meteorologist, hydrologist and communications staff (who have prior familiarisation with Queensland operations) are flown in to assist during significant events and peak periods; and
- e. Additional ICT support from Melbourne and Brisbane.

[125] The Bureau also had in place contingency planning in the event that the Brisbane office was inundated or had power blackouts. This planning included UPS (Uninterrupted Power Supply) and special generator capability and transfer of operations, as a third level of redundancy, to other state offices or temporary accommodation.

[126] Through the BCM process outlined in paragraph [124]d of this Report, staffing was supplemented from Head Office and other offices by several additional operational staff during peak periods. Bureau Executive members (from Melbourne and Canberra) also attended during periods to assist with support arrangements.

## 3.2 Bureau of Meteorology Interface with Public

### 3.2.1 Q3.2.1 What information was provided by Bureau to the Public?

[127] The Bureau takes its role to provide information to the public very seriously. During pre-season planning, the Bureau contributes regularly to campaigns aimed at raising awareness of the community to dangers of flooding. Such campaigns are led by state or local government agencies or by Emergency Management Australia.

[128] The list of services provided to the public are described above in Section 1.2 of this Report, and include weather and flood forecasting and warnings. The Bureau also provides to the public media interviews, radar loops and other observations, model data and public education material brochures for phenomena and warnings.

[129] During the Queensland flood events, the public were provided with all weather and flood warning products as well as regular (updated hourly and more frequently in some cases) consolidated reports of hydrologic data (rainfall and water level) through the Bureau web pages.

[130] Similarly, the media has access to most of the Bureau's information for use in regular public broadcasts. Additional reports specially tailored to suit radio broadcasts are sent directly to the media. The ABC has special arrangements to enable emergency broadcasts during significant crisis. Supporting this, Bureau officials are frequently engaged in direct media crosses aimed at communicating key information to the public.

[131] A list of the warnings issued during the period 9 to 12 January is included in Appendix C.

[132] Specifically, the community received warning of heavy rain and thunderstorms conducive to flash flooding across the region well ahead of the flooding occurring. As outlined at paragraph [31] of this Report, the Bureau's role concerning flood warnings does not extend to forecasting flash flooding in specific locations or individual creeks.

**3.3 Q3.3 In relation to the information provided to the public and to personnel performing a role in a disaster management plan, what is Bureau’s assessment in relation to the accuracy, timeliness and meaningfulness of that information?**

[133] The Bureau’s forecast and warning services were generally timely, meaningful, effective and accurate. The Bureau provided important advice to the community and emergency management agencies before, during and after events. The complete mitigation of damage from flooding is impossible in Australia. However, with cooperation between all levels of government and affected communities, improvements can be made. The Bureau will continue its close involvement in this process.

**4 Lockyer Valley – Disaster Management**

[134] The events that led to the serious flash flooding over Toowoomba and the Lockyer Valley were the result of a complex interaction between thunderstorms, the atmosphere and the catchment physiography. The rainfall rates assessed beneath these storms were not by themselves unique over the 3 day period of 10 to 12 January, but their location and the very wet state of the catchments in these areas exacerbated the impact of the ensuing flooding.

**4.1 Q4.1 Was there a regular form of communication in place between a Bureau representative and local government or disaster management people in Toowoomba or the Lockyer in December 2010/January 2011? If so, how did it work?**

[135] In severe weather and flooding events, the Bureau would not generally have any direct contact with Toowoomba Regional Council and Lockyer Valley Regional Council unless Council officers telephoned the Bureau to seek further specific advice regarding their area.

[136] Consistent with this, during December 2010 and January 2011, there was no regular form of direct communication specifically with the Councils. These Councils, however, may have participated in the regular disaster management teleconferences with the State Disaster Coordination Centre (SDCC) at which the Bureau provides meteorological and hydrological briefings as described in Section 3 of this Report. The local governments may also have participated in State Disaster Management Group (SDMG) meetings at which the Bureau also provides briefings.

[137] The Bureau automatically distributes a pre-agreed list of forecast and warning products to these Councils according to pre-defined distribution lists, as follows:

**Table 4.1.1 Bureau products normally received by Toowoomba Regional Council**

<b>WARNING/INFORMATION PRODUCT</b>	<b>COMMUNICATION</b>
Information Bulletin to all clients	Email
Severe Weather Warning	Email
Fire Weather Warning	Email
Severe Thunderstorm Warning - SE Qld	Email
Severe Thunderstorm Warning – Qld	Email
Flood Warning for Condamine Balonne	Email
Queensland Flood Warning Summary	Email
3 hourly River Height Bulletin for Condamine Balonne	Email

Table 4.1.2: Bureau products sent to Lockyer Valley Regional Council

<b>WARNING/INFORMATION PRODUCT</b>	<b>COMMUNICATION</b>
Tsunami Warning	Email and Fax
Tropical Cyclone Advice (warnings)	Email and Fax
Information Bulletin to all clients	Email and Fax
Flood Warning: Coastal rivers south of Maryborough	Email and Fax
Queensland Flood Warning Summary	Email and Fax
3 hourly River Height Bulletin for Brisbane, Bremer etc	Email and Fax

[138] There was no regular form of direct communication with the Disaster District Coordinator based in Toowoomba or with the Emergency Management Queensland area office based in Toowoomba. These coordinators would be engaged in the usual manner via the SDCC teleconferences and SDMG meetings and would telephone the Bureau for additional advice as required.

[139] The Bureau maintains lists of contact points where applicable for disaster management agencies and local governments to allow for direct telephone communication as required. They are also especially useful in relation to collaborative activities in the preparation and prevention stages.

**4.2 Q4.2 Was there a Bureau employee nominated for this particular area? If so, what is that person’s name and contact details?**

[140] There is not a nominated Bureau employee who was responsible for the Toowoomba and Lockyer Valley area or catchment. The Bureau’s provision of forecast and warning services involves a roster of operational staff covering the whole or parts of Queensland according to the specific functions and the individual forecasting and warning requirements at the time.

[141] During busy situations in the FWC, the shift manager (ie, Duty FWC Engineer/Hydrologist) generally allocates specific warnings/river basins to hydrologists according to the workload and the priority/severity of the floods in particular catchments.

[142] Similarly, for weather forecasting in the RFC, the senior forecaster manages the allocation of resources.

**5 Lockyer Valley Specific Issues: Warning, Forecasting and Modelling**

**5.1 Q5.1 What forms of warning were available to the Bureau to alert residents of the Lockyer Valley?**

[143] In terms of weather forecasts and Severe Weather Warnings, the Bureau subdivides Queensland into 17 districts and provides updates twice daily. The Lockyer Valley is part of the Southeast Coast district (see Figure 5.1.1). The Southeast Coast forecast includes a brief weather forecast for the next four days, with additional detail (including maximum and minimum temperature forecasts) for the next seven days for Ipswich, the Gold Coast and the Sunshine Coast.



Figure 5.1 Queensland Forecast Area Map showing Forecast District Boundaries

- [144] The Bureau also conducts scheduled interviews with many radio stations, and endeavours to provide comment to radio, newspaper and online media on request subject to operational workloads. Scheduled radio interviews are routinely held with Toowoomba based radio stations 4DDB, 4WK, 4GR and ABC Local Radio. Interviews with Brisbane based radio stations may also be received in the Lockyer Valley.
- [145] Warnings are issued to the public, emergency services and other organisations via the Bureau's website and relayed via other web providers. The Bureau also distributes these warnings to a defined list of recipients which typically includes a selection of relevant disaster and emergency management agencies, other State and Local Government agencies, water agencies and media (radio, television, newspaper, and web). Distribution is via email, fax, computer links and (on request) to emergency management personnel via SMS.
- [146] Available warnings are described in Section 5.1.1 to 5.1.5.

### 5.1.1 Severe Weather Warnings and Severe Thunderstorm Warnings

- [147] Severe weather warnings are issued when one or more of the criteria in Table 5.1.1 are met and:
- severe weather is expected to affect land-based communities within 6-24 hours;
  - it is not directly the result of severe thunderstorms; and
  - it is not covered by tropical cyclone or fire weather warnings which are covered by other warnings.

[148] Table 5.1.1 below details the criteria for issuing severe weather or severe thunderstorm warnings.

Table 5.1.1 Criteria for issuing severe weather or severe thunderstorm warnings

PHENOMENON	SEVERE THUNDERSTORM WARNING	SEVERE WEATHER WARNING
Wind (Gusts)	Gusts 90km/h or more	Gusts 90km/h or more
Wind (Average)		Widespread winds over land of 63km/h or more (Gale force)
Tornado	All tornados	
Blizzard		Widespread blizzards in Alpine areas
Flash Flood	Heavy Rainfall that is conducive to flash flooding or a reported flash flood	Heavy Rainfall that is conducive to flash flooding or a reported flash flood
Large Hail	Hail with diameter of at least 2cm (size of \$2 coin)	
Storm Tide		Abnormally high tides caused by winds (expected to exceed highest astronomical tide)
Large Waves		Unusually large surf waves expected to cause dangerous conditions on the coast (dependent on location - but generally surf exceeding 5 m, less in the tropics). Large surf is commonplace in SA, Vic and Tas, so warnings are only issued there for extreme events.

- [149] Note that with regard to flash flooding these warnings identify areas under threat of heavy rain that may lead to flash flooding, and do not attempt to forecast specifics of any ensuing flash flooding or to provide detailed information on the likely downstream impact areas. As outlined in paragraph [31] of this Report, this is the role of other government agencies. However reports received of flash flooding may be included in, and relayed to the public through, these warnings.
- [150] While the threat remains, a Severe Weather Warning will usually be issued every six hours, however the more frequent warnings may be issued in some rapidly changing situations or in serious circumstances.
- [151] Copies of the Severe Weather Warnings issued during December 2010 and January 2011 are contained in Appendix B.

### 5.1.2 *Severe Thunderstorm Warnings*

- [152] Severe Thunderstorm Warnings are issued by the Bureau to alert communities of the threat of the dangerous thunderstorms when the criteria in Table 5.1.1 above are met. A Severe Thunderstorm Warning is issued:
- a. When a severe thunderstorm is reported, or there is strong evidence of a severe thunderstorm, and it is expected to persist, or
  - b. when existing thunderstorms are likely to develop into a severe thunderstorm.
- [153] Severe thunderstorms can be quite localised and develop quickly leading to difficulties in determining the exact location of their formation. The warnings are usually issued without much lead-time. To try and issue warnings with a greater lead-time would lead to an increase in false alarms, thus rendering the service ineffective.
- [154] The Bureau implemented further changes to the format of Severe Thunderstorm Warnings issued for southeast Queensland in 2008. The main change was the use of Local Government Areas (LGAs) as the spatial subdivision rather than the Bureau's standard forecast districts.
- [155] While the threat remains, a Severe Thunderstorm Warning will usually be issued every three hours, however the more detailed southeast Queensland warnings may be issued every 30-60 minutes.
- [156] It is rare for Severe Weather Warnings and Severe Thunderstorm Warnings to be issued concurrently for the same area. The practicality of maintaining clear and concise messages generally leads the Bureau to opt for simplicity of message. One situation where they will be issued concurrently is where the severe thunderstorms are expected to produce additional phenomena such as large hailstones or damaging winds.
- [157] Copies of severe thunderstorm warnings issued during January 2011 in Queensland are contained in Appendix C.

### 5.1.3 *Flood Warnings*

- [158] Flood warnings are issued for the Brisbane River basin which includes the Stanley and upper Brisbane, Lockyer Creek, Warrill Creek, Bremer River and lower Brisbane River below Wivenhoe Dam. Warnings typically include information regarding the observed or expected flood conditions (mostly in descriptive terms of minor, moderate and major flooding) in one or more of the major Brisbane River tributaries or subcatchments, including the Lockyer Creek system at times. Predicted river heights at specific locations may also be provided in the Flood Warning. A list of latest river heights for selected stations is also provided within the body of the warning.
- [159] The criteria for issuing flood warnings are described in the warning procedures for the Brisbane/Bremer River basin and state that "Flood Warnings are to be issued whenever any key river height station is expected to exceed, or exceeds, the moderate flood level in the upper catchment and tributaries, or minor flood level in lower areas around Brisbane and Ipswich Cities."
- [160] Copies of flood warnings issued during the 2010-11 Queensland wet season are contained in Appendix D.

#### 5.1.4 *Threshold Based River Height Bulletins*

- [161] Threshold based River Height Bulletins (RHBs) are issued by the Bureau as a part of the flood warning system in Queensland. RHBs are a list of flood warning stations and their latest river height and where available, additional information relating to a bridge, road, lake or spillway level. During rain-flood periods, RHBs are automatically issued every 3 hours where the water level at any one of the stations on the list has exceeded a pre-set threshold height. River heights (water levels) for Lockyer Creek are contained in the "River Height Bulletin for Brisbane, Pine, Caboolture Rivers and tributaries".
- [162] Each RHB is distributed to a defined list of recipients which typically includes a selection of relevant State and Local Government agencies, disaster management agencies, water agencies, and media (radio, television, newspaper). Distribution is via email, fax and computer links.
- [163] All RHB issued during 2010/11 flood season are archived in the Bureau computer systems and can be made available. Almost 5,000 threshold based river height bulletins were issued during the 2 month period, and each bulletin contains lists of river height stations exceeding threshold levels and is distributed to multiple recipients via fax, email and computer links
- [164] Depending on the product type, updates for river heights and latest rainfall are also produced every 15 to 60 minutes, and published on the Bureau's website as soon as the information becomes available to the Bureau. Although the updating occurs every 15 to 60 minutes, individual station data will only be refreshed when new information is received by the Bureau. The frequency of data receipt depends on the type of field station varying from daily reporting only, to three-hourly telephone-based automatic stations, to continuous real-time updating from ALERT type stations.

#### 5.1.5 *Standard Emergency Warning Signal (SEWS)*

- [165] In 1999 an agreement was reached between all states and territories on the need for the Standard Emergency Warning Signal (SEWS) to assist in the delivery of public warnings and messages for major emergency events. The Assistant Director-General of EMQ is responsible for coordinating and managing polices dealing with the use of SEWS. The Bureau's Queensland Regional Director (or delegate) is one of a number of nominated initiating authorities, for the use of the SEWS for intense rainfall leading to flash flooding (1 to 6 hour rainfall > 50 Year Average Recurrence Interval (ARI)) or major flood, flash flood and//or dam break or for other significant weather events only. (For more information on ARI see Appendix K) In determining the use of the audio signal the following four factors should be present:
- a. Potential for loss of life and/or a major threat to a significant number of properties or the environment;
  - b. A significant number of people need to be warned;
  - c. The impact is expected within 12 hours – or is occurring at the time; and
  - d. One or more of the phenomena are classified as "destructive".
- [166] The Bureau's Flood Warning Centre directed broadcasters to use the SEWS for the extraordinary flash flood warnings in the Lockyer creek area at 5:00 pm and 8:37 pm 10 January and the flash flood warning was finalised at 7:27 am on 11 January.
- [167] The SEWS was also used on Severe Weather Warnings from 8:00 am Tuesday 11 January 2011 until the warning was cancelled at 10:00 pm EST on 11 January 2011.

[168] Flood warnings for the Lockyer, Bremer, Warrill and Brisbane River below Wivenhoe including Brisbane City required broadcasters to use the SEWS from 8:05 pm on 11 until 3:52 am on 13 January 2011.

**5.2 Q5.2 There were ‘flood warnings’ for the Lockyer Valley on 23 December 2010 – were these warnings provided by Bureau? If so how and to whom were they distributed?**

[169] There were no flood warnings for the Lockyer Valley issued by the Bureau on 23 December 2010. Water levels were at a relatively low level until some minor flood levels were reached in Laidley Creek and Lockyer Creek around Gatton after about 3.00 pm that day.

[170] River Height Bulletins containing latest heights for Laidley Creek and Lockyer Creek were issued on 23 December at these times:

- a. 12:31 pm; included Laidley Creek at Showground Weir;
- b. 3:30 pm; included Showground Weir and Lockyer Creek at Gatton;
- c. 6:31 pm; included Gatton, Showground Weir, Warrego Highway and Glenore Grove; and
- d. 9:31 pm; included Gatton, Warrego Highway and Glenore Grove.

[171] A Queensland Flood Summary was issued at 7:51 pm Thursday 23 December which contained additional information as follows: “Brisbane River: Minor flooding at Gatton along Lockyer Creek and at Harrisville along Warrill Creek.”

[172] At 12:45 pm Thursday 23 December, a severe weather warning was issued for rainfall with locally moderate to heavy falls and potential for flooding over a broad area of Queensland from the Gulf of Carpentaria to Southeast Queensland and parts of Cape York Peninsula. The warning was re-issued every 6 hours until December 28.

**5.2.1 Flood warnings for Lockyer Valley at other times in December 2010**

[173] Flood warnings covering the Lockyer Valley were issued four times on 5 December; then six were issued between 19 December and 22 December, the final one of the six being issued at 9:14 am on Wednesday 22 December.

[174] At 7:57 pm Sunday 26 December, a ‘Priority Flood Warning for coastal streams from Bundaberg to the NSW border including adjacent inland streams’ was issued which included specific mention of Lockyer Creek.

[175] Flood warnings for Lockyer Creek then followed from 5:19 am Monday 27 December and continued until Thursday 30 December.

**5.3 Q5.3 What warnings were provided by Bureau for the Lockyer Valley on 10 January 2011? How, to whom and at what times were they distributed?**

[176] In the days leading up to Monday 10 January, Bureau forecasters were involved in numerous media interviews and briefings to emergency services outlining a deteriorating situation. The Bureau had already heightened awareness in the community through riverine flood warnings and severe weather warnings for parts of Queensland. From Sunday 5 January 2011, severe weather warnings were being issued for the southeast coast district (that includes the Lockyer Valley area) and they were updated regularly, warning the community about very heavy rain and thunderstorms which may lead to localised flash flooding and/or worsen existing river flooding.

- [177] On 10 January the Bureau continued to issue flood warnings, river height bulletins and severe weather warnings for heavy rainfall leading to flash flooding. These were issued both at regular times and at unscheduled times as the events unfolded. See table 5.3.1 for details.
- [178] The warnings and bulletins were transmitted by several communications channels including:
- Fax
  - Email
  - CMSS – Computer Message Switching System - FTP or direct electronic transfer to an external agency computer
  - SMS to some individual disaster management personnel
  - Products available on the internet ([www.bom.gov.au](http://www.bom.gov.au)) and via FTP to Bureau anonymous FTP server.
- [179] The Bureau Product ID and warning title for products covering the Lockyer Valley on 10 January 2011 were:
- IDQ60140 River Height Bulletin for Brisbane, Pine, Caboolture Rivers and tributaries
  - IDQ20805 Flood Warning for Lower Brisbane
  - IDQ20032 Severe Weather Warning 1
  - IDQ20780 Flood Warning For Coastal Streams From Maryborough To The NSW Border
  - IDQ20885 Queensland Flood Summary
- [180] Table 5.3.1 is a table of warnings issued by the Bureau on 10 January 2011 that covered the Lockyer Valley area. Copies of the full text of the warnings are available in Appendix L.

**Table 5.6.1 Rainfall and Water Level Commentary**

DATE	TIME	PRODUCT ID	HEADER
Monday 10 January 2011	12:30 AM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries
Monday 10 January 2011	12:36 AM	IDQ20805	FLOOD WARNING FOR THE LOWER BRISBANE BELOW WIVENHOE Issued at 12:36 AM on Monday the 10th of January 2011
Monday 10 January 2011	3:31 AM	IDQ60140	<i>RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries</i>
Monday 10 January 2011	5:00 AM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 5:00 am on Monday 10 January 2011
Monday 10 January 2011	6:30 AM	IDQ60140	<i>RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries</i>
Monday 10 January 2011	9:19 AM	IDQ20780	FLOOD WARNING FOR COASTAL STREAMS FROM MARYBOROUGH TO THE NSW BORDER Issued at 9:19 AM on Monday the 10th of January 2011
Monday 10 January 2011	9:30 AM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries

<b>DATE</b>	<b>TIME</b>	<b>PRODUCT ID</b>	<b>HEADER</b>
Monday 10 January 2011	10:28 AM	IDQ20805	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE Issued at 10:28 AM on Monday the 10th of January 2011
Monday 10 January 2011	11:00 AM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 11:00 am on Monday 10 January 2011
Monday 10 January 2011	11:05 AM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 11:05 am on Monday 10 January 2011
Monday 10 January 2011	11:40 AM	IDQ20885	Flood Summary Issued at 11:40 AM on Monday the 10th of January 2011
Monday 10 January 2011	12:30 PM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries
Monday 10 January 2011	3:30 PM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries
Monday 10 January 2011	4:16 PM	IDQ20805	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 4:16 PM on Monday the 10th of January 2011
Monday 10 January 2011	5:00 PM	IDQ20780	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 5:00 PM on Monday the 10th of January 2011
Monday 10 January 2011	5:05 PM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, far southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 5:05 pm on Monday 10 January 2011
Monday 10 January 2011	6:12 PM	IDQ20805	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 6:12 PM on Monday the 10th of January 2011
Monday 10 January 2011	6:30 PM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt and eastern parts of the Maranoa and Warrego districts. Issued at 6:30 pm on Monday 10 January 2011

DATE	TIME	PRODUCT ID	HEADER
Monday 10 January 2011	6:30 PM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries
Monday 10 January 2011	7:50 PM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts. Issued at 7:50 pm on Monday 10 January 2011
Monday 10 January 2011	8:37 PM	IDQ20780	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 8:37 PM on Monday the 10th of January 2011
Monday 10 January 2011	9:30 PM	IDQ60140	RIVER HEIGHT BULLETIN for Brisbane, Pine, Caboolture Rivers and tributaries
Monday 10 January 2011	9:44 PM	IDQ20805	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 9:44 PM on Monday the 10th of January 2011
Monday 10 January 2011	11:00 PM	IDQ20032	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts. Issued at 11:00 pm on Monday 10 January 2011

[181] These warnings and river height bulletins were provided directly to an extensive list of over 300 users ranging from local councils in the area, radio and television stations in the area, emergency services organisations (and their regional centres) in the area, private weather companies and utility companies in the area.

[182] At 1:00 pm on 10 January 2011 the Bureau contacted the SDCC Watch Desk to inform them of exceptionally heavy rainfall west of Wivenhoe and that 75 mm had been recorded at Redbank Creek over the last hour. The Bureau also noted that the really heavy rainfall had moved over the Toowoomba town area with expected flash flooding over the next hour or two. See Section 6.8.

**5.4 Q5.4 Media reports indicate that on 10 January 2011, the Helidon flood gauge produced a reading of 5.2 m and that at Gatton 18.92 m, before each was washed away. Is this correct?**

[183] The media were reporting information from river gauge stations that were later known to have failed during the flooding. Subsequent field visits and analysis of data provided information about the actual levels that were reached at Helidon and Gatton on 10 January. This information is detailed below.

#### 5.4.1 *Lockyer Creek at Helidon*

- [184] At Helidon, two water level readings, from equipment co-located at the same installation, are available to the Bureau:  
**Helidon TM:** Readings of water level from the DERM gauging station are communicated via direct telephone polling by the Bureau and via computer transfer from DERM to the Bureau. This station gave a highest reading of 12.66 m for 2.50 pm and then no further reports were received.  
**Helidon AL:** Readings of water level from the Seqwater 'ALERT' station are communicated via VHF radio telemetry to the Bureau and Seqwater. This station gave a highest reading of 12.74 m at 2:53 pm and then several readings which suggested that the water level had peaked at about this level. (In the weeks after the flood, it was learnt from DERM that higher water levels had been reached which had inundated the monitoring station.) The station then stopped reporting for about 2.5 hours and then began reporting incorrectly.
- [185] Paragraph [199]c of this Report provides more detail on the way that the Bureau's computer system received these readings.
- [186] Both the Helidon TM gauge and the Helidon AL gauge had failed at the time of the very fast creek rises. Some weeks later DERM advised that the Helidon station had been completely inundated by flood waters. DERM advised that the Helidon flood peak has been surveyed at 13.88m and estimated to have occurred at 3.10 pm on 10 January 2011. Flood peaks surveyed after a flood are generally taken from flood debris and flood "high tide" lines.
- [187] The 2011 flood peak of about 13.88 metres is more than 6 metres higher than the previous record of 7.55 metres recorded in the January 1974 flood.

#### 5.4.2 *Lockyer Creek at Gatton*

- [188] At Gatton, two water level readings from different locations (i.e. readings that are not directly comparable), were available to the Bureau.  
**Gatton TM:** Readings of water level from the Seqwater station are communicated via direct telephone polling by the Bureau. This station gave a highest reading of 13.87 m for 6:40 pm before reporting a sudden (later found to be erroneous) drop in water level.  
**Gatton AL:** Readings of water level from the Seqwater 'ALERT' station are communicated via VHF radio telemetry to the Bureau and Seqwater. This station gave a highest (later found to be erroneous) reading of 18.92 m at 6:27 pm before the station failed.  
These readings were later found to be erroneous by undertaking post-flood visits and confirming the actual peak flood level by inspection and from information received from local landholders.
- [189] The Lockyer flash flood on Monday 10 January did not cause the highest flooding of the event at Gatton and downstream. Higher flood levels were experienced at Gatton on the following day, Tuesday 11 January, due to further heavy rainfall in the Lockyer-Laidley valley. A post flood survey indicates a 2011 flood peak of 15.38 metres (for Tuesday 11) at the original manual reporting flood warning station which has a long history of recorded flood peaks. The 2011 flood of 15.38 metres compares with a 1974 flood peak of 14.63 metres. The highest recorded flood at Gatton is 16.33 metres in 1893.
- [190] Based on a re-construction of flood data, it is likely that the 'flash' flood peak at Gatton on Monday 10 January occurred at about 8 pm and it is estimated that it was about one metre lower than the peak recorded the following day.

**5.5 Q5.5 If there was a marked spike in the reading at Helidon, why did it not cause the Bureau to issue warnings for locations further down the Lockyer Valley?**

[191] Monitoring of observational data by weather and flood forecasters takes place with the Bureau's core services in mind. River gauges are not generally monitored to detect flash floods. Our automatic systems do collect and publish the data with thresholds based river height bulletins issued automatically every 3 hours via fax and email and river height data as maps, tables and plots updated on the Bureau website every 15 to 30 minutes. Section 4, at page 17 of the Bureau's Preliminary Report outlines the way in which the Bureau's River Height Bulletins are automatically updated. While the River Height Bulletins are automatically updated three-hourly, some automatic and manual river height stations may not report within every three-hour time period. The result is that some River Height Bulletins may display information that has not been updated for more than three hours. Section 5.1.4 of this Report outlines the threshold-based river height bulletins that the Bureau provides.

[192] As outlined at paragraph [31], the Bureau monitors river catchments and provides forecasts and warnings for those river systems; however it does not routinely issue flash flood warnings for specific locations or individual creeks.

[193] The flash flooding generated in the headwaters of Lockyer Creek was severe and had devastating impact. The following summarises the Bureau's involvement in monitoring, detecting, forecasting and reporting on this event.

- The Bureau's chief priority for flood monitoring, forecasting and warning in the Brisbane catchment is the lower Brisbane River, with Moggill being the most upstream station for which river height predictions are required.
- In the early afternoon of January 10, the Bureau concluded that the conditions were giving rise to the most severe flooding in the Brisbane Valley since 1974. At this point more of the Bureau's attention was required to estimate potential flooding levels in the lower Brisbane and Bremer Rivers, giving rise to intense activity in the FWC and very active dialogue with stakeholders, notably the dam operator and the City Councils of Brisbane and Ipswich.
- The Bureau collects and publishes (in near-real-time) a large amount of river height data obtained from other agencies, including for sites in the headwaters of catchments draining to agreed forecast locations. However, the Bureau actively monitors a subset of that information that is salient to its forecasting and warning process for those agreed (lower-catchment) locations where the rain to flood times are greater than six hours.
- The Helidon TM and Helidon AL river height gauges are examples of such headwater stations that are operated by other agencies for purposes other than flood warning. In these cases the data is collected for water resource and dam operations, by DERM and Seqwater respectively. The Bureau collects and publishes this data, and ultimately uses it for forecasting flows in the lower catchment.
- The Bureau does not have the systems, capacity or detailed local knowledge to provide a flash flood service for the many thousands of headwater valleys across Australia.
- Nevertheless, by collecting and publishing on the web in near-real-time the Helidon gauge (and similar) data and by issuing automated threshold-based river height bulletins, the Bureau provides valuable information for stakeholders.

- [194] On the afternoon of Monday 10 January, in response to the rapid stream rises being registered on automatic water level gauges at Helidon, as soon as those readings were recognised by the FWC, the Bureau took steps to verify the data and issue additional warnings for the community located downstream.
- [195] The Bureau's Flood Warning Centre created an extraordinary "Flash Flood Warning" using the Warning for Coastal Streams from Maryborough to the NSW Border as a template. It was retitled and the content changed to become a top priority flash flood warning for Lockyer Creek. Broadcasters were requested to use the Standard Emergency Warning Signal (SEWS). This flash flood warning was first issued at 5:00 pm Monday, approximately 2 hours ahead of the arrival of the flood peak at Gatton. It was and subsequently updated and re-issued at 8:37 pm and on Tuesday at 12:19 am, 4:10 am and 7:27 am.
- [196] The Bureau's Flood Warning Centre also notified the Queensland State Disaster Coordination Centre by telephone at around 4.50 pm that the extreme flash flooding was expected to rapidly extend though the Lockyer Valley system to the Gatton area.
- [197] By 5 pm Monday, the time of the first flash flood warning, the leading edge of the flash flood waters had passed Grantham and was approaching the Gatton area. The purpose of the flash flood warnings was to provide warning for locations downstream along Lockyer Creek. For example, the top priority warning issued at 5:00 pm advised:

*"Very heavy rainfalls have been recorded in the Toowoomba area and caused extreme flash flooding. This rainfall is also causing extreme rises in the upper Lockyer Creek at Helidon with very fast and dangerous rises possible downstream at Gatton in the next few hours. Rises will extend downstream of Gatton during tonight."*

- [198] It should be noted that the Bureau does not have information regarding the flood impacts associated with flood levels at Helidon, Sandy Creek Road near Grantham, or Gatton, apart from the flood classifications (level of minor, moderate, major flood), road crossing information where relevant and available past flood heights.

**Summary of warning, information and briefing activities following the Helidon 'spike'**

- [199] Following the marked 'spike' in the readings at Helidon, other considerations, relevant activities, briefings, warnings and information for agencies and the public included:
- a. At 3:30 pm, a threshold based River Height Bulletin, which is automatically generated, was issued containing the latest available river levels at Helidon:
 

<i>Lockyer Creek at Helidon #</i>	<i>3.02 pm</i>	<i>12.68</i>	
<i>Lockyer Creek at Helidon *</i>	<i>2.50 pm</i>	<i>12.66</i>	<i>R (for rising)</i>
  - b. The Bureau's website was updated at 15 minute intervals with the latest available water levels, and at 30 minute intervals with the summary tables and plots.
  - c. At around 4:00 pm to 4:30 pm, the Flood Warning Centre became aware of the water level readings at Helidon, a few of which had become available in the Bureau's computer system at around 3:00 pm or shortly after. Only a few readings were available at this time as the computer system had automatically marked most of the readings, which were incomplete, from the Helidon AL station as being incorrect. The readings that had been received had the 'hallmark' of a station which had become faulty with significant "jumps" in values and loss of receipt of intervening values. There is no flood warning rainfall or water level network above the Helidon gauge to be able to model or assess with any reliability or accuracy the observed or expected water levels at Helidon.

- d. The Bureau does not have processes or resources to respond to rapid rises and it does not provide a site-specific flash flood warning service. To do so would require a different systems and service model scaled to deal with flash flooding at a state and national scale. The flood warning service is on a river basin scale with predictions for key locations. Additionally, the FWC was heavily occupied at the time, observing many hundreds of water level gauges across the State in multiple areas of major flood and responding continuously to continued heavy rainfall over a very wide area of southern Queensland. Some towns were experiencing or were forecast to experience severe flooding and inundation, including in/at the Dawson, Fitzroy/Rockhampton and other towns; Condamine-Balonne/Killarney, Warwick, Dalby, Surat, St George; Gympie & Maryborough; Bundaberg as well as a developing flood situation in the Brisbane River system downstream to Ipswich and Brisbane City. It is also relevant to note that no information came to the Bureau at this time in relation to flash flooding from any local council, spotter, media or commercial operator other than a call from a Bureau spotter received at 12.39 pm from the Cressbrook Dam area advising of very heavy rainfall in that area. The Bureau passed this information on to the SDCC at 12.59 pm.
- e. At 4:16 pm, a priority Flood Warning was issued for the Lockyer, Bremer, Warrill and Brisbane River below Wivenhoe including Brisbane City. At this stage, the Flood Warning Centre was unaware of the flash flood which had developed in the upper Lockyer Creek catchment.
- f. At about 4:30 pm to 4:50 pm, the unusual readings from Helidon were assessed by the FWC to be most likely valid in indicating that a rapid rise in water level had occurred at that location. The indicated significant spike in water level was linked to footage of the flash flooding in Toowoomba which had begun appearing on television monitors in the FWC.
- g. At about 4:50 pm to 4:55 pm, the Flood Warning Centre phoned the Executive Officer, State Disaster Coordinator to advise him of the situation and the expected progress of the flash flood.
- h. At about 4:50 pm, the FWC Hydrologist was "live" on ABC Radio and warned that the strong rises in the Helidon area should be expected in the Gatton area within the hour.
- i. At 5:00 pm, the top priority flash flood warning was issued as described above. SEWS was used to broadcast this warning.
- j. At 5:05 pm, a top priority (for immediate broadcast) Severe Weather Warning was updated and re-issued for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation for people in the Southeast Coast district, far southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.
- k. From 5:00 pm onwards, the FWC remained in close contact (telephone and email) with the State Disaster Coordinator or his representative and the SDCC to continue to update the unfolding flash flood situations in both the Lockyer Creek and the creeks, including Gowrie and Oakey Creeks flowing north westwards away from the Toowoomba and range area towards the Condamine River.
- l. Concurrently, staff in the FWC and the RFC undertook many radio interviews and briefings.
- m. At 5:25 pm, an update of the priority Flood Warning for the Condamine and Balonne River system was issued by the FWC.
- n. At 6:12 pm, an update of the priority Flood Warning for the Lockyer, Bremer, Warrill and Brisbane River below Wivenhoe Dam including Brisbane City was issued by the FWC.
- o. At 6:30 pm, updated River Height Bulletins were issued, which provide the latest available river heights for Lockyer Creek and Oakey Creek at Fairview TM. These continued to be updated and issued at 3 hourly intervals.
- p. Before 9:30 pm, the FWC 'turned off' the Helidon water level stations to prevent erroneous data from appearing in the River Height Bulletin and website as these stations had failed.

[200] Warning and briefing activities associated with the movement of the flash flood and its downstream impacts, including its projected effect on Brisbane River flood predictions, continued throughout Monday 10 January evening and overnight.

**5.6 Q5.6 Particular commentary is required from a hydrologist as to the science of the extreme rainfall, the incident in Toowoomba on 10 January 2011 and the water that ran down the range into the Lockyer.**

[201] The Bureau's Preliminary Report to the Commission of Inquiry provides a meteorological and hydrological analysis covering the rainfall and flash flood events in Toowoomba and Lockyer Creek on Monday 10 January.

[202] Some additional commentary and clarification is given below:

- The Great Dividing Range in the Toowoomba region is a common catchment boundary (catchment 'divide') of the Lockyer Creek catchments and the catchments of the metropolitan creeks (East Creek, West Creek) of Toowoomba City. Runoff generated by heavy rain falling to the east of the ridge (along the highest points) of the Great Dividing Range flows eastwards into the Lockyer Creek system, whereas rainfall falling to the west of the ridge flows in a general westwards (north-westwards) direction through Toowoomba City, before moving towards the Condamine River on the Darling Downs. This is shown in Figure 5.6.1.
- To clarify, flood waters in the Toowoomba creeks do not enter the Lockyer Creek system and did not contribute to the flash flooding in the areas of Murphys Creek, Withcott, Postmans Ridge, Helidon, Grantham and Gatton.
- Table 5.6.1 summarises the events in conjunction with Figure 5.6.1. (Text in italics indicates that the information became available in the weeks after the floods, i.e. it was not known at the time of the flash flood.)

**Table 5.6.1 Rainfall and Water Level Commentary**

<b>RAINFALLS</b>	
11 am to 1 pm	Heavy rainfall 50 mm to above 100 mm recorded in the Cressbrook Dam area (e.g. highest total of 111 mm at Redbank Creek rainfall station; located approximately 40 km to the north west of Toowoomba). The radar shows this storm cell moving in a south west direction towards Alice and Murphys Creeks catchments.
1 pm to 2 pm	Heavy rainfall in excess of 50 mm recorded in the Toowoomba area (58 mm at Toowoomba ALERT rainfall station approx 6 km north of city; 60 mm at Toowoomba Airport).  Lighter rainfalls of generally less than 10 mm at Gatton (1 mm), Sandy Creek Road near Grantham (5 mm) and Helidon (11 mm).  <i>Information received by the Bureau since the event indicates that:</i> * 180.8 mm was recorded at Withcott for the 24 hour period ending 9 am Tuesday 11 January (Source: Bureau pluvio rain gauge network) * 93 mm was recorded in 1 hour at Holmes near Spring Bluff (Source: Queensland Rail) * Report of 150 mm in 50 minutes in the Rocky Creek catchment (Source: Courier mail, original source unknown) * Report of 107 mm in 2 hours at Postmans Ridge (Source: Internet, original source unknown)

WATER LEVELS	
2 pm to 3 pm	<p>Subsequent <b>post event information</b> indicates the peak at Lockyer Creek Rail Bridge was at about 2:20 pm and that Alice and Paradise Creeks were in full flood. Rises also took place in Murphys Creek and along Rocky Creek at Withcott. Five sub-catchments of Lockyer Creek to Helidon were in full flood during this period.</p> <p>Very rapid rise in Lockyer Creek at Helidon. Automatic gauge indicated a water level rise, commencing at about 2 pm, of more than 8 metres in one hour, from about 4 metres to possibly about 12.7 metres at about 3 pm, before failing.</p> <p>Subsequently, DERM have advised that the Helidon flood peak has been surveyed as 13.88 metres and estimated to have occurred at 3:10 pm on 10 January.</p>
3 pm to 5 pm	<p>Rise of approx 1.2 metres recorded at the automatic water level station in Sandy Creek at Sandy Creek Road AL, near Grantham, possibly indicating passage of Lockyer Creek floodwaters.</p>
5 pm to 7 pm	<p>Very rapid rise in Lockyer Creek at Gatton. Automatic gauge (Gatton TM) indicated a water level rise, commencing at about 5 pm, of about 7 metres in two hours before failing.</p> <p>The Lockyer flash flood did not cause the highest flooding at Gatton and downstream. Higher flood levels were experienced at Gatton on the following day, Tuesday 11 January, due to further heavy rainfall in the Lockyer-Laidley Valley. A <b>post flood survey</b> indicates a 2011 flood peak of 15.38 metres (occurring on Tuesday 11) at the long term flood warning gauge. This compares with a 1974 flood peak of 14.63 metres. The highest recorded flood at Gatton is 16.33 metres in 1893.</p>
6 pm to 9 pm	<p>Rapid rise in Lockyer Creek at Glenore Grove. Automatic gauge indicated a water level rise, commencing at about 6 pm, of about 3.8 metres in two hours from about 10.7 metres to about 14.5 metres at about 9 pm. (Automatic gauge indicated a peak water level of about 14.6 metres at about 11 pm.)</p>
Midnight to midday Tuesday 11 January	<p>Rise in Lockyer Creek at Lyons Bridge. Automatic gauge indicated a water level rise, commencing at about midnight Monday, of about 2 metres in twelve hours from about 15.2 metres to about 17.1 metres at about midday Tuesday.</p>

- It is likely that the intensity of the highest hourly and two hourly rainfalls which could not be observed in the Lockyer catchment exceeded the 1% Annual Exceedance Probability (AEP - chance of occurrence of 1% in any given year, or a "100 year" rainfall). The 1% AEP rainfall amounts for this area are approximately 75mm for 1 hour duration and 100 mm for 2 hours duration.
- An important contributing factor to the events of 10 January is the physiography of the catchment. The steep slope of the catchments played an important role in the destructive nature of the flood that followed. Based on a preliminary analysis of the likely timing of peaks, it is estimated that the peak was travelling, on average at around 40 km per hour in the upper areas above Helidon.
- In addition to the above factors, the atypical direction of the approaching storm played a role in the flood that followed. The south westerly storm movement may have allowed peak runoff from the five sub-catchments to align more closely in downstream areas. A storm moving in the typical opposite direction would be more likely to allow the peak of the Rocky Creek and Murphys Creek flood waters to flow down the valley to Helidon before those from Alice and 15 Mile Creeks arrive.

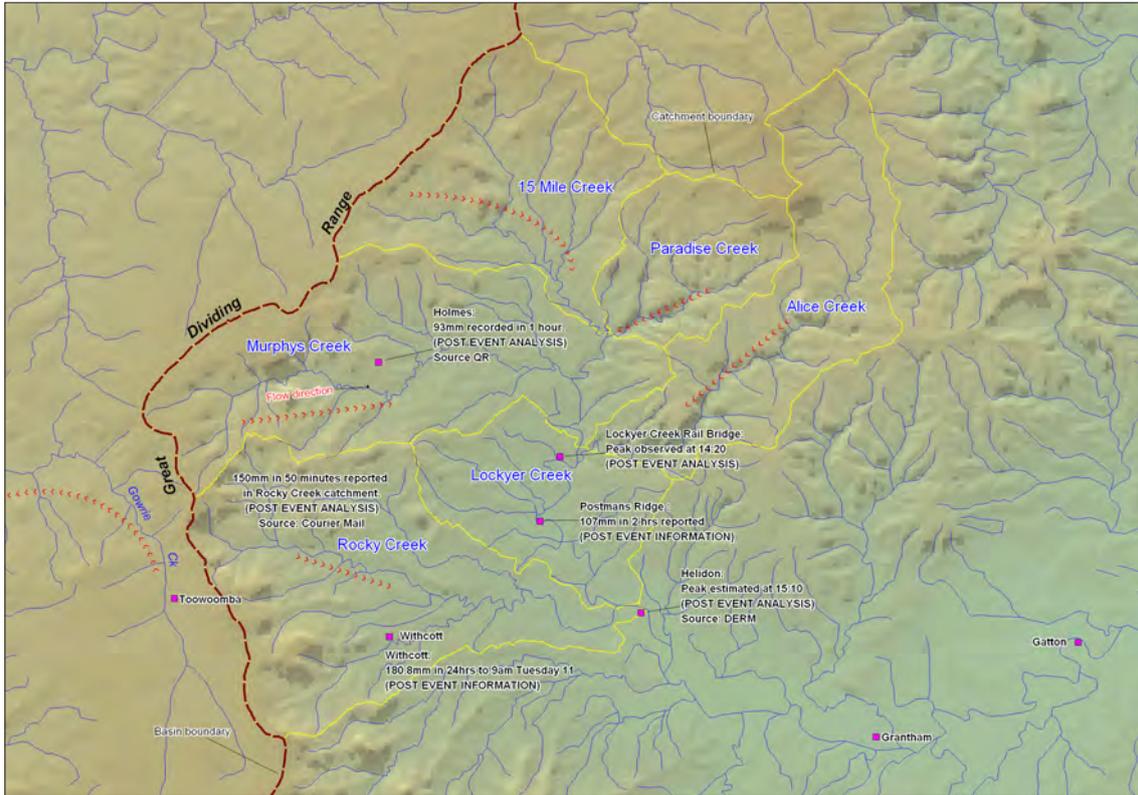


Figure 5.6.1 Map showing the direction of flow for the Lockyer Valley catchments above Helidon.

**5.7 Q5.7** In relation to this “wall of water” can the hydrologist comment on any aspect that may have lessened the impact of this – such as the geography of the land, diversion of water ways, regular clearing of creeks and rivers, levees, etc.

[203] It is not the Bureau’s role to develop or assess flood mitigation options, except when requested to contribute to the development of a flood monitoring and warning system. At times, Bureau water engineers/hydrologists are invited to participate in expert panels, steering committees or reference groups providing advice on flood studies being undertaken by other agencies (e.g. local government). The flash flood in the Lockyer Creek system was a complex phenomenon and would require detailed engineering investigations to fully understand. The Bureau could assist in an advisory panel to undertake such a study.

**6 Toowoomba Specific Issues: Warning, Forecasting and Modelling**

In relation to the storm which deposited the rain on Toowoomba on 10 January 2011, leading to flash flooding:

**6.1 Q6.1** Were there any unusual features to the appearance of the storm cell as it appeared on radar?

[204] Appendix M provides some background information about interpreting radar images. The storms propagated from northeast to southwest (from the Sunshine Coast to Toowoomba). The most common direction for severe storms that affect Toowoomba and the Lockyer Valley is in the opposite direction (i.e. from Toowoomba to the Sunshine Coast). These severe storms are generally characterised by large hail and damaging winds; any flash flooding is moderated by the usual speed of the storm movement. In this case the storms moved from northeast to southwest

(from the Sunshine Coast to Toowoomba). Major flash flood producing storms in southeast Queensland do generally approach from the eastern quadrant but usually produce most of their rainfall nearer the coast. It is usual that storms approaching the Sunshine Coast from the east to northeast dissipate over the hinterland and form broad rain bands that can then affect the eastern Darling Downs. However it is unusual that a storm originating from the Sunshine Coast with such localised rainfall intensity should maintain that intensity as far inland as Toowoomba. The storm had relatively low intensity of radar returns (reflectivity) for a storm in southeast Queensland of such high actual rainfall amounts.

## **6.2 Q6.2 What is the quality of radar coverage in Toowoomba; where are the nearest radar facilities and at what level of resolution do they operate?**

- [205] Currently southeast Queensland and the Darling Downs is serviced by weather radars at Marburg, Mt Stapylton (near Beenleigh), Gympie (Mount Kanighan) and Grafton in northern NSW.
- [206] Radar sites are chosen such that they give the best spatial coverage possible. However surrounding terrain can cause blockages of the radar beam when pointed near to the horizon thus reducing the maximum range of the radar. The radars used to forecast severe weather in the Toowoomba area generally have unimpeded coverage, except for some terrain blockage to the south west from the Marburg radar affecting coverage toward Milmerran and Inglewood.
- [207] Additionally the radars near Dulbydilla (east of Charleville) and in NSW at Moree further enhance the southeast Queensland and Darling Downs radar network allowing monitoring of upstream weather systems. In general, useful radar coverage (when not impeded by nearby terrain) extends to around only 200km due to curvature of the earth.
- [208] With regard to resolution, this can be measured in a number of ways. The angular resolution of a radar is determined by its beamwidth which in turn is determined (for a given operating wavelength) by the size of its antenna. The range resolution of radar is determined by the number of pulses it transmits every second. The 'video' resolution is determined by the number of intensity levels used when recording returned signals. Radar information is depicted with a 'display' resolution that is chosen to suit the display medium, whether it is a meteorologist's workstation or the Bureau's web site. Indeed there are many data products collected from each radar (one low resolution, low altitude product designed for display via the web and other low capacity display systems, and a high resolution hemispheric 'volume' scan product designed for display on meteorologist workstations and for use to compute other derived products such as rainfall estimates). It is also the case that each radar in the Bureau's network is configured slightly differently to take advantage of its particular site location and various hardware configurations that will vary with the dimension, type and age of the radar. For simplicity in the following comments the term resolution is used to refer to the overall spatial detail that a radar is generally able to convey to a forecaster.
- [209] Of the radars used by weather forecasters in southeast Queensland, the Brisbane (Mt Stapylton) radar operates at the highest resolution and has 'Doppler' capability to a range of 150km, which extends about 25 km west of Toowoomba area. Of the other radars only the Gympie (Mt Kanighan) radar operates in Doppler mode but at a lower resolution than the Mt Stapylton radar. The Marburg and Grafton radars operate in the lowest resolution mode. Only the Mt Stapylton radar operates with updates every 6 minutes; the other radars update every 10 minutes.
- [210] The closely spaced radars in southeast Queensland are designed to provide semi-redundant monitoring capability over greater Brisbane and the Gold and Sunshine Coast areas, with lower resolution weather monitoring capability over the remainder of southeast Queensland and the eastern Darling Downs.

[211] During the southeast Queensland flooding, all radars operating in the southeast Queensland area performed to expectations and any outages were attended to in the shortest possible time. There were no radar outages associated with the flooding experienced in southeast Queensland on 10 January 2011.

**6.3 Q6.3 Ought there to be an additional radar facility installed to provide greater coverage of the Darling Downs, and if so where?**

[212] Extensive flooding across southeast Queensland and the Darling Downs in January 2011 included devastating flash flooding in Toowoomba and the Lockyer Valley and a rise of the Brisbane River to major flood levels. The Bureau's radar network provided valuable information during these events.

[213] As explained in Section 6.2 of this Report, the Bureau's network is designed to give the best possible coverage of the area with its network of radars. The question of the value that might be provided by an additional radar facility would need to be the subject of detailed investigation and the Bureau is not able to provide comment on this specific question at this time.

**6.4 Q6.4 What steps could be taken, by way of improvement of radar coverage, modelling or otherwise; to ensure that intense localised rainfall events of the type are detected?**

[214] Extreme events can be very localised and can occur on spatial extents less than 10 x 10 km. The development of a warning service whereby intense localised events are reliably monitored and accurately modelled would require further detailed research and investigation.

**6.5 Q6.5 What rainfall reports were received for areas affected by the storm cell before it reached Toowoomba?**

[215] The Bureau has access to rainfall data at nine ALERT stations in the wider Toowoomba area. Table 6.5.1 gives hourly rainfall amounts for the period 9:00 am to 3:00 pm 10 January 2011. The display tool used for the rainfall data from the VHF radio ALERT network is the Bureau Environon software. An example of the data display at 1:00 pm 10 January 2011 is included in Figure 6.5.1.

**6.6 Q6.6 What flood gauges, if any, and what rainfall gauges exist in the Toowoomba urban area?**

[216] The Bureau has no information regarding water level stations or the water levels recorded in the Toowoomba City creek systems.

[217] The operational rainfall data (i.e. data available to the Bureau during the rain-flood event) is available from the Toowoomba AL station (owned by Seqwater) near Mt Kynoch and the Toowoomba AWS station (owned by Bureau) at Toowoomba Airport, which are both outside the catchment of the creeks upstream of the city area. More information is provided on these stations in Section 6.11 of this Report.

[218] The Toowoomba Regional Council also operates a rain gauge network around the Toowoomba City area and suburbs for its own purposes. Rainfall data from these stations is not available to the Bureau during rain-flood events, i.e. the stations are not a part of the flood warning network. While the Bureau is willing to collect and publish additional rainfall data that is compatible to its flood warning system, the Bureau does not require the data from these rainfall gauges to provide flood warnings for the very large Condamine river basin.

Table 6.5.1: Rainfall data (mm) displayed by the Bureau Enviromon system

1 HOUR TOTALS	CRESSBROOK CREEK AL	HELIDON AL	ROSENRETTERS AL	CABOONBAH AL	SOMERSET DAM AL	RAVENSBOURNE AL	UPPER CRESSBROOK CREEK AL	REDBANK CREEK AL	TOOWOOMBA AL
	540142	540143	540148	540155	540159	540299	540385	540489	
Total Midnight to midnight	97	45	93	92	144	142	80	153	96
10/01/2011 2 - 3 pm	14	1	2	6	-	8	4	6	2
10/01/2011 1 - 2 pm	3	11	-	1	8	6	6	6	55
10/01/2011 12 noon - 1 pm	54	13	29	8	4	6	30	75	10
10/01/2011 11 am - 12 noon	5	2	33	44	50	2	5	36	1
10/01/2011 10 - 11 am	1	2	1	6	18	4	1	-	-
10/01/2011 9 - 10 am	-	-	0	-	2	3	-	-	2

Note: Ravensbourne AL was reporting false data.

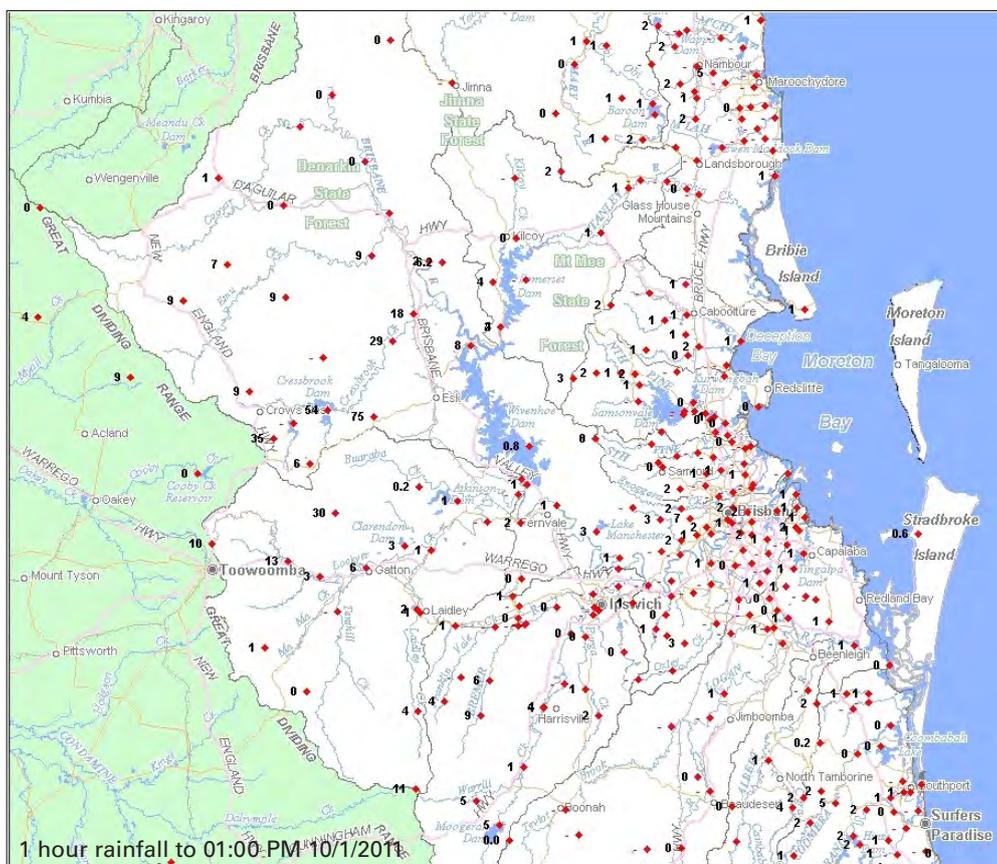


Figure 6.5.1 Example of rainfall map from the Bureau Enviromon system for the period ending 1:00 pm 10 January 2011

[219] Where there is a known flash flood threat local agencies can operate flood ALERT systems consisting of a dense network of automatic radio reporting rainfall and water level stations and a local computer to display, analyse and alarm on the data. The Bureau's role is to assist local agencies to develop such a system.

**6.7 Q6.7 What forms of warning were available to the Bureau to alert Toowoomba residents of severe weather events?**

[220] Details on the applicable forms of weather warnings and the method of distribution are discussed in Section 5.

[221] Toowoomba is part of the Darling Downs & Granite Belt district. The Darling Downs & Granite Belt forecast includes a brief weather forecast for the next day for Dalby, Warwick and Goondiwindi, with additional detail (including maximum and minimum temperature forecasts) for the next four days for Toowoomba.

**6.8 Q6.8 What warnings were given in relation to Toowoomba and at what times?**

[223] Severe Weather Warnings for heavy rain and thunderstorms conducive to flash flooding were issued for the Darling Downs and Granite Belt District (including Toowoomba) at 4.55 pm and 11 pm on 9 January 2011; 5 am, 11 am (re-issued at 11.05 to amend update time); 5.05 pm; 6.30 pm, 7.50 pm, 11 pm on 10 January; and 5.05 am on 11 January 2011. (Copies of these warnings are provided in Appendix L of this Report).

[223] The Bureau also conducted scheduled interviews with many radio stations, and provided comment to radio, newspaper and online media on request. Scheduled radio interviews were routinely held with Toowoomba based radio stations 4DDB, 4WK, 4GR and ABC Local Radio.

[224] To maintain a clear message, and reduce duplication, the Severe Weather Warning continued to be issued on a regular update cycle. This was based on the most significant phenomenon (heavy rain conducive to flash flooding) of the weather event. This decision was conveyed to emergency management authorities at the SDCC.

[225] At 1.00 pm on 10 January 2011 the Bureau contacted the SDCC Watch Desk to inform them that a pulse of really heavy rainfall was moving over the Toowoomba town area with expected flash flooding over the next hour or two. During the conversation with the SDCC, the Bureau expressed the view that the expected flash flooding could soon result in calls for assistance. This was in accord with the Bureau's standard interaction with the SDCC (see Section 3).

**6.9 Q6.9 What recordings of rainfall were made by the Bureau during the rain event in Toowoomba and over what period; where were those recordings made; and are they considered to have been accurate?**

[226] The Bureau had access to rain gauge data in real time from the Toowoomba area from stations at Toowoomba Airport (Toowoomba AWS) and from near Mount Kynoch (Toowoomba AL). Note that the Toowoomba AWS is owned and operated by the Bureau but the Toowoomba AL gauge is owned and operated by Seqwater.

[227] Hourly rainfalls from the Toowoomba AL and Toowoomba AWS stations during the rain event of Monday 10 January were as follows in Table 6.9.1:

Table 6.5.1: Rainfall recorded by the Toowoomba rain gauges on Monday 10 January 2011.

TIME	TOOWOOMBA AL	TOOWOOMBA AWS
11 am to noon	1 mm	0.2 mm
Noon to 1 pm	10 mm	8.4 mm
1 pm to 2 pm	55 mm	60.2 mm
2 pm to 3 pm	2 mm	3.6 mm
3 pm to 4 pm	7 mm	10.0 mm

[228] These rainfalls are considered to be accurate at the location of measurement.

[229] Rainfall information received from Toowoomba Regional Council after the event indicated that rainfalls in excess of the rainfalls outlined in the table at paragraph [226] of this Report were recorded around the Toowoomba City area and suburbs within the catchment areas of the Toowoomba Creek systems. For example, the highest rainfall in the recorded data obtained to date indicated rainfall intensity of about 94 millimetres in one hour ending 2:15 pm on Monday 10 January 2011.

**6.10 Q6.10 If the rainfall recordings are not considered to have been accurate, has the Bureau any alternative means of determining what the actual falls were; what are those means; and what are the results?**

[230] As outlined in Section 6.9 of this Report, the rainfalls measured at Toowoomba AL and Toowoomba AWS are considered to be accurate at the location of measurement. None of the gauges that the Bureau has access to in real time sampled the areas believed to have received the heaviest rain. Additional rain gauges would be required to provide an accurate determination of the areal extent and intensity of the storm.

[231] The Bureau is researching the use of advanced techniques to calibrate radar returns with rain gauge reports and use these to provide a better estimation of rain rates. The Bureau also has a longer term research initiative underway termed the Strategic Radar Enhancement Project (SREP). Its aim, over the next four years, is to examine the incorporation of radar data directly into high resolution numerical weather models. In addition the Bureau is a partner on a research project examining the use of more advanced polarised radar systems.

**6.11 Q6.11 A submission to the Inquiry has suggested that rainfall recording in Toowoomba occurs at the airport on the western edge of the city, whereas the heavier rain falls to its east as clouds strike the range, with the consequence that rainfall is under-reported. The suggestion is that the observation facilities should be relocated. Comment?**

[232] The Bureau has not had the opportunity to consider the submission referred to in question 6.11. The Toowoomba AWS is located at the airport on the western edge of the city for the purposes of taking observations for aviation meteorological services. As this is required to maintain aviation safety relocation is not considered an option.

[233] The Toowoomba AL rainfall station is owned by Seqwater and is located close to the top of the range in the Mt Kynoch area to serve both as a rainfall station and as a possible future VHF repeater for other stations in the Seqwater ALERT system.

[234] To enable improved monitoring of flooding in the tributaries of the upper Brisbane River, such as the major creek systems in the Lockyer Valley, and in the Toowoomba city itself, access to additional telemetered rain and river gauges would be required. Any additions to the rainfall and river monitoring networks will be a matter for consultation with the respective state and local government authorities such as DERM, Seqwater, Toowoomba Regional Council and Lockyer Valley Regional Council.

**6.12 O6.12 The same submission suggests that there is a need for the Bureau to deploy on the ground observers as well as using satellite imagery and modelling. Comment?**

[235] Manual observations by people comprise an important part of the Bureau's national observing network. The Bureau maintains volunteer rainfall networks, volunteer river height networks and paid weather observers (both Bureau staff and contracted observers) at many locations. In addition, there is a large severe thunderstorm spotter network across the country. Recently the Bureau undertook a national campaign to increase the storm spotter network. These volunteers are encouraged to call Regional Forecasting Centres around the country when severe thunderstorms are experienced at their location. They have dedicated telephone access to the forecasting centre so their reports can be delivered and considered in a timely manner. Spotters can also relay information to the Bureau through a web-based form and via a dedicated email address. Such intelligence supplements the array of other information the Bureau processes. Although nine registered spotters reside in the Toowoomba and Lockyer Valley region, the Bureau received only one call on 10 January 2011 and did not receive any information from spotters by email or web.

[236] The Bureau will continue to augment its automatic observations with on-ground observers to best support warning services. All such information is prone to human interpretation and use of this information needs to take into account the resource requirements to provide verification, maintenance and quality control.

## **7 Dams - Forecasting**

[237] The Bureau models 47 basins in Queensland using over 150 operational rainfall-runoff flood models that includes the modelling of about 28 large dams. Collectively these models are calibrated on over 1200 flood events dating back to 1893.

[238] Each dam needs to be individually modelled and has different data networks, operating procedures and characteristics in relation to modifying flood behaviour and affecting downstream flood forecasting. Importantly, flood warning operations for dams with gated spillways that allow control of outflows require different arrangements for flood prediction than a dam with fixed spillways.

[239] For gated spillways the Bureau needs estimates of future dam releases from the dam operator to be able to predict for downstream locations. For fixed spillways the Bureau models the inflows and the characteristics of the dam using the spillway to predict outflows and downstream locations.

### Wivenhoe Dam (Gated spillway) and Ipswich and Brisbane City Predictions

- [240] The flood travel time from Wivenhoe Dam to Brisbane City is around 30 hours and the catchment below Wivenhoe is over 6000 square kilometres. The Bureau aims to provide 24 hours lead time for forecasts of heights in Brisbane but this is not always possible because large floods can be generated from the lower Brisbane River catchment without releases from Wivenhoe. A large Brisbane flood also causes backwater flooding of Lockyer Creek and the Bremer River including Ipswich.
- [241] The role of the Bureau and other agencies with regard to floods in the Brisbane River is defined in the Bureau operational procedures as:
- Bureau of Meteorology:** Issue Flood Warnings including predicted river heights for Ipswich, Moggill, Jindalee and Brisbane City in consultation with the South East Queensland Water (Seqwater), Brisbane City Council and Ipswich City Council and with other Local Governments as required.
  - Seqwater:** Information to the Bureau and other agencies on the status of dams and actual and projected releases from Wivenhoe Dam and Somerset Dam. Consultation with the Bureau regarding expected flood heights along the Brisbane River downstream of Wivenhoe Dam.
  - Local Government (in particular Brisbane & Ipswich City Councils):** Detailed flood level information to their respective communities, including the interpretation of river height forecasts into expected areas and depths of inundation.
- [242] The actual and projected releases change often during events especially when the heavy rainfall continues for long periods or returns to catchments above the dams. For example, Figure 7.1 shows the projected releases provided by Seqwater FOC to the Bureau during the January 2011 flood with the final actual releases in a bolder black line. The Bureau used the Seqwater advice of actual and projected releases in its Brisbane River flood forecasting model during the process of developing and updating predicted flood levels for Brisbane and Ipswich Cities. The Bureau was also requested to examine scenarios of 9000 and 10000 cumec peak outflows from Wivenhoe Dam and how this would affect predicted flood levels for Brisbane and Ipswich.

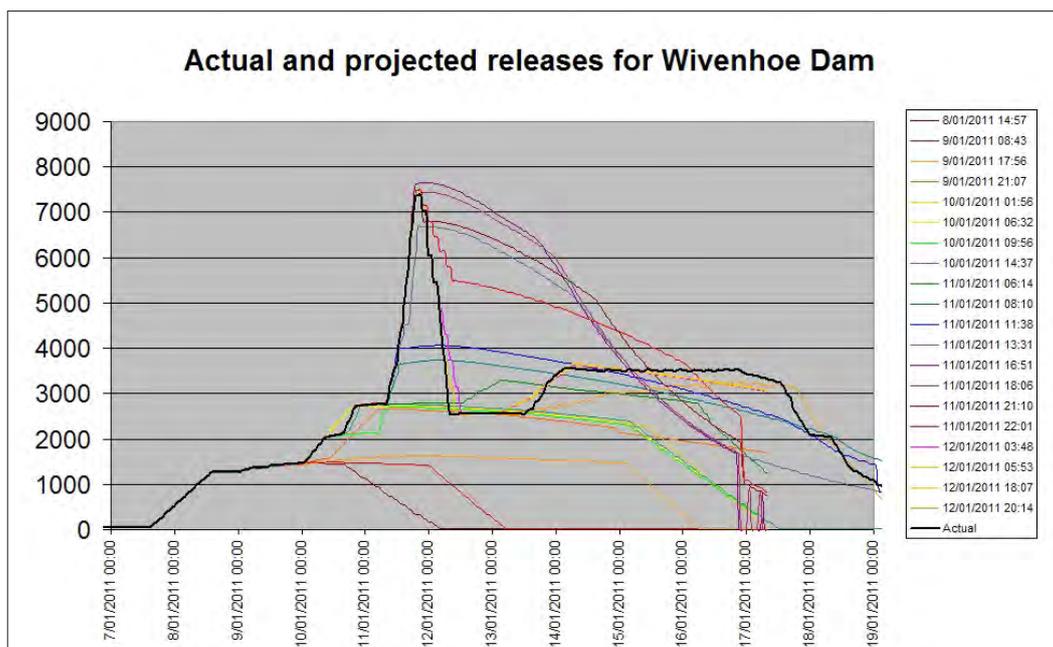


Figure 7.1 Actual and projected releases provided to the Bureau from Seqwater during the January 2011 Brisbane River Flood.

**7.1 Q7.1 In relation to forecasting provided to the operators of the Wivenhoe, Somerset and North Pine Dams, what forecast advice was given in the 2010/2011 wet season and at what times was it given?**

- [243] The following types of operational forecast advice have been provided by the Bureau to Seqwater, who are the operators of the Wivenhoe, Somerset and North Pine Dams:
- Operational forecasting and warning products;
  - 24-hour Quantitative Precipitation Forecasts (QPF) for the Dam catchments;
  - Multi-day model rainfall forecasts;
  - Flood model results;
  - Direct telephone briefings and email communications; and
  - Ad hoc forecast scenario requests.
- [244] Additionally, the Bureau publishes seasonal rainfall outlooks each month for the next three months. Based on the predicted seasonal outlook for a very wet 2010-11, and the experience of the Wivenhoe Dam releases in October 2010, the Bureau participated in several meetings with representatives from Seqwater and Brisbane City Council during October and November 2010, to discuss and refine technical capabilities and arrangements in flood prediction and warning for the Brisbane River.
- [245] The Bureau provides other rainfall related services on its website for use by dam operators in the course of operations:
- The weather radar (available through [www.bom.gov.au](http://www.bom.gov.au));
  - ACCESS meteograms forecast rainfall (based on the Bureau ACCESS Model);
  - Interactive weather and wave forecast rainfall maps (based on ACCESS Model);
  - Water and land forecast rainfall (based on an ensemble of several numerical weather prediction models);
  - Severe weather warnings.

**7.1.1 Operational forecasting and warning products**

- [246] A 24 hour quantitative precipitation forecast is provided to Seqwater for the catchments of Wivenhoe, Somerset and North Pine Dams at about 10am and 4pm each day. Below is an example of the product issued at 10:00 each morning. This product is prepared by an operational meteorologist based on the forecast strategy and best model guidance available at the time.

```
IDQ10003
BUREAU OF METEOROLOGY
Queensland Region
Brisbane Office

QUANTITATIVE PRECIPITATION FORECAST FOR SEQWB/SUNWATER)
Issued at 10:03 am EST on Sunday the 13th of March 2011

SOMERSET DAM AND WIVENHOE DAM CATCHMENTS:
Forecast of catchment average rainfall for the 24 hour period to
10 am Monday: 10 to 15 mm

NORTH PINE DAM CATCHMENT
Forecast of catchment average rainfall for the 24 hour period to
10 am Monday: 10 to 20 mm
```

- [247] Seqwater also receive:
- a. a selection of warning products. A complete list of the products sent to Seqwater is included in Table 7.1.1;
  - b. A range of multi-day model rainfall forecasts, which are outlined in Section 7.1.2 of this Report; and
  - c. Flood model results, which are publicly available and outlined in Section 7.1.3 of this Report;
  - d. Direct telephone briefings and email communications, which are outlined in Section 7.1.4 of this Report; and
  - e. Ad hoc forecast scenario requests, which are outlined in Section 7.1.5 of this Report.

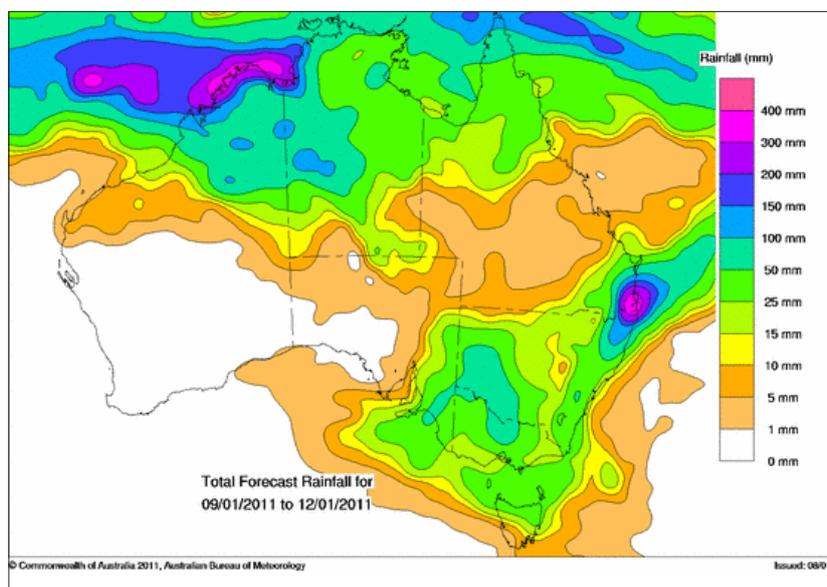
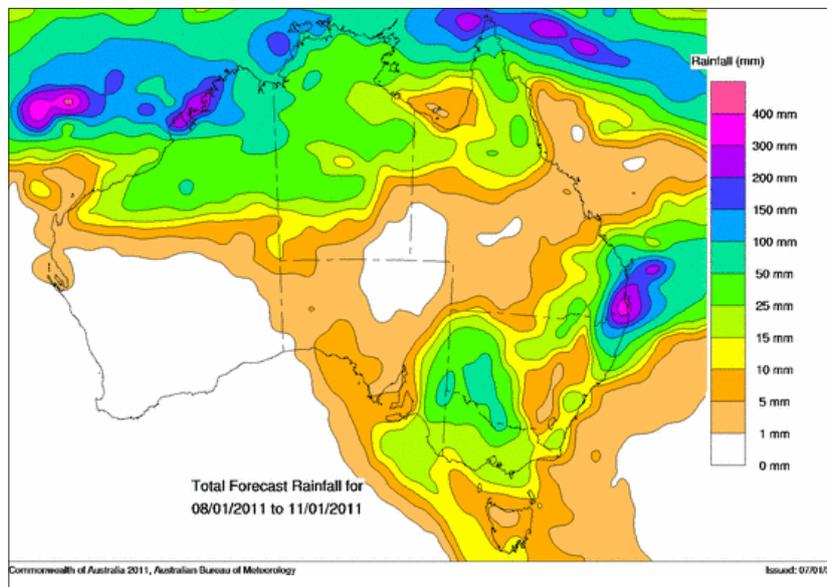
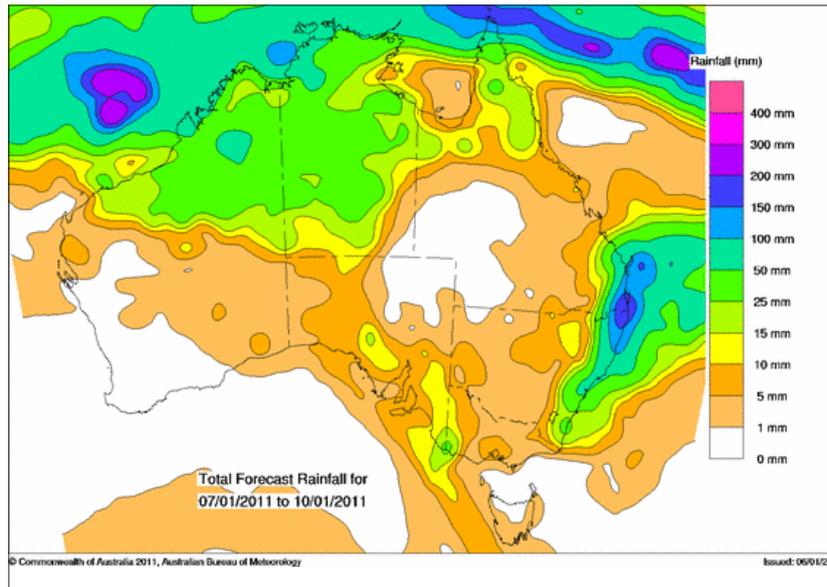
Table 7.1.1 List of forecasting and warning products received by Seqwater

PRODUCT ID	PRODUCT TITLE	DELIVERY MECHANISM	HOW OFTEN
10003	SEQWB Quantitative Precipitation	EMAIL	Routinely 10:03 and 1600 each day
20003	Tsunami Warning	EMAIL	When issued
20023	Tropical Cyclone Advice 1	EMAIL	When issued
20026	Tropical Cyclone Advice 2	EMAIL	When issued
20029	Tropical Cyclone Advice 3	EMAIL	When issued
20032	Severe Weather Warning 1	EMAIL	When issued
20033	Severe Weather Warning 2	EMAIL	When issued
20036	Fire Weather Warning 2	EMAIL	When issued
20038	Severe Thunderstorm Warning - SE Qld 1	EMAIL	When issued
20041	Severe Thunderstorm Warning - Qld 1	EMAIL	When issued
20780	FLDWARN Coastal Rs Maryborough south	EMAIL	When issued
20790	FLDWARN for the Mary River basin	EMAIL	When issued
20795	FLDWARN for the Noosa and Maroochy Rs	EMAIL	When issued
20800	FLDWARN for the Upper Brisbane R basin	EMAIL	When issued
20805	FLDWARN for Lower Brisbane and Bremer Rs	EMAIL	When issued
20810	FLDWARN for the Brisbane Creeks	EMAIL	When issued
20815	FLDWARN for the Logan Albert R basin	EMAIL	When issued
20820	FLDWARN for the Nerang and Coomera Rs	EMAIL	When issued

### 7.1.2 Multi-day model rainfall forecasts

- [248] The multi-day rainfall forecast products available on the Bureau website that Seqwater used during events include:
- a. ACCESS meteograms forecast rainfall (based on the Bureau ACCESS Model);
  - b. Interactive weather and wave forecast rainfall maps (based on ACCESS Model); and
  - c. WATL - Water and land forecast rainfall (based on an ensemble of several numerical weather prediction models);
- [249] These forecast products are based on direct model output and provide forecasts up to 8 days in graphical and tabular form. The WATL products also present the forecast in terms of probability.





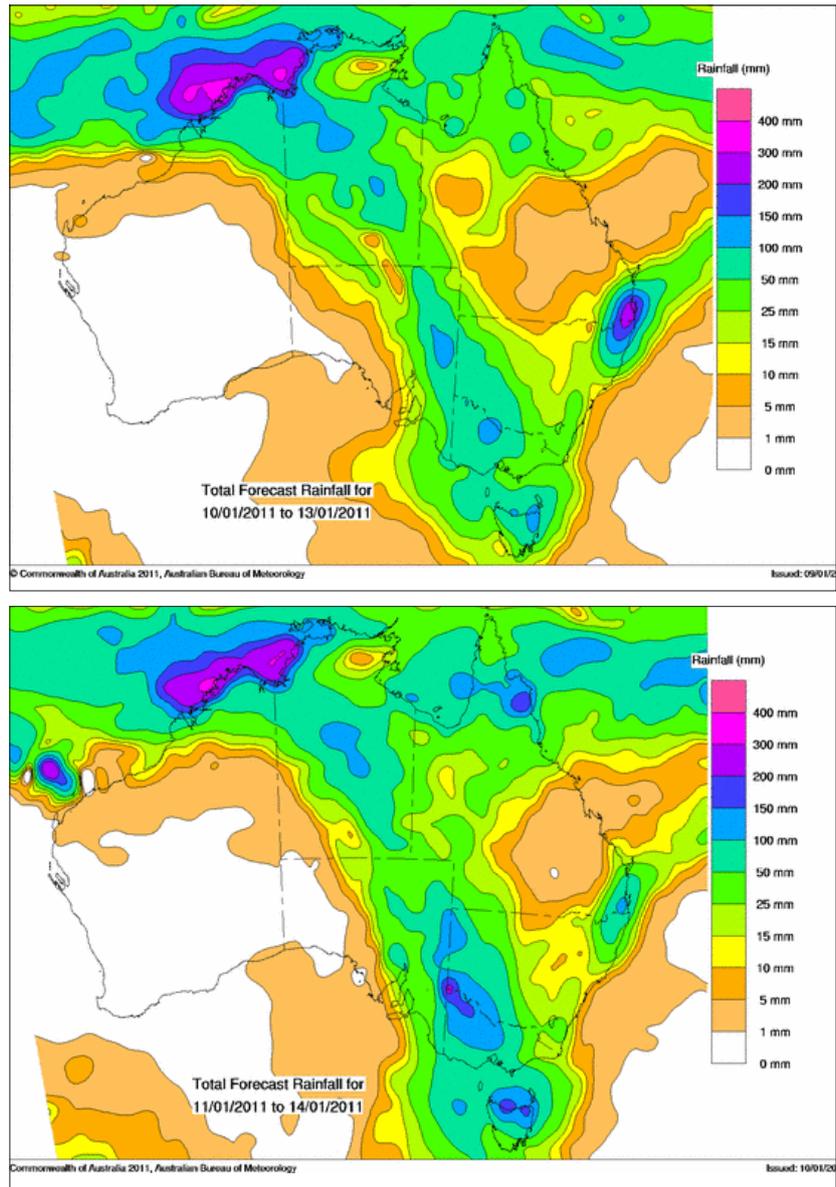


Figure 7.1.3 Four Day WATL rainfall forecast maps published daily from 6/1/2011 to 10/1/2011

### 7.1.3 Flood model results

[252] The Bureau Flood Warning Centre (FWC) allows access to its flood modelling results via a registered user (password protected) area on the Bureau website. For Wivenhoe Dam, the sharing of flood forecast model results allows the FWC and Seqwater Flood Operations Centre (FOC) to compare model results for areas upstream of the dams and for downstream areas, based on the projected outflows. The Brisbane City Council Flood Information Centre also uses the flood forecast model results for more detailed information regarding forecast heights at Moggill, Jindalee and Brisbane City. However the official predicted heights at any time are contained in the flood warnings and may differ from the predictions given by the flood forecast model

[253] The projected outflows are sent to the Bureau via email every time the release strategy and projections change. The FWC then uses this in models and publishes the results to the registered user website.

[254] The Bureau's FWC published flood model results for the Brisbane River Model 31 times between the 6 and 19 January 2011. This is summarised in Table 7.1.2.

Table 7.1.2. Dates and times of when FWC model results were published to the registered user web site.

DATE	TIME	PRODUCT
6/01/2011	15:08	IDQ65163 Brisbane River Flood Model Results
8/01/2011	06:07	IDQ65163 Brisbane River Flood Model Results
9/01/2011	18:49	IDQ65163 Brisbane River Flood Model Results
9/01/2011	23:14	IDQ65163 Brisbane River Flood Model Results
10/01/2011	07:40	IDQ65163 Brisbane River Flood Model Results
10/01/2011	10:17	IDQ65163 Brisbane River Flood Model Results
10/01/2011	14:48	IDQ65163 Brisbane River Flood Model Results
10/01/2011	22:13	IDQ65163 Brisbane River Flood Model Results
11/01/2011	02:16	IDQ65163 Brisbane River Flood Model Results
11/01/2011	07:23	IDQ65163 Brisbane River Flood Model Results
11/01/2011	09:14	IDQ65163 Brisbane River Flood Model Results
11/01/2011	11:43	IDQ65163 Brisbane River Flood Model Results
11/01/2011	17:18	IDQ65163 Brisbane River Flood Model Results
12/01/2011	00:37	IDQ65163 Brisbane River Flood Model Results
12/01/2011	08:28	IDQ65163 Brisbane River Flood Model Results
12/01/2011	17:01	IDQ65163 Brisbane River Flood Model Results
12/01/2011	18:25	IDQ65163 Brisbane River Flood Model Results
12/01/2011	21:08	IDQ65163 Brisbane River Flood Model Results
13/01/2011	02:23	IDQ65163 Brisbane River Flood Model Results
13/01/2011	02:57	IDQ65163 Brisbane River Flood Model Results
13/01/2011	09:15	IDQ65163 Brisbane River Flood Model Results
13/01/2011	11:58	IDQ65163 Brisbane River Flood Model Results
13/01/2011	14:56	IDQ65163 Brisbane River Flood Model Results
13/01/2011	18:43	IDQ65163 Brisbane River Flood Model Results
14/01/2011	09:01	IDQ65163 Brisbane River Flood Model Results
15/01/2011	11:43	IDQ65163 Brisbane River Flood Model Results
16/01/2011	16:23	IDQ65163 Brisbane River Flood Model Results
17/01/2011	05:18	IDQ65163 Brisbane River Flood Model Results
18/01/2011	10:11	IDQ65163 Brisbane River Flood Model Results
18/01/2011	14:27	IDQ65163 Brisbane River Flood Model Results
19/01/2011	07:03	IDQ65163 Brisbane River Flood Model Results

#### 7.1.4 *Direct telephone briefings and email communications*

[255] The Bureau provides a generic email address for organisations to reach staff working in the FWC. This is used to share situation reports and forecast model results.

[256] The Bureau FWC and the Seqwater FOC communicate regularly using routine and ad-hoc teleconferences, in addition to email communication. The teleconferences allow discussion on rainfall forecasts, flood model results and operational situation analysis.

### 7.1.5 *Ad-hoc forecast scenario requests*

[257] The Seqwater FOC also requested that two scenarios be provided on the afternoon of 11 January 2011. The scenarios were regarding projected downstream flood levels at Brisbane if the peak of release from Wivenhoe dam reached 9000 cumecs and 10,000 cumecs.

### 7.2 **Q7.2 In relation to forecasts regarding the Wivenhoe, Somerset and North Pine Dams, could the Bureau provide details of all communication between the Bureau and the Queensland State Department of Environment and Resource Management?**

[258] A draft or interim communications protocol was established in late 2010 between State and Local Government for flood events involving releases from Wivenhoe Dam.

[259] The Bureau communicates regularly with DERM during flood events regarding aspects of the use of the DERM gauging network for flood warning purposes. The Bureau does not normally communicate with DERM regarding forecasts for Wivenhoe, Somerset and North Pine Dams. DERM is the dam regulator and Seqwater is the dam owner/operator. For the purposes of this question the communication with Seqwater will be provided.

[260] In accordance with agreed arrangements and within the scope of the interim protocol the Bureau and the Seqwater Flood Operations Centre communicated extensively during flood events in South East Queensland. The forms of communication can be summarised as:

- a. **Operational forecasting and warning products:** See 7.1 for a full listing of the operational products provided to Seqwater.
- b. **Situation Reports:** The Seqwater Flood Operations Centre sends regular Situation Reports for Wivenhoe, Somerset and North Pine Dams to a generic email address that all staff in the FWC can access. These documents describe the release strategy in a high level.
- c. **Actual and Project Wivenhoe Releases:** The Seqwater Flood Operations Centre sends regular detailed actual and projected release data to the FWC via email. This provides a time series (date, time, value) of releases and can be easily included in the Bureau's flood modelling for the Lower Brisbane River.
- d. **Flood Event - Operations Directives:** The Bureau receives a drop copy of the gate operations directives. It is of no direct use to the Bureau and for information only.
- e. **Ad hoc forecast scenario requests:** The Seqwater FOC also requested that two scenarios be provided on the afternoon of 11 January 2011. The scenarios were regarding projected downstream flood levels at Brisbane if the peak of release from Wivenhoe dam reached 9000 cumecs and 10,000 cumecs.
- f. **Technical discussions via phone or email:** The Bureau's FWC and the Seqwater Flood Operations Centre are involved in technical discussions regarding flood modelling for the Brisbane River basin. The Bureau publishes the FWC model results to a registered user website as a basis for these discussions.
- g. **Disaster management meetings involving both agencies:** The Bureau provides briefings to many levels of the Disaster management system and Seqwater are present at some of these meetings.
- h. **Data communications:** With Seqwater support, the Bureau receives all data directly via VHF radio from the Seqwater ALERT system for the Brisbane Valley. The Bureau forwards a data stream of event reporting radio telemetry data to the Seqwater and SunWater computing systems. This includes additional rainfall data for the Brisbane River catchment and neighbouring catchments.

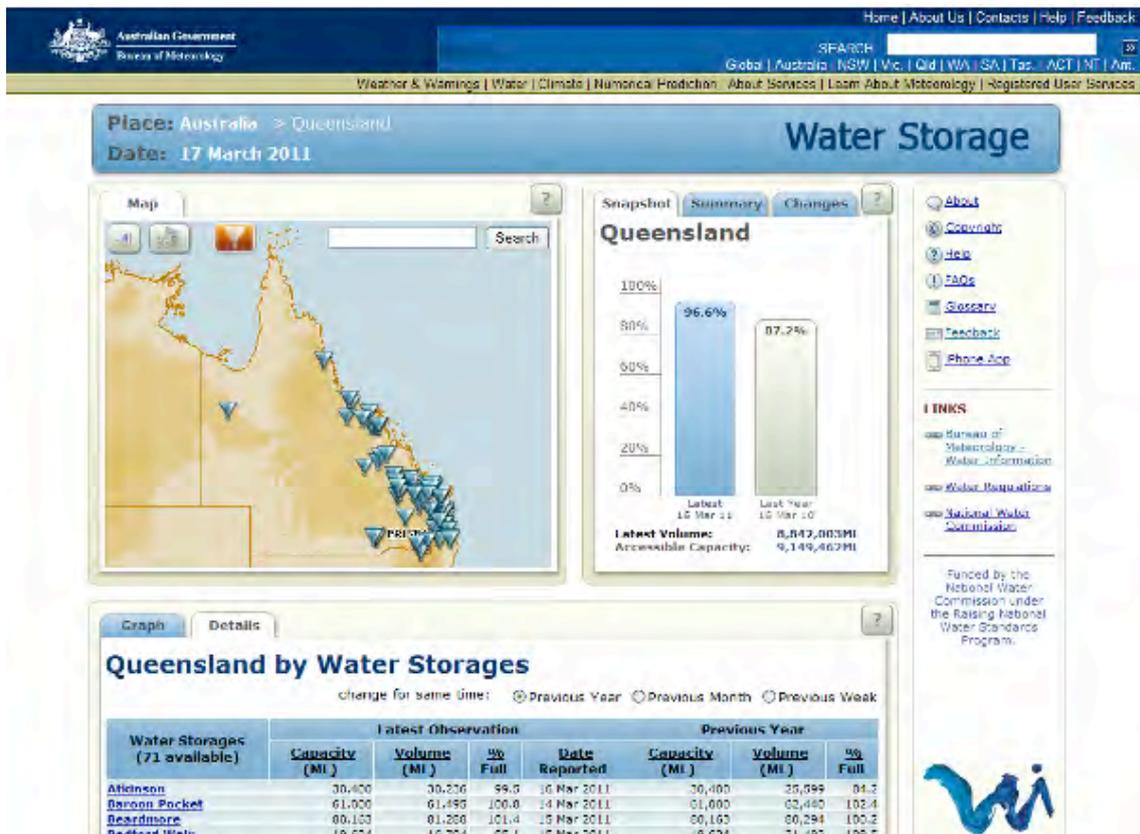
- i. **The Bureau Website:** The Bureau provides a large amount of information via the Bureau website. This includes forecasts, warnings, radar, rainfall and water level data. Seqwater are a registered user of the Bureau website and use this to access gridded forecast rainfall forecasts from the Bureau ACCESS model.

[261] During non-operational times the Bureau has been involved in flood exercises and scientific advisory groups that included aspects of the operations of Wivenhoe Dam.

**7.3 Q7.3 Is there any other dam-related data the Bureau gathers?**

[262] The Bureau collects storage related data as part of the Commonwealth Water Act (2007) and provides this to the public on the Water Storages website.  
<http://water.bom.gov.au/waterstorage/awris/index.html>

This site is intended for water resources reporting. It reports daily average levels and typically has a latency of 2-3 days for most of the approximately 260 dams that are included in the web site. In this regard it is of limited use in the flood forecasting and warning process.



[263] The Bureau also has copies of operational manuals and emergency action plans for some dams in Queensland and has technical data such as spillway ratings and dam storage tables that are required for flood modelling involving dams.

[264] The Bureau models 47 basins in Queensland using over 150 operational rainfall-runoff flood models that include modelling of 28 large dams.

## 8 Dams - Data

8.1 On a Queensland wide basis, could the Bureau provide the Commission with the following data, records, documents and communications in relation to:

8.1.1 *Q8.1.1 Climate data and developing conditions*

[265] See section 2 and Appendix E.

8.1.2 *Q8.1.2 Rainfall predictions for 2010-11 wet season*

[266] See paragraph [272] for maps from the Seasonal Climate Outlooks issued during the 2010-11 wet season.

8.1.3 *Q8.1.3 Warnings/information communicated to catchment managers*

[267] See section 3 and Appendix A for list of all warnings, and Appendices B, C, D and L for copies of warnings.

8.1.4 *Q8.1.4 Rainfall and radar data*

[268] The Bureau has provided access to these data sets for a range of users. It is provided for the Commission on a memory stick.

8.2 Q 8.2 For each catchment area for Queensland could the Bureau provide the Commission with the following data, records, documents and communications:

8.2.1 *Q8.2.1 Document the pre-conditions, including SOI from January 2010 to the present.*

[269] The meteorology and influence of the preconditions are discussed above in the Section 2.1.1 of this Report and in Appendix E. The major preconditions are the abnormally high rainfall in the 5 months up to and including the month of December 2010. In particular both September and December 2010 were the wettest on record (that is wettest September, wettest December) for the state of Queensland. The rainfall decile maps for the 3-month seasons over 2010 are shown in Figure 8.2.1.1. It is noteworthy that for spring 2010 (September-November) almost the entire state had rainfall in the 10th decile. This means at each location 90% of years received less rainfall during spring.

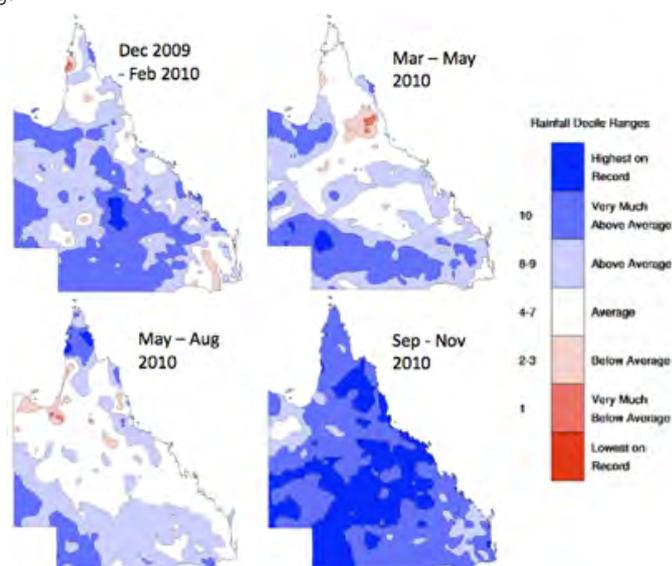


Figure 8.2.1.1 Three monthly rainfall Deciles over the State of Queensland for summer, autumn, winter and spring during the year 2010.

[270] The time series of the Southern Oscillation Index SOI which monitors ENSO is shown in Appendix E. The positive SOI relates to La Niña conditions and negative to El Niño. The beginning months of 2010 were under the end of an El Niño event. The SOI went positive in March and from July onwards showed persistent large positive values signifying a La Niña. Measuring by this simple index, it was one of the strongest La Niña events on record. The average August to December SOI (+21.1) is the second highest on record, coming after the La Niña of 1917-18 (+24.4) with the 1975-76 La Niña value (+18.8) ranked third.

[271] The values of the SOI from January 2010 to present are:

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	-10.1	-14.5	-10.6	-15.2	10.0	1.8	20.5	18.8	25.0	18.3	16.4	27.1
2011	19.9	22.3										

### 8.2.2 Q8.2.2 Document other indicators e.g. climate models.

[272] Seasonal Forecasts are issued every month by the National Climate Centre. These are based on an objective statistical model using global sea surface temperature patterns as predictors. These predictors include the sea surface temperature patterns associated with the La Niña. The 3-monthly forecasts for Queensland for November 2010 to January 2011, and for December 2010 to February 2011 are shown in Figures 8.2.2.1 and 8.2.2.2 below. The forecast for November 2010 to January 2011 gives higher than normal probabilities of above average rainfall across Queensland. The forecast for December through February continued higher probabilities of above normal for the southeast of the State. These forecasts are based on objective statistical schemes trained on data from the preceding years of record. Thus, they show the extent to which the heavy rain could have been anticipated based purely on sea surface temperature and ENSO indices.

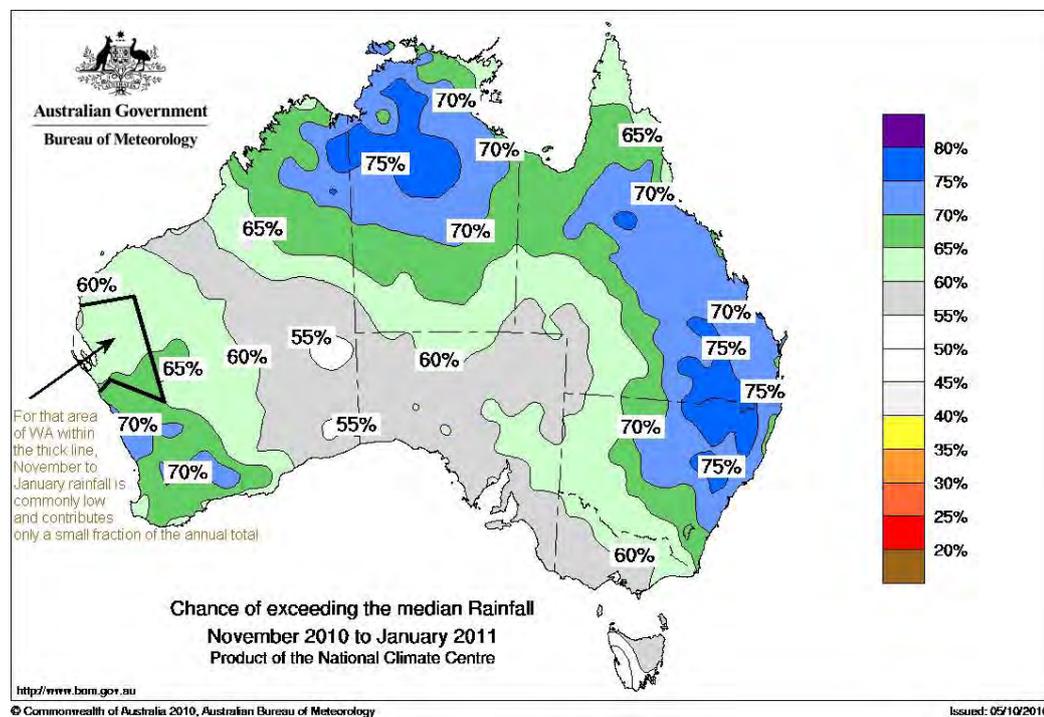


Figure 8.2.2.1 The operational Seasonal rainfall outlook for November 2010 to January 2011, issued by the Bureau of Meteorology on 26 October 2010.

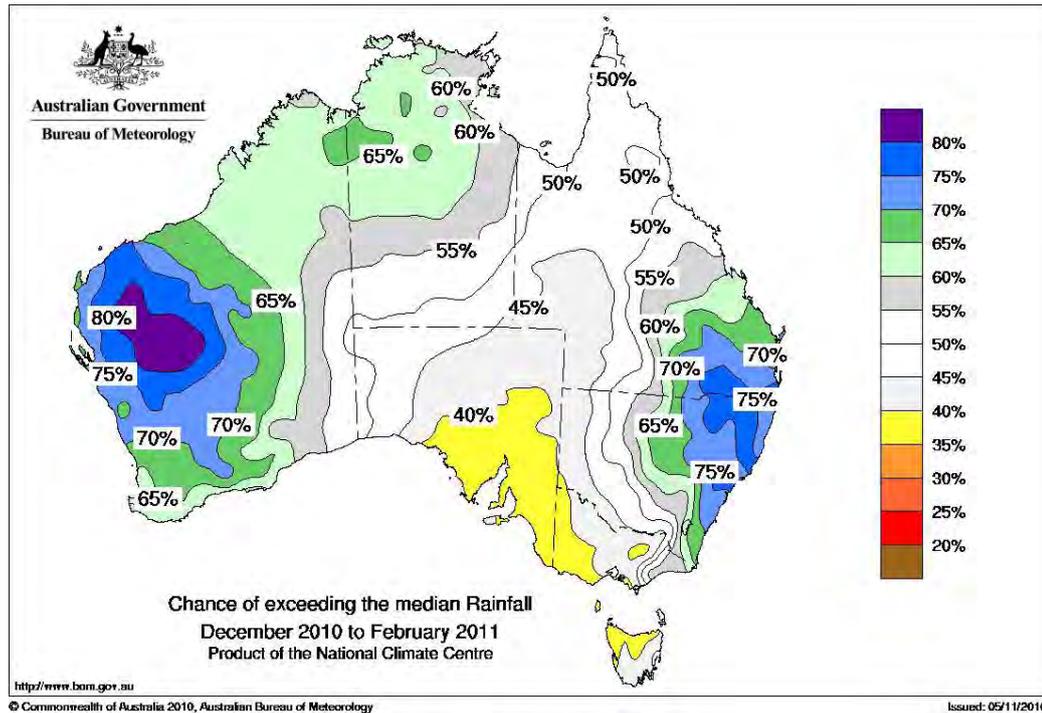


Figure 8.2.2.2 The operational Seasonal rainfall outlook for December 2010 to February 2011, issued by the Bureau of Meteorology on 23 November 2010.

[273] A model called Predictive Ocean Atmosphere Model for Australia (POAMA) is run operationally at the Bureau and produces forecast products of sea surface temperature anomalies in the Indian and Pacific Oceans. Some experimental rainfall forecasts are available as prototype from the Centre for Australian Weather and Climate Research (CAWCR).

[274] A discussion paper documenting "Climate Monitoring and Prediction advice leading up to the eastern Australian floods" has been prepared by the National Climate Centre and is supplied as Appendix N.

### 8.2.3 Q 8.2.3 Developing conditions for each flood event

[275] See Section 2 of this Report and location specific fact sheets in Appendix J.

### 8.2.4 Q 8.2.4 Description of causes of each event

[276] See Section 2 of this Report and location specific fact sheets in Appendix J.

### 8.2.5 Q 8.2.5 Warnings and information issued by the Bureau during the 2010/2011 wet season

[277] See Appendix A for list of all warnings, and Appendices B, C, D and L for copies of warnings.

### 8.3 Q8.3 To provide information in risk indicators, can the Bureau provide: individual "event" rainfall probabilities

[278] See location specific fact sheets in Appendix I. The Bureau is not able to provide the remainder of information that has been requested in this question, as local councils are responsible for maintaining up to date flood risk estimates for their localities.

<b>ABBREVIATIONS</b>	
ACCESS	Australian Community Climate and Earth System Simulator
AL	Alert Station
AWS	automatic weather station
BCM	Business Continuity Management
CAWCR	Centre for Australian Weather and Climate Research (Bureau of Meteorology/CSIRO)
CMSS	Corporate message switching system
CSRP	Cloud Seeding Research Project
DDC	District Disaster Committee
DERM	Department of Environment and Resource Management
EAP	Emergency action plans
EMQ	Emergency Management Queensland
ENSO	El Niño-Southern Oscillation
EST	Eastern standard time
FOC	Flood Operations Centre (Seqwater)
FWC	Flood Warning Centre (Bureau of Meteorology)
ITCZ	Intertropical convergence zone
LDC	local Disaster Committee
LDMG	Local Disaster Management Group
LGA	Local government areas
MJO	Madden Julian Oscillation
NCC	National Climate Centre (Bureau of Meteorology)
NWP	Numerical weather prediction
POAMA	Predictive Ocean Atmosphere Model for Australia
QCCCE	Queensland Climate Change Centre of Excellence
QPF	Quantitative Precipitation Forecast
RFC	Regional forecast centre (Bureau of Meteorology)
RHB	River Height Bulletins
RSS	really simple syndication
SDCC	State Disaster Coordination Centre
SDCG	State Disaster Coordination Group
SDMG	State Disaster Management Group
Seqwater	Southeast Queensland Water
SEWS	Standard Emergency Warning Signal
SOI	Southern oscillation index
SREP	Strategic Radar Enhancement Project
TITAN	Thunderstorm Identification Tracking and Nowcasting
TM	telemetry station
UPS	uninterrupted power supply

<b>ABBREVIATIONS</b>	
WATL	Water and the Land website (Bureau of Meteorology)
WIRADA	Water Information Research and Development Alliance
WMO	World Meteorological Organization

## Appendices

- A. List of warnings issued 9 to 12 January 2011
- B. Copies of severe weather warnings December 2010 to January 2011
- C. Copies of severe thunderstorm warnings issued December 2010 to January 2011
- D. Copies of flood warnings issued December 2010 to January 2011
- E. A discussion paper on the meteorology of the rainfall associated with the December to January floods across the state
- F. Table and map of flood affected towns and Local Government Areas
- G. Table of regions based on flood classification
- H. A selection of record flood peak heights reached during December 2010 and January 2011.
- I. Flood summaries for a selection of flood affected towns
- J. Specific activities and briefings
- K. ARI information
- L. Copies of warnings for Lockyer valley and Toowoomba
- M. Interpreting radar images
- N. NCC "Climate Monitoring and Prediction advice leading up to the eastern Australian floods"
- O. Table of all peak heights recorded in the Bureau Peak Height Database between 1/12/2010 and 12/3/2011



**Australian Government**  
**Bureau of Meteorology**

Appendix A

## List of warnings issued 9 to 12 January 2011

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## Appendix A: List of warnings issued 9 to 12 January 2011

DATE	TIME OF ISSUE	WARNING HEADER
Sunday 9 January 2011	4:40:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district and southern parts of the Wide Bay and Burnett. Issued at 4:40 am on Sunday 9 January 2011
Sunday 9 January 2011	7:27:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 7:27 AM on Sunday the 9th of January 2011
Sunday 9 January 2011	9:13:00	FLOOD WARNING FOR WARRILL CREEK THE LOWER BRISBANE BELOW WIVENHOE Issued at 9:13 AM on Sunday the 9th of January 2011
Sunday 9 January 2011	9:28:00	FLOOD WARNING FOR THE STANLEY RIVER BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 9:28 AM on Sunday the 9th of January 2011
Sunday 9 January 2011	10:55:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett, and eastern Darling Downs and Granite Belt District. Issued at 10:55 am on Sunday 9 January 2011
Sunday 9 January 2011	14:12:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 2:12 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	14:48:00	FLOOD WARNING FOR COASTAL STREAMS FROM MARYBOROUGH TO THE NSW BORDER Issued at 2:48 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	15:28:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 3:28 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	16:55:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett, and eastern Darling Downs and Granite Belt District. Issued at 4:55 pm on Sunday 9 January 2011
Sunday 9 January 2011	19:05:00	FLOOD WARNING FOR COASTAL STREAMS FROM MARYBOROUGH TO THE NSW BORDER Issued at 7:05 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	22:38:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 10:38 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	22:55:00	FLOOD WARNING FOR THE LOWER BRISBANE BELOW WIVENHOE Issued at 10:55 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	23:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 11:00 pm on Sunday 9 January 2011
Sunday 9 January 2011	23:02:00	FLOOD WARNING FOR COASTAL STREAMS FROM MARYBOROUGH TO THE NSW BORDER Issued at 11:02 PM on Sunday the 9th of January 2011
Sunday 9 January 2011	23:46:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 11:46 PM on Sunday the 9th of January 2011
Monday 10 January 2011	0:36:00	FLOOD WARNING FOR THE LOWER BRISBANE BELOW WIVENHOE Issued at 12:36 AM on Monday the 10th of January 2011
Monday 10 January 2011	1:44:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 1:44 AM on Monday the 10th of January 2011

<b>DATE</b>	<b>TIME OF ISSUE</b>	<b>WARNING HEADER</b>
Monday 10 January 2011	5:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 5:00 am on Monday 10 January 2011
Monday 10 January 2011	6:13:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 6:13 AM on Monday the 10th of January 2011
Monday 10 January 2011	9:16:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 9:16 AM on Monday the 10th of January 2011
Monday 10 January 2011	9:19:00	FLOOD WARNING FOR COASTAL STREAMS FROM MARYBOROUGH TO THE NSW BORDER Issued at 9:19 AM on Monday the 10th of January 2011
Monday 10 January 2011	10:28:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE Issued at 10:28 AM on Monday the 10th of January 2011
Monday 10 January 2011	10:53:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 10:53 AM on Monday the 10th of January 2011
Monday 10 January 2011	11:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 11:00 am on Monday 10 January 2011
Monday 10 January 2011	11:05:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 11:05 am on Monday 10 January 2011 (Re-issued to amend update time)
Monday 10 January 2011	16:16:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 4:16 PM on Monday the 10th of January 2011
Monday 10 January 2011	17:00:00	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 5:00 PM on Monday the 10th of January 2011
Monday 10 January 2011	17:05:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast district, far southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district. Issued at 5:05 pm on Monday 10 January 2011
Monday 10 January 2011	17:22:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 5:22 PM on Monday the 10th of January 2011
Monday 10 January 2011	17:25:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 5:25 PM on Monday the 10th of January 2011
Monday 10 January 2011	18:12:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 6:12 PM on Monday the 10th of January 2011
Monday 10 January 2011	18:30:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt and eastern parts of the Maranoa and Warrego districts. Issued at 6:30 pm on Monday 10 January 2011

<b>DATE</b>	<b>TIME OF ISSUE</b>	<b>WARNING HEADER</b>
Monday 10 January 2011	19:50:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts. Issued at 7:50 pm on Monday 10 January 2011
Monday 10 January 2011	20:37:00	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 8:37 PM on Monday the 10th of January 2011
Monday 10 January 2011	21:44:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 9:44 PM on Monday the 10th of January 2011
Monday 10 January 2011	22:32:00	FLOOD WARNING FOR THE CONDRAMINE AND BALONNE RIVER SYSTEM Issued at 10:32 PM on Monday the 10th of January 2011
Monday 10 January 2011	23:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts. Issued at 11:00 pm on Monday 10 January 2011
Tuesday 11 January 2011	0:06:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 12:06 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	0:19:00	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 12:19 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	4:06:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 4:06 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	4:10:00	FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 4:10 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	5:05:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts. Issued at 5:05 am on Tuesday 11 January 2011
Tuesday 11 January 2011	6:55:00	FLOOD WARNING FOR THE CONDRAMINE AND BALONNE RIVER SYSTEM Issued at 6:55 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	6:56:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 6:56 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	7:27:00	FINAL FLASH FLOOD WARNING FOR LOCKYER CREEK Issued at 7:27 AM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	8:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to localised flash flooding and worsening the existing river flood situation For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Issued at 8:00 am on Tuesday 11 January 2011
Tuesday 11 January 2011	9:28:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 9:28 AM on Tuesday the 11th of January 2011

<b>DATE</b>	<b>TIME OF ISSUE</b>	<b>WARNING HEADER</b>
Tuesday 11 January 2011	11:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to flash flooding and worsening the existing river flood situation For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Issued at 11:00 am on Tuesday 11 January 2011
Tuesday 11 January 2011	12:30:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 12:30 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	13:02:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 1:02 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	14:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to flash flooding and worsening the existing river flood situation For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Issued at 2:00 pm on Tuesday 11 January 2011
Tuesday 11 January 2011	14:15:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 2:15 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	15:24:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 3:24 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	16:52:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 4:52 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	17:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to flash flooding and worsening the existing river flood situation For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Issued at 5:00 pm on Tuesday 11 January 2011
Tuesday 11 January 2011	18:44:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 6:44 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	20:05:00	FLOOD WARNING FOR THE LOCKYER, BREMER, WARRILL AND BRISBANE RIVER BELOW WIVENHOE INCLUDING BRISBANE CITY Issued at 8:05 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	22:00:00	SEVERE WEATHER WARNING for heavy rainfall leading to flash flooding and worsening the existing river flood situation For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Issued at 5:00 pm on Tuesday 11 January 2011
Tuesday 11 January 2011	23:07:00	FLOOD WARNING FOR THE CONDAMINE AND BALONNE RIVER SYSTEM Issued at 11:07 PM on Tuesday the 11th of January 2011
Tuesday 11 January 2011	23:18:00	FLOOD WARNING FOR THE STANLEY RIVER AND BRISBANE RIVER ABOVE WIVENHOE DAM Issued at 11:18 PM on Tuesday the 11th of January 2011



**Australian Government**  
**Bureau of Meteorology**

Appendix B

## Copies of Severe Weather Warnings

December 2010 to January 2011

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**Australian Government**

**Bureau of Meteorology**

IDQ20032

Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for rainfall with locally moderate to heavy falls and potential for flooding  
For people over a broad area of Queensland from the Gulf of Carpentaria to  
Southeast Queensland and parts of Cape York Peninsula.

Issued at 12:45 pm on Thursday 23 December 2010

**Synoptic Situation:**

The monsoon trough extends across northern Cape York Peninsula. A low is deepening on the monsoon trough and will move towards Cape York Peninsula during today and Friday. Moist onshore winds are feeding into an upper level trough and producing widespread areas of rain, showers and thunderstorms over eastern Queensland.

Scattered showers thunderstorms and general rain areas will continue over eastern Queensland for the coming week.

Heavy rainfall leading to flash flooding is expected on the coast between Cooktown and Ingham this afternoon and tonight.

Locally heavy falls may occur with thunderstorms elsewhere in the broad warning area.

Tides are expected to remain higher than normal and exceed the high water mark on the high tide over the next few days. This will cause inundation in low lying areas on the high tide.

**Recent Events:**

Abergowrie Bridge near Cardwell has recorded 269mm of rainfall in the 24 hours to 9am this morning.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5:00 pm Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for rainfall with locally moderate to heavy falls and flooding  
For people over a broad area of Queensland from the Gulf of Carpentaria to  
Southeast Queensland and parts of Cape York Peninsula.

Issued at 4:45 pm on Thursday 23 December 2010

**Synoptic Situation:**

The monsoon trough extends across northern Cape York Peninsula. A low is deepening on the monsoon trough and will move towards Cape York Peninsula during today and Friday. Moist onshore winds are feeding into an upper level trough and producing widespread areas of rain, showers and thunderstorms over eastern Queensland.

Scattered showers thunderstorms and general rain areas will continue over eastern Queensland for the coming week.

Heavy rainfall and thunderstorm activity leading to flash flooding is expected to increase on the coast and adjacent inland between Cooktown and Ingham tonight and tomorrow.

Locally heavy falls may occur with thunderstorms elsewhere in the broad warning area.

Tides are expected to remain higher than normal and exceed the high water mark on the high tide over the next few days. This will cause inundation in low lying areas on the high tide.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 pm Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**  
for rainfall with locally heavy falls, possibly leading to or worsening flooding  
For people over a broad area east of the Gulf of Carpentaria to Southeast  
Queensland.

Issued at 10:45 pm on Thursday 23 December 2010

**Synoptic Situation:**

The monsoon trough extends across northern Cape York Peninsula. A low is expected to develop on the monsoon trough over the northwest Coral Sea on Friday and move towards the Northeast Tropical Coast early Saturday. A combination of moist onshore winds and an upper level trough is producing widespread areas of rain, showers and thunderstorms over eastern Queensland.

Scattered showers, thunderstorms and general rain areas with locally heavy falls will continue over eastern Queensland for the coming week.

Heaviest rainfalls and thunderstorm activity, possibly leading to flash flooding, are expected to focus on the tropical east coast and adjacent inland between Cooktown and Mackay in the next 24 hours. Some locally heavy falls are also expected to develop about the southeast coast during Friday evening.

Tides are also expected to remain higher than normal and exceed the high water mark over southeastern Queensland on the high tide over the next couple of days. This will cause inundation in low lying areas on the high tide.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5:00 am Friday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for rainfall with locally heavy falls, possibly leading to or worsening flooding  
For people over a broad area east of the Gulf of Carpentaria to Southeast  
Queensland.

Issued at 4:40 am on Friday 24 December 2010

**Synoptic Situation:**

The monsoon trough extends across northern Cape York Peninsula. A low is expected to develop on the monsoon trough over the northwest Coral Sea today and move towards the Northeast Tropical Coast early Saturday. A combination of moist onshore winds and an upper level trough is producing widespread areas of rain, showers and thunderstorms over eastern Queensland.

Scattered showers, thunderstorms and general rain areas with locally heavy falls will continue over eastern Queensland for the coming week.

Heaviest rainfalls and thunderstorm activity, possibly leading to flash flooding, are expected to focus on the tropical east coast and adjacent inland between Cooktown and Mackay in the next 24 hours. Some locally heavy falls are also expected to develop about the southeast coast during this evening.

Tides are also expected to remain higher than normal and exceed the high water mark over southeastern Queensland on the high tide over the next couple of days. This will cause inundation in low lying areas on the high tide.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 am Friday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING

for rainfall with locally heavy falls, possibly leading to or worsening flooding  
For people in a broad area east of the Gulf of Carpentaria to Southeast  
Queensland, particularly about the coast and ranges between Cairns and St  
Lawrence.

Issued at 11:15 am on Friday 24 December 2010

Synoptic Situation:

The monsoon trough extended across northern Cape York Peninsula to a monsoon low located near Willis island in the Coral Sea. The monsoon low is expected to continue to move in a west south-west direction and cross the north tropical coast during Saturday morning. The combination of moist onshore winds and an upper level trough over Qld will continue to produce widespread areas of rain, showers and thunderstorms over eastern Queensland.

Scattered showers, thunderstorms and general rain areas with locally heavy falls will continue over eastern Queensland for the next few days.

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Area most affected in the next 24 hours:

Heaviest rainfalls and associated flooding are expected to focus on the tropical east coast and adjacent inland between Cairns and St Lawrence during the next 24 hours.

\*\*\*\*\*  
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Tides are also expected to remain higher than normal and exceed the high water mark over southeastern Queensland on the high tide over the next couple of days. This will cause inundation in low lying areas on the high tide.

The situation across Qld will continue to be monitored and be updated every 6 hours to advise of the areas most likely to be affected.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 am Friday



**Australian Government**

**Bureau of Meteorology**

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for damaging wind gusts, heavy rainfall and further flooding  
For people in about the coast, ranges and adjacent inland between Cairns and St  
Lawrence.

Issued at 4:45 pm on Friday 24 December 2010

**Synoptic Situation:**

The monsoon trough extended across northern Cape York Peninsula to a monsoon low located near Willis island in the Coral Sea. The monsoon low is expected to continue to move in a south-west direction and cross the north tropical coast near Cairns during Saturday morning.

Damaging wind gusts to 90 kph will develop overnight between Cairns and Bowen, particularly about the higher ground including the Atherton Tablelands. These wind gusts will extend westwards into the adjacent inland during Saturday morning.

Heavy rainfall and associated flooding will continue on the coast between Cairns and St Lawrence and extend inland during Saturday.

Scattered showers, thunderstorms and general rain areas will continue over remaining eastern areas of Queensland for the next few days. Some localised heavy falls may occur.

The situation across Qld will continue to be monitored and be updated every 6 hours to advise of the areas most likely to be affected.

The State Emergency Service advises that people in the affected area should:

- beware of fallen trees and powerlines
- secure loose outdoor items
- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 pm Friday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Damaging Winds, Heavy Rainfall and Further Flooding

For people about the coast, ranges and adjacent inland areas between Cairns and St Lawrence.

Issued at 11:15 pm on Friday 24 December 2010

Synoptic Situation: At 10pm, the monsoon trough extended across northern Cape York Peninsula to a monsoon low located in the northwest Coral Sea, approximately 300km northeast of Cairns. The monsoon low has been slowly intensifying and is expected to continue intensifying and move in a southwest direction and cross the north tropical coast between Cairns and Cardwell during Saturday morning.

Damaging wind gusts to 90 kilometres per hour will develop overnight between Cairns and Bowen, particularly about the higher ground, including the Atherton Tablelands. These wind gusts will extend westwards into the adjacent inland during Saturday morning.

Heavy rainfall and associated flooding will continue in coastal areas between Cairns and St Lawrence overnight and extend inland during Saturday. Some localised heavy falls may occur.

The situation will continue to be monitored and will be updated every 3 hours.

**Recent Events:**

- 592mm of rainfall has been recorded at Clarke Range Alert [west of Mackay] within the last 48 hours.

The State Emergency Service advises that people in the affected area should:

- beware of fallen trees and powerlines
- secure loose outdoor items
- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 2 am Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**  
for Damaging Winds, Heavy Rainfall and Further Flooding  
For people about the coast, ranges and adjacent inland areas between Port  
Douglas and St Lawrence.

Issued at 12:40 am on Saturday 25 December 2010

Synoptic Situation: At 11pm a Tropical Low was estimated to be 175 km ENE of Cairns, and 235 km NE of Cardwell. The Low is moving SW at 28 km/h and expected to make landfall between Cairns and Cardwell on Saturday morning. There is the potential for the system to reach weak category 1 tropical cyclone intensity prior to landfall.

Damaging wind gusts to 90 kilometres per hour will develop this morning between Port Douglas and Bowen, particularly about the higher ground, including the Atherton Tablelands. These wind gusts will extend westwards into the adjacent inland later in the morning.

Heavy rainfall and associated flooding will continue in coastal areas between Port Douglas and St Lawrence, extending inland later this morning. Some localised heavy falls may occur.

The situation will continue to be monitored and will be updated every 3 hours.

**Recent Events:**

- 592mm of rainfall has been recorded at Clarke Range Alert [west of Mackay] within the last 48 hours.

The State Emergency Service advises that people in the affected area should:

- beware of fallen trees and powerlines
- secure loose outdoor items
- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 3 am Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Damaging Winds, Heavy Rainfall and Further Flooding

For people about the coast, ranges and adjacent inland areas between Cardwell and St Lawrence.

Issued at 3:15 am on Saturday 25 December 2010

Synoptic Situation: At 1:00 am EST Tropical Cyclone Tasha, Category 1, was estimated to be 95 kilometres east northeast of Cairns and 195 kilometres north northeast of Cardwell and is moving west southwest at 31 kilometres per hour towards the coast and is likely to cross the coast on Saturday morning between Cairns and Innisfail [see separate Cyclone Advice]. A 1025 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Damaging wind gusts to 90 kilometres per hour are likely this morning between Cardwell and Townsville, particularly about the higher ground. These wind gusts will extend westwards into the adjacent inland later in the morning and are forecast to ease late on Saturday.

Heavy rainfall and associated flooding will continue in coastal areas between Cardwell and St Lawrence, extending inland later this morning. Some localised heavy falls may occur.

**Recent Events:**

- 668mm of rainfall has been recorded at Clarke Range Alert [west of Mackay] within the last 72 hours.

The State Emergency Service advises that people in the affected area should:

- beware of fallen trees and powerlines
- secure loose outdoor items
- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 8 am Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy Rainfall and Further Flooding

For people about the coast between Cairns and St Lawrence and extending inland to also include the eastern Northern Goldfields and Upper Flinders and northern Central Highlands and Coalfields Districts.

Issued at 8:45 am on Saturday 25 December 2010

Synoptic Situation: At 7:00 am EST Ex-Tropical Cyclone Tasha was estimated to be 40 kilometres southwest of Cairns and 25 kilometres south southeast of Mareeba and is moving west southwest at 22 kilometres per hour. A 1023 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Heavy rainfall and associated flooding will continue in coastal areas between Cairns and St Lawrence, and will extend inland with the low from later this morning. Some localised heavy falls may occur.

**Recent Events:**

- 704mm of rainfall has been recorded at Clarke Range Alert [west of Mackay] within the last 72 hours.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11 am Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

**for Heavy Rainfall and Further Flooding**

For people about the coast between Cardwell and St Lawrence and extending inland to also include the eastern Northern Goldfields and Upper Flinders and northeastern Central Highlands and Coalfields Districts.

Issued at 11:35 am on Saturday 25 December 2010

Synoptic Situation: At 10:00 am EST Ex-Tropical Cyclone Tasha was estimated to be 150 kilometres southwest of Innisfail and 140 kilometres east of Georgetown and is moving west south-southwest at 40 kilometres per hour. A 1023 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Heavy rainfall and associated flooding will continue in coastal areas between Cardwell and St Lawrence, and will extend inland with the low during the afternoon. Some localised heavy falls may occur.

**Recent Events:**

Widespread rainfall of 200-300mm between Cairns and Ingham in the 24 hours to 9am Saturday.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 pm Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy Rainfall and Further Flooding

For people about the east coast between Ingham and Fraser Island, extending inland to the eastern Northern Goldfields and Upper Flinders, the Central Highlands and Coalfields and remaining northern parts of the Wide Bay and Burnett forecast Districts.

Issued at 4:55 pm on Saturday 25 December 2010

Synoptic Situation: At 4:00 pm EST Ex-Tropical Cyclone Tasha had weakened into a broad rain depression between Georgetown and Charters Towers and was moving south-southwest at around 30 kilometres per hour. A 1023 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Heavy rainfall and associated flooding will continue in coastal areas between Ingham and Gladstone tonight, extending inland to southeastern parts of the Northern Goldfields and Upper Flinders, and through eastern parts of the Central Highlands and Coalfields district.

On Sunday this heavy rainfall is forecast to move south between Bowen and Fraser Island on the east coast and inland through the Central Highlands and Coalfields district.

**Recent Events:**

Widespread rainfall of 200-300mm between Cairns and Ingham in the 24 hours to 9am Saturday. Localised heavy falls are being recorded near the coast between Ingham and Mackay on Saturday afternoon.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11 pm Saturday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Widespread Damaging/Hazardous Winds, Locally Destructive Winds, Flash Flooding, Abnormally High Tides/Dangerous Surf

For people about the east coast between Ingham and the NSW border, extending inland to the eastern Northern Goldfields and Upper Flinders, the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 11:10 pm on Saturday 25 December 2010

Synoptic Situation: At 10:00 pm EST Ex-Tropical Cyclone Tasha had weakened into a broad rain depression north of Hughenden and was moving southwest at around 30 kilometres per hour. A 1020 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Heavy rainfall and associated flooding will continue in coastal areas between Ingham and Bundaberg tonight, extending inland to southeastern parts of the Northern Goldfields and Upper Flinders, and through eastern parts of the Central Highlands and Coalfields district.

On Sunday this heavy rainfall is forecast to move south between Mackay and the NSW border on the east coast and inland through the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall of 80 to 130mm inland from Mackay since 9am Saturday. Increasing rainfall being observed on radar through the Capricornia district.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 am Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between Ingham and the NSW border, extending inland to the eastern Northern Goldfields and Upper Flinders, the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 11:20 pm on Saturday 25 December 2010

Synoptic Situation: At 10:00 pm EST Ex-Tropical Cyclone Tasha had weakened into a broad rain depression north of Hughenden and was moving southwest at around 30 kilometres per hour. A 1020 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast south of the cyclone.

Heavy rainfall and associated flooding will continue in coastal areas between Ingham and Bundaberg tonight, extending inland to southeastern parts of the Northern Goldfields and Upper Flinders, and through eastern parts of the Central Highlands and Coalfields district.

On Sunday this heavy rainfall is forecast to move south between Mackay and the NSW border on the east coast and inland through the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall of 80 to 130mm inland from Mackay since 9am Saturday. Increasing rainfall being observed on radar through the Capricornia district.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 am Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between Mackay and the NSW border, extending inland to the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 4:45 am on Sunday 26 December 2010

Synoptic Situation: At 4:00 am EST Ex-Tropical Cyclone Tasha had weakened into a broad rain depression northwest of Hughenden and was moving southwest at around 30 kilometres per hour. A 1021 hPa high in the southern Tasman Sea extended a firm ridge onto the Queensland east coast.

Heavy rainfall is forecast to move south between Mackay and the NSW border on the east coast and inland through the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall of up to 160mm inland from Mackay and 130mm at Rockhampton since 9am Saturday. Increasing rainfall being observed on radar through the Capricornia and Wide Bay and Burnett districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11 am Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the northern Herbert and Burdekin, and about the east coast between Mackay and the NSW border, extending inland to the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 9:55 am on Sunday 26 December 2010

Synoptic Situation: At 9:00 am the monsoon trough sat from northwest Queensland to the southern interior with rain areas to its east. A 1019 hPa high over New Zealand extended a ridge onto the Queensland east coast.

Localised heavy rainfall is occurring about the northern Herbert and Burdekin district and is forecast to ease during the afternoon.

Widespread heavy rainfall is occurring and forecast to further develop on the east coast between Mackay and the NSW border and inland through the Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall of up to 160mm inland from Mackay and 130mm at Rockhampton since 9am Saturday. Increasing rainfall being observed on radar through the Capricornia, Wide Bay and Burnett and Maranoa and Warrego districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 pm Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between St Lawrence and the NSW border, extending inland to the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 2:50 pm on Sunday 26 December 2010

Synoptic Situation: At 2:00 pm the monsoon trough sat from northwest Queensland to the southern interior with rain areas to its east. A 1019 hPa high over New Zealand extended a ridge onto the Queensland east coast.

Widespread rainfall is forecast to become heavy late today or tonight on the east coast between St Lawrence and the NSW border and inland through the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall rates over eastern Queensland have generally eased today.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 pm Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between St Lawrence and the NSW border, extending inland to the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 4:45 pm on Sunday 26 December 2010

Synoptic Situation: At 2:00 pm the monsoon trough sat from northwest Queensland to the southern interior with rain areas to its east. A 1019 hPa high over New Zealand extended a ridge onto the Queensland east coast.

Widespread rainfall is forecast to become heavy late today or tonight on the east coast between St Lawrence and the NSW border and inland through the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall rates over eastern Queensland have generally eased today.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11 pm Sunday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between St Lawrence and the NSW border, extending inland to the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 10:35 pm on Sunday 26 December 2010

Synoptic Situation: At 9:00 pm the monsoon trough sat from northwest Queensland to the southern interior with rain areas to its east. A 1019 hPa high over New Zealand extended a ridge onto the Queensland east coast.

Widespread rainfall is likely to become heavy again on Monday on the east coast between St Lawrence and the NSW border and inland through the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall totals since 9am Sunday: Up to 150mm in southwest parts of the Central Highland and Coalfields, Up to 80mm to the west and south of Bundaberg, widespread falls of 60 to 110mm about the Gold Coast and adjacent hinterland.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Heavy rainfall

For people about the east coast between St Lawrence and the NSW border, extending inland to the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

Issued at 4:41 am on Monday 27 December 2010

Synoptic Situation: At 3:00 am Monday the monsoon trough was lying from northwest Queensland to the southern interior areas of rain to its east. A high near New Zealand extended a weak ridge onto the Queensland east coast.

Widespread rainfall is likely to become heavy again on Monday on the east coast between St Lawrence and the NSW border and inland through the southern Central Highlands and Coalfields, the northeast Maranoa and Warrego and the northern Darling Downs and Granite Belt districts.

**Recent Events:**

Rainfall totals since 9am Sunday: Up to 190mm in southwest parts of the Central Highlands and Coalfields, Up to 80mm to the west and south of Bundaberg, up to 110mm about the Gold Coast and widespread falls of 50 to 80mm across southern parts of the Southeast Coast and Darling Downs and Granite Belt districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Flash Flooding

For people in the southern Central Highlands and Coalfields, northeastern Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and Capricornia districts.

Issued at 11:40 am on Monday 27 December 2010

Synoptic Situation: At 10am, the monsoon trough extended across Queensland interior from the northeast of the state down into the southeast interior. The trough is forecast to retreat northwards over the next couple of days.

Widespread rainfall is expected to continue and flash flooding is likely throughout the southern Central Highlands and Coalfields, northeast Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast and Wide Bay and Burnett and Capricornia districts today.

The rainfall is expected to contract out of the Maranoa and Warrego and Darling Downs and Granite Belt districts by Monday.

**Recent Events:**

- Generally 150 to 250mm of rainfall was recorded in the 24 hours to 9am Monday in southern parts of the Central Highlands and Coalfields district, including 274mm at Carnarvon.
- Generally 50 to 100mm of rainfall was recorded in the 24 hours to 9am Monday across the Darling Downs and Granite Belt and Southeast Coast districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST**  
**SEVERE WEATHER WARNING**

for Flash Flooding

For people in the southern Central Highlands and Coalfields, northeastern Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and Capricornia districts.

Issued at 11:45 am on Monday 27 December 2010

Synoptic Situation: At 10am, the monsoon trough extended across Queensland interior from the northeast of the state down into the southeast interior. The trough is forecast to retreat northwards over the next couple of days.

Widespread rainfall is expected to continue and flash flooding is likely throughout the southern Central Highlands and Coalfields, northeast Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast and Wide Bay and Burnett and Capricornia districts today.

The rainfall is expected to contract out of the Maranoa and Warrego and Darling Downs and Granite Belt districts by Tuesday.

**Recent Events:**

- Generally 150 to 250mm of rainfall was recorded in the 24 hours to 9am Monday in southern parts of the Central Highlands and Coalfields district, including 274mm at Carnarvon.
- Generally 50 to 100mm of rainfall was recorded in the 24 hours to 9am Monday across the Darling Downs and Granite Belt and Southeast Coast districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Flash Flooding

For people in the Central Highlands and Coalfields, northeastern Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and Capricornia districts.

Issued at 4:20 pm on Monday 27 December 2010

Synoptic Situation: At 4pm, the monsoon trough extended across the Queensland interior from the northwest down into the southeast of the state. The trough is forecast to retreat northwards over the next couple of days.

Widespread rainfall is expected to continue and flash flooding is likely throughout the Central Highlands and Coalfields, Southeast Coast, Wide Bay and Burnett and Capricornia districts during the remainder of today.

The rainfall is expected to ease overnight across the Southeast Coast district, while extending throughout the Central Highlands and Coalfields district on Tuesday. Widespread rainfall is otherwise expected to persist in all remaining districts.

Rain has eased in the northeastern Maranoa and Warrego and Darling Downs and Granite Belt districts and hence the warning for these districts is **CANCELLED**.

**Recent Events:**

- Generally 150 to 250mm of rainfall was recorded in the 24 hours to 9am Monday in southern parts of the Central Highlands and Coalfields district, including 274mm at Carnarvon.
- Generally 50 to 100mm of rainfall was recorded in the 24 hours to 9am Monday across the Darling Downs and Granite Belt and Southeast Coast districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Flash Flooding

For people in the Central Highlands and Coalfields, northeastern Maranoa and Warrego, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and Capricornia districts.

Issued at 4:20 pm on Monday 27 December 2010

Synoptic Situation: At 4pm, the monsoon trough extended across the Queensland interior from the northwest down into the southeast of the state. The trough is forecast to retreat northwards over the next couple of days.

Widespread rainfall is expected to continue and flash flooding is likely throughout the southern Central Highlands and Coalfields, Southeast Coast, Wide Bay and Burnett and Capricornia districts during the remainder of today.

The rainfall is expected to ease overnight across the Southeast Coast district, while extending throughout the Central Highlands and Coalfields district on Tuesday. Widespread rainfall is otherwise expected to persist in all remaining districts.

Rain has eased in the northeastern Maranoa and Warrego and Darling Downs and Granite Belt districts and hence the warning for these districts is **CANCELLED**.

**Recent Events:**

- Generally 150 to 250mm of rainfall was recorded in the 24 hours to 9am Monday in southern parts of the Central Highlands and Coalfields district, including 274mm at Carnarvon.
- Generally 50 to 100mm of rainfall was recorded in the 24 hours to 9am Monday across the Darling Downs and Granite Belt and Southeast Coast districts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Monday AEST

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Flash Flooding

For people in the Central Highlands and Coalfields, Wide Bay and Burnett and Capricornia districts.

Issued at 12:20 am on Monday 27 December 2010

Synoptic Situation: At 1150pm, a trough is moving north through the Wide Bay region at the moment with widespread rainfall and flash flooding. This trough is expected to reach the Capricorn region during Tuesday. This will reduce the rainfall through the Burnett and Wide Bay regions while shifting the heavy falls through the Capricorn region. Heavy falls are still expected to continue through the Central Highlands for Tuesday. By Wednesday the heavier falls will have moved further north over the northern Central Highlands and the Mackay region. By Thursday the overall rain situation will weaken with an end to the heavier falls.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 am

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for Flash Flooding

For people in the Central Highlands and Coalfields, Wide Bay and Burnett and Capricornia districts.

Issued at 5:00 am on Tuesday 28 December 2010

Synoptic Situation: At 5am a trough is moving north through the Wide Bay region at the moment with widespread rainfall and flash flooding. This trough is expected to reach the Capricorn region this afternoon. This will reduce the rainfall through the Burnett and Wide Bay regions while shifting the heavy falls through the Capricorn region. Heavy falls are still expected to continue through the Central Highlands later today. By Wednesday the heavier falls will have moved further north over the northern Central Highlands and the Mackay region. By Thursday the overall rain situation will weaken with an end to the heavier falls.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 am

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
CANCELLATION OF SEVERE WEATHER WARNING**

**for Flash Flooding**

For people in the Central Highlands and Coalfields, Wide Bay and Burnett and Capricornia districts.

Issued at 10:15 am on Tuesday 28 December 2010

Synoptic Situation: At 10am, a trough extended across Queensland from the northwest down through central parts of the state. The trough is forecast to remain slow moving while weakening over the next couple of days.

Rainfall is easing and the threat of flash flooding is becoming less likely throughout the Central Highlands and Coalfields, Wide Bay and Burnett and Capricornia districts. However, rain is expected to continue in these districts though not to the extent of the past few days, which may locally exacerbate any flash flooding that is already occurring.

The warning for these districts is therefore **CANCELLED**.

Flood warnings remain current for various rivers and streams in these districts, refer to these products for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

No further warnings are expected to be issued for this event

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Maranoa, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and southern parts of the Central Highlands and Coalfields and Capricornia forecast districts.

Issued at 10:55 am on Wednesday 5 January 2011

Synoptic Situation: At 10am EST, a trough extended from northwestern Queensland into the southern Maranoa. The trough is expected to intensify as it moves slowly east over the next 24 hours.

Thundery rain areas with some heavy falls are expected to develop this evening and overnight over the Maranoa, Darling Downs and Granite Belt, Southeast Coast districts and southern parts of the Wide Bay and Burnett district. This heavy rain is expected to extend to the Capricornia districts and remaining parts of the Wide Bay and Burnett district during Thursday. The rain will ease over the Maranoa and western Darling Downs during Thursday.

Heavy rainfall may lead to localised flash flooding and/or worsen current river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5:00 pm Wednesday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Maranoa, Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett and Capricornia forecast districts and southern parts of the Central Highlands and Coalfields district.

Issued at 11:10 am on Wednesday 5 January 2011

Synoptic Situation: At 10am EST, a trough extended from northwestern Queensland into the southern Maranoa. The trough is expected to intensify as it moves slowly east over the next 24 hours.

Thundery rain areas with some heavy falls are expected to develop this evening and overnight over the Maranoa, Darling Downs and Granite Belt and Southeast Coast districts and southern parts of the Wide Bay and Burnett and Central Highlands and Coalfields districts. This heavy rain is expected to extend to the Capricornia and remaining parts of the Wide Bay and Burnett during Thursday. The rain will ease over the Maranoa, western Darling Downs and southwestern Central Highlands and Coalfields during Thursday.

Heavy rainfall may lead to localised flash flooding and/or worsen current river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5:00 pm Wednesday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Darling Downs and Granite Belt, Southeast Coast, Wide Bay and Burnett, Capricornia and Central Highlands and Coalfields district.

Issued at 5:00 pm on Wednesday 5 January 2011

Synoptic Situation: At 4pm EST, a trough extended from northwestern Queensland into the Darling Downs. The trough is expected to intensify as it moves slowly east over the next 24 hours.

Thundery rain areas with some heavy falls are occurring over the Darling Downs and Granite Belt, Southeast Coast districts and southern parts of the Wide Bay and Burnett and Central Highlands and Coalfields districts. This heavy rain is expected to extend to the Capricornia and remaining parts of the Wide Bay and Burnett and eastern Central Highlands and Coalfields during Thursday. The rain will ease over the western Darling Downs and southwestern Central Highlands and Coalfields on Thursday.

Heavy rainfall may lead to localised flash flooding and/or worsen current river flooding.

Heavy rainfall has eased over the Maranoa District and a Severe Weather Warning for this area is no longer current.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 pm Wednesday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding, this may add to the existing river flood situation

For people in the Eastern Darling Downs, Granite Belt, Southeast Coast, Wide Bay and Burnett and the Capricornia districts.

Issued at 11:30 pm on Wednesday 5 January 2011

Synoptic Situation: At 11pm EST, a developing upper level low over southern Queensland and a surface trough will combine to concentrate heavier weather over the SE region during Thursday morning which will then contract towards the Capricorn and Wide Bay coasts later in the day.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11:00 pm Wednesday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding, this may add to the existing river flood situation

For people in the Eastern Darling Downs, Granite Belt, Southeast Coast, Wide Bay and Burnett and the Capricornia districts.

Issued at 11:55 pm on Wednesday 5 January 2011

Synoptic Situation: At 11pm EST, a developing upper level low over southern Queensland and a surface trough will combine to concentrate heavier weather over the SE region during Thursday morning which will then contract towards the Capricorn and Wide Bay coasts later in the day.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding, this may add to the existing river flood situation

For people in the Southeast Coast, Wide Bay and Burnett and the Capricornia districts.

Issued at 3:40 am on Thursday 6 January 2011

Synoptic Situation: At 0330AM EST, a developing upper level low over southern Queensland and a surface trough will combine to concentrate heavier weather over the SE region during Thursday which will then contract towards the Capricorn, Wide Bay and Sunshine coasts later in the day.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding, this may add to the existing river flood situation

For people in the Wide Bay and Burnett districts.

Issued at 6:55 am on Thursday 6 January 2011

Synoptic Situation: At 0650AM EST, a developing upper level low over southern Queensland and a surface trough will combine to concentrate heavier weather towards the Wide Bay region this afternoon and overnight.

Heavy rainfall has eased over the Capricorn and SE coastal district, therefore this warning has been cancelled in these districts.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district and eastern parts of the Wide Bay and Burnett District.

Issued at 8:30 am on Thursday 6 January 2011

Synoptic Situation: At 8am EST, an upper level low was developing over the southeastern interior of Queensland. A slow moving surface trough extended from northwestern Queensland into the Darling Downs.

Rain areas and thunderstorms are expected to increase through the Southeast Coast District and eastern parts of the Wide Bay and Burnett District this afternoon. Some heavy falls are expected which may lead to localised flash flooding and/or worsen existing river flooding.

Isolated thunderstorms are expected through the Capricornia and remaining parts of the Wide Bay and Burnett District. Locally heavy falls may occur with these thunderstorms and Severe Thunderstorm Warnings will be issued as necessary.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast District and eastern parts of the Wide Bay and Burnett District.

Issued at 10:45 am on Thursday 6 January 2011

Synoptic Situation: At 10am EST, an upper level low was developing over the southeastern interior of Queensland. A slow moving surface trough extended from northwestern Queensland into eastern Darling Downs.

Rain areas and thunderstorms will increase further through the Southeast Coast District and eastern parts of the Wide Bay and Burnett District today. Some heavy falls are expected which may lead to localised flash flooding and/or worsen existing river flooding.

Rainfall is expected to ease about the Southeast Coast District during Friday.

Isolated thunderstorms are expected through the Capricornia and remaining parts of the Wide Bay and Burnett District. Locally heavy falls may occur today with these thunderstorms and Severe Thunderstorm Warnings will be issued as necessary.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and eastern parts of the Wide Bay and Burnett districts.

Issued at 4:50 pm on Thursday 6 January 2011

Synoptic Situation: At 4pm EST, an upper level low was developing over the southeastern interior of Queensland and is forecast to move in a north northeast direction overnight. A slow moving surface trough extended from northwestern parts of the state down into the southeast.

Rain areas and thunderstorms will continue through parts of the Southeast Coast district north of Brisbane and eastern parts of the Wide Bay and Burnett district this evening and overnight. Some heavy falls are expected which may lead to localised flash flooding and/or worsen existing river flooding.

Rain areas and thunderstorms have eased in parts of the Southeast Coast district south of Brisbane but may redevelop overnight. Heavy rain areas are forecast to contract into eastern parts of the Wide Bay and Burnett district on Friday.

Isolated thunderstorms are expected through the Capricornia and remaining parts of the Wide Bay and Burnett District. Locally heavy falls may occur today with these thunderstorms and Severe Thunderstorm Warnings will be issued as necessary.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Thursday

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IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening  
the existing river flood situation

For people in the Southeast Coast and eastern parts of the Wide Bay and Burnett  
districts.

Issued at 10:55 pm on Thursday 6 January 2011

Synoptic Situation: At 1030pm EST, an upper level low over the southeastern  
interior will move north into the Capricorn district during Friday. Current rain  
areas near the coast will develop back inland over the SE region during Friday.

Some heavy falls may occur about the eastern Burnett, Wide Bay and northern  
parts of the Sunshine coast later on Friday with the potential for flash  
flooding and this may contribute to existing river flooding.

Flood warnings are current for various rivers and streams in these districts;  
refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's  
website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency  
Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and eastern parts of the Wide Bay and Burnett districts.

Issued at 5:25 am on Friday 7 January 2011

Synoptic Situation: At 0420am EST, an upper level low occurs over the Capricorn region at present and will contribute to further rain areas over southeastern region today.

Some heavy falls may occur about the eastern Burnett, Wide Bay and northern parts of the Sunshine coast later today with the potential for flash flooding and this may contribute to existing flooding situation.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation  
For people in the Southeast Coast and Wide Bay and Burnett forecast districts.

Issued at 8:25 am on Friday 7 January 2011

Synoptic Situation: At 7am EST, an upper level low was located over the Capricornia district while a low level trough was located off the Capricorn coast. These systems will combine to produce further rain areas and thunderstorms over the Southeast Coast and Wide Bay and Burnett forecast districts.

Some heavy falls are currently occurring about southern parts of the Southeast Coast District. Heavy rainfall is also expected to develop further north about the Sunshine Coast and Wide Bay and Burnett district through today. Rainfalls should ease south of the Sunshine Coast later today.

Heavy rainfalls may lead to localised flash flooding and/or worsen existing river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 11:25 am on Friday 7 January 2011

Synoptic Situation: At 10am EST, an upper level low was located over the Capricornia district while a low level trough was located near the Queensland east coast. These systems will combine to produce further rain areas and thunderstorms over the Southeast Coast and Wide Bay and Burnett districts.

Heavy rain and isolated thunderstorms are currently occurring about the Southeast Coast district. These conditions are expected to develop in the Wide Bay and Burnett district during this afternoon and evening. Rainfall is expected to ease south of the Sunshine Coast later today.

Heavy rainfall may lead to localised flash flooding and/or worsen existing river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Thursday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 3:35 pm on Friday 7 January 2011

Synoptic Situation: At 3pm EST, an upper level low was located over the Capricornia district while a low level trough was located near the Queensland east coast. The upper level low is forecast to move off the Capricornia coast on Saturday while the low level trough remains slow moving.

Heavy rain and isolated thunderstorms are currently occurring about the Wide Bay and Burnett and Southeast Coast districts north of Brisbane. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

These conditions are expected to persist about the Wide Bay and Burnett district on Saturday while redeveloping throughout the Southeast Coast district during the afternoon and evening.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Friday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 3:40 pm on Friday 7 January 2011

Synoptic Situation: At 3pm EST, an upper level low was located over the Capricornia district while a low level trough was located near the Queensland east coast. The upper level low is forecast to move off the Capricornia coast on Saturday while the low level trough remains slow moving.

Heavy rain and isolated thunderstorms are currently occurring about the Wide Bay and Burnett and Southeast Coast districts north of Brisbane. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

These conditions are expected to persist in these areas on Saturday while redeveloping throughout the Southeast Coast district during the afternoon and evening.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Friday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 10:50 pm on Friday 7 January 2011

Synoptic Situation: At 10pm EST, an upper level low was located offshore from the Capricornia district while a low level trough was located near the Wide Bay coast.

Heavy rain and isolated thunderstorms are currently occurring about the southern Wide Bay and Burnett district and are forecast to develop about the Sunshine Coast during Saturday morning, and remaining parts of the Southeast Coast district on Saturday afternoon. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Saturday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 4:55 am on Saturday 8 January 2011

Synoptic Situation: At 10pm EST, an upper level low was located offshore from the Capricornia district while a low level trough was located near the Wide Bay coast.

Heavy rain and isolated thunderstorms are currently occurring about the southern Wide Bay and Burnett district and are forecast to develop about the Sunshine Coast during Saturday morning, and remaining parts of the Southeast Coast district on Saturday afternoon. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: Rainfall of up to 220mm over the Mary River catchment since 9am Friday has caused rapid river rises there, see separate Flood Warning for details.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Saturday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 11:00 am on Saturday 8 January 2011

Synoptic Situation: At 10am EST, an upper level low was located offshore from the Capricornia district while a low level trough was located off the southern coast.

Heavy rain overnight has weakened recently to showers and isolated thunderstorms. Rain areas are expected to return to the Southeast Coast and Wide Bay and Burnett districts from this afternoon, and increase to moderate to heavy falls at times tonight and Sunday. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: Rainfall of up to 304mm over the Mary River catchment in the 24 hours to 9am Saturday. A Flood Warning is current for this area.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Saturday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast and Wide Bay and Burnett districts.

Issued at 5:15 pm on Saturday 8 January 2011

Synoptic Situation: At 4pm EST, an upper level low was located offshore from the Capricornia district while a low level trough was located off the southern coast.

Rain areas are expected to return to the Southeast Coast and Wide Bay and Burnett districts tonight, and are likely to increase to moderate to heavy falls at times during Sunday. Heavy rain may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: Rainfall of up to 304mm over the Mary River catchment in the 24 hours to 9am Saturday. A Flood Warning is current for this area.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Saturday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district and southern parts of the Wide Bay and Burnett.

Issued at 10:20 pm on Saturday 8 January 2011

Synoptic Situation: At 10pm EST, an upper level low was located offshore of the Capricorn coast. A surface trough was located well offshore of the Fraser coast. Both of these systems are expected to move closer to the coast overnight and during Sunday.

Rain areas and thunderstorms are expected to increase through the Southeast Coast district and southern parts of the Wide Bay and Burnett district from early Sunday. Some heavy falls are likely which may lead to localised flash flooding and/or worsen existing river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Sunday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district and southern parts of the Wide Bay and Burnett.

Issued at 4:40 am on Sunday 9 January 2011

Synoptic Situation: At 4am EST, an upper level low was located offshore of the Capricorn coast. A surface trough was located offshore of the southern Queensland coast. Both of these systems are expected to move closer to the coast today.

Rain areas and thunderstorms are expected to increase further through the Southeast Coast district and southern parts of the Wide Bay and Burnett district today. Some heavy falls are likely which may lead to localised flash flooding and/or worsen existing river flooding.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Sunday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett, and eastern Darling Downs and Granite Belt District.

Issued at 10:55 am on Sunday 9 January 2011

Synoptic Situation: At 10am EST, an upper level low was located offshore of the Capricorn coast. A surface trough was located offshore of the southern Queensland coast. Both of these systems are expected to move closer to the coast today.

Rain areas and thunderstorms are expected to increase further through the Southeast Coast district and southern parts of the Wide Bay and Burnett district today. The heavy rain areas are expected to move into the eastern parts of the Darling Downs and Granite Belt District overnight. Some heavy falls are likely which may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: Rainfall over 100mm was recorded in the last 24 hours about parts of the Sunshine Coast and Hinterland.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5pm Sunday

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**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett, and eastern Darling Downs and Granite Belt District.

Issued at 4:55 pm on Sunday 9 January 2011

Synoptic Situation: At 4pm EST, an upper level low was located near the Wide Bay coast. A surface trough was located near the southern Queensland coast. Both of these systems are moving towards the west and southwest.

Rain areas and thunderstorms are expected to continue about the northern and central parts of the Southeast Coast District, southern parts of the Wide Bay and Burnett District, and northeastern parts of the Darling Downs and Granite Belt district. The heavy rain areas are expected to move into the southern parts towards the border with New South Wales and west to the Granite Belt overnight. Heavy falls are likely which may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: In the past 24 hours, Maleny has recorded 239mm, West Bellthorpe 233mm and Lindfield 226mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Sunday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.

Issued at 11:00 pm on Sunday 9 January 2011

Synoptic Situation: At 10pm EST, an upper level low was located over the southern Capricornia. A surface trough was located near the Fraser coast. Both of these systems are moving slowly west.

Heavy rain areas and thunderstorms are expected to continue about northern and central parts of the Southeast Coast District, southern parts of the Wide Bay and Burnett District, and northeastern parts of the Darling Downs and Granite Belt district. The heavy rain areas are expected to extend further south to the New South Wales border and west to the Granite Belt overnight. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: In the past 24 hours, Maleny has recorded 336mm, West Bellthorpe 331mm and Lindfield 301mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Monday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.

Issued at 5:00 am on Monday 10 January 2011

Synoptic Situation: At 4am EST, an upper level low was located over the southern Capricornia. A surface trough was located near the Fraser coast. Both of these systems are moving slowly west.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast district, far southern parts of the Wide Bay and Burnett District and eastern parts of the Darling Downs and Granite Belt district. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

Recent events: In the past 24 hours, West Bellthorpe recorded 343mm, Maleny 337mm, and Lindfield 313mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Monday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.

Issued at 11:00 am on Monday 10 January 2011

Synoptic Situation: At 10am EST, an upper level low was located over the southwest of the Capricornia District. A surface trough was located off the southeast coast. Both of these systems are moving slowly west.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast district, far southern parts of the Wide Bay and Burnett District and eastern parts of the Darling Downs and Granite Belt district. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract southwards into the Southeast Coast district and southeast parts of the Darling Downs and Granite Belt district during Tuesday.

Recent events: In the 24 hours to 9am EST Monday morning, Maleny received 321mm, West Bellthorpe 310 mm and Peachester 298 mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Monday

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.

Issued at 11:05 am on Monday 10 January 2011

Synoptic Situation: At 10am EST, an upper level low was located over the southwest of the Capricornia District. A surface trough was located off the southeast coast. Both of these systems are moving slowly west.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast district, far southern parts of the Wide Bay and Burnett District and eastern parts of the Darling Downs and Granite Belt district. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract southwards into the Southeast Coast district and southeast parts of the Darling Downs and Granite Belt district during Tuesday.

Recent events: In the 24 hours to 9am EST Monday morning, Maleny received 321mm, West Bellthorpe 310 mm and Peachester 298 mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 pm Monday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032

Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast district, far southern parts of the Wide Bay and Burnett district and eastern parts of the Darling Downs and Granite Belt district.

Issued at 5:05 pm on Monday 10 January 2011

Synoptic Situation: At 4pm EST, an upper level low was located over the west of the Wide Bay and Burnett district. A surface trough was located off the east Queensland coast. The upper low is forecast to move southwest over the southern interior of Queensland while the surface trough remains slow moving.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast district and eastern parts of the Darling Downs and Granite Belt district. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract southwards and gradually ease in the Southeast Coast district and eastern parts of the Darling Downs and Granite Belt district later on Tuesday.

Rainfall has eased in far southern parts of the Wide Bay and Burnett district and therefore the warning for this district is now CANCELLED.

Recent events: In the 24 hours to 9am EST Monday, Maleny received 321mm, West Bellthorpe 310 mm and Peachester 298 mm.  
In the 7 hours since 9am EST Monday, Redbank Creek received 126mm, Toowoomba Airport 88mm and Mt Castle 80mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Monday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast, Darling Downs and Granite Belt and eastern parts of the Maranoa and Warrego districts.

Issued at 6:30 pm on Monday 10 January 2011

Synoptic Situation: At 6pm EST, an upper level low was located over the west of the Wide Bay and Burnett district. A surface trough was located off the east Queensland coast. The upper low is forecast to move southwest over the southern interior of Queensland while the surface trough remains slow moving.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast, Darling Downs and Granite Belt and eastern parts of the Maranoa and Warrego districts this evening. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract into the Southeast Coast and eastern parts of the Darling Downs and Granite Belt districts during Tuesday. These conditions should gradually ease later in the day.

Recent events: In the 24 hours to 9am EST Monday, Maleny received 321mm, West Bellthorpe 310 mm and Peachester 298 mm.  
In the 7 hours since 9am EST Monday, Redbank Creek received 126mm, Toowoomba Airport 88mm and Mt Castle 80mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Monday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts.

Issued at 7:50 pm on Monday 10 January 2011

Synoptic Situation: At 7pm EST, an upper level low was located over the west of the Wide Bay and Burnett district. A surface trough was located off the east Queensland coast. The upper low is forecast to move southwest over the southern interior of Queensland while the surface trough remains slow moving.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts this evening and overnight. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract into the Southeast Coast and eastern parts of the Darling Downs and Granite Belt districts during Tuesday. These conditions should gradually ease later in the day.

Recent events: In the 24 hours to 9am EST Monday, Maleny received 321mm, West Bellthorpe 310 mm and Peachester 298 mm.  
In the 7 hours since 9am EST Monday, Redbank Creek received 126mm, Toowoomba Airport 88mm and Mt Castle 80mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11pm Monday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts.

Issued at 11:00 pm on Monday 10 January 2011

Synoptic Situation: At 10pm EST, an upper level low was located over the far southeast of the Central Highlands and Coalfields district. The upper low is forecast to move southwest over the southern interior of Queensland while weakening during Tuesday.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts tonight. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract into the Southeast Coast and eastern parts of the Darling Downs and Granite Belt districts during Tuesday. These conditions should gradually ease later in the day.

Recent events: In the 1 hour to 11pm EST Monday, Monsildale and Mt Stanley [situated in northern parts of the Southeast Coast district] both received 58mm. In the 13 hours since 9am EST Monday, Redbank Creek received 132mm, Ballon 124mm and Mt Castle 103mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5am Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and potentially worsening the existing river flood situation

For people in the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts.

Issued at 5:05 am on Tuesday 11 January 2011

Synoptic Situation: At 4am EST, an upper level low was located over the Darling Downs and Granite Belt district. The upper low is forecast to move southwest over the southern interior of Queensland while weakening during the day.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast, Darling Downs and Granite Belt, far southern parts of the Wide Bay and Burnett and eastern parts of the Maranoa and Warrego districts today. Heavy falls may lead to localised flash flooding and/or worsen existing river flooding.

The heavy rain areas and thunderstorms are expected to contract to the south by late today, before gradually easing.

Recent events: Rainfall since 9am Monday Monsildale 160mm, Mt Stanley 135mm, and Redbank Creek 134mm.

Flood warnings are current for various rivers and streams in these districts; refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

Transmitters in the areas of the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi are REQUESTED TO USE THE STANDARD EMERGENCY WARNING SIGNAL BEFORE BROADCASTING.

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to localised flash flooding and worsening the existing river flood situation

For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi.

Issued at 8:00 am on Tuesday 11 January 2011

Synoptic Situation: At 8am AEST, an upper level low was located over the Darling Downs and Granite Belt district and is forecast to move to the southwest and slowly weaken.

Heavy rain areas and thunderstorms are expected to continue through the Southeast Coast and Darling Downs and Granite Belt today. Heavy falls will lead to localised flash flooding and will worsen existing river flooding.

Currently, an intense slow moving band of rainfall extends from about Maroochydore to Warwick. Rainfall rates in this band are reaching 80 to 100 mm per hour.

Flood warnings are current for various rivers and streams in these districts. Please refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The Severe Weather Warning for the southern parts of Wide Bay and Burnett and eastern Maranoa and Warrego and northwestern parts of Darling Downs and Granite Belt districts has been cancelled. However showers and thunderstorms will persist through the area and may produce heavy rainfall in these parts.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11am Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

Transmitters in the areas of the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi are REQUESTED TO USE THE STANDARD EMERGENCY WARNING SIGNAL BEFORE BROADCASTING.

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to flash flooding and worsening the existing river flood situation

For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi.

Issued at 11:00 am on Tuesday 11 January 2011

Synoptic Situation: At 10am AEST, an upper level low was located over the southern Queensland interior and is forecast to move to the southwest and continue weakening. A surface trough lying over the Southeast Queensland Coast is expected to weaken overnight.

Heavy rain areas and local thunderstorms are expected to continue through the Southeast Coast and Darling Downs and Granite Belt today. Heavy falls will lead to flash flooding and will worsen existing river flooding.

Currently, an intense band of rainfall extends from about Tewantin to Warwick. Recent rainfall rates in this band have reached 80 to 100 mm per hour, particularly about the Brisbane and Lockyer Valleys. This rainfall band is expected to remain slow moving during the remainder of today.

Flood warnings are current for various rivers and streams in these districts. Please refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 2pm AEST Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



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Australian Government Bureau of Meteorology  
Queensland

Transmitters in the areas of the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi are REQUESTED TO USE THE STANDARD EMERGENCY WARNING SIGNAL BEFORE BROADCASTING.

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to flash flooding and worsening the existing river flood situation

For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi.

Issued at 2:00 pm on Tuesday 11 January 2011

Synoptic Situation: At 2 pm AEST, a surface trough was lying over the Southeast Queensland Coast and is expected to weaken overnight.

Heavy rain areas and local thunderstorms are expected to continue through the Southeast Coast and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Heavy falls will lead to flash flooding and will worsen existing river flooding.

Currently the focus of the heaviest rainfall extends from about Maroochydore to Warwick, including the Brisbane and Lockyer Valleys and Ipswich area. Recent rainfall rates in this band have reached 60 to 80 mm per hour. This rainfall band is expected to remain slow moving during the remainder of today and gradually weaken overnight and during Wednesday morning.

Flood warnings are current for various rivers and streams in these districts. Please refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 5 pm AEST Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

Transmitters in areas of the Southeast Coast district and the Darling Downs and Granite Belt district southeast of Dalby to Goondiwindi are REQUESTED TO USE THE STANDARD EMERGENCY WARNING SIGNAL BEFORE BROADCASTING.

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
SEVERE WEATHER WARNING**

for heavy rainfall leading to flash flooding and worsening the existing river flood situation

For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi.

Issued at 5:00 pm on Tuesday 11 January 2011

Synoptic Situation: At 4 pm AEST, southeast Queensland was under the influence of a deep moist easterly airstream, with an upper trough located over the Darling Downs.

Heavy rain areas and local thunderstorms are expected to continue tonight through the Southeast Coast and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi. Heavy falls will lead to further localised flash flooding and will worsen existing river flooding.

The heavy rain areas are expected to gradually weaken overnight and during Wednesday morning.

Flood warnings are current for various rivers and streams in these districts. Please refer to these products [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- take care on the roads, especially in heavy downpours
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

The next warning is due to be issued by 11 pm AEST Tuesday.

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



IDQ20032  
Australian Government Bureau of Meteorology  
Queensland

Note: The Standard Emergency Warning Signal is no longer required.

**TOP PRIORITY FOR IMMEDIATE BROADCAST  
CANCELLATION - SEVERE WEATHER WARNING**

For people in the Southeast Coast District and the Darling Downs and Granite Belt District southeast of Dalby to Goondiwindi.

Issued at 10:00 pm on Tuesday 11 January 2011

Synoptic Situation: At 10 pm AEST, southeast Queensland was under the influence of a deep moist east to northeast airstream. A weakening upper trough was moving south.

Heavy rain areas have eased during the past few hours and further flash flooding due to rainfall is no longer expected.

Note that an extremely serious river and stream flood situation still exists. Refer to flood warnings [[www.bom.gov.au/qld](http://www.bom.gov.au/qld)] for further information.

The State Emergency Service advises that people in the affected area should:

- avoid driving, walking or riding through flood waters
- avoid swimming in swollen rivers and creeks

Contact the SES on 132 500 for emergency assistance if required.

No further warnings are expected to be issued for this event

This warning is also available through TV and Radio broadcasts; the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and State Emergency Service would appreciate this warning being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

Appendix C

## Copies of Severe Thunderstorm Warnings

December 2010 to January 2011

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**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the  
Peninsula,

Gulf Country and

Northern Goldfields and Upper Flinders Forecast Districts.

Issued at 8:17 pm Saturday, 1 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Georgetown, Croydon, Kowanyama and Forsayth.

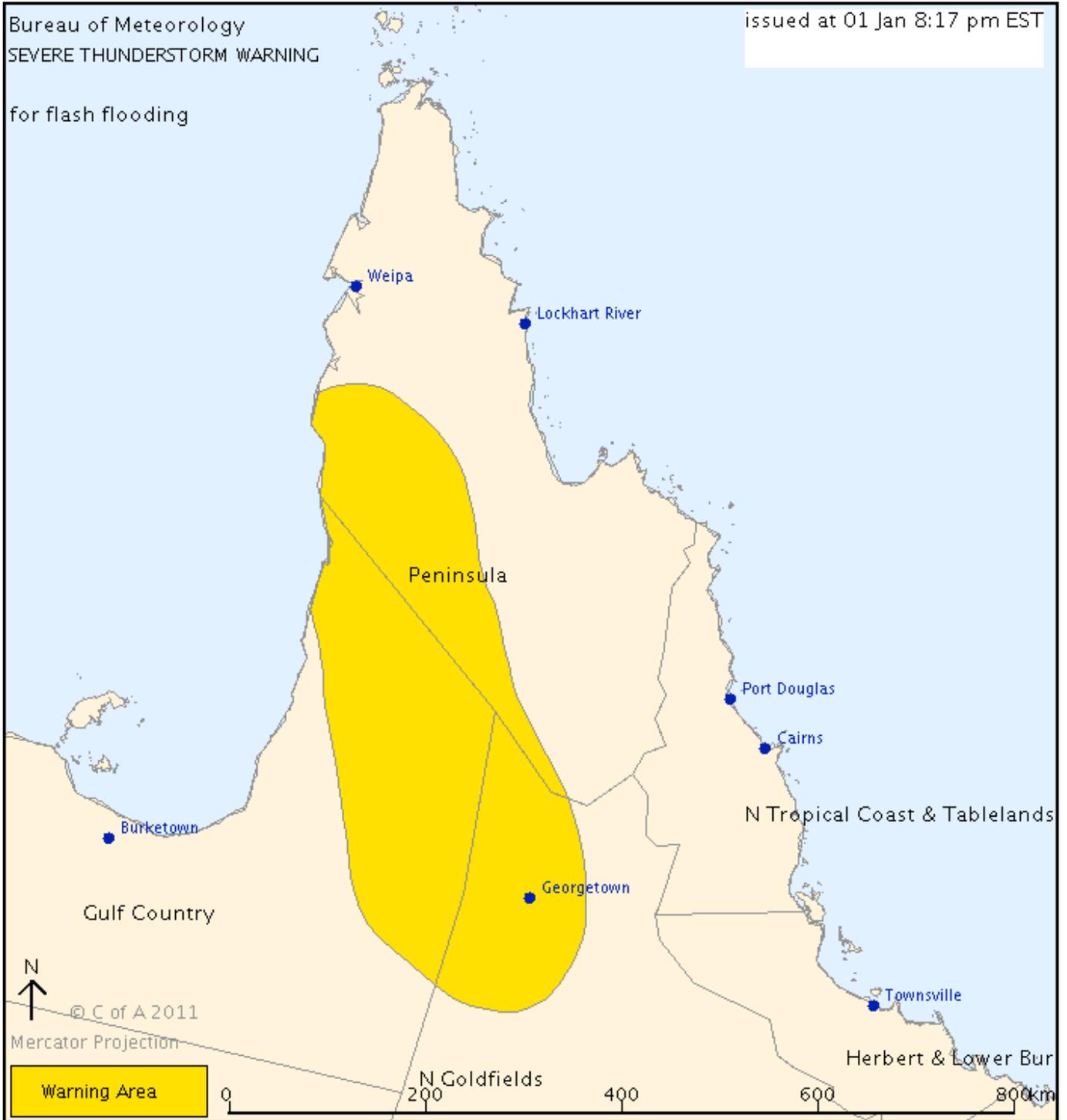


issued at 01 Jan 8:17 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:20 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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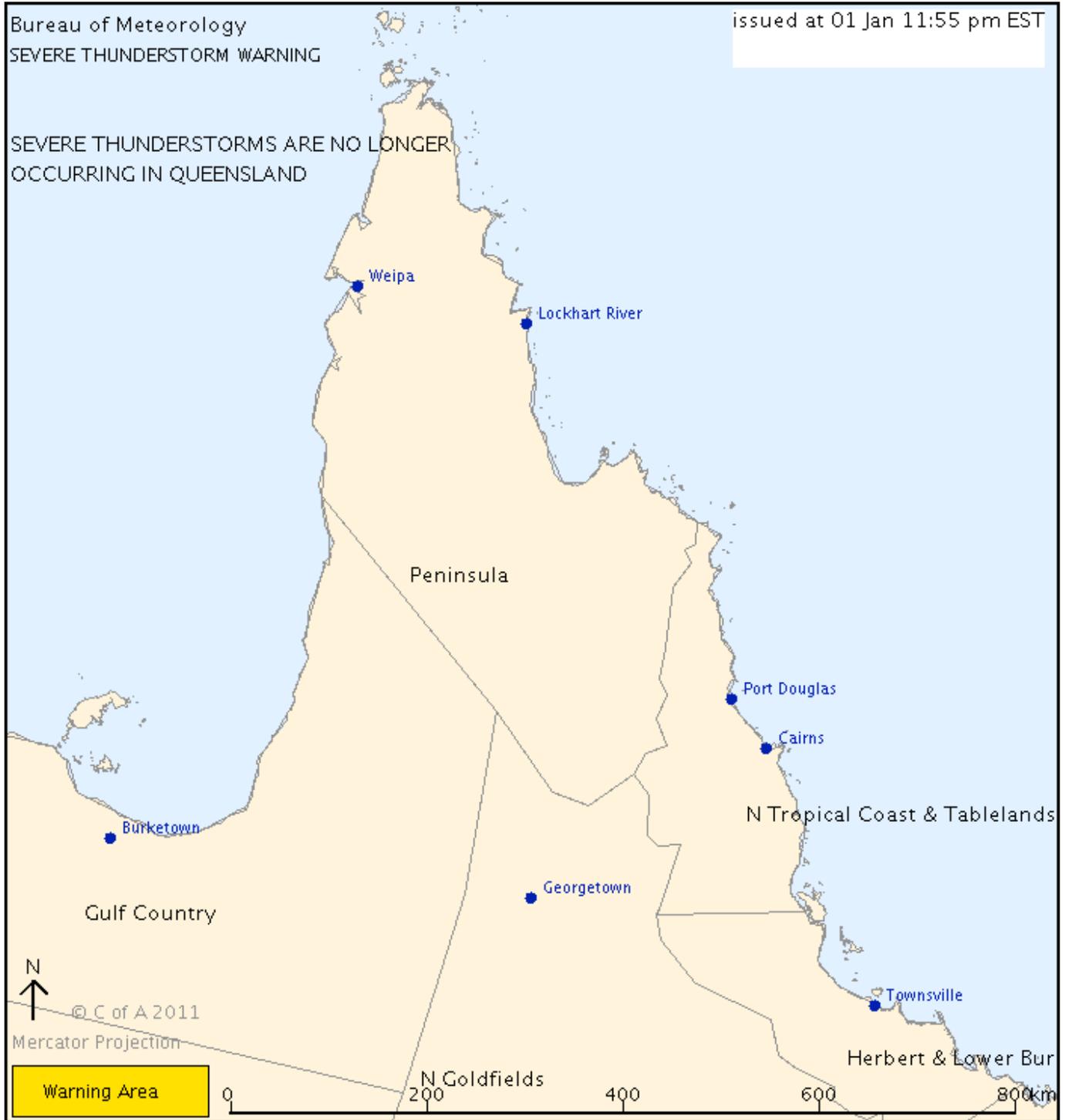
TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

Issued at 11:55 pm Saturday, 1 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

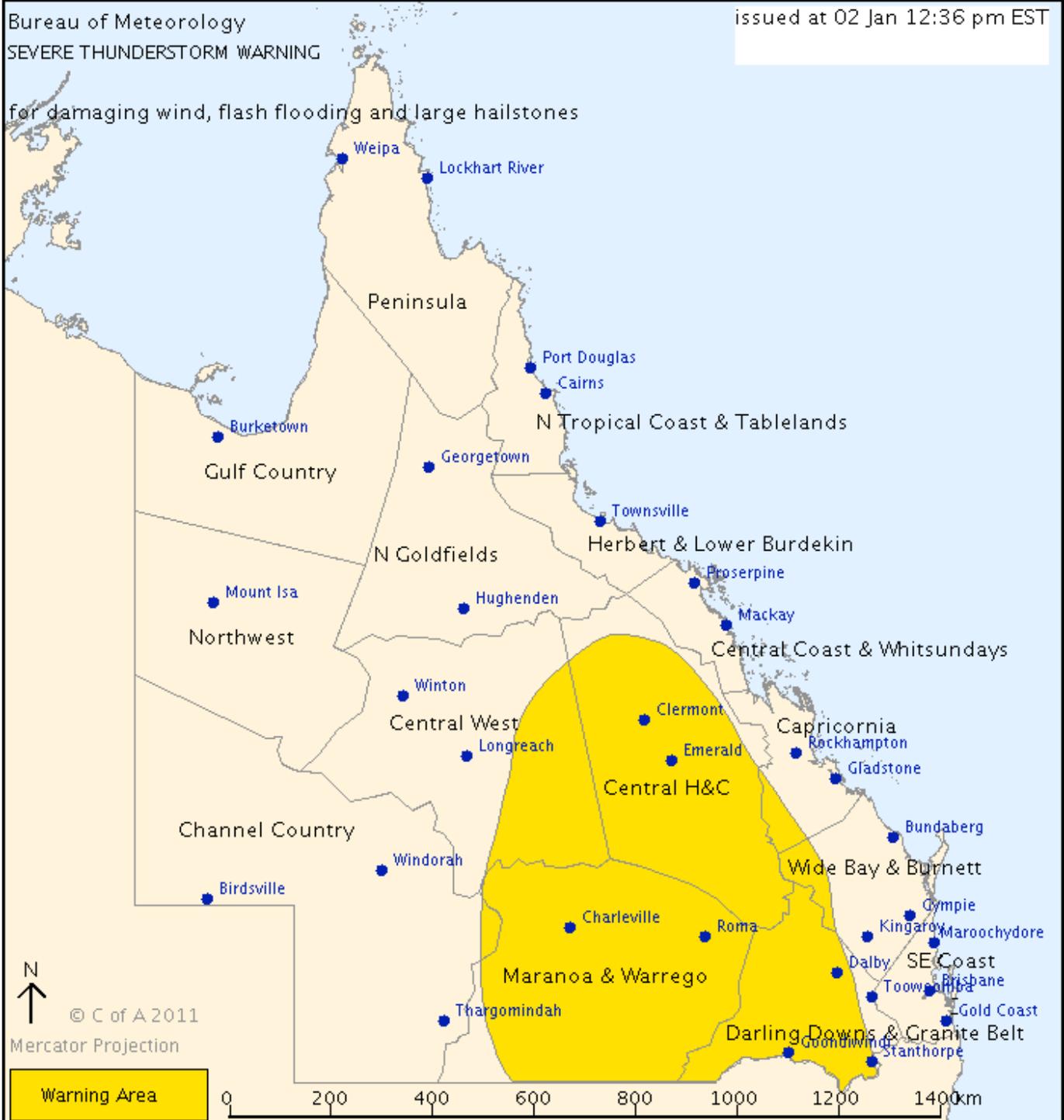
For people in the Central Highlands and Coalfields, Maranoa and Warrego, Darling Downs and Granite Belt and parts of the Central West, Channel Country, Capricornia and Wide Bay and Burnett Forecast Districts.

Issued at 12:36 pm Sunday, 2 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Dalby, Roma, Charleville, Emerald, Clermont, Cunnamulla, St George, Blackwater, Barcaldine, Moranbah, Stanthorpe and Goondiwindi.



issued at 02 Jan 12:36 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:40 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES  
For people in the Central Highlands and Coalfields, Maranoa and Warrego, Darling Downs and Granite Belt and parts of the Central Coast and Whitsundays, Central West, Channel Country, Capricornia and Wide Bay and Burnett Forecast Districts.

Issued at 3:30 pm Sunday, 2 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Dalby, Roma, Charleville, Emerald, Clermont, Cunnamulla, St George, Quilpie, Biloela, Blackwater, Moranbah and Goondiwindi.

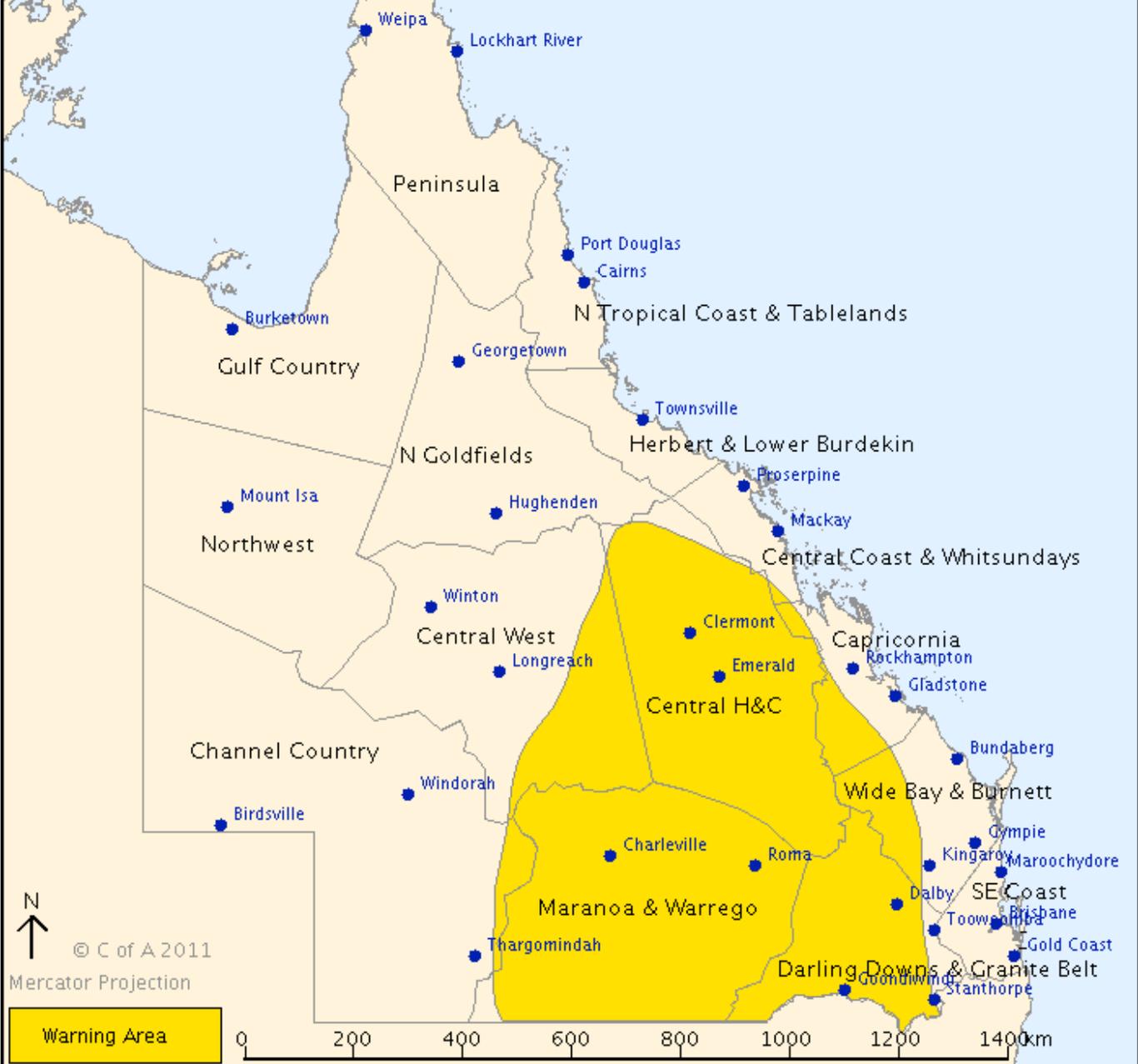


issued at 02 Jan 3:30 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:30 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING

for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

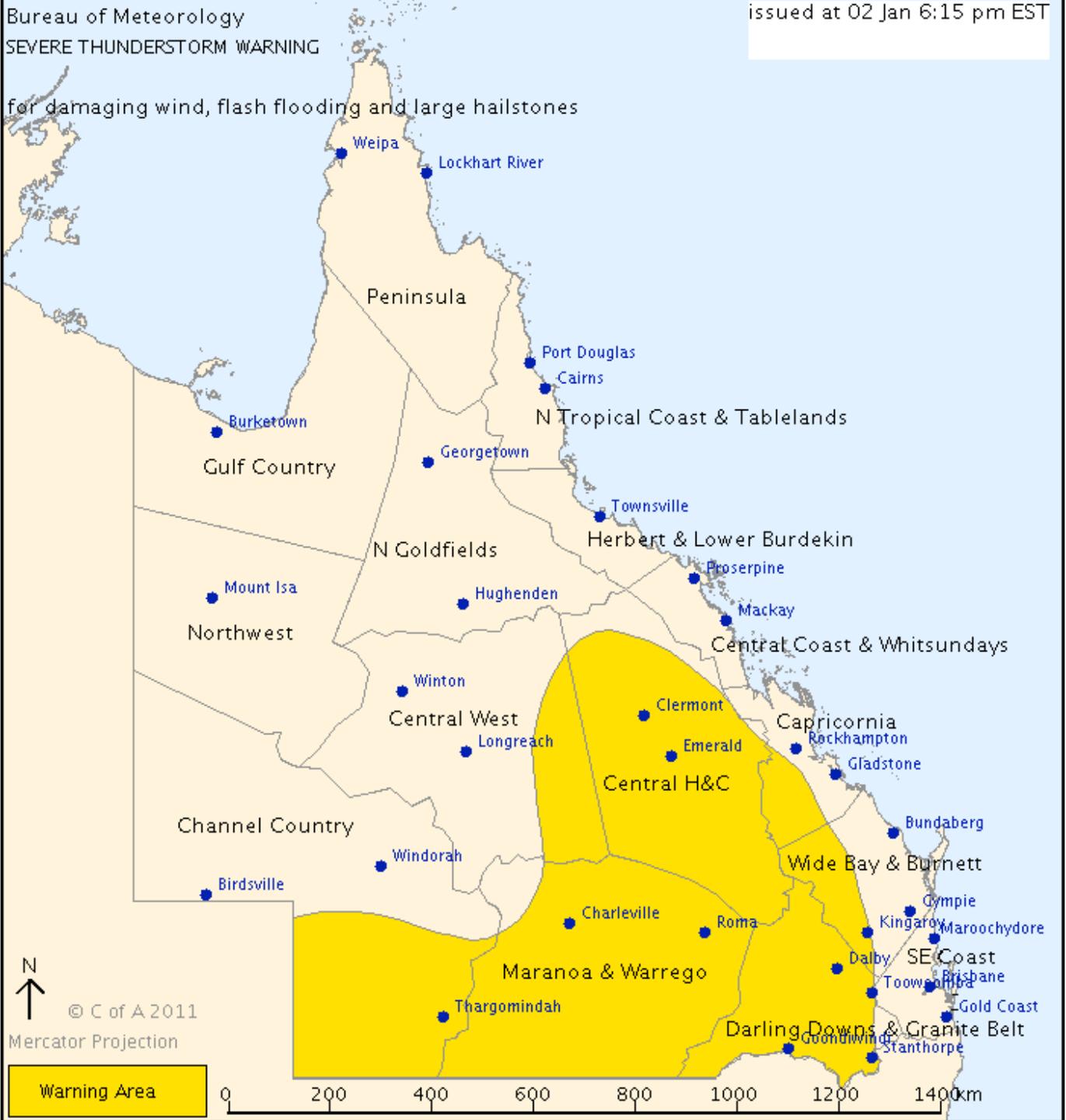
For people in the Central Highlands and Coalfields, Maranoa and Warrego, Darling Downs and Granite Belt and parts of the Central West, Channel Country, Capricornia, Wide Bay and Burnett and Southeast Coast Forecast Districts.

Issued at 6:15 pm Sunday, 2 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Thargomindah, Toowoomba, Dalby, Roma, Charleville, Emerald, Clermont, Kingaroy, Blackwater, Moranbah, Stanthorpe and Goondiwindi.



issued at 02 Jan 6:15 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:15 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**

**Bureau of Meteorology**

At 6:15 pm Sunday, 2 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

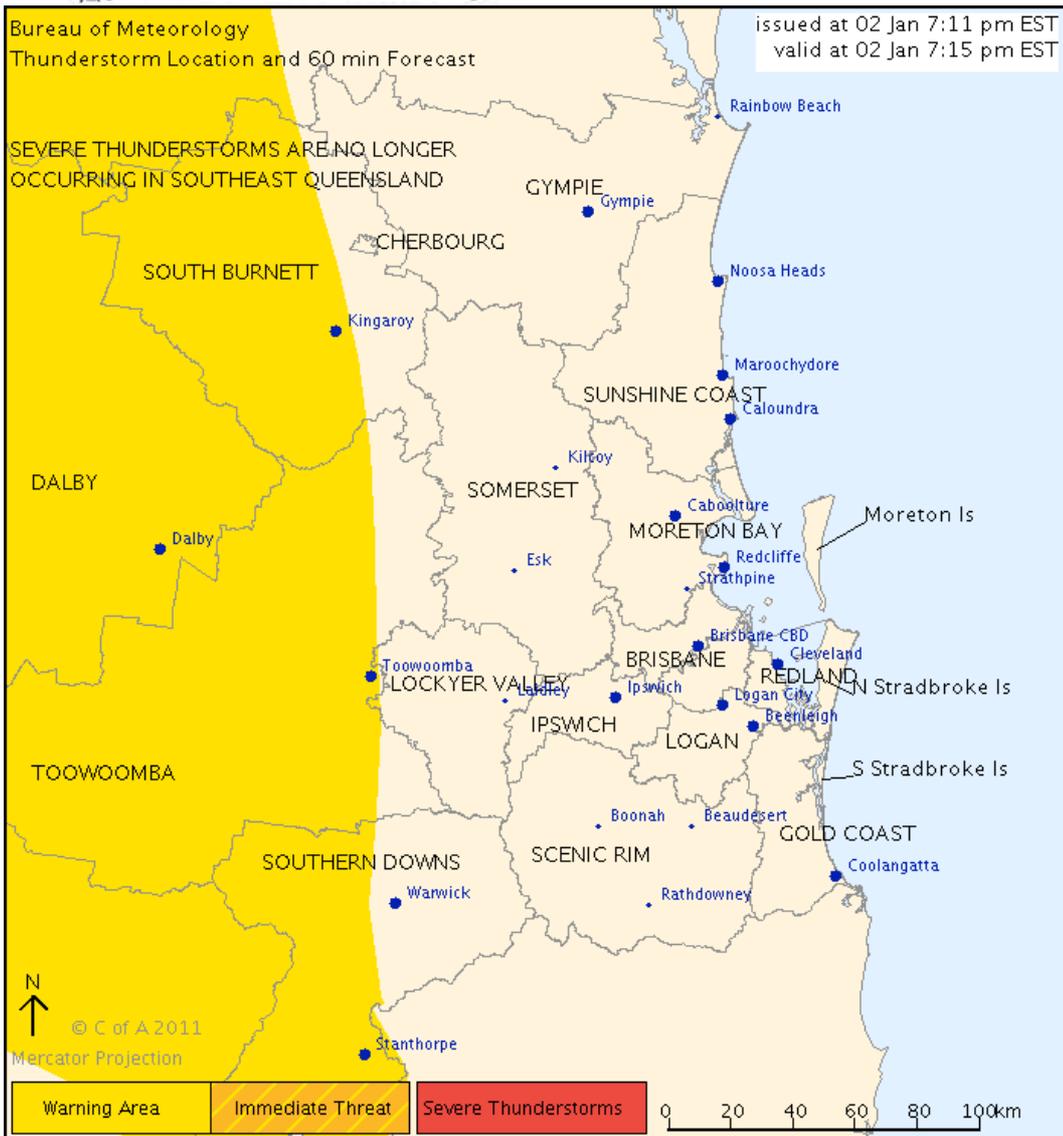
IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

Issued at 7:11 pm Sunday, 2 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for the Central Highlands and Coalfields, Maranoa and Warrego, Darling Downs and Granite Belt and parts of the Central West, Channel Country, Capricornia, Wide Bay and Burnett and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING

for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

For people in parts of the

Central Highlands and Coalfields,

Central West and

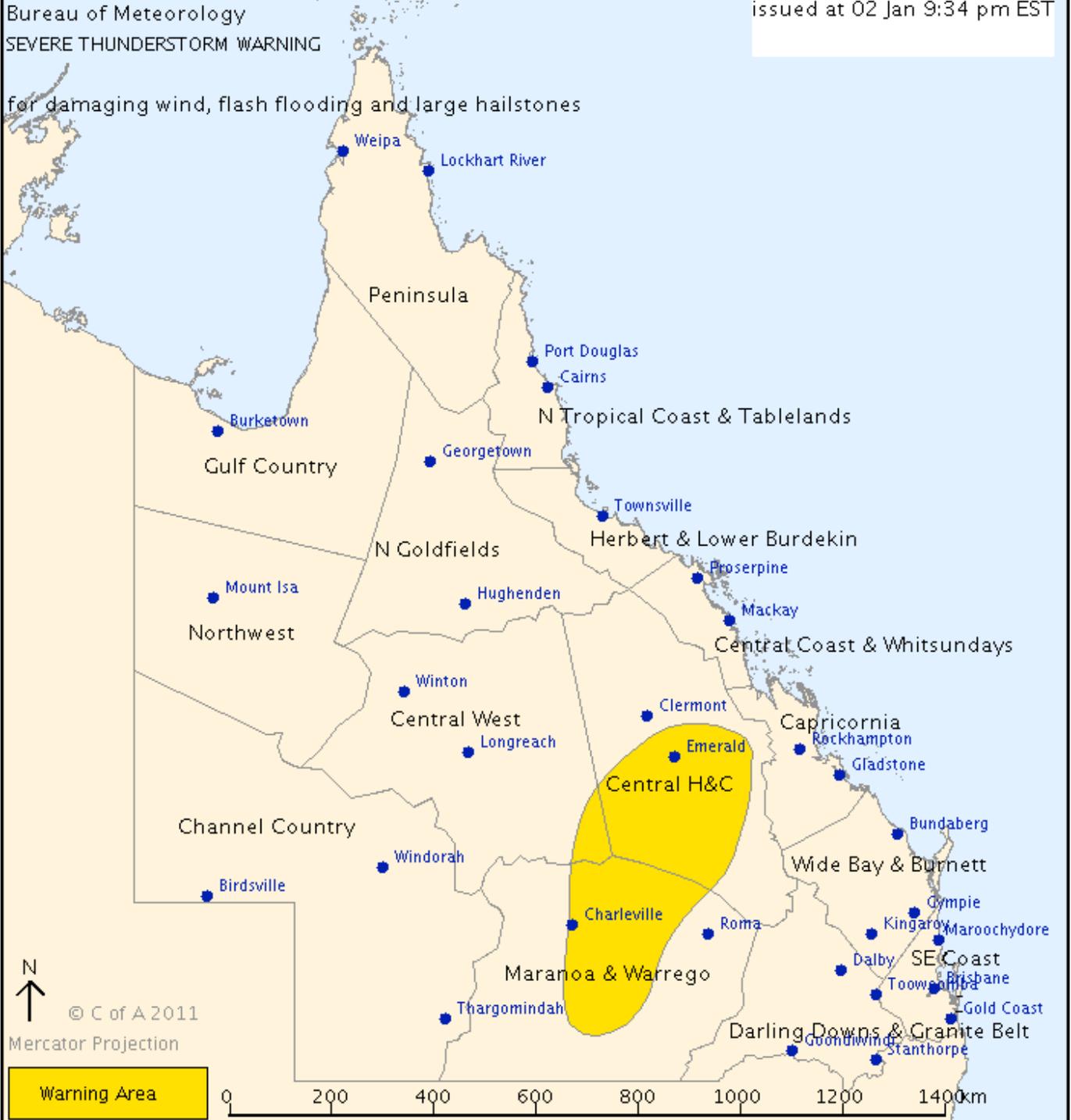
Maranoa and Warrego Forecast Districts.

Issued at 9:34 pm Sunday, 2 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Charleville, Emerald, Blackwater, Mitchell, Rolleston and Springsure.



issued at 02 Jan 9:34 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:35 am Monday.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

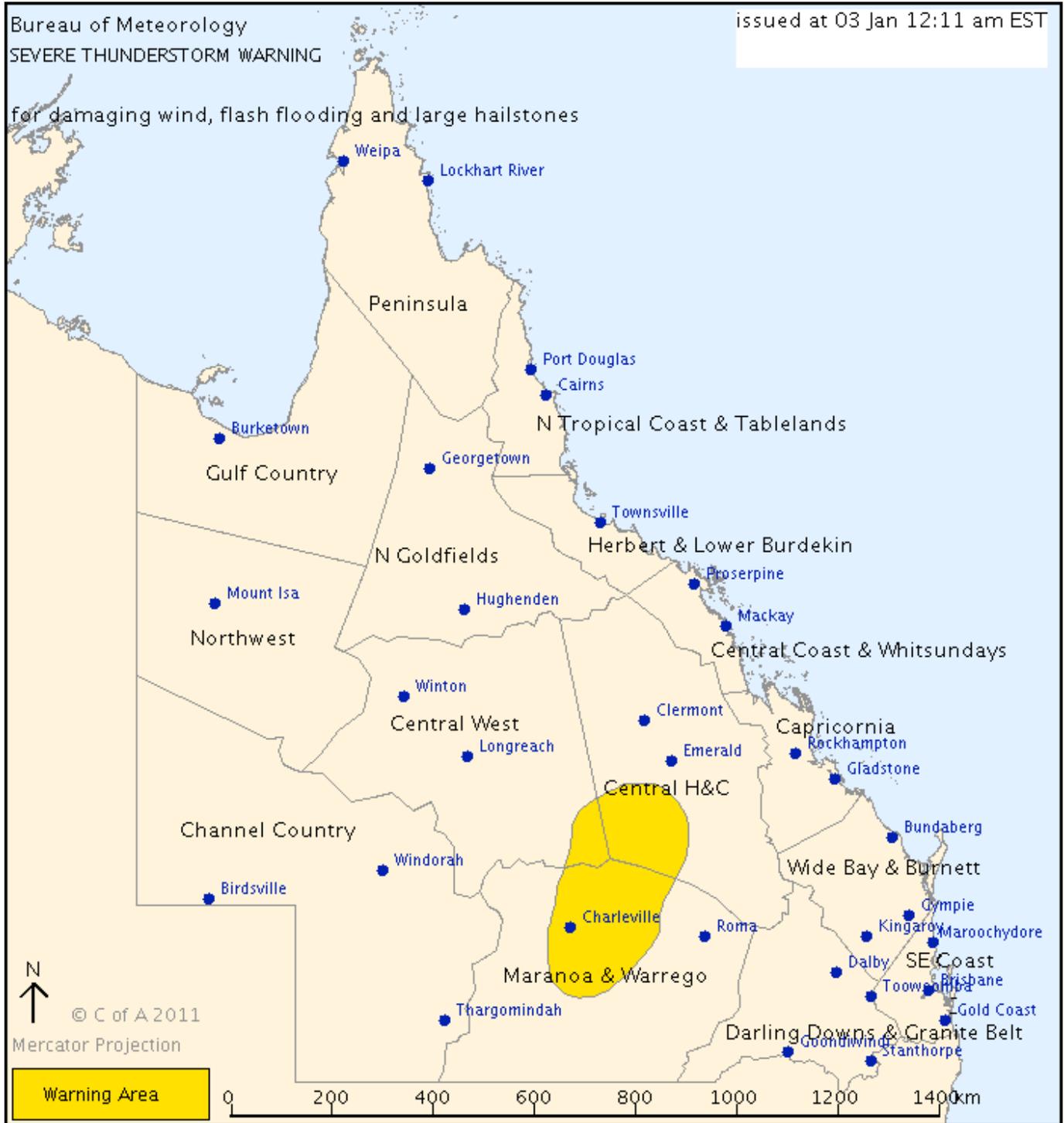
IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Highlands and Coalfields,  
Central West and  
Maranoa and Warrego Forecast Districts.

Issued at 12:11 am Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Charleville, Tambo, Springsure, Augathella and Mantuan Downs.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:15 am.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

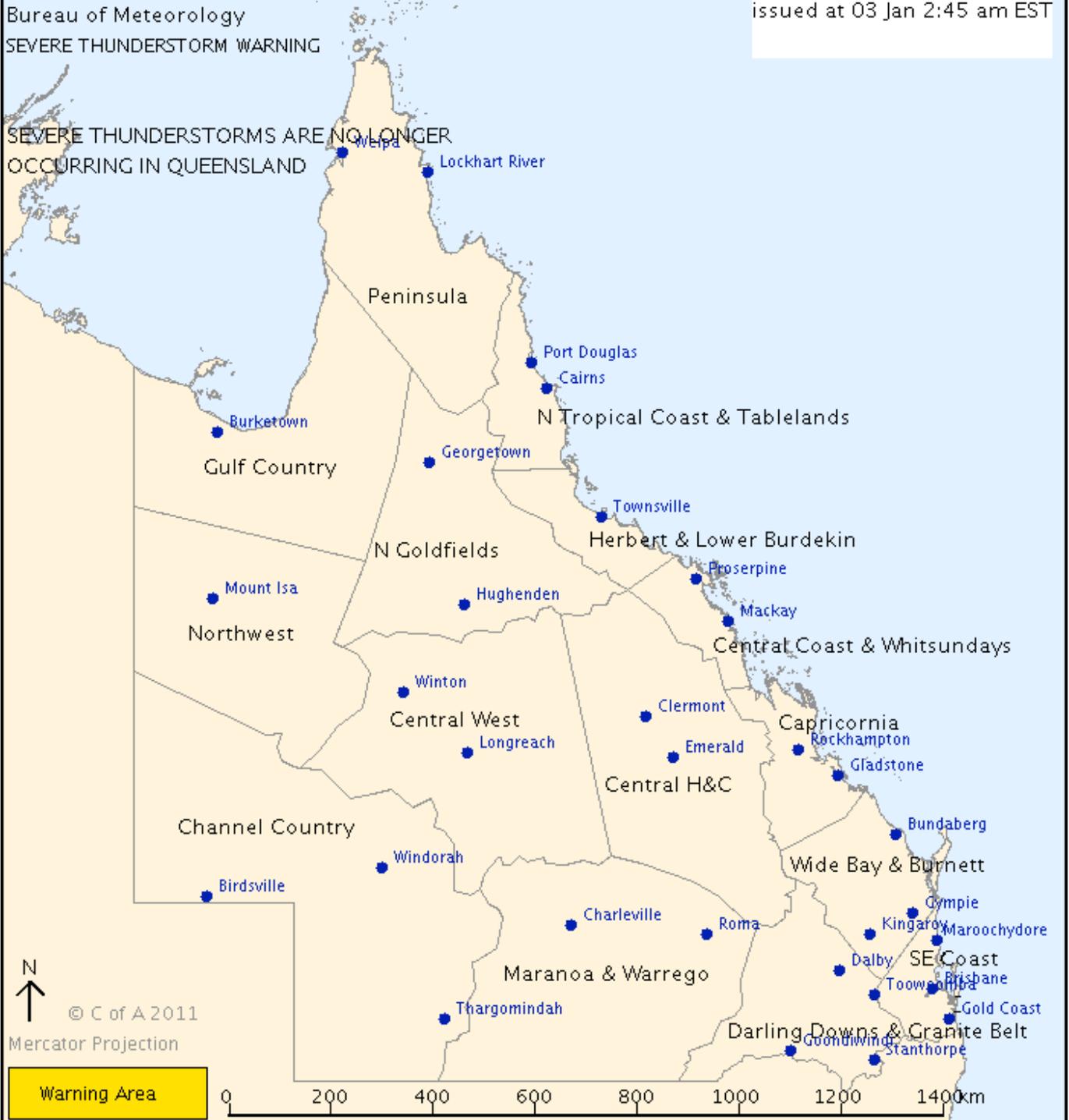
Issued at 2:45 am Monday, 3 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 03 Jan 2:45 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20038

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING**

For people in parts of the

LOCKYER VALLEY and

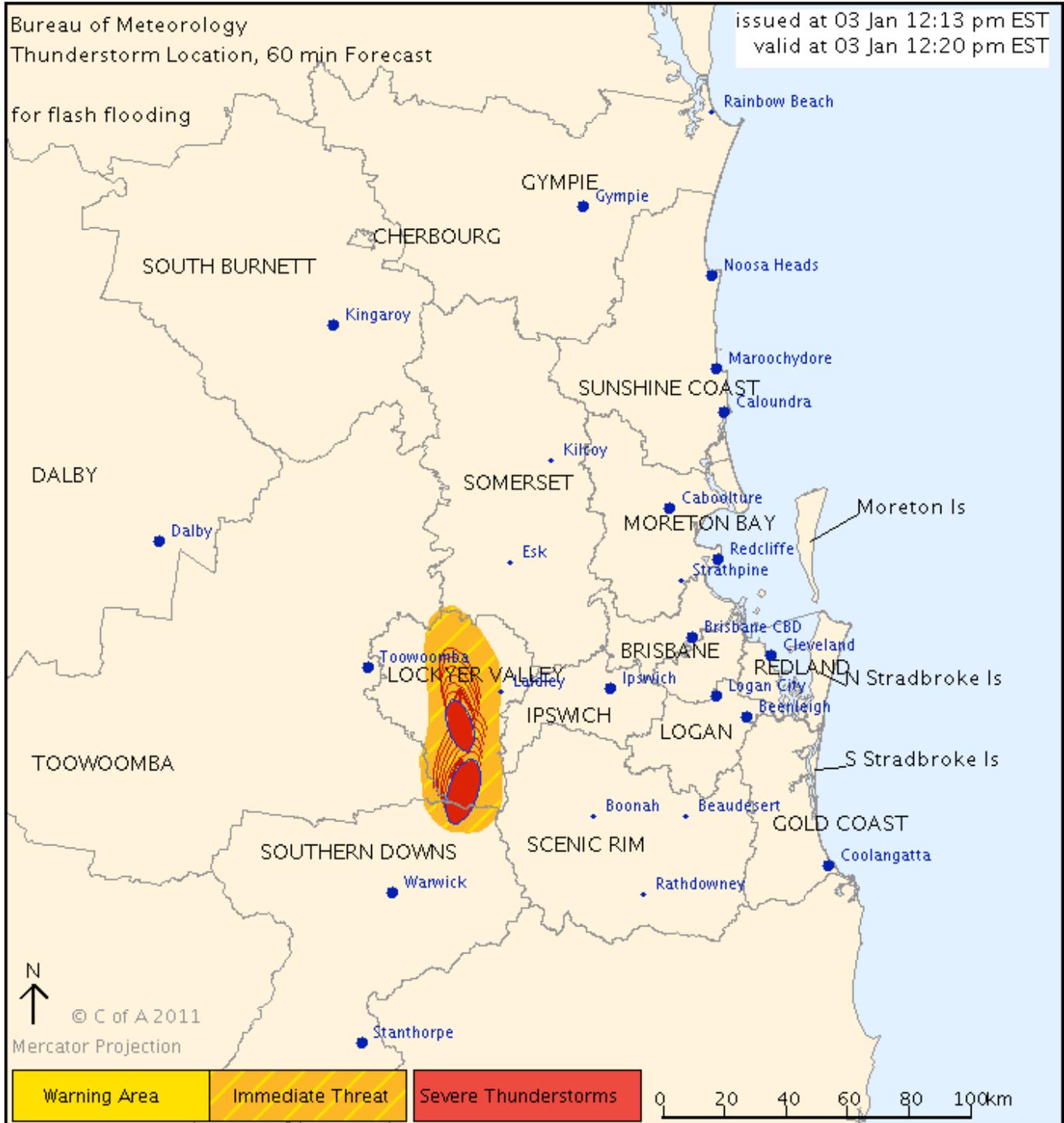
SOUTHERN DOWNS Council Areas.

Issued at 12:13 pm Monday, 3 January 2011.

Thunderstorms are moving towards the north.

They are forecast to affect the area northwest of Cunninghams Gap by 12:50 pm  
and Gatton by 1:20 pm.

Very heavy rainfall and flash flooding are likely.



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 1:15 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING

for FLASH FLOODING and LARGE HAILSTONES

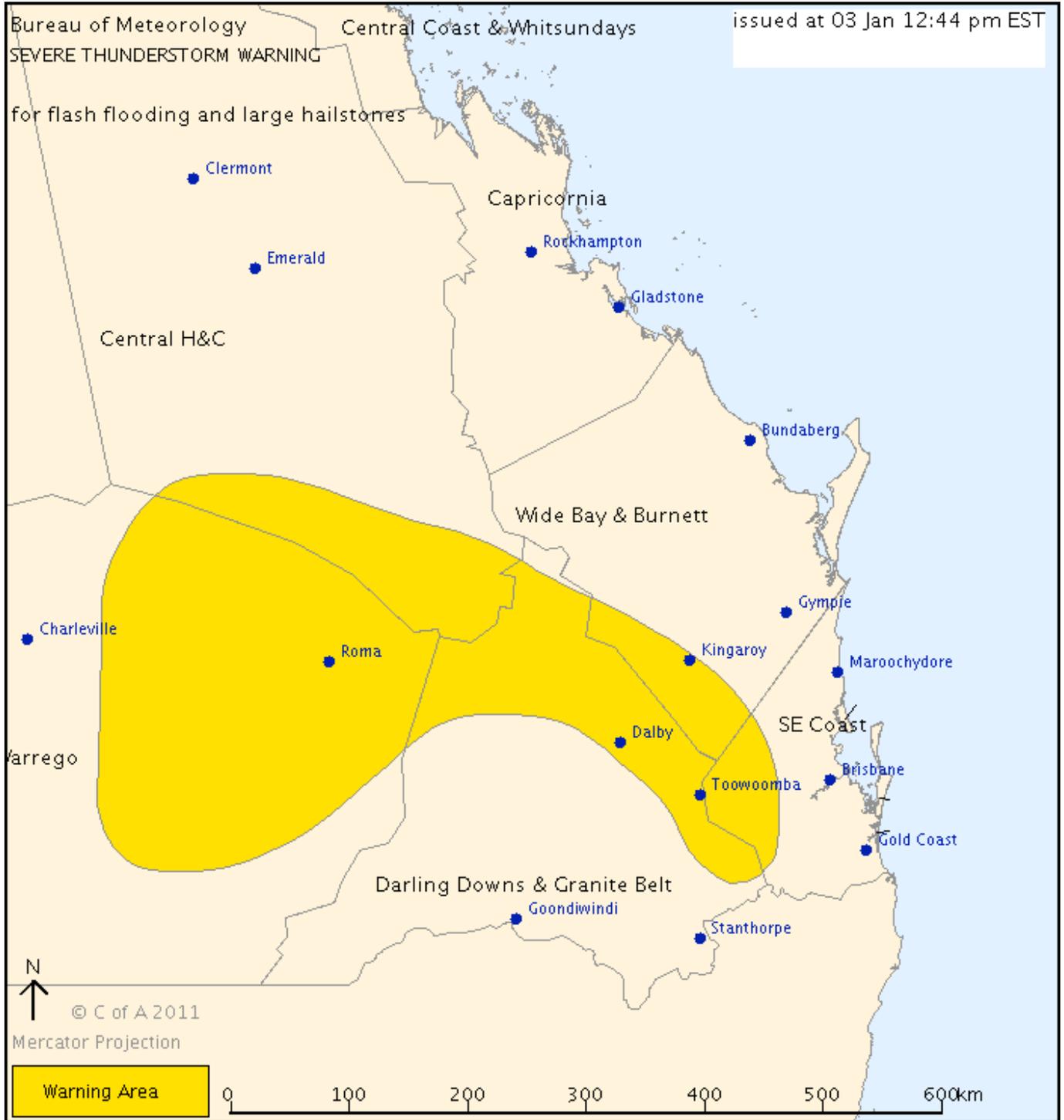
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 12:44 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Toowoomba, Dalby, Roma, Kingaroy, Bollon, Oakey, Mitchell, Taroom and Injune.



issued at 03 Jan 12:44 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:45 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING and LARGE HAILSTONES**

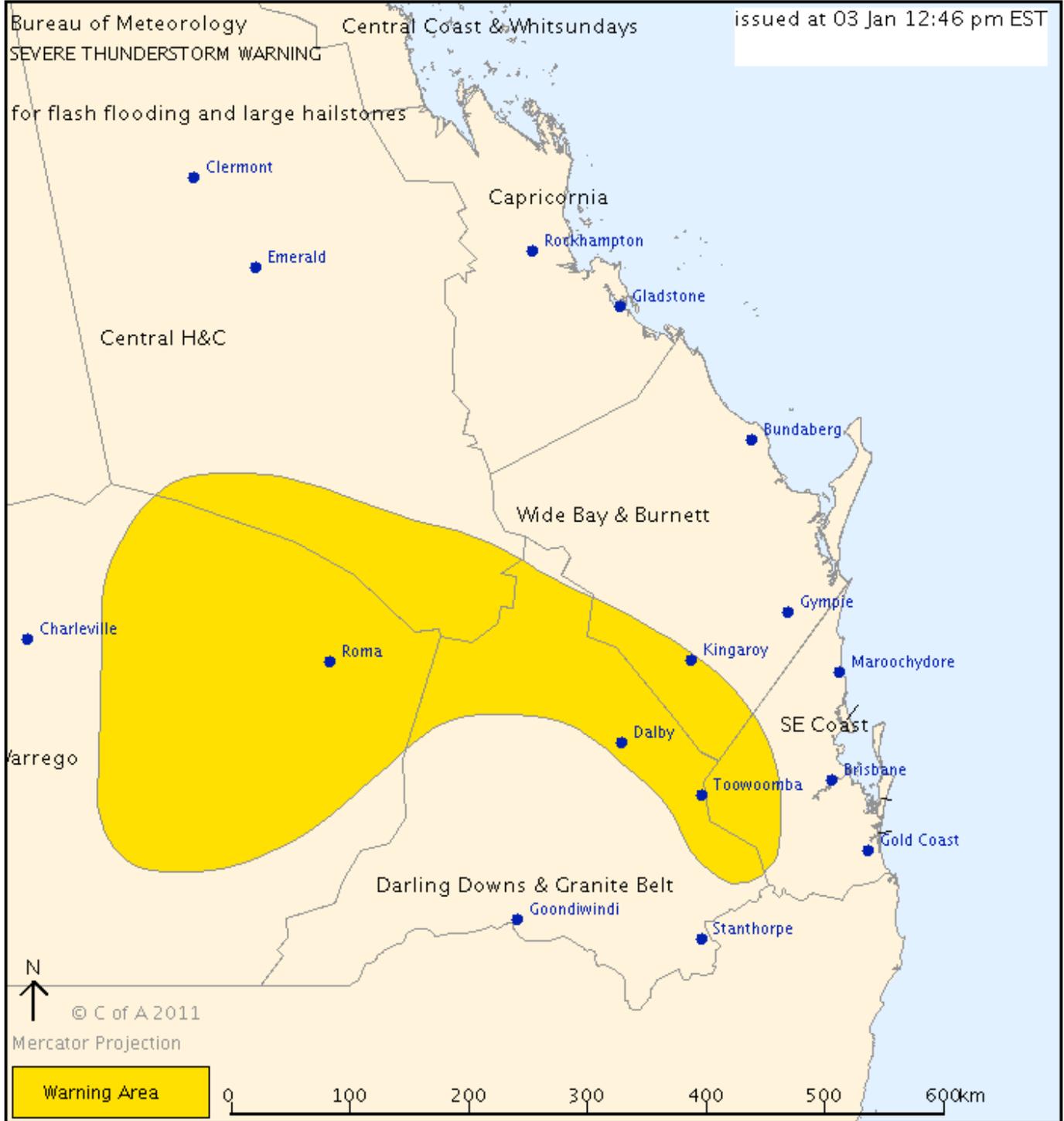
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 12:46 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Toowoomba, Dalby, Roma, Kingaroy, Bollon, Oakey, Mitchell, Taroom and Injune.



issued at 03 Jan 12:46 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:50 pm.



**Australian Government**

**Bureau of Meteorology**

At 12:46 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING**

For people in the  
LOCKYER VALLEY and parts of the  
TOOWOOMBA Council Areas.

Issued at 12:47 pm Monday, 3 January 2011.

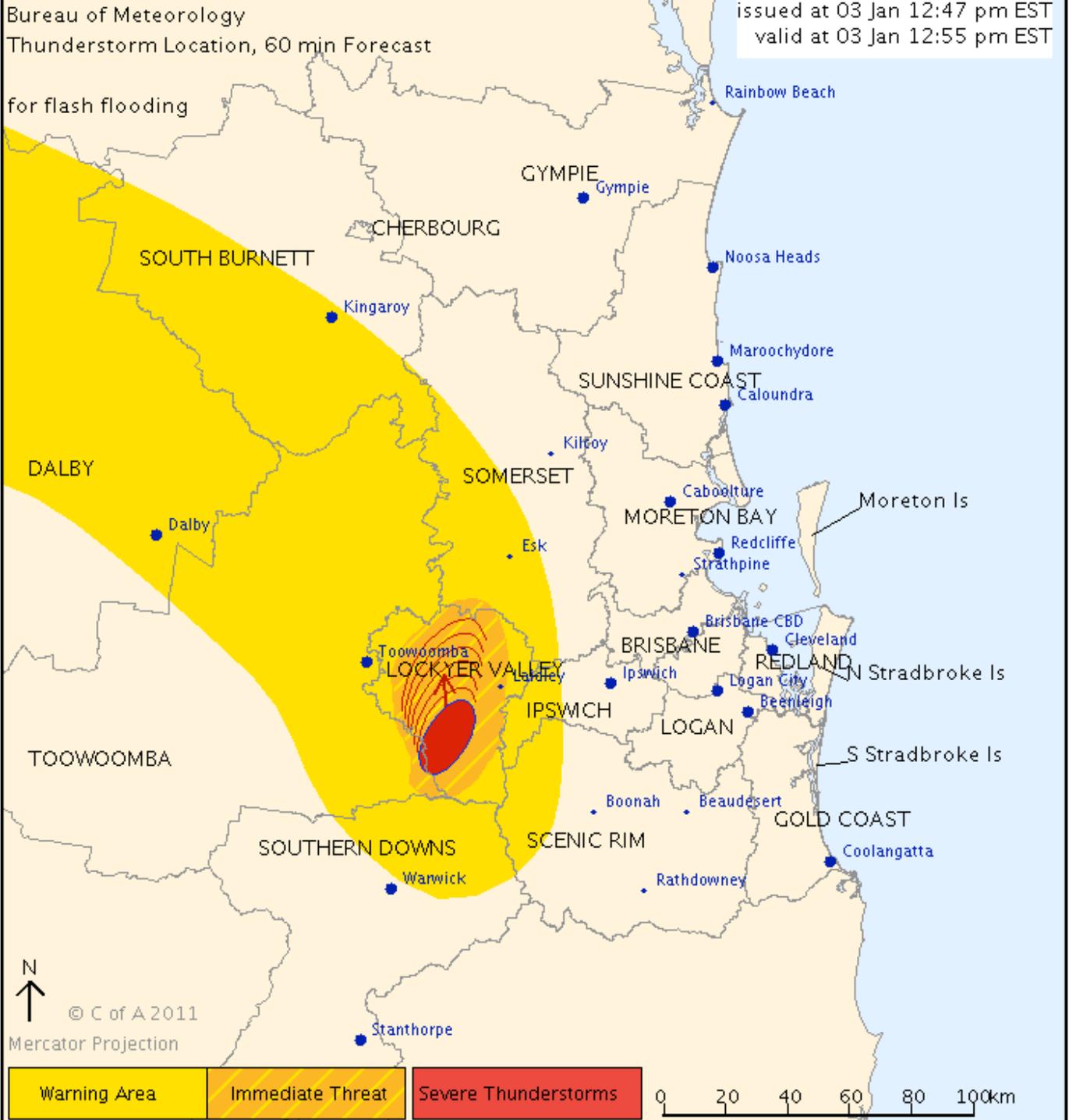
Thunderstorms are moving towards the north.

They are forecast to affect Gatton and the area south of Helidon by 1:25 pm and Helidon and the area north of Gatton by 1:55 pm.

Very heavy rainfall and flash flooding are likely.



issued at 03 Jan 12:47 pm EST  
valid at 03 Jan 12:55 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 1:50 pm.



**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

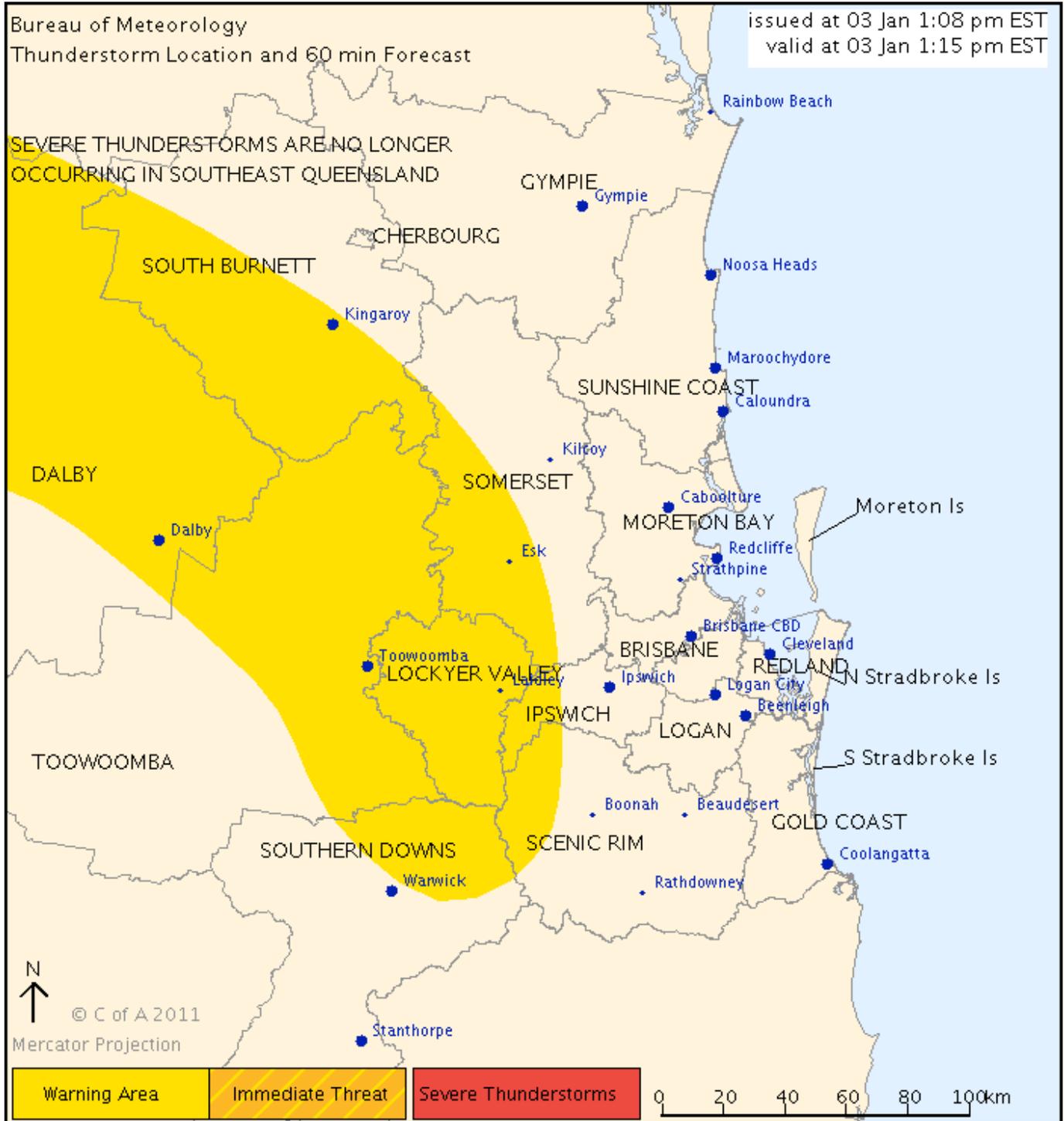
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

Issued at 1:08 pm Monday, 3 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
LOCKYER VALLEY and  
TOOWOOMBA Council Areas.

Issued at 1:33 pm Monday, 3 January 2011.

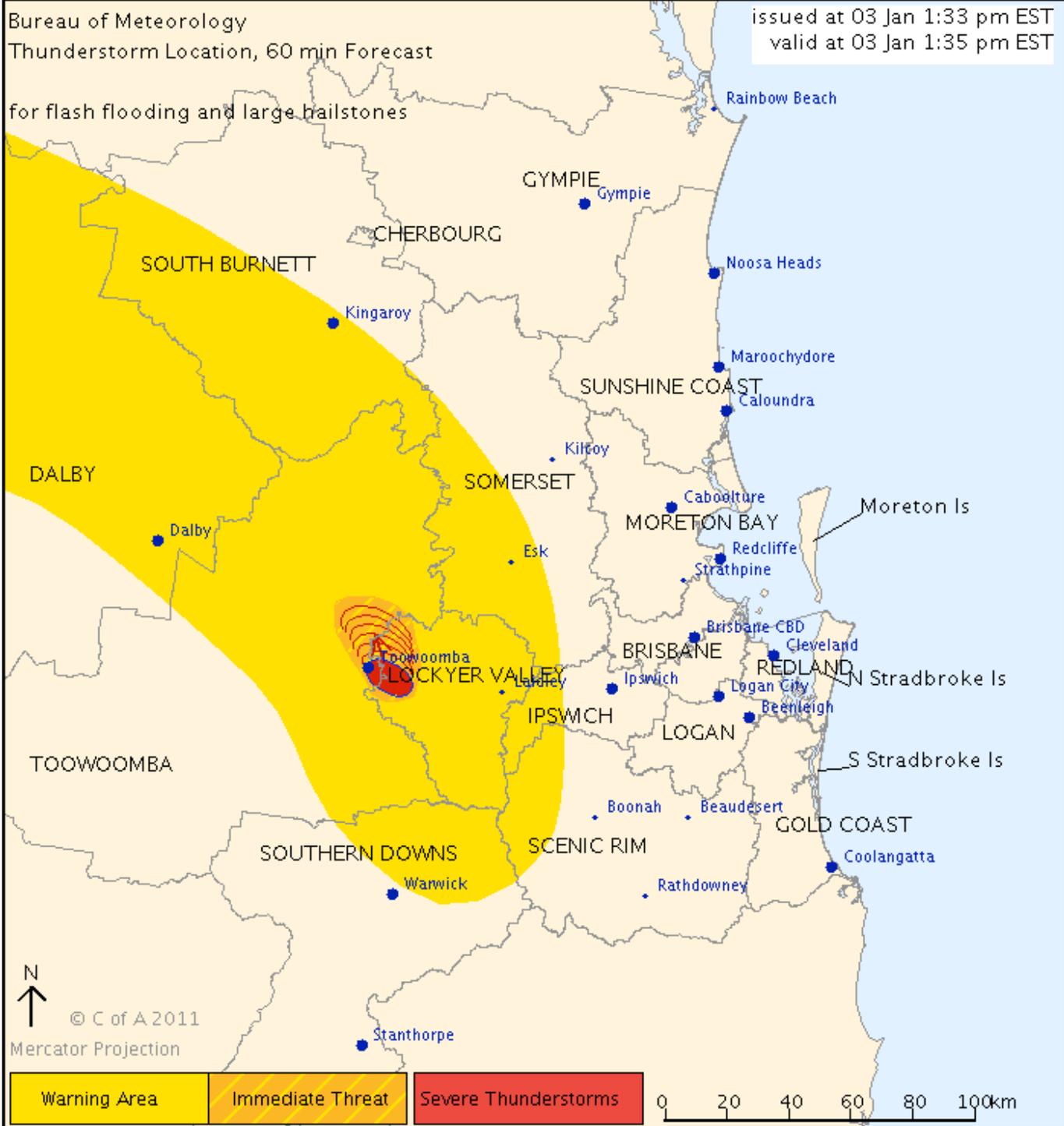
The Bureau of Meteorology warns that, at 1:35 pm, severe thunderstorms were detected on weather radar near Toowoomba.

They are forecast to affect Highfields by 2:05 pm and the area north of Toowoomba by 2:35 pm.

Very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 1:33 pm EST  
valid at 03 Jan 1:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**  
**Bureau of Meteorology**

The next warning is due to be issued by 2:35 pm.

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING and LARGE HAILSTONES

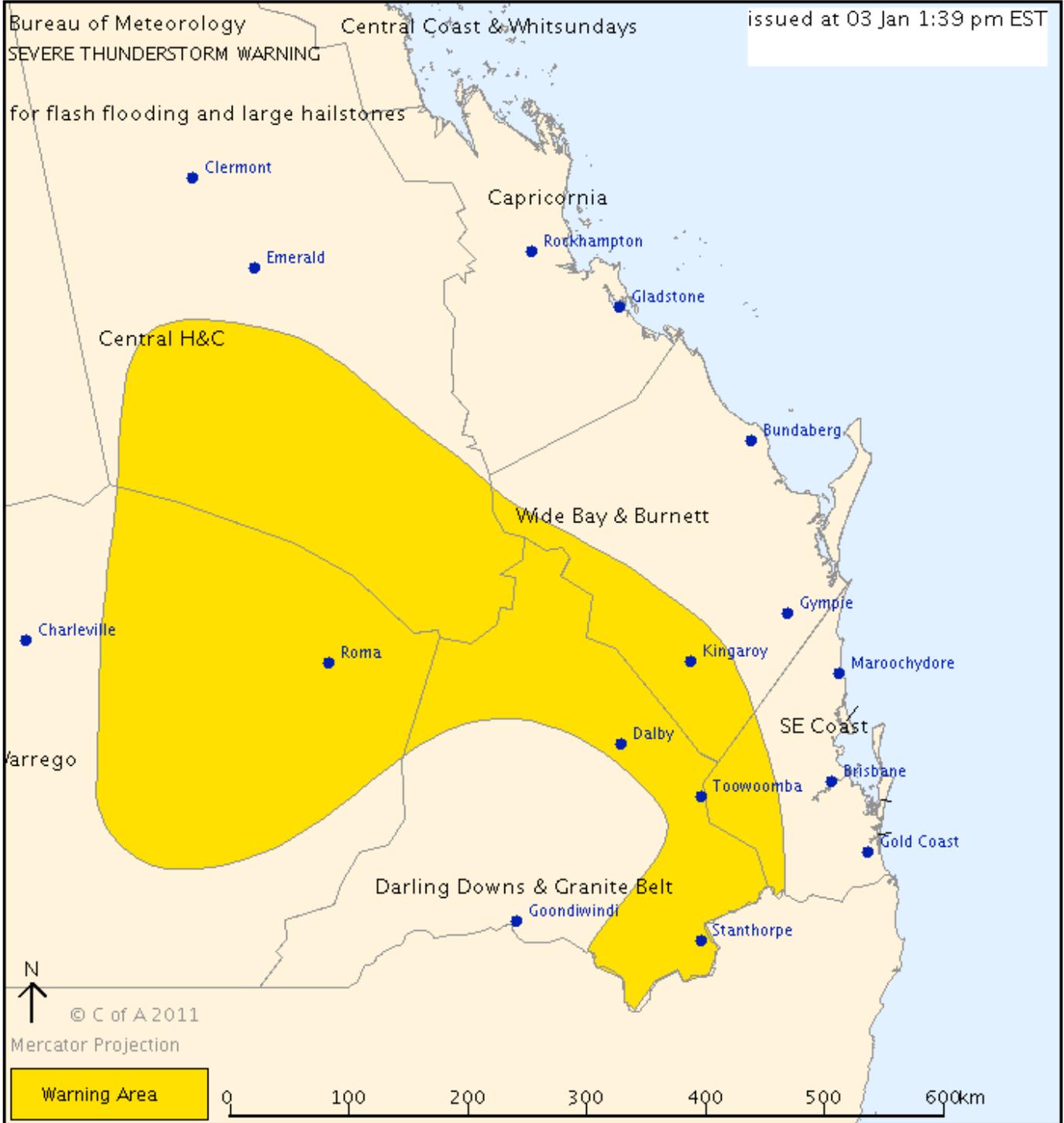
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 1:39 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Warwick, Toowoomba, Dalby, Roma, Kingaroy, Stanthorpe, Bollon, Oakey, Mitchell, Taroom, Rolleston and Springsure.



issued at 03 Jan 1:39 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:40 pm.



**Australian Government**

**Bureau of Meteorology**

At 1:39 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

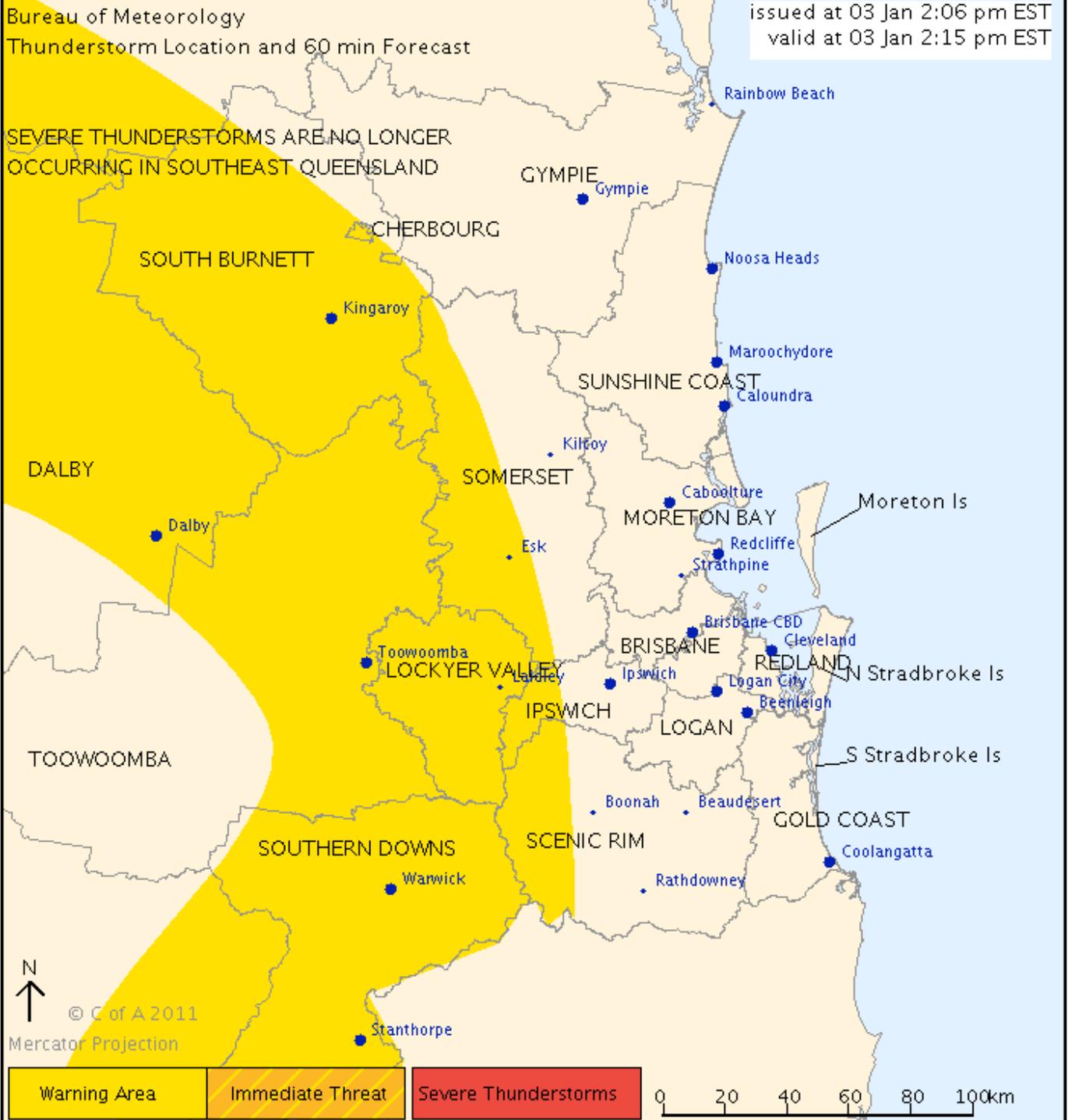
**CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

Issued at 2:06 pm Monday, 3 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 03 Jan 2:06 pm EST  
valid at 03 Jan 2:15 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
BRISBANE CITY,  
MORETON BAY and  
SOUTHERN DOWNS Council Areas.

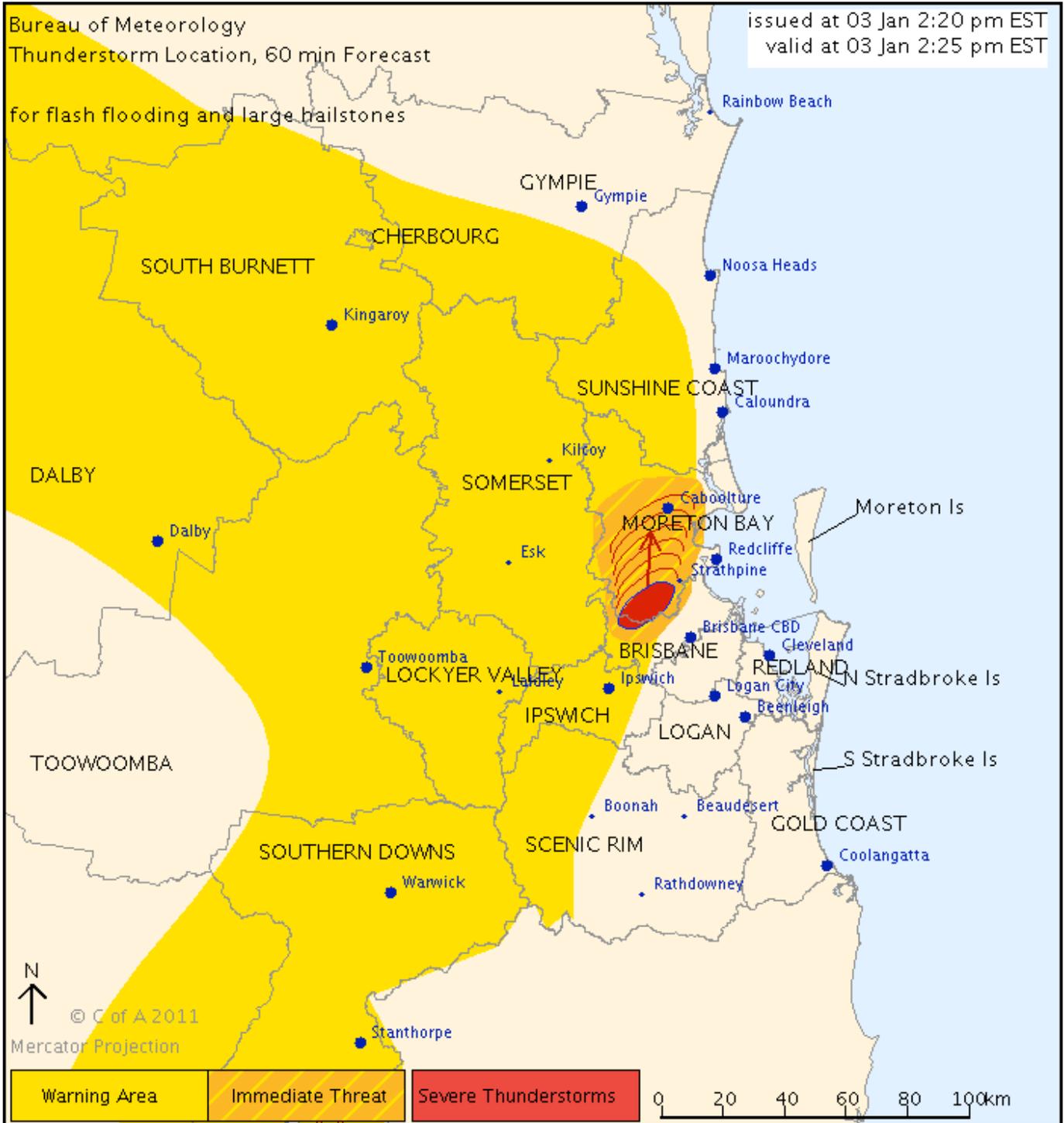
Issued at 2:20 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 2:25 pm, severe thunderstorms were detected on weather radar near Highvale, Samford and Albany Creek. These thunderstorms are moving towards the north. They are forecast to affect Lake Samsonvale, Kallangur and Narangba by 2:55 pm and Caboolture, Dayboro and Burpengary by 3:25 pm.

Very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 2:20 pm EST  
valid at 03 Jan 2:25 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:20 pm.

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**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING and LARGE HAILSTONES

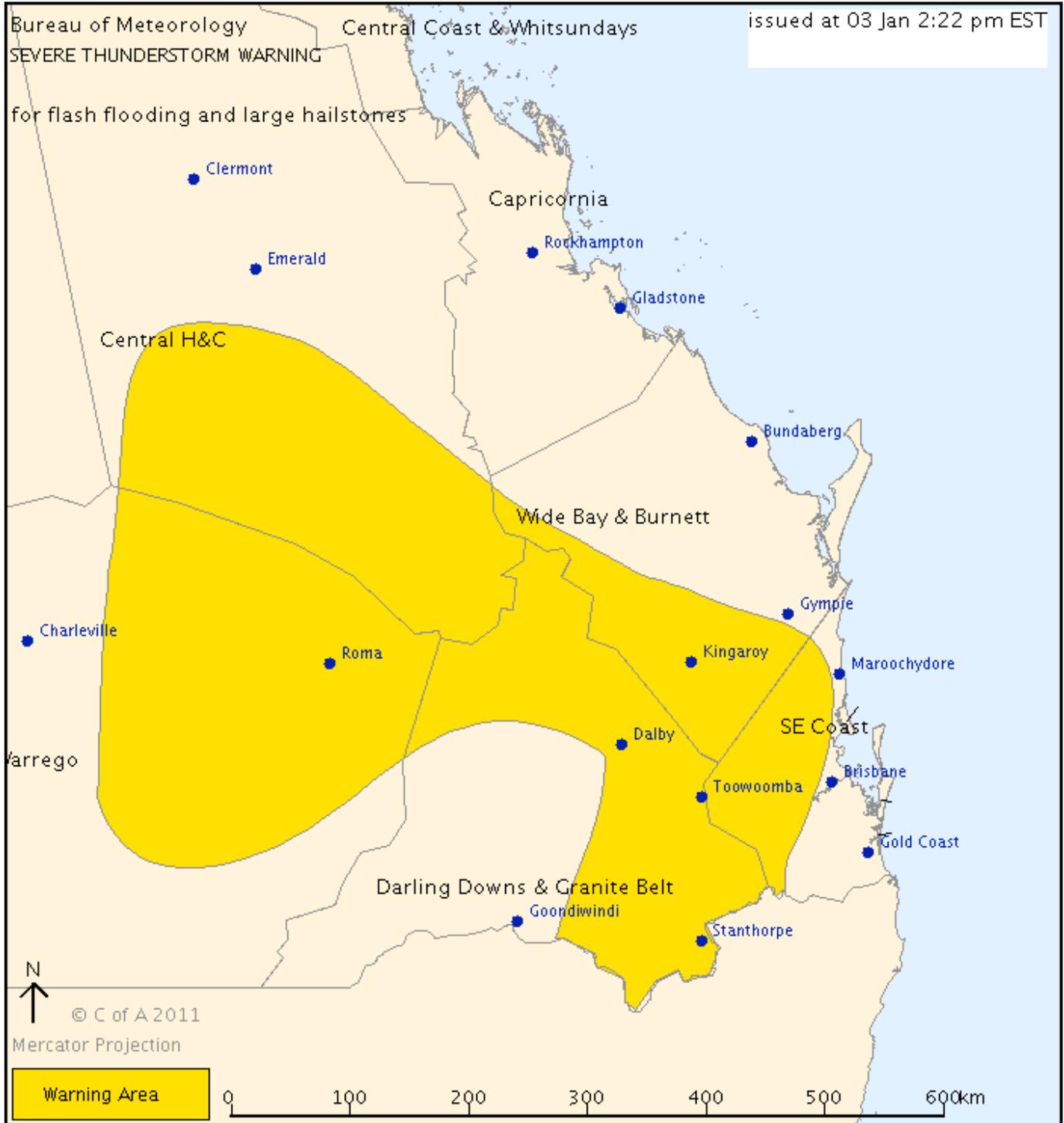
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 2:22 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Warwick, Toowoomba, Dalby, Roma, Ipswich, Kingaroy, Stanthorpe, Caboolture, Mitchell, Taroom, Rolleston and Springsure.



issued at 03 Jan 2:22 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:25 pm.



**Australian Government**

**Bureau of Meteorology**

At 2:22 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING**

For people in parts of the  
**SOUTHERN DOWNS** and  
**TOOWOOMBA** Council Areas.

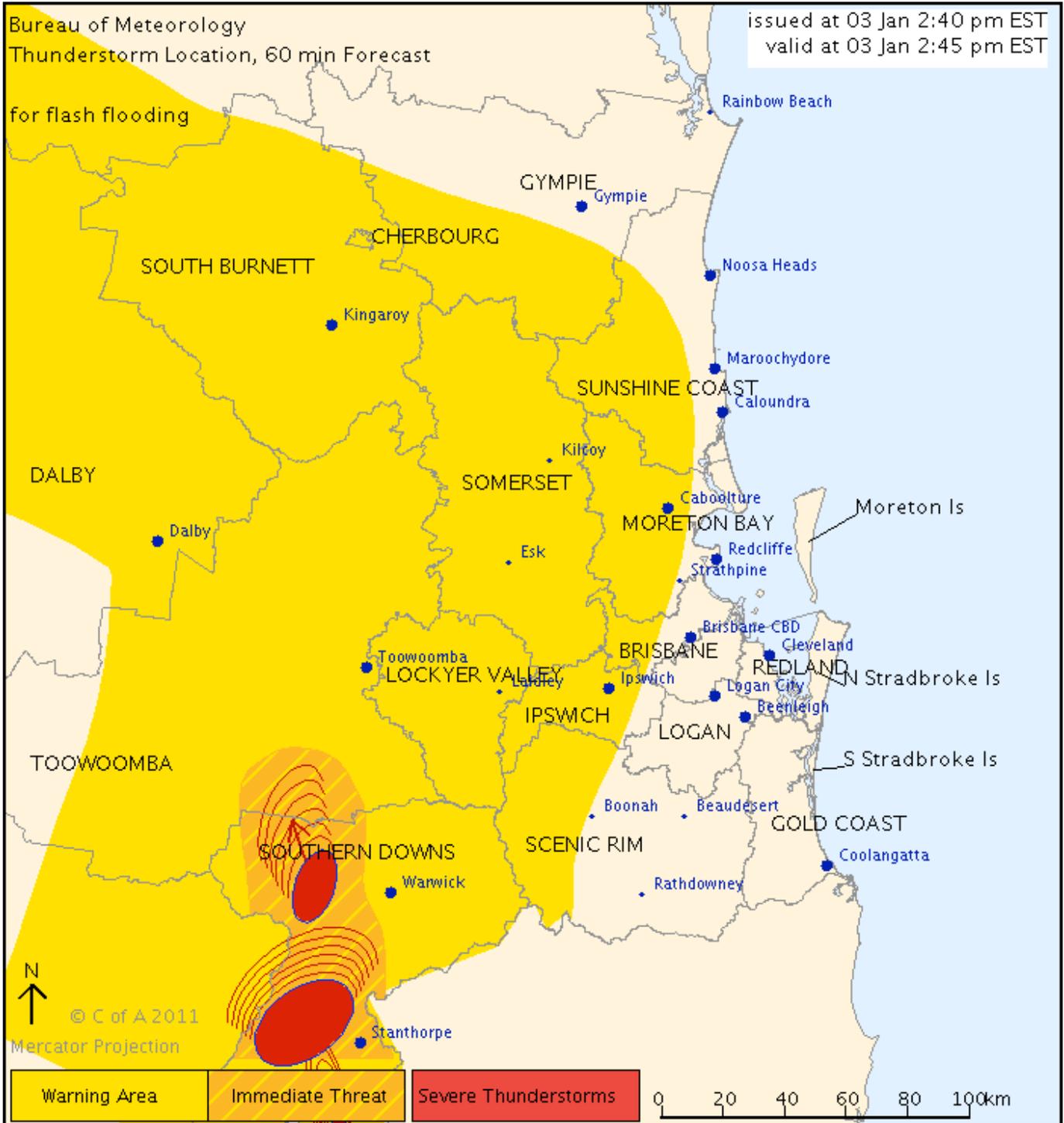
Issued at 2:40 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 2:45 pm, severe thunderstorms were detected on weather radar near Pikedale, the area between Stanthorpe and Warwick, the area west of Warwick and the NSW border. They are forecast to affect the area southwest of Warwick by 3:15 pm and Dalveen and Ellangowan by 3:45 pm.

Very heavy rainfall and flash flooding are likely.



issued at 03 Jan 2:40 pm EST  
valid at 03 Jan 2:45 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:40 pm.



**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

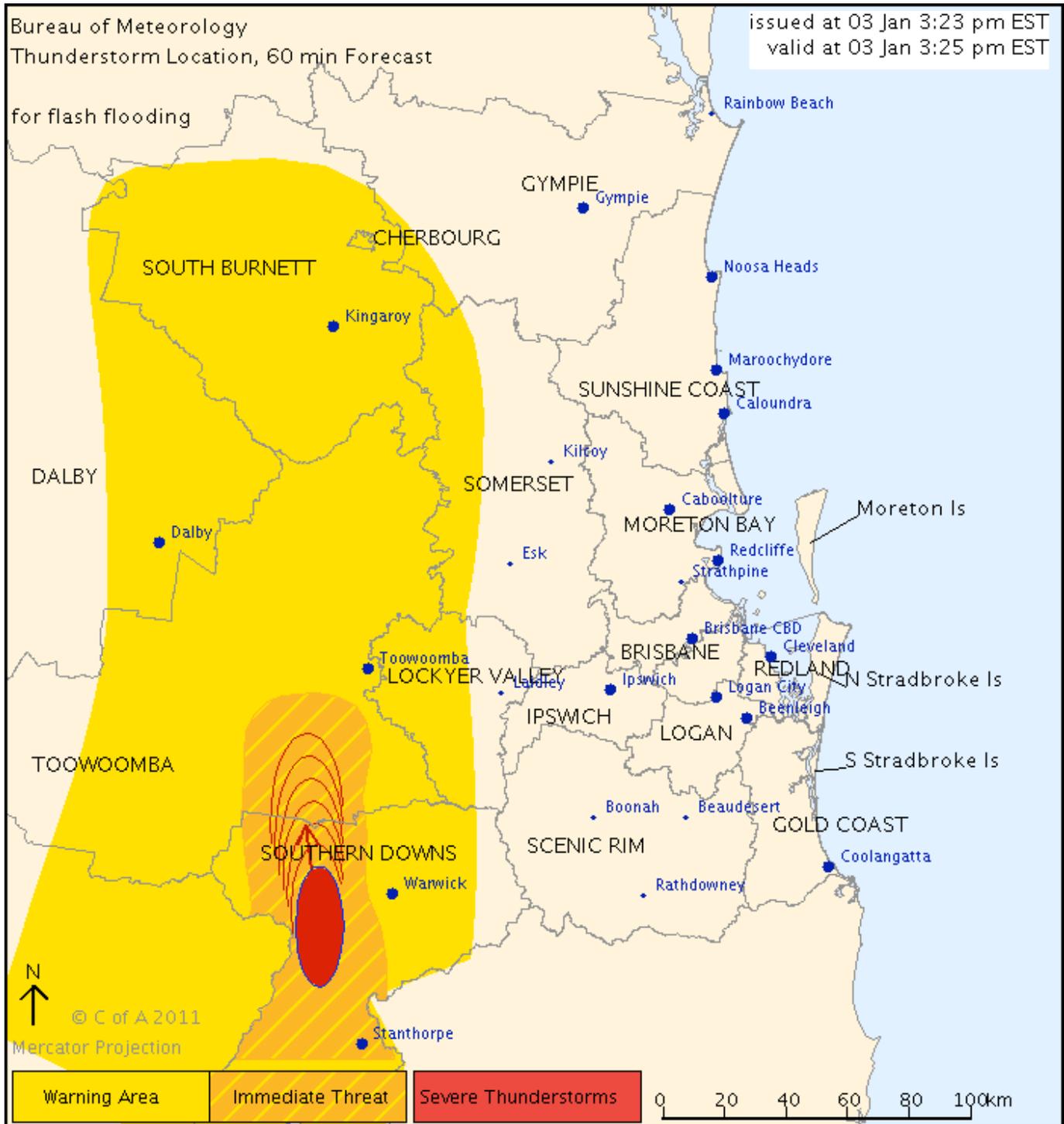
**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING**

For people in parts of the  
**SOUTHERN DOWNS** and  
**TOOWOOMBA** Council Areas.

Issued at 3:23 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 3:25 pm, severe thunderstorms were detected on weather radar near the area west of Warwick. These thunderstorms are moving towards the north. They are forecast to affect Ellangowan and Felton by 4:25 pm.

Very heavy rainfall and flash flooding are likely.



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:25 pm.



**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING and LARGE HAILSTONES

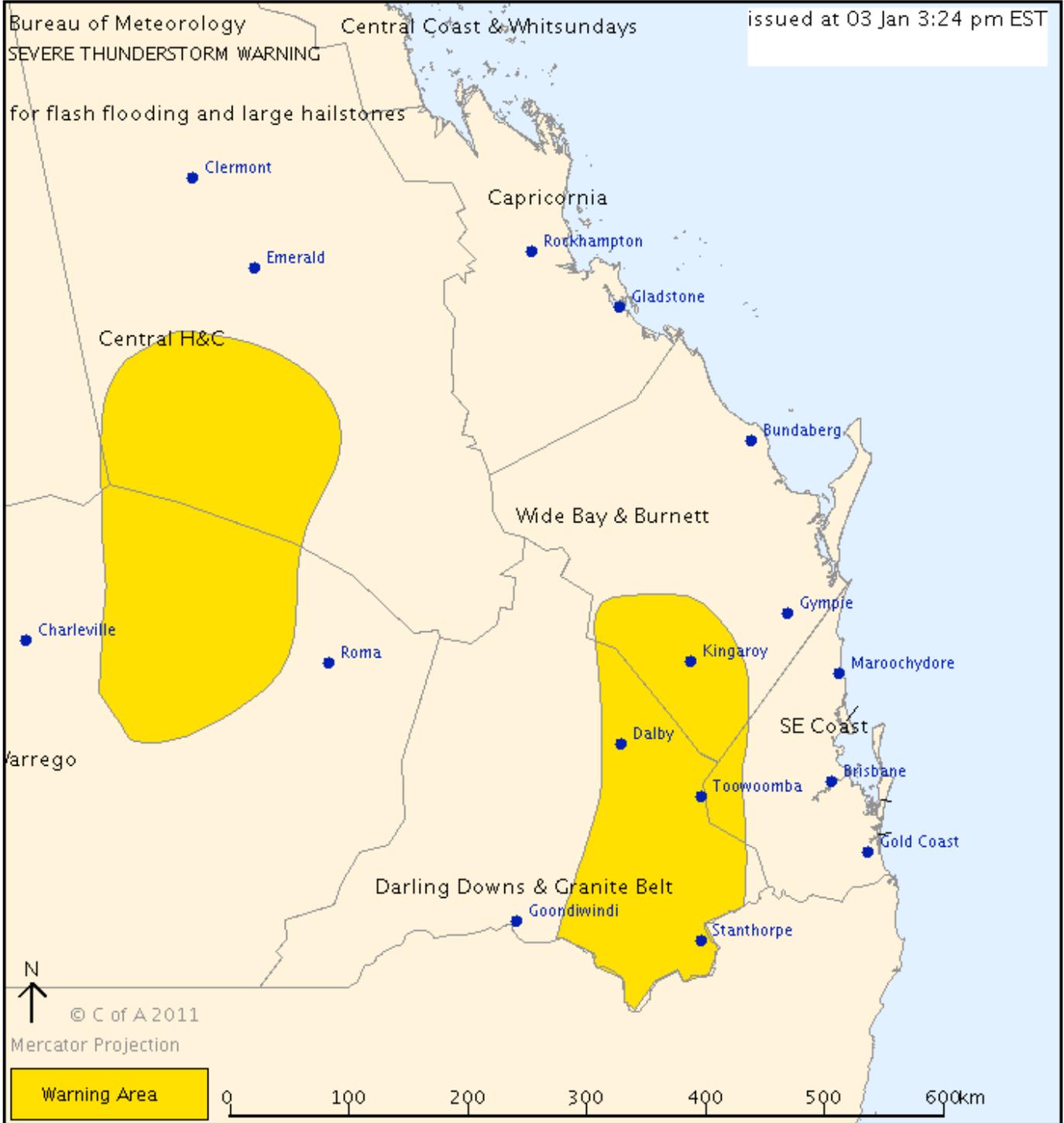
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 3:24 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Mitchell, Rolleston, Springsure, Warwick, Toowoomba, Dalby, Kingaroy, Stanthorpe, Oakey, Inglewood, Jondaryan and Yarraman.



issued at 03 Jan 3:24 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:25 pm.



**Australian Government**

**Bureau of Meteorology**

At 3:24 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

for FLASH FLOODING and LARGE HAILSTONES

For people in parts of the GYMPIE, MORETON BAY, SOUTHERN DOWNS, SUNSHINE COAST, SOMERSET and TOOWOOMBA Council Areas.

Issued at 3:57 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 4:05 pm, severe thunderstorms were detected on weather radar near Kilcoy and Mount Kilcoy.

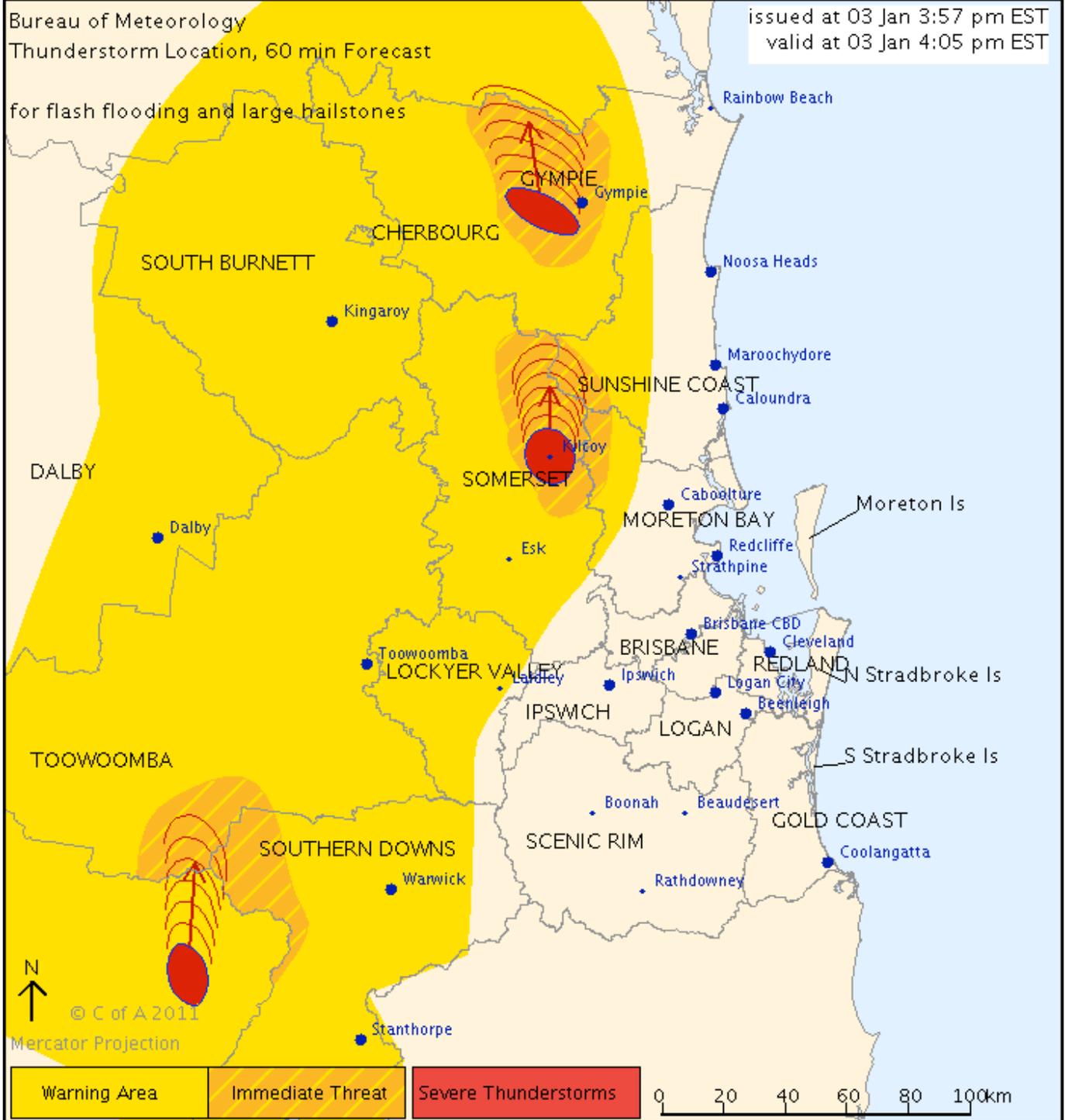
These thunderstorms are moving towards the north.

They are forecast to affect the area northwest of Gympie and the area north of Gympie by 4:35 pm and Jimna, the ranges south of Jimna, the area west of Conondale and Mount Kanighan by 5:05 pm.

Very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 3:57 pm EST  
valid at 03 Jan 4:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 5:00 pm.

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING and LARGE HAILSTONES

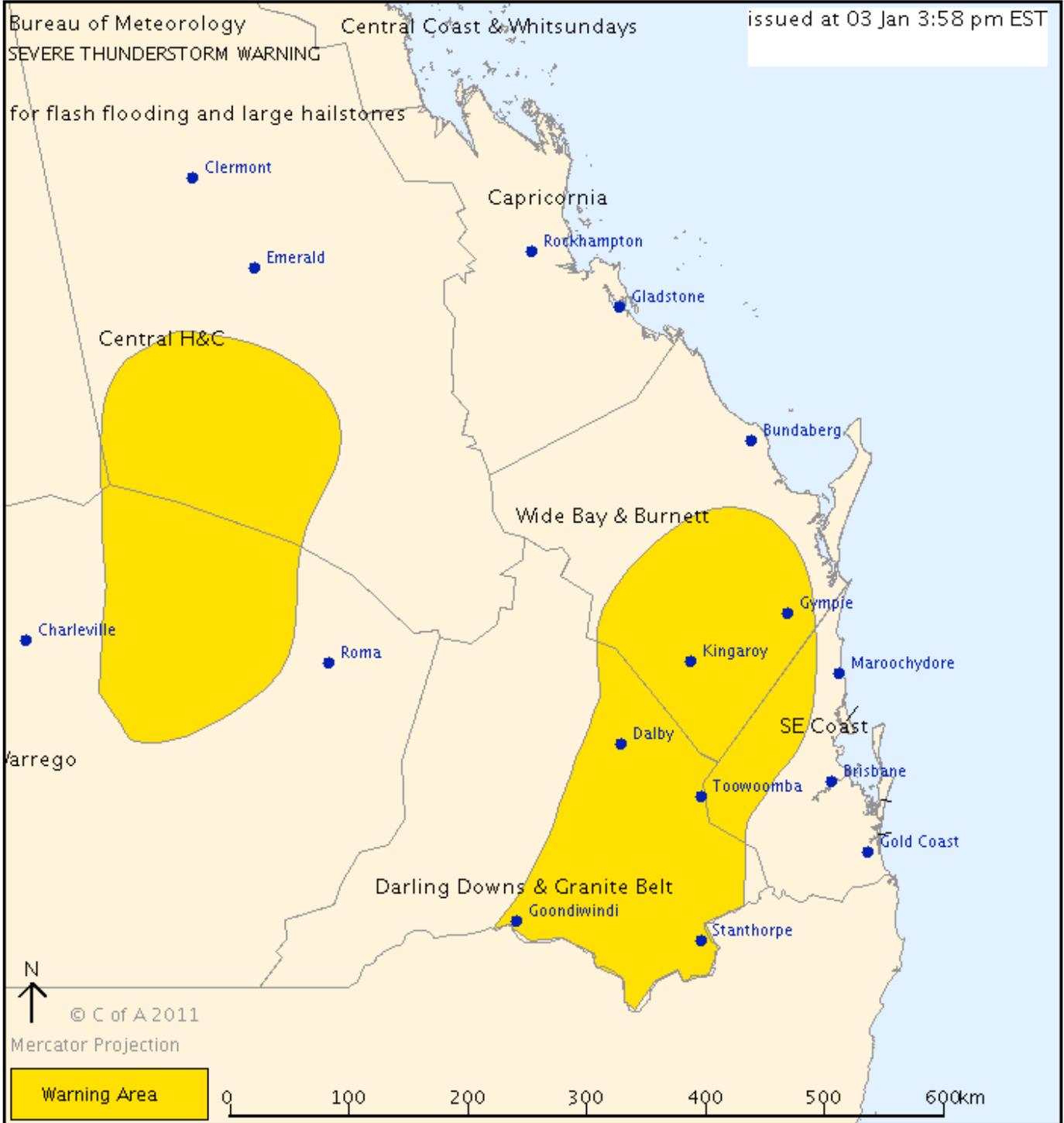
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 3:58 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Mitchell, Rolleston, Springsure, Warwick, Toowoomba, Dalby, Gympie, Kingaroy, Stanthorpe, Oakey, Goondiwindi and Toolara Forestry.



issued at 03 Jan 3:58 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:00 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING and LARGE HAILSTONES**

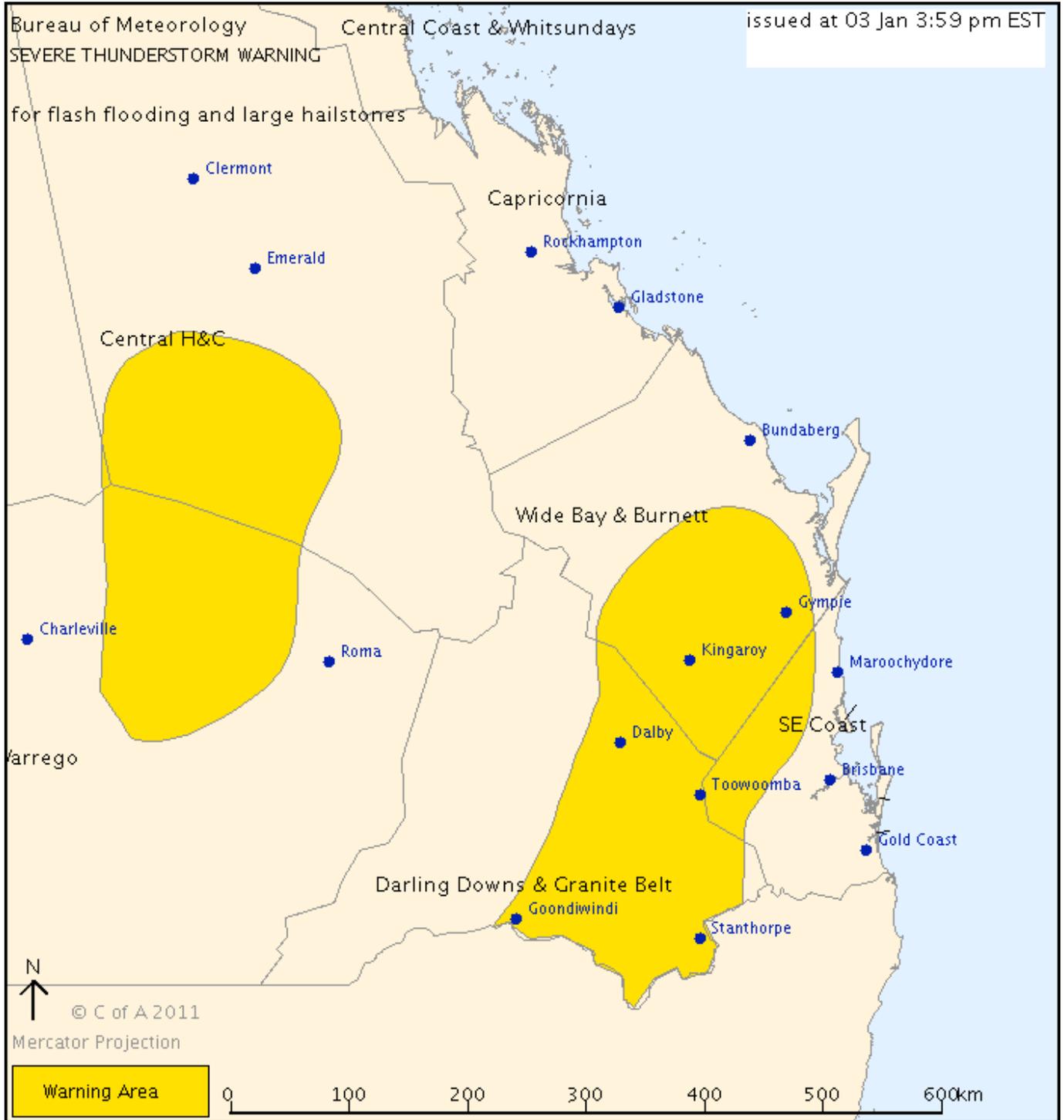
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 3:59 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Mitchell, Rolleston, Springsure, Warwick, Toowoomba, Dalby, Gympie, Kingaroy, Stanthorpe, Oakey, Goondiwindi and Toolara Forestry.



issued at 03 Jan 3:59 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:00 pm.



**Australian Government**

**Bureau of Meteorology**

At 3:59 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
GYMPIE Council Area.

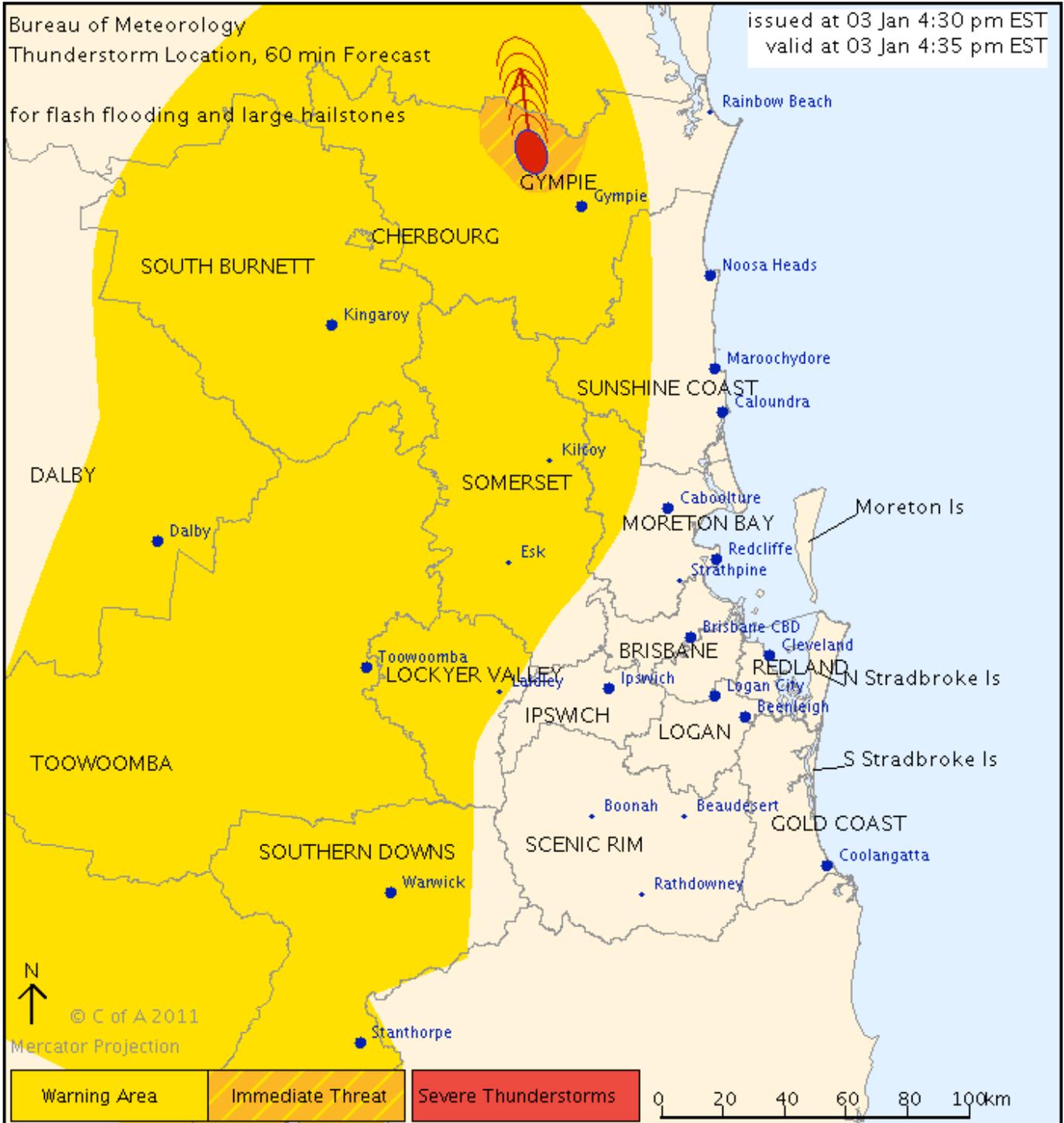
Issued at 4:30 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 4:35 pm, severe thunderstorms were detected on weather radar near the area northwest of Gympie.

Very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 4:30 pm EST  
valid at 03 Jan 4:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 5:30 pm.

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
TOOWOOMBA Council Area.

Issued at 4:49 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 4:55 pm, severe thunderstorms were detected on weather radar near Jondaryan and the area west of Oakey.

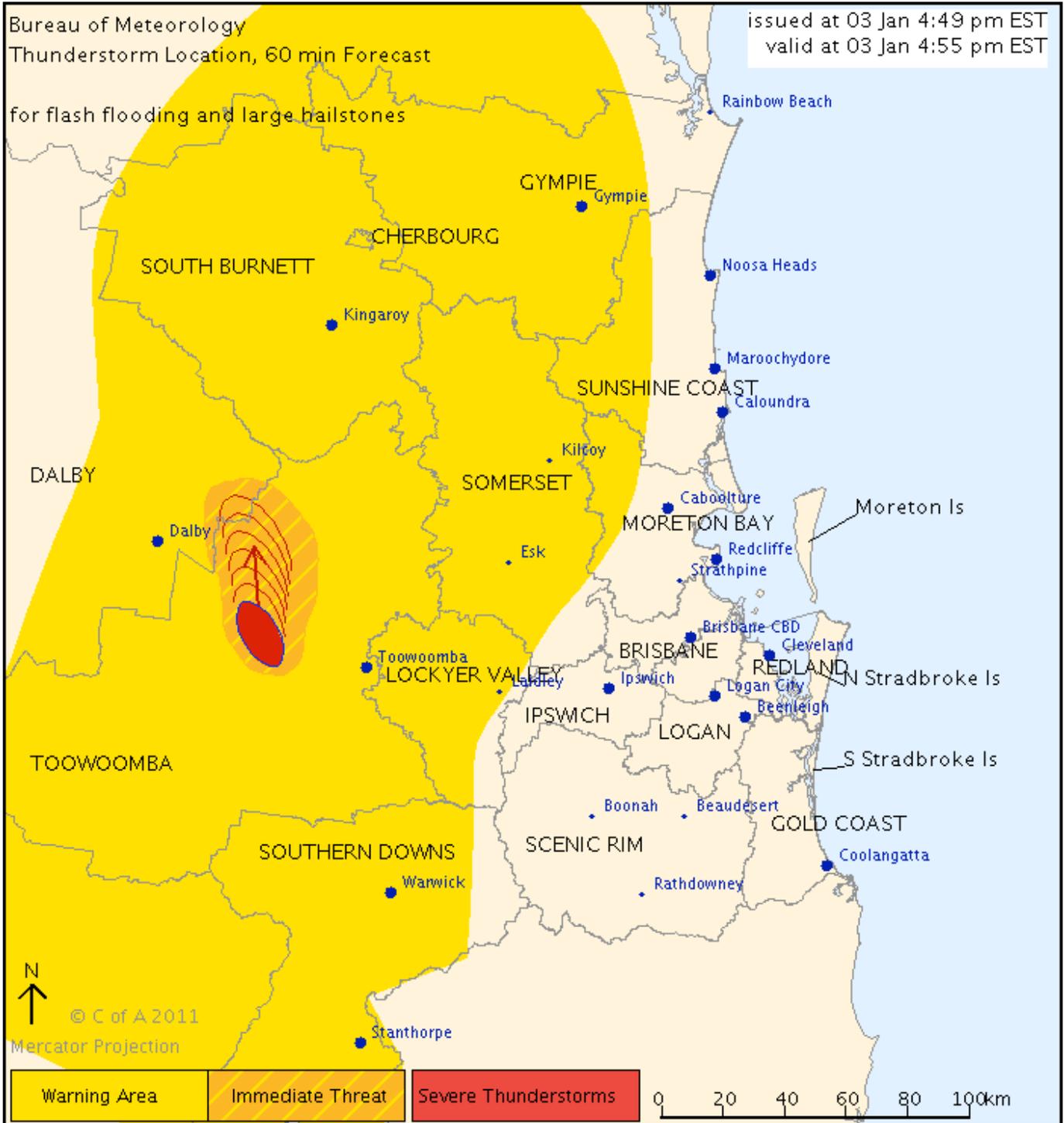
These thunderstorms are moving towards the north.

They are forecast to affect the area east of Dalby by 5:55 pm.

Very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 4:49 pm EST  
valid at 03 Jan 4:55 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 5:50 pm.

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the

GYMPIE,

DALBY,

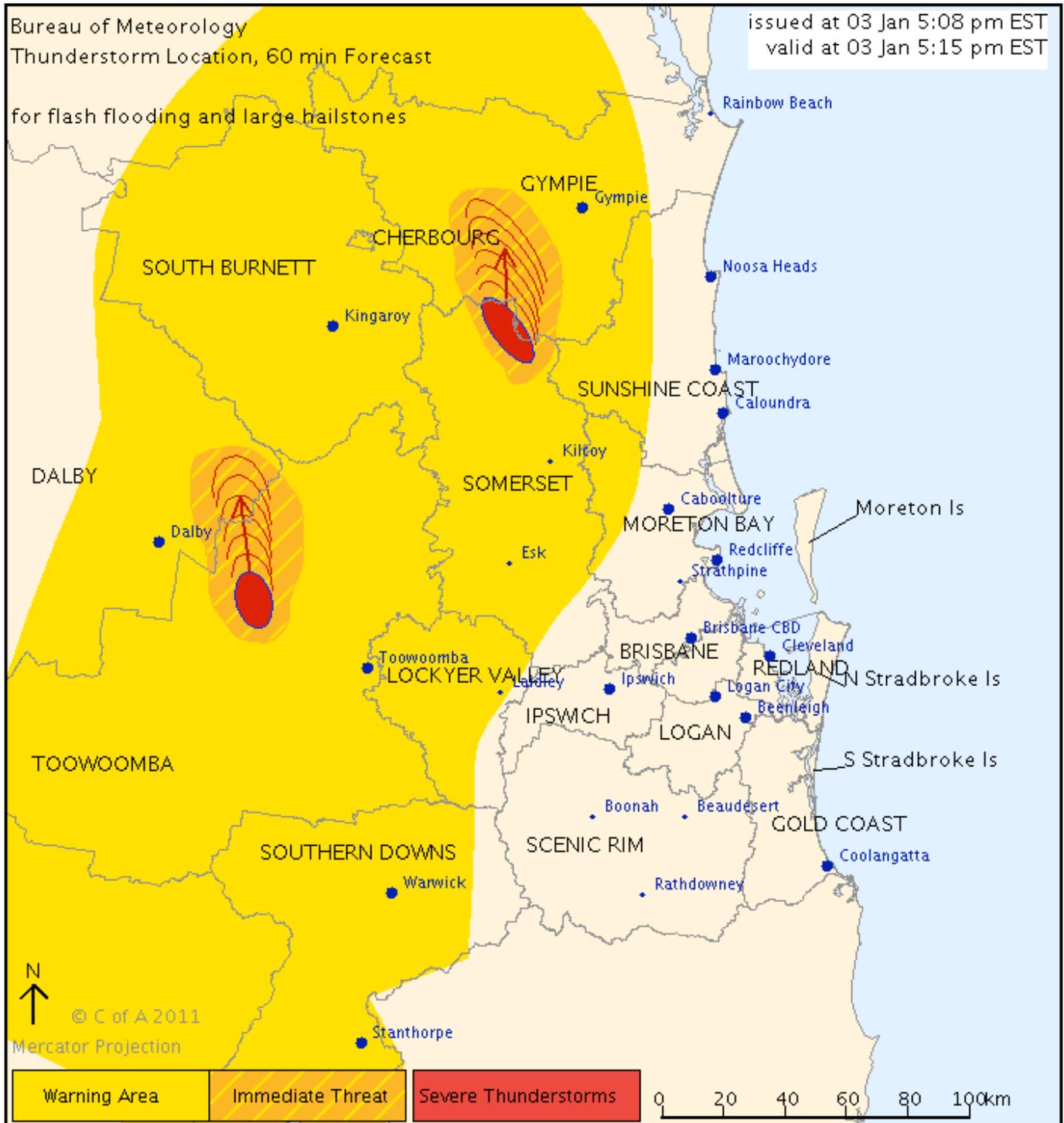
SOMERSET and

TOOWOOMBA Council Areas.

Issued at 5:08 pm Monday, 3 January 2011.

The Bureau of Meteorology warns that, at 5:15 pm, severe thunderstorms were detected on weather radar near Jondaryan and the area northwest of Jimna. These thunderstorms are moving towards the north. They are forecast to affect the area southwest of Gympie, the ranges between Gympie and Murgon, the area east of Dalby and the Amamoor Range northwest of Kenilworth by 6:15 pm.

Very heavy rainfall, flash flooding and large hailstones are likely.



Emergency Management Queensland advises that people should:

- \* Move your car under cover.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:10 pm.

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A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
LOCKYER VALLEY,  
IPSWICH CITY,  
SCENIC RIM and  
SOMERSET Council Areas.

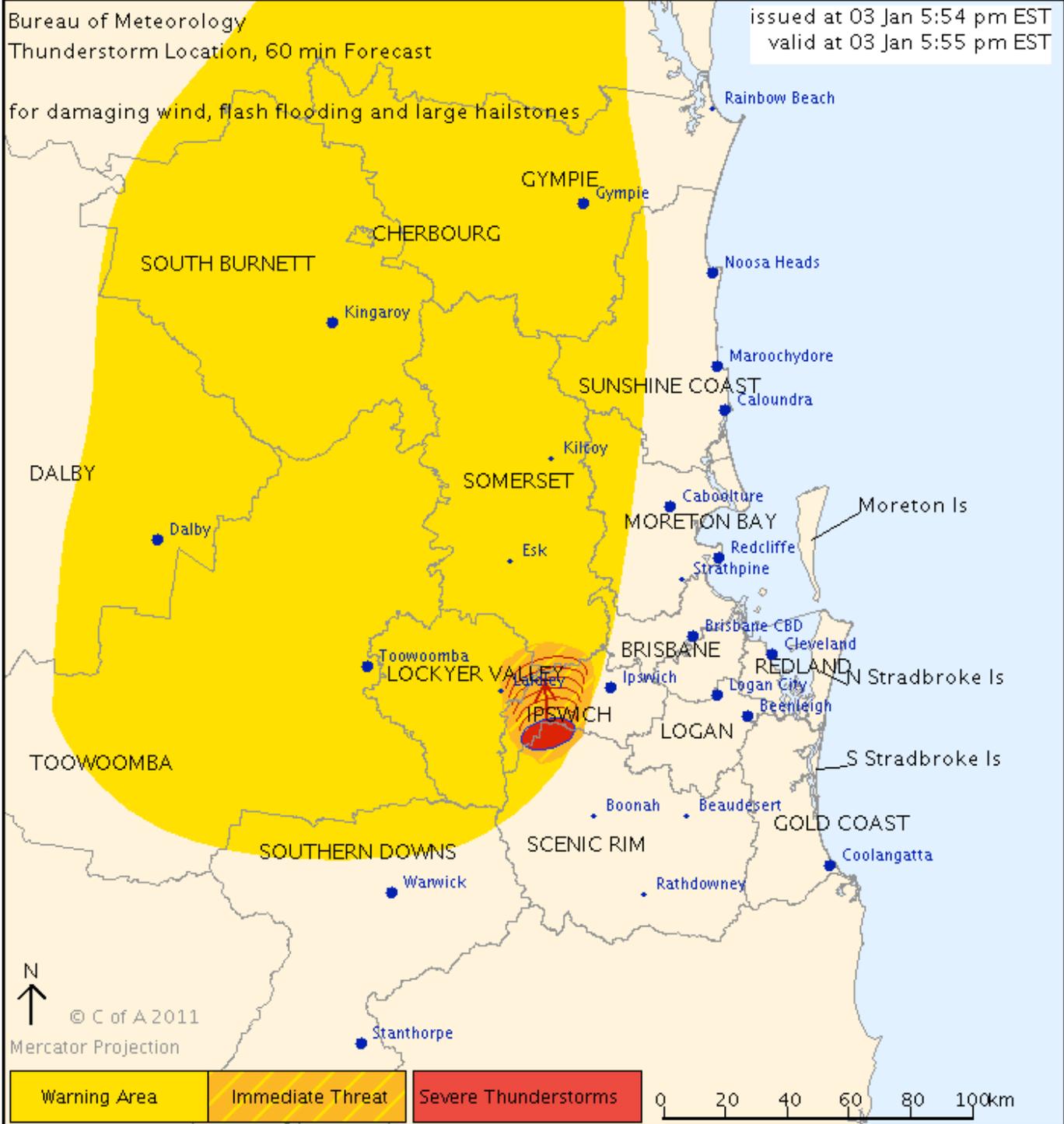
Issued at 5:54 pm Monday, 3 January 2011.

Thunderstorms are moving towards the north. They are forecast to affect Grandchester and Rosewood by 6:25 pm and Hatton Vale and Marburg by 6:55 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 03 Jan 5:54 pm EST  
valid at 03 Jan 5:55 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 6:55 pm.

A more general severe thunderstorm warning is also current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING

for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

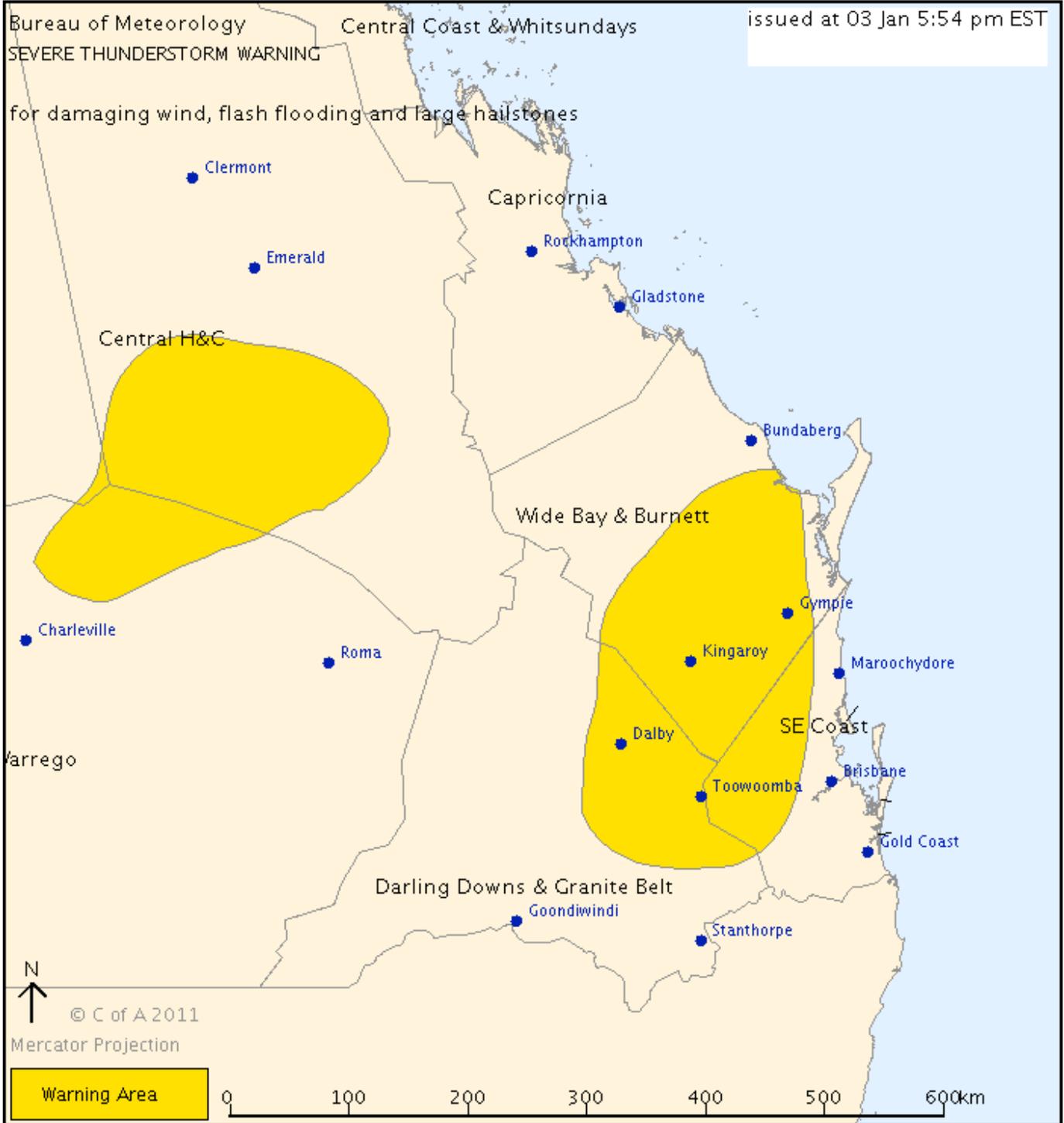
For people in parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 5:54 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Toowoomba, Dalby, Gympie, Kingaroy, Oakey, Maryborough, Gayndah, Biggenden, Rolleston, Springsure, Augathella and Mantuan Downs.



issued at 03 Jan 5:54 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:55 pm.

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**Australian Government**

**Bureau of Meteorology**

At 5:54 pm Monday, 3 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

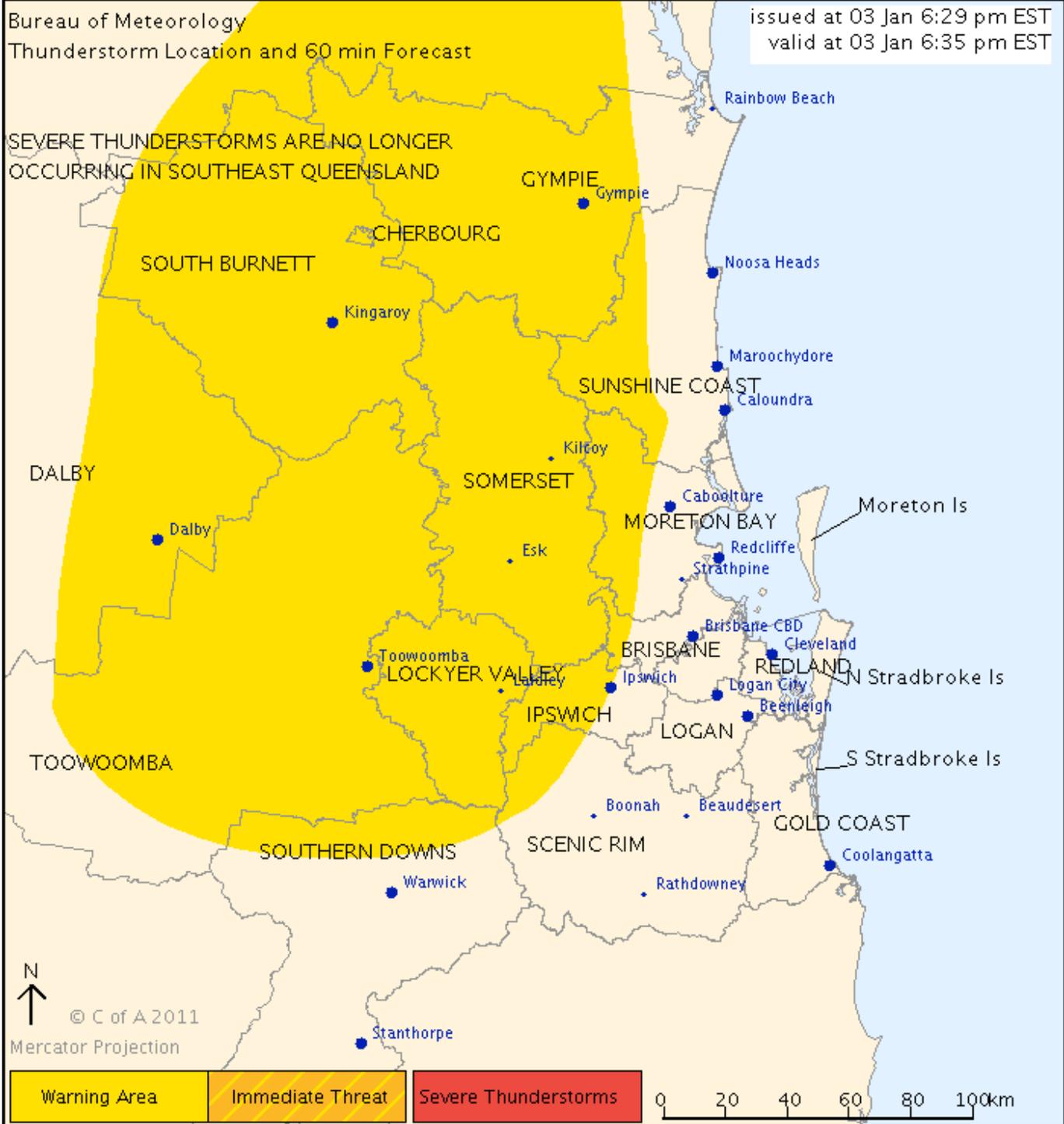
CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

Issued at 6:29 pm Monday, 3 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 03 Jan 6:29 pm EST  
valid at 03 Jan 6:35 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for parts of the Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego,

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**Australian Government**

**Bureau of Meteorology**

Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

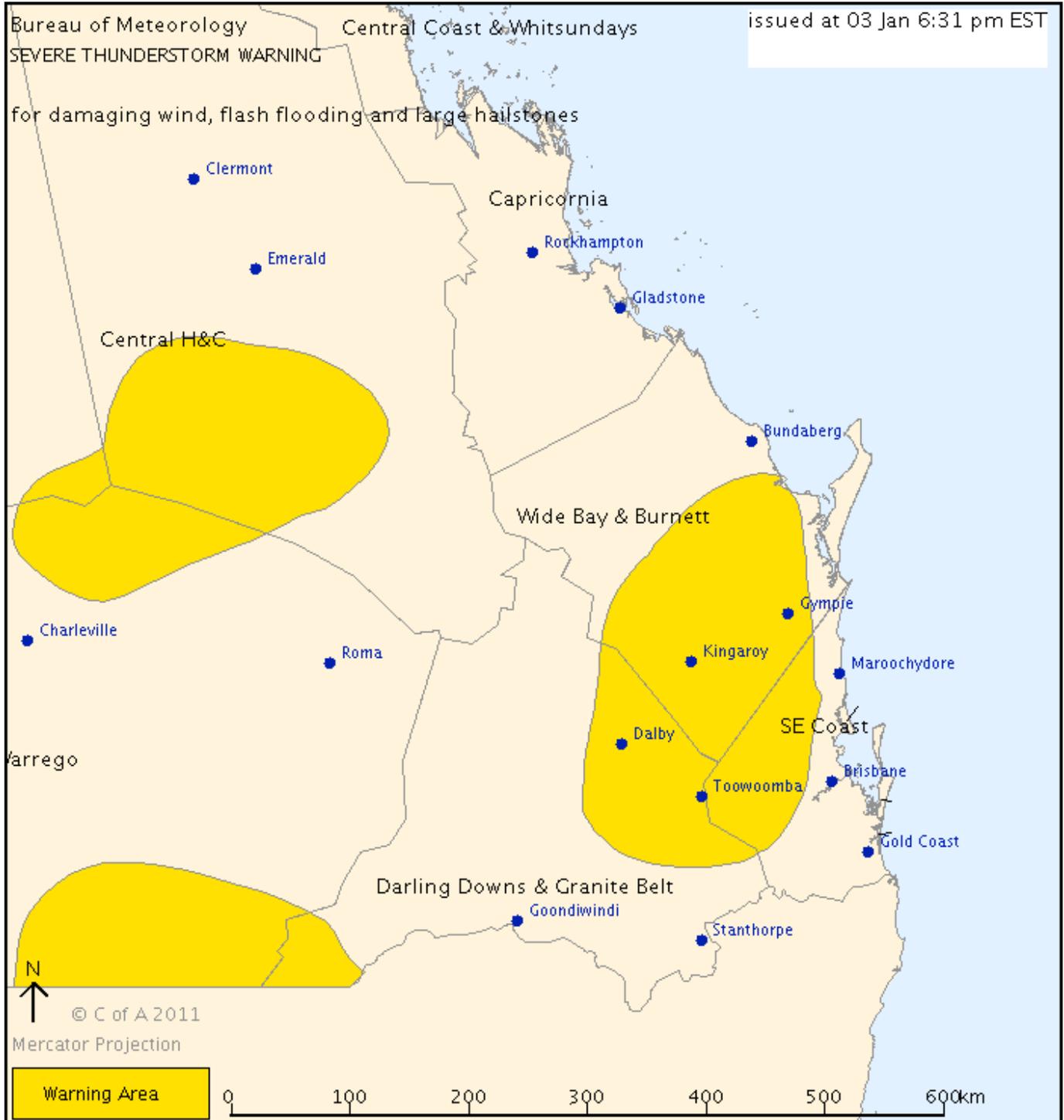
For people in parts of the Central Highlands and Coalfields, Central West, Wide Bay and Burnett, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 6:31 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Toowoomba, Dalby, Gympie, Kingaroy, Rolleston and Springsure.



issued at 03 Jan 6:31 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:35 pm.

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

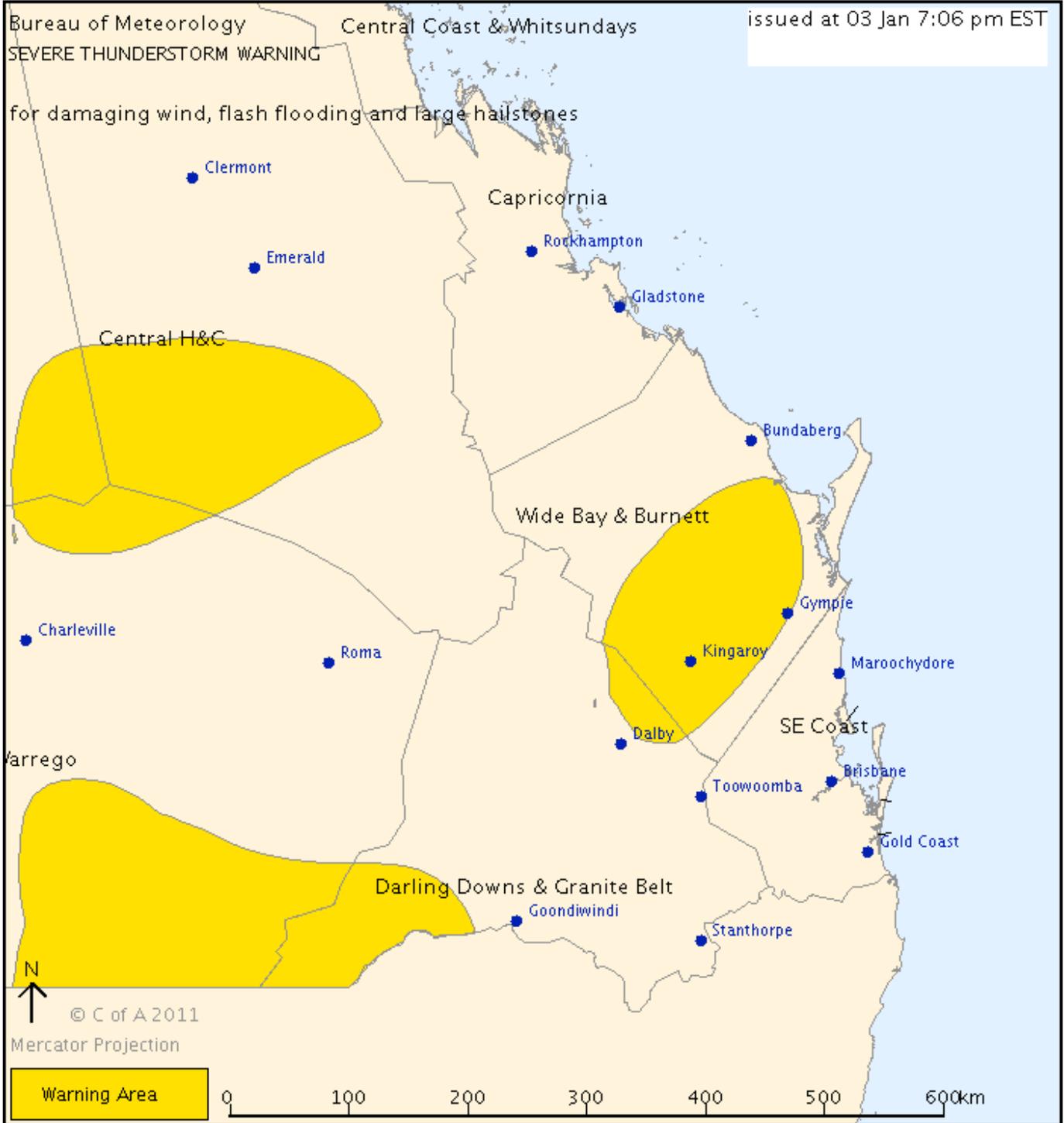
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the Central Highlands and Coalfields, Central West, Wide Bay and Burnett, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

Issued at 7:06 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Gympie, Kingaroy, Tambo, Rolleston, Springsure and Bollon.



issued at 03 Jan 7:06 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:10 pm.

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

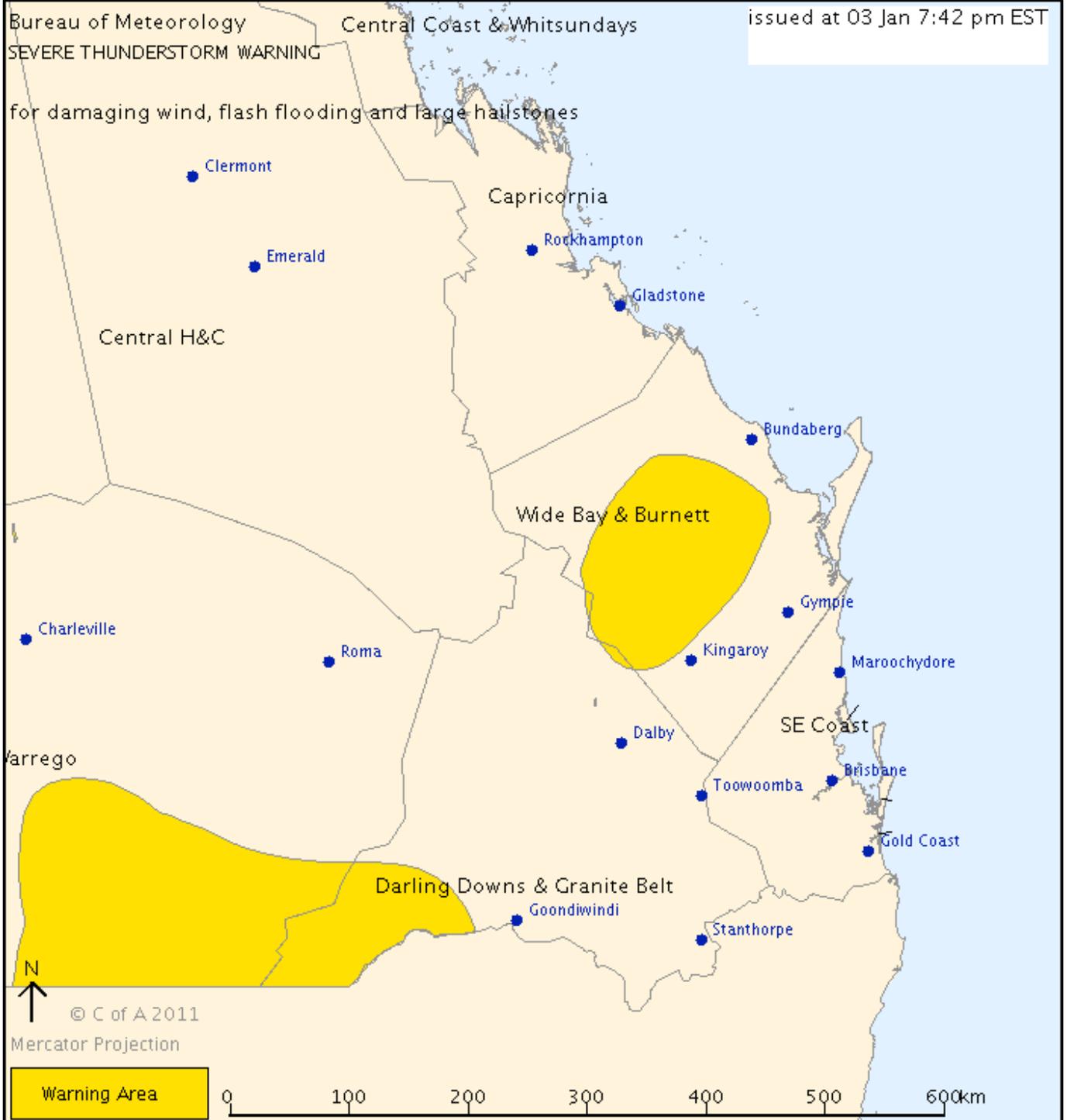
For people in parts of the  
Wide Bay and Burnett,  
Maranoa and Warrego and  
Darling Downs and Granite Belt Forecast Districts.

Issued at 7:42 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Bollon, Dirranbandi, Wondai, Murgon, Childers, Gayndah, Mundubbera and Biggenden.



issued at 03 Jan 7:42 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:45 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the

Capricornia,

Wide Bay and Burnett and

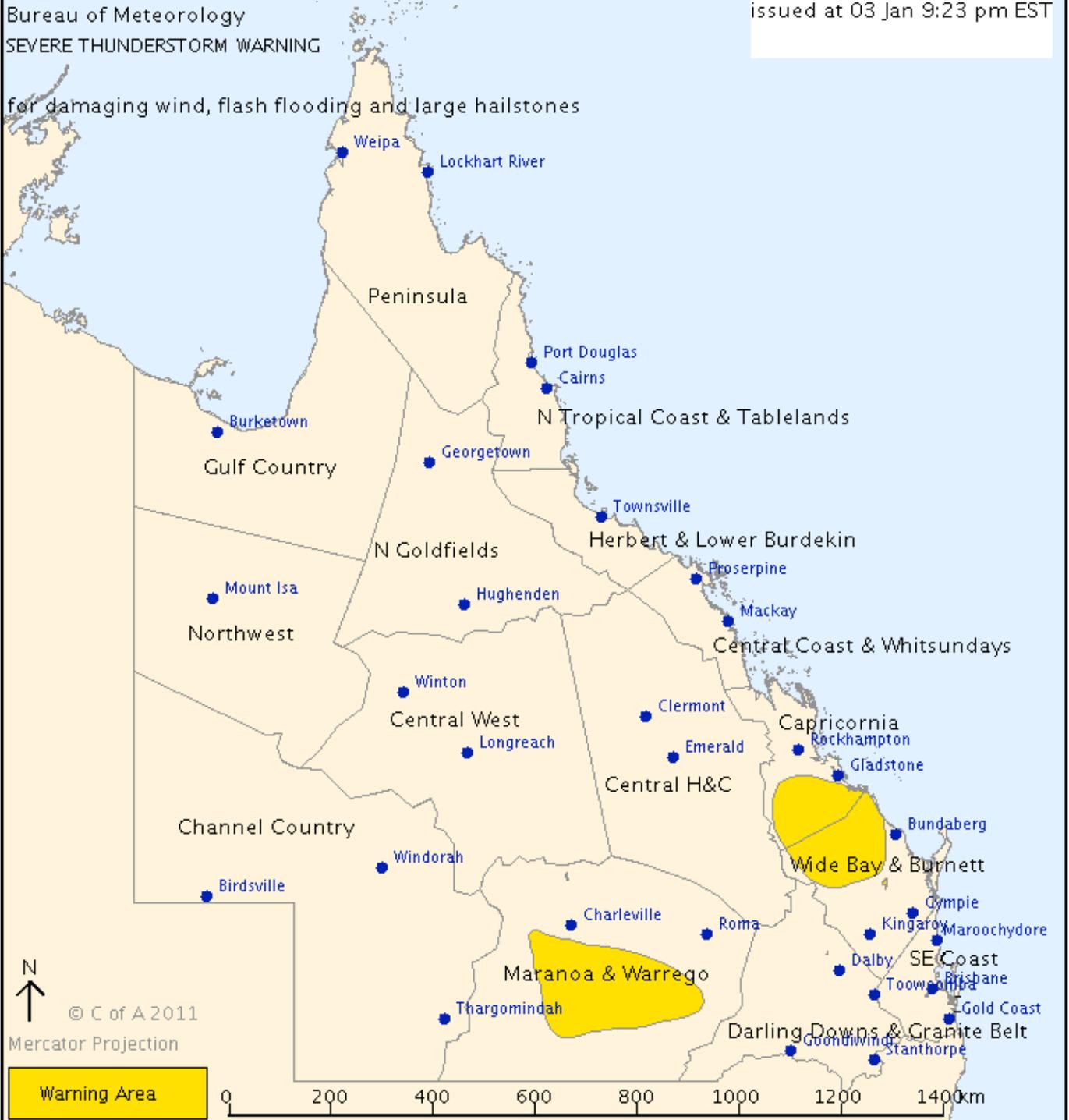
Maranoa and Warrego Forecast Districts.

Issued at 9:23 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Bollon, Biloela, Monto, Gayndah, Mundubbera and Eidsvold.



issued at 03 Jan 9:23 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:25 am Tuesday.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

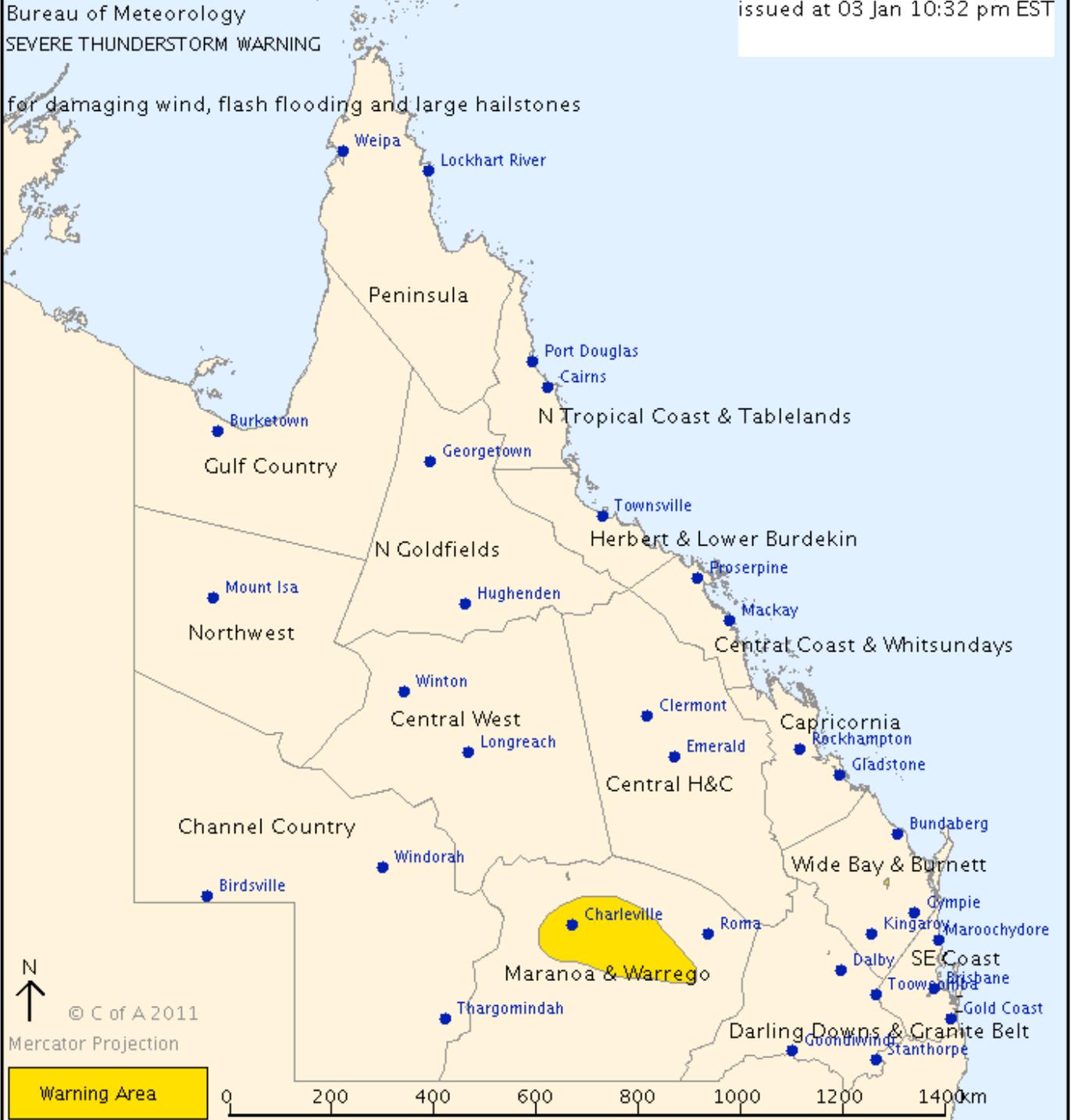
For people in parts of the  
Maranoa and Warrego Forecast District.

Issued at 10:32 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Charleville.



issued at 03 Jan 10:32 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 1:35 am Tuesday.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
Maranoa and Warrego Forecast District.

Issued at 10:41 pm Monday, 3 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Charleville and Mitchell.

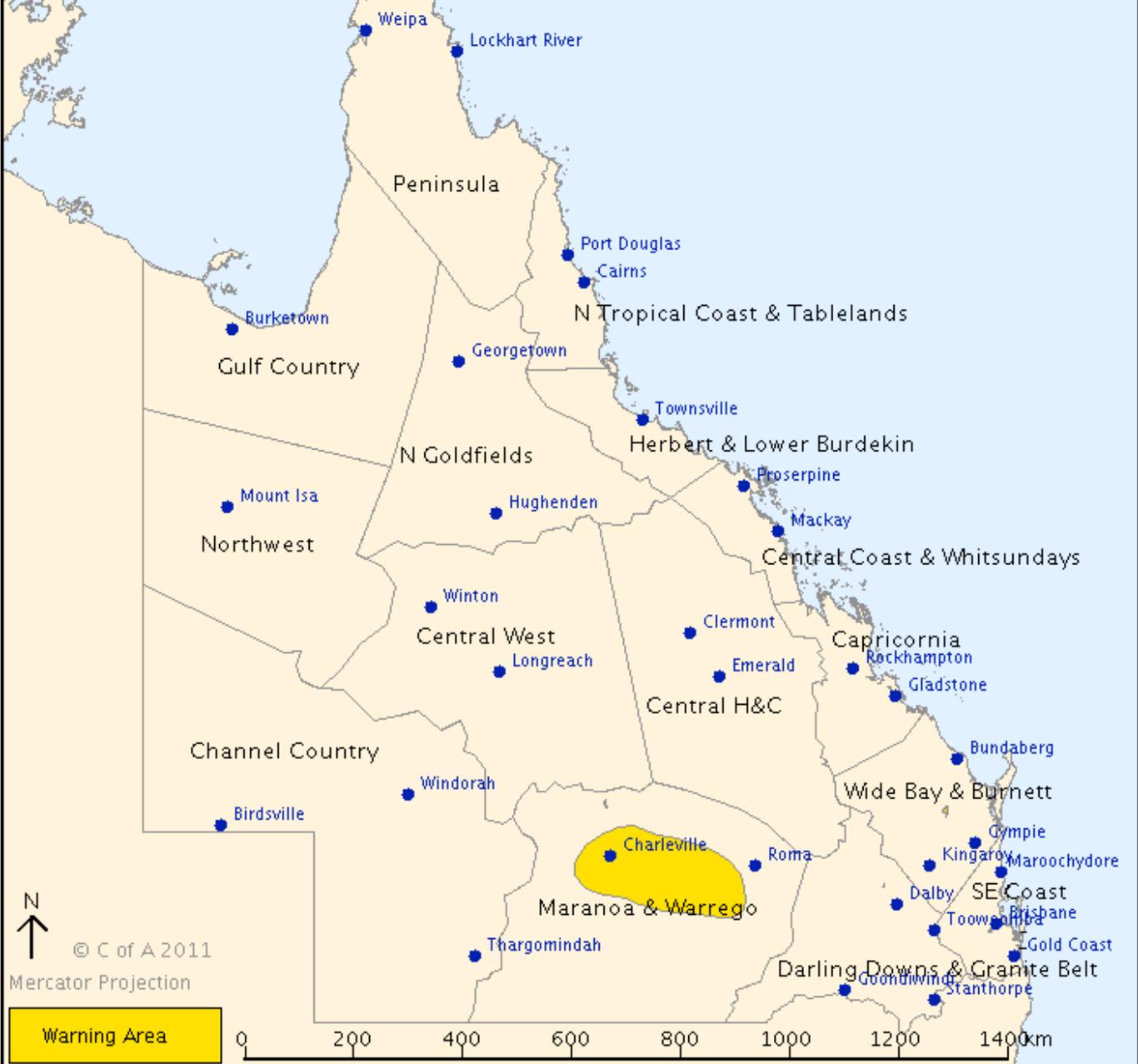


issued at 03 Jan 10:41 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 1:45 am Tuesday.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**CANCELLATION SEVERE THUNDERSTORM WARNING**

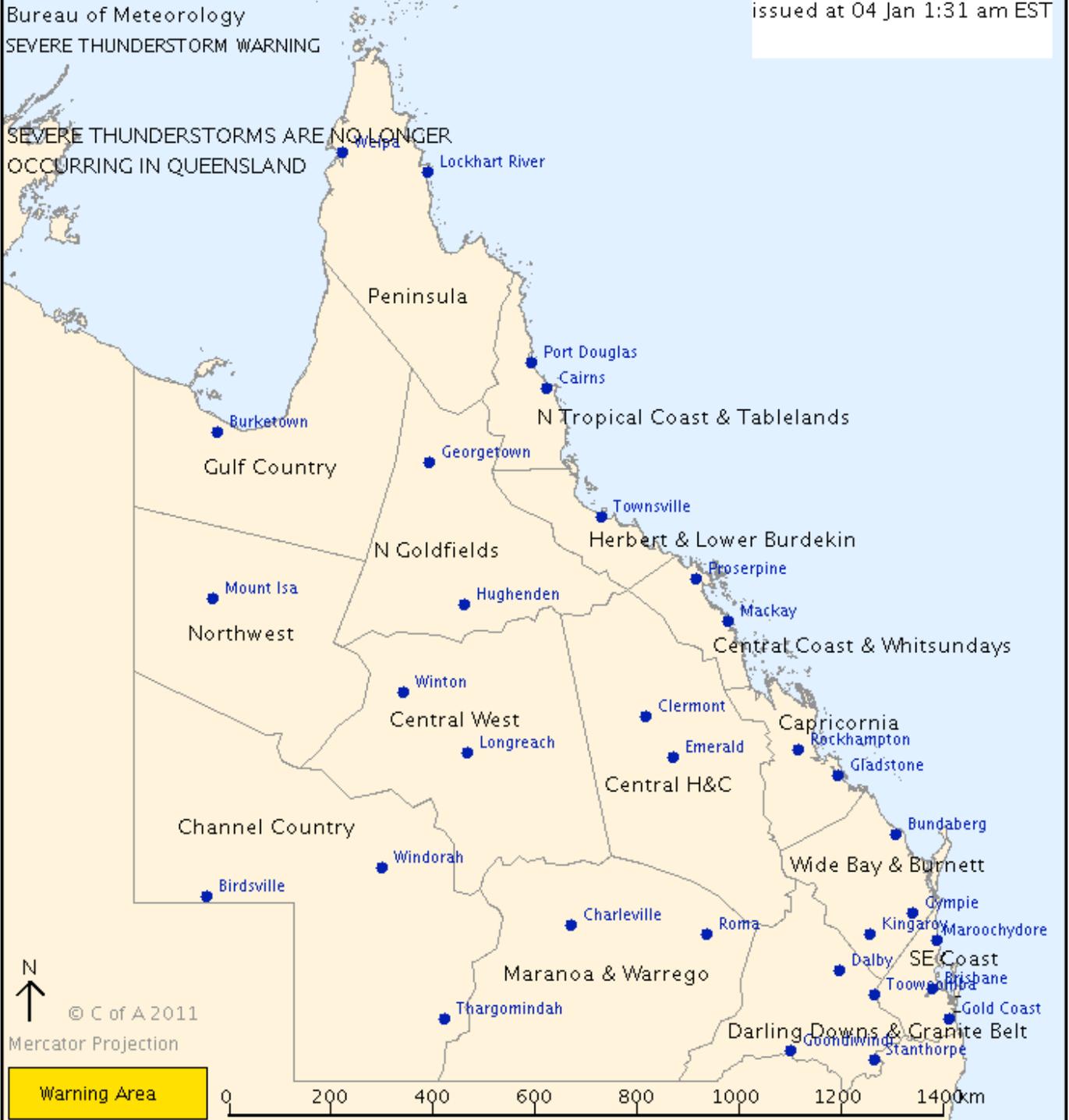
Issued at 1:31 am Tuesday, 4 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 04 Jan 1:31 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency



**Australian Government**

**Bureau of Meteorology**

Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for DAMAGING WIND and LARGE HAILSTONES**

For people in parts of the

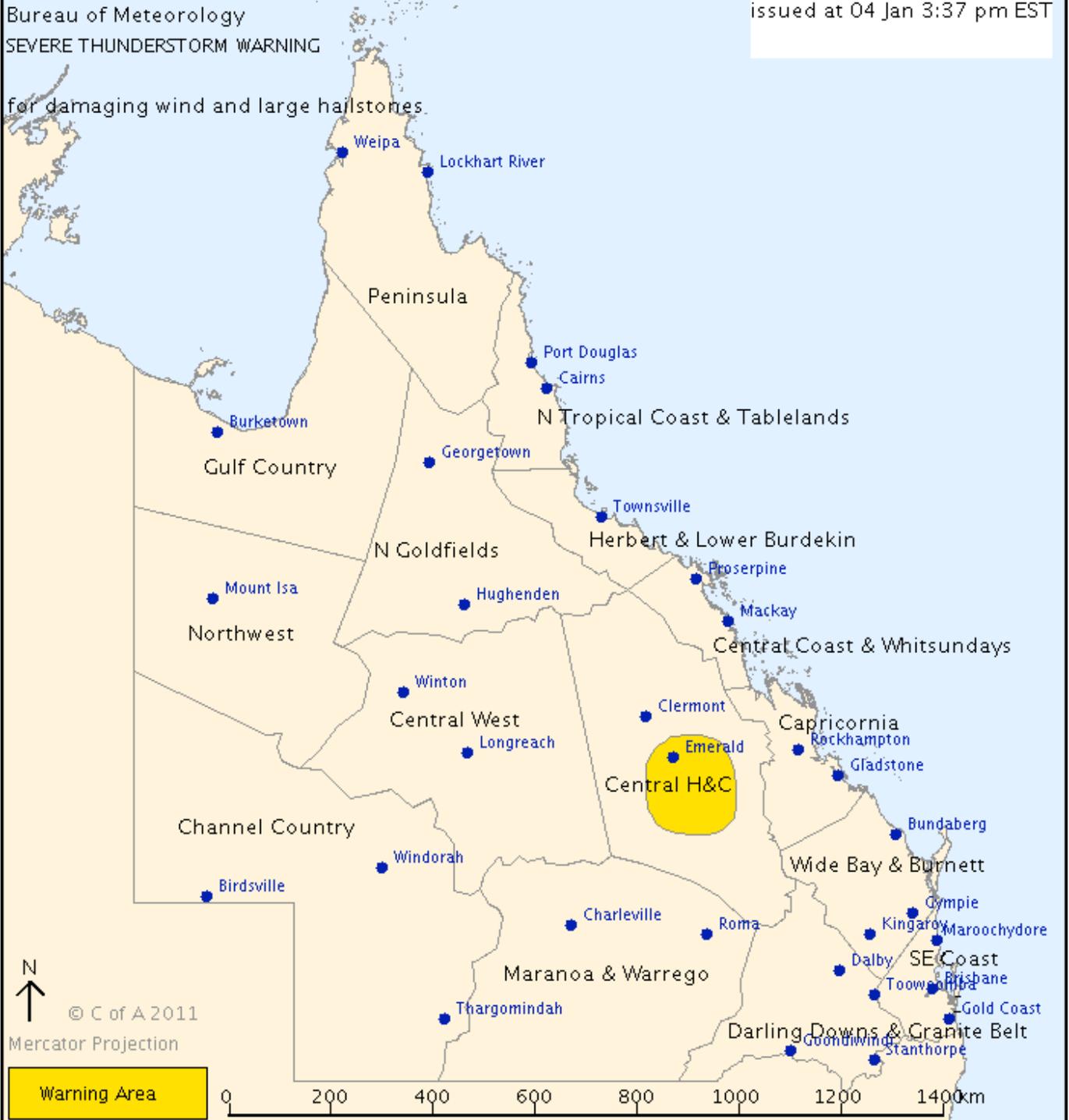
Central Highlands and Coalfields Forecast District.

Issued at 3:37 pm Tuesday, 4 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Emerald, Blackwater, Rolleston, Springsure and Comet.



issued at 04 Jan 3:37 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:40 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

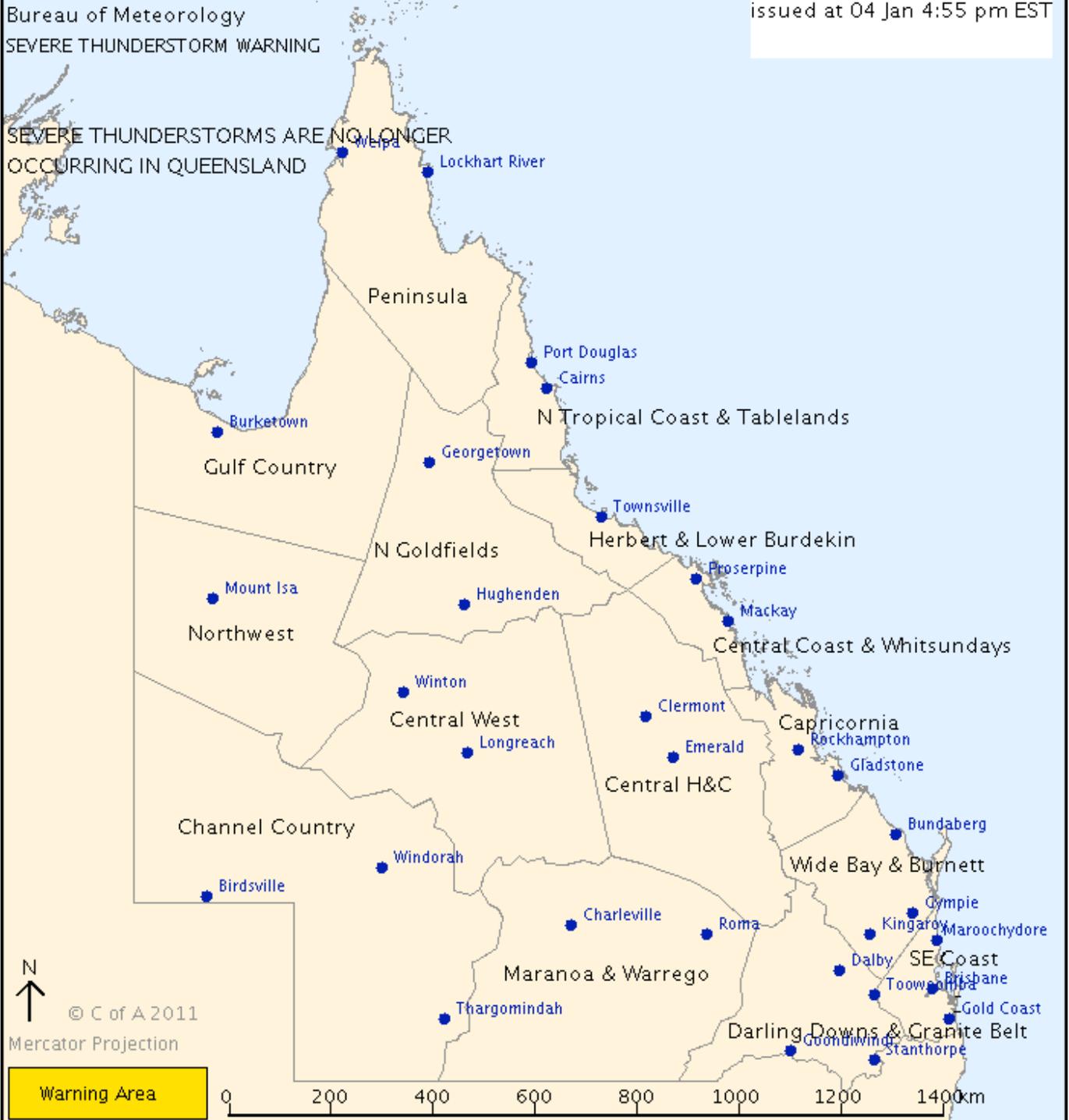
Issued at 4:55 pm Tuesday, 4 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 04 Jan 4:55 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

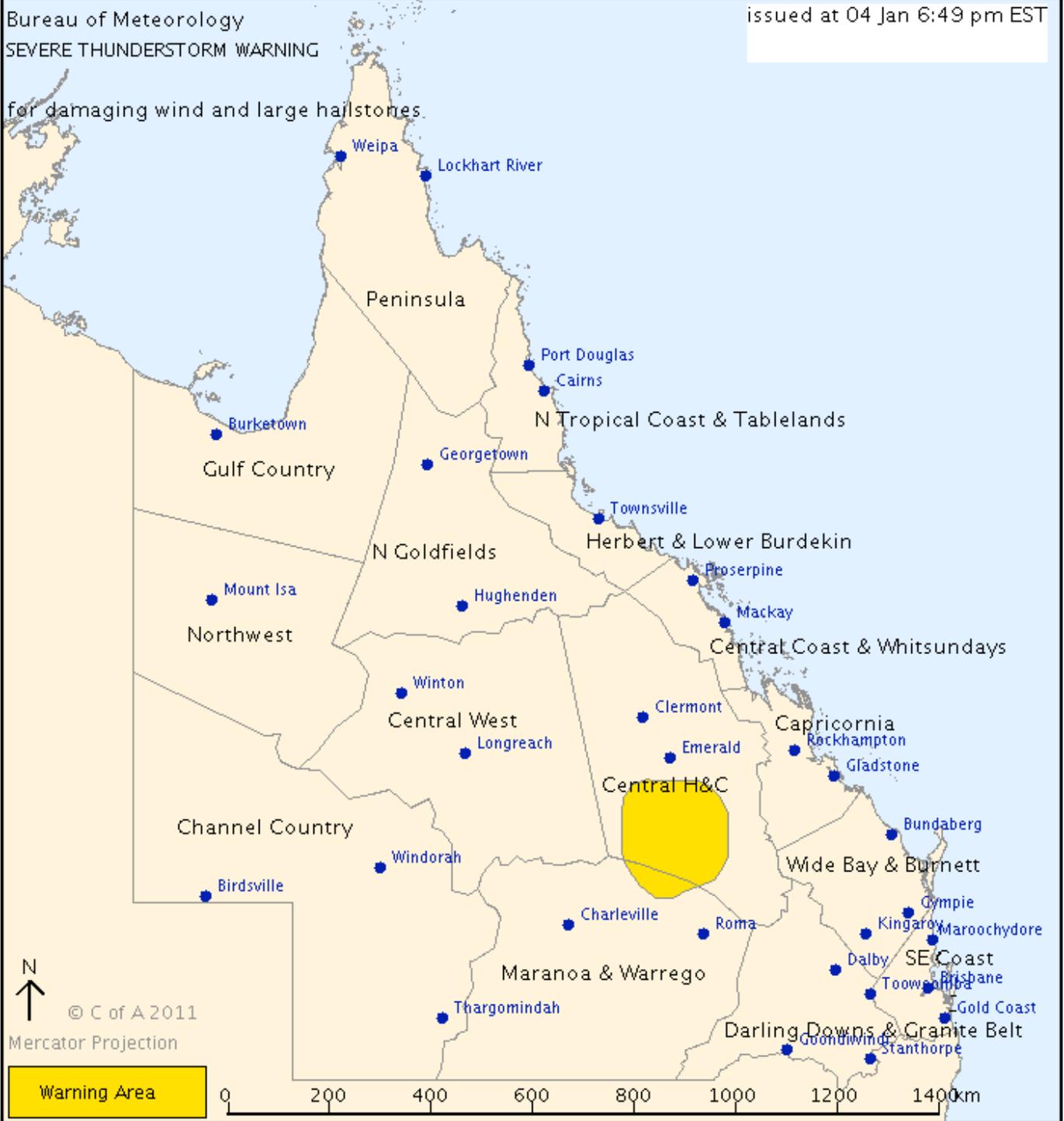
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and LARGE HAILSTONES  
For people in parts of the  
Central Highlands and Coalfields and  
Maranoa and Warrego Forecast Districts.

Issued at 6:49 pm Tuesday, 4 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Rolleston, Springsure and Mantuan Downs.



issued at 04 Jan 6:49 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:50 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

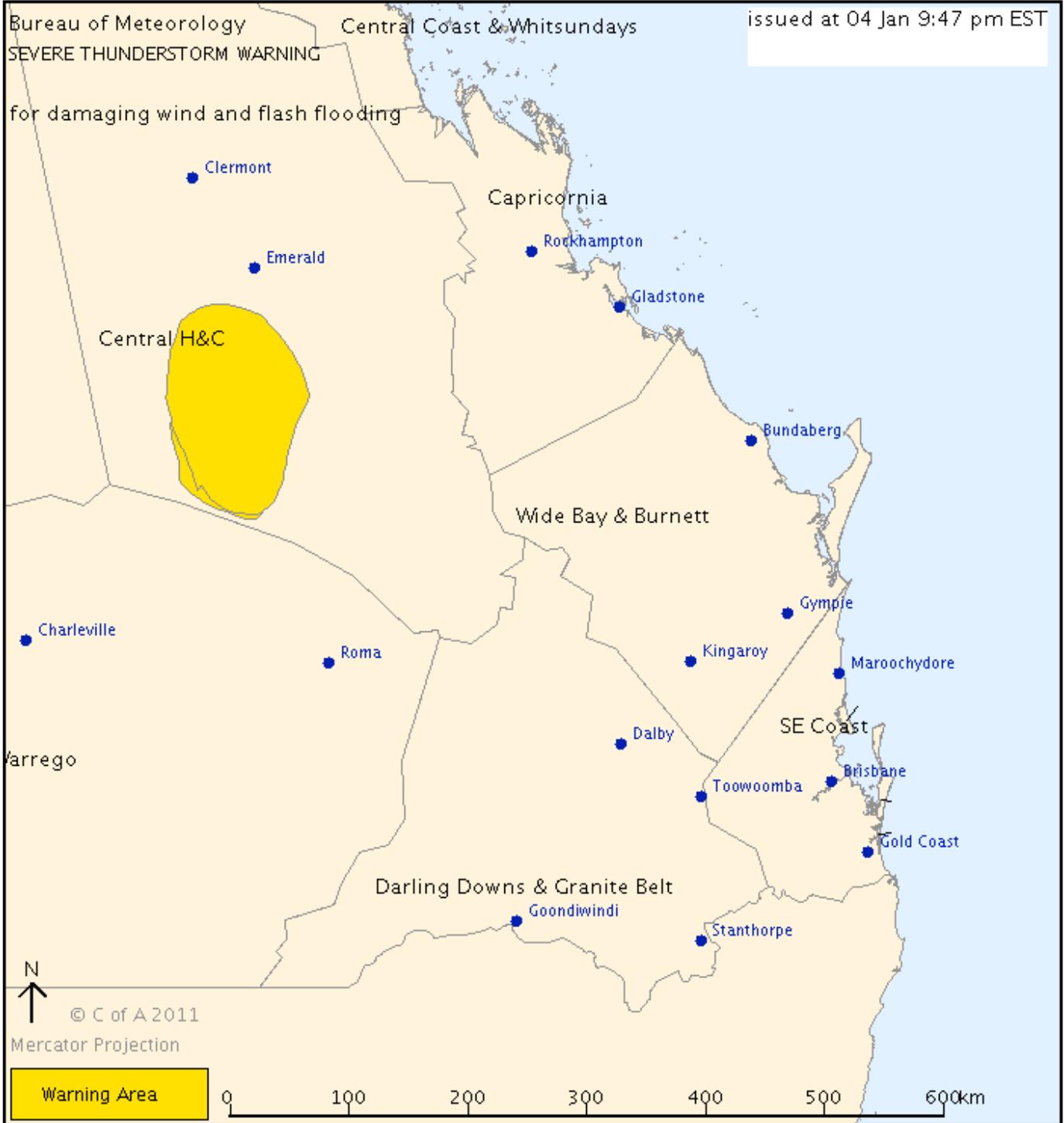
**SEVERE THUNDERSTORM WARNING**  
**for DAMAGING WIND and FLASH FLOODING**  
For people in parts of the  
Central Highlands and Coalfields Forecast District.

Issued at 9:47 pm Tuesday, 4 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Springsure.



issued at 04 Jan 9:47 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:50 am Wednesday.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

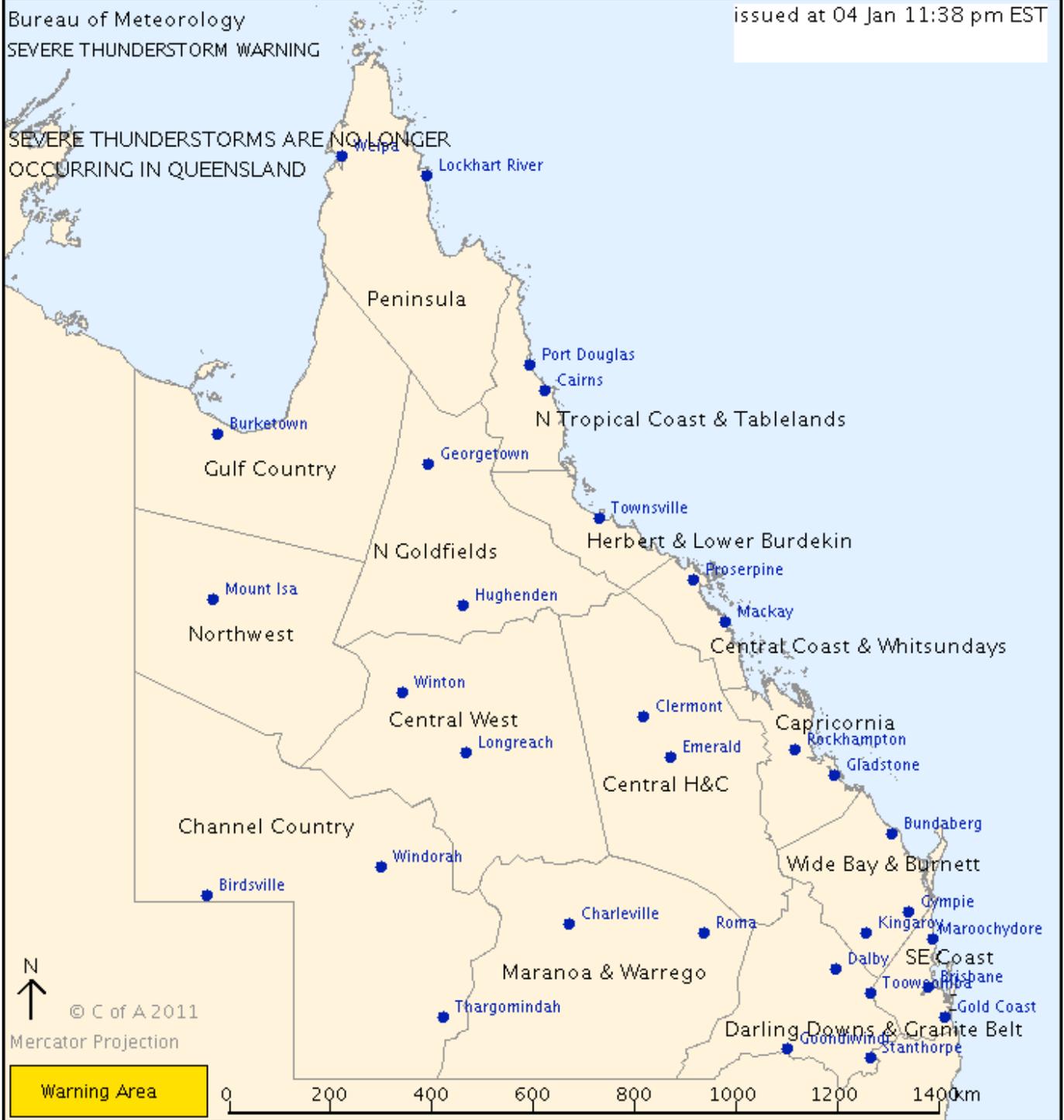
Issued at 11:38 pm Tuesday, 4 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 04 Jan 11:38 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

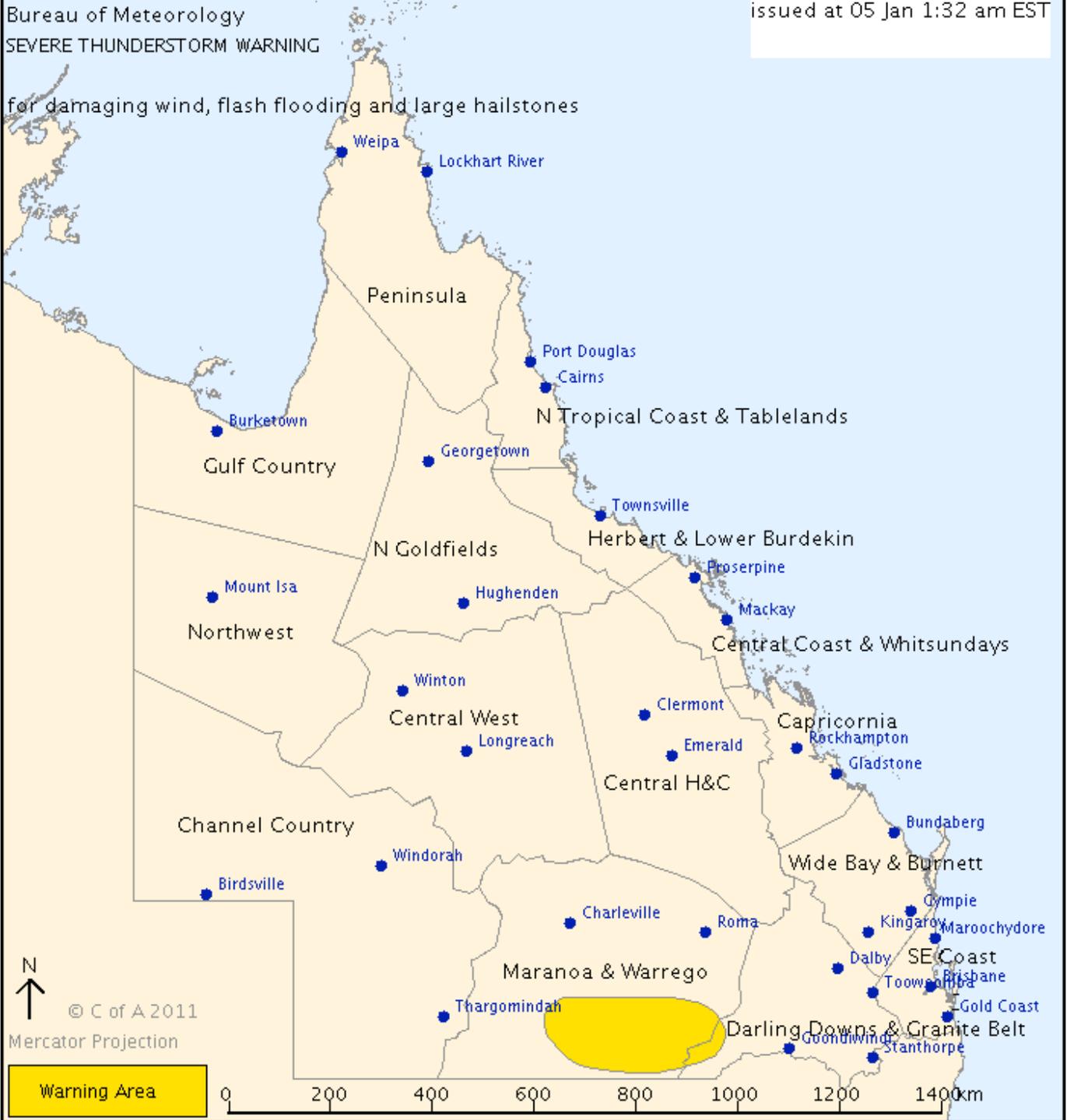
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Maranoa and Warrego and  
Darling Downs and Granite Belt Forecast Districts.

Issued at 1:32 am Wednesday, 5 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include St George, Bollon and Dirranbandi.



issued at 05 Jan 1:32 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:35 am.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

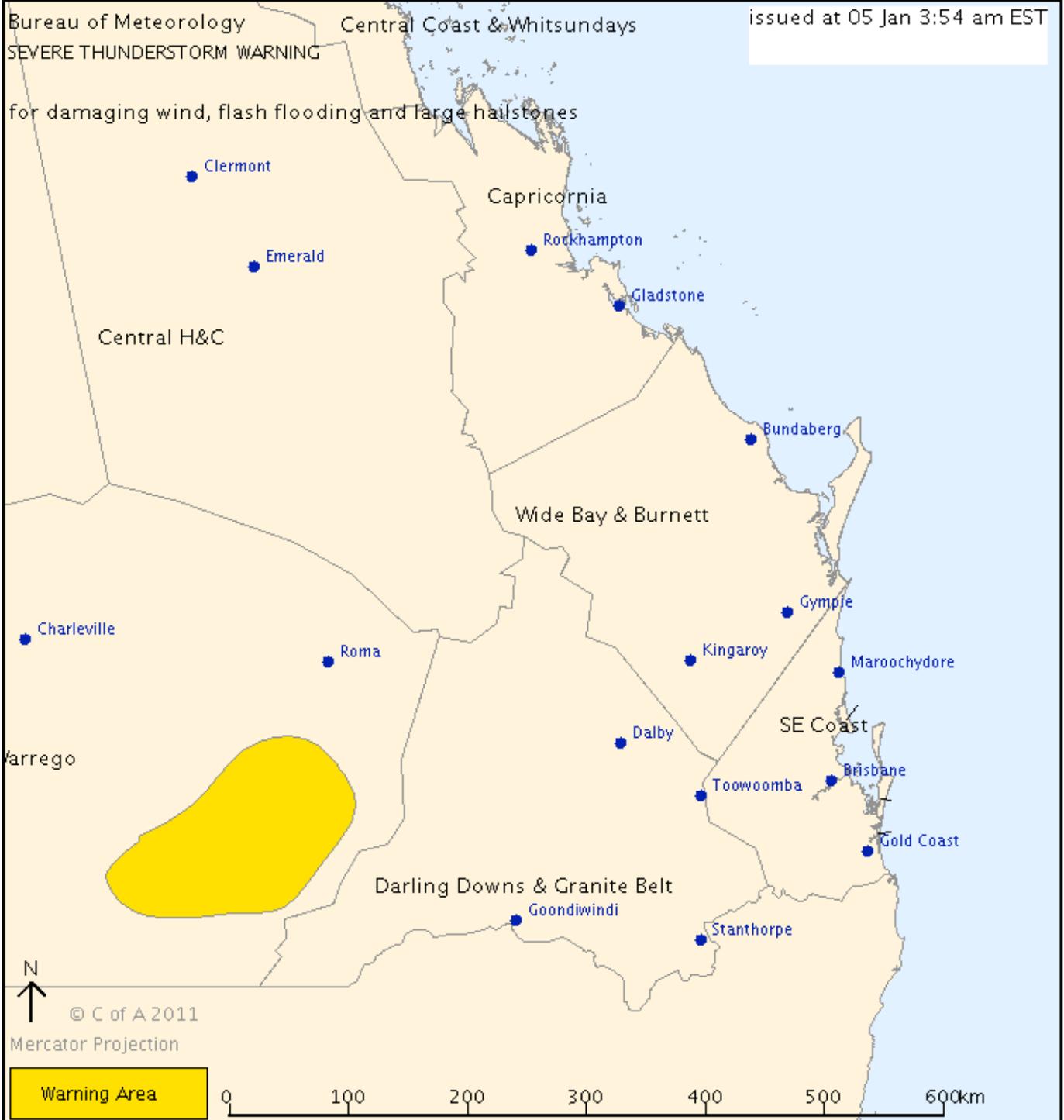
For people in parts of the  
Maranoa and Warrego Forecast District.

Issued at 3:54 am Wednesday, 5 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include St George and Bollon.



issued at 05 Jan 3:54 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:55 am.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

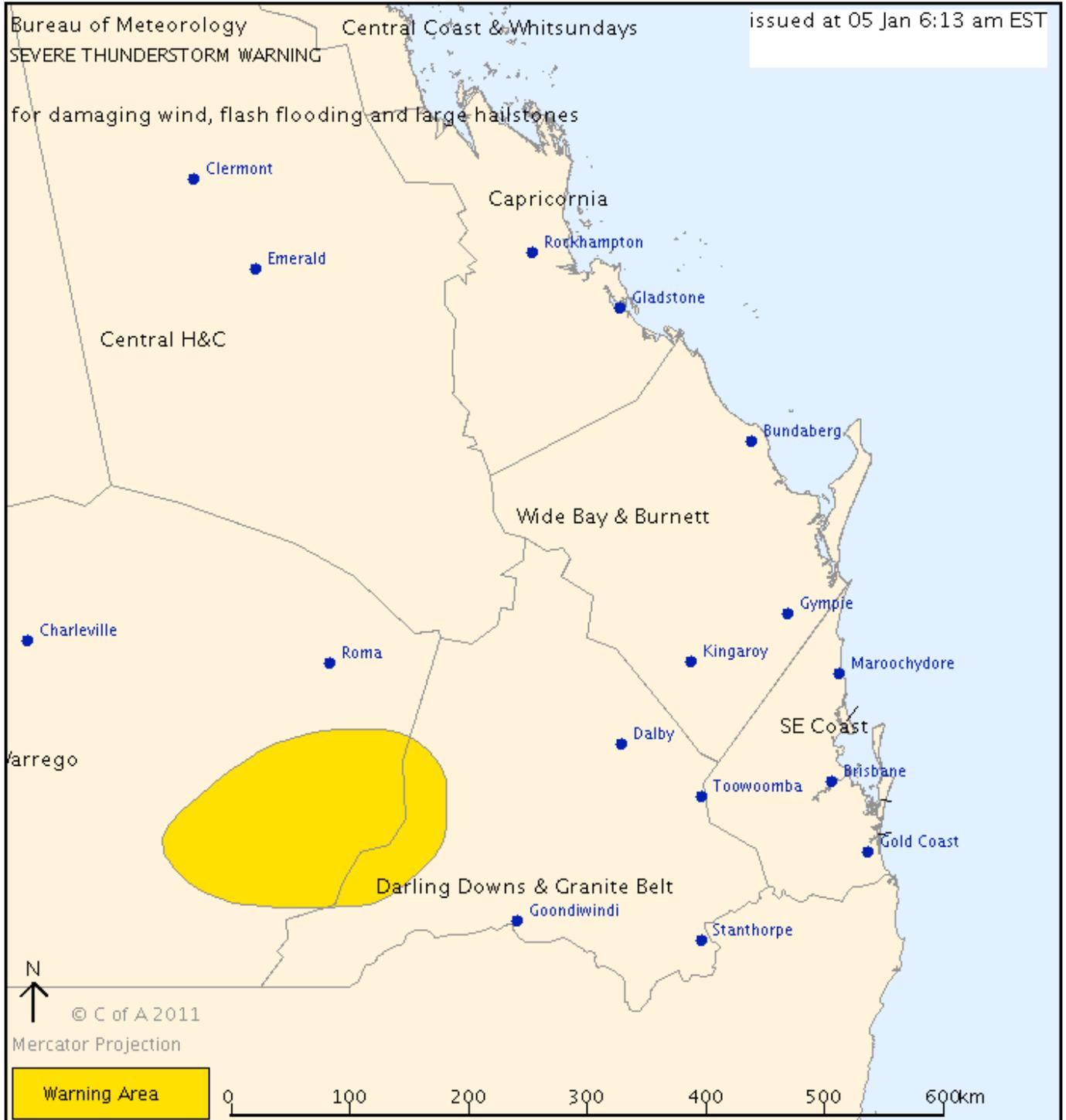
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES  
For people in parts of the  
Maranoa and Warrego and  
Darling Downs and Granite Belt Forecast Districts.

Issued at 6:13 am Wednesday, 5 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include St George and Bollon.



issued at 05 Jan 6:13 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:15 am.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

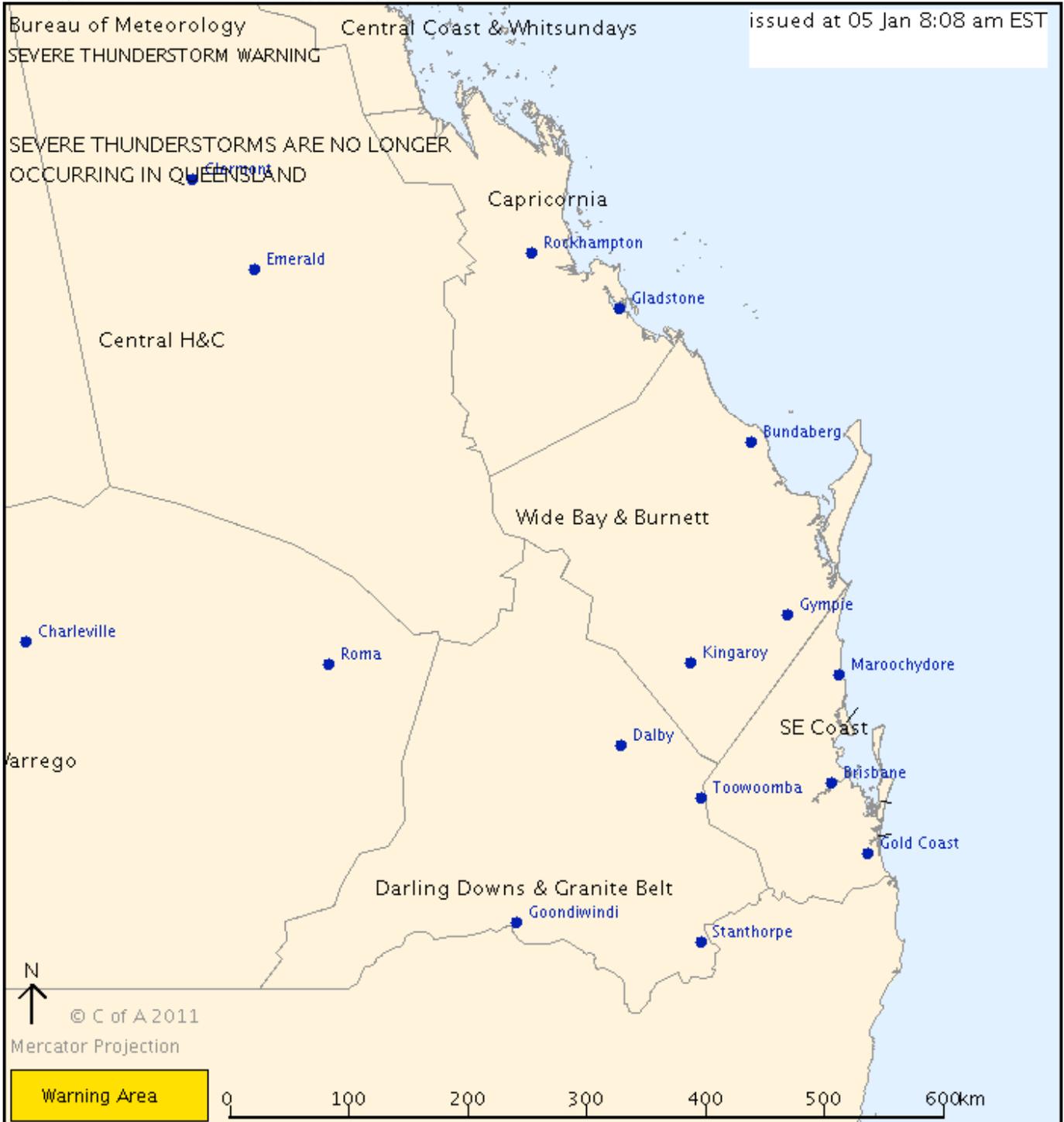
Issued at 8:08 am Wednesday, 5 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 05 Jan 8:08 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

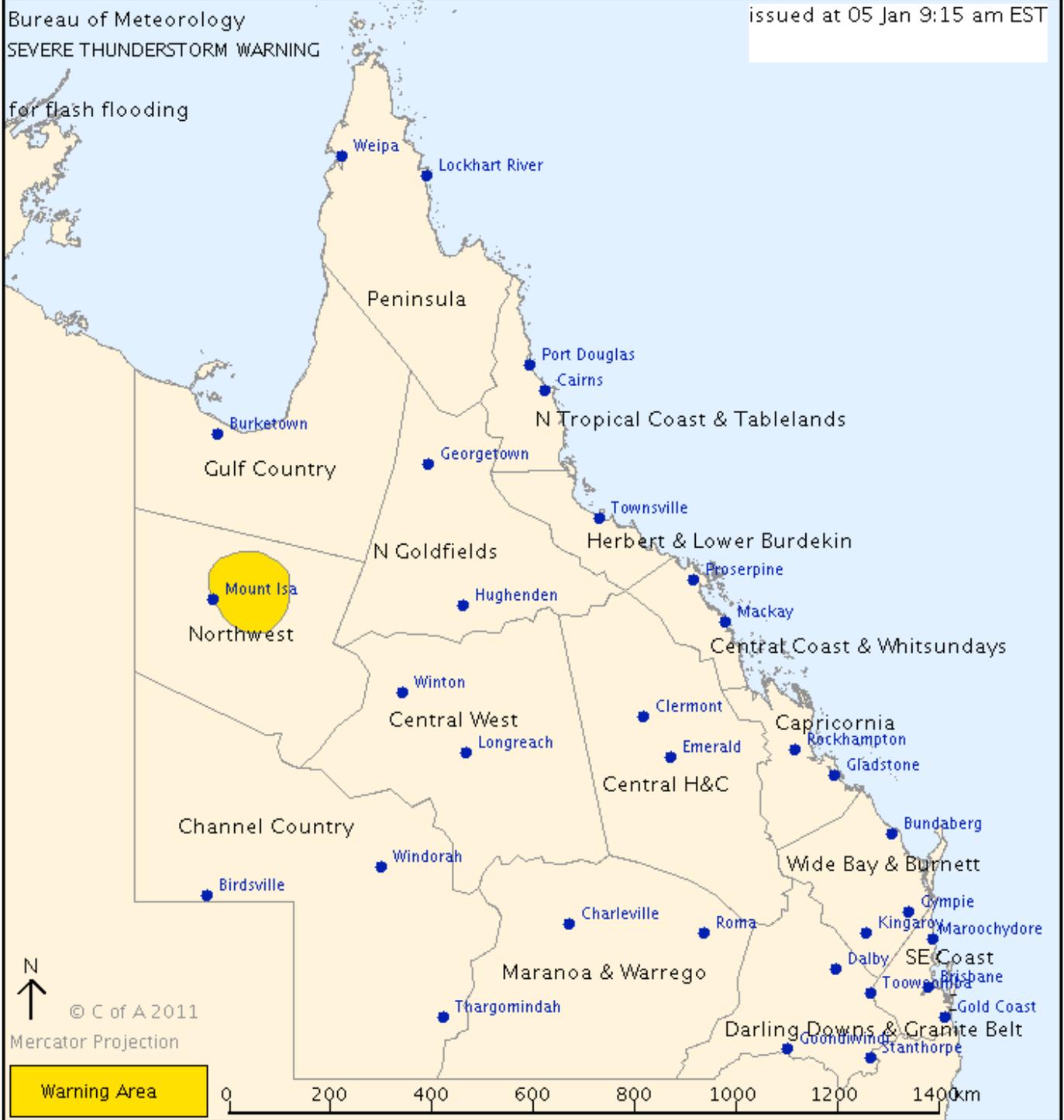
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Northwest Forecast District.

Issued at 9:15 am Wednesday, 5 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Mount Isa and Cloncurry.



issued at 05 Jan 9:15 am EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:15 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

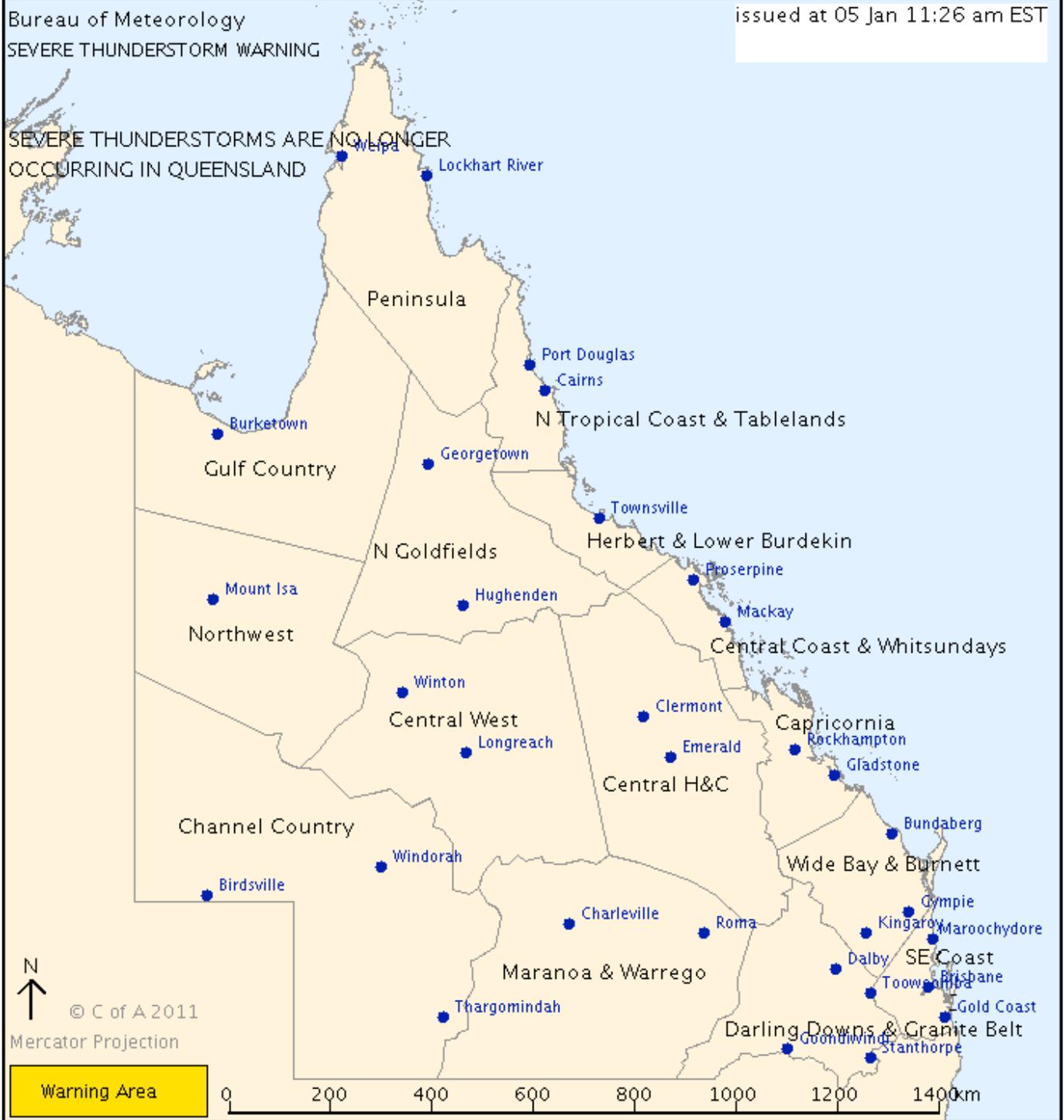
Issued at 11:26 am Wednesday, 5 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 05 Jan 11:26 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
BRISBANE CITY,  
LOCKYER VALLEY,  
MORETON BAY and  
SOMERSET Council Areas.

Issued at 4:19 pm Wednesday, 5 January 2011.

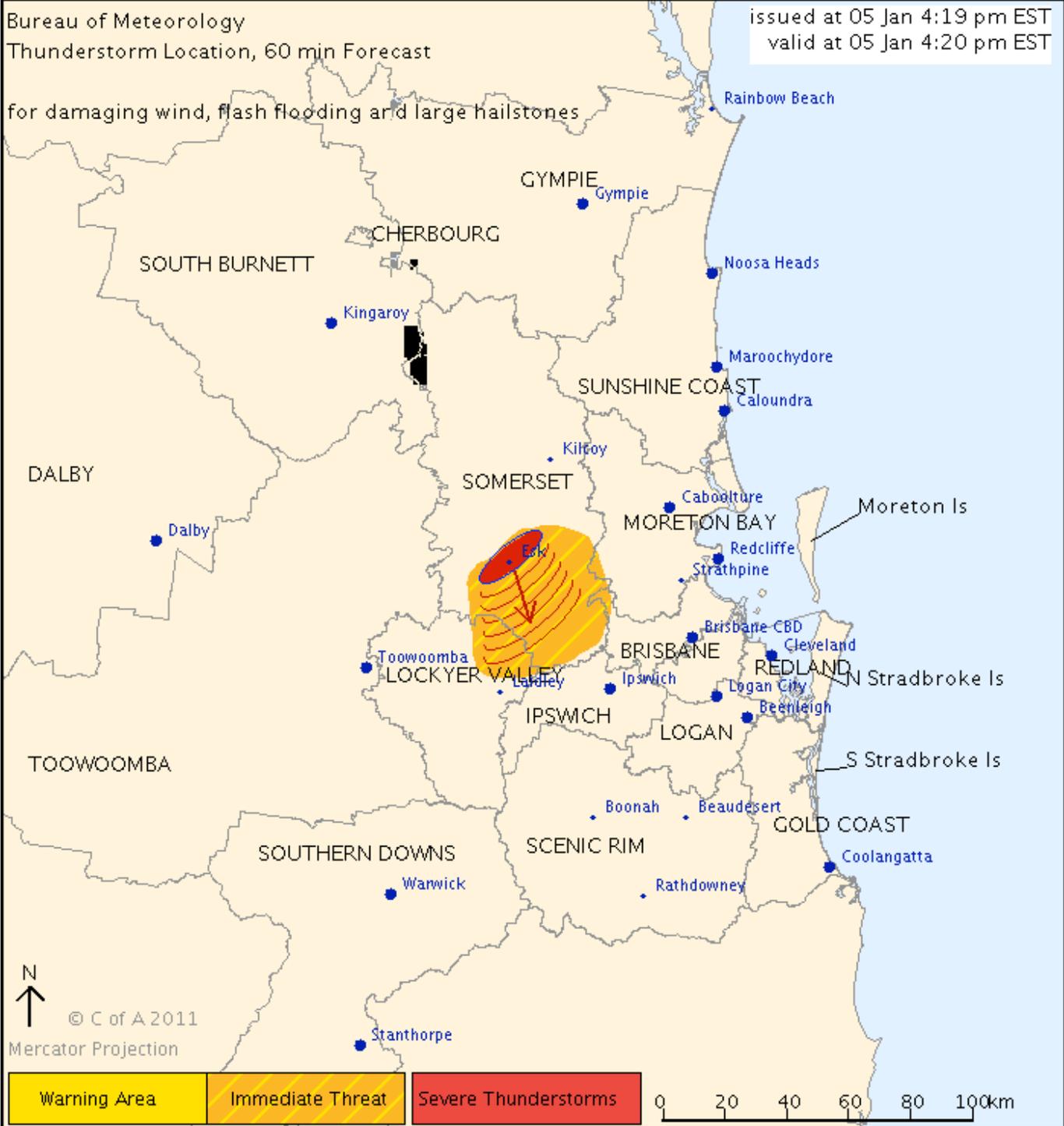
The Bureau of Meteorology warns that, at 4:20 pm, severe thunderstorms were detected on weather radar near Esk and northern Lake Wivenhoe.

They are forecast to affect the area south of Esk by 4:50 pm and southern Lake Wivenhoe by 5:20 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 05 Jan 4:19 pm EST  
valid at 05 Jan 4:20 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**  
**Bureau of Meteorology**

The next warning is due to be issued by 5:20 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

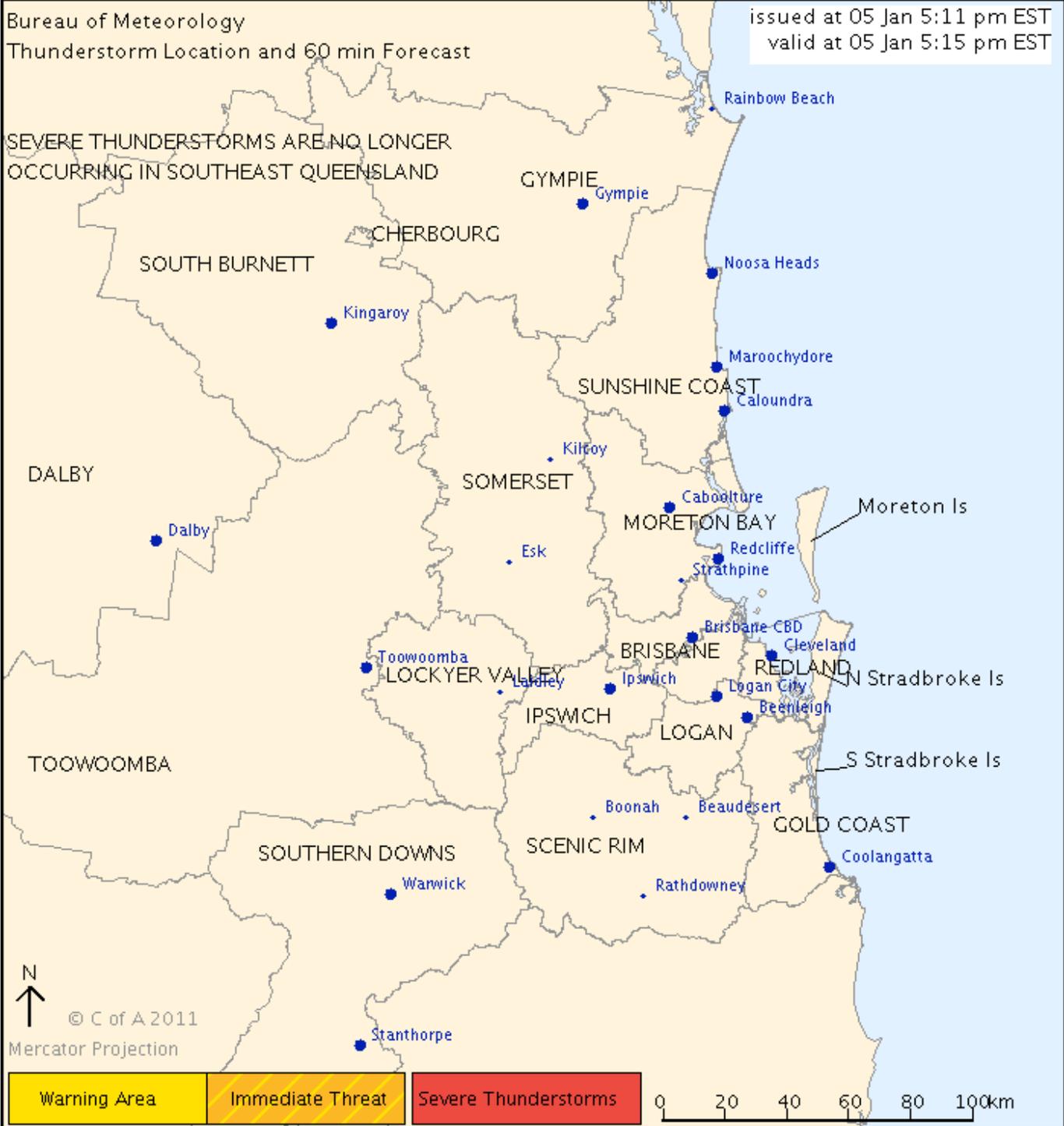
Issued at 5:11 pm Wednesday, 5 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but further severe thunderstorms are possible and the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 05 Jan 5:11 pm EST  
valid at 05 Jan 5:15 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Coast and Whitsundays,  
Central Highlands and Coalfields and  
Capricornia Forecast Districts.

Issued at 3:21 pm Thursday, 6 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Rockhampton, Clermont, Yeppoon and Moranbah.



issued at 06 Jan 3:21 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:25 pm.

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the Peninsula, Northern Tropical Coast and Tablelands, Central Coast and Whitsundays, Central Highlands and Coalfields and Capricornia Forecast Districts.

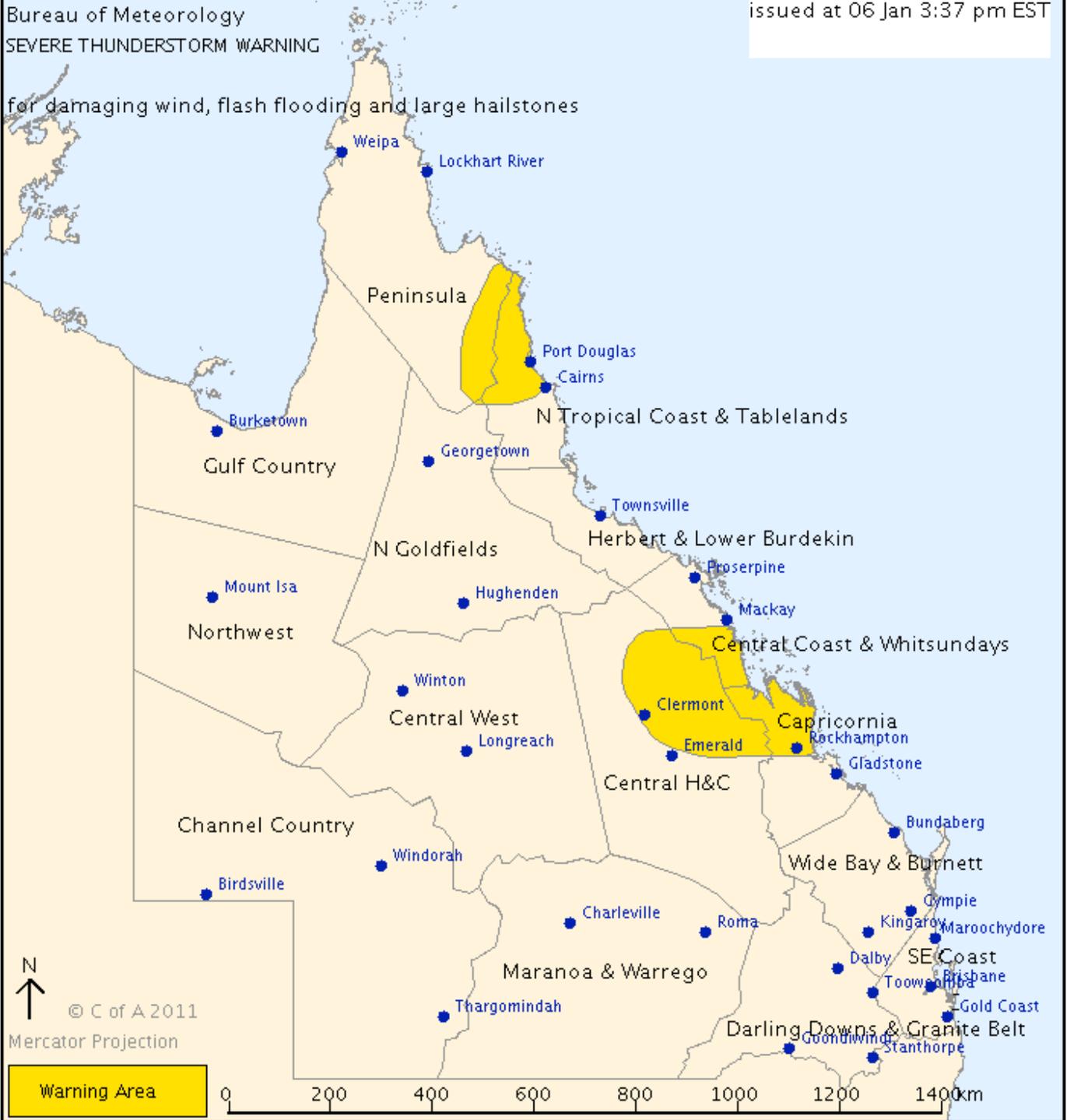
Issued at 3:37 pm Thursday, 6 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones over the next several hours in parts of the Central Coast and Whitsundays, Central Highlands and Coalfields and Capricornia districts. Locations which may be affected include Rockhampton, Clermont, Yeppoon and Moranbah.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next several hours in parts of the Peninsula and Northern Tropical Coast and Tablelands districts. Locations which may be affected include Port Douglas, Mareeba, Cooktown and Daintree Village.



issued at 06 Jan 3:37 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:40 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**

**Bureau of Meteorology**

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IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the Peninsula, Northern Tropical Coast and Tablelands, Central Coast and Whitsundays, Central Highlands and Coalfields and Capricornia Forecast Districts.

Issued at 4:18 pm Thursday, 6 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones over the next several hours in parts of the Central Coast and Whitsundays, Central Highlands and Coalfields and Capricornia districts. Locations which may be affected include Mackay, Moranbah, St Lawrence and Sarina.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next several hours in parts of the Peninsula and Northern Tropical Coast and Tablelands districts. Locations which may be affected include Port Douglas, Mareeba, Cooktown and Daintree Village.

88mm of rainfall was recorded in 1 hour at Flaggy Creek [northwest of Cairns] at 3:50pm.

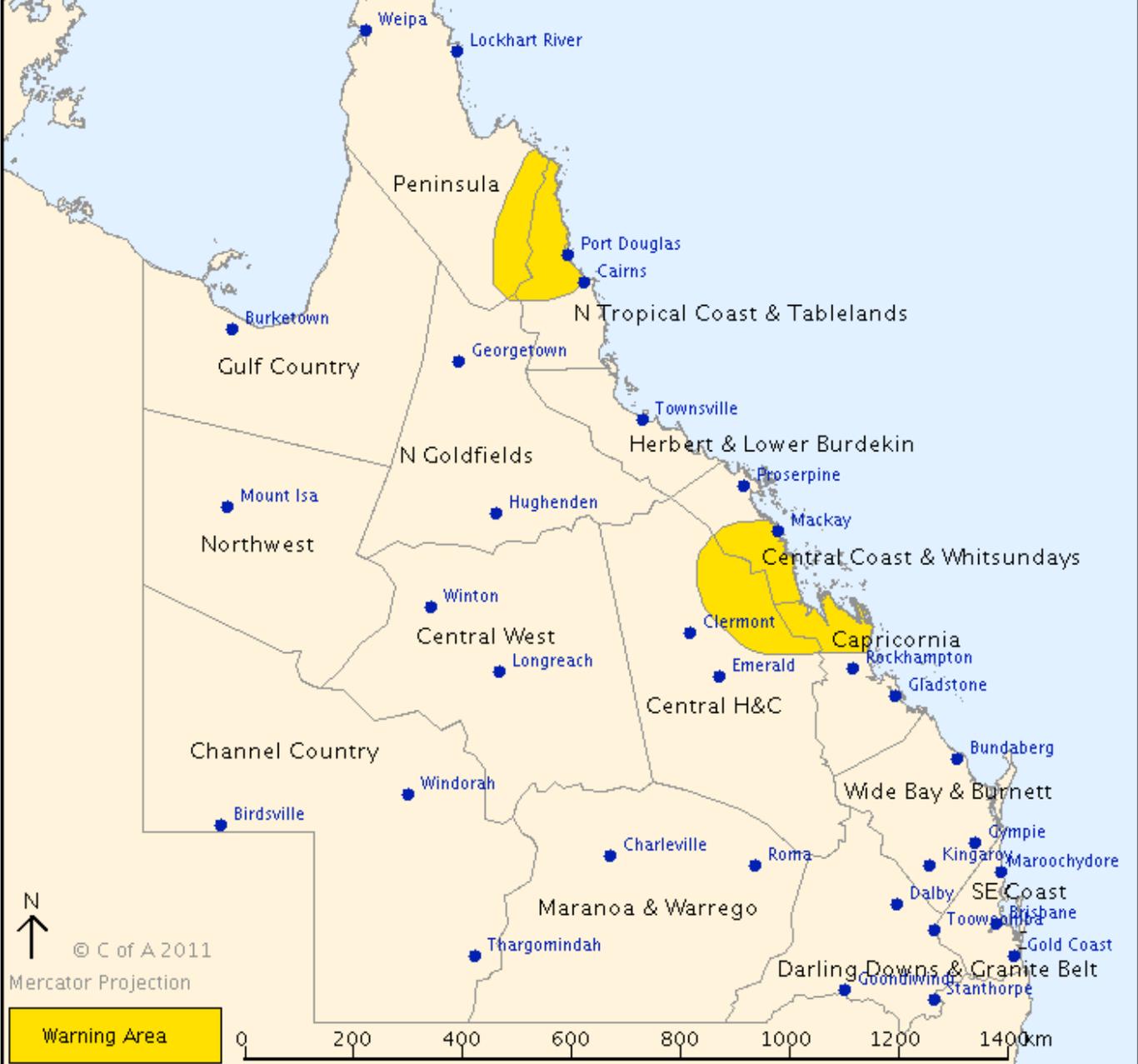


issued at 06 Jan 4:18 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:20 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
**for DAMAGING WIND and FLASH FLOODING**  
For people in the  
Central Coast and Whitsundays and parts of the  
Herbert and Lower Burdekin and  
Capricornia Forecast Districts.

Issued at 5:54 pm Thursday, 6 January 2011.

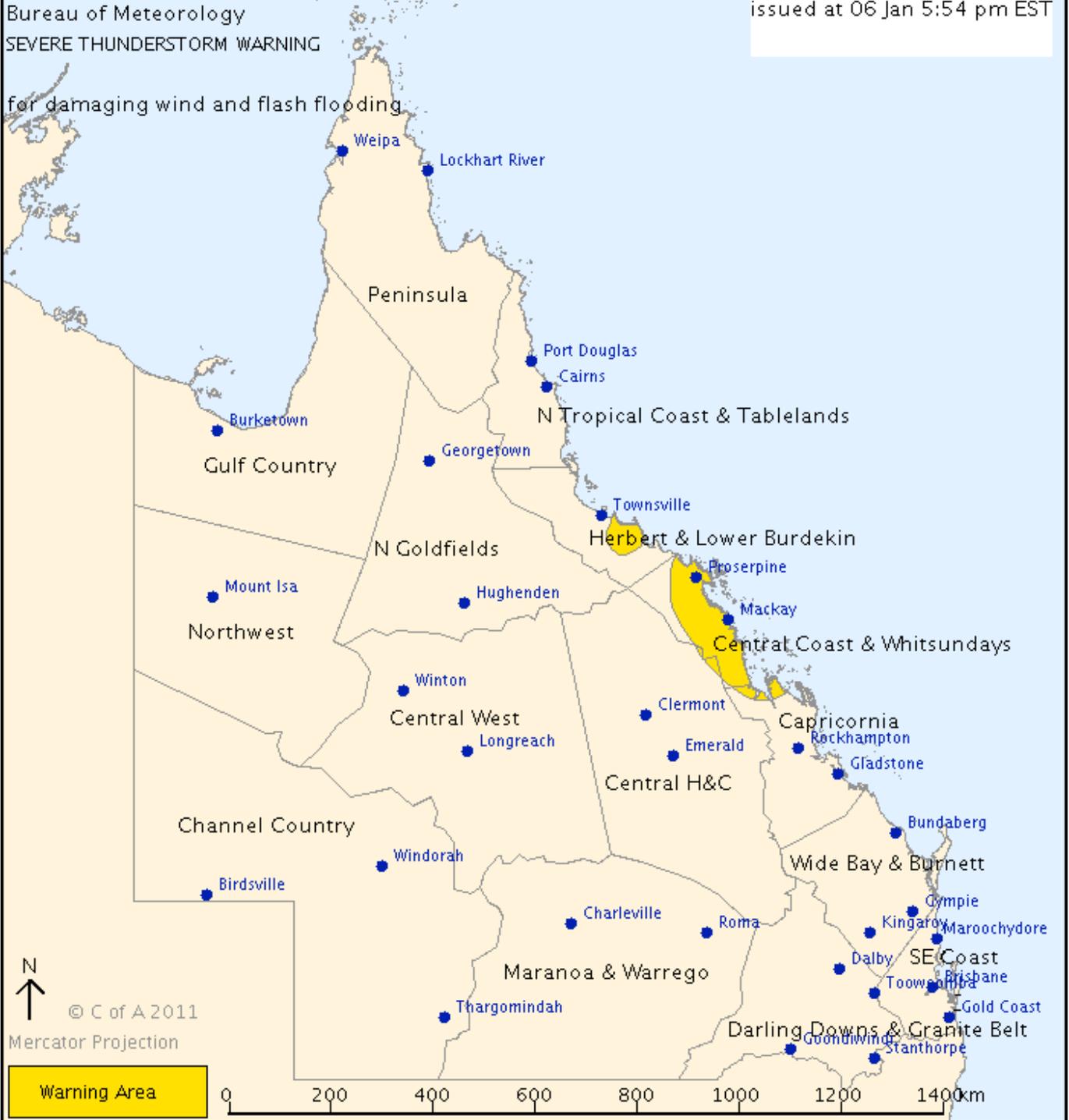
Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding over the next several hours in the Central Coast and Whitsundays and far northern parts of the Capricornia districts. Locations which may be affected include Mackay, Proserpine, Hamilton Island, St Lawrence, Sarina and Nebo.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next several hours in parts of the Herbert and Lower Burdekin district. Locations which may be affected include Giru.

89mm of rainfall was earlier recorded in 1 hour at Flaggy Creek [northwest of Cairns] at 3:50pm.



issued at 06 Jan 5:54 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:55 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Coast and Whitsundays,  
Central Highlands and Coalfields,  
Maranoa and Warrego and  
Darling Downs and Granite Belt Forecast Districts.

Issued at 6:51 pm Thursday, 6 January 2011.

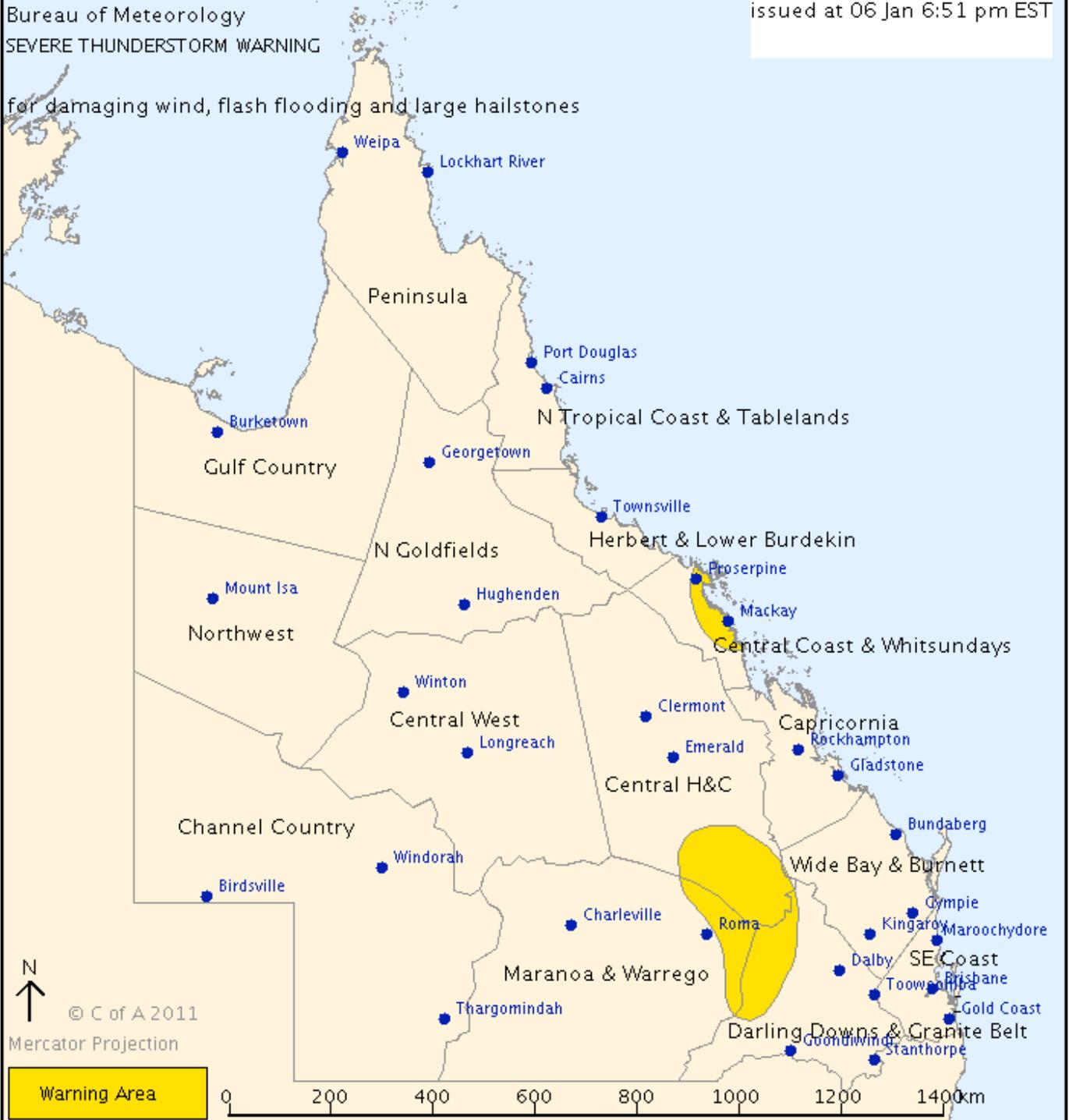
Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next hour or two in parts of the Central Coast and Whitsundays district. Locations which may be affected include Mackay, Proserpine and Hamilton Island.

Severe thunderstorms could possibly produce damaging winds, very heavy rainfall, flash flooding and large hailstones over the next several hours in parts of the Central Highlands and Coalfields, Maranoa and Warrego and Darling Downs and Granite Belt districts.

89mm of rainfall was earlier recorded in 1 hour at Flaggy Creek [northwest of Cairns] at 3:50pm.



issued at 06 Jan 6:51 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:55 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

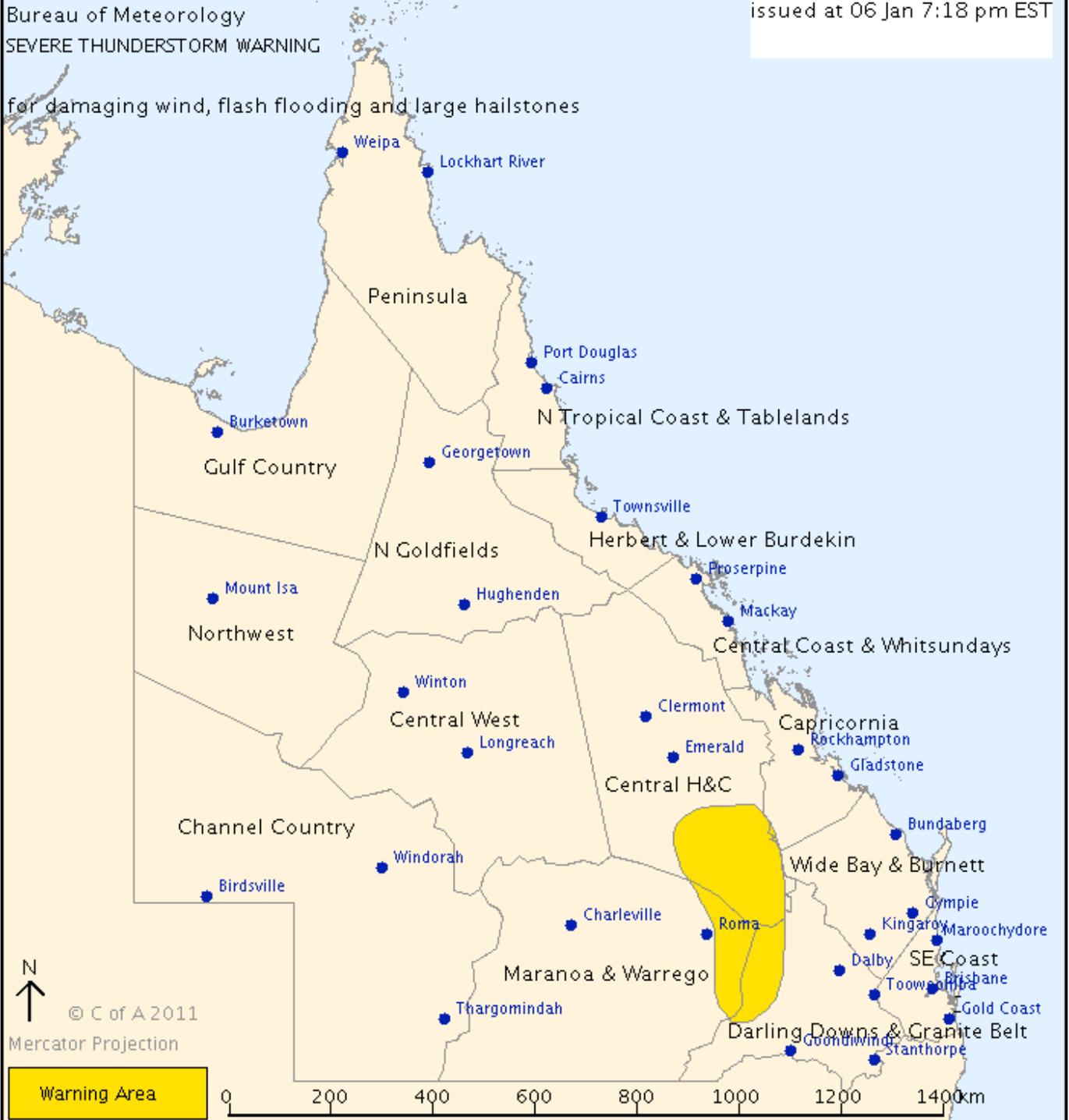
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Highlands and Coalfields,  
Maranoa and Warrego and  
Darling Downs and Granite Belt Forecast Districts.

Issued at 7:18 pm Thursday, 6 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Surat and the area east of Marengo.



issued at 06 Jan 7:18 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:20 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the Herbert and Lower Burdekin, Central Coast and Whitsundays, Central Highlands and Coalfields, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

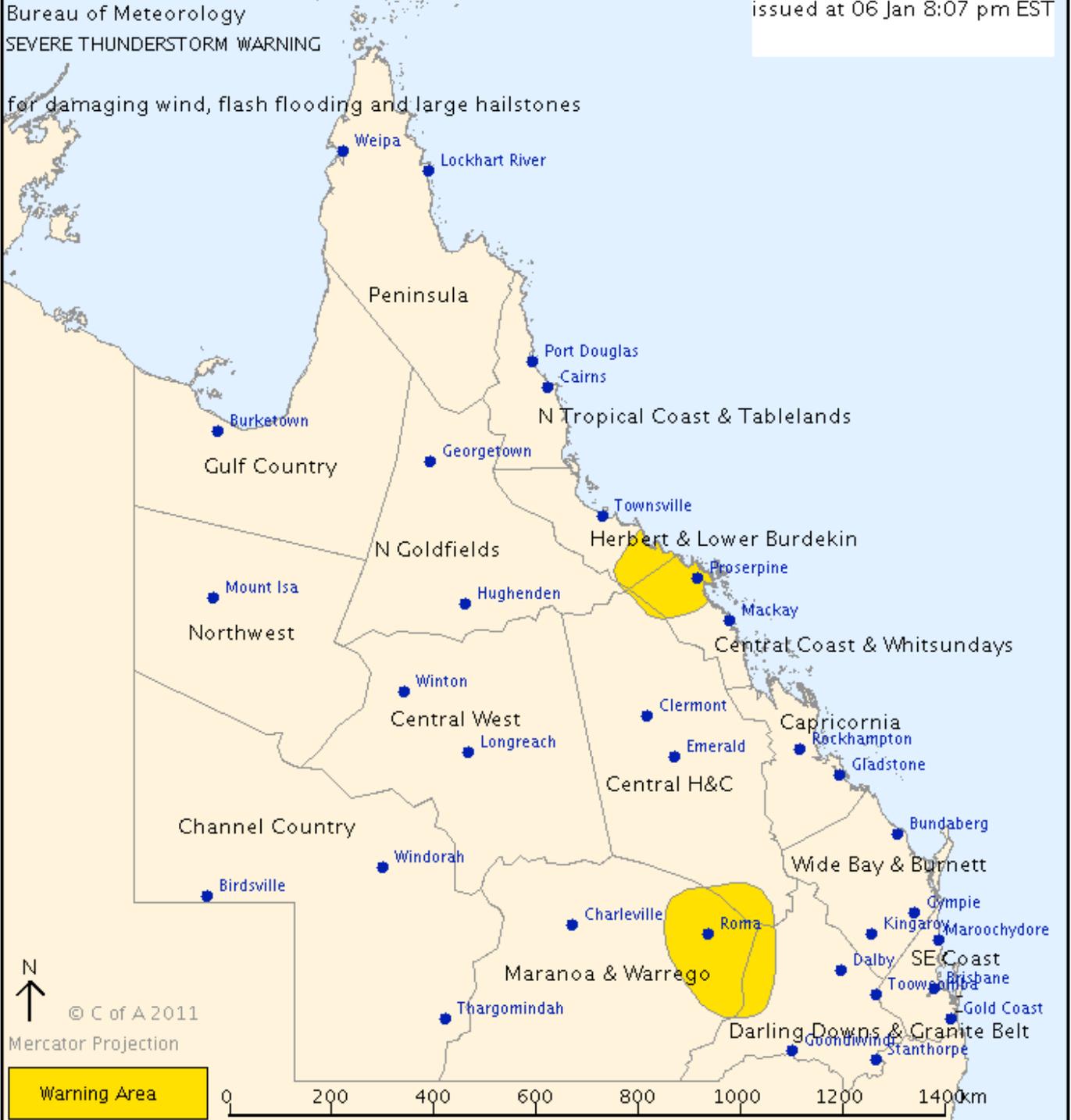
Issued at 8:07 pm Thursday, 6 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones over the next several hours in far southern parts of the Central Highlands and Coalfields, Maranoa and Warrego and far northwestern parts of the Darling Downs and Granite Belt districts. Locations which may be affected include Roma and Mitchell.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding over the next several hours in southern parts of the Herbert and Lower Burdekin and northern parts of the Central Coast and Whitsundays districts. Locations which may be affected include Proserpine, Bowen and Collinsville.



issued at 06 Jan 8:07 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:10 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

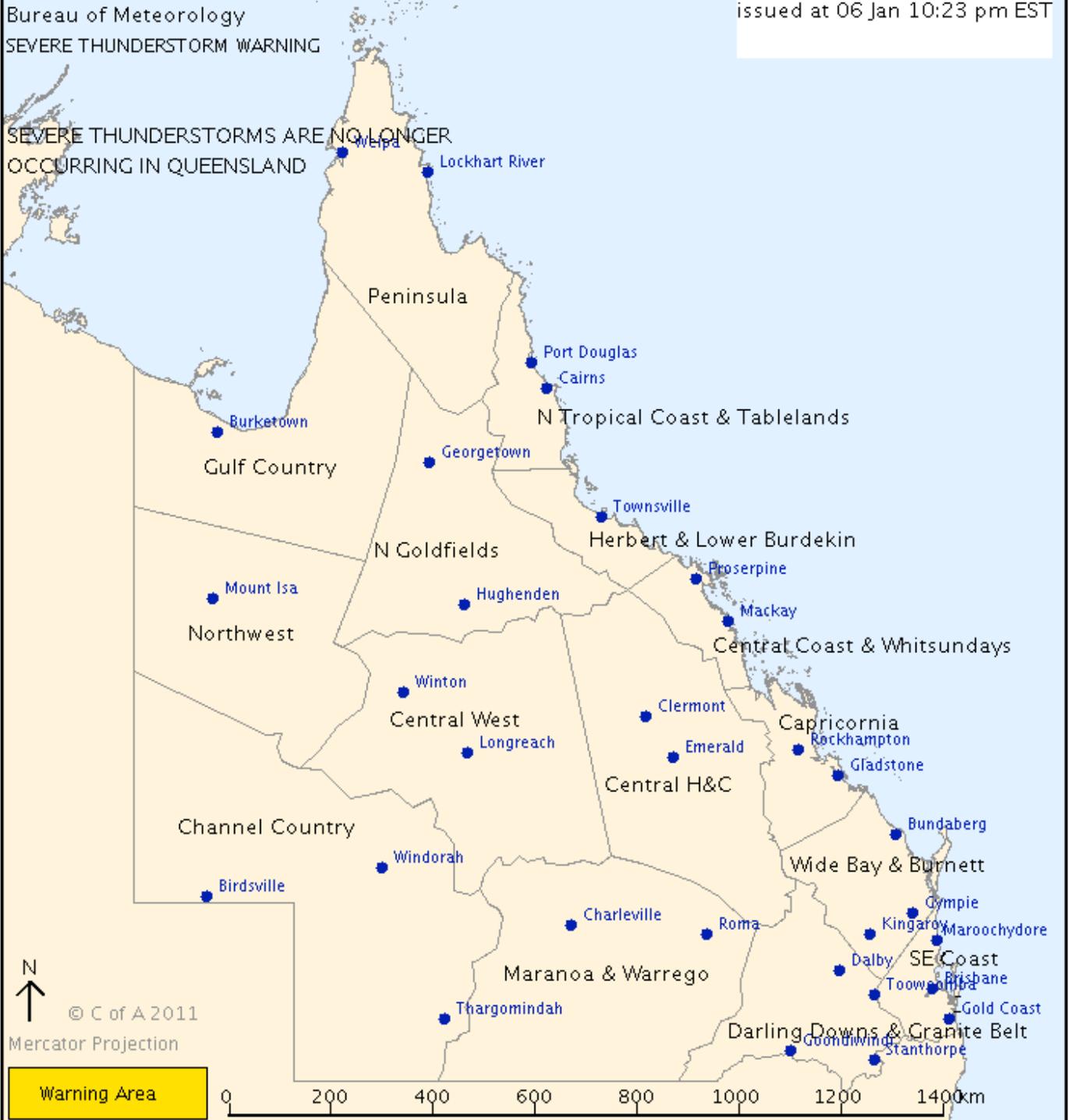
Issued at 10:23 pm Thursday, 6 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 06 Jan 10:23 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

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Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

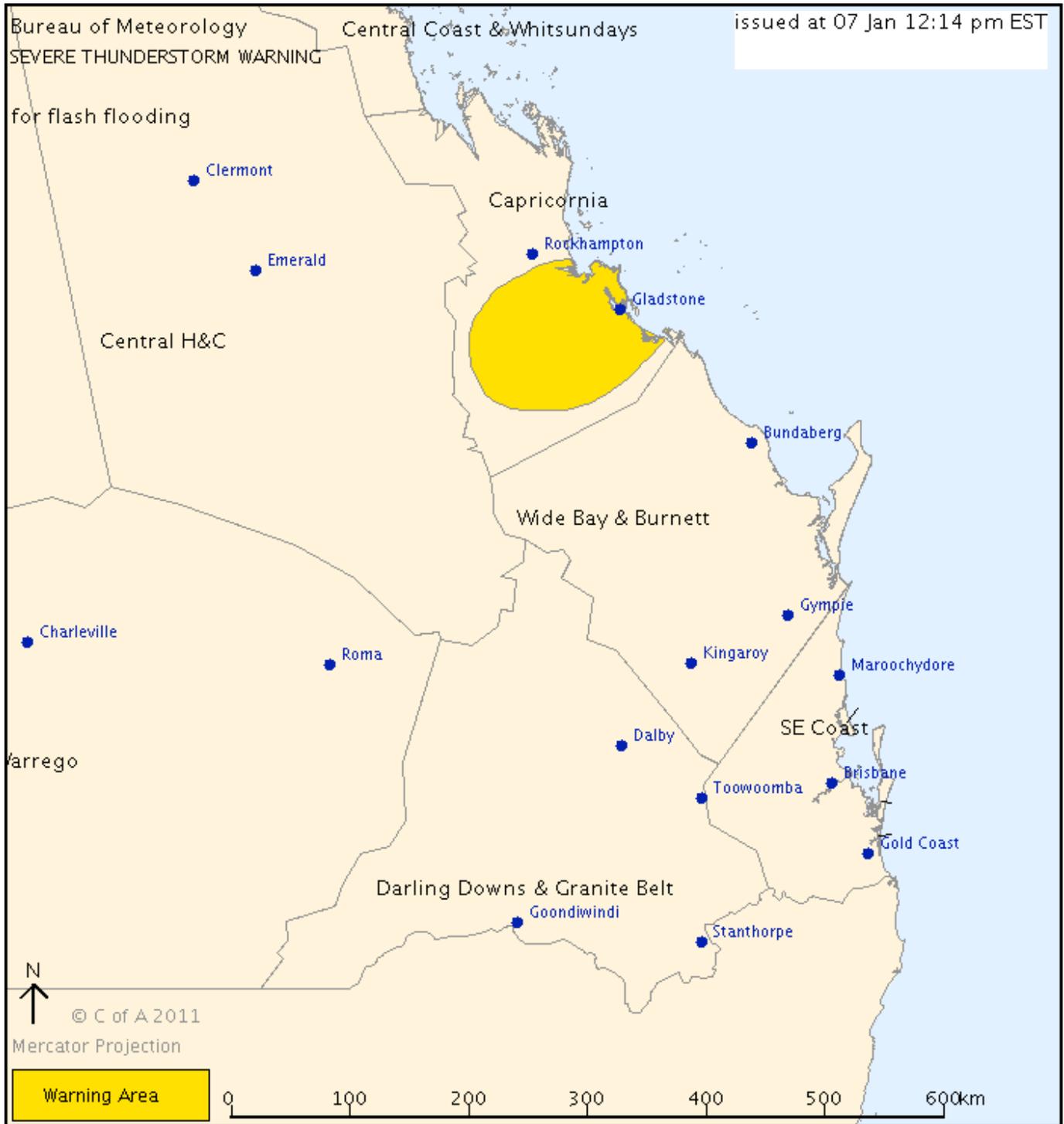
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Capricornia Forecast District.

Issued at 12:14 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected includes the area inland of Gladstone.



issued at 07 Jan 12:14 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:15 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

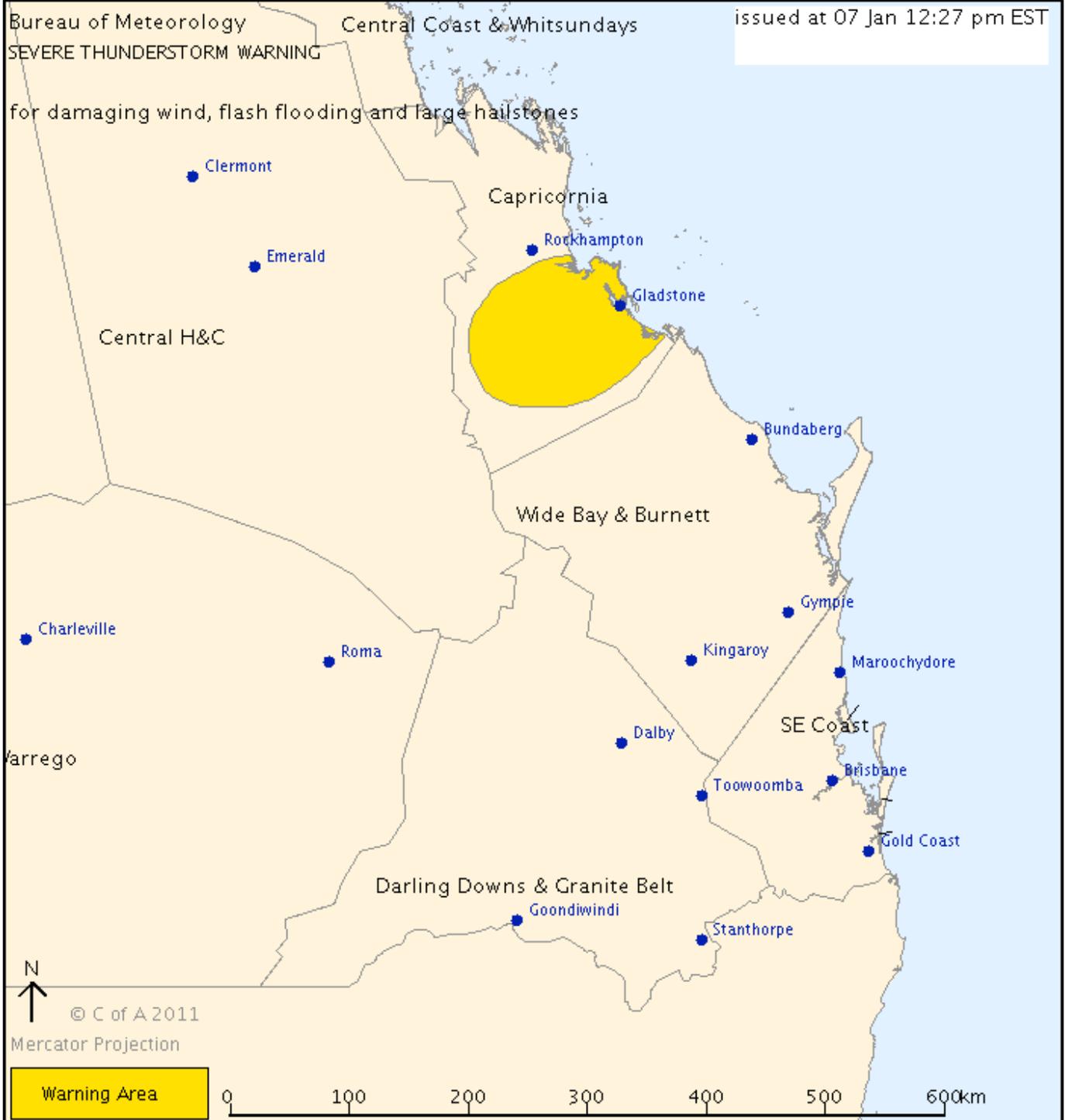
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Capricornia Forecast District.

Issued at 12:27 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Mt Larcom and Calliope.



issued at 07 Jan 12:27 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:30 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

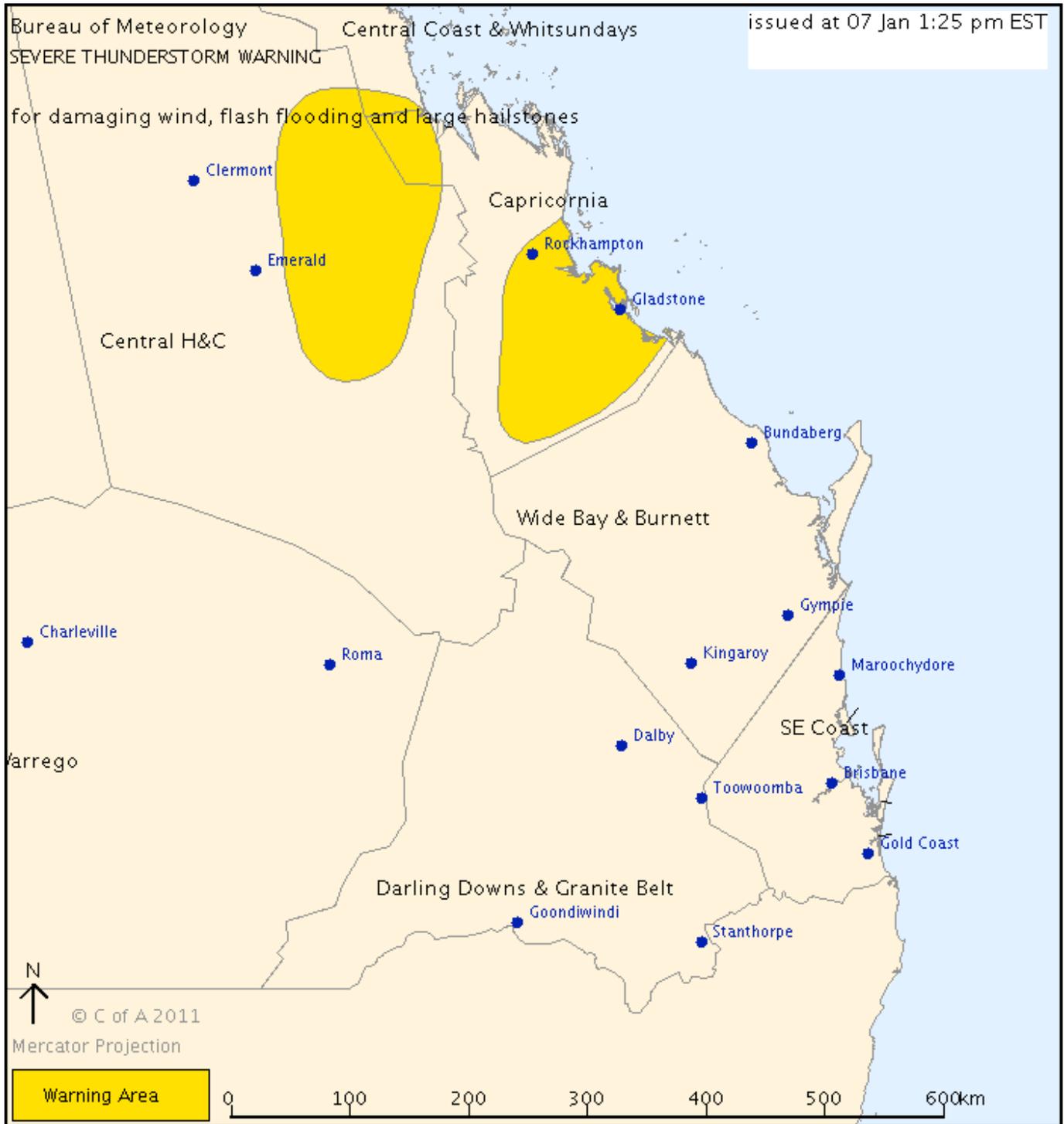
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Coast and Whitsundays,  
Central Highlands and Coalfields and  
Capricornia Forecast Districts.

Issued at 1:25 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Rockhampton, Leura and Blackwater.



issued at 07 Jan 1:25 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:25 pm.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

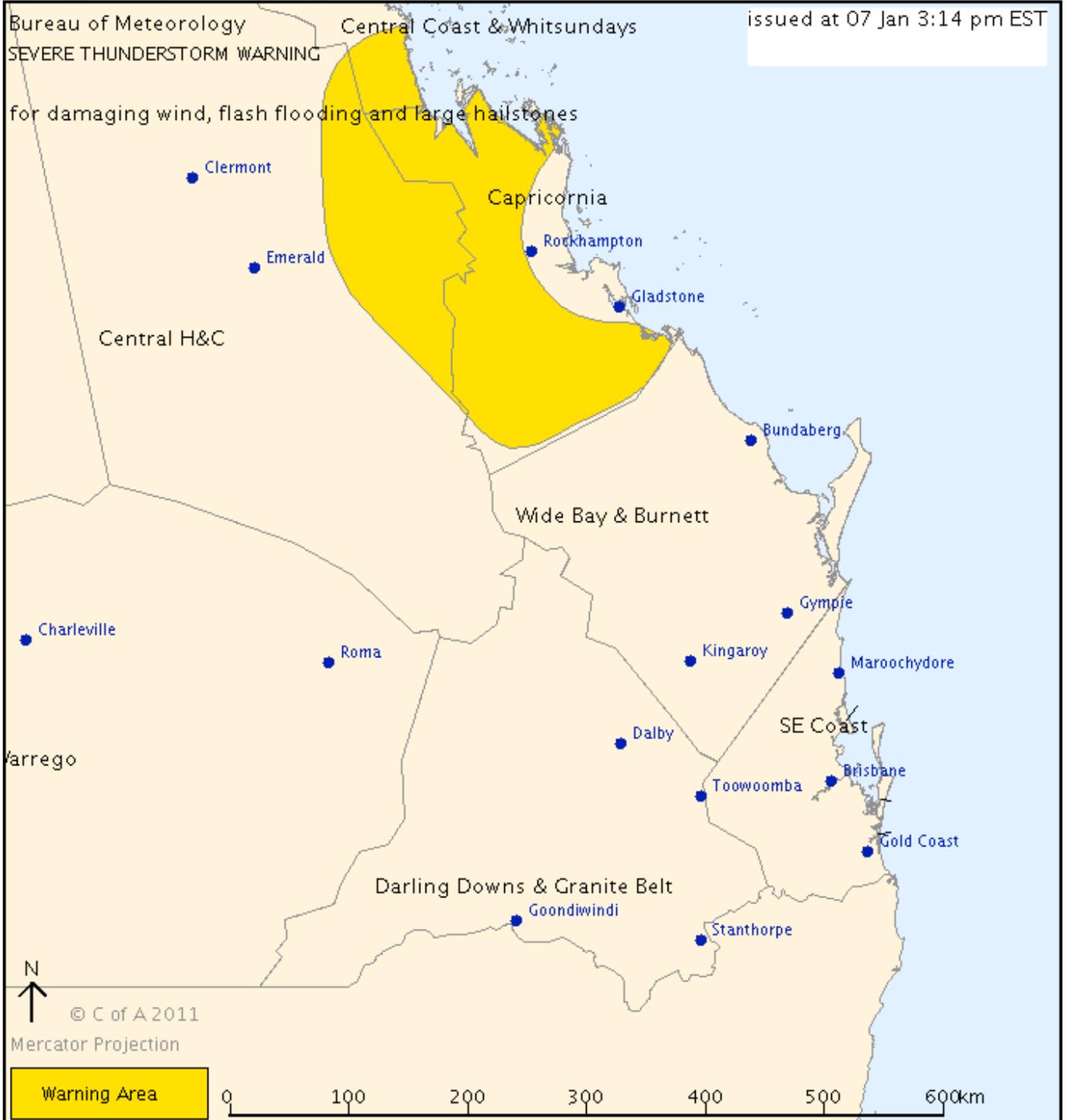
For people in the  
Capricornia and parts of the  
Central Coast and Whitsundays and  
Central Highlands and Coalfields Forecast Districts.

Issued at 3:14 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Biloela, Baralaba and Marlborough.



issued at 07 Jan 3:14 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:15 pm.



**Australian Government**

**Bureau of Meteorology**

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

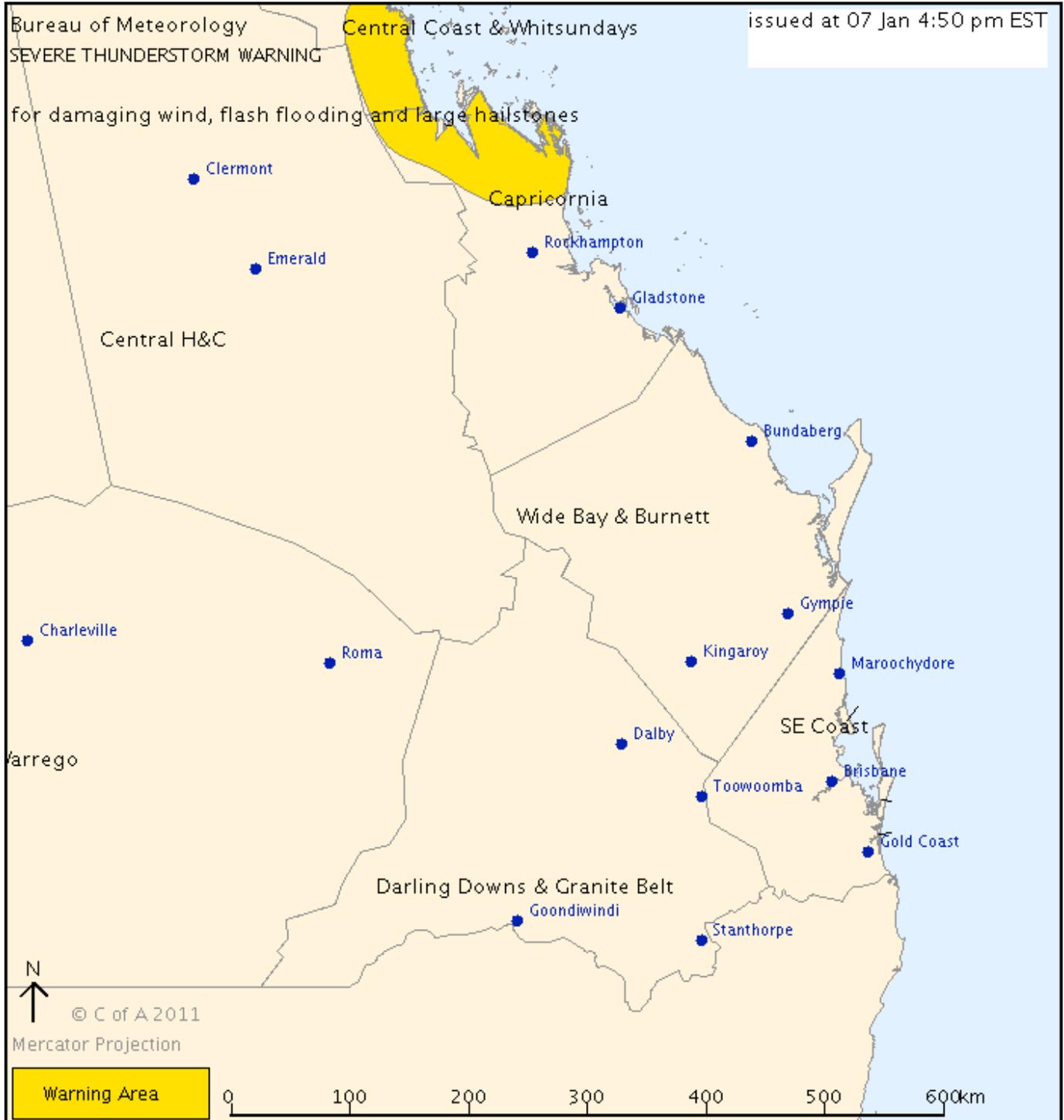
For people in parts of the  
Central Coast and Whitsundays and  
Capricornia Forecast Districts.

Issued at 4:50 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Marlborough and Sarina.



issued at 07 Jan 4:50 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:50 pm.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

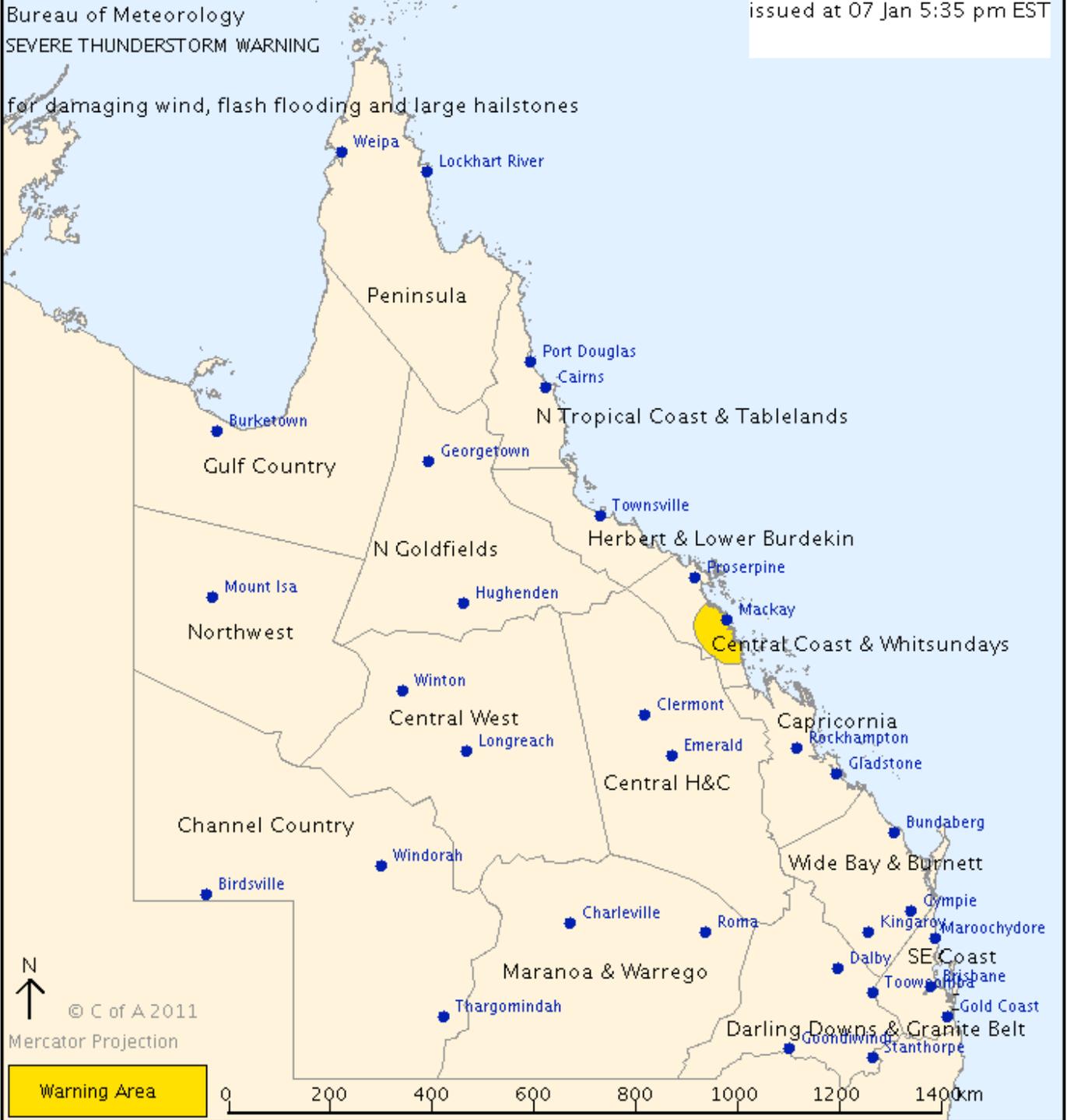
For people in parts of the  
Central Coast and Whitsundays Forecast District.

Issued at 5:35 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Mackay and Sarina.



issued at 07 Jan 5:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:35 pm.

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Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

Issued at 6:17 pm Friday, 7 January 2011.

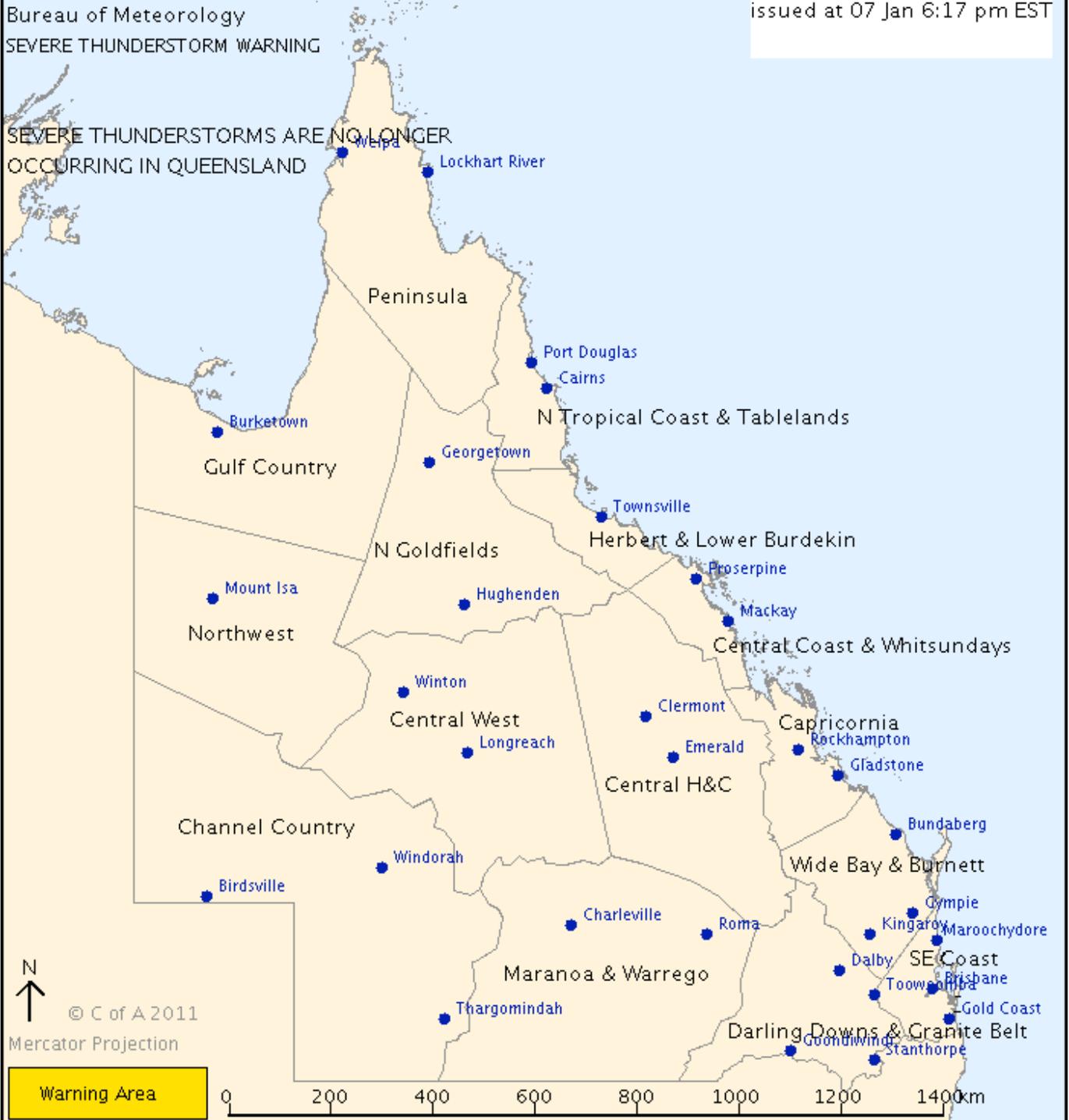
Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.

A 111km/hr wind gust was earlier recorded at Mackay Ap at 5:42pm.



issued at 07 Jan 6:17 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



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Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Coast and Whitsundays Forecast District.

Issued at 8:06 pm Friday, 7 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Proserpine and Hamilton Island.



issued at 07 Jan 8:06 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:10 pm.

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

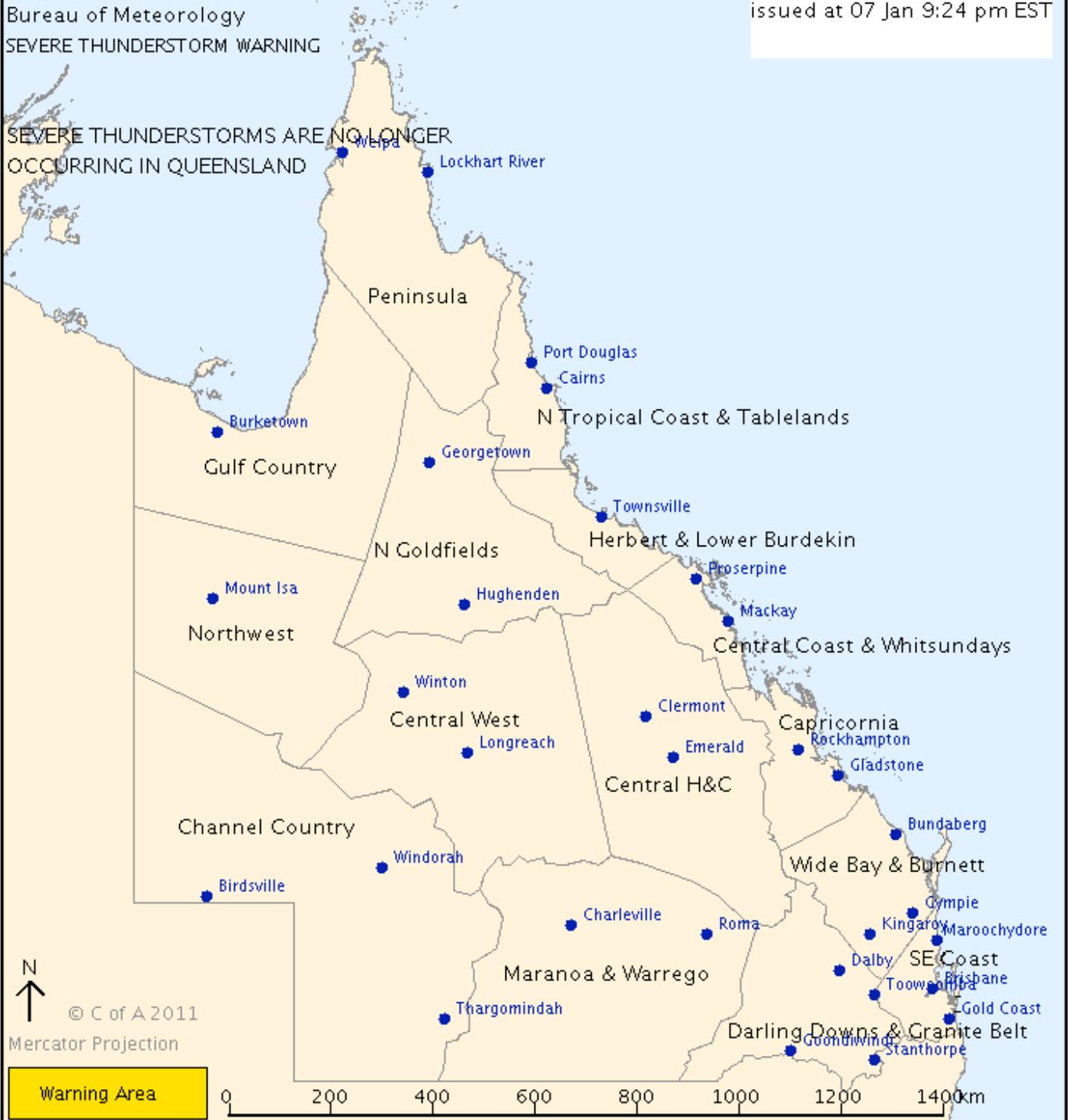
Issued at 9:24 pm Friday, 7 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 07 Jan 9:24 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

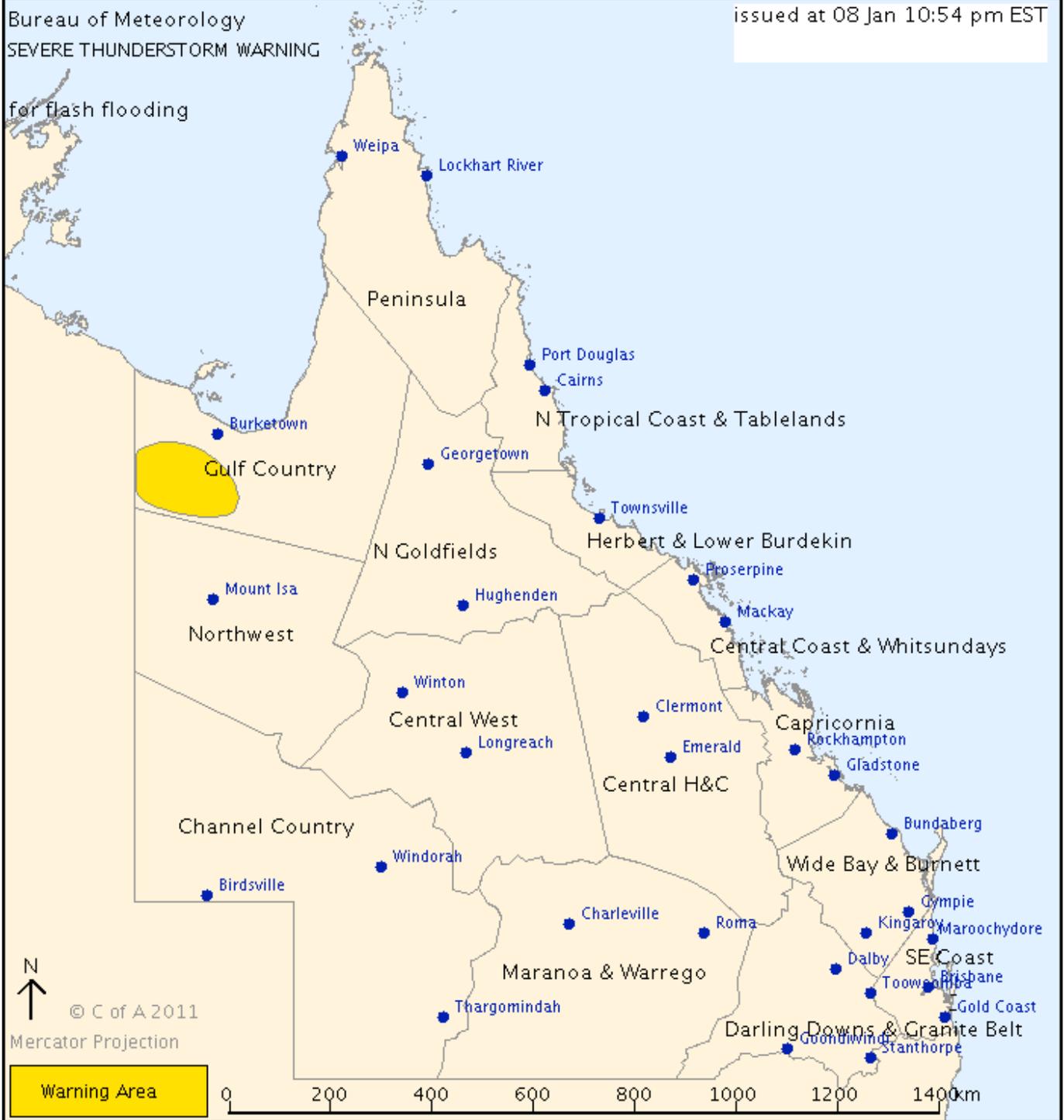
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Gulf Country Forecast District.

Issued at 10:54 pm Saturday, 8 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Riversleigh Station and Gregory Downs Station.



issued at 08 Jan 10:54 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 1:55 am Sunday.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

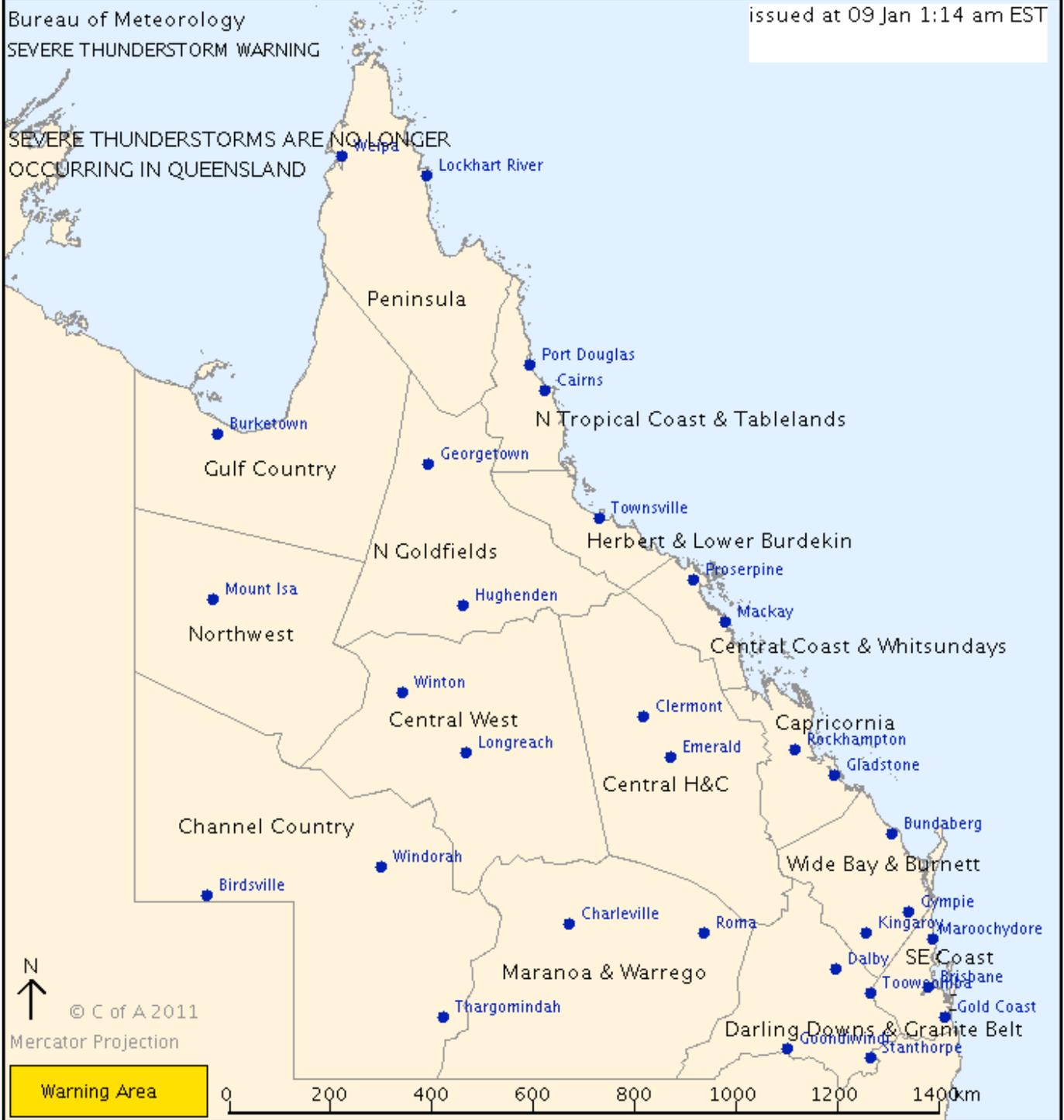
Issued at 1:14 am Sunday, 9 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 09 Jan 1:14 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Peninsula,

Gulf Country and

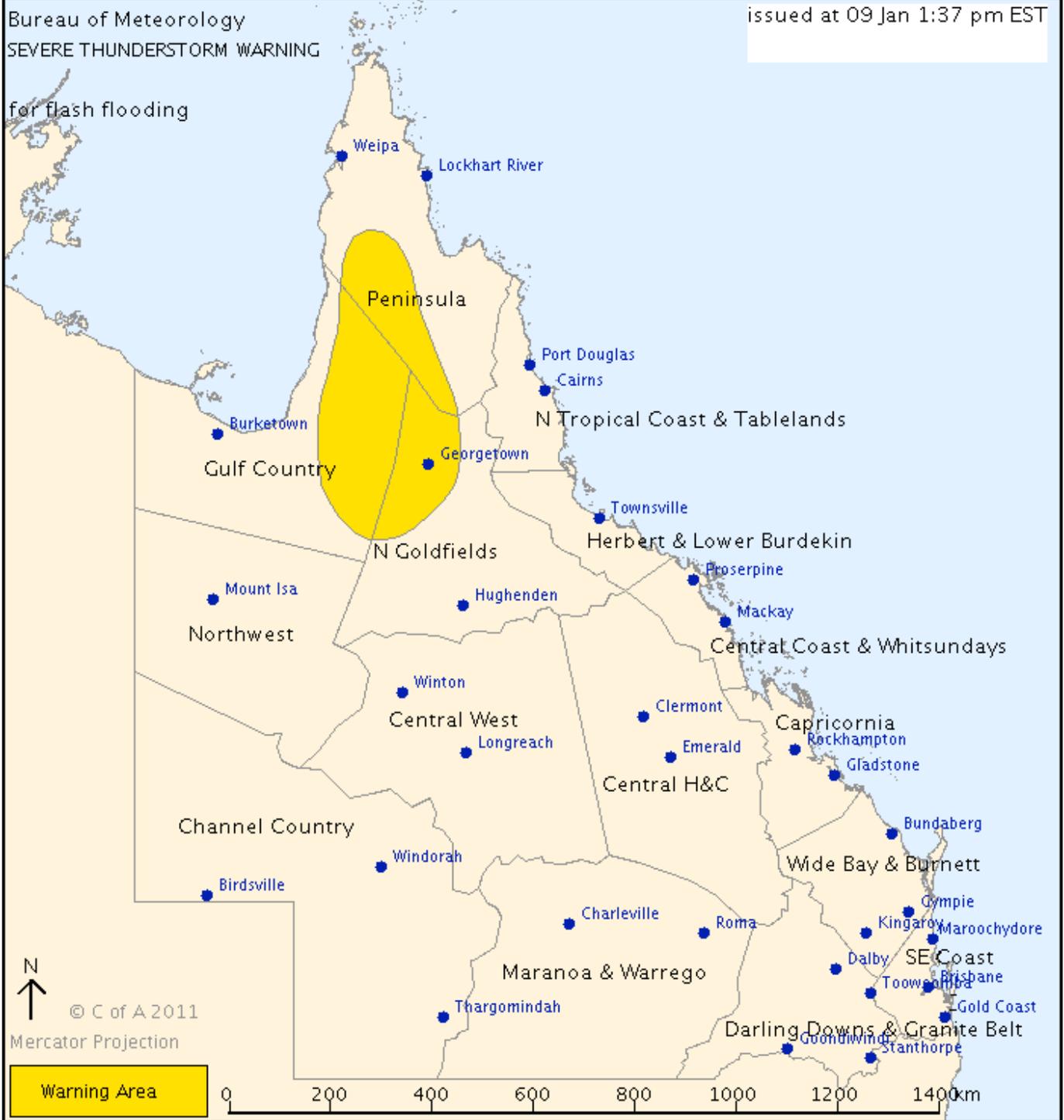
Northern Goldfields and Upper Flinders Forecast Districts.

Issued at 1:37 pm Sunday, 9 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Georgetown, Croydon, Forsyth and Blackbull Siding.



issued at 09 Jan 1:37 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:40 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Peninsula,

Gulf Country and

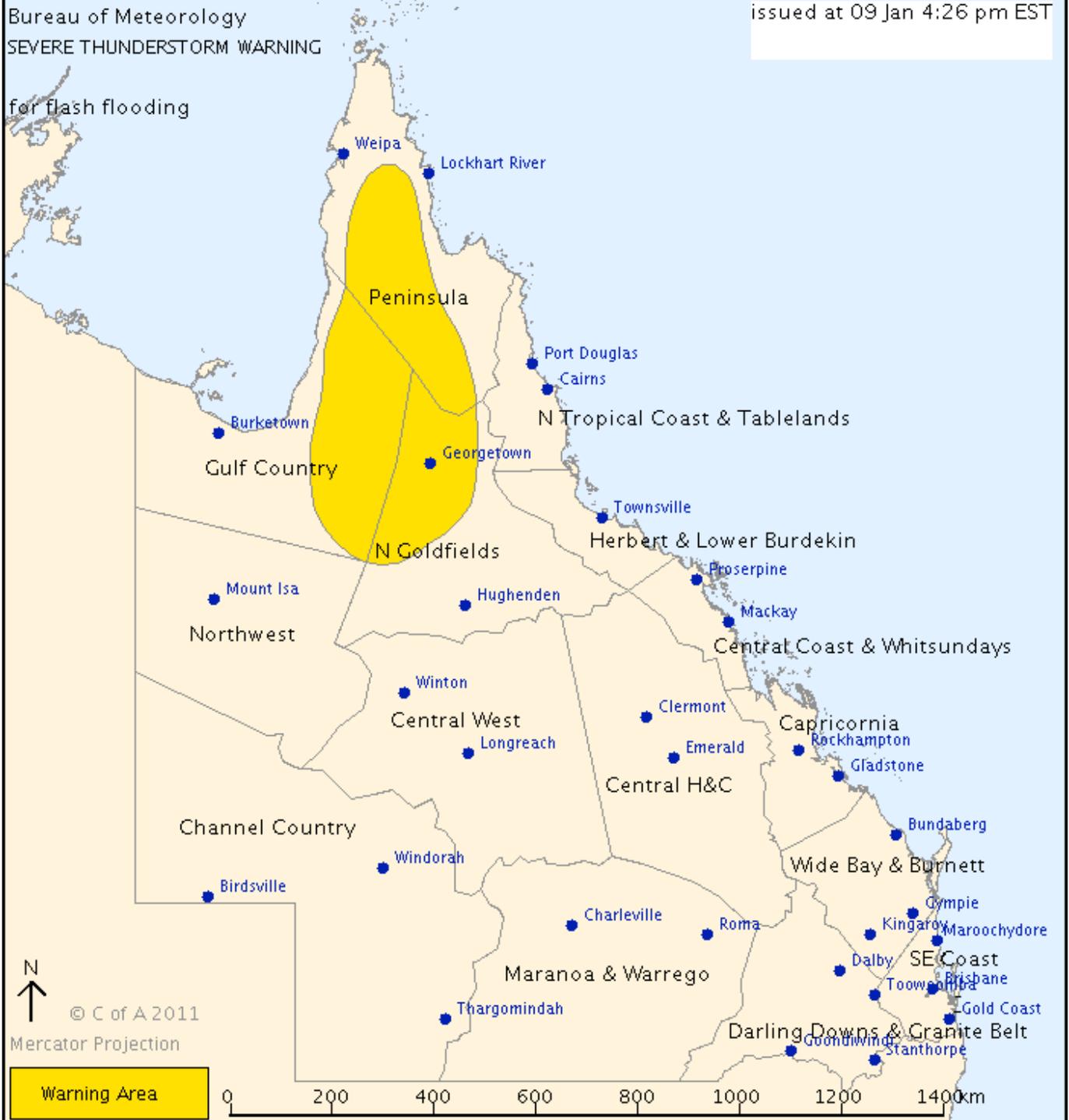
Northern Goldfields and Upper Flinders Forecast Districts.

Issued at 4:26 pm Sunday, 9 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Georgetown, Croydon, Coen, Palmerville, Musgrave and Einasleigh.



issued at 09 Jan 4:26 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:30 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for DAMAGING WIND and FLASH FLOODING**

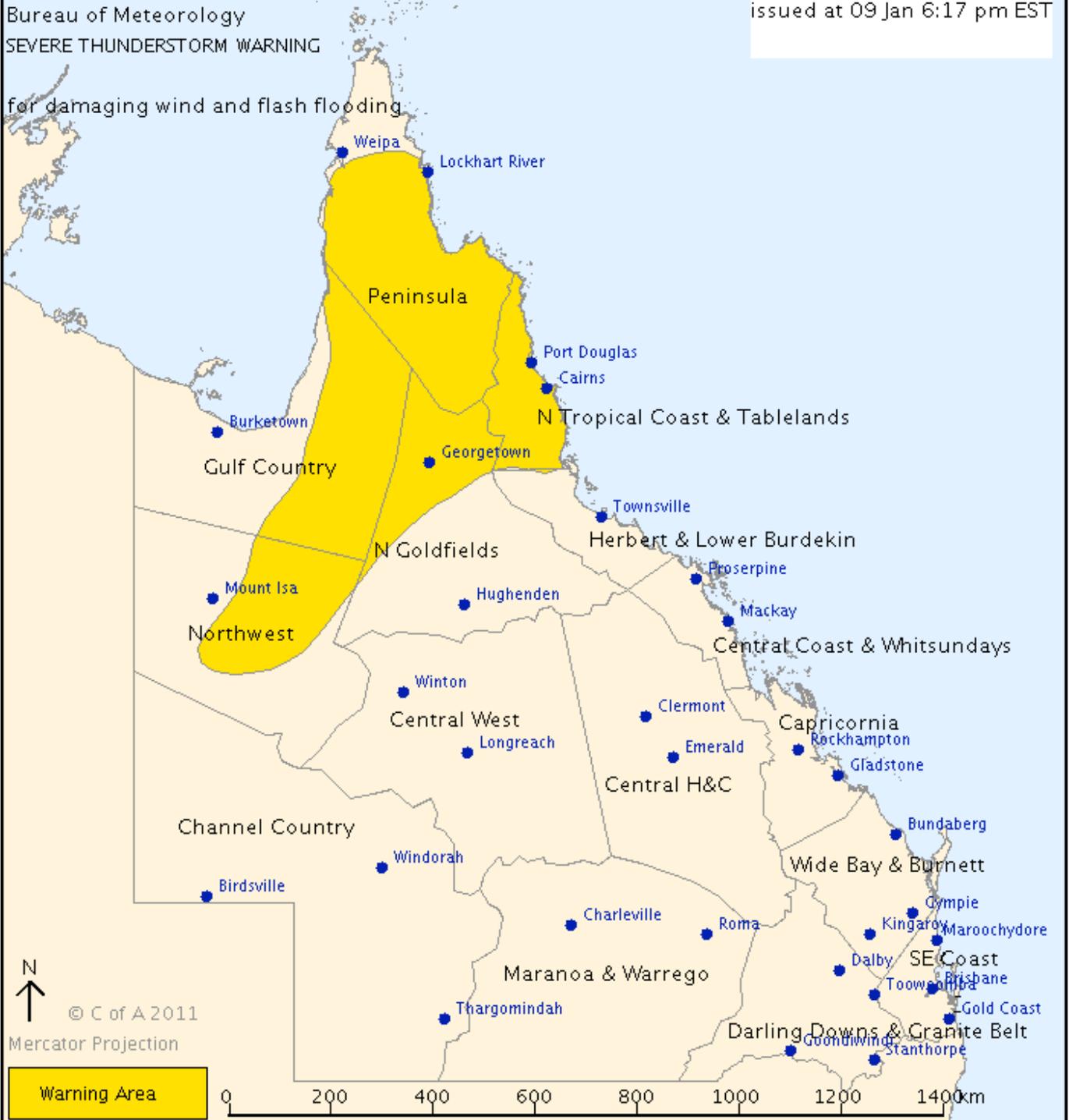
For people in the Peninsula, Northern Tropical Coast and Tablelands and parts of the Gulf Country, Northern Goldfields and Upper Flinders and Northwest Forecast Districts.

Issued at 6:17 pm Sunday, 9 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Cloncurry, Georgetown, Cairns, Port Douglas, Lockhart River, Julia Creek, Croydon, Innisfail, Mareeba, Kowanyama, Coen and Aurukun.



issued at 09 Jan 6:17 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:20 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**CANCELLATION SEVERE THUNDERSTORM WARNING**

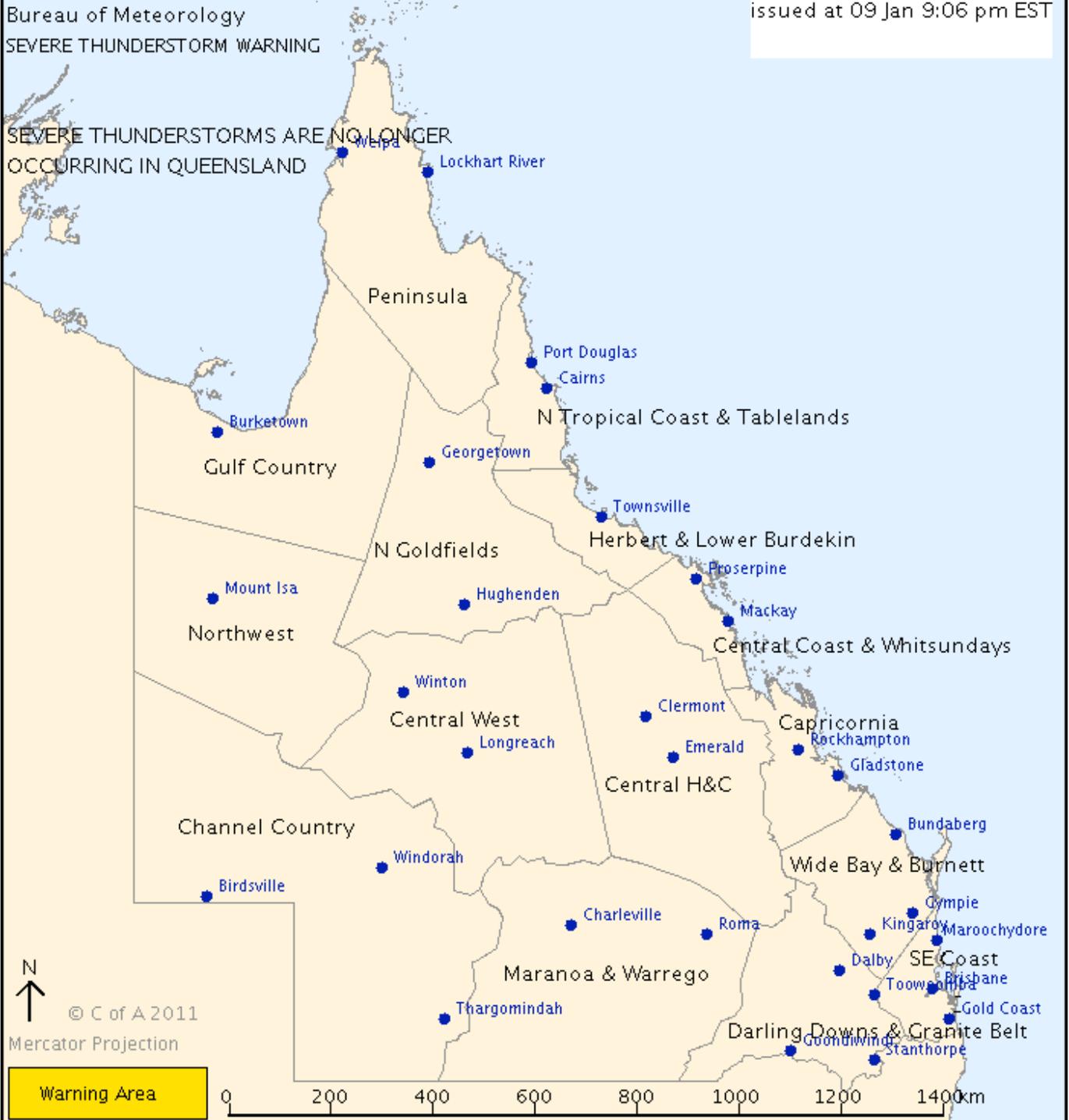
Issued at 9:06 pm Sunday, 9 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 09 Jan 9:06 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING  
For people in parts of the  
Gulf Country Forecast District.

Issued at 11:51 am Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Burketown, Normanton, Karumba and Delta Downs Station.

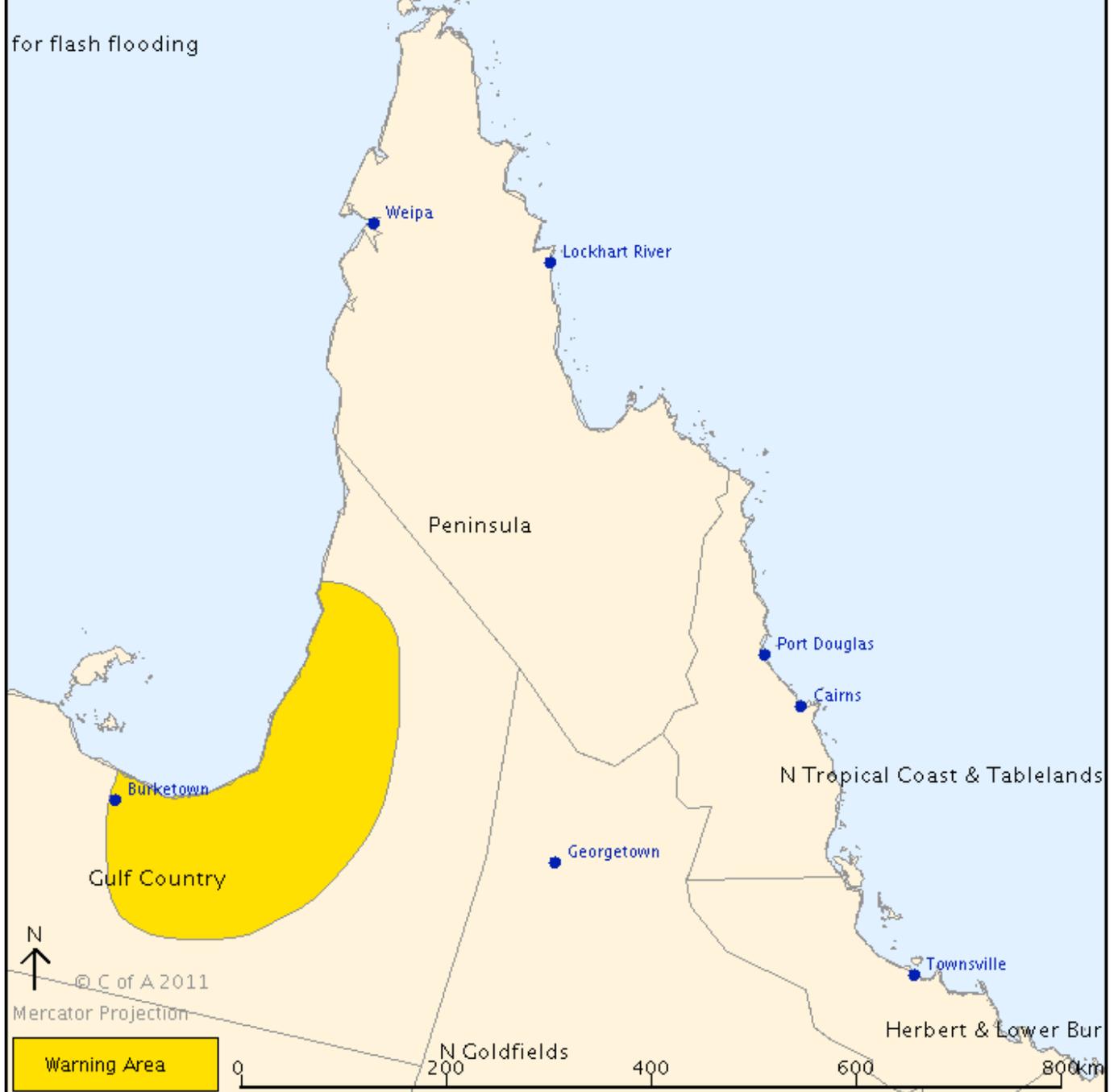


issued at 10 Jan 11:51 am EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 2:55 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Gulf Country Forecast District.

Issued at 1:34 pm Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Normanton, Croydon, Delta Downs Station and Augustus Downs Station.

55mm of rainfall was recorded in an hour at Normanton Ap at 12:20pm.

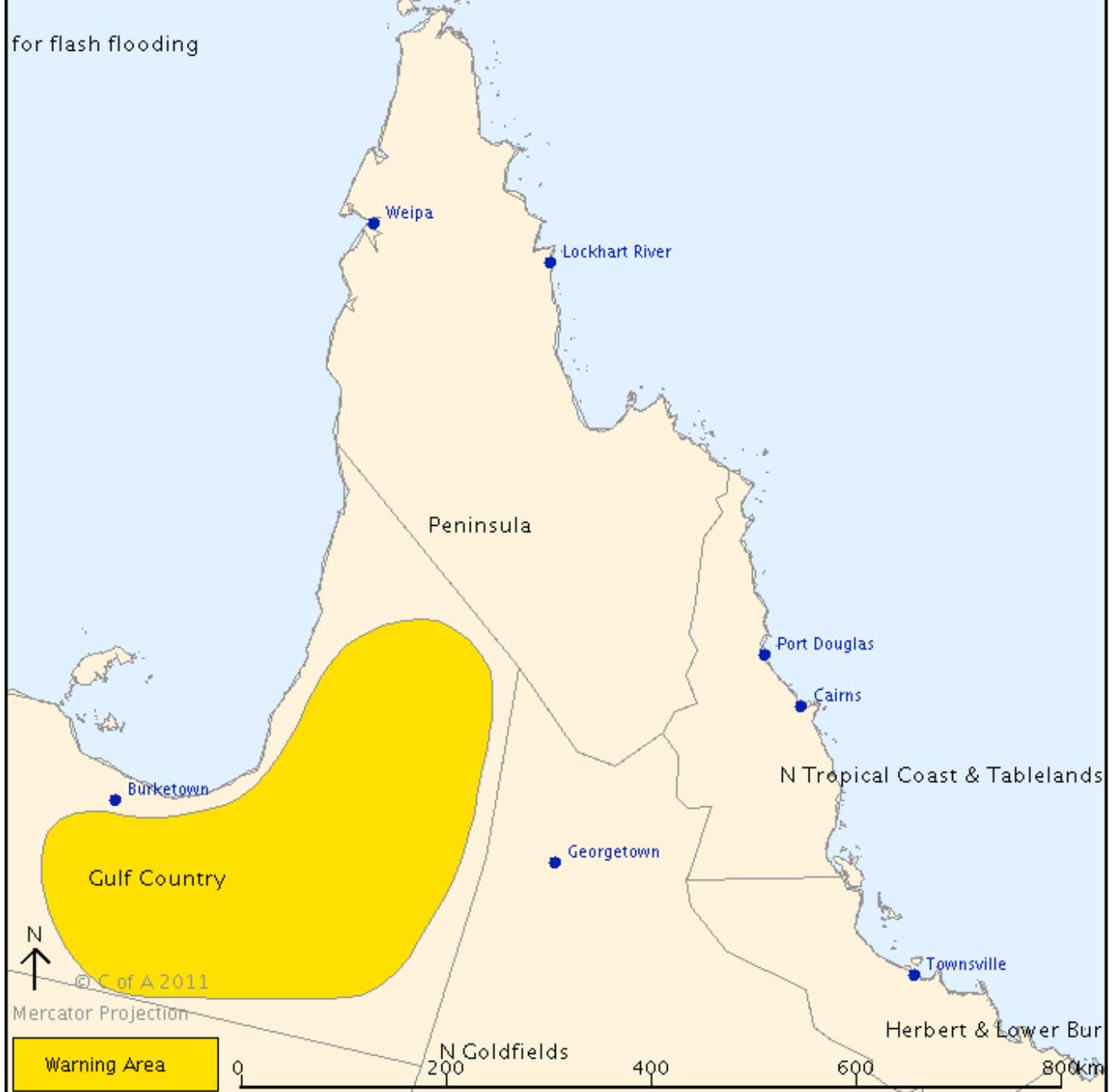


issued at 10 Jan 1:34 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:35 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING**

For people in parts of the Gulf Country, Northwest, Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

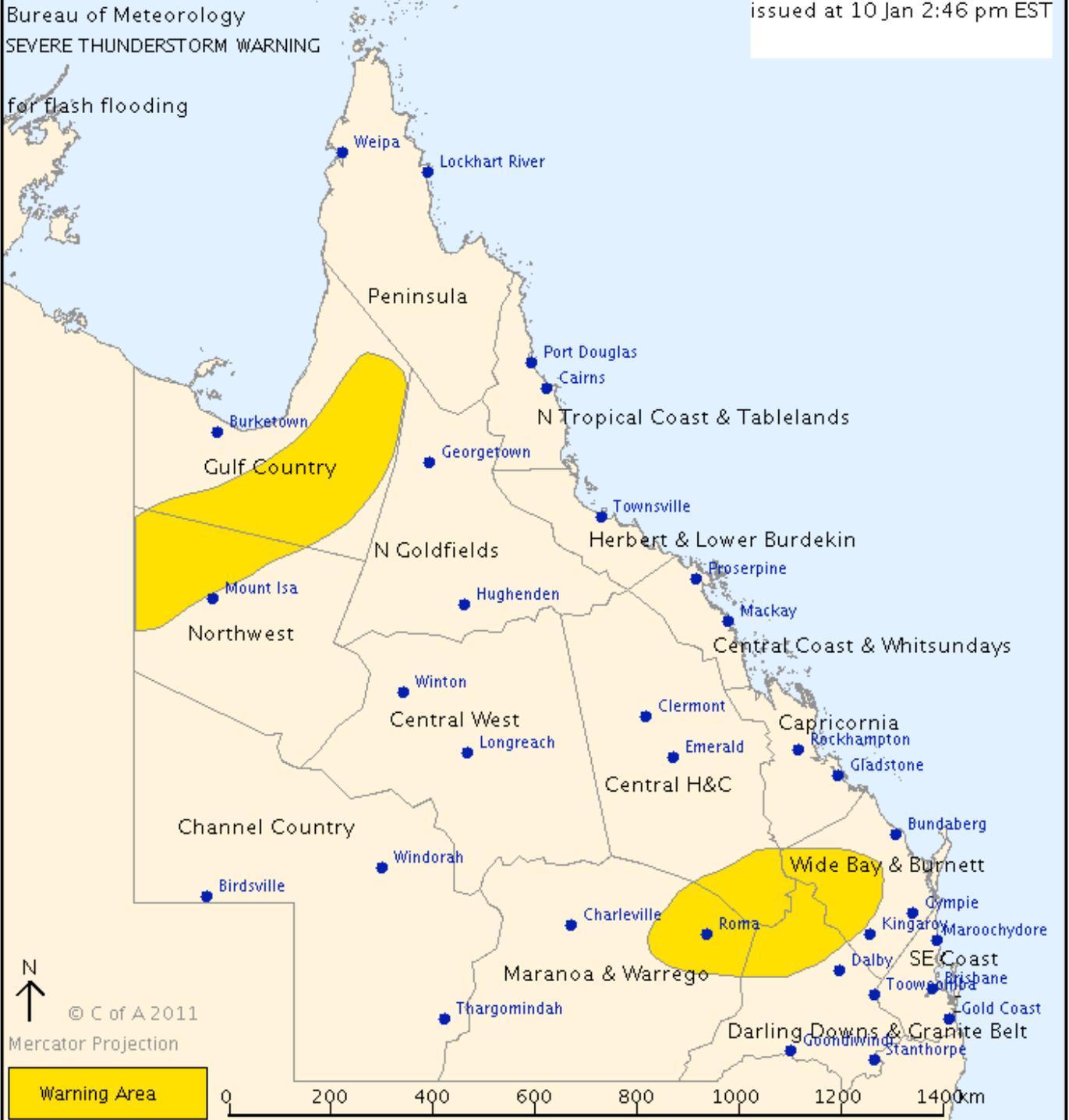
Issued at 2:46 pm Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Camooweal, Croydon, Roma and Taroom.

55mm of rainfall was recorded in an hour at Normanton Ap at 12:20pm.



issued at 10 Jan 2:46 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:50 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING**

For people in parts of the Gulf Country, Northwest, Central Highlands and Coalfields, Wide Bay and Burnett, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

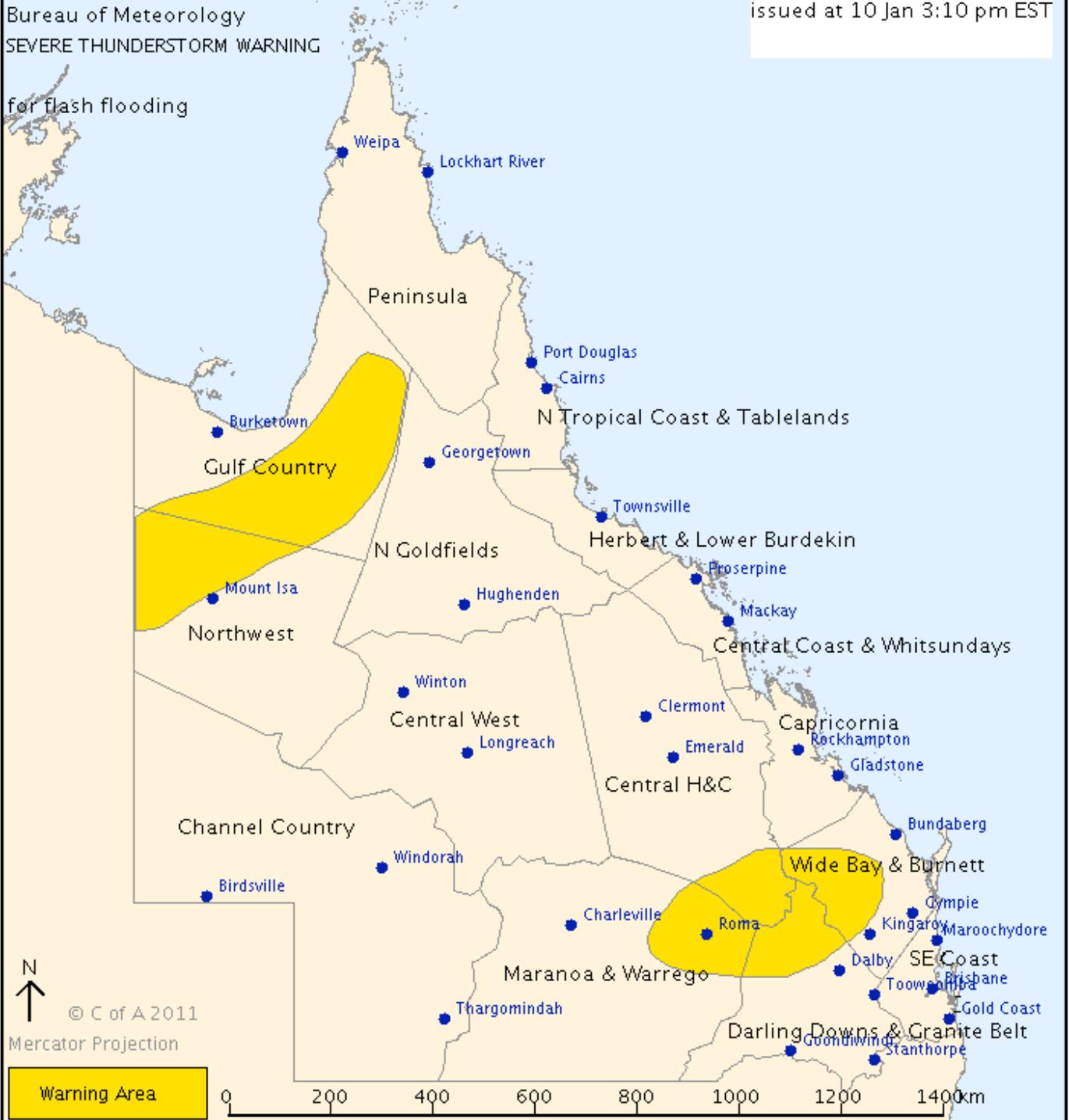
Issued at 3:10 pm Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Camooweal, Croydon, Roma and Taroom.

A separate Severe Weather Warning is also current for rain and isolated thunderstorms affecting Southeast Coast, southern parts of the Wide Bay and Burnett and eastern parts of the Darling Downs and Granite Belt districts.



issued at 10 Jan 3:10 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:10 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Gulf Country,

Northern Goldfields and Upper Flinders and

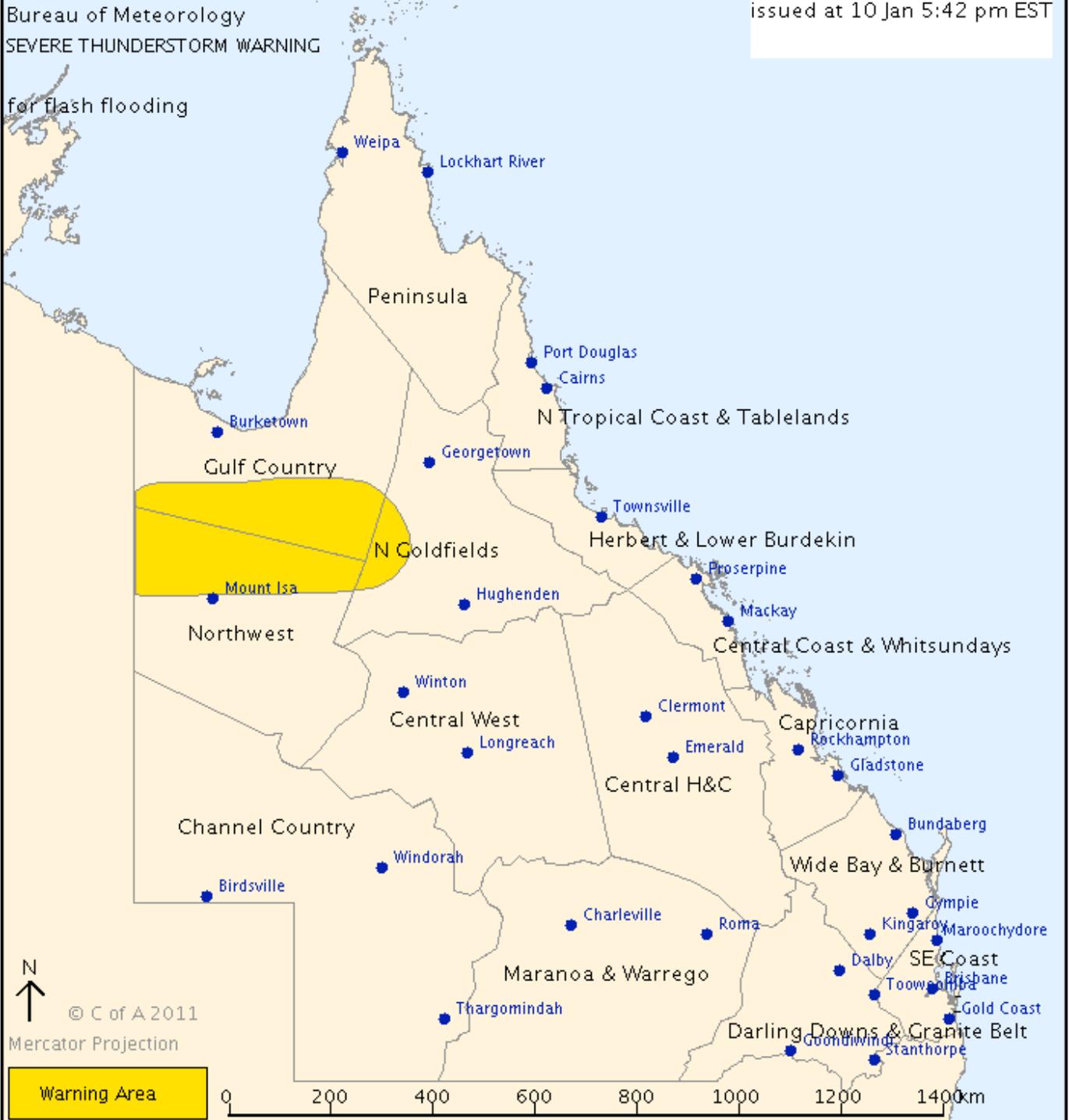
Northwest Forecast Districts.

Issued at 5:42 pm Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Camooweal, Kamilaroi Station and Riversleigh Station.



issued at 10 Jan 5:42 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:45 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Gulf Country,

Northern Goldfields and Upper Flinders and

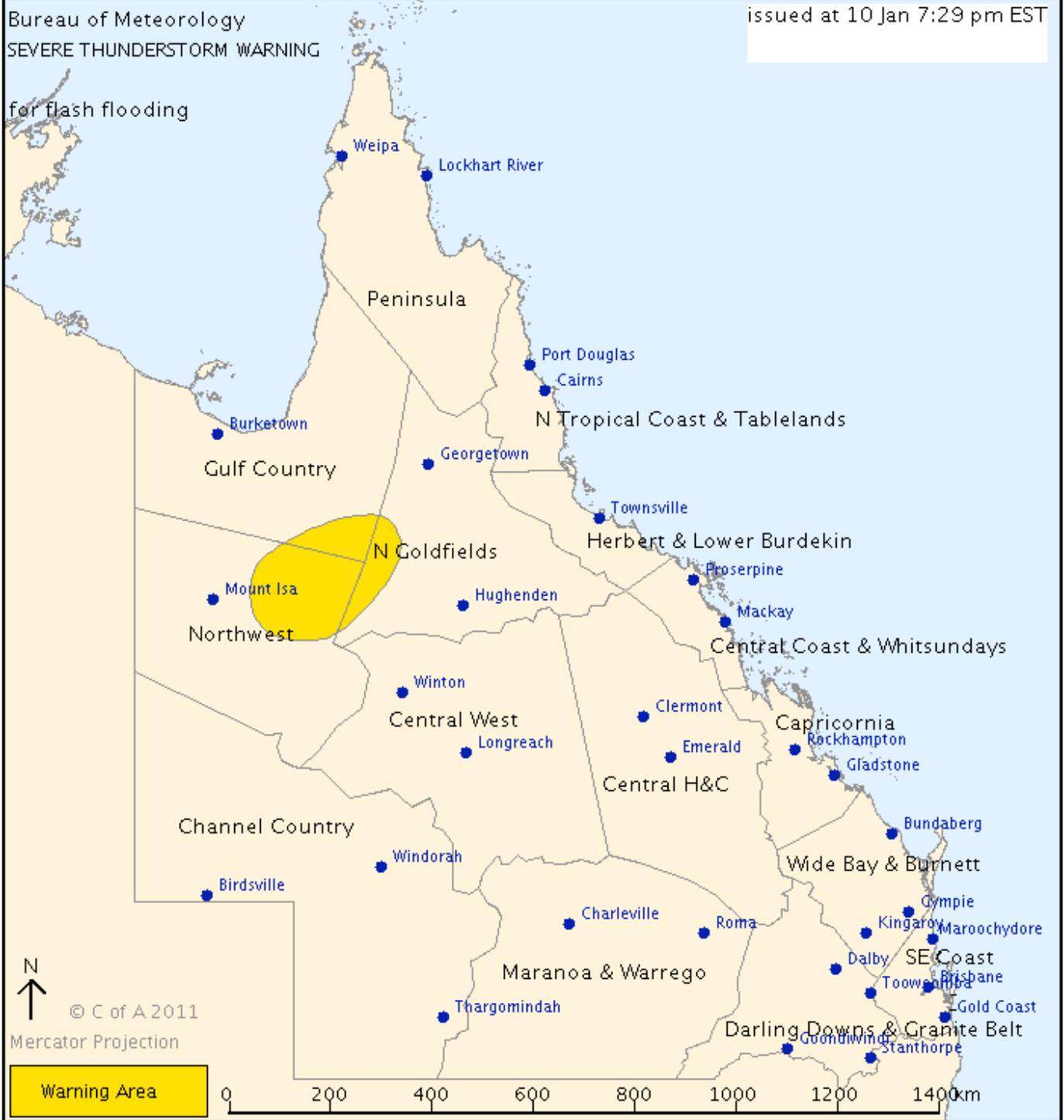
Northwest Forecast Districts.

Issued at 7:29 pm Monday, 10 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Cloncurry, Julia Creek and Mckinlay Roadhouse.



issued at 10 Jan 7:29 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:30 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

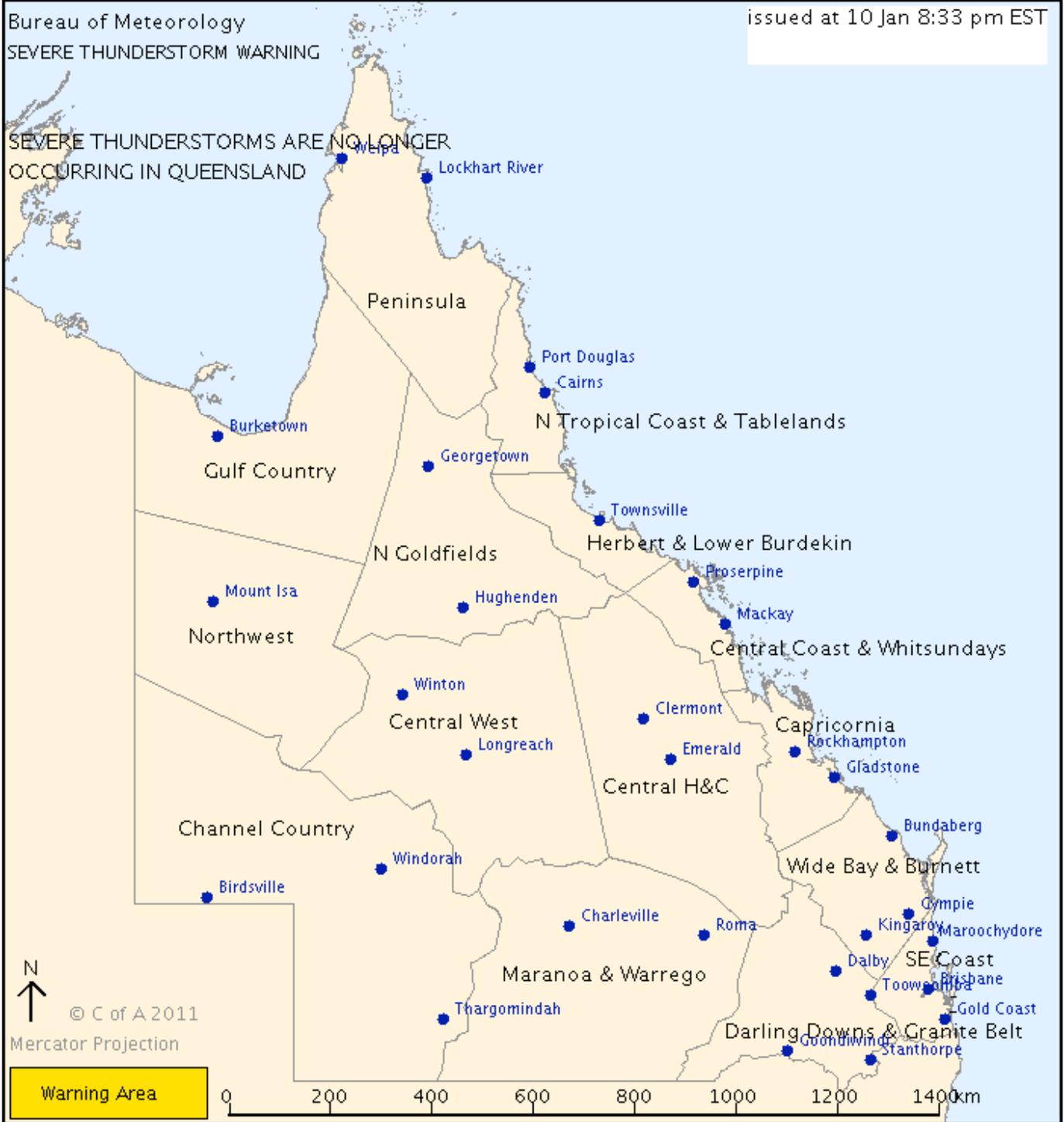
Issued at 8:33 pm Monday, 10 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 10 Jan 8:33 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Northern Tropical Coast and Tablelands Forecast District.

Issued at 12:49 pm Tuesday, 11 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Cairns, Innisfail, Cardwell, Tully and Babinda.

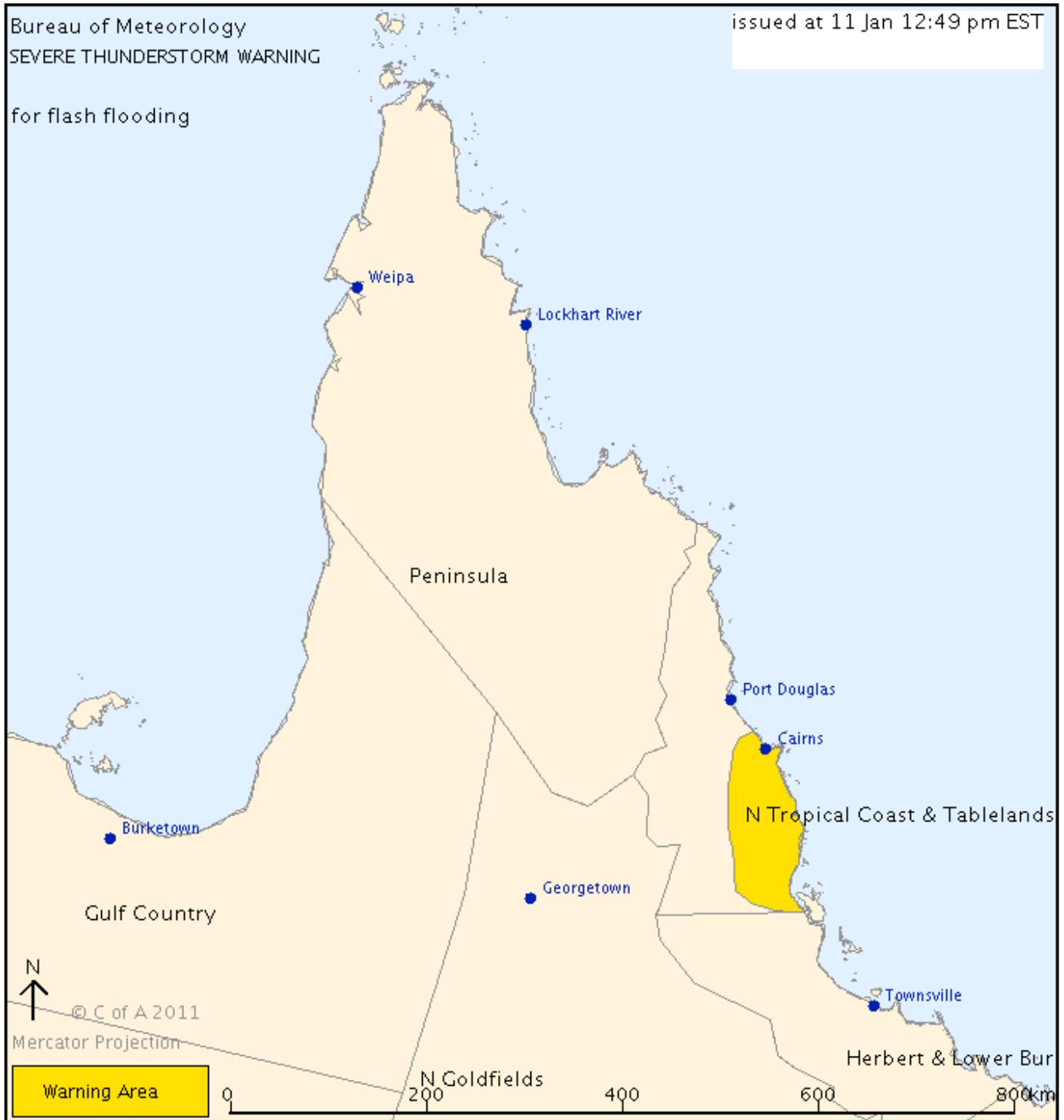


issued at 11 Jan 12:49 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:50 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING**

For people in parts of the

Northern Tropical Coast and Tablelands and

Herbert and Lower Burdekin Forecast Districts.

Issued at 1:46 pm Tuesday, 11 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Cairns, Ingham, Innisfail, Cardwell, Tully and Babinda.

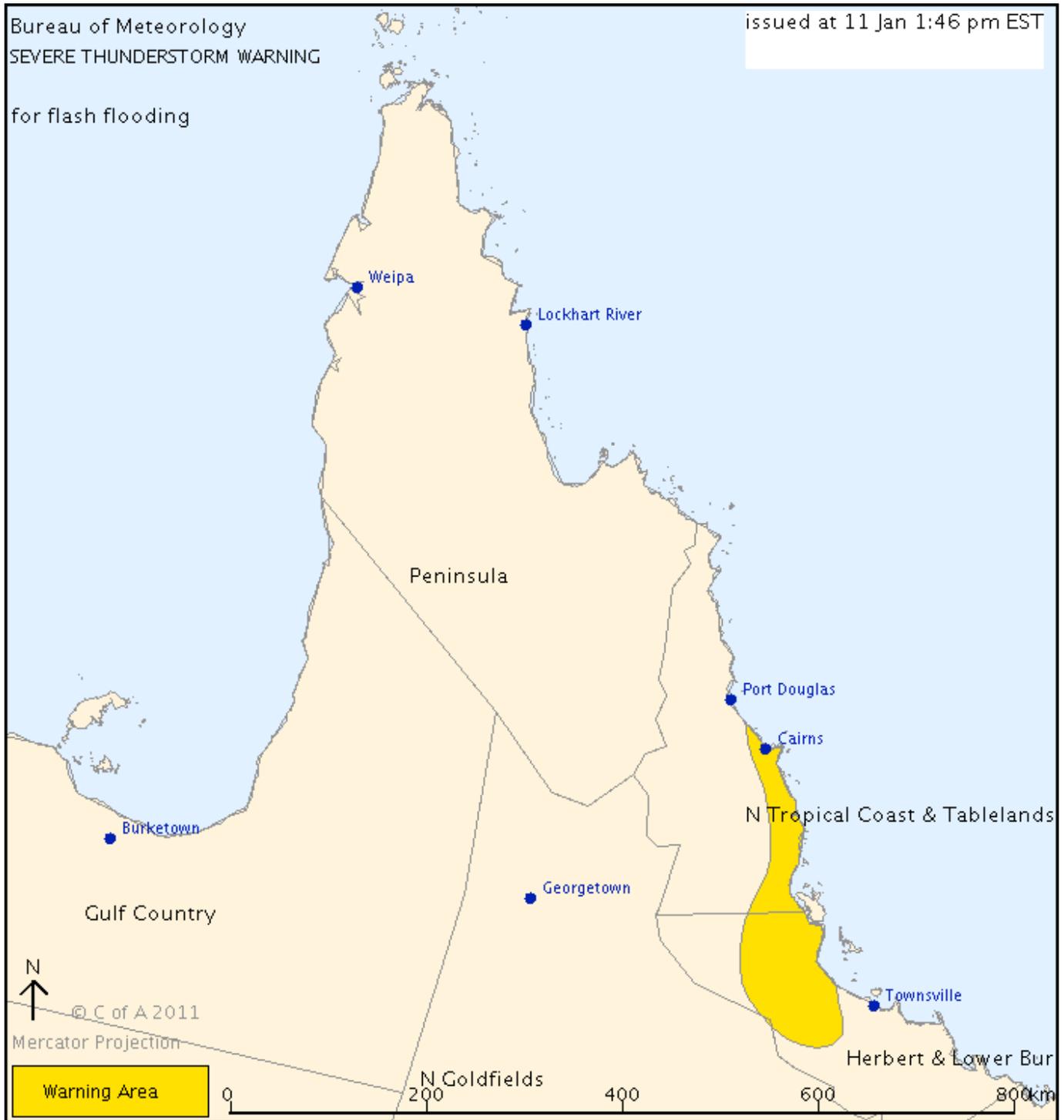


issued at 11 Jan 1:46 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:50 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

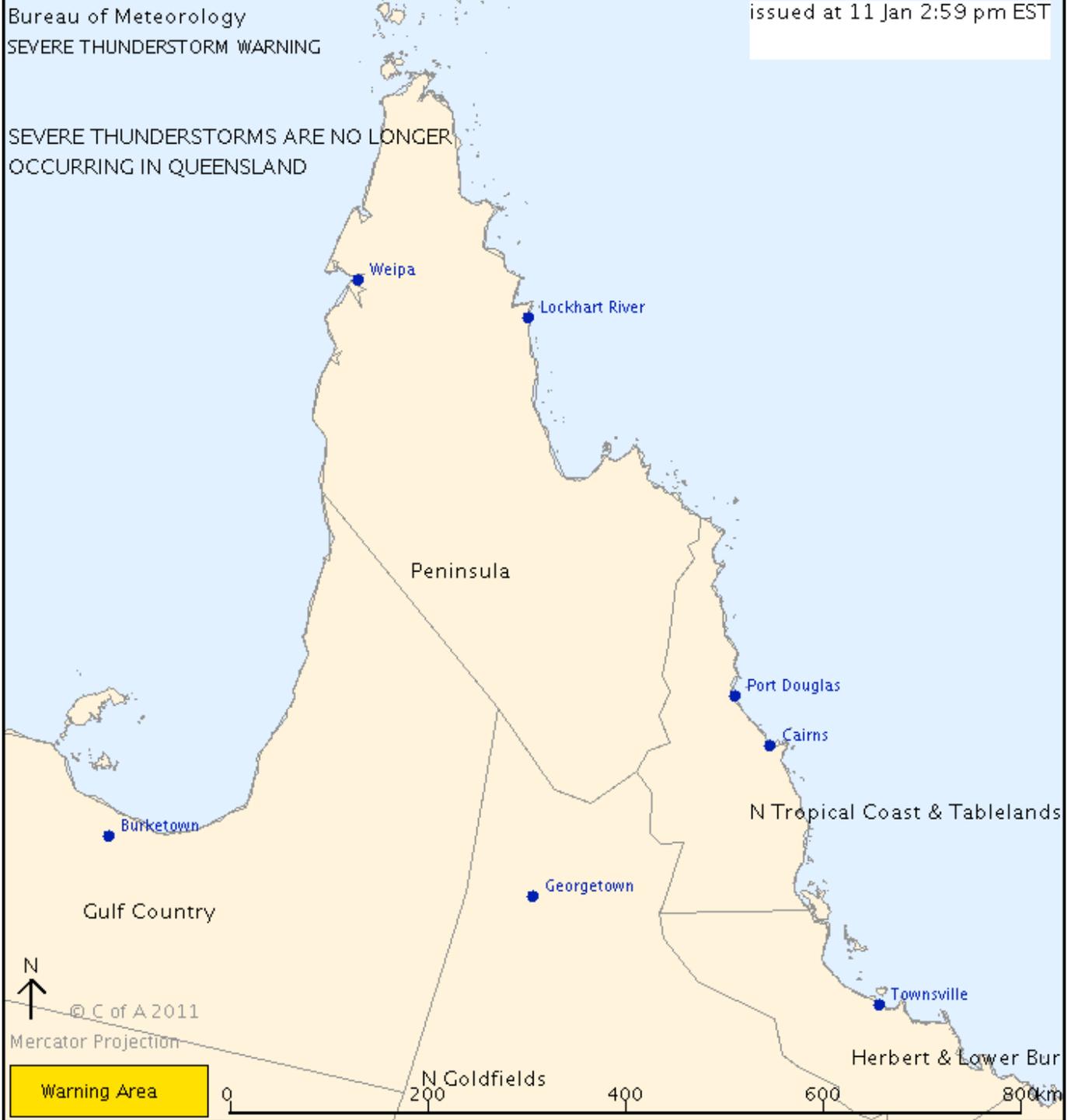
Issued at 2:59 pm Tuesday, 11 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 11 Jan 2:59 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Northwest,

Central West,

Channel Country and

Maranoa and Warrego Forecast Districts.

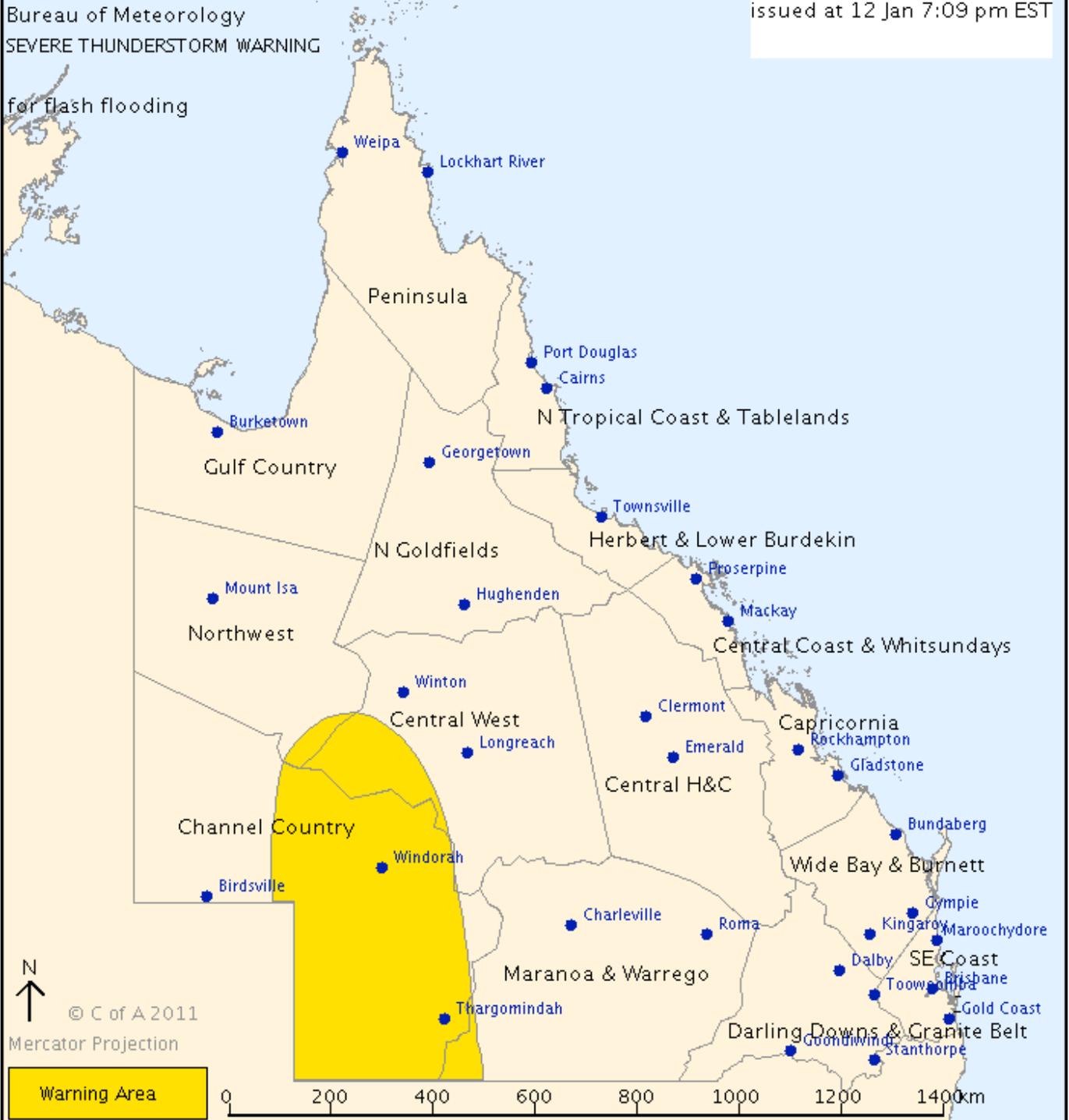
Issued at 7:09 pm Wednesday, 12 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Thargomindah, Windorah, Bulloo Downs, Eromanga, Stonehenge and Davenport Downs Station.

92mm of rainfall recorded near Windorah since this afternoon.



issued at 12 Jan 7:09 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:10 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

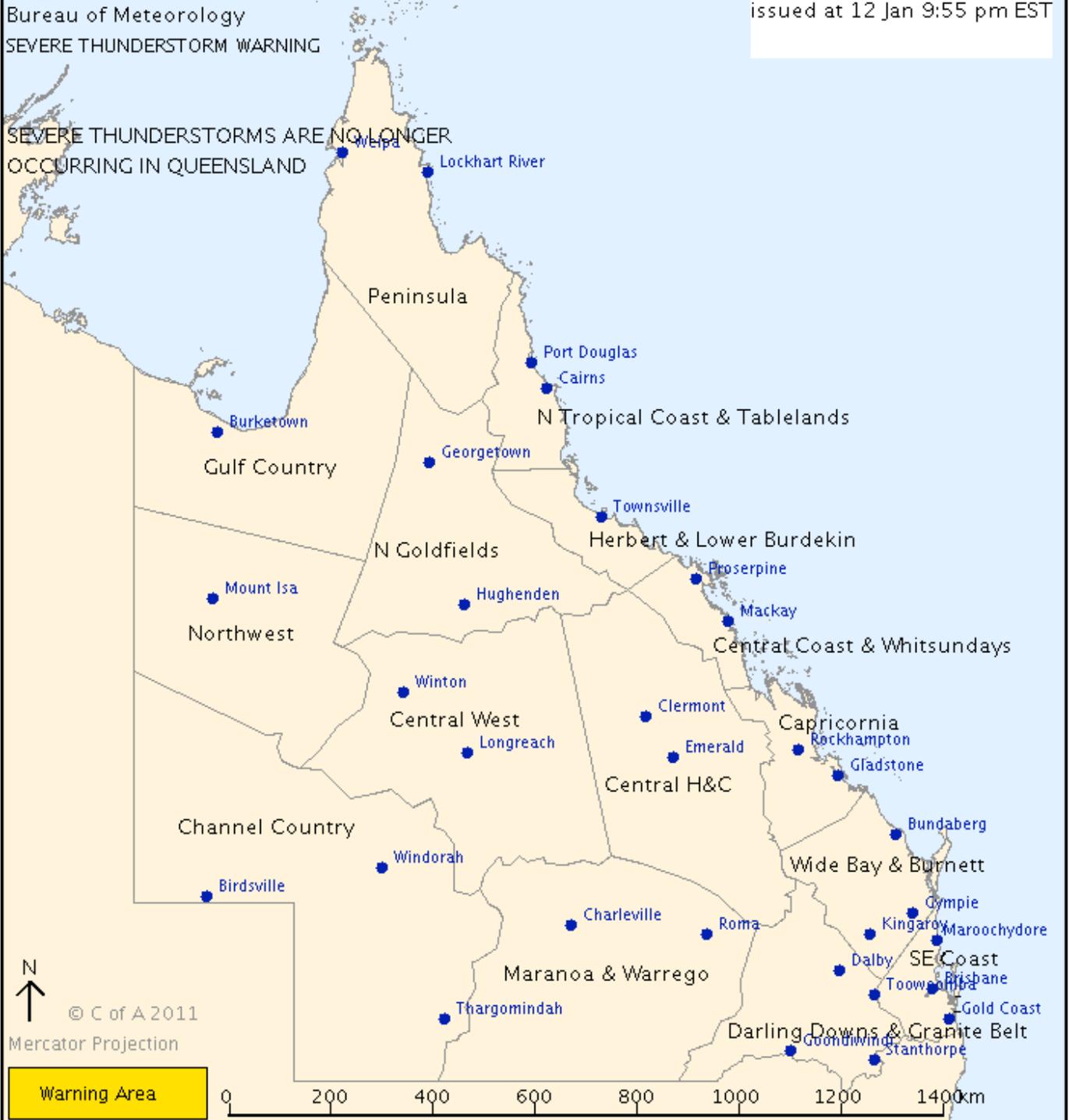
Issued at 9:55 pm Wednesday, 12 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 12 Jan 9:55 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

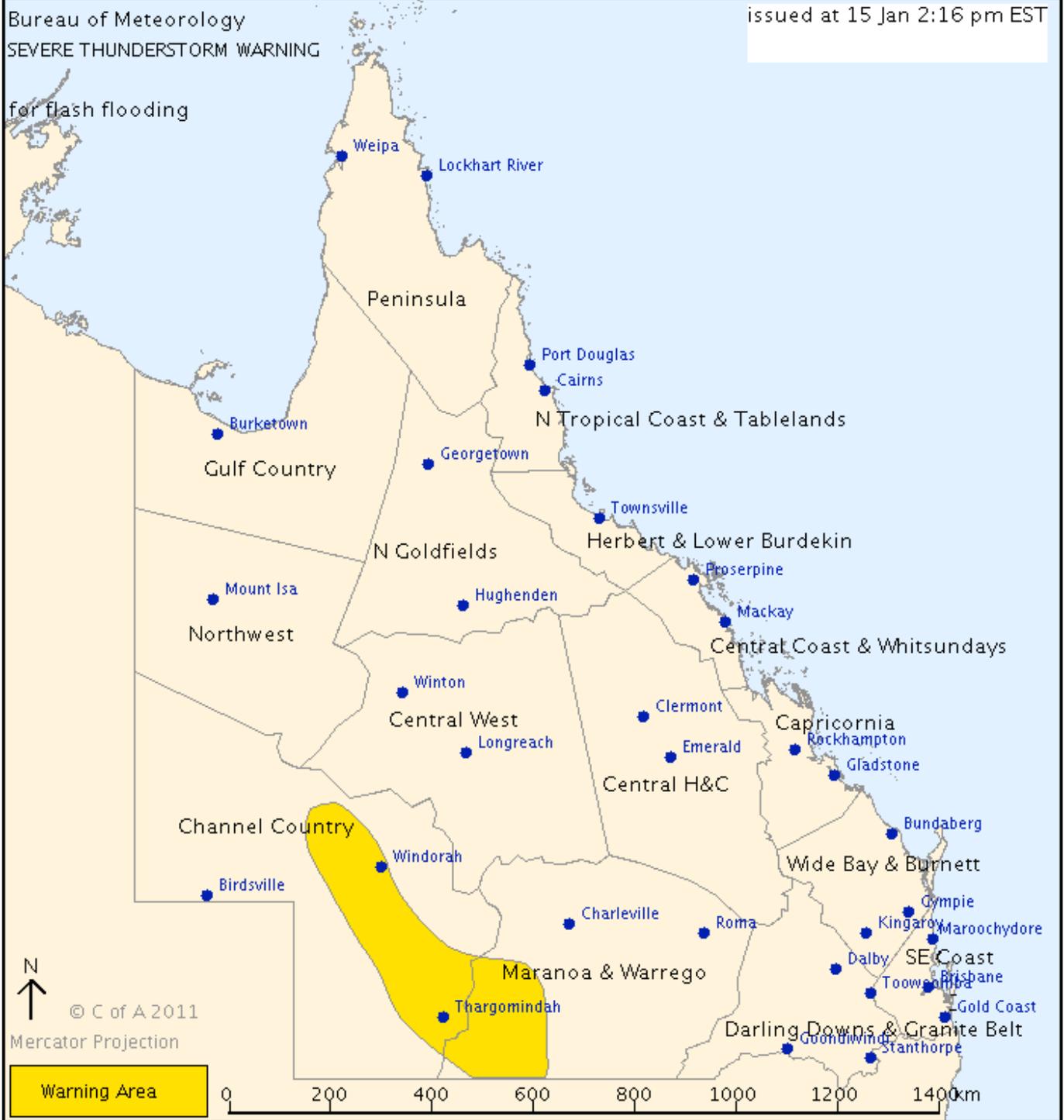
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Channel Country and  
Maranoa and Warrego Forecast Districts.

Issued at 2:16 pm Saturday, 15 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Thargomindah, Cunnamulla, Windorah, Eromanga, Mount Margaret and Mt Howitt Station.



issued at 15 Jan 2:16 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:20 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING**

For people in parts of the

Channel Country and

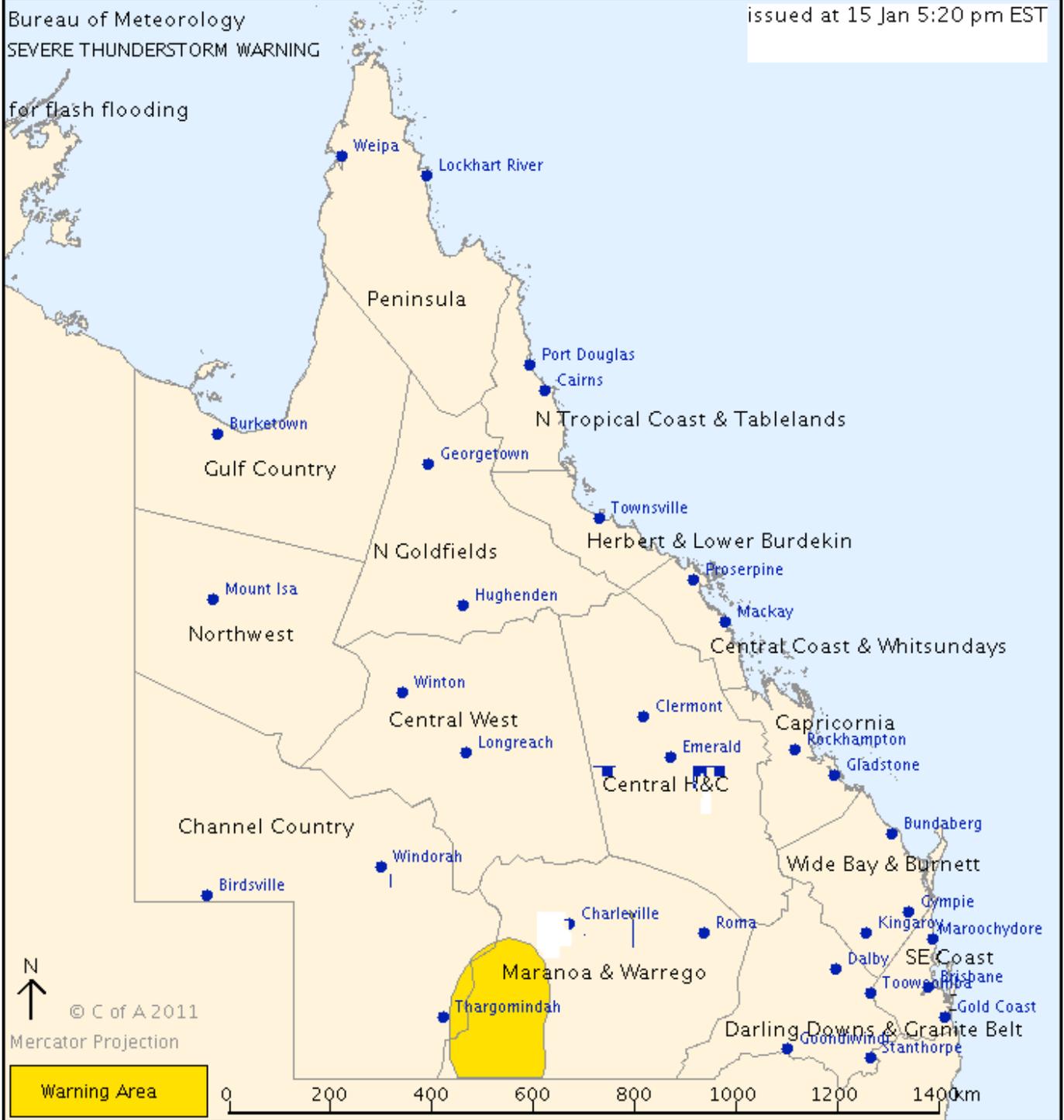
Maranoa and Warrego Forecast Districts.

Issued at 5:20 pm Saturday, 15 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Cunnamulla, Hungerford and Eulo.



issued at 15 Jan 5:20 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:20 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Northwest,

Channel Country and

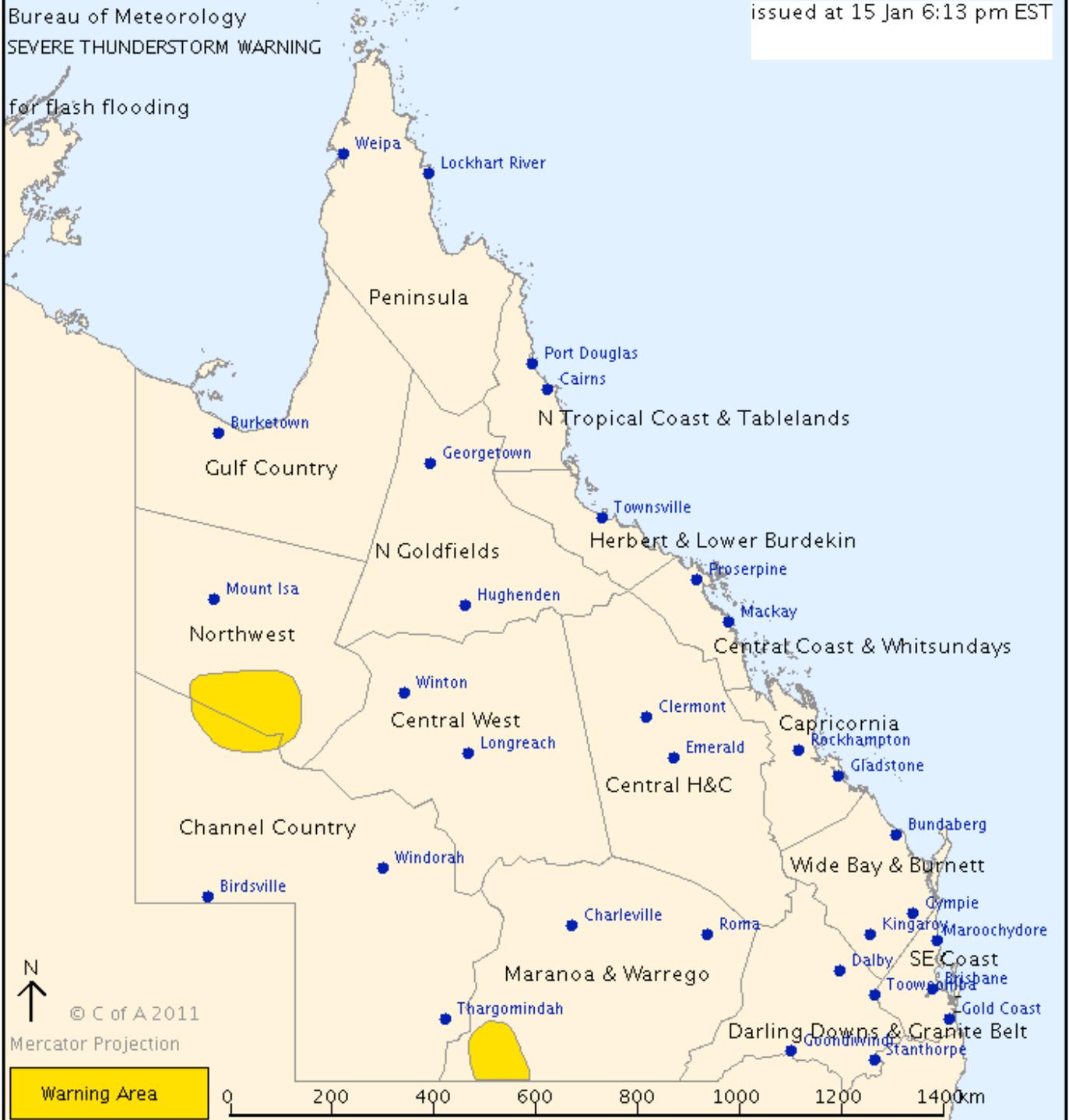
Maranoa and Warrego Forecast Districts.

Issued at 6:13 pm Saturday, 15 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Boulia, Hungerford and Eulo.



issued at 15 Jan 6:13 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:15 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

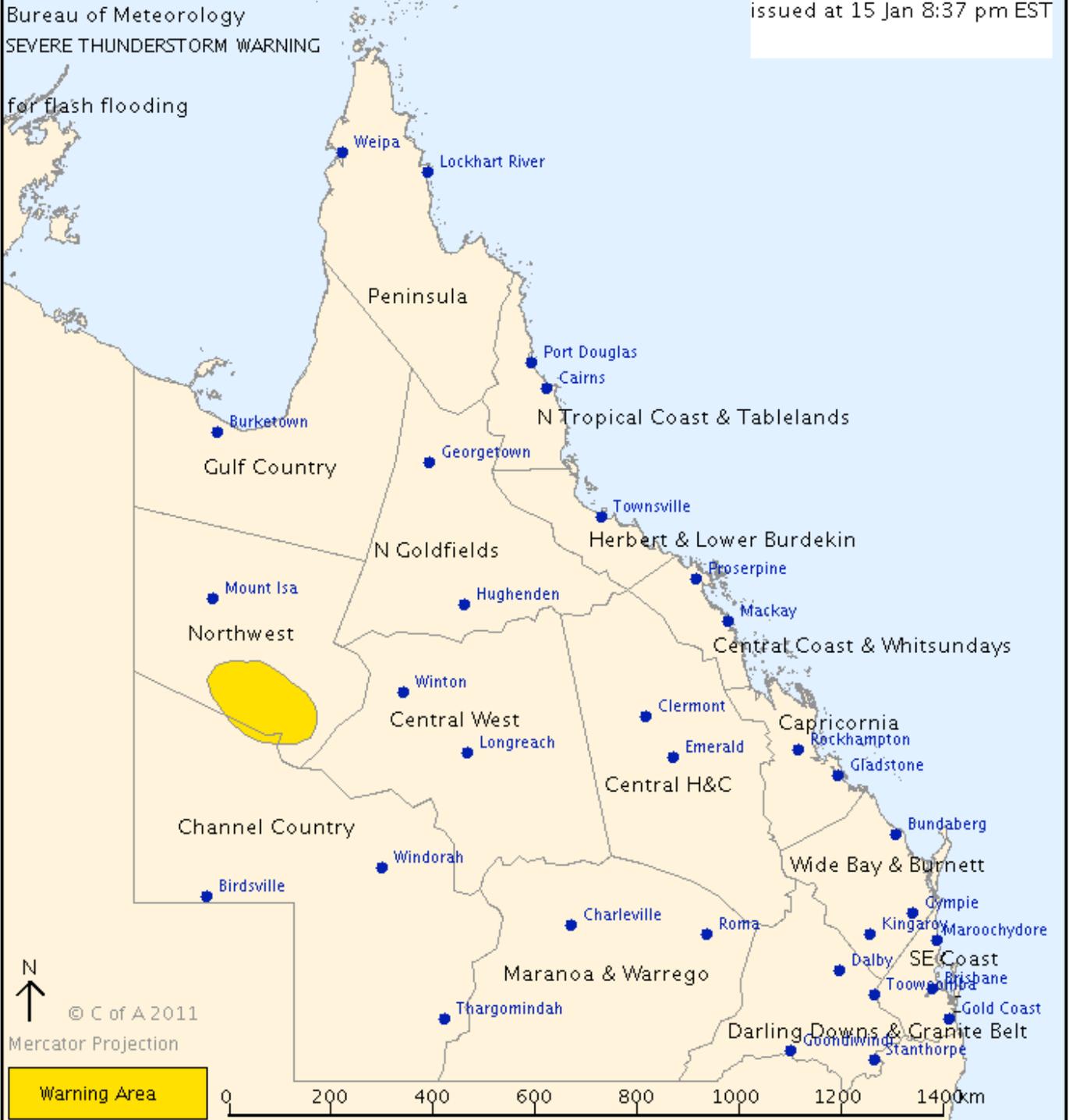
SEVERE THUNDERSTORM WARNING  
for FLASH FLOODING  
For people in parts of the  
Northwest Forecast District.

Issued at 8:37 pm Saturday, 15 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Boulia.



issued at 15 Jan 8:37 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:40 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

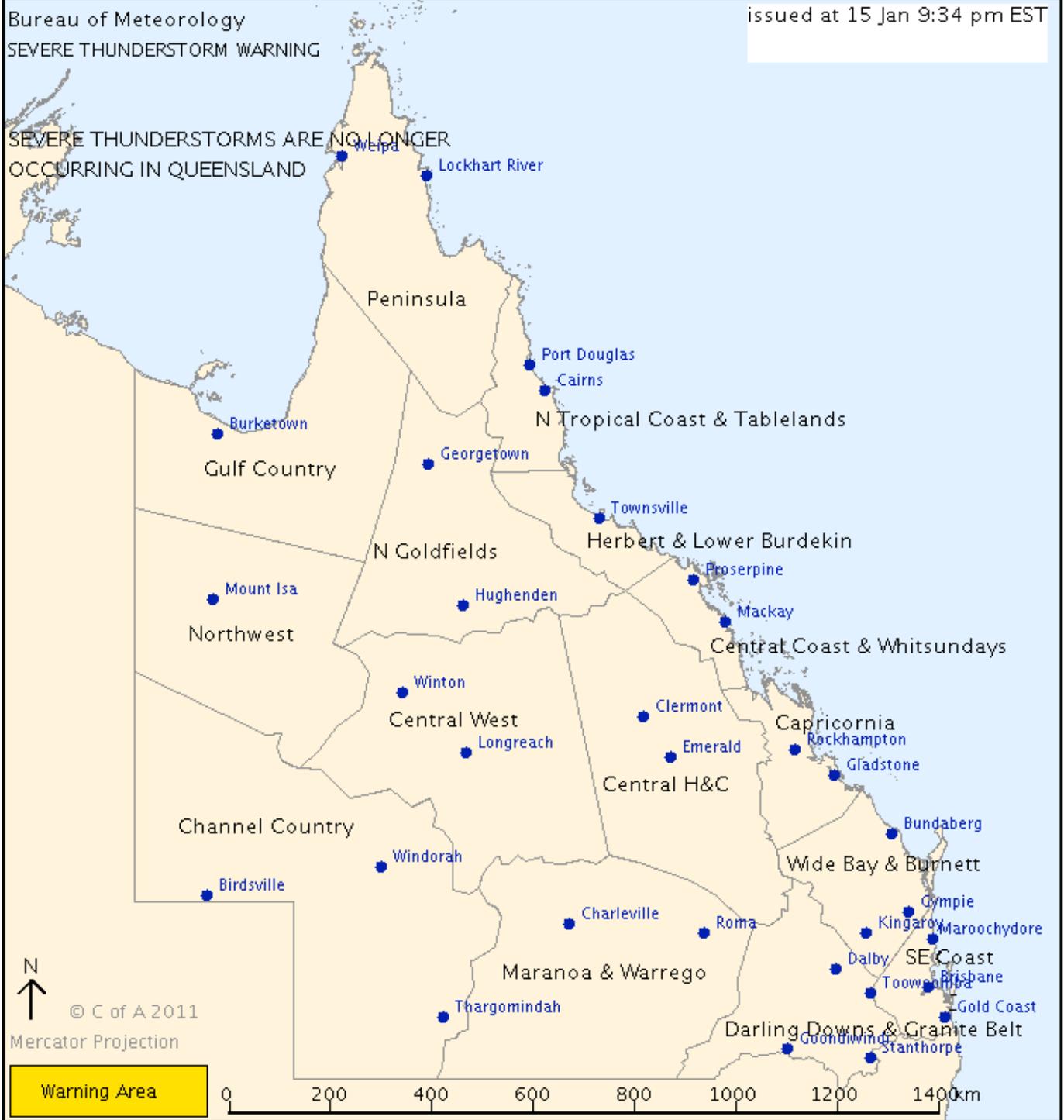
Issued at 9:34 pm Saturday, 15 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 15 Jan 9:34 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

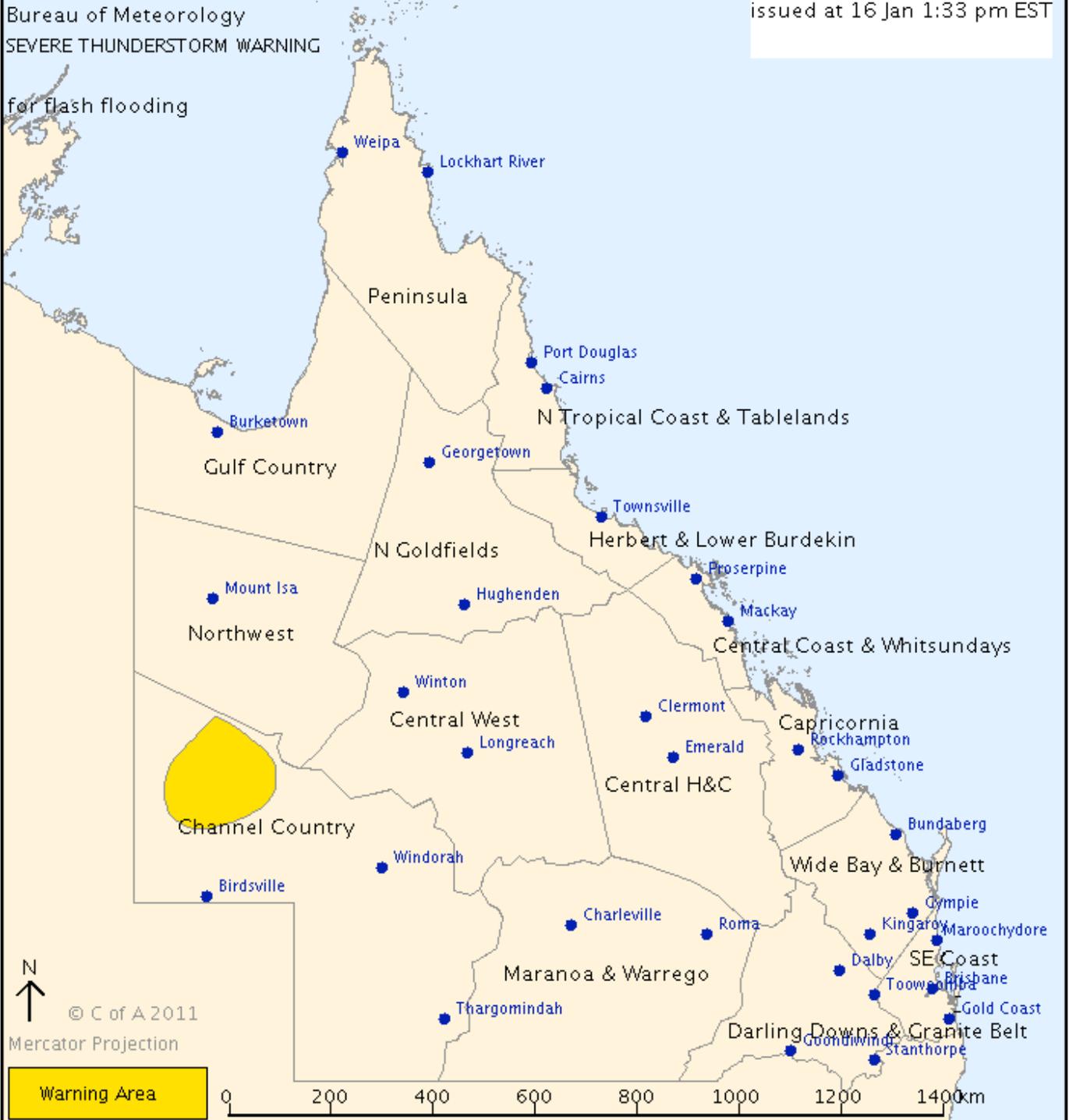
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Channel Country Forecast District.

Issued at 1:33 pm Sunday, 16 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Bedourie.



issued at 16 Jan 1:33 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:35 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Northwest and

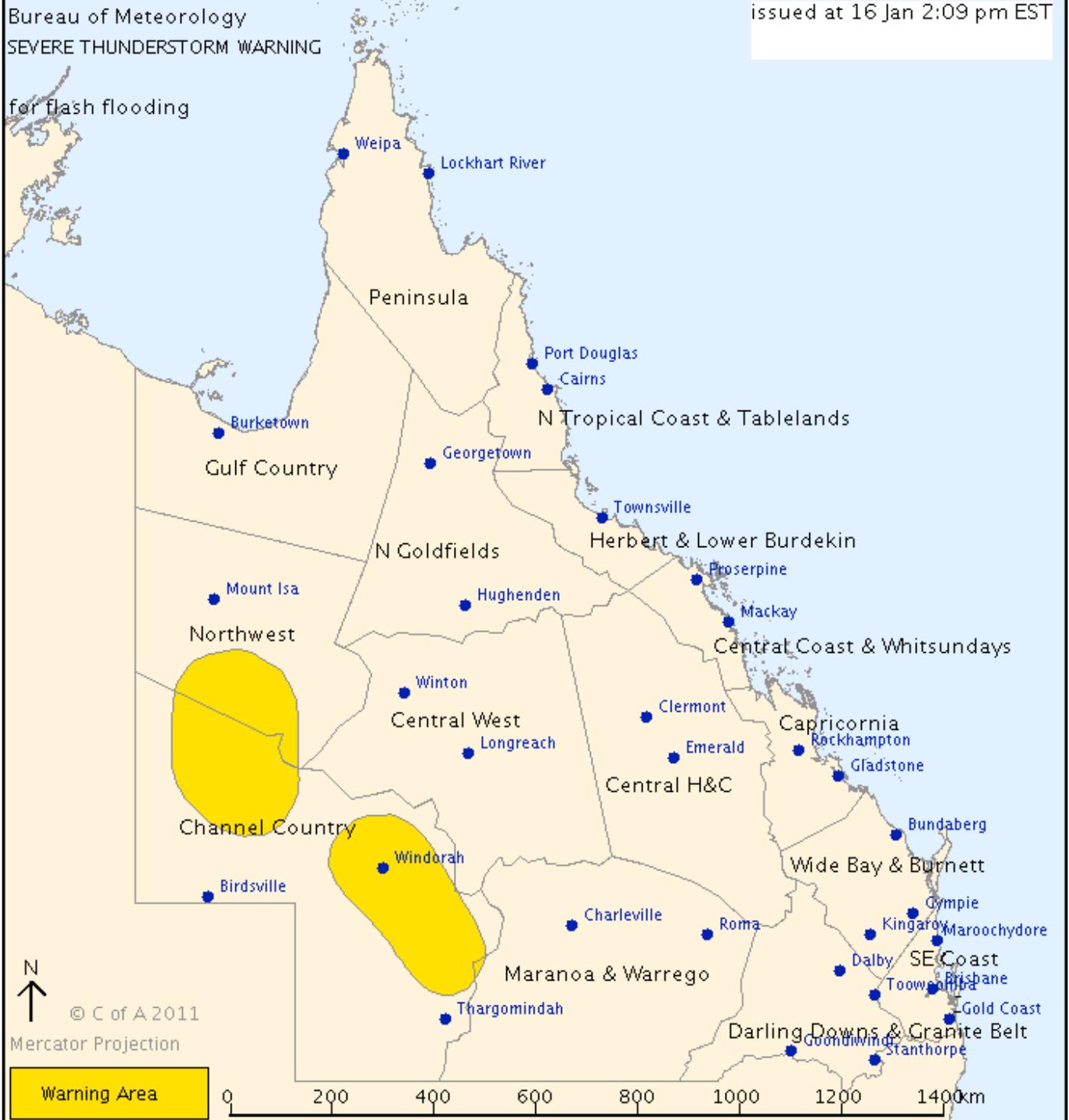
Channel Country Forecast Districts.

Issued at 2:09 pm Sunday, 16 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Bedourie, Boulia, Dajarra Hotel, Quilpie, Windorah and Eromanga.



issued at 16 Jan 2:09 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:10 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Northwest,

Central West and

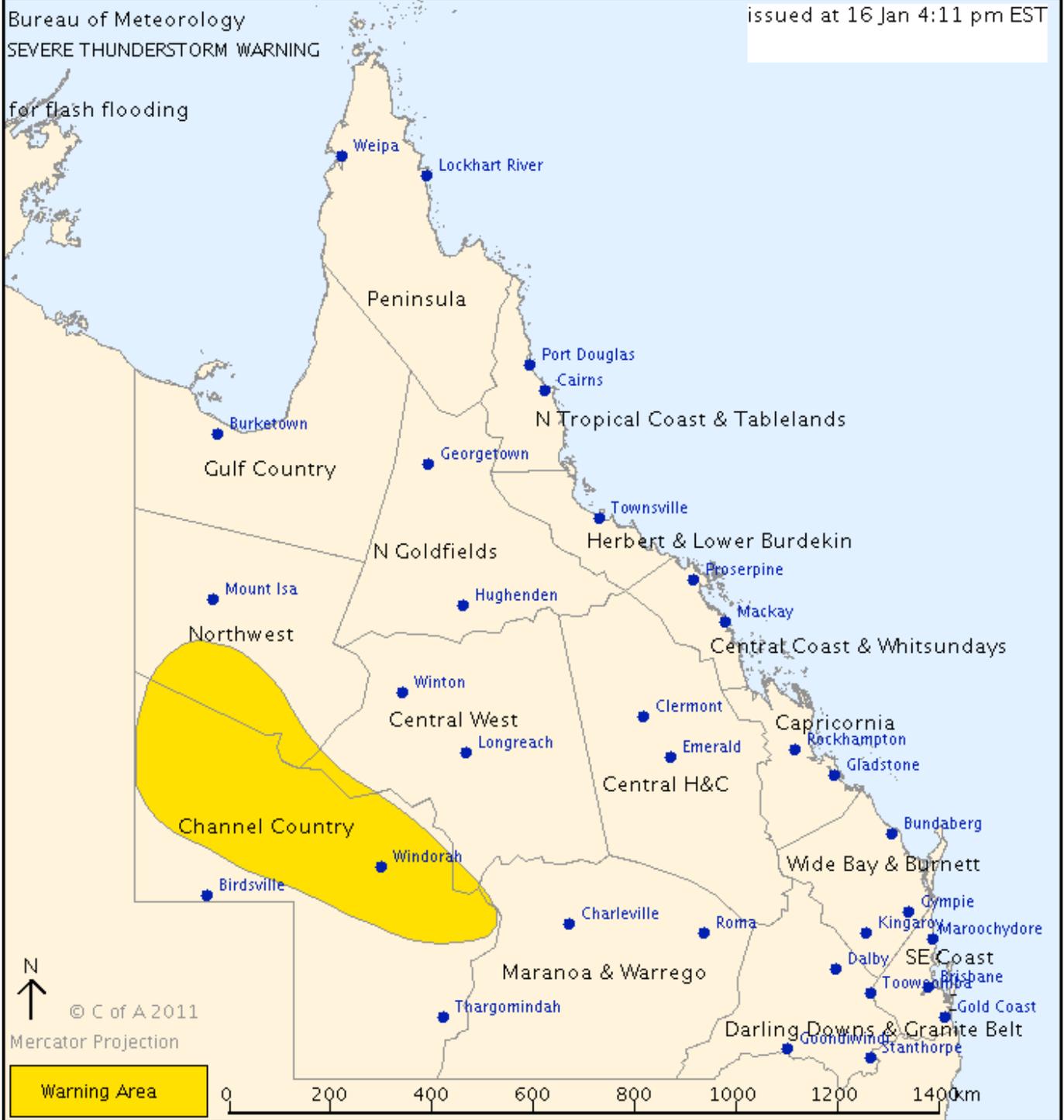
Channel Country Forecast Districts.

Issued at 4:11 pm Sunday, 16 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Quilpie, Windorah, Bedourie, Boulia, Dajarra Hotel and Eromanga.



issued at 16 Jan 4:11 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:15 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for FLASH FLOODING**

For people in parts of the

Northwest and

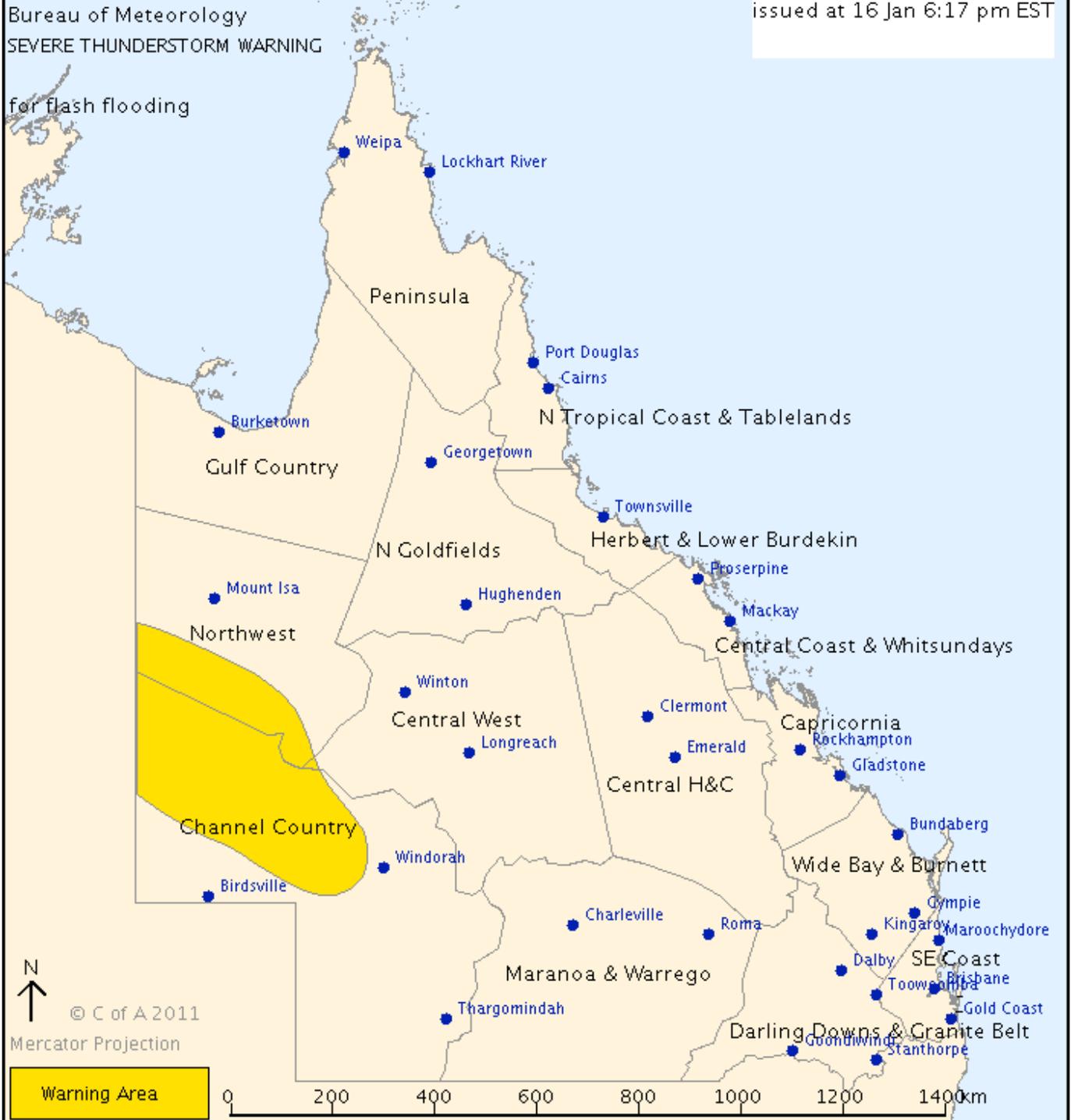
Channel Country Forecast Districts.

Issued at 6:17 pm Sunday, 16 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Bedourie, Boulia, Urandangie, Glenormiston and Davenport Downs Station.



issued at 16 Jan 6:17 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:20 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and FLASH FLOODING**

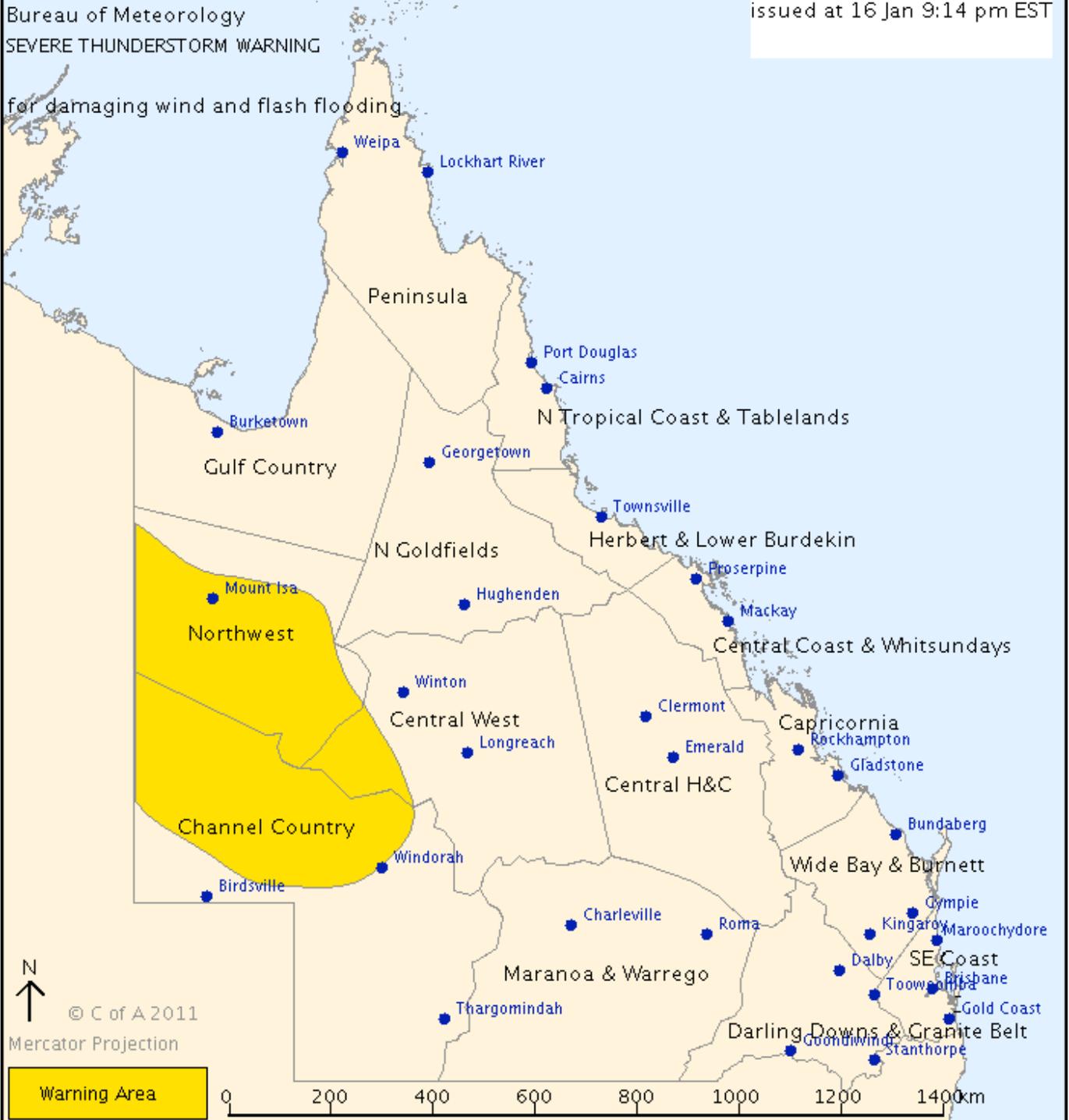
For people in the  
Northwest and parts of the  
Central West and  
Channel Country Forecast Districts.

Issued at 9:14 pm Sunday, 16 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Mount Isa, Cloncurry, Camooweal, Boulia, Dajarra Hotel and Urandangie.



issued at 16 Jan 9:14 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:15 am Monday.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

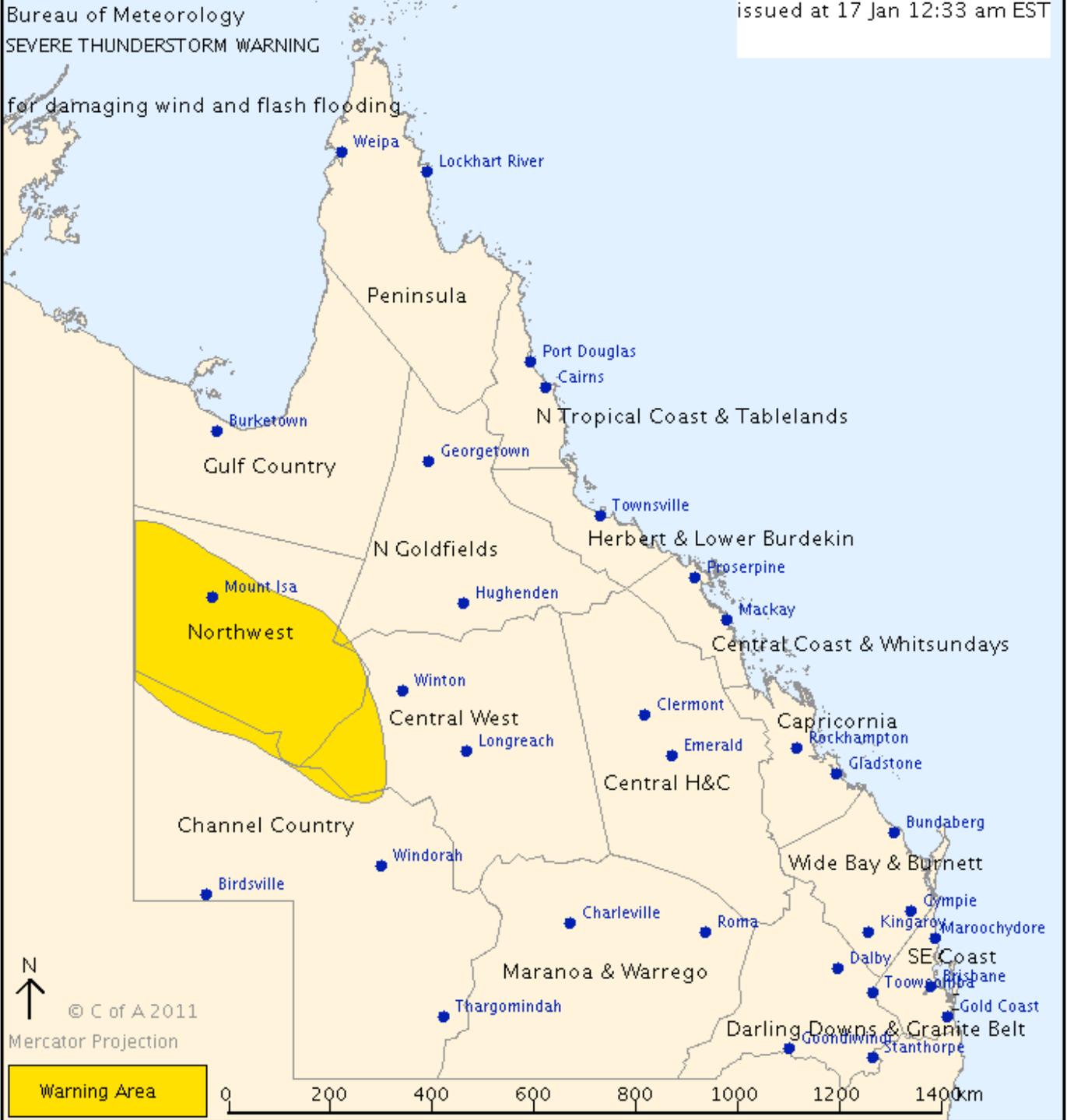
**SEVERE THUNDERSTORM WARNING**  
**for DAMAGING WIND and FLASH FLOODING**  
For people in the  
Northwest and parts of the  
Central West and  
Channel Country Forecast Districts.

Issued at 12:33 am Monday, 17 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Mount Isa, Cloncurry, Camooweal, Boulia, Dajarra Hotel and Urandangie.



issued at 17 Jan 12:33 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:35 am.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

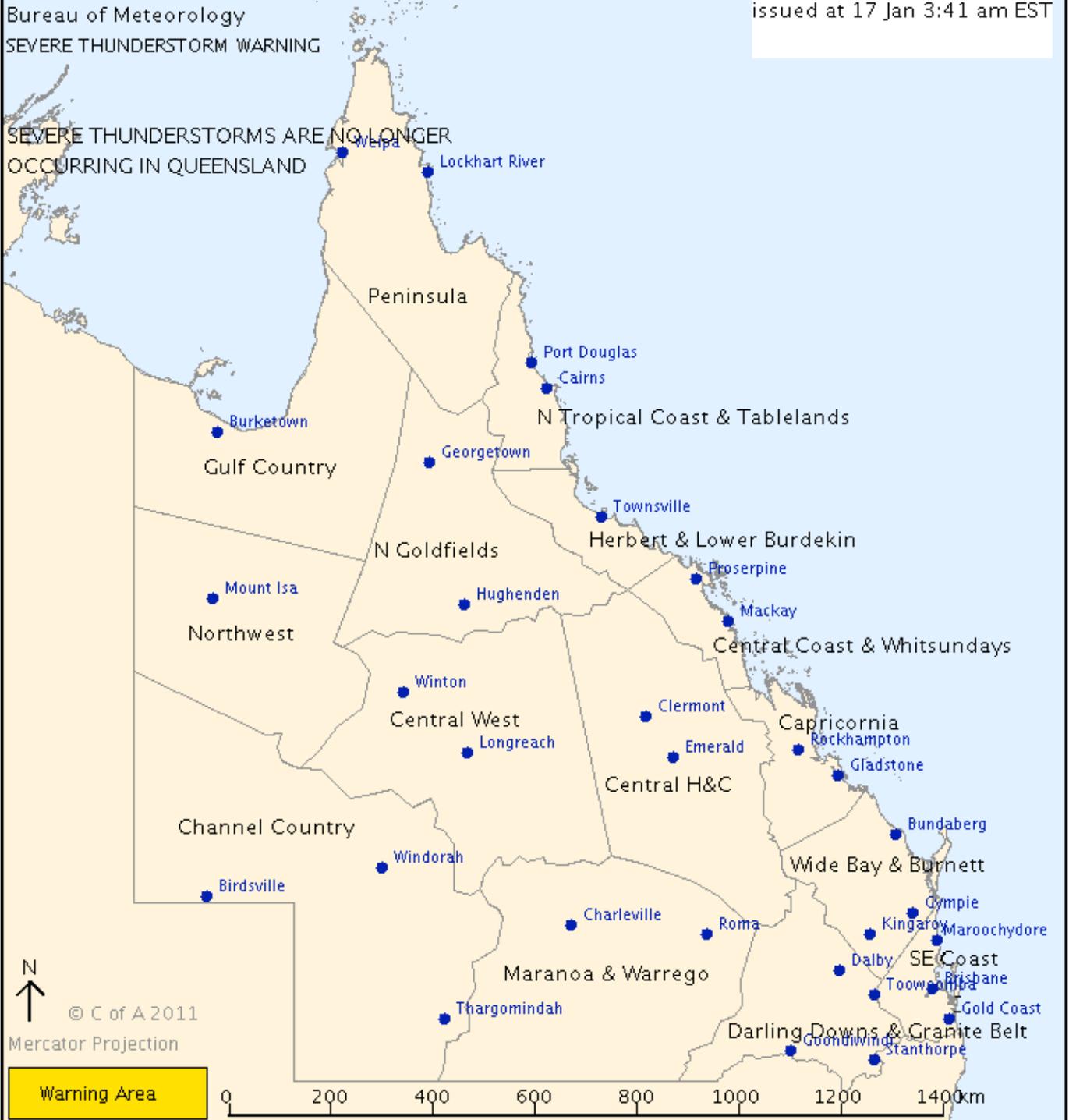
Issued at 3:41 am Monday, 17 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 17 Jan 3:41 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20038

Bureau of Meteorology

Queensland Regional Office

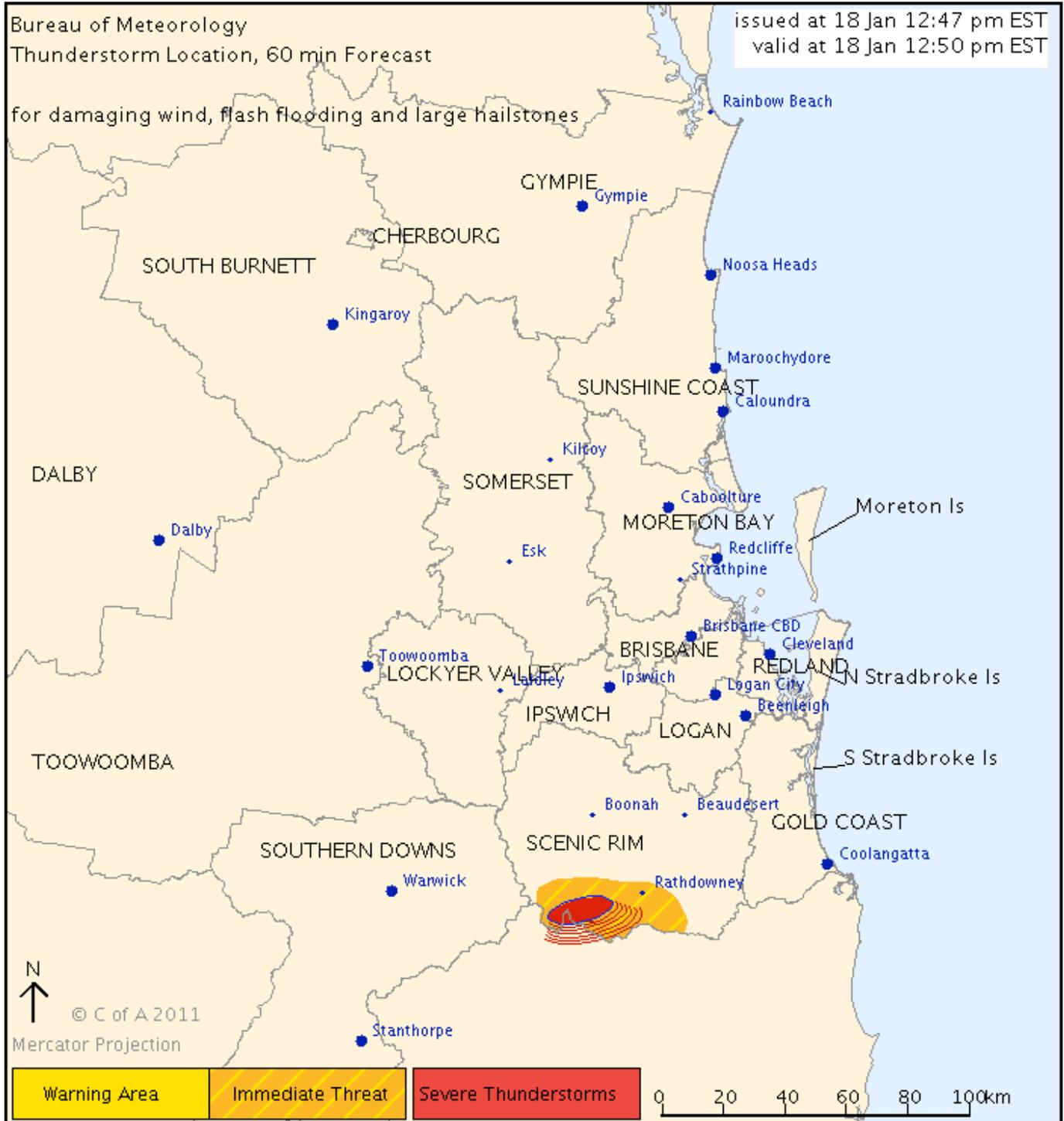
TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
SCENIC RIM Council Area.

Issued at 12:47 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 12:50 pm, severe thunderstorms were detected on weather radar near Mount Barney and the NSW border. These thunderstorms are slow moving. Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 1:50 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
**GOLD COAST CITY** and  
**SCENIC RIM** Council Areas.

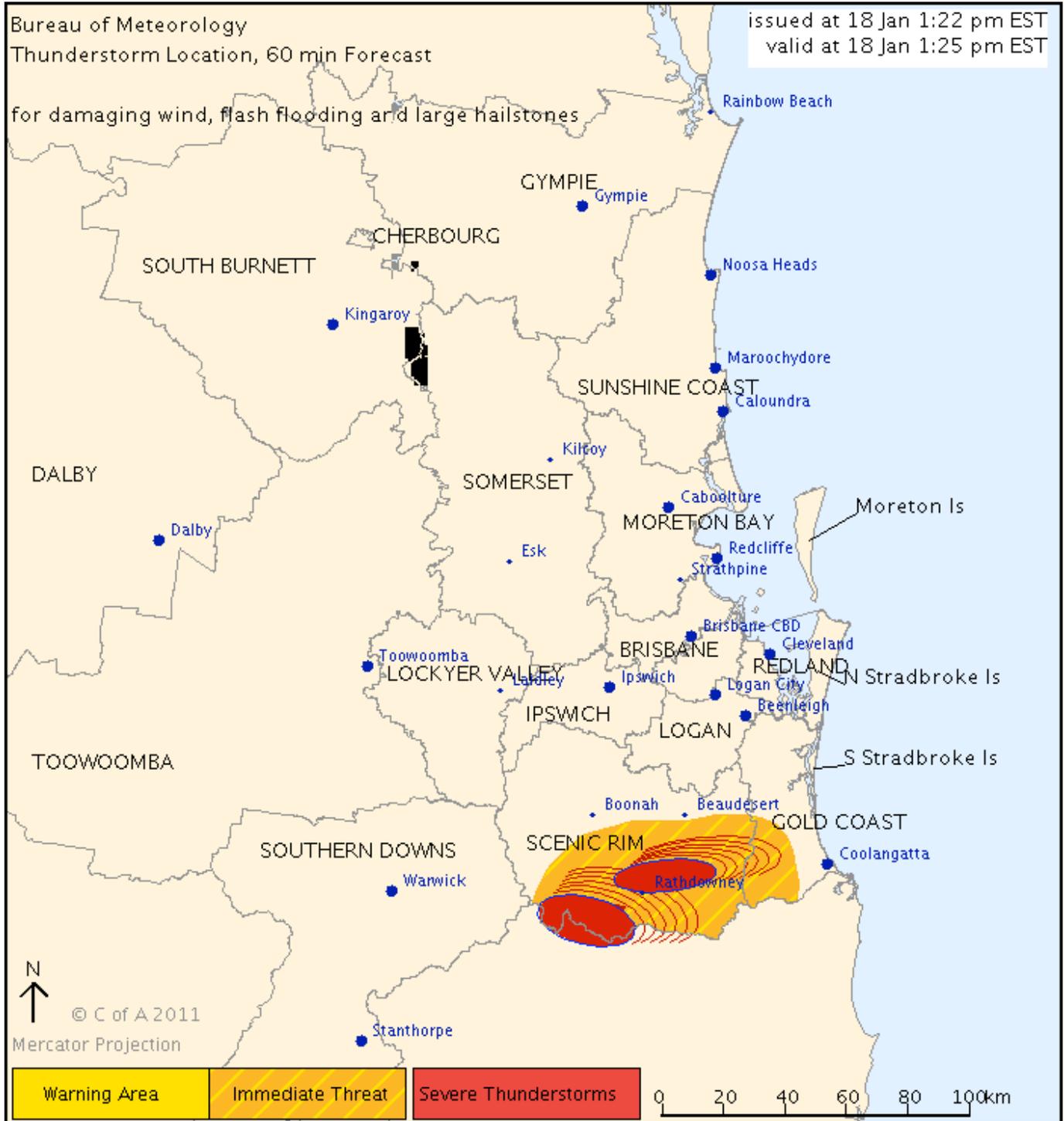
Issued at 1:22 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 1:25 pm, severe thunderstorms were detected on weather radar near Mount Barney and Rathdowney.

These thunderstorms are moving towards the east.

They are forecast to affect Border Ranges National Park and the area south of Canungra by 1:55 pm and Numinbah Valley, Little Nerang Dam and Laravale by 2:25 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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The next warning is due to be issued by 2:20 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

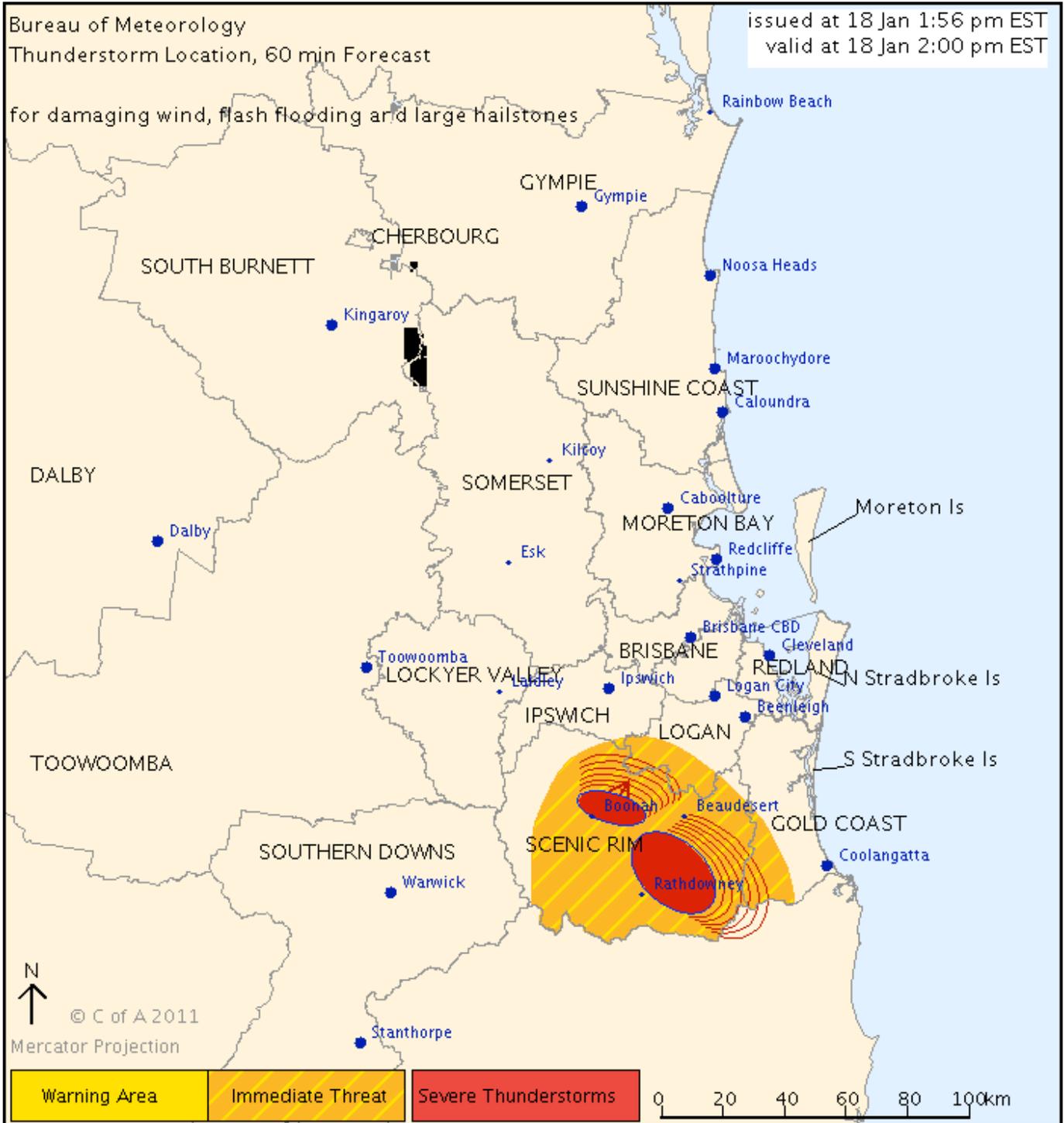
**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in the  
SCENIC RIM and parts of the  
GOLD COAST CITY and  
LOGAN CITY Council Areas.

Issued at 1:56 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 2:00 pm, severe thunderstorms were detected on weather radar near Boonah, the area between Boonah and Beaudesert and Laravale. These thunderstorms are slow moving. They are forecast to affect the McPherson Range and the area south of Canungra by 2:30 pm and Beaudesert, Springbrook and Numinbah Valley by 3:00 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 3:00 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in the  
LOGAN CITY and parts of the  
GOLD COAST CITY,  
IPSWICH CITY and  
SCENIC RIM Council Areas.

Issued at 2:31 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 2:35 pm, severe thunderstorms were detected on weather radar near the area between Boonah and Beaudesert.

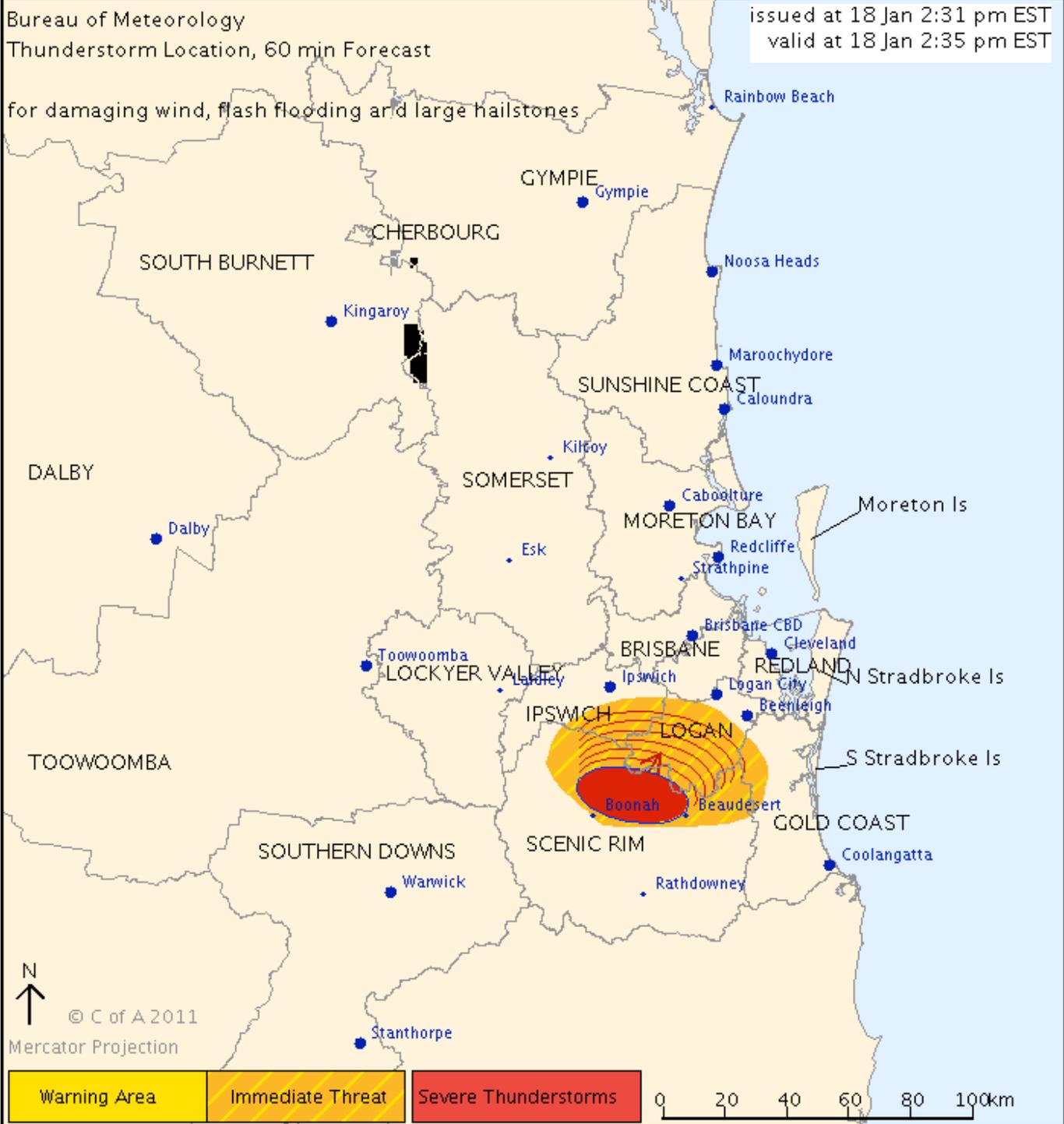
These thunderstorms are moving towards the northeast.

They are forecast to affect Jimboomba by 3:05 pm and Logan Village, Bundamba Lagoon and Greenbank by 3:35 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 18 Jan 2:31 pm EST  
valid at 18 Jan 2:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

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The next warning is due to be issued by 3:30 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOGAN CITY and parts of the BRISBANE CITY, GOLD COAST CITY,  
IPSWICH CITY and SCENIC RIM Council Areas.

Issued at 2:52 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 2:55 pm, very dangerous thunderstorms were detected on weather radar near the area between Boonah and Beaudesert and Peak Crossing.

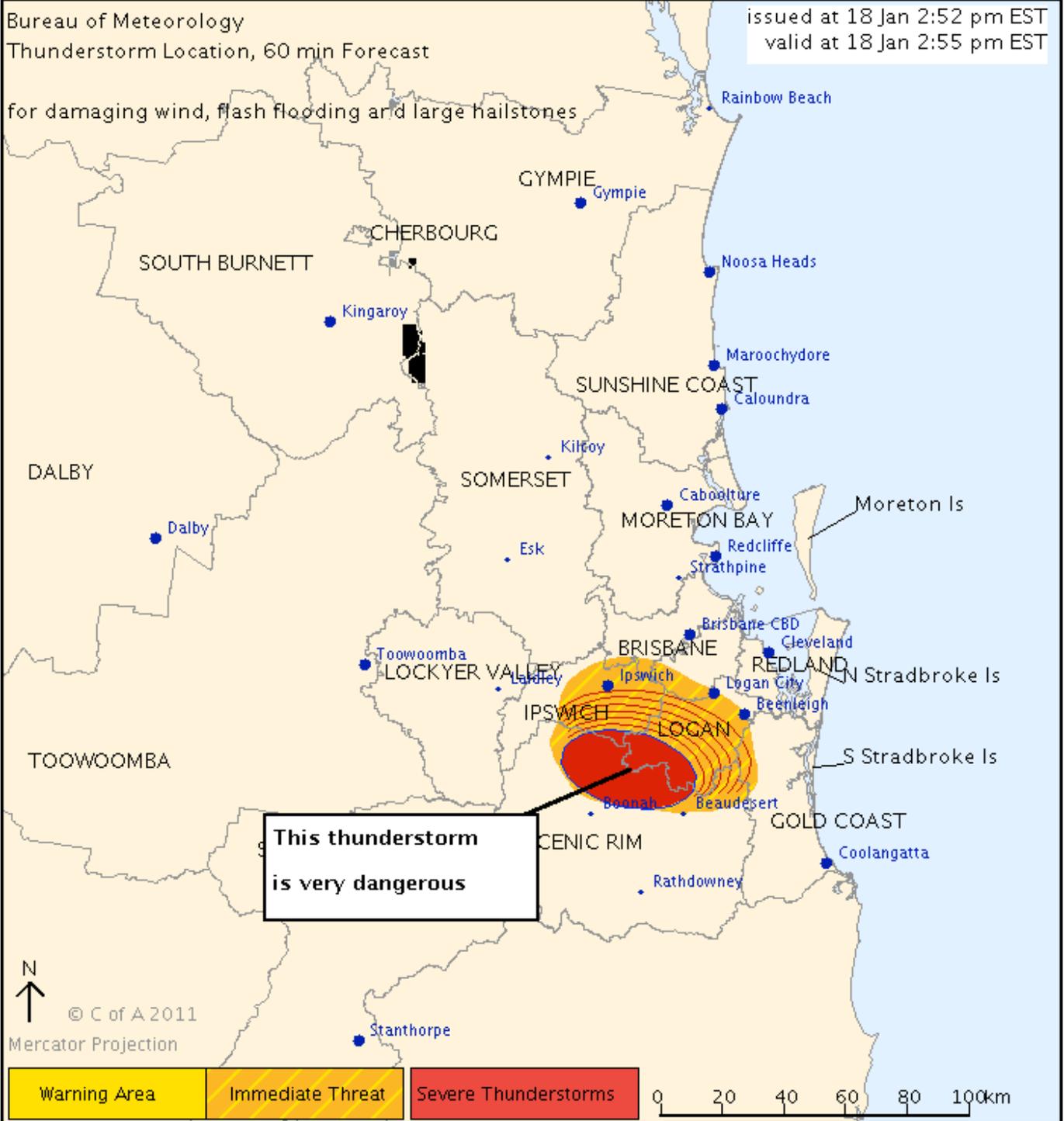
These thunderstorms are slow moving.

Very dangerous thunderstorms are forecast to affect Tamborine, Jimboomba and Bundamba Lagoon by 3:25 pm and Greenbank, Redbank Plains and Amberley by 3:55 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 18 Jan 2:52 pm EST  
valid at 18 Jan 2:55 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

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The next warning is due to be issued by 3:55 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOGAN CITY, IPSWICH CITY and parts of the BRISBANE CITY, GOLD COAST CITY, MORETON BAY, SOUTHERN DOWNS, SCENIC RIM, SOMERSET and REDLAND Council Areas.

Issued at 3:04 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 3:05 pm, very dangerous thunderstorms were detected on weather radar near Peak Crossing and Amberley.

These thunderstorms are moving towards the north to northeast.

Very dangerous thunderstorms are forecast to affect Ipswich and Bundamba Lagoon by 3:35 pm and Redbank Plains, Lake Manchester and Fernvale by 4:05 pm.

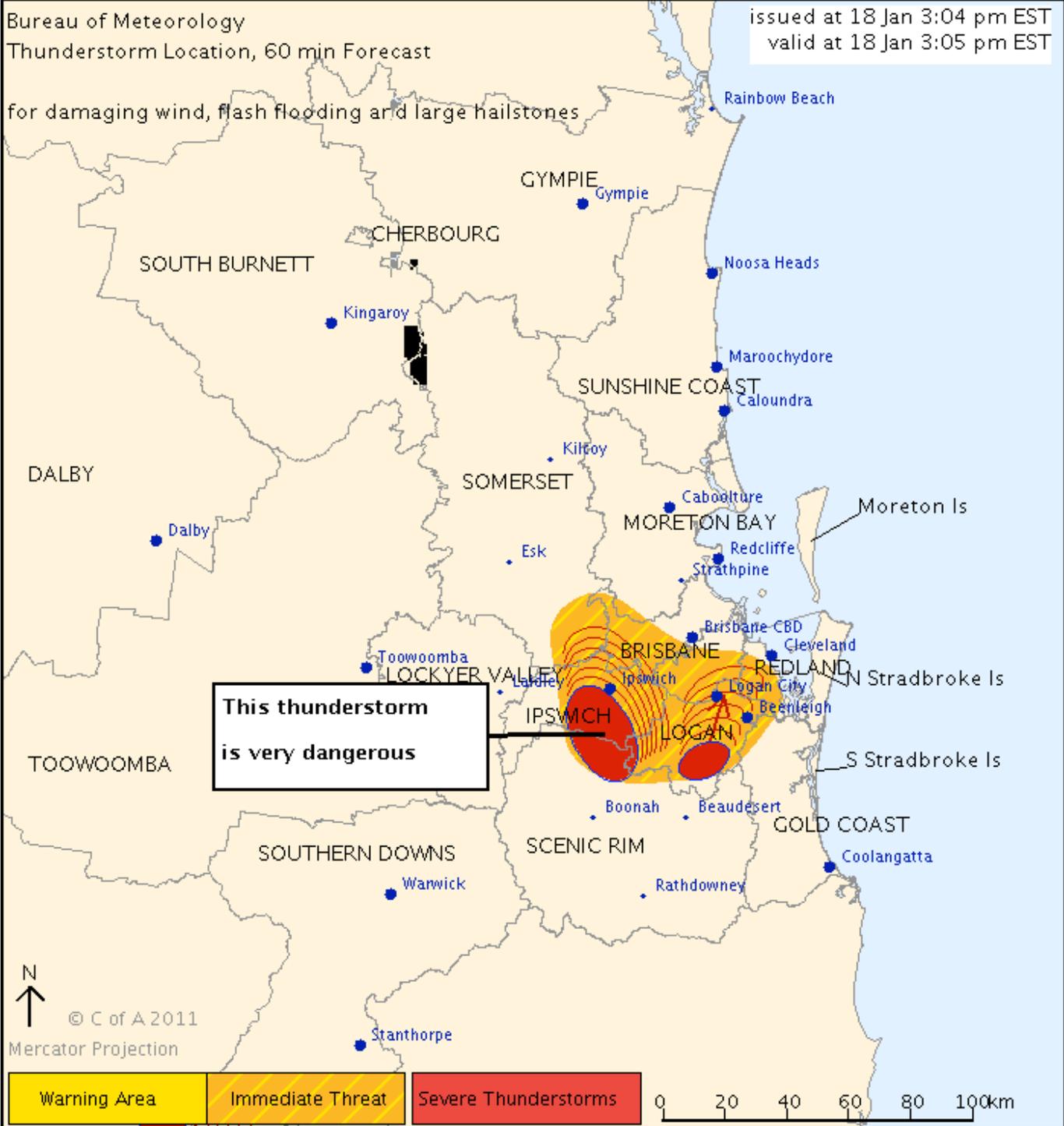
Other severe thunderstorms were located near Jimboomba.

They are forecast to affect Logan Village by 3:35 pm and Beenleigh, Logan City and Sunnybank Hills by 4:05 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 18 Jan 3:04 pm EST  
valid at 18 Jan 3:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

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The next warning is due to be issued by 4:05 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the BRISBANE CITY and parts of the LOGAN CITY, MORETON BAY, IPSWICH CITY, SOMERSET and REDLAND Council Areas.

Issued at 3:40 pm Tuesday, 18 January 2011.

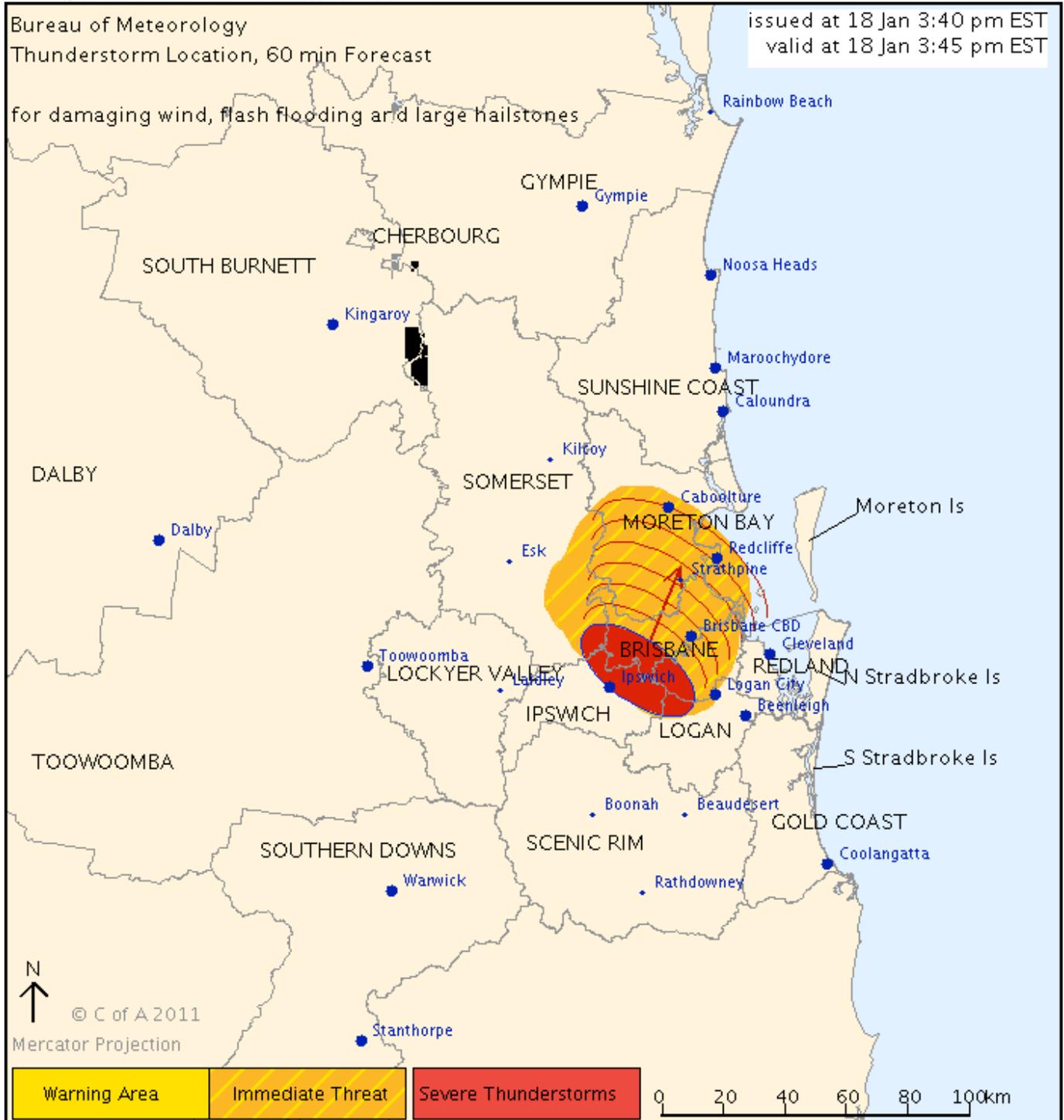
The Bureau of Meteorology warns that, at 3:45 pm, severe thunderstorms were detected on weather radar near Ipswich and Upper Brookfield.

These thunderstorms are moving towards the north.

They are forecast to affect Brisbane CBD, Albany Creek and the D'Aguilar Ranges by 4:15 pm and Strathpine, Redcliffe and Mount Mee by 4:45 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:40 pm.

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IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the **BRISBANE CITY** and parts of the **LOCKYER VALLEY, LOGAN CITY, MORETON BAY, IPSWICH CITY, SOMERSET, TOOWOOMBA and REDLAND Council Areas.**

Issued at 3:47 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 3:55 pm, severe thunderstorms were detected on weather radar near Toowoomba, Highfields and Sunnybank Hills.

These thunderstorms are moving towards the north to northeast.

They are forecast to affect Brisbane CBD, Logan City and the area north of Toowoomba by 4:25 pm and Cleveland, Albany Creek and Crows Nest by 4:55 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley

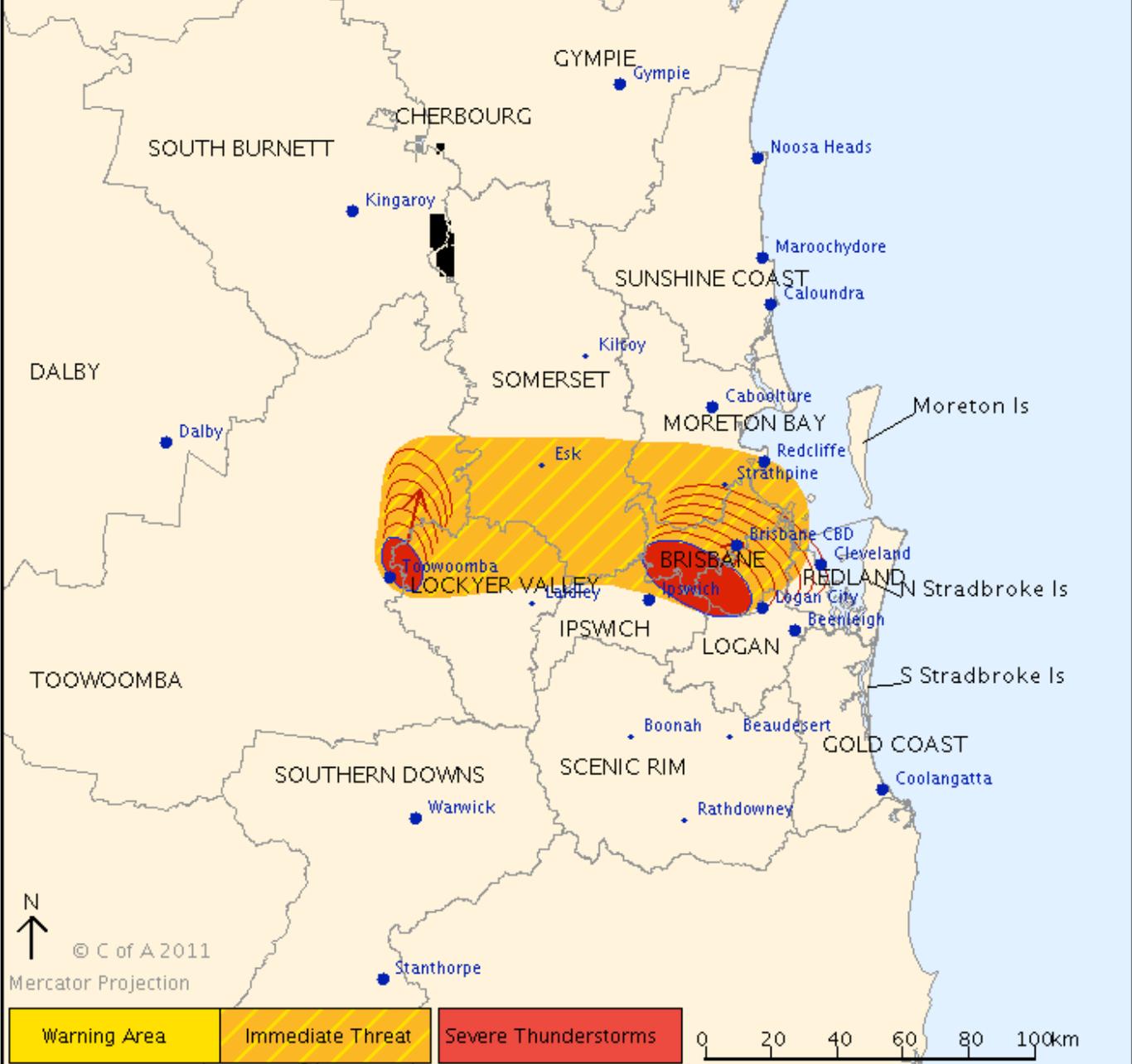


Bureau of Meteorology

Thunderstorm Location, 60 min Forecast

issued at 18 Jan 3:47 pm EST  
valid at 18 Jan 3:55 pm EST

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:50 pm.

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for **DAMAGING WIND, FLASH FLOODING** and **LARGE HAILSTONES**  
For people in the **MORETON BAY** and parts of the **BRISBANE CITY, LOCKYER VALLEY, IPSWICH CITY, SOMERSET** and **TOOWOOMBA** Council Areas.

Issued at 4:16 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 4:25 pm, severe thunderstorms were detected on weather radar near Brisbane CBD, the area south of Esk and Highvale.

These thunderstorms are moving towards the north to northeast.

They are forecast to affect Strathpine, Esk and Dayboro by 4:55 pm and Redcliffe, Caboolture and Wamuran by 5:25 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm

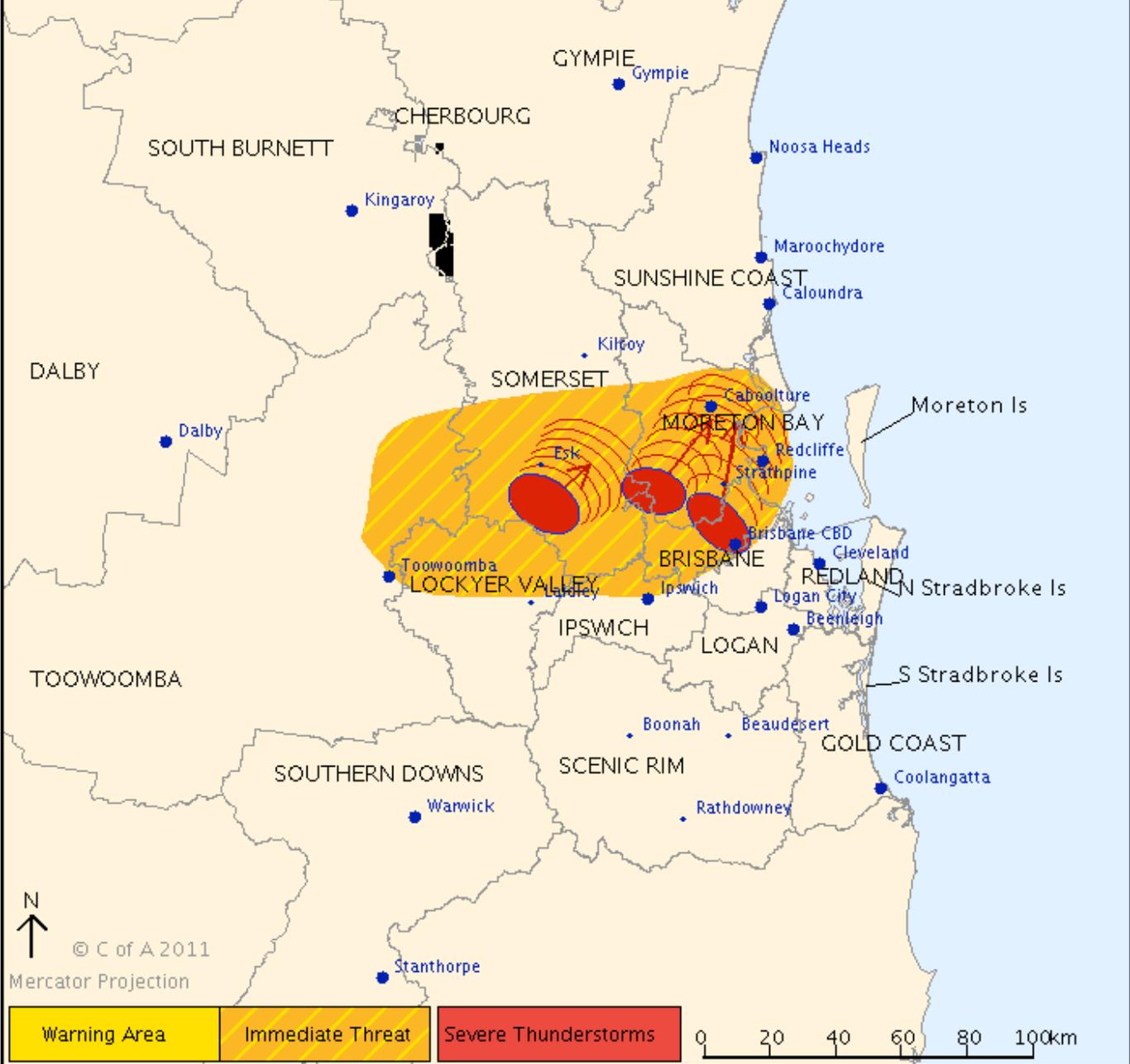


Bureau of Meteorology

Thunderstorm Location, 60 min Forecast

issued at 18 Jan 4:16 pm EST  
valid at 18 Jan 4:25 pm EST

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:20 pm.

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for **DAMAGING WIND, FLASH FLOODING** and **LARGE HAILSTONES**  
For people in the **MORETON BAY** and parts of the **BRISBANE CITY, LOCKYER VALLEY, SUNSHINE COAST, SOMERSET** and **TOOWOOMBA** Council Areas.

Issued at 4:18 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 4:25 pm, severe thunderstorms were detected on weather radar near Brisbane CBD, the area south of Esk, the D'Aguilar Ranges and the area north of Toowoomba.

These thunderstorms are moving towards the north to northeast.

They are forecast to affect Strathpine, Esk and the area southwest of Esk by 4:55 pm and Redcliffe, Caboolture and the area northwest of Esk by 5:25 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm

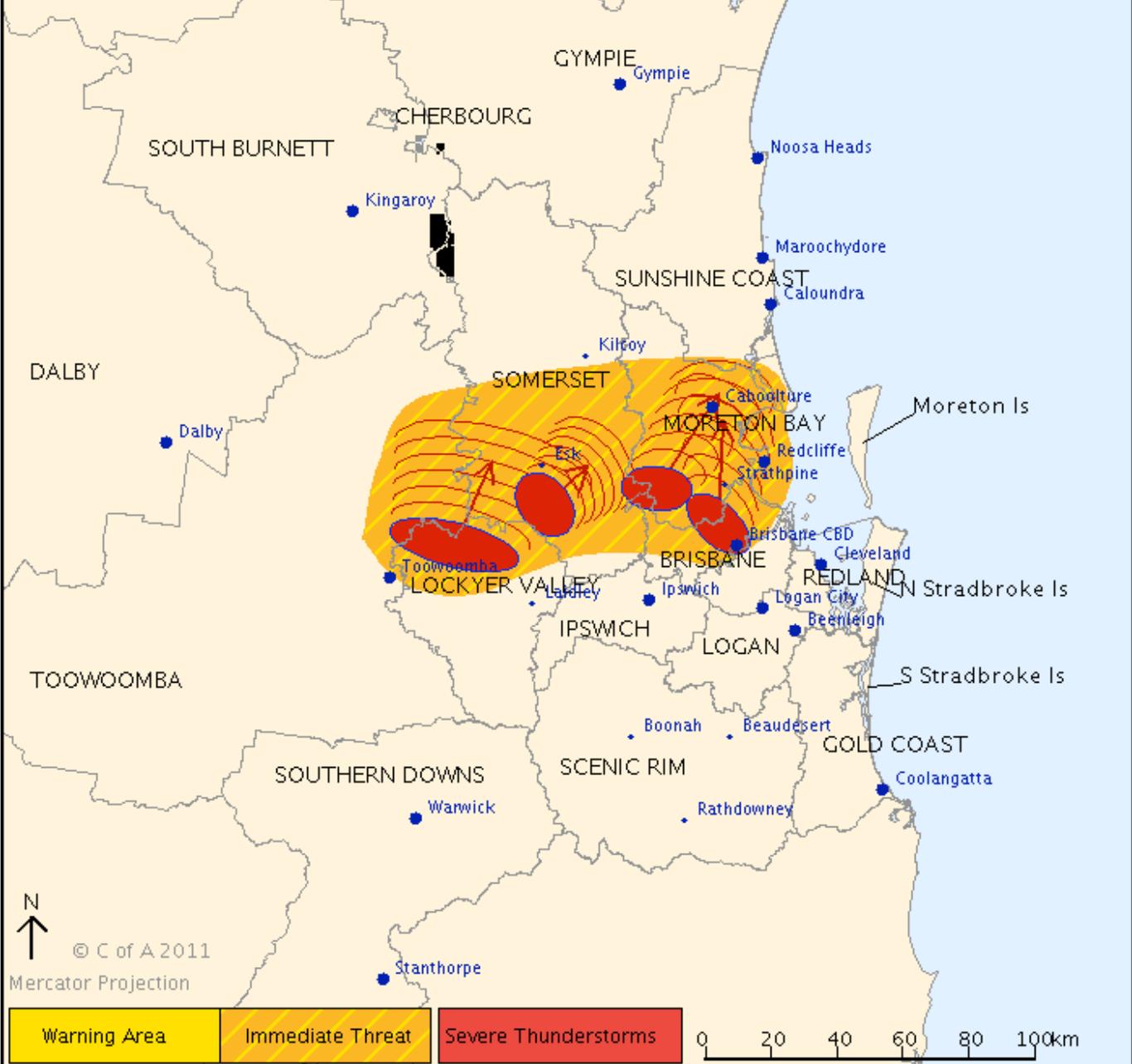


Bureau of Meteorology

Thunderstorm Location, 60 min Forecast

issued at 18 Jan 4:18 pm EST  
valid at 18 Jan 4:25 pm EST

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:20 pm.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

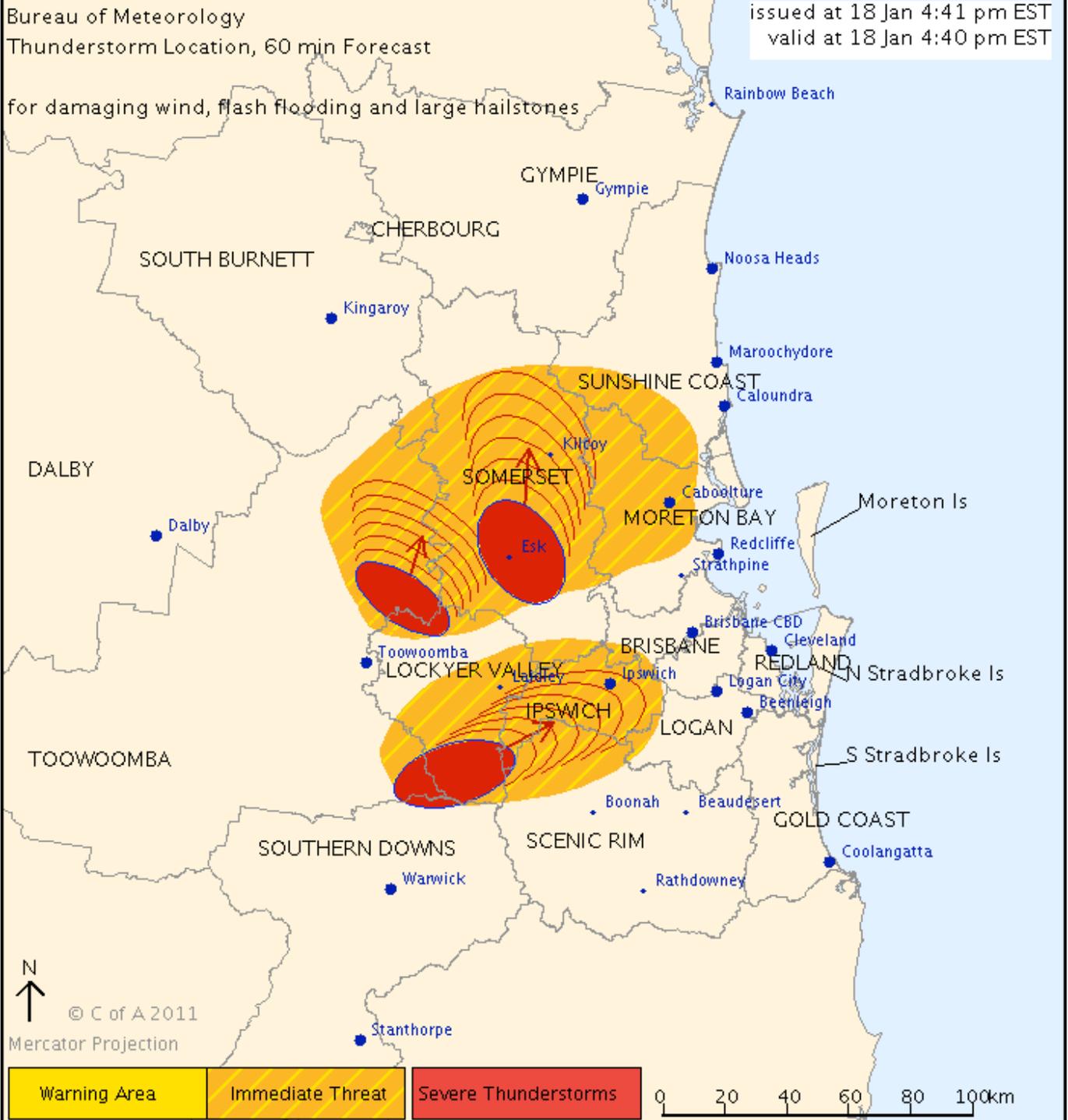
**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOCKYER VALLEY, MORETON BAY, IPSWICH CITY, SOMERSET and parts of the BRISBANE CITY, LOGAN CITY, SUNSHINE COAST, SCENIC RIM, SOUTH BURNETT and TOOWOOMBA Council Areas.

Issued at 4:41 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 4:40 pm, severe thunderstorms were detected on weather radar near Esk, the area south of Esk, Hampton and the area northwest of Cunninghams Gap. These thunderstorms are moving towards the north to northeast. They are forecast to affect the area southwest of Esk, the area west of Kilcoy and Lake Somerset by 5:10 pm and Ipswich, Kilcoy and the area northwest of Esk by 5:40 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm  
3-4 cm hail reported at Bridgeman Downs



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:45 pm.

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IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
**MORETON BAY,**  
**SUNSHINE COAST and**  
**SOMERSET Council Areas.**

Issued at 5:28 pm Tuesday, 18 January 2011.

The Bureau of Meteorology warns that, at 5:35 pm, severe thunderstorms were detected on weather radar near Kilcoy.

These thunderstorms are moving towards the north.

They are forecast to affect the area west of Kilcoy and Mount Kilcoy by 6:05 pm and the ranges south of Jimna and the area west of Conondale by 6:35 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm  
3-4 cm hail reported at Bridgeman Downs

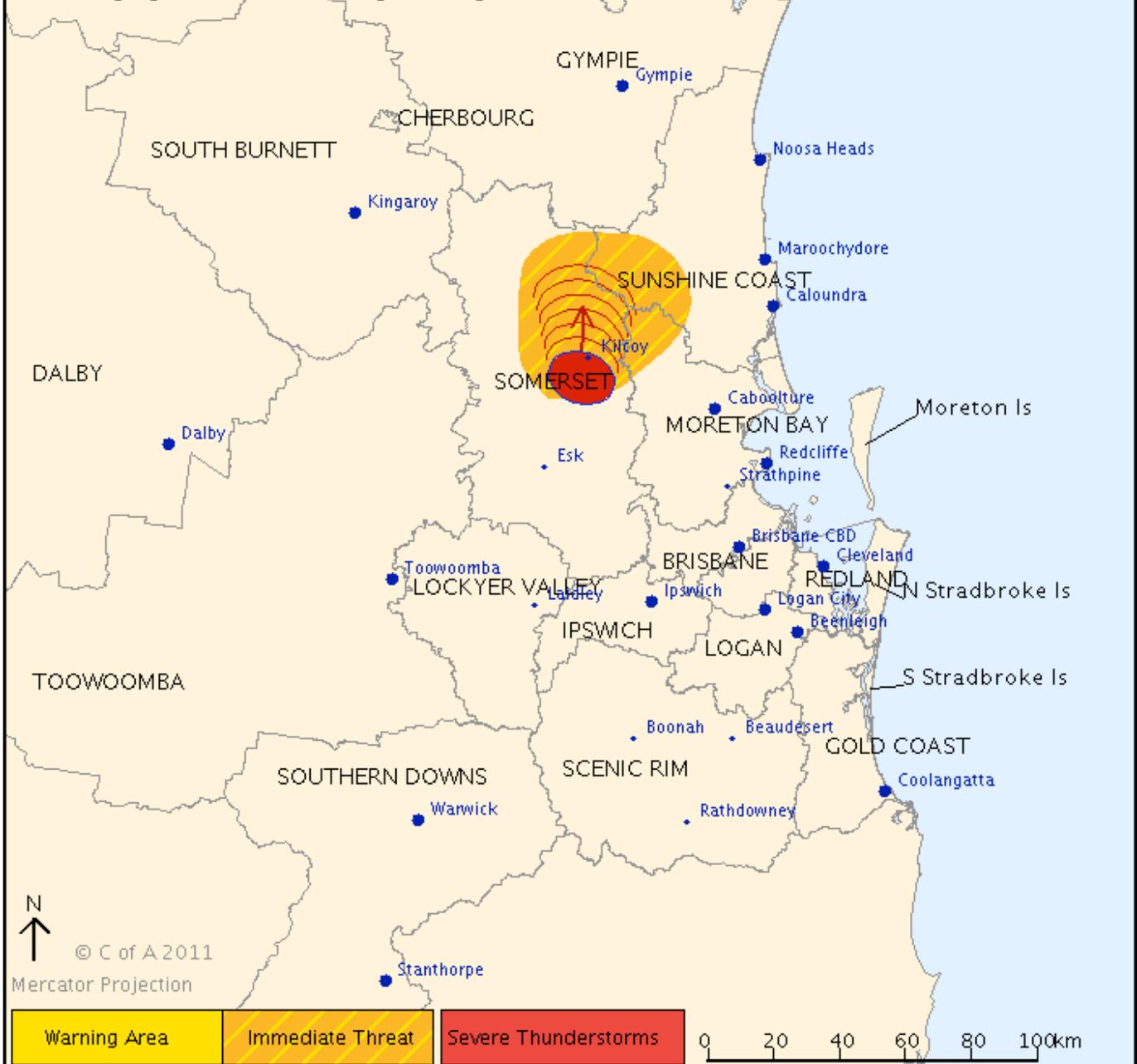


Bureau of Meteorology

Thunderstorm Location, 60 min Forecast

issued at 18 Jan 5:28 pm EST  
valid at 18 Jan 5:35 pm EST

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:30 pm.

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
**SOUTHERN DOWNS** and  
**TOOWOOMBA** Council Areas.

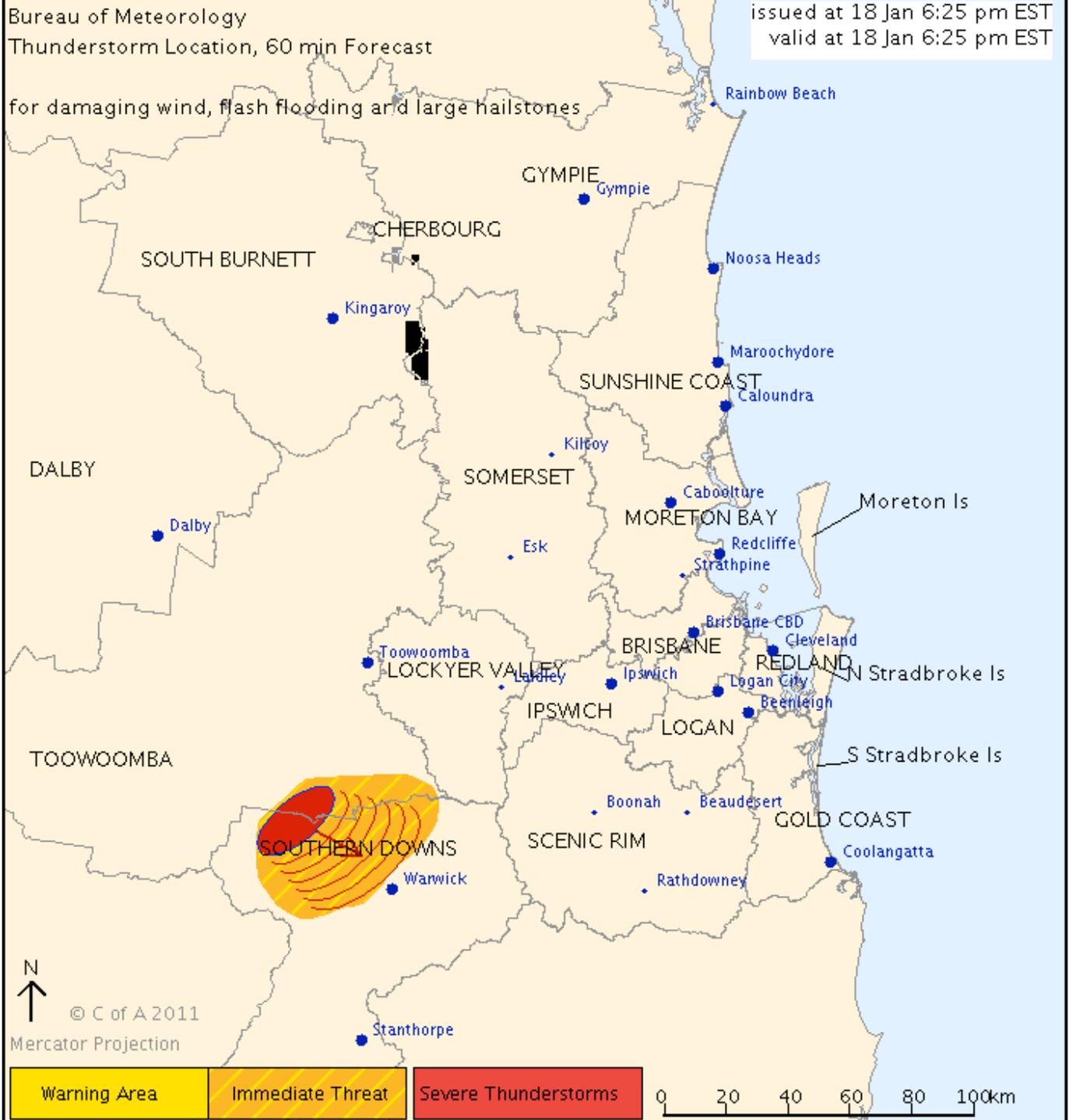
Issued at 6:25 pm Tuesday, 18 January 2011.

Thunderstorms are moving towards the southeast.

They are forecast to affect the area west of Warwick by 6:55 pm and the area northwest of Warwick, the area north of Warwick and Allora by 7:25 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm  
3-4 cm hail reported at Bridgeman Downs



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:25 pm.

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IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

Issued at 6:55 pm Tuesday, 18 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.

Wind gust of 95km/hr was observed at Amberley at 3:01pm  
2cm hail reported at Gatton at 3:42pm  
3-4 cm hail reported at Bridgeman Downs

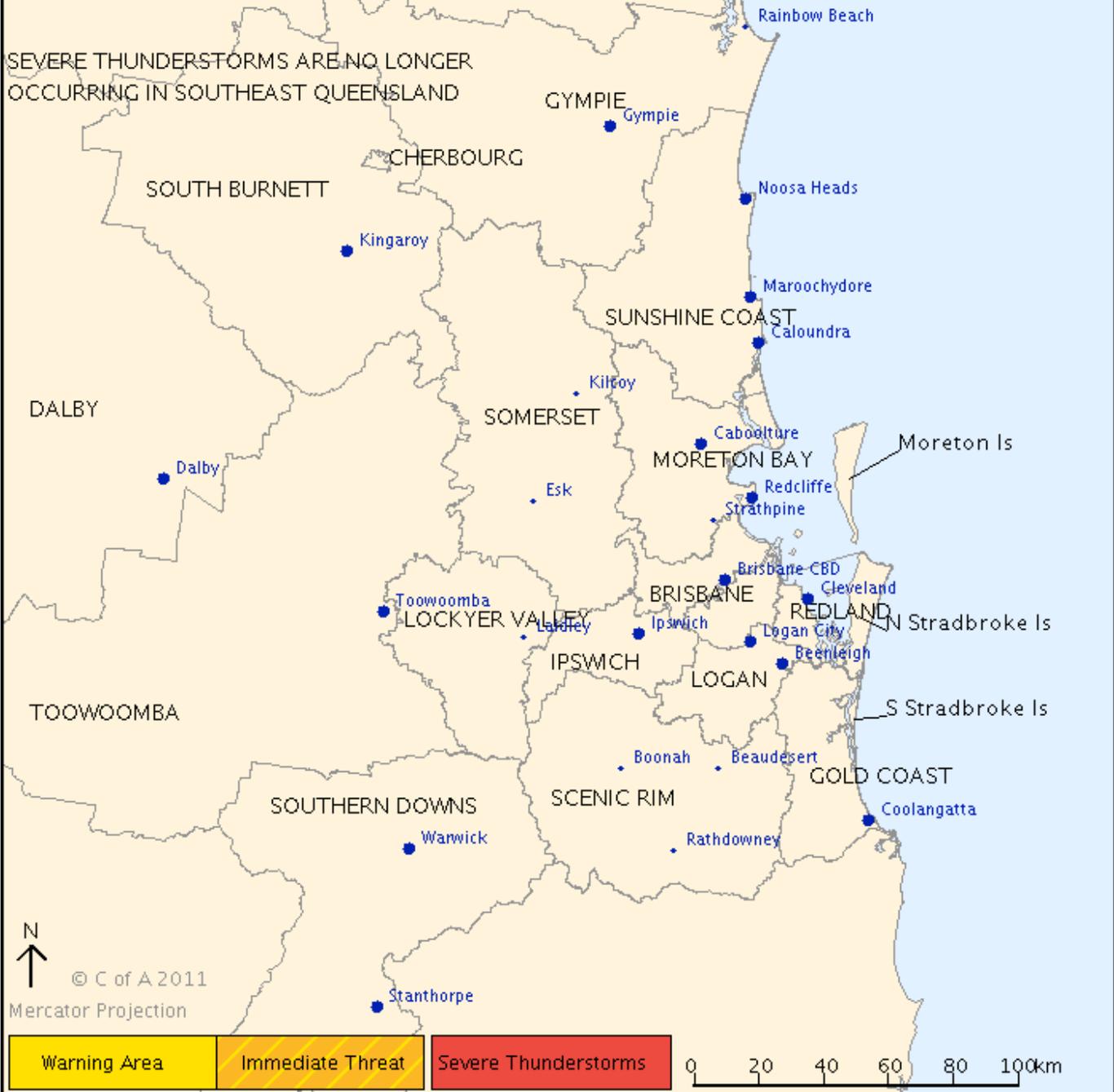


Bureau of Meteorology

Thunderstorm Location and 60 min Forecast

issued at 18 Jan 6:55 pm EST  
valid at 18 Jan 6:55 pm EST

SEVERE THUNDERSTORMS ARE NO LONGER OCCURRING IN SOUTHEAST QUEENSLAND



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

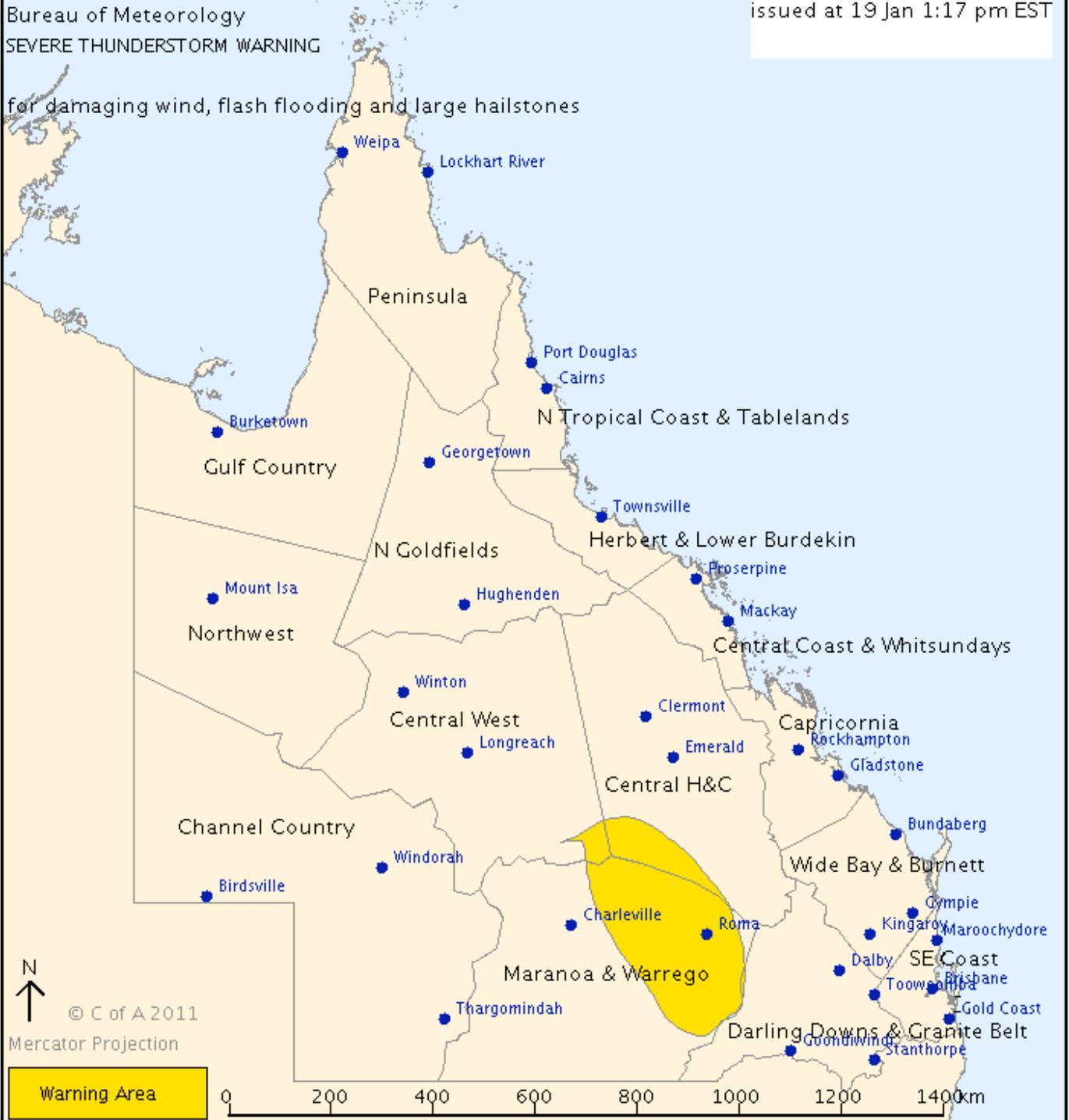
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Central Highlands and Coalfields,  
Central West and  
Maranoa and Warrego Forecast Districts.

Issued at 1:17 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Roma, St George, Mitchell and Injune.



issued at 19 Jan 1:17 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:20 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

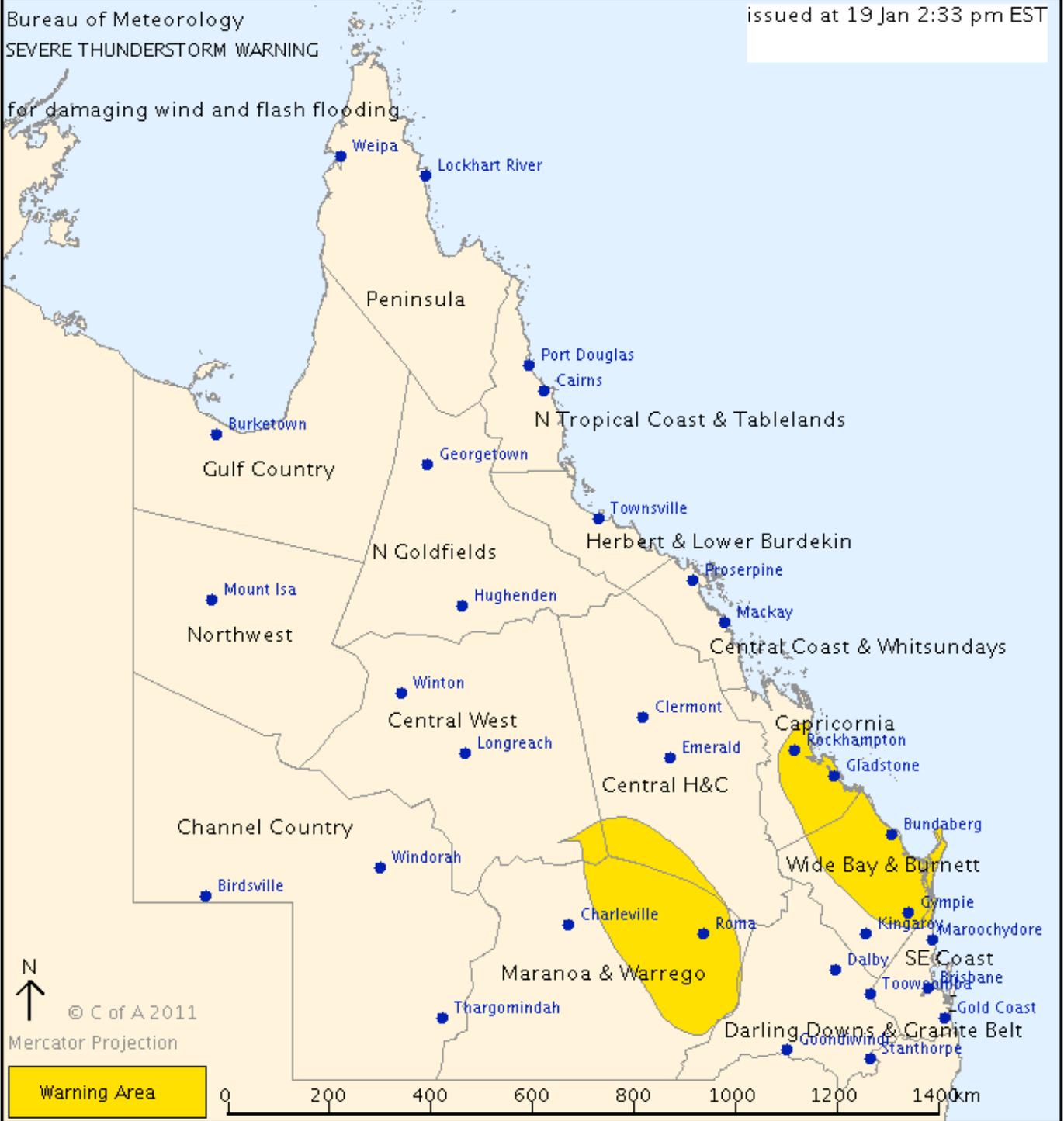
**SEVERE THUNDERSTORM WARNING**  
**for DAMAGING WIND and FLASH FLOODING**  
For people in parts of the Central Highlands and Coalfields, Central West, Capricornia, Wide Bay and Burnett, Maranoa and Warrego and Southeast Coast Forecast Districts.

Issued at 2:33 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Gympie, Bundaberg, Gladstone, Rockhampton, Hervey Bay, Fraser Island, Hervey Bay waters and Yeppoon.



issued at 19 Jan 2:33 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:35 pm.

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**Australian Government**  
**Bureau of Meteorology**

At 2:33 pm Wednesday, 19 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

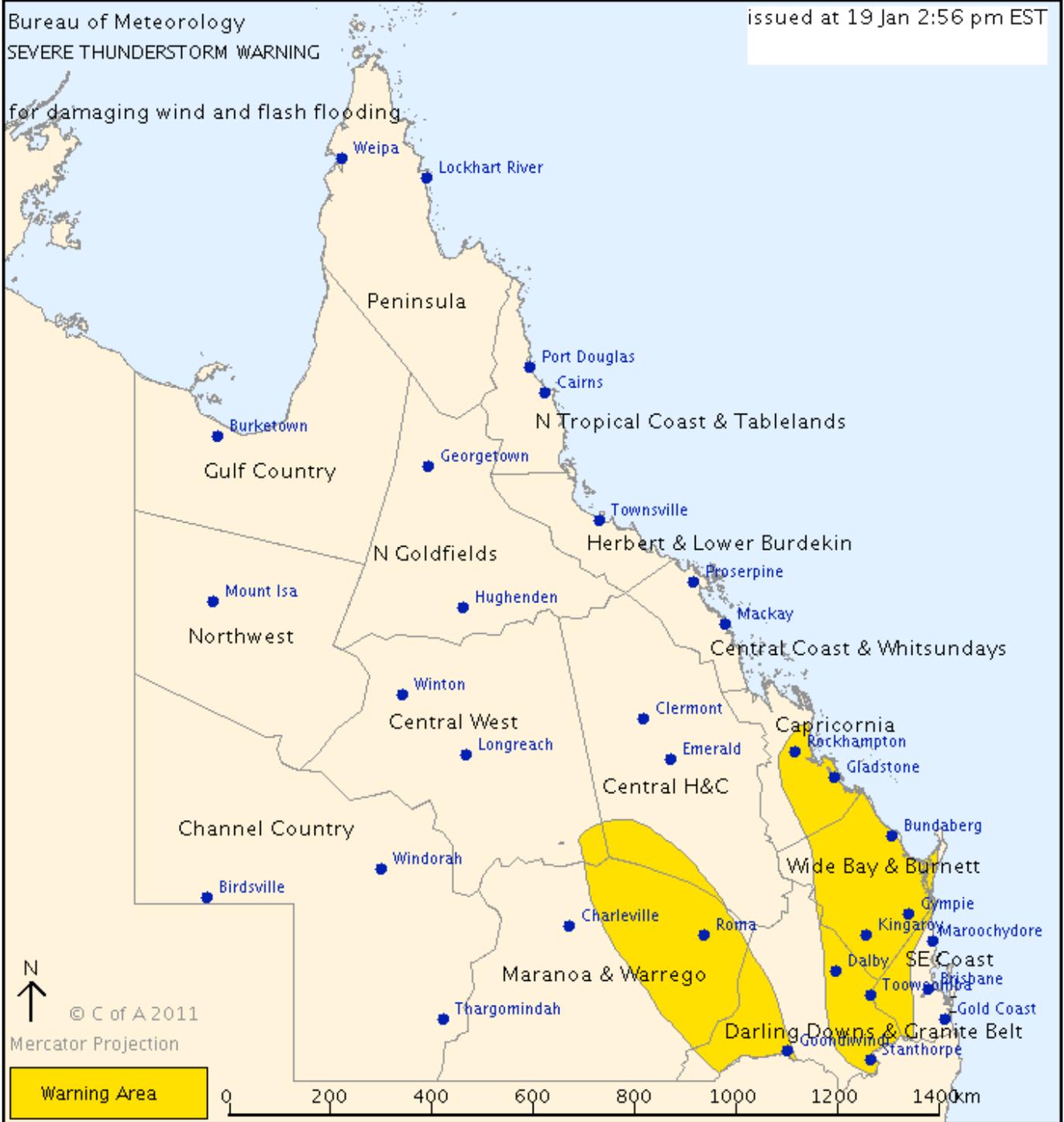
**SEVERE THUNDERSTORM WARNING**  
**for DAMAGING WIND and FLASH FLOODING**  
For people in the Wide Bay and Burnett and parts of the Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 2:56 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Goondiwindi, Warwick, Toowoomba, Dalby, Gympie, Bundaberg, Rockhampton, Kingaroy and Stanthorpe.



issued at 19 Jan 2:56 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:00 pm.

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**Australian Government**

**Bureau of Meteorology**

At 2:56 pm Wednesday, 19 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

For people in parts of the  
SOUTHERN DOWNS Council Area.

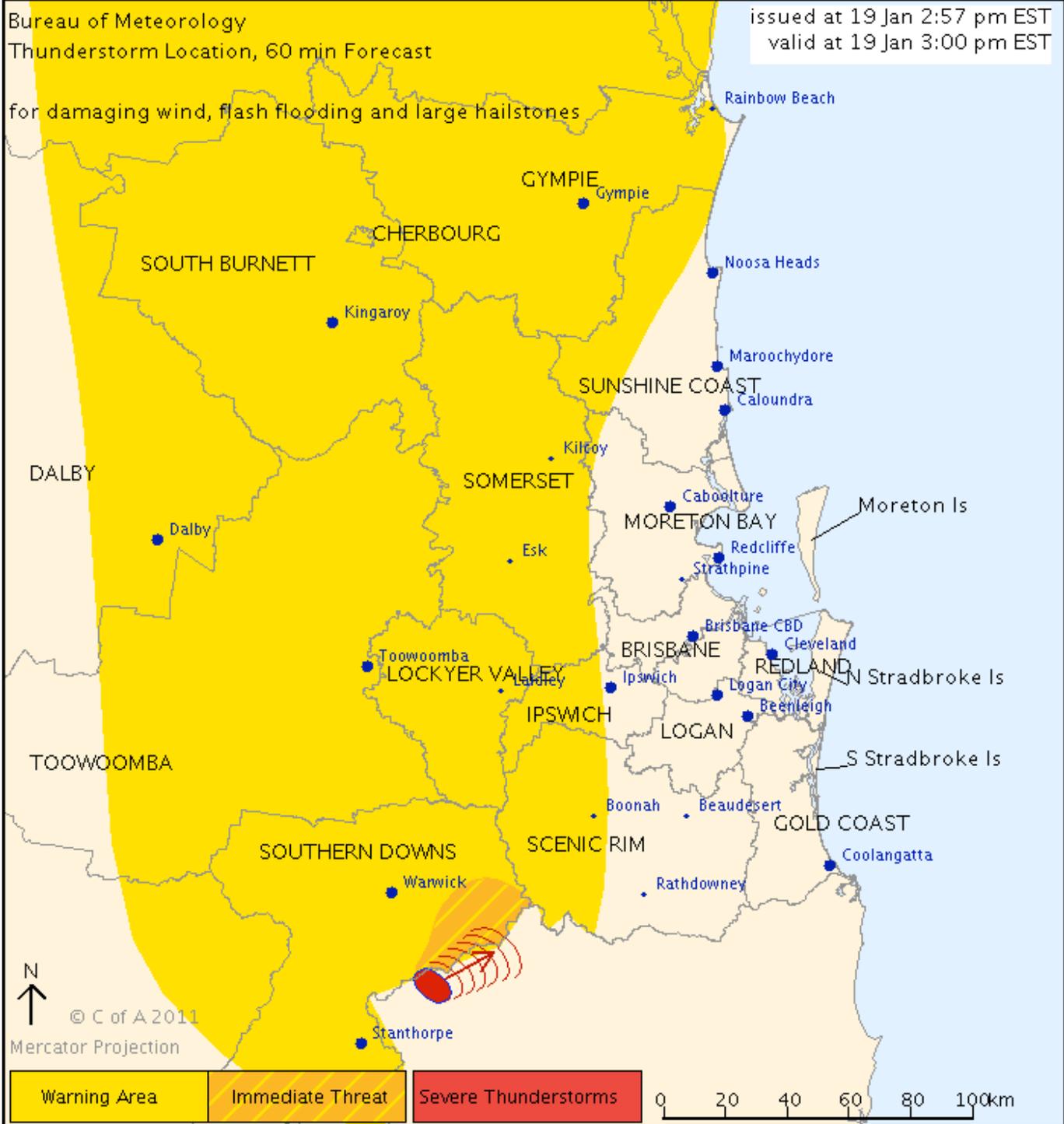
Issued at 2:57 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 3:00 pm, severe thunderstorms were detected on weather radar near the area south of the NSW border. These thunderstorms are moving towards the northeast. They are forecast to affect Killarney by 4:00 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 19 Jan 2:57 pm EST  
valid at 19 Jan 3:00 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 4:00 pm.

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett and parts of the Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

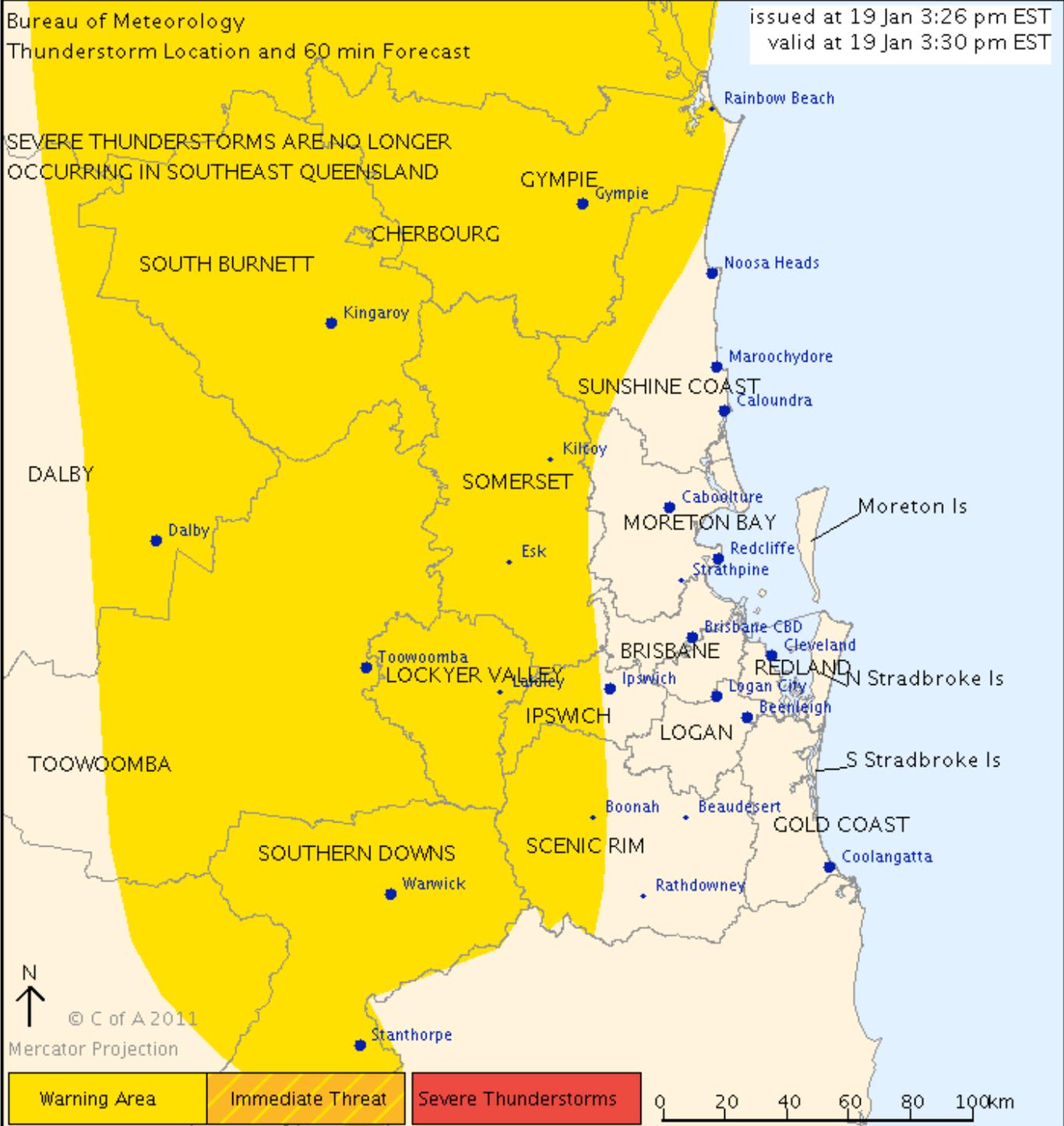
Issued at 3:26 pm Wednesday, 19 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 19 Jan 3:26 pm EST  
valid at 19 Jan 3:30 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for the Wide Bay and Burnett and parts of the Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

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**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **FLASH FLOODING**

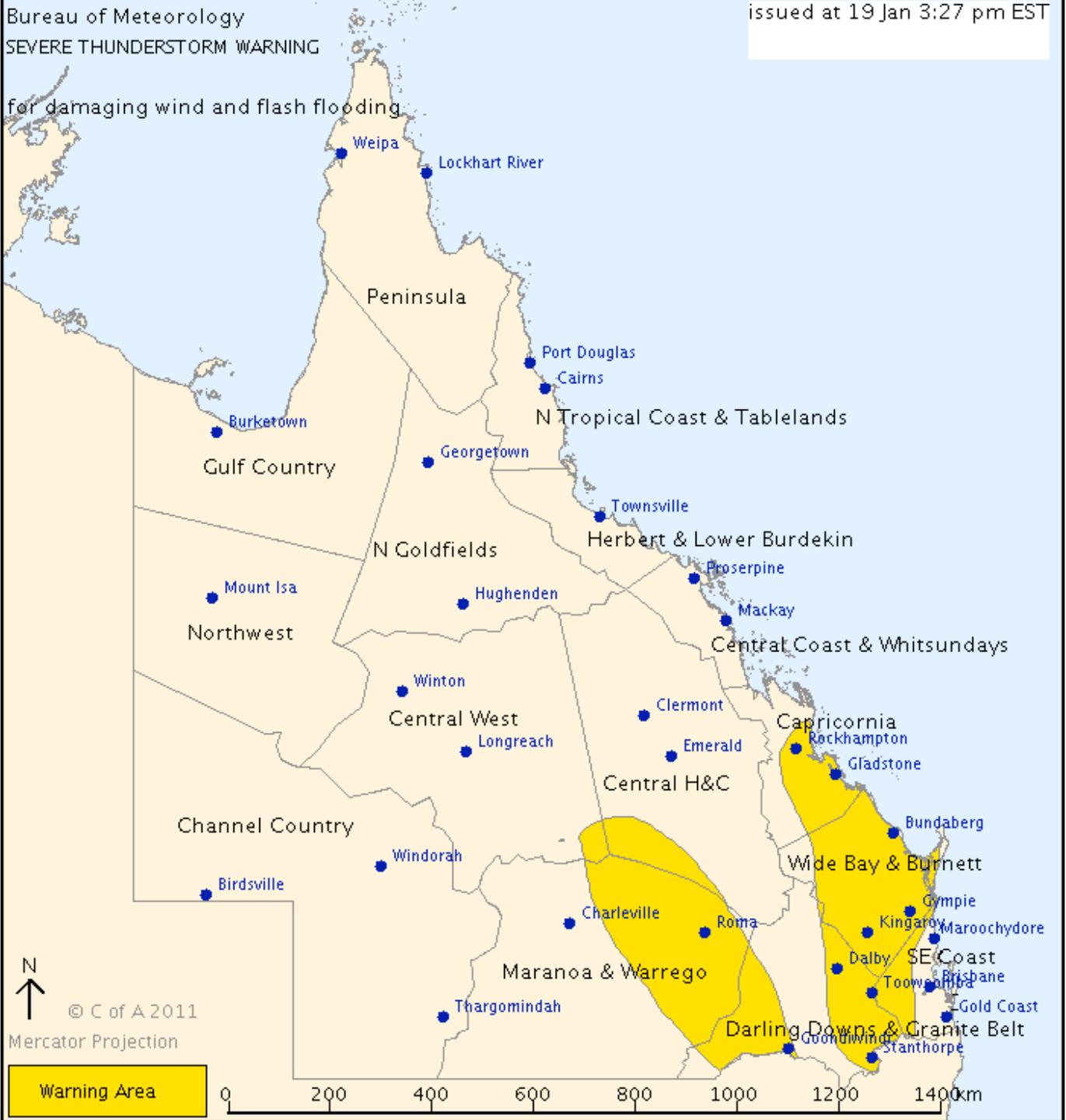
For people in the Wide Bay and Burnett and parts of the Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 3:27 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Goondiwindi, Warwick, Toowoomba, Dalby, Gympie, Bundaberg, Rockhampton, Kingaroy and Stanthorpe.



issued at 19 Jan 3:27 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:30 pm.

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES  
For people in parts of the  
TOOWOOMBA Council Area.

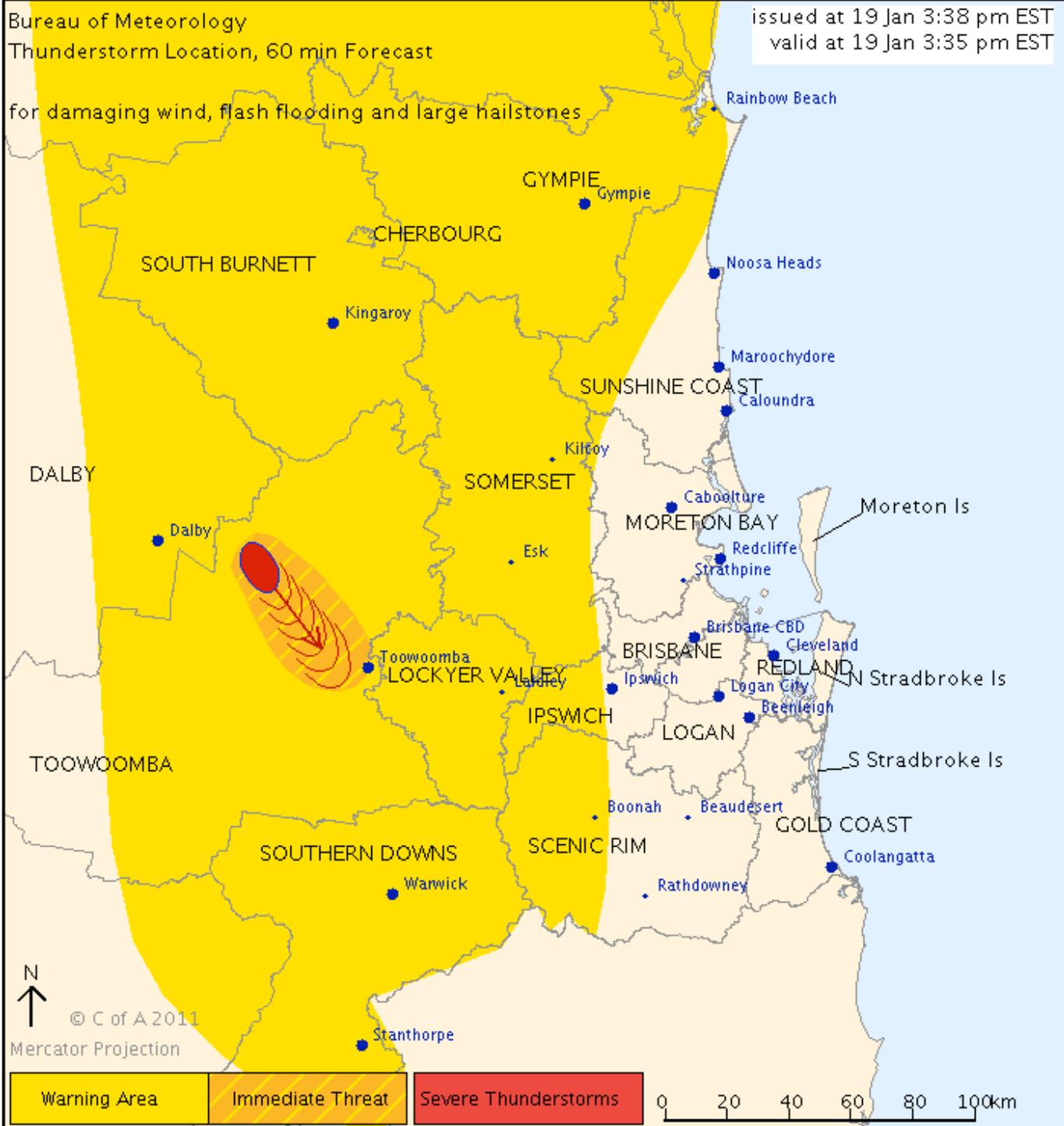
Issued at 3:38 pm Wednesday, 19 January 2011.

Thunderstorms are moving towards the southeast. They are forecast to affect Oakey by 4:05 pm and the area northwest of Toowoomba by 4:35 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



issued at 19 Jan 3:38 pm EST  
valid at 19 Jan 3:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 4:40 pm.

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett and parts of the Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **FLASH FLOODING**

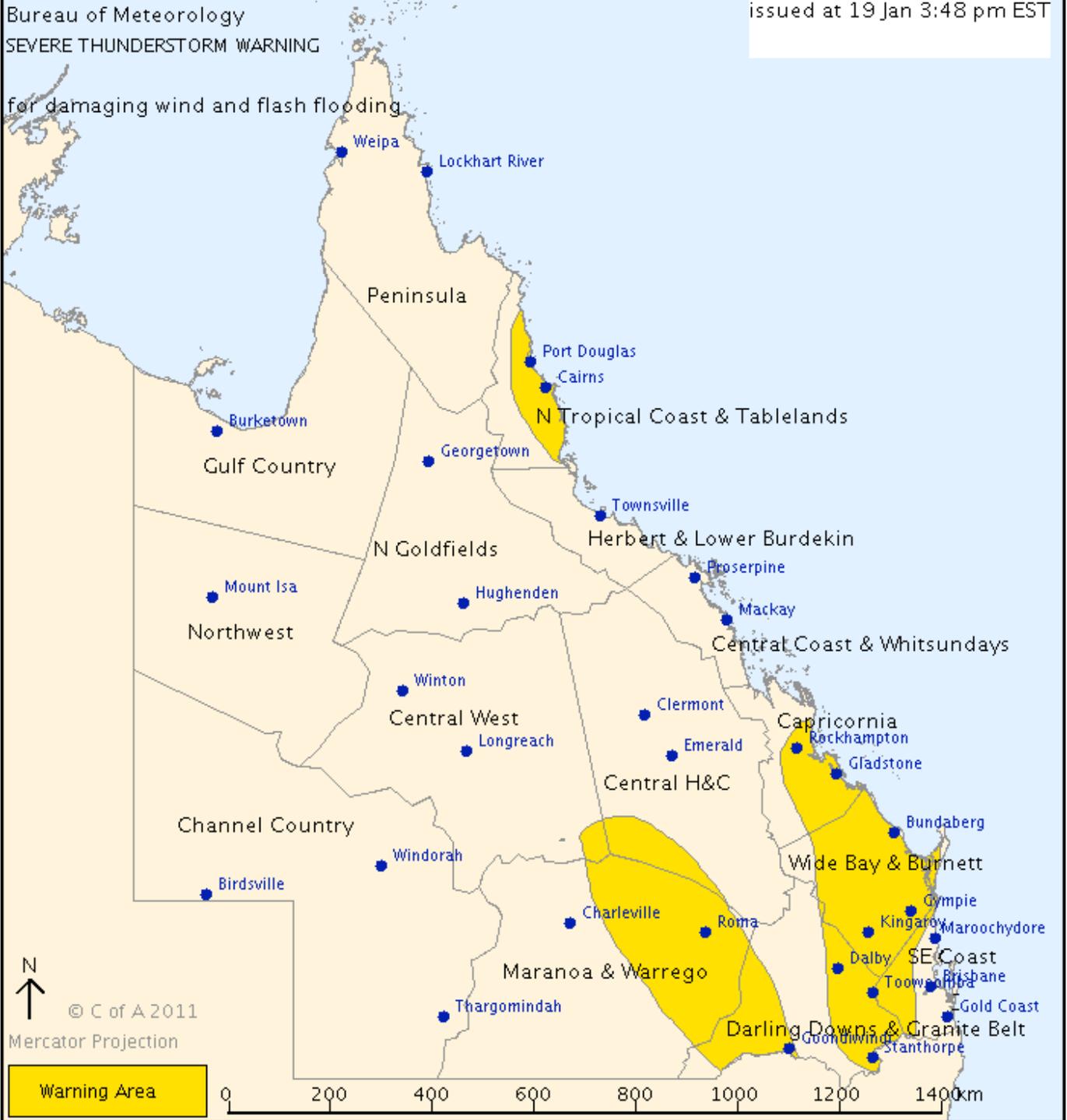
For people in the Wide Bay and Burnett and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego, Darling Downs and Granite Belt and Southeast Coast Forecast Districts.

Issued at 3:48 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Goondiwindi, Warwick, Toowoomba, Dalby, Gympie, Bundaberg, Rockhampton, Kingaroy, Stanthorpe, Cairns and Port Douglas.



issued at 19 Jan 3:48 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:50 pm.

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and FLASH FLOODING**

For people in the Wide Bay and Burnett, Southeast Coast and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

Issued at 4:26 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Goondiwindi, Warwick, Gold Coast, Toowoomba, Brisbane, Dalby, Maroochydore, Gympie, Bundaberg, Rockhampton, Kingaroy, Stanthorpe, Cairns and Port Douglas.





**Australian Government**

**Bureau of Meteorology**

At 4:26 pm Wednesday, 19 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for **DAMAGING WIND, FLASH FLOODING** and **LARGE HAILSTONES**  
For people in parts of the **LOCKYER VALLEY, IPSWICH CITY, SOUTHERN DOWNS, SCENIC RIM** and **TOOWOOMBA Council Areas**.

Issued at 4:27 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 4:25 pm, severe thunderstorms were detected on weather radar near the area northwest of Toowoomba and Oakey.

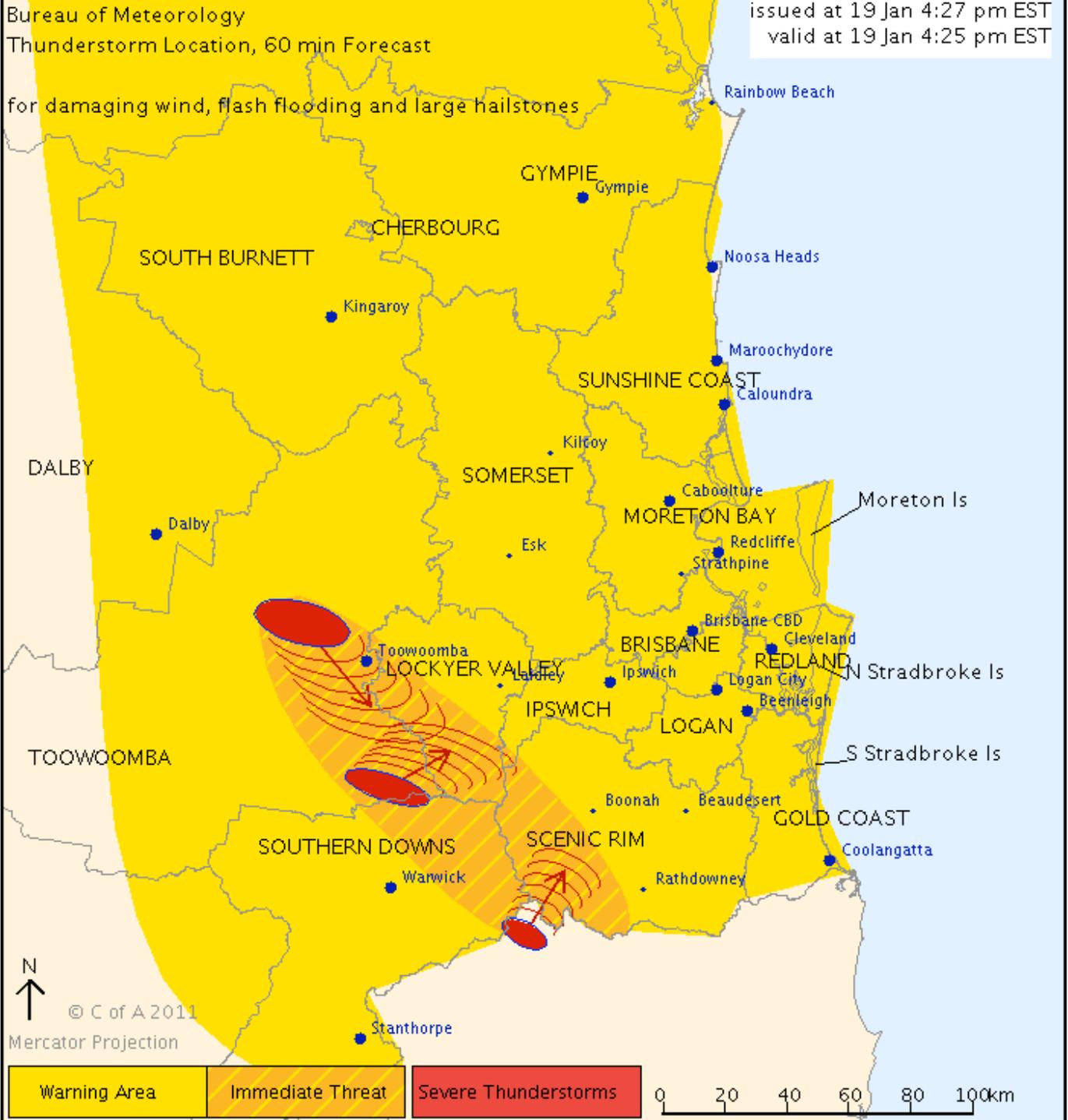
They are forecast to affect Toowoomba and the area west of Toowoomba by 4:55 pm and the area south of Toowoomba, the area southwest of Toowoomba and Cambooya by 5:25 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 4:27 pm EST  
valid at 19 Jan 4:25 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:30 pm.

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**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the GOLD COAST CITY, LOCKYER VALLEY, IPSWICH CITY, SOUTHERN DOWNS, SCENIC RIM and TOOWOOMBA Council Areas.

Issued at 4:36 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 4:35 pm, severe thunderstorms were detected on weather radar near Little Nerang Dam, Tallebudgera and Numinbah Valley.

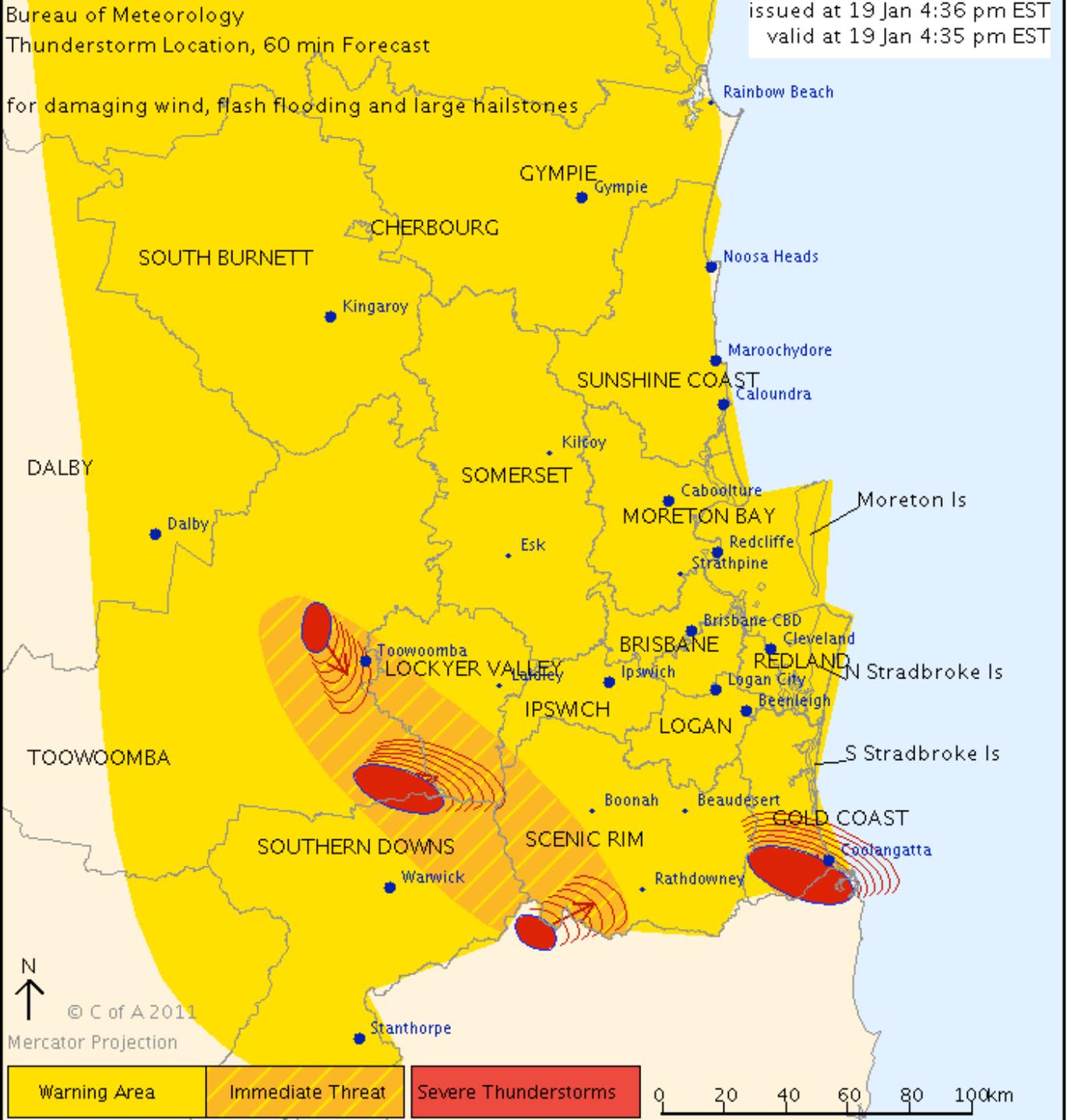
They are forecast to affect Coolangatta, the area northwest of Toowoomba and Mudgeeraba by 5:05 pm and Toowoomba, Maroon Dam and Miami by 5:35 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 4:36 pm EST  
valid at 19 Jan 4:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:35 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the **SCENIC RIM** and parts of the **GOLD COAST CITY, LOCKYER VALLEY, IPSWICH CITY, SOUTHERN DOWNS** and **TOOWOOMBA** Council Areas.

Issued at 4:47 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 4:50 pm, severe thunderstorms were detected on weather radar near Coolangatta, the area southwest of Toowoomba, Border Ranges National Park and the NSW border.

These thunderstorms are moving towards the east to northeast.

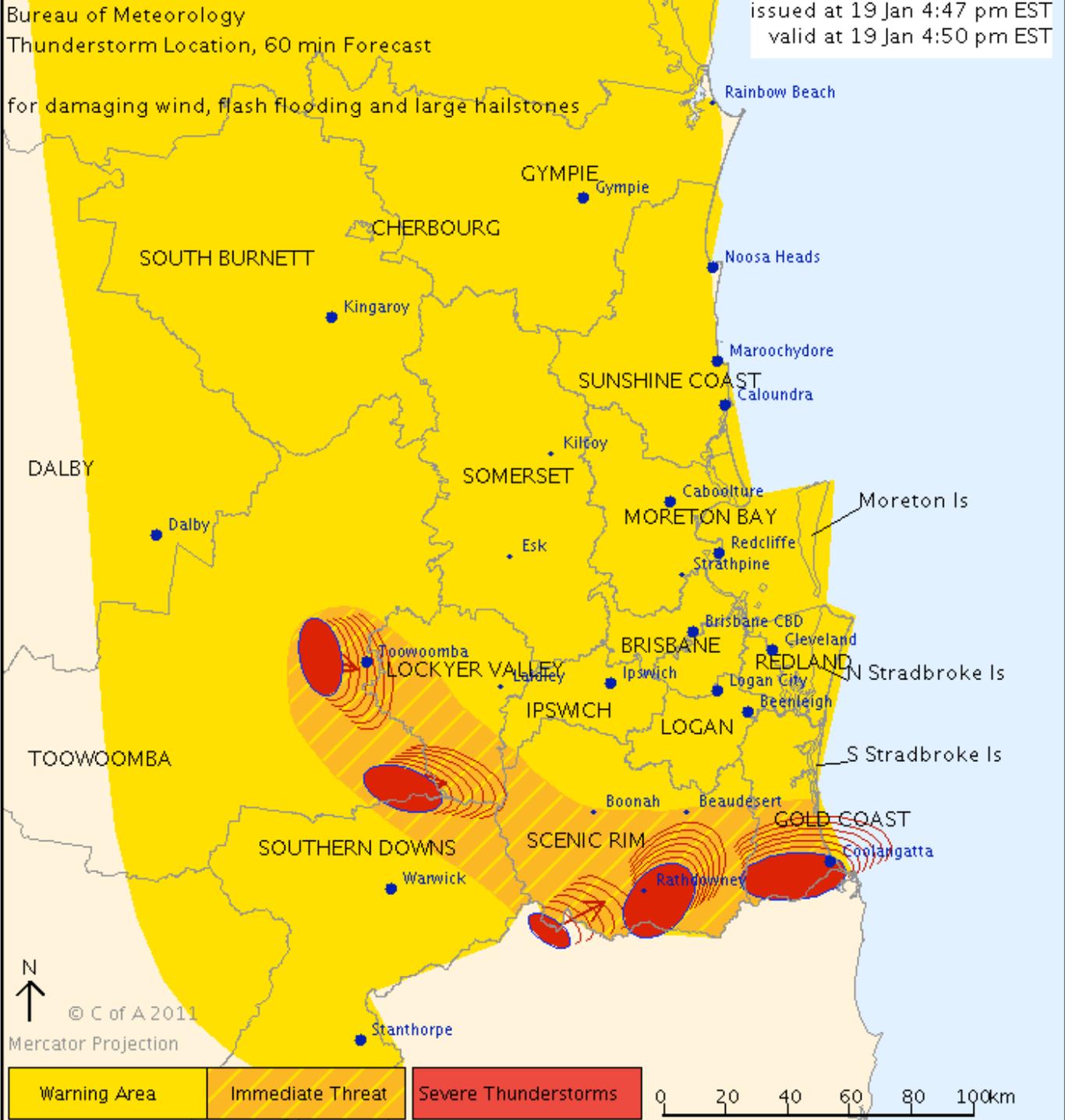
They are forecast to affect the area northwest of Toowoomba, Laravale and Miami by 5:20 pm and Toowoomba, the area south of Toowoomba and Highfields by 5:50 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 4:47 pm EST  
valid at 19 Jan 4:50 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:50 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in the  
LOCKYER VALLEY and parts of the  
IPSWICH CITY,  
SCENIC RIM and  
SOMERSET Council Areas.

Issued at 5:25 pm Wednesday, 19 January 2011.

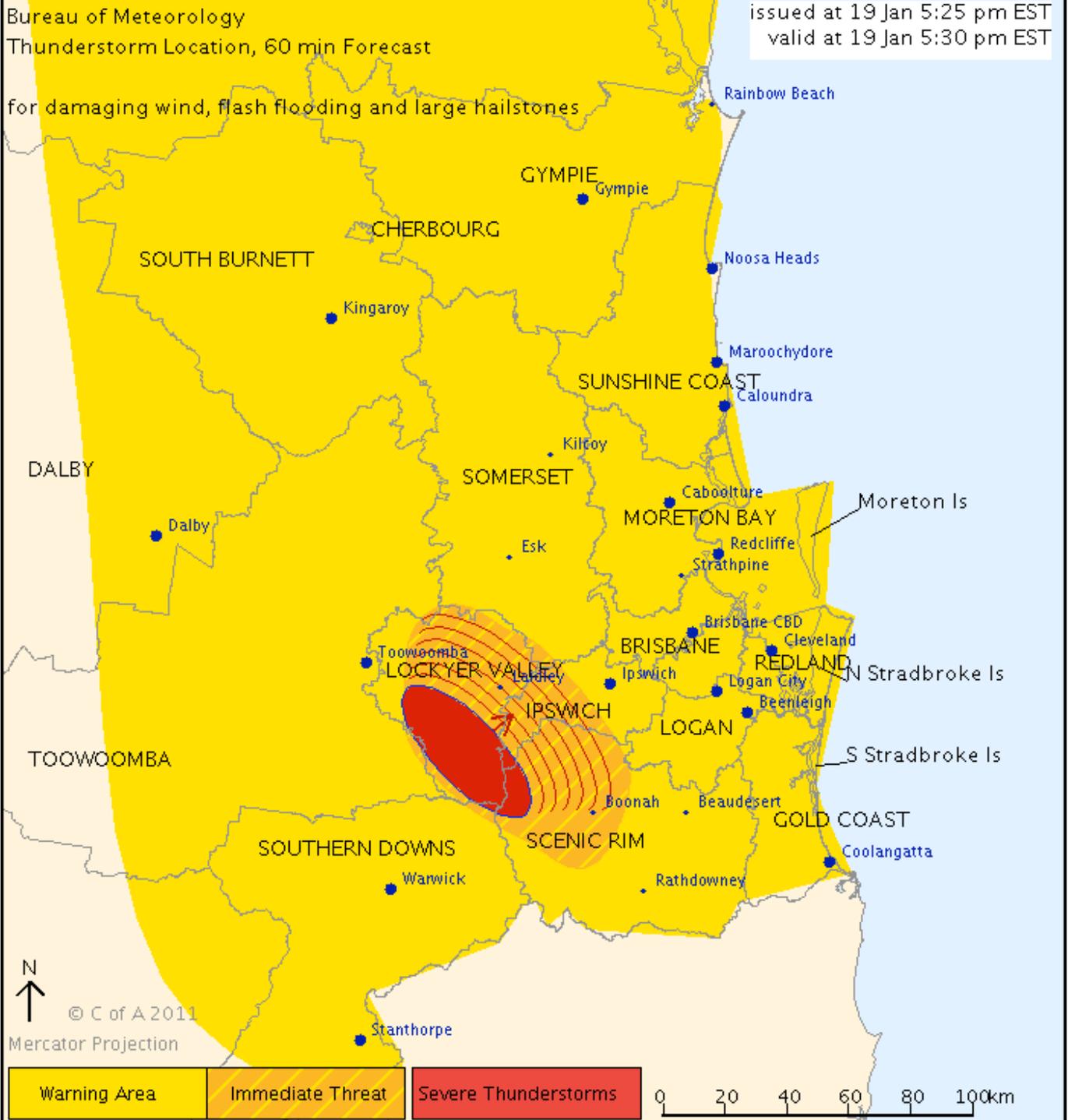
The Bureau of Meteorology warns that, at 5:30 pm, severe thunderstorms were detected on weather radar near the area northwest of Cunninghams Gap and the area south of Helidon. These thunderstorms are moving towards the northeast. They are forecast to affect Gatton, Mulgowie and Helidon by 6:00 pm and Boonah, Laidley and Hatton Vale by 6:30 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 5:25 pm EST  
valid at 19 Jan 5:30 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:25 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Northern Tropical Coast and Tablelands, Central Highlands and Coalfields, Central West, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **FLASH FLOODING**

For people in the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

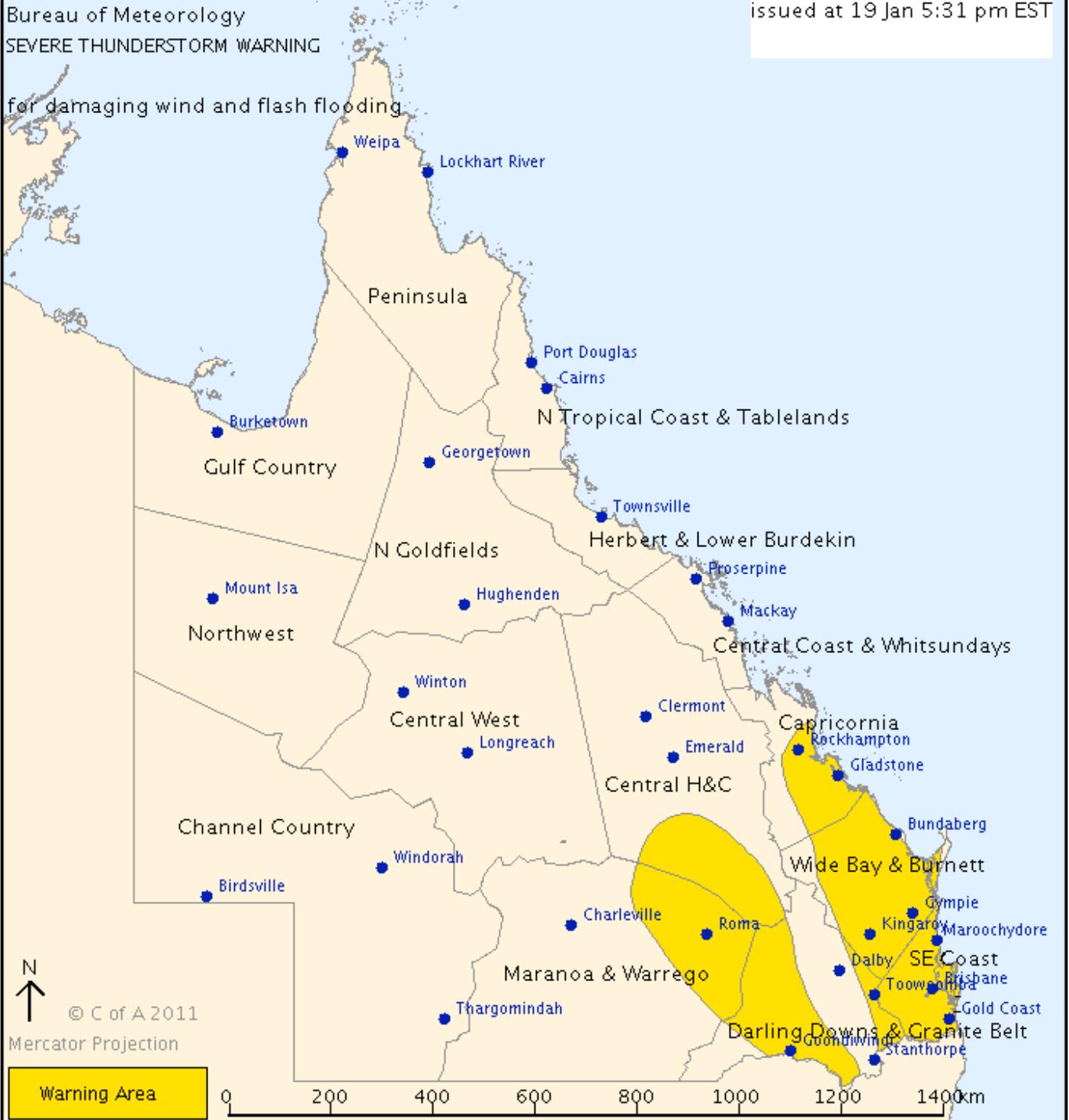
Issued at 5:31 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Roma, Goondiwindi, Warwick, Gold Coast, Toowoomba, Brisbane, Maroochydore, Gympie, Bundaberg, Rockhampton and Kingaroy.

2cm hail was observed at Oakey



issued at 19 Jan 5:31 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:35 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in the LOCKYER VALLEY, IPSWICH CITY, SCENIC RIM and parts of the LOGAN CITY, SOMERSET and TOOWOOMBA Council Areas.

Issued at 5:54 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 5:55 pm, severe thunderstorms were detected on weather radar near Mulgowie, Helidon, Maroon Dam and Rosevale.

These thunderstorms are moving towards the northeast.

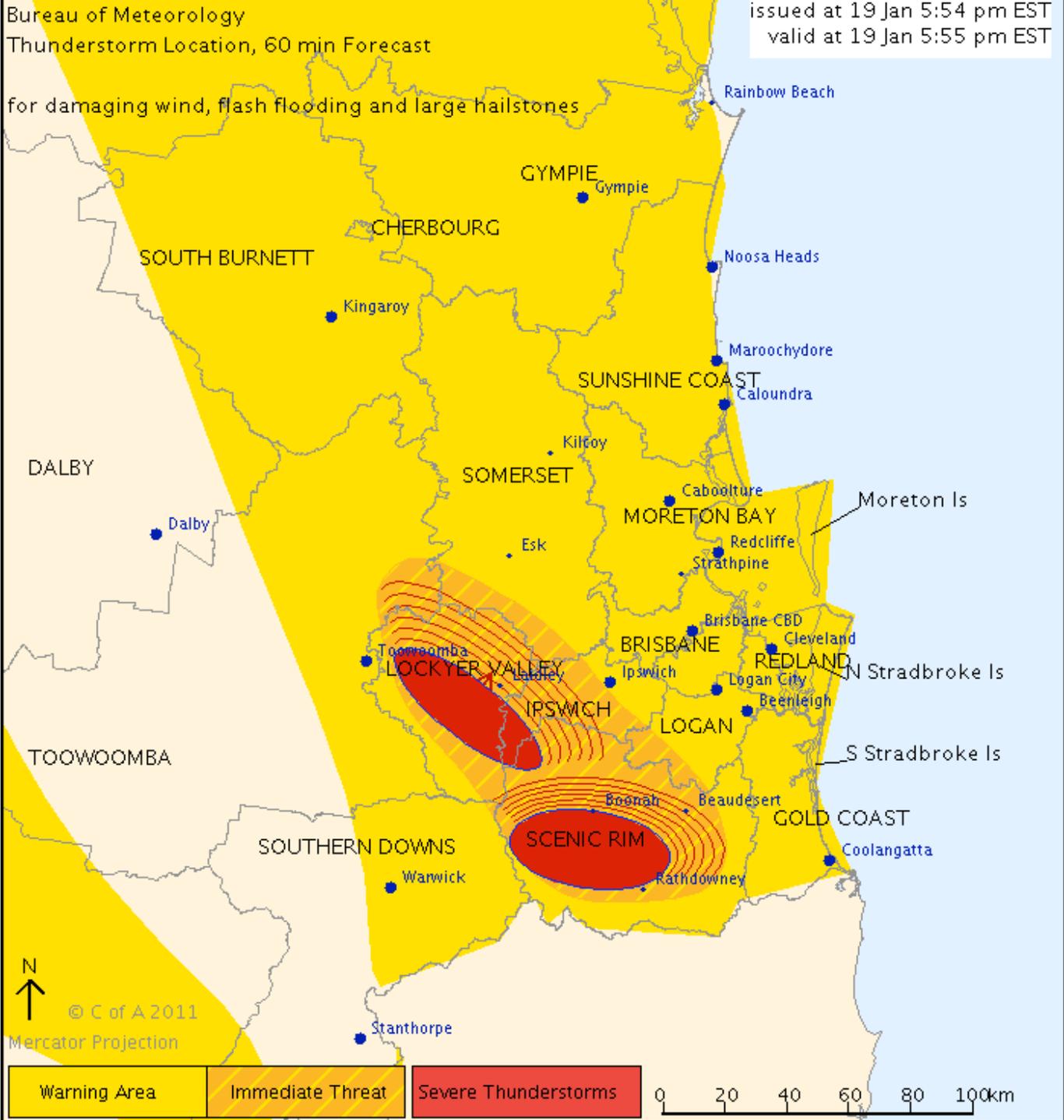
They are forecast to affect Boonah, Laidley and Gatton by 6:25 pm and Beaudesert, the area between Boonah and Beaudesert and Hampton by 6:55 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 5:54 pm EST  
valid at 19 Jan 5:55 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:55 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOCKYER VALLEY, IPSWICH CITY, SCENIC RIM and parts of the LOGAN CITY, SOUTHERN DOWNS, SOMERSET and TOOWOOMBA Council Areas.

Issued at 6:12 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 6:15 pm, very dangerous thunderstorms were detected on weather radar near Laidley and Gatton.

These thunderstorms are moving towards the northeast.

Very dangerous thunderstorms are forecast to affect Rosewood, Hatton Vale and the area north of Gatton by 6:45 pm and Amberley, Marburg and Hampton by 7:15 pm.

Other severe thunderstorms were located near Boonah, the area between Boonah and Beaudesert and the area southwest of Stanthorpe.

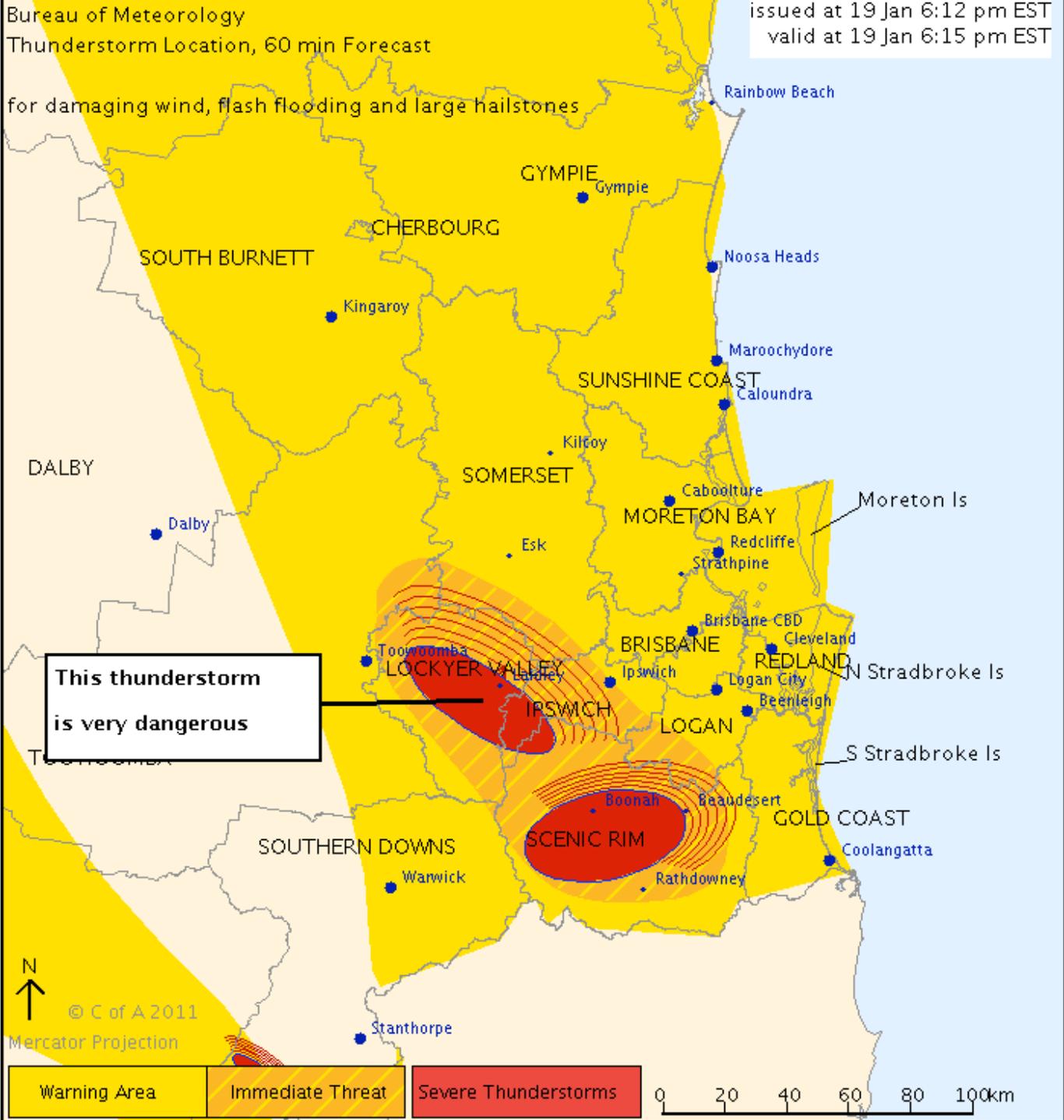
They are forecast to affect Beaudesert and Aratula by 6:45 pm and Rathdowney, Cunninghams Gap and Canungra by 7:15 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 6:12 pm EST  
valid at 19 Jan 6:15 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:15 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOCKYER VALLEY, IPSWICH CITY, SCENIC RIM and parts of the LOGAN CITY, SOUTHERN DOWNS, SOMERSET and TOOWOOMBA Council Areas.

Issued at 6:15 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 6:15 pm, very dangerous thunderstorms with intense rainfall were detected on weather radar near Laidley and Gatton. These thunderstorms are moving towards the northeast. Very dangerous thunderstorms are forecast to affect Rosewood, Hatton Vale and the area north of Gatton by 6:45 pm and Amberley, Marburg and Hampton by 7:15 pm.

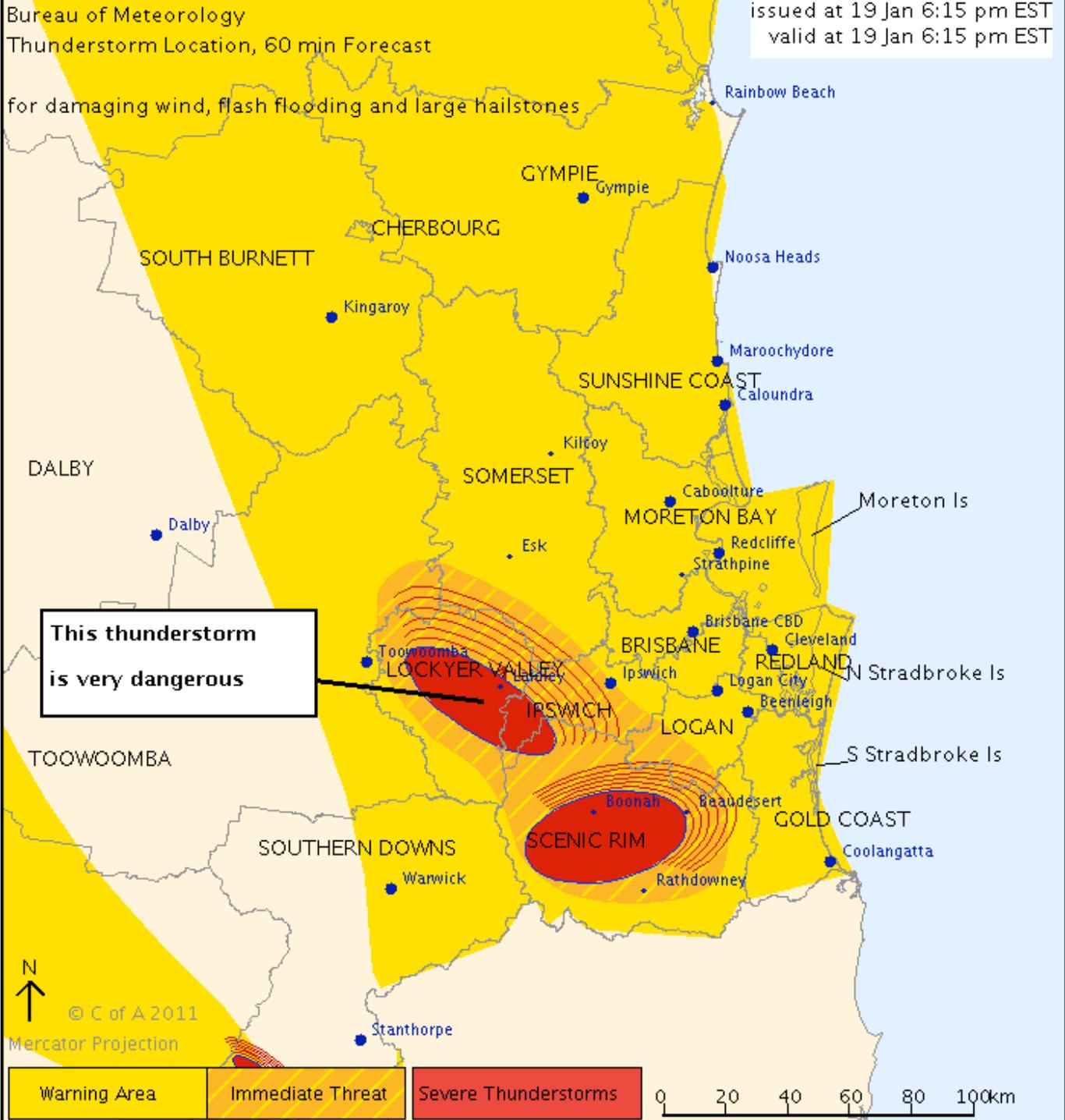
Other severe thunderstorms were located near Boonah, the area between Boonah and Beaudesert and the area southwest of Stanthorpe. They are forecast to affect Beaudesert and Aratula by 6:45 pm and Rathdowney and Canungra by 7:15 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

2cm hail was observed at Oakey



issued at 19 Jan 6:15 pm EST  
valid at 19 Jan 6:15 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:15 pm.

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

For people in the LOCKYER VALLEY, IPSWICH CITY, SCENIC RIM and parts of the LOGAN CITY, SOUTHERN DOWNS, SOMERSET and TOOWOOMBA Council Areas.

Issued at 6:20 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 6:15 pm, a very dangerous thunderstorm with intense rainfall was detected on weather radar near Laidley and Gatton.

This thunderstorm is moving towards the northeast. This very dangerous thunderstorm is forecast to affect Rosewood, Hatton Vale and the area north of Gatton by 6:45 pm and Amberley, Marburg and Hampton by 7:15 pm.

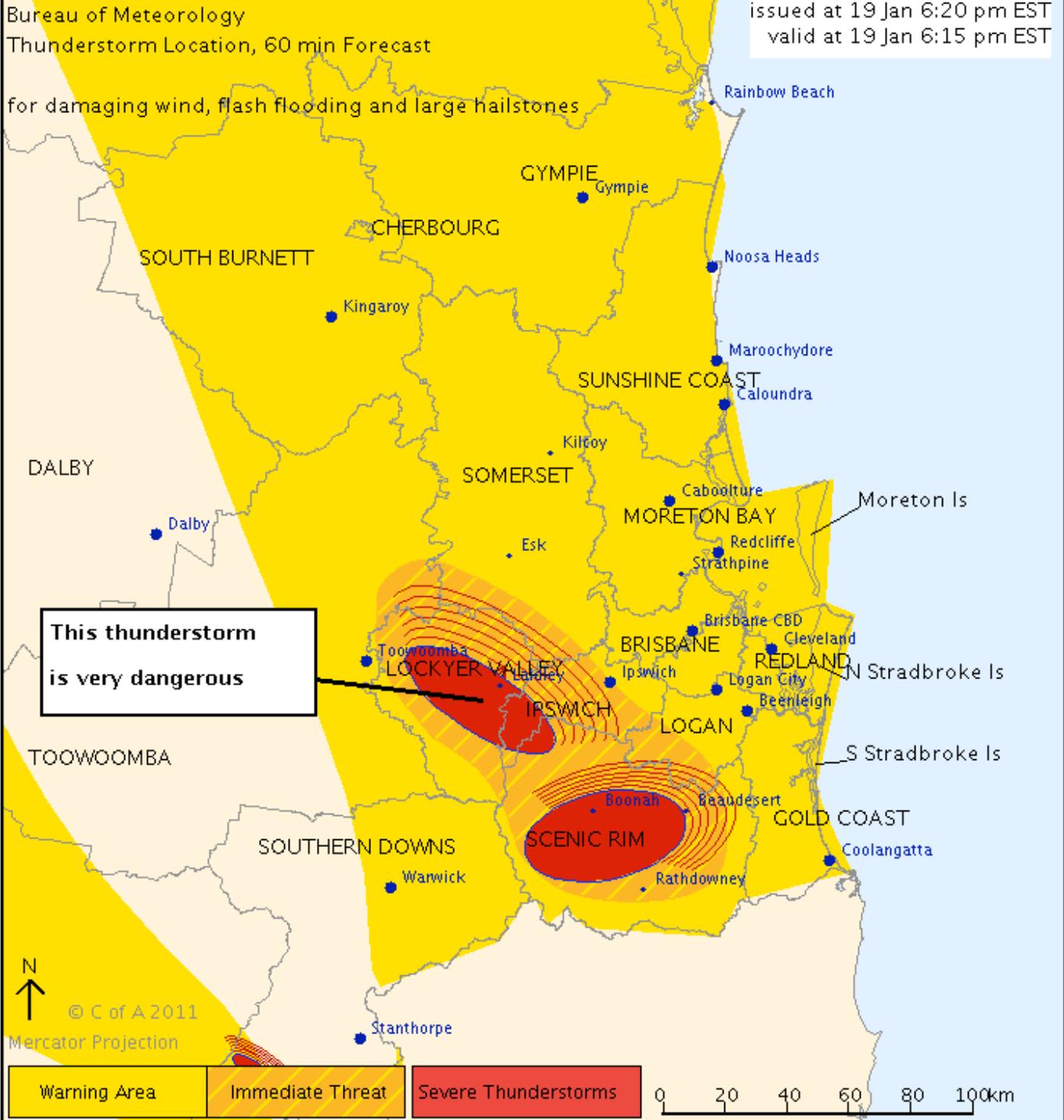
Other severe thunderstorms were located near Boonah, the area between Boonah and Beaudesert and the area southwest of Stanthorpe. They are forecast to affect Beaudesert and Aratula by 6:45 pm and Rathdowney and Canungra by 7:15 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Rainfall rates of 60mm/hr and 40mm/30 min have been observed near Tenthill [southwest of Gatton]



issued at 19 Jan 6:20 pm EST  
valid at 19 Jan 6:15 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 7:15 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in the LOGAN CITY, IPSWICH CITY and parts of the BRISBANE CITY, GOLD COAST CITY, LOCKYER VALLEY, SCENIC RIM, SOMERSET and REDLAND Council Areas.

Issued at 7:07 pm Wednesday, 19 January 2011.

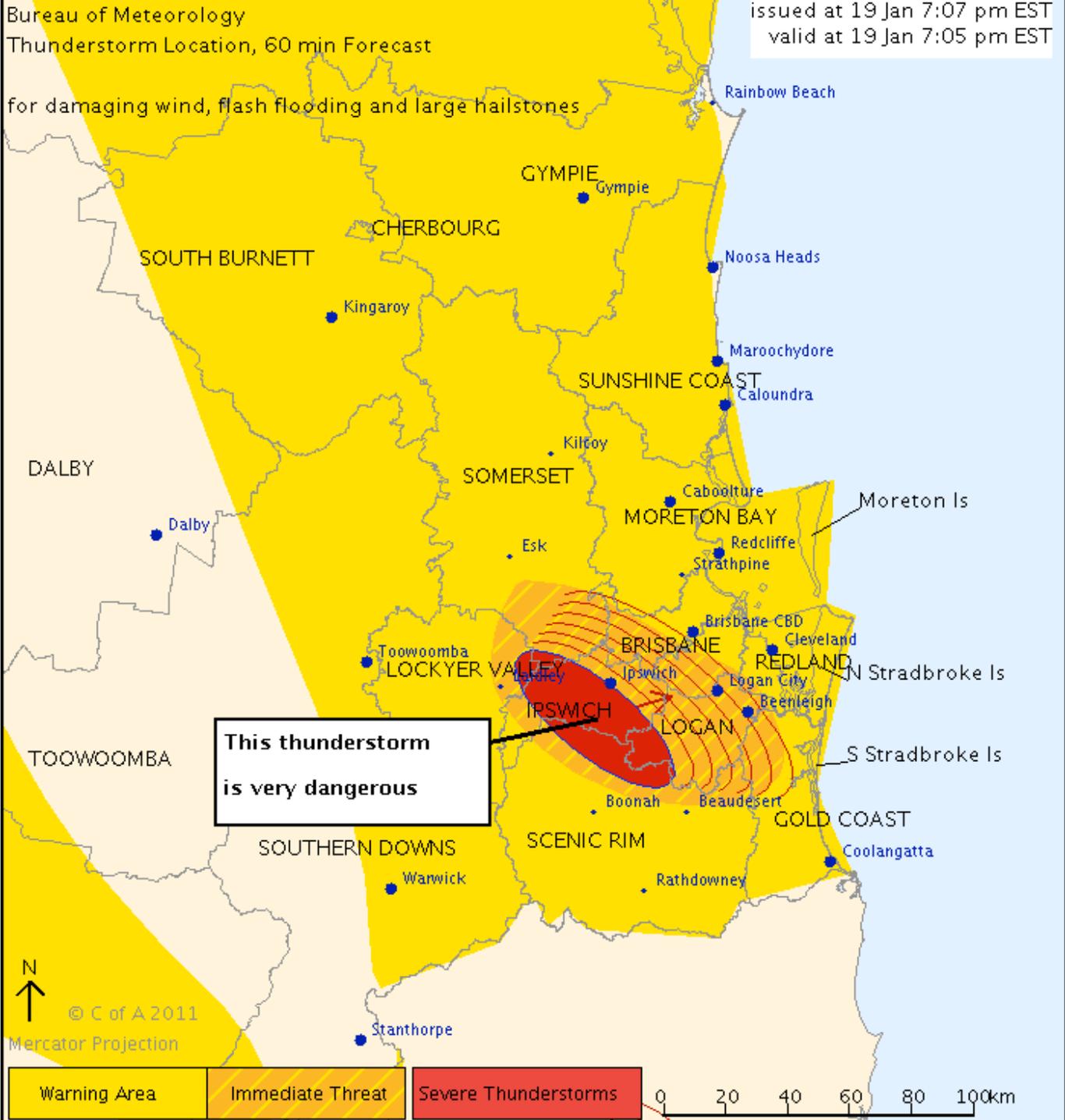
The Bureau of Meteorology warns that, at 7:05 pm, very dangerous thunderstorm with intense rainfall was detected on weather radar near Amberley, Rosewood, Hatton Vale, Marburg and Harrisville. This thunderstorm is moving towards the northeast. This thunderstorm is forecast to affect Ipswich, Redbank Plains, Lowood and Fernvale by 7:35 pm and Beenleigh, Logan City, Enoggera Reservoir and Mount Nebo by 8:05 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Rainfall rates of 52mm in 30 minutes has been observed at Romani, SSE of Ipswich.



issued at 19 Jan 7:07 pm EST  
valid at 19 Jan 7:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:05 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and FLASH FLOODING

For people in the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Maranoa and Warrego and Darling Downs and Granite Belt Forecast Districts.

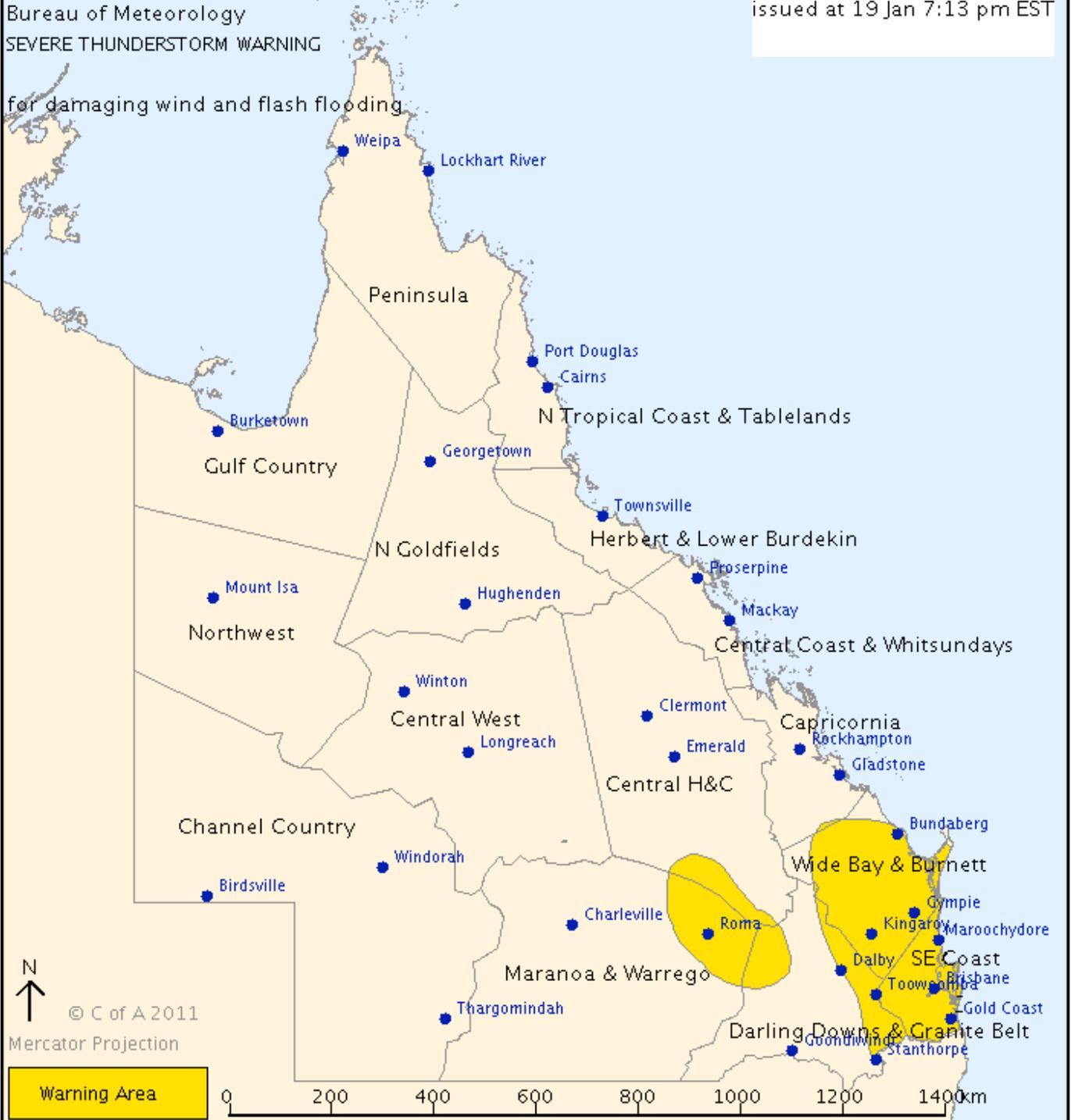
Issued at 7:13 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Warwick, Gold Coast, Toowoomba, Brisbane, Maroochydore, Gympie, Bundaberg, Kingaroy and Roma.

Rainfall rates of 52mm in 30 minutes has been observed at Romani, SSE of Ipswich.



issued at 19 Jan 7:13 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:15 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES  
For people in the LOGAN CITY, IPSWICH CITY and parts of the BRISBANE CITY,  
LOCKYER VALLEY, MORETON BAY, SCENIC RIM and SOMERSET Council Areas.

Issued at 7:25 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 7:05 pm, very dangerous thunderstorms were detected on weather radar near Ipswich, Amberley, Rosewood and Marburg.

These thunderstorms are moving towards the north.

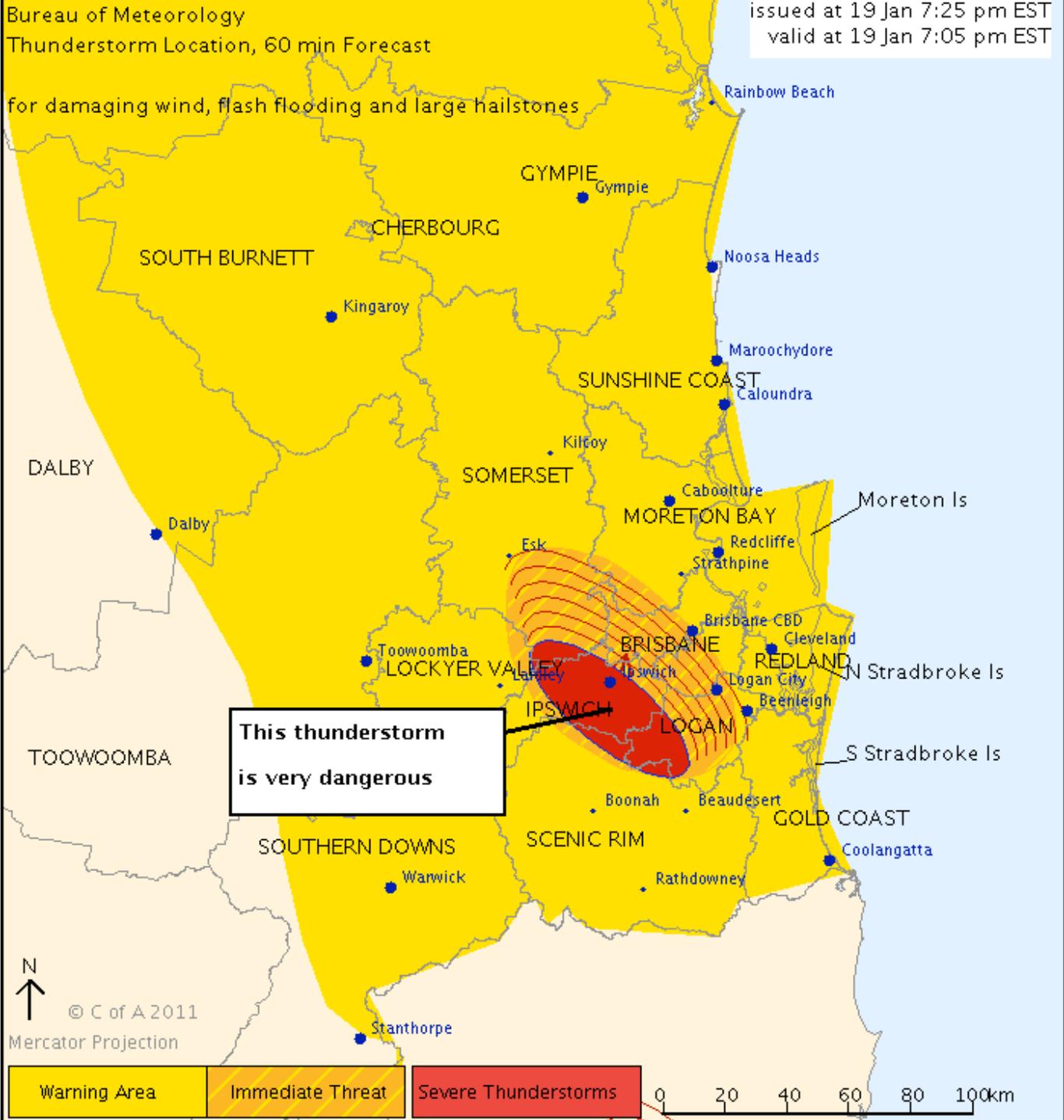
Very dangerous thunderstorms are forecast to affect Wacol, Lake Manchester, Lowood and Fernvale by 7:35 pm and Logan City, the area south of Esk, southern Lake Wivenhoe and the D'Aguiar Ranges by 8:05 pm.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.

Rainfall rates of 52mm in 30 minutes has been observed at Romani, SSE of Ipswich.



issued at 19 Jan 7:25 pm EST  
valid at 19 Jan 7:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:25 pm.

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**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Maranoa and Warrego and Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **FLASH FLOODING**

For people in the  
Wide Bay and Burnett,  
Southeast Coast and parts of the  
Darling Downs and Granite Belt Forecast Districts.

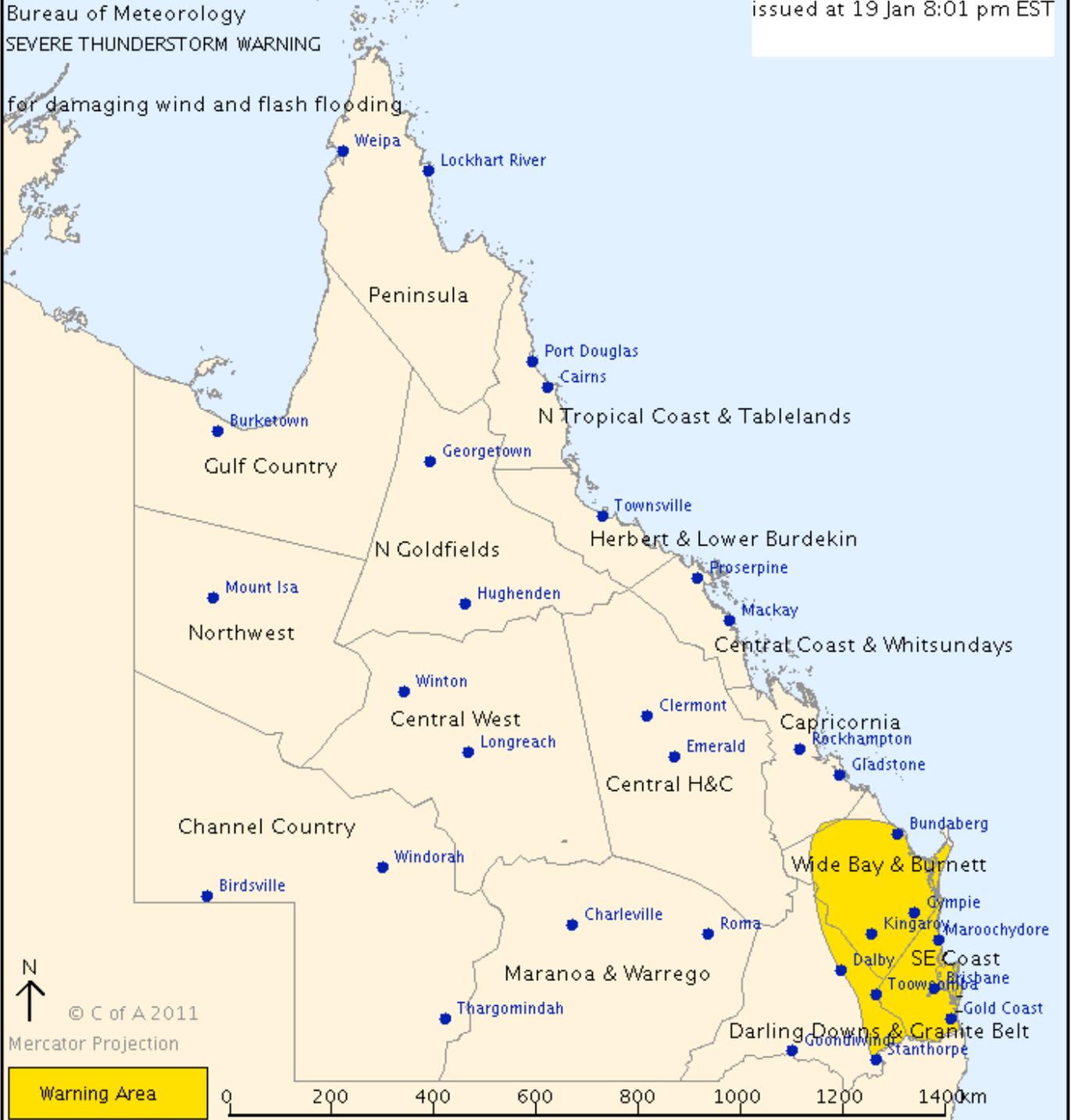
Issued at 8:01 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Warwick, Gold Coast, Toowoomba, Brisbane, Maroochydore, Gympie, Bundaberg, Kingaroy and Hervey Bay waters.

Rainfall rates of 52mm in 30 minutes has been observed at Romani, SSE of Ipswich.



issued at 19 Jan 8:01 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:05 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND and FLASH FLOODING**

For people in the  
BRISBANE CITY,  
MORETON BAY and parts of the  
IPSWICH CITY and  
SOMERSET Council Areas.

Issued at 8:03 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 8:05 pm, severe thunderstorms were detected on weather radar near Enoggera Reservoir, Mount Nebo, Highvale, Samford and Wacol.

These thunderstorms are moving towards the north to northeast.

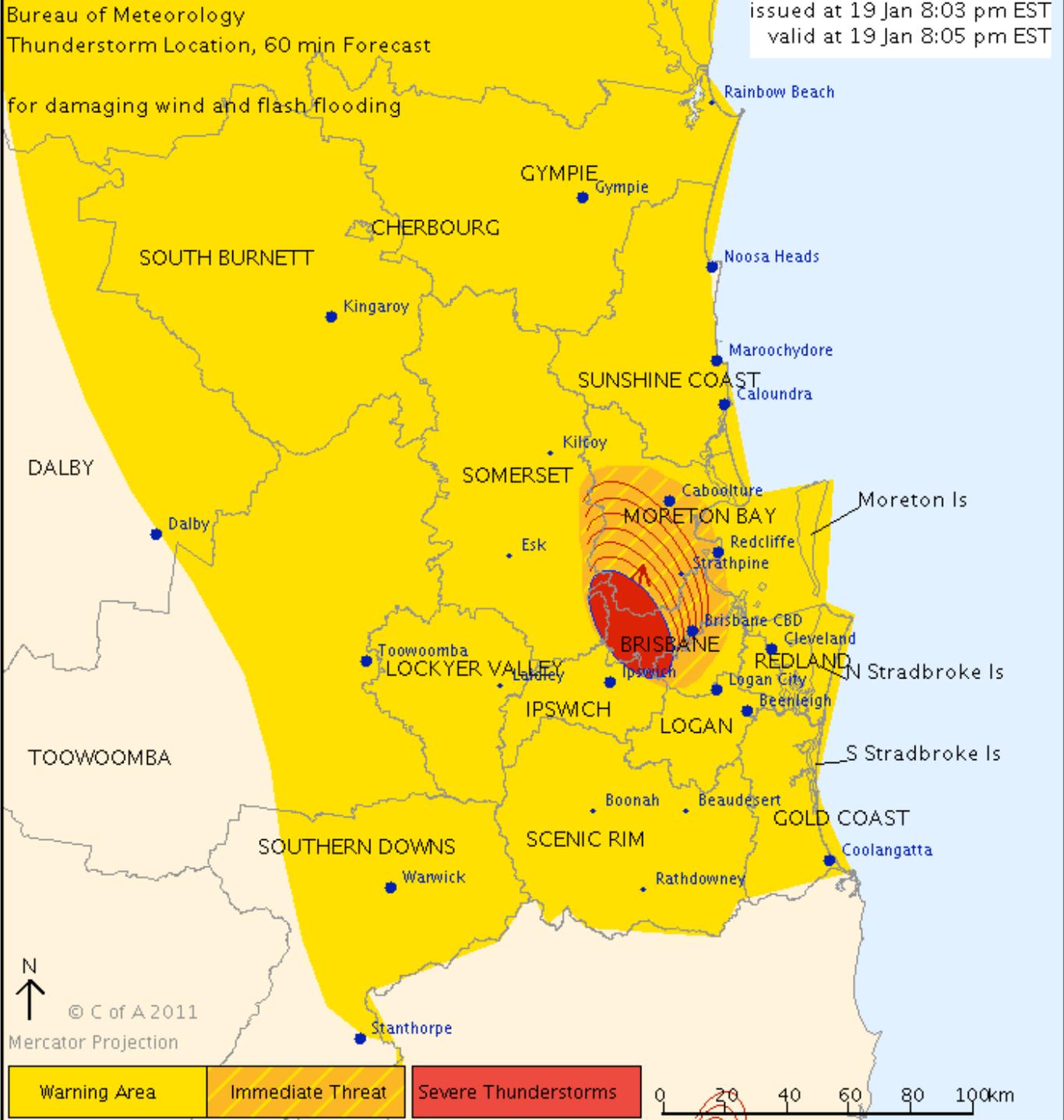
They are forecast to affect Albany Creek, the D'Aguilar Ranges, Lake Samsonvale and Dayboro by 8:35 pm and Brisbane CBD, Strathpine, Burpengary and Mount Mee by 9:05 pm.

Damaging winds, very heavy rainfall and flash flooding are likely.

Rainfall rates of 52mm in 30 minutes has been observed at Romani, SSE of Ipswich.



issued at 19 Jan 8:03 pm EST  
valid at 19 Jan 8:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:05 pm.

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**Australian Government**

**Bureau of Meteorology**

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND and FLASH FLOODING**

For people in the  
MORETON BAY and parts of the  
BRISBANE CITY,  
SUNSHINE COAST and  
SOMERSET Council Areas.

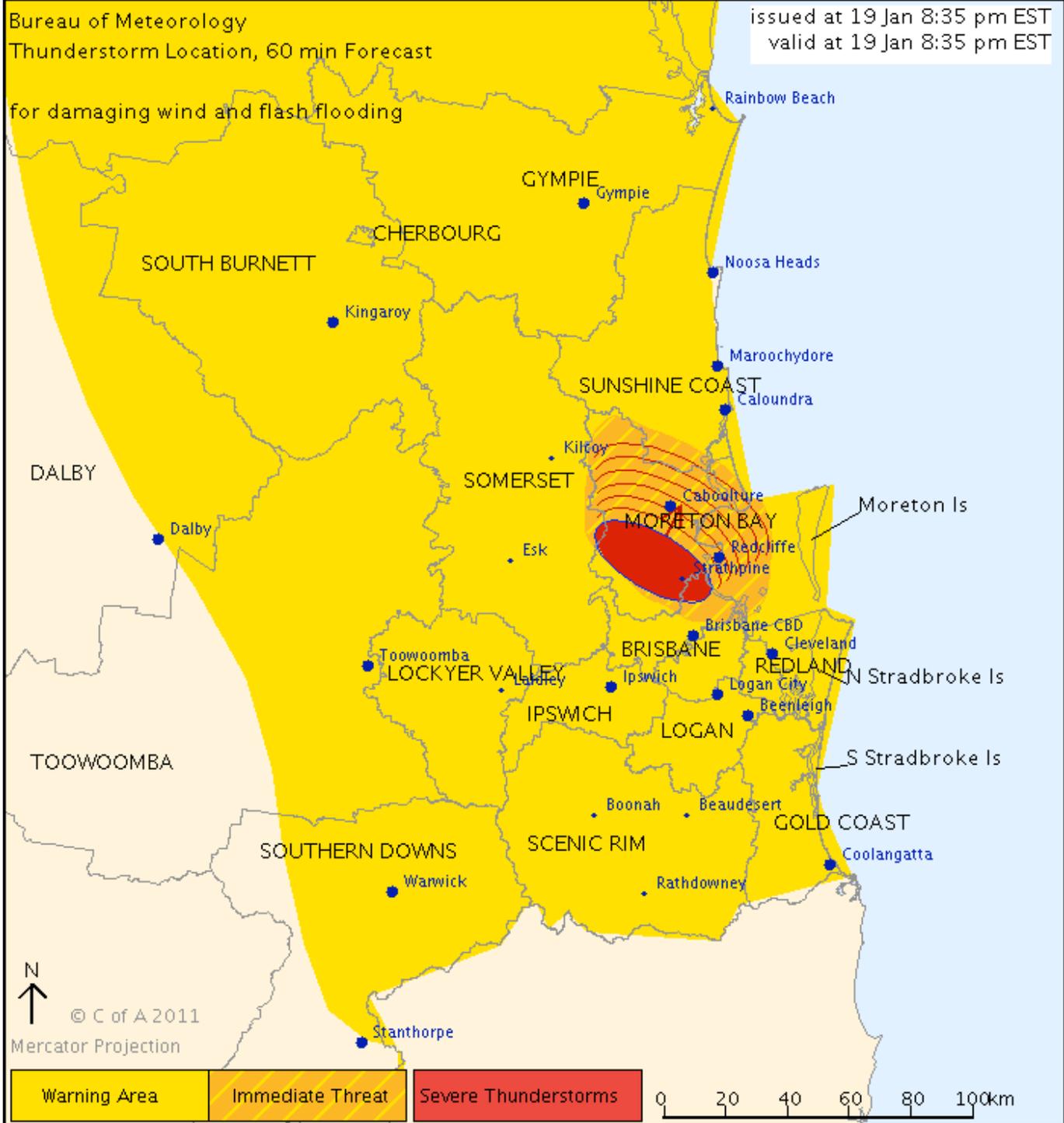
Issued at 8:35 pm Wednesday, 19 January 2011.

The Bureau of Meteorology warns that, at 8:35 pm, a severe thunderstorm is detected on weather radar near Strathpine, Kallangur, Narangba and Dayboro. This thunderstorm is moving towards the northeast. This thunderstorm is forecast to affect Redcliffe, Caboolture, Mount Mee and Wamuran by 9:05 pm and Deception Bay waters, Bribie Island, Beerburrum and Woodford by 9:35 pm.

Damaging winds, very heavy rainfall and flash flooding are likely.



issued at 19 Jan 8:35 pm EST  
valid at 19 Jan 8:35 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 9:35 pm.

A more general severe thunderstorm warning is also current for the Wide Bay and Burnett, Southeast Coast and parts of the Darling Downs and Granite Belt districts.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

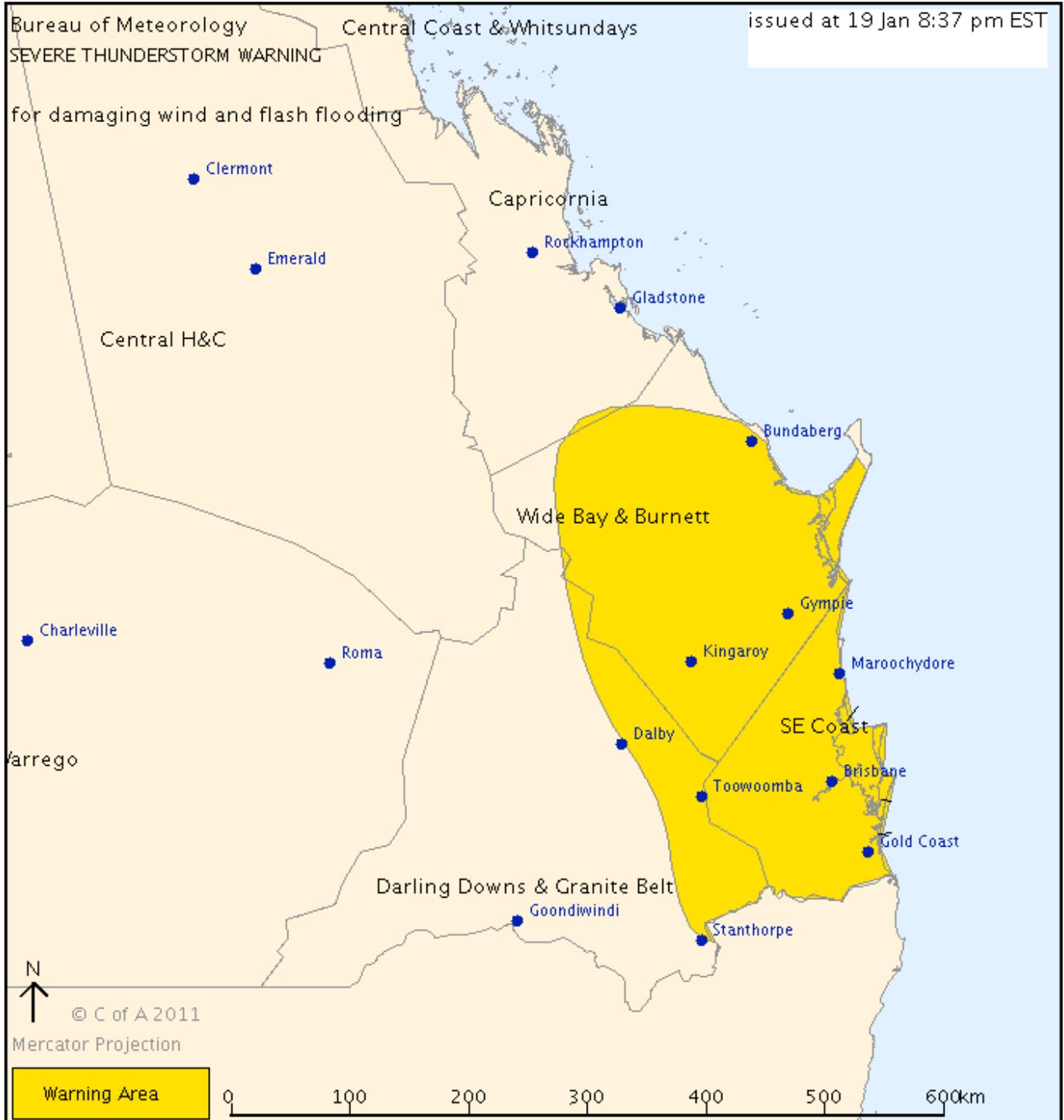
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and FLASH FLOODING  
For people in the  
Wide Bay and Burnett,  
Southeast Coast and parts of the  
Darling Downs and Granite Belt Forecast Districts.

Issued at 8:37 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Warwick, Gold Coast, Toowoomba, Brisbane, Maroochydore, Gympie, Bundaberg, Kingaroy and Fraser Island.



issued at 19 Jan 8:37 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:40 pm.

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**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and FLASH FLOODING**

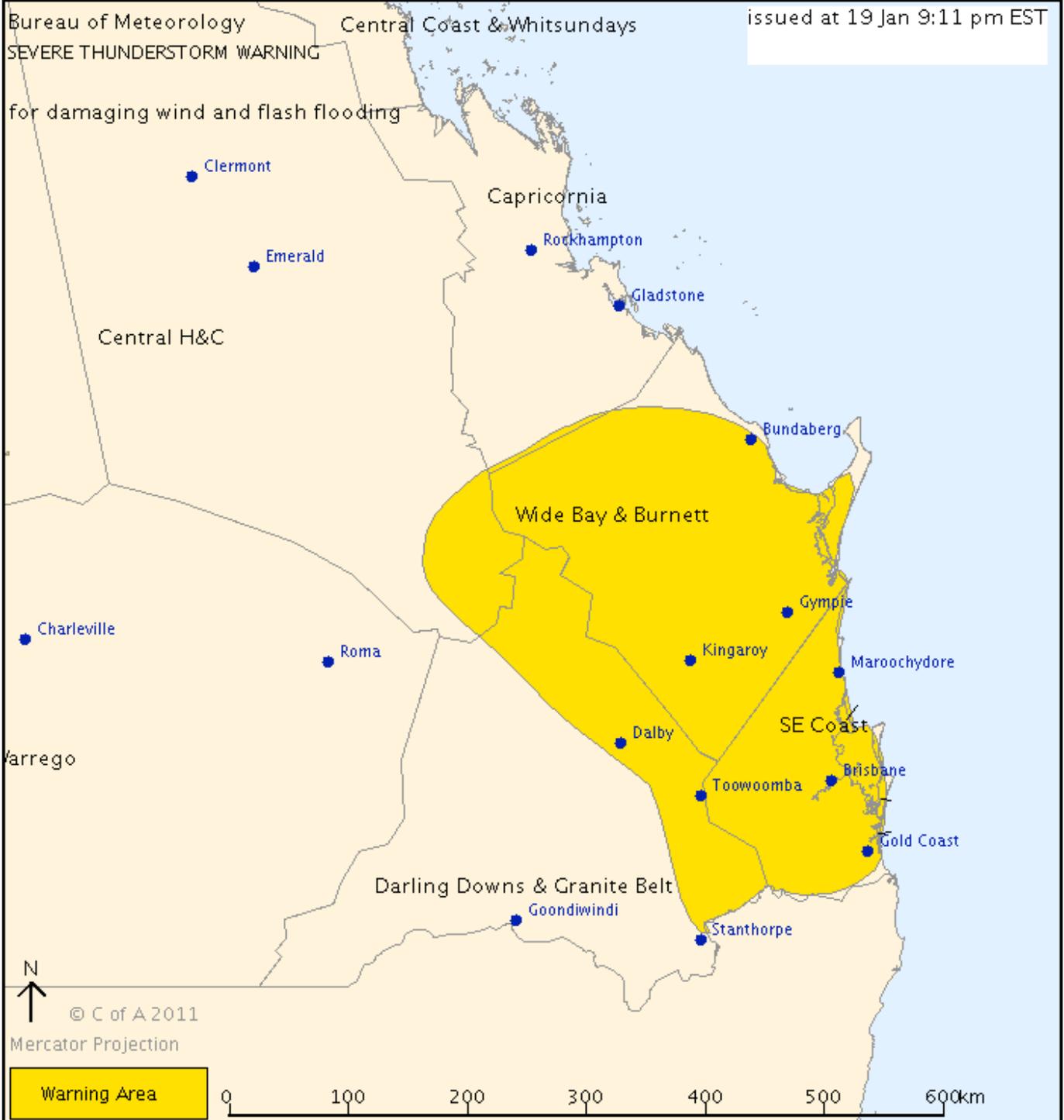
For people in the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia and Darling Downs and Granite Belt Forecast Districts.

Issued at 9:11 pm Wednesday, 19 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Warwick, Toowoomba, Brisbane, Dalby, Maroochydore, Gympie, Bundaberg and Kingaroy.



issued at 19 Jan 9:11 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:15 am Thursday.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

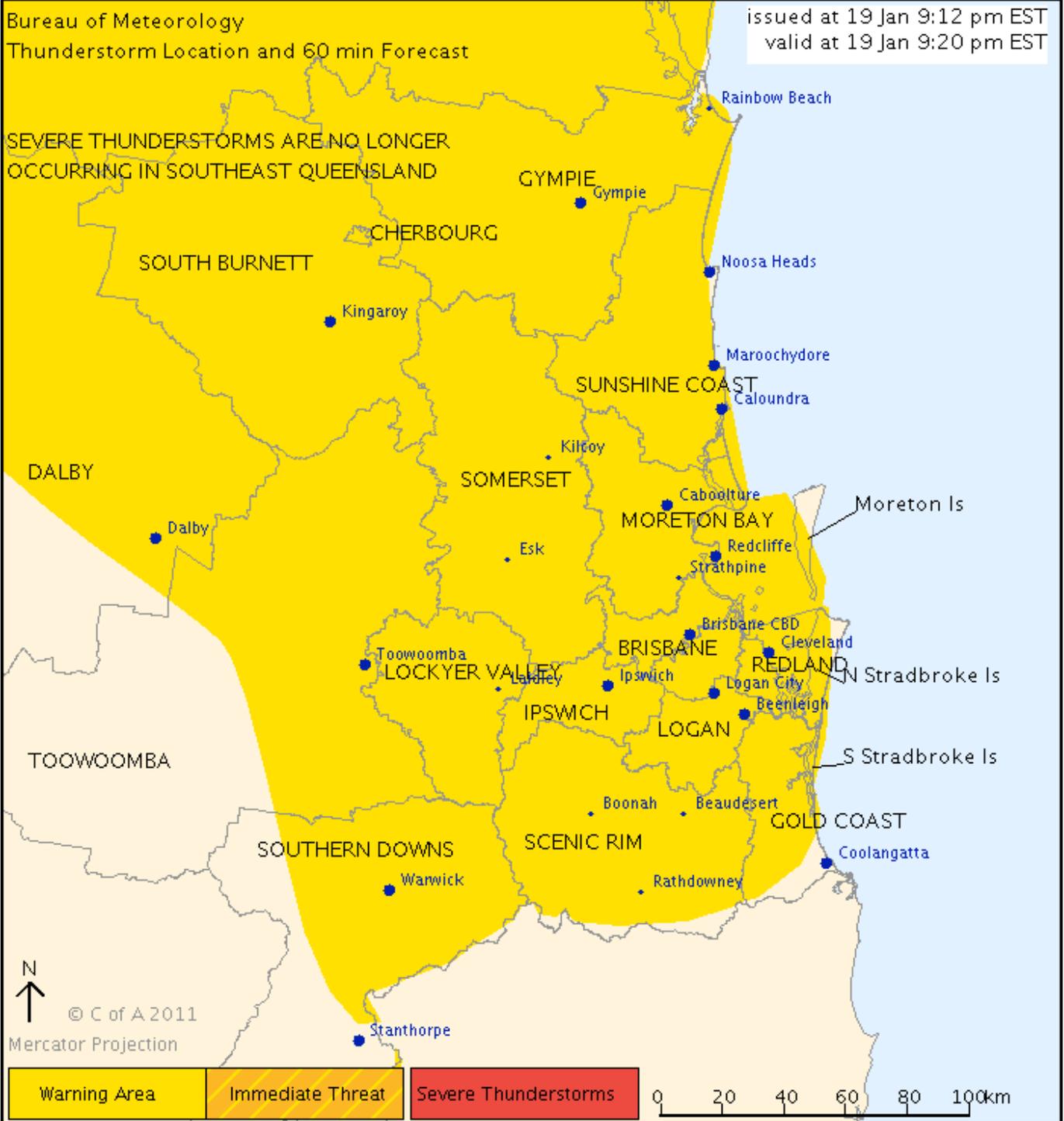
Issued at 9:12 pm Wednesday, 19 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 19 Jan 9:12 pm EST  
valid at 19 Jan 9:20 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for the Wide Bay and Burnett, Southeast Coast and parts of the Central Highlands and Coalfields, Capricornia and Darling Downs and Granite Belt districts.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

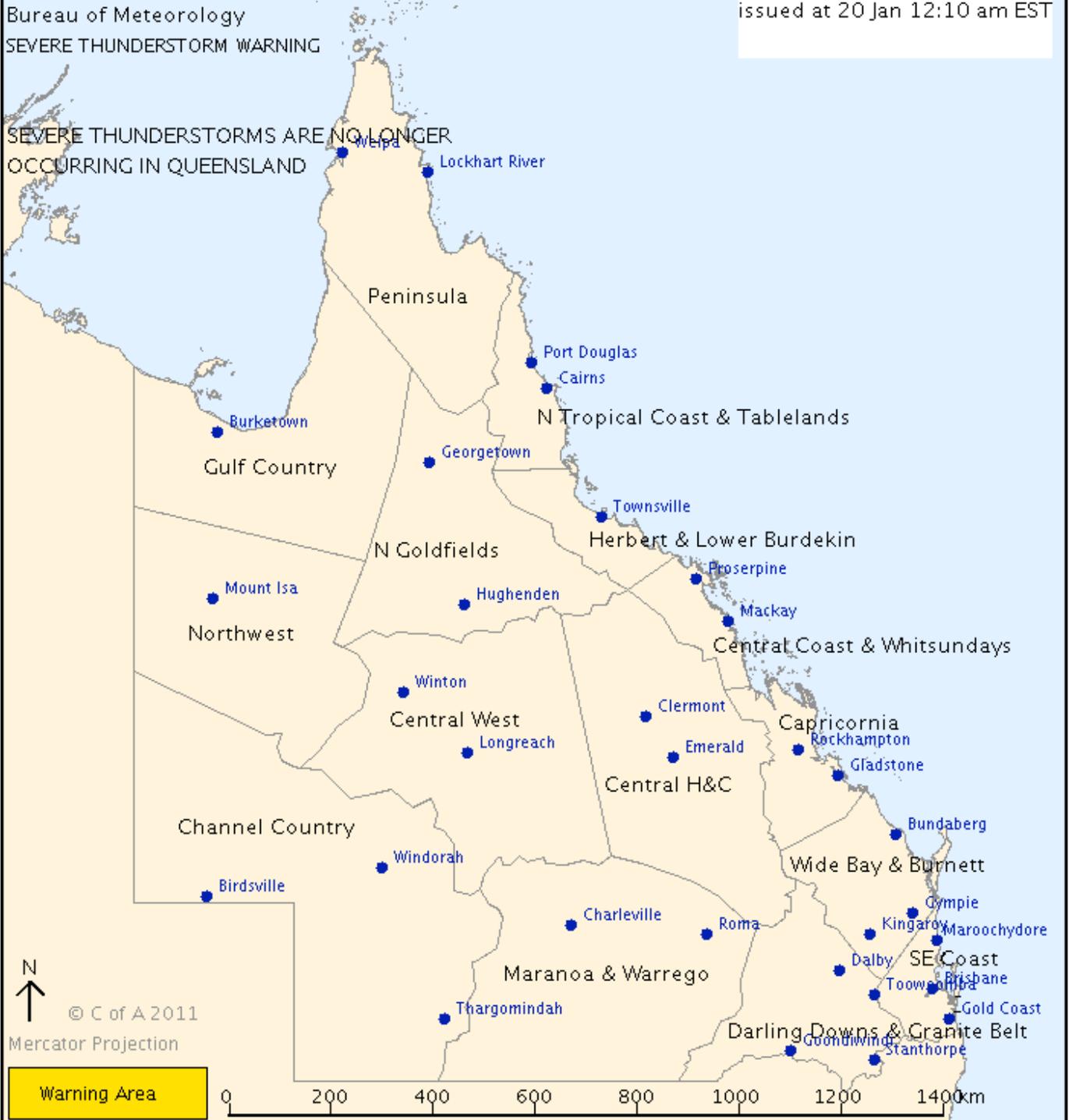
Issued at 12:10 am Thursday, 20 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 12:10 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20038

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

for FLASH FLOODING

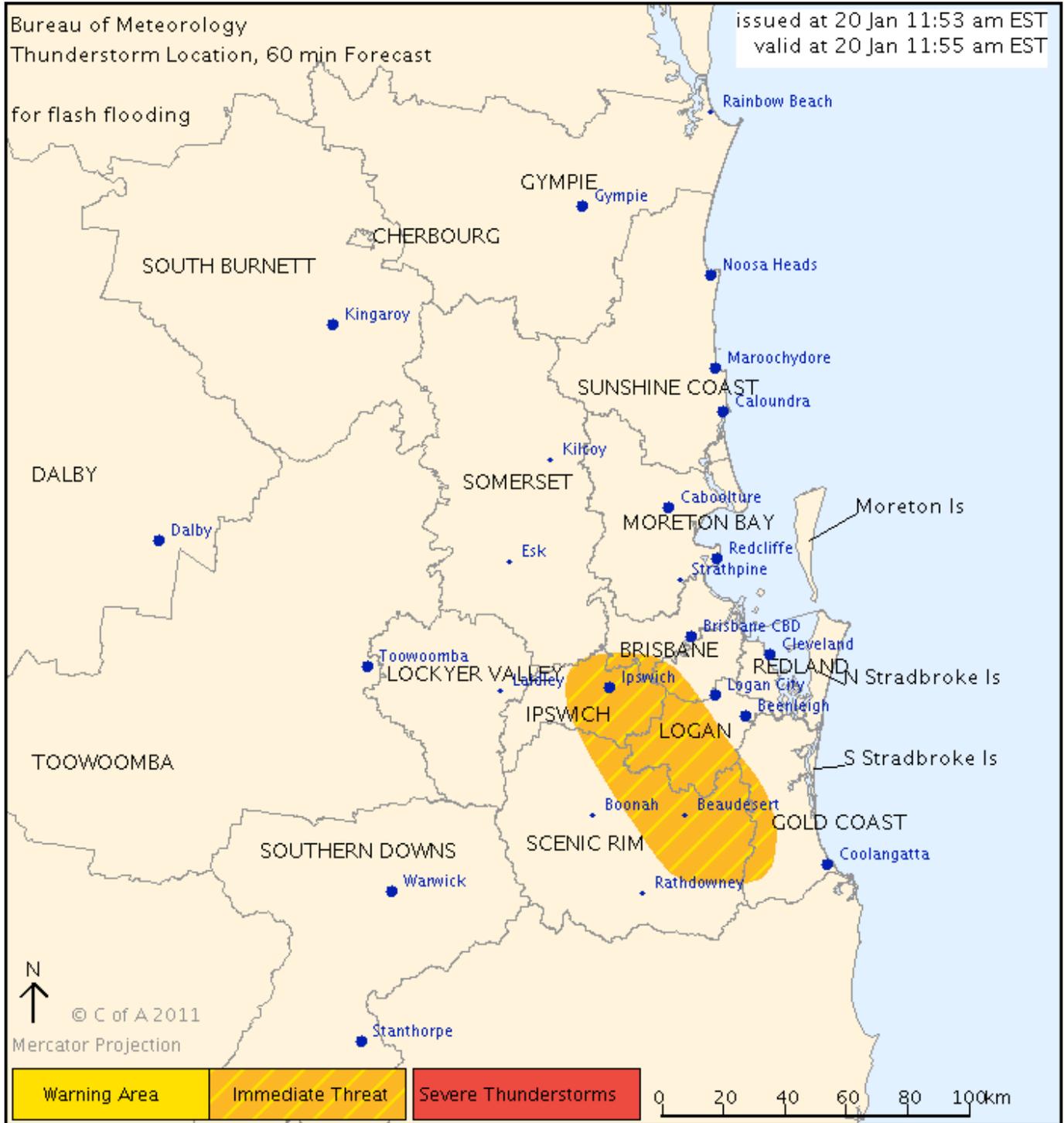
For people in the LOGAN CITY and parts of the BRISBANE CITY, GOLD COAST CITY, IPSWICH CITY and SCENIC RIM Council Areas.

Issued at 11:53 am Thursday, 20 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours.

Locations which may be affected

include Ipswich, Beaudesert and the area between Boonah and Beaudesert.



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:55 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for FLASH FLOODING**

For people in the LOGAN CITY, IPSWICH CITY and parts of the BRISBANE CITY,  
SCENIC RIM and SOMERSET Council Areas.

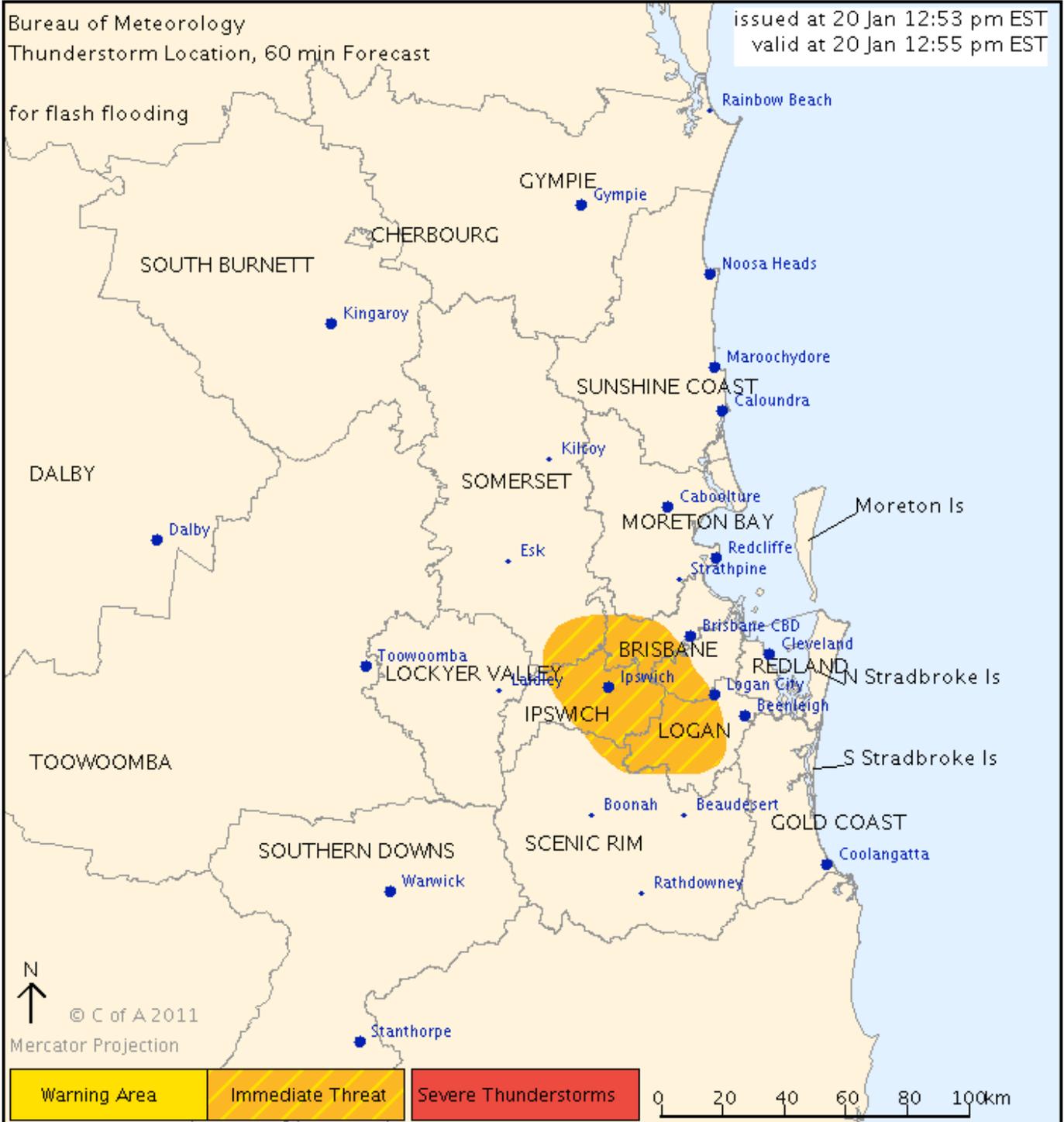
Issued at 12:53 pm Thursday, 20 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and could possibly cause localised flash flooding in the warning area over the next several hours.

Locations which may be affected include Ipswich.



issued at 20 Jan 12:53 pm EST  
valid at 20 Jan 12:55 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 1:55 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**  
for FLASH FLOODING  
For people in parts of the  
BRISBANE CITY,  
MORETON BAY and  
SOMERSET Council Areas.

Issued at 1:49 pm Thursday, 20 January 2011.

The Bureau of Meteorology warns that, at 1:55 pm, severe thunderstorms were detected on weather radar near Upper Brookfield.

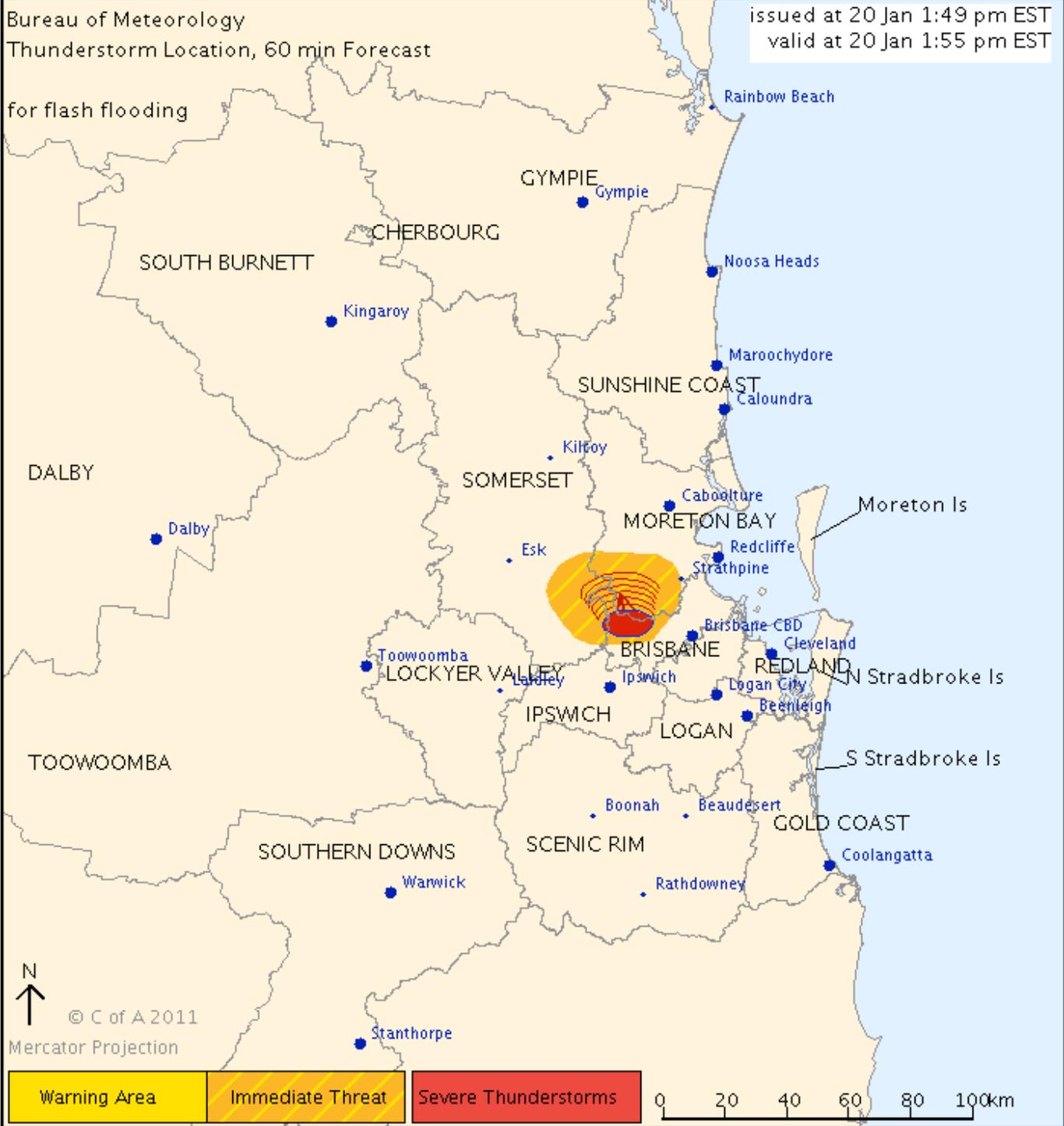
These thunderstorms are slow moving.

They are forecast to affect Highvale and Samford by 2:25 pm.

Very heavy rainfall and flash flooding are likely.



issued at 20 Jan 1:49 pm EST  
valid at 20 Jan 1:55 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 2:50 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

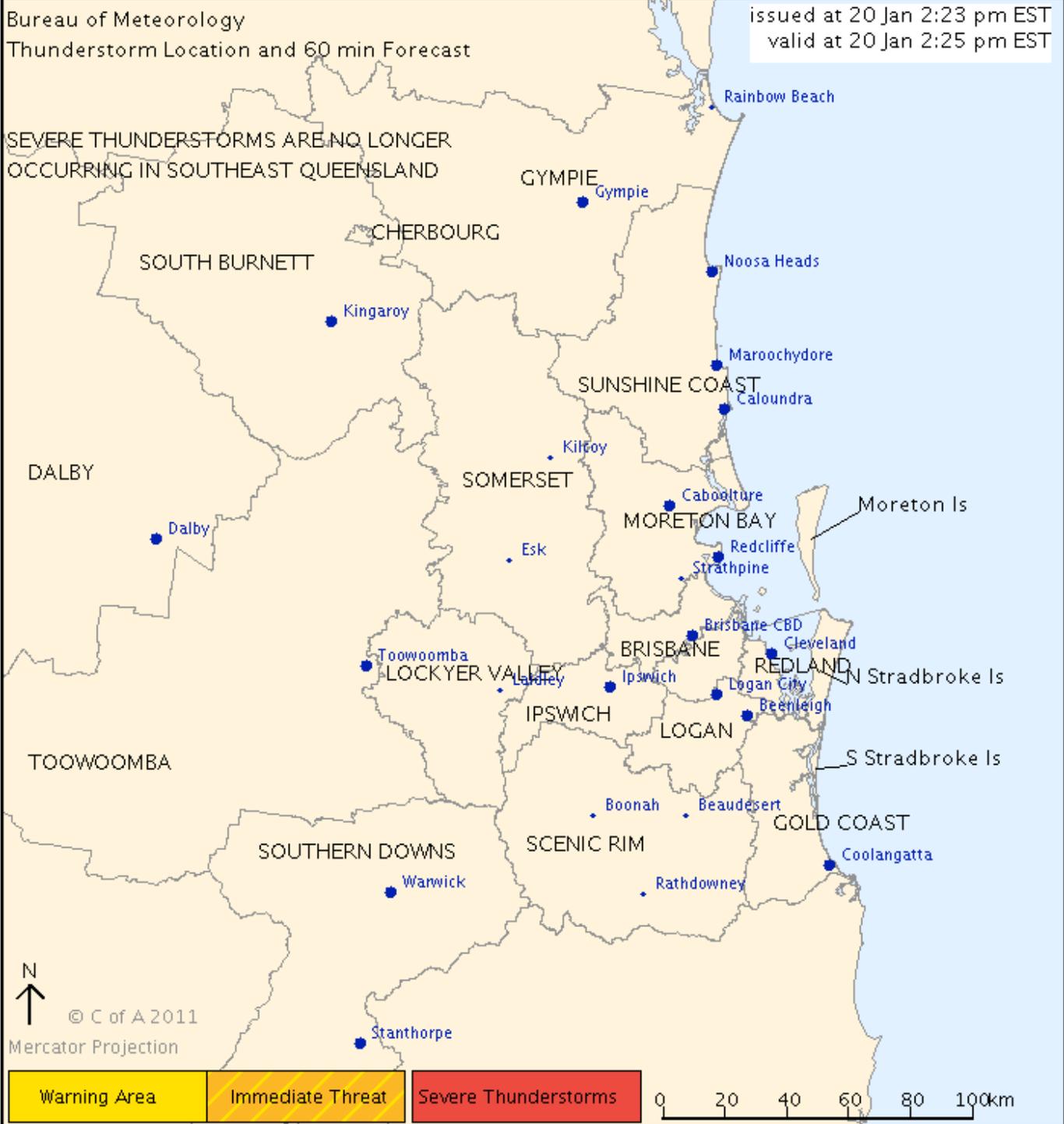
CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

Issued at 2:23 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 2:23 pm EST  
valid at 20 Jan 2:25 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



Australian Government

Bureau of Meteorology

IDQ20038

Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES

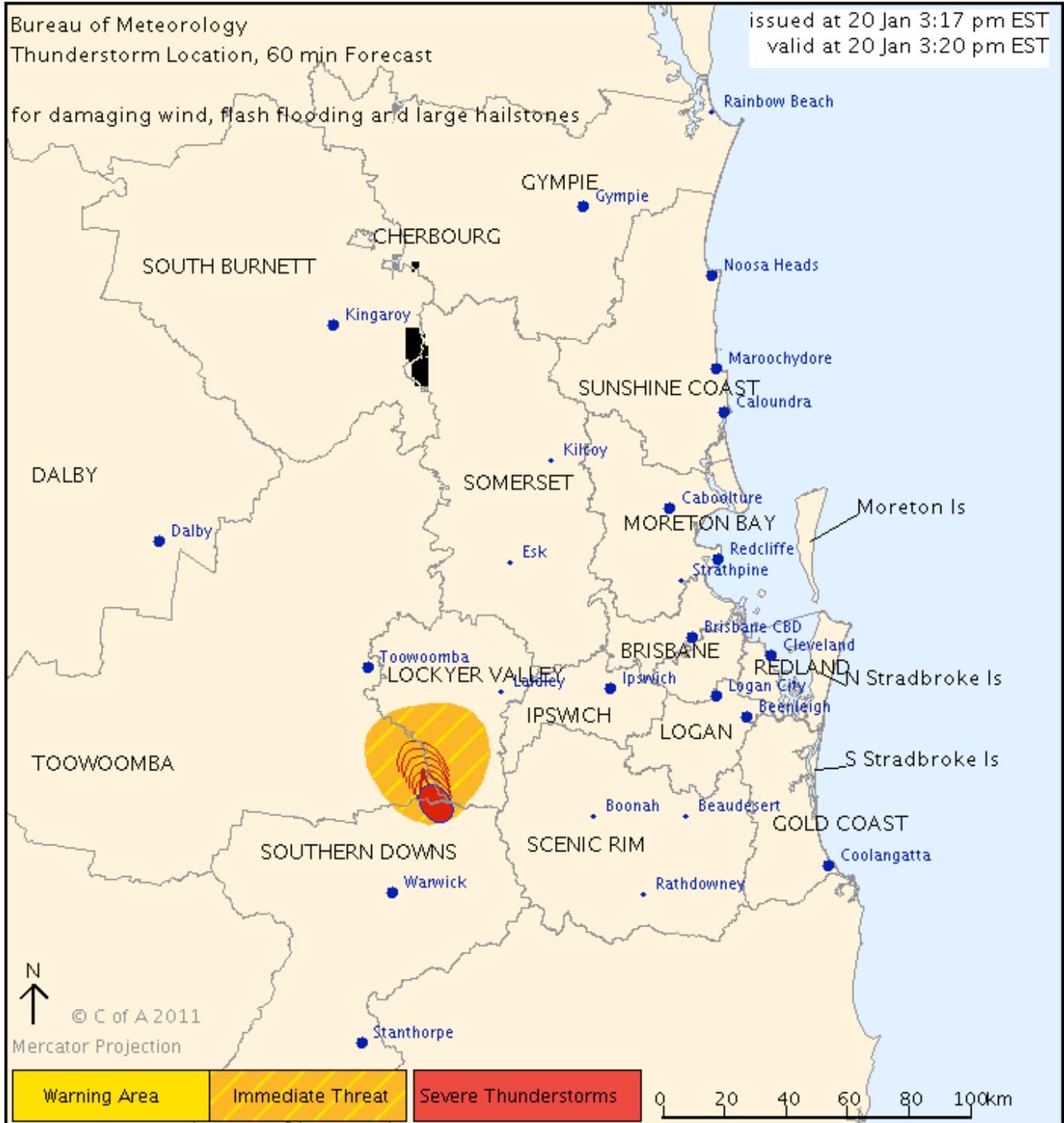
For people in parts of the  
LOCKYER VALLEY,  
SOUTHERN DOWNS and  
TOOWOOMBA Council Areas.

Issued at 3:17 pm Thursday, 20 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours.

Locations which may be affected

include the area northwest of Cunninghams Gap and the area south of Helidon.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 4:20 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

**for FLASH FLOODING**

For people in parts of the

**LOCKYER VALLEY,**

**IPSWICH CITY and**

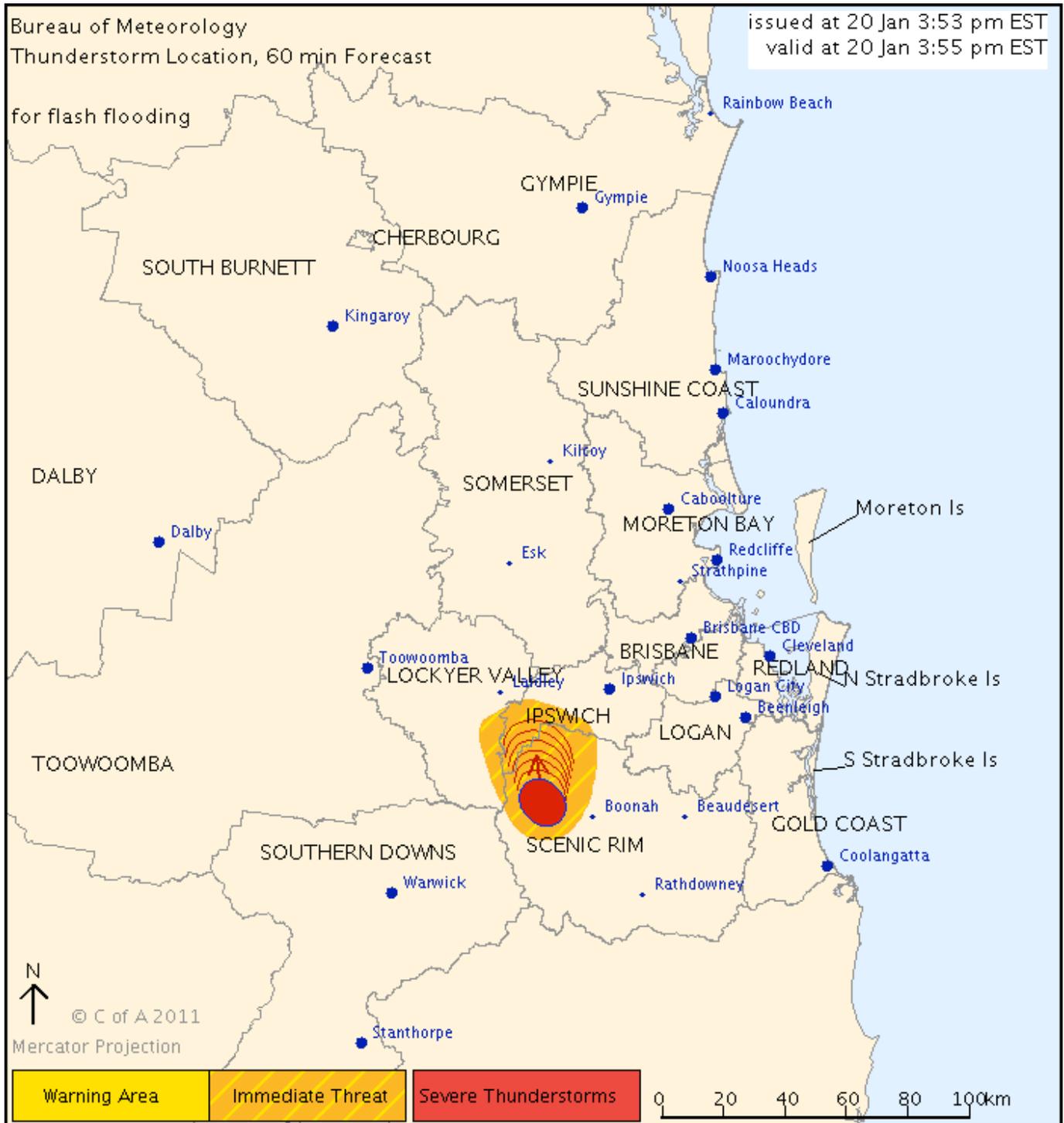
**SCENIC RIM Council Areas.**

Issued at 3:53 pm Thursday, 20 January 2011.

The Bureau of Meteorology warns that, at 3:55 pm, severe thunderstorms were detected on weather radar near Aratula.

They are forecast to affect Rosevale by 4:25 pm.

Very heavy rainfall and flash flooding are likely.



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 4:55 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20038  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

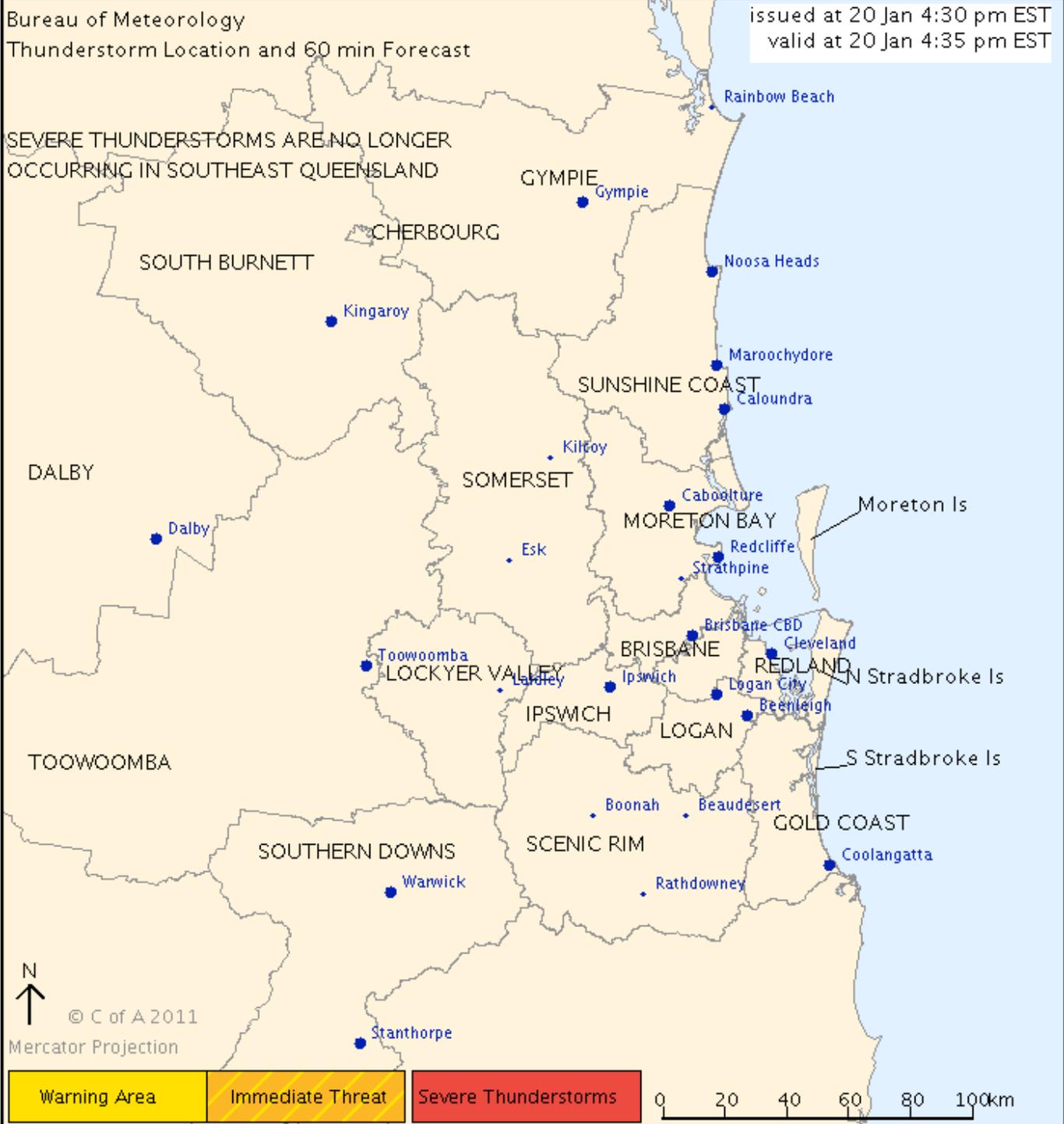
Issued at 4:30 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 4:30 pm EST  
valid at 20 Jan 4:35 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

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Bureau of Meteorology

Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the

LOCKYER VALLEY,

SOMERSET and

TOOWOOMBA Council Areas.

Issued at 4:47 pm Thursday, 20 January 2011.

The Bureau of Meteorology warns that, at 4:45 pm, severe thunderstorms were detected on weather radar near the area north of Gatton. Damaging winds, very heavy rainfall, flash flooding and large hailstones are possible.

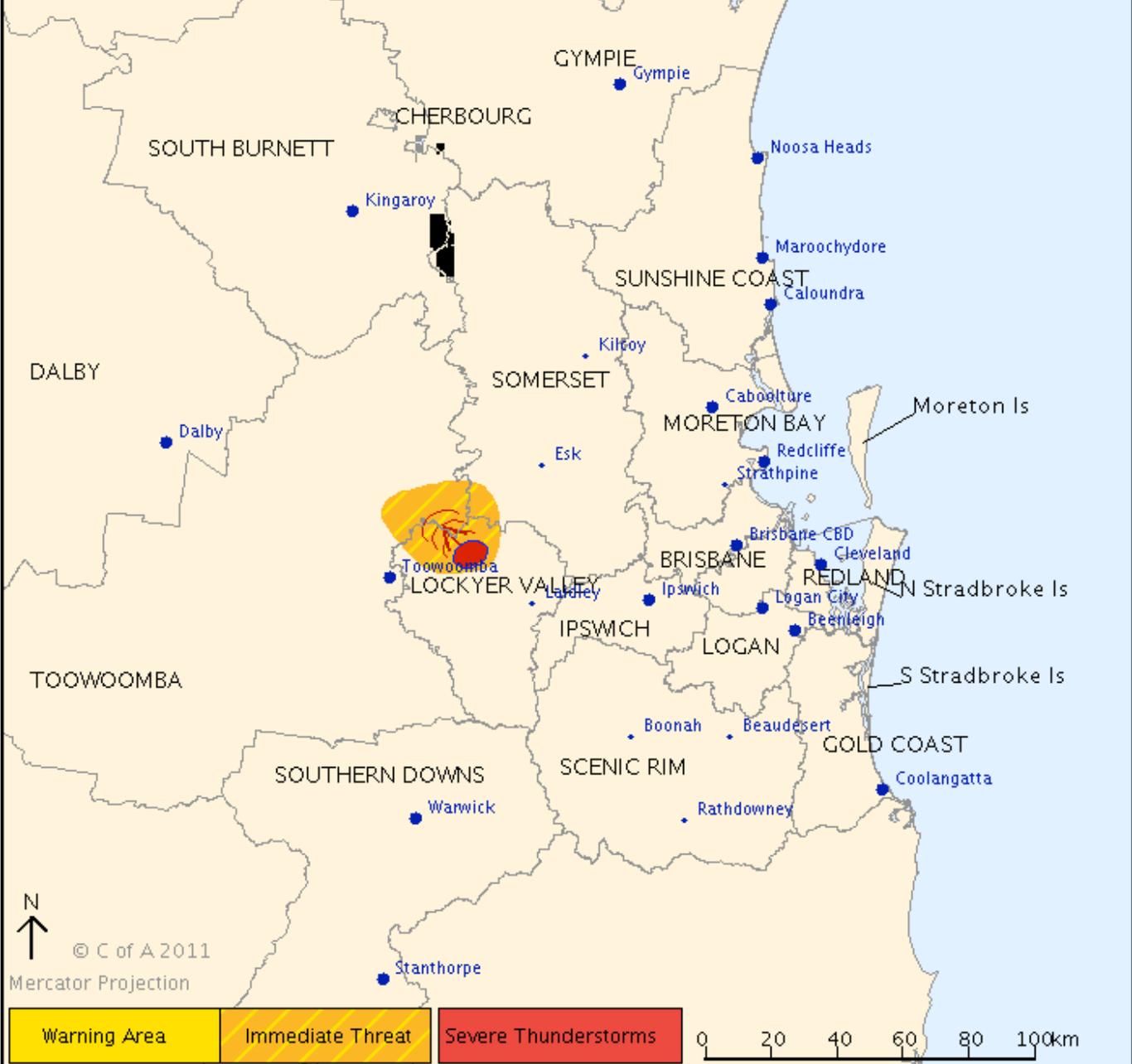


Bureau of Meteorology

Thunderstorm Location, 60 min Forecast

issued at 20 Jan 4:47 pm EST  
valid at 20 Jan 4:45 pm EST

for damaging wind, flash flooding and large hailstones



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 5:50 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

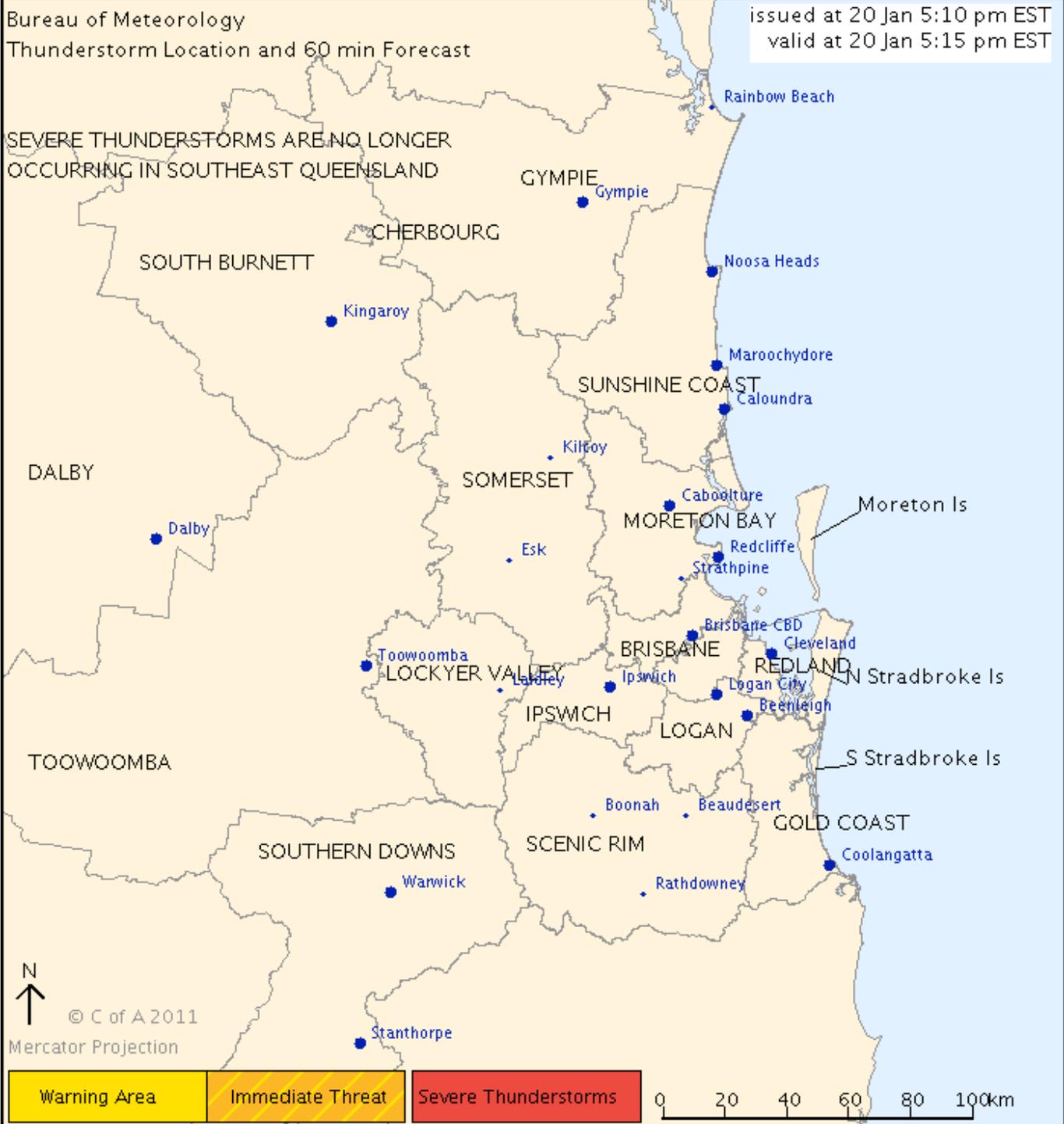
**CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

Issued at 5:10 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 5:10 pm EST  
valid at 20 Jan 5:15 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

IDQ20038

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND**

**for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the

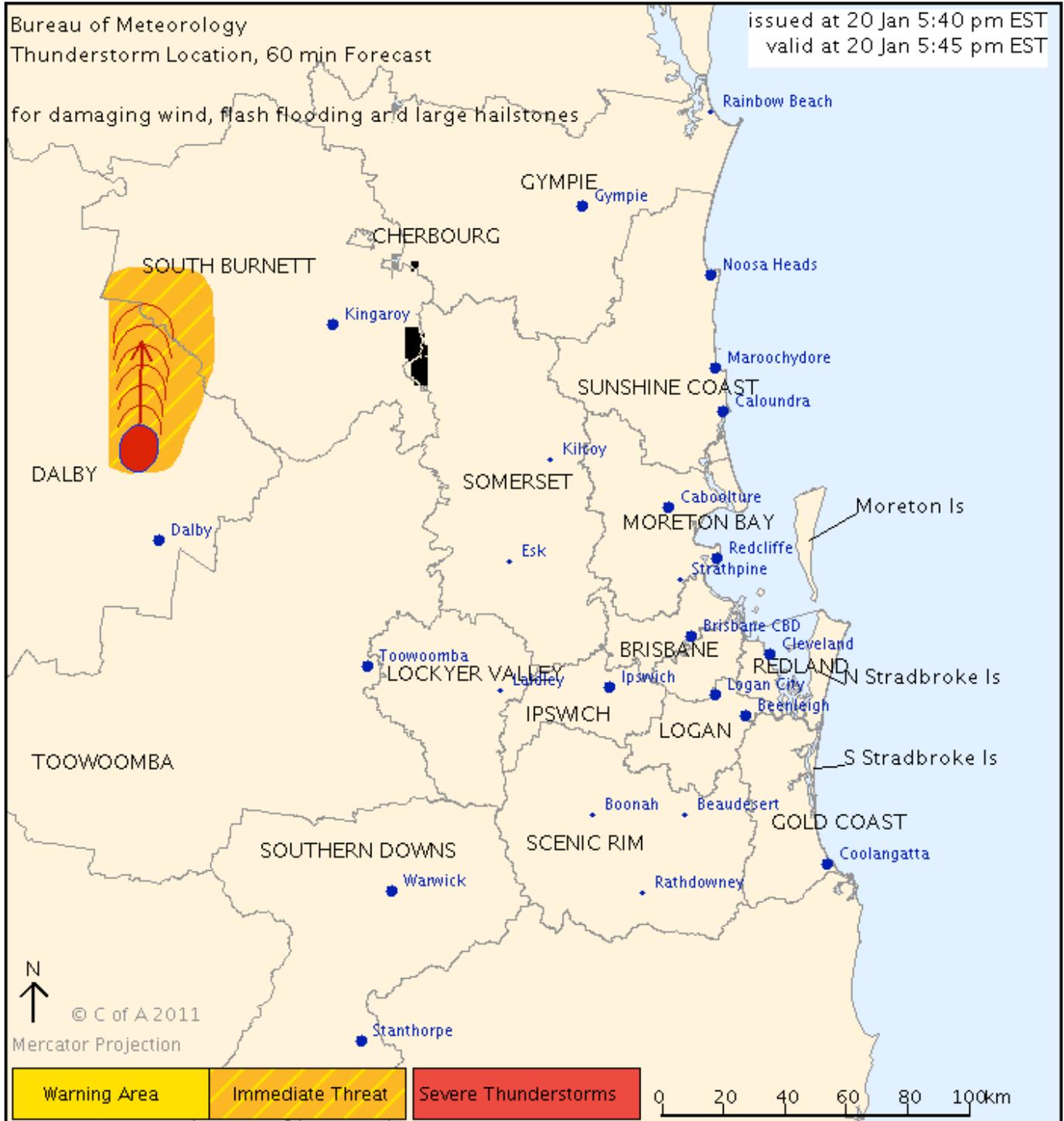
DALBY and

SOUTH BURNETT Council Areas.

Issued at 5:40 pm Thursday, 20 January 2011.

The Bureau of Meteorology warns that, at 5:45 pm, severe thunderstorms were detected on weather radar near Jimbour. These thunderstorms are moving towards the north.

Damaging winds, very heavy rainfall, flash flooding and large hailstones are likely.



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.



**Australian Government**

**Bureau of Meteorology**

The next warning is due to be issued by 6:40 pm.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

SEVERE THUNDERSTORM WARNING

for FLASH FLOODING

For people in parts of the  
Northern Tropical Coast and Tablelands Forecast District.

Issued at 5:44 pm Thursday, 20 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next hour. Locations which may be affected include Babinda.



issued at 20 Jan 5:44 pm EST

Bureau of Meteorology

SEVERE THUNDERSTORM WARNING

for flash flooding



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:45 pm.



**Australian Government**

**Bureau of Meteorology**

At 5:44 pm Thursday, 20 January 2011 a separate, more detailed Severe Thunderstorm Warning was current for the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe]. Refer to this product for more information.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**

For people in parts of the  
Northern Tropical Coast and Tablelands and  
Darling Downs and Granite Belt Forecast Districts.

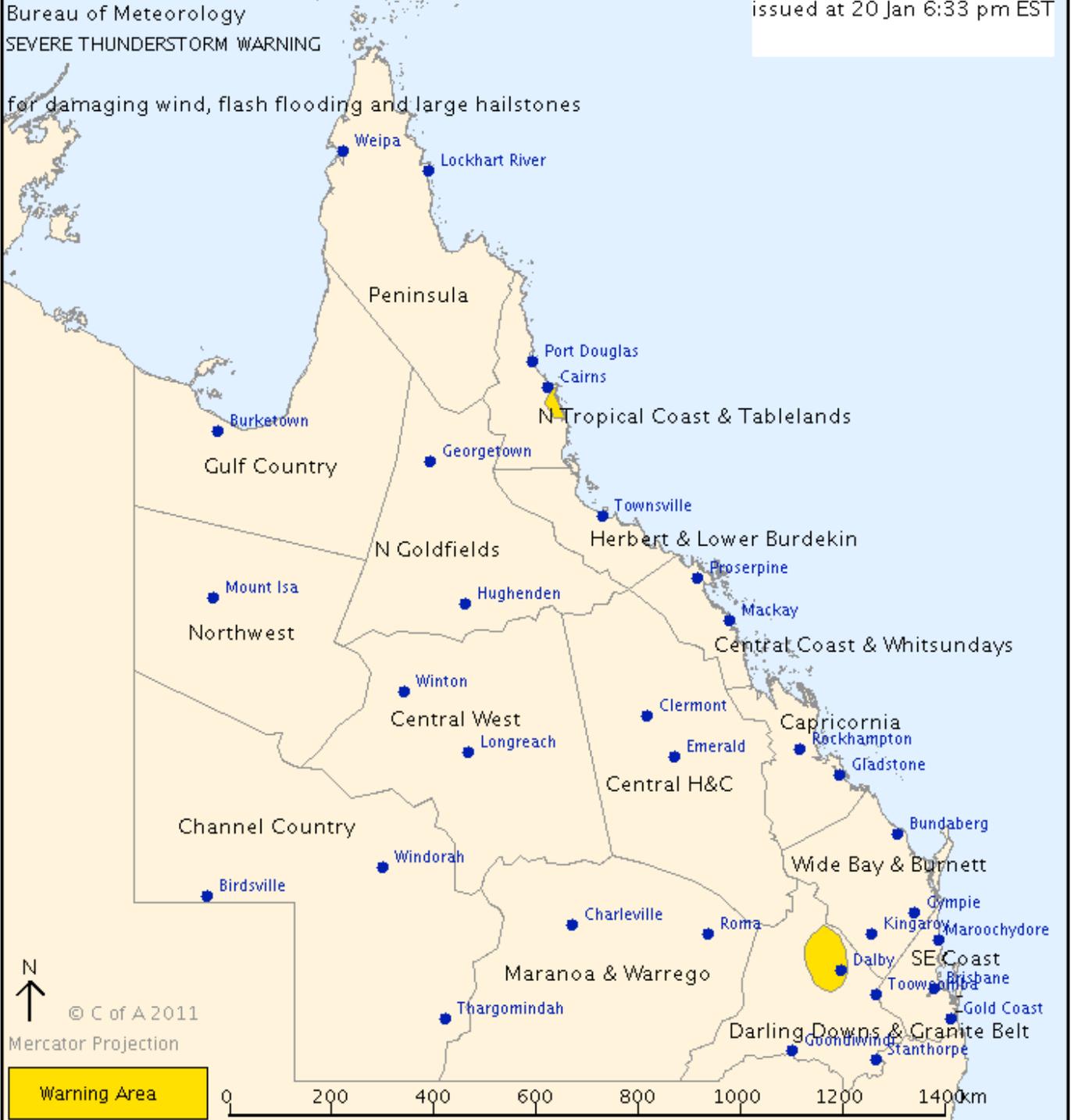
Issued at 6:33 pm Thursday, 20 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next hour or two in parts of the Northern Tropical Coast and Tablelands district. Locations which may be affected include Gordonvale and Babinda.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones over the next hour or two in parts of the Darling Downs and Granite Belt district.



issued at 20 Jan 6:33 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:35 pm.



**Australian Government**

**Bureau of Meteorology**

If severe thunderstorms develop in the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe], a more detailed Severe Thunderstorm Warning will be issued to people in this area.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING - SOUTHEAST QUEENSLAND

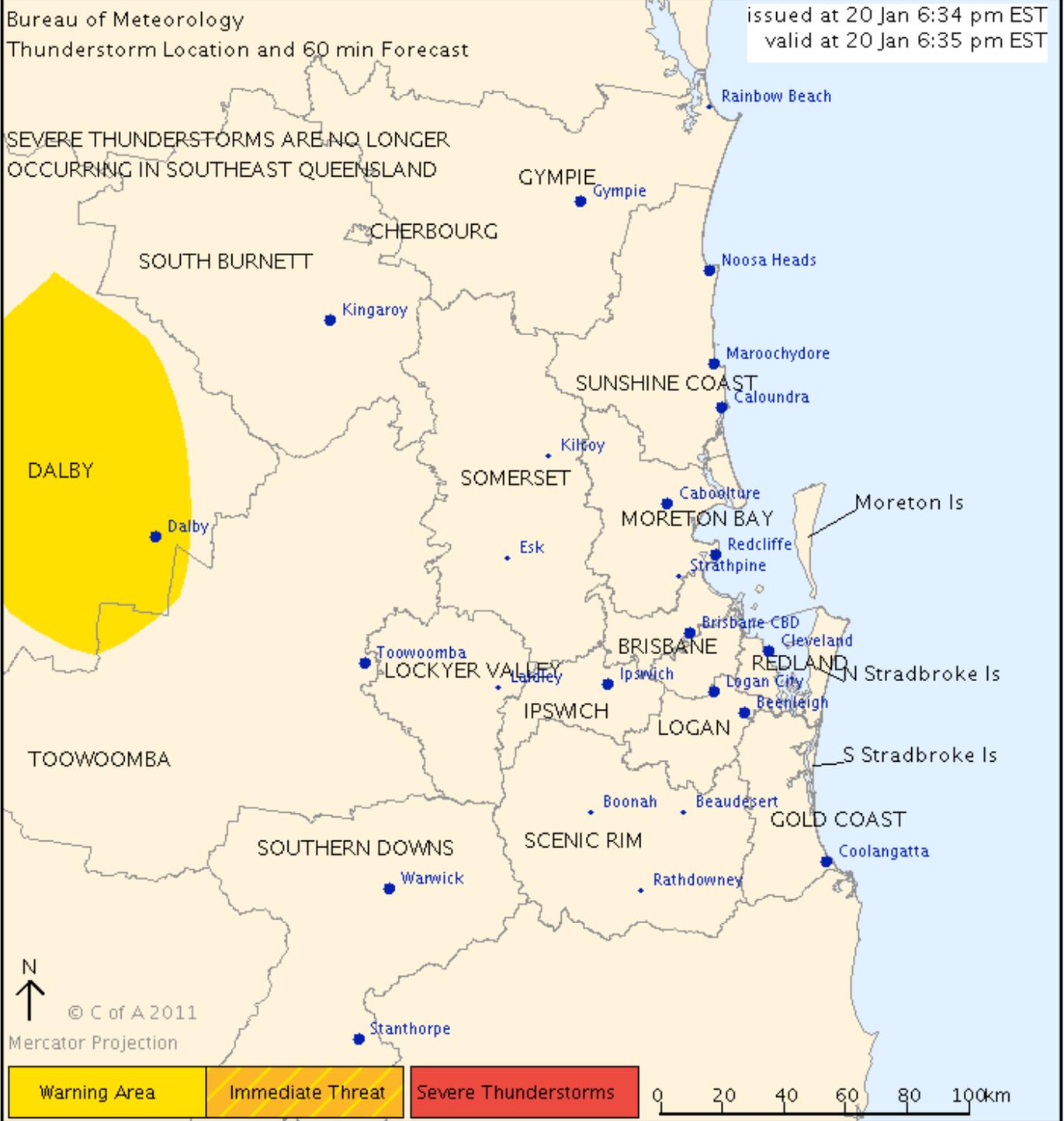
Issued at 6:34 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer affecting the Southeast Queensland area [east of Dalby from Rainbow Beach to Stanthorpe].

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 6:34 pm EST  
valid at 20 Jan 6:35 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

A more general severe thunderstorm warning remains current for parts of the Northern Tropical Coast and Tablelands and Darling Downs and Granite Belt districts.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

Issued at 6:58 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 6:58 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**

**Bureau of Meteorology**

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Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

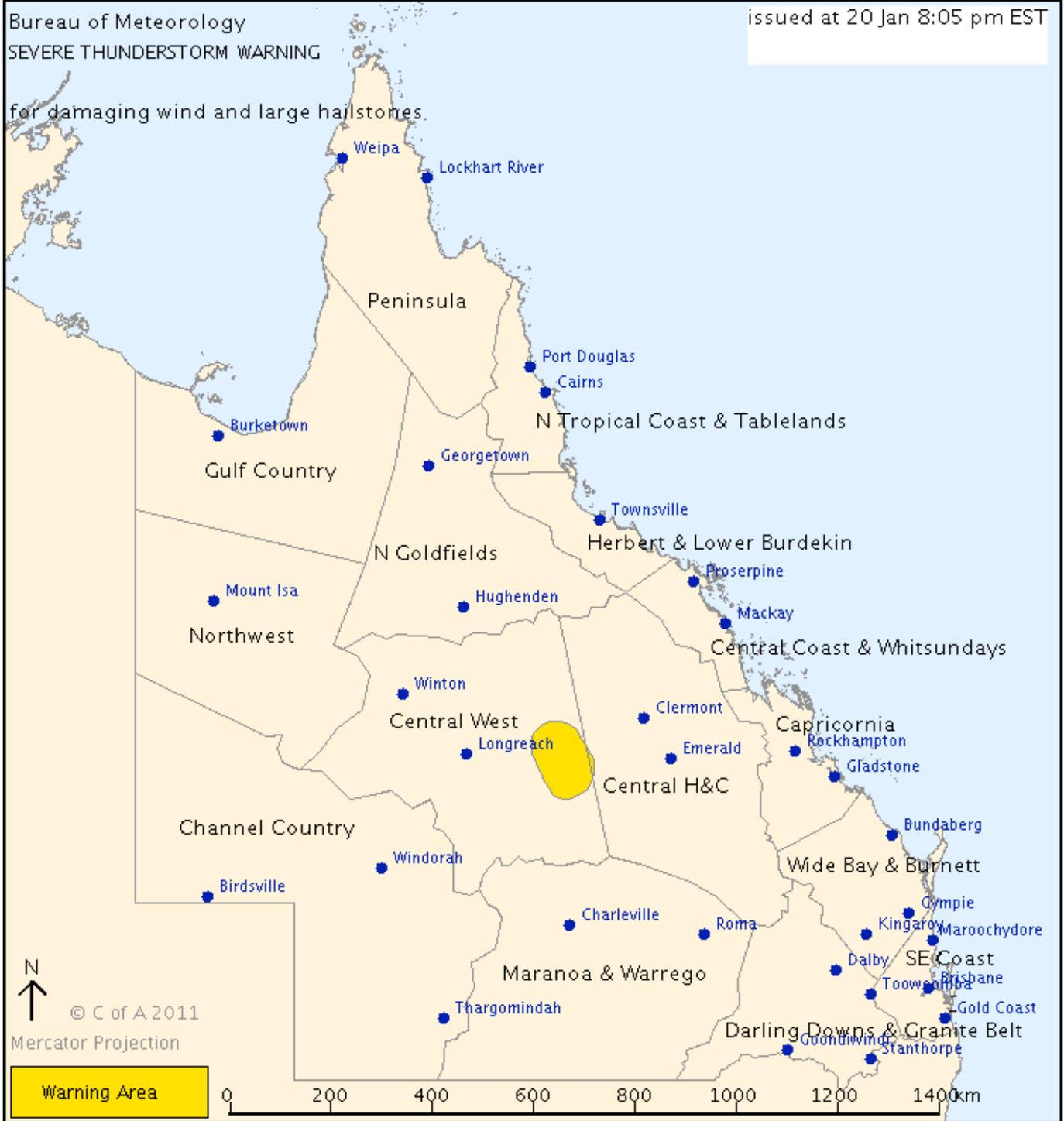
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and LARGE HAILSTONES  
For people in parts of the  
Central West Forecast District.

Issued at 8:05 pm Thursday, 20 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Alpha and Jericho.



issued at 20 Jan 8:05 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:05 pm.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Northern Tropical Coast and Tablelands,  
Herbert and Lower Burdekin and  
Central West Forecast Districts.

Issued at 8:25 pm Thursday, 20 January 2011.

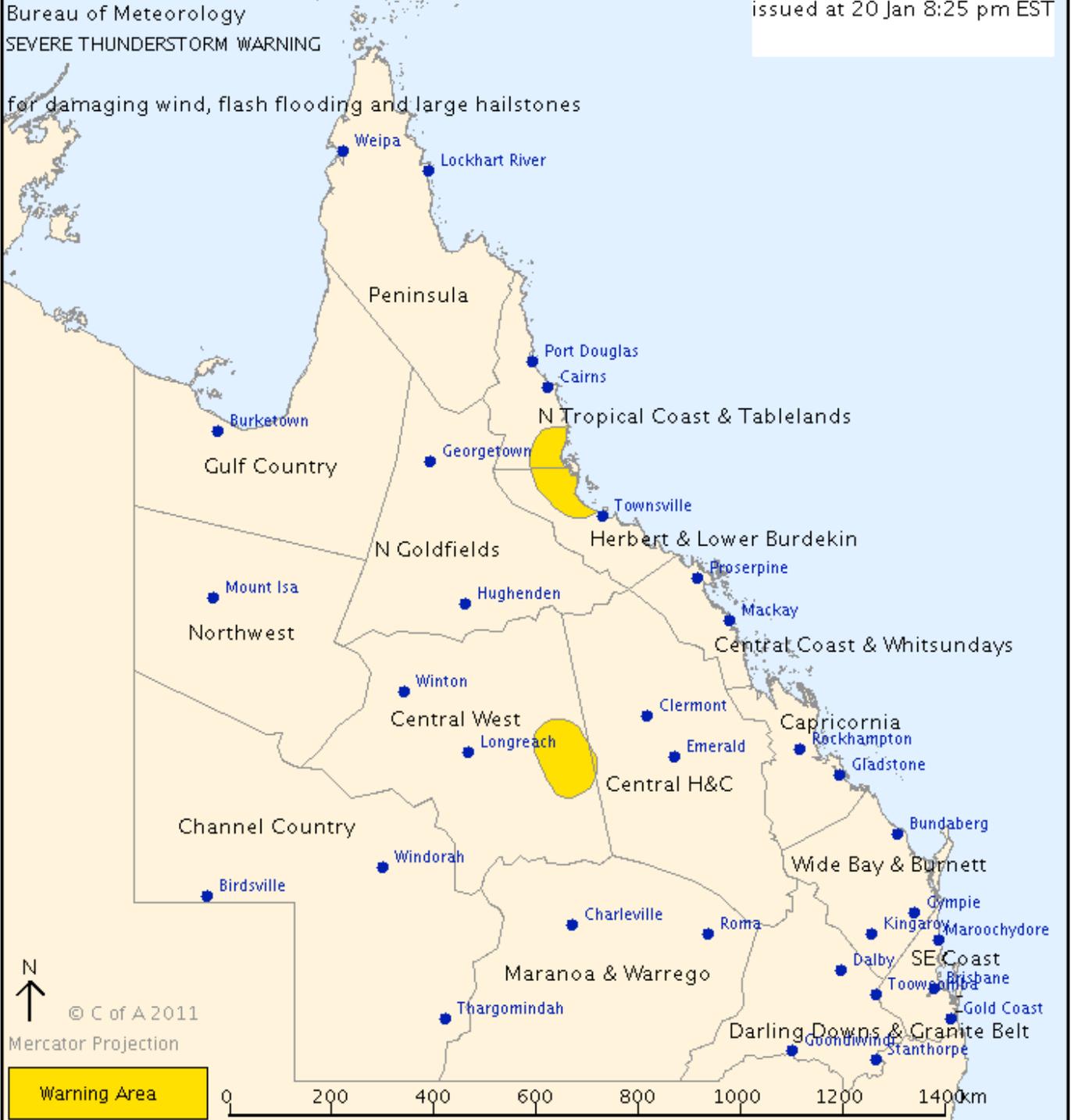
Severe thunderstorms are likely to produce damaging winds and large hailstones over the next several hours in parts of the Central West district. Locations which may be affected include Jericho.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding over the next several hours in parts of the Northern Tropical Coast and Tablelands and Herbert and Lower Burdekin districts. Locations which may be affected include Ingham, Cardwell and Rollingstone.

30mm of rainfall has been recorded in 15 minutes at Paradise Lagoon [northeast of Townsville] at 8:25pm.



issued at 20 Jan 8:25 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:25 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

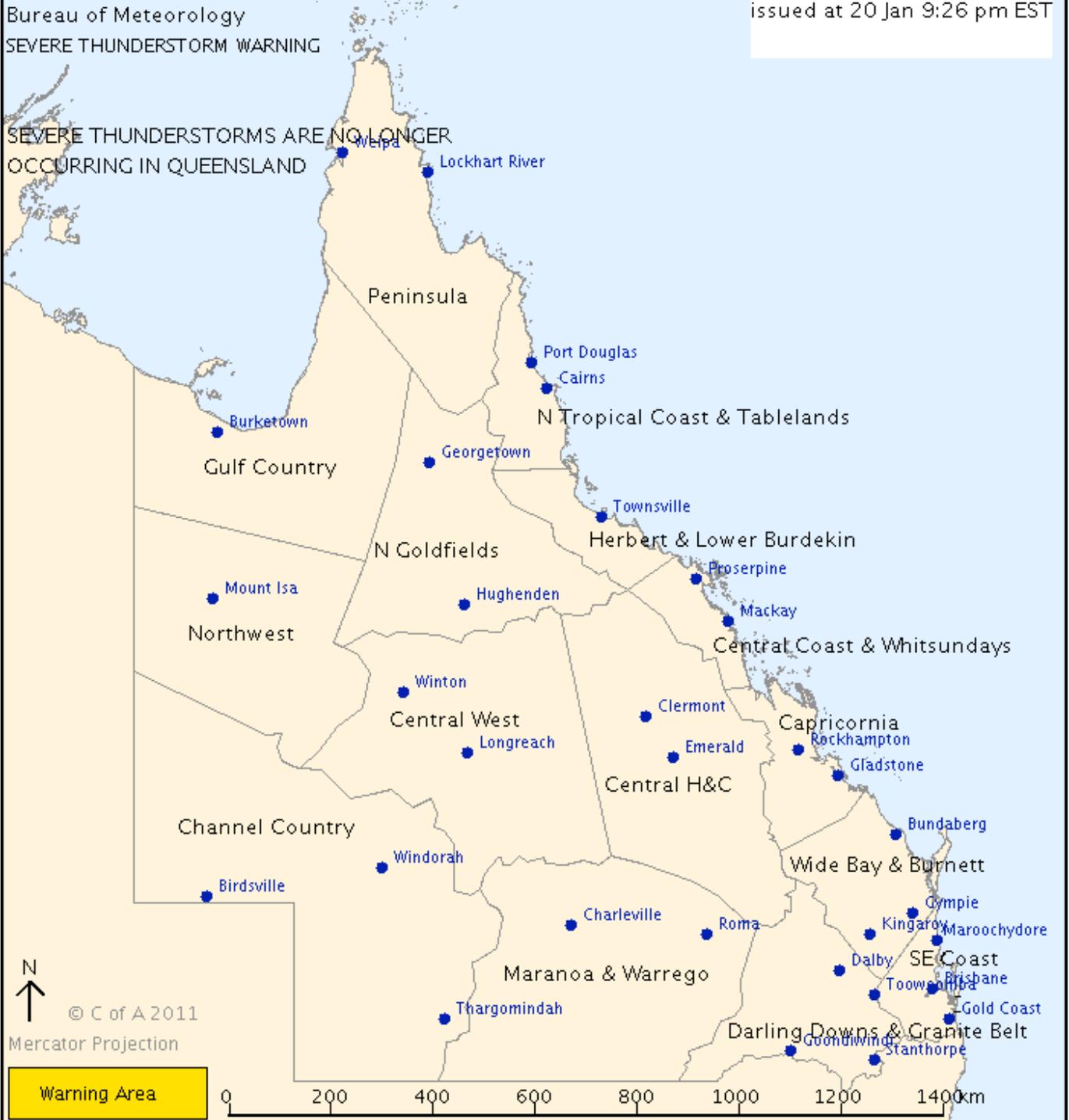
Issued at 9:26 pm Thursday, 20 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 20 Jan 9:26 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

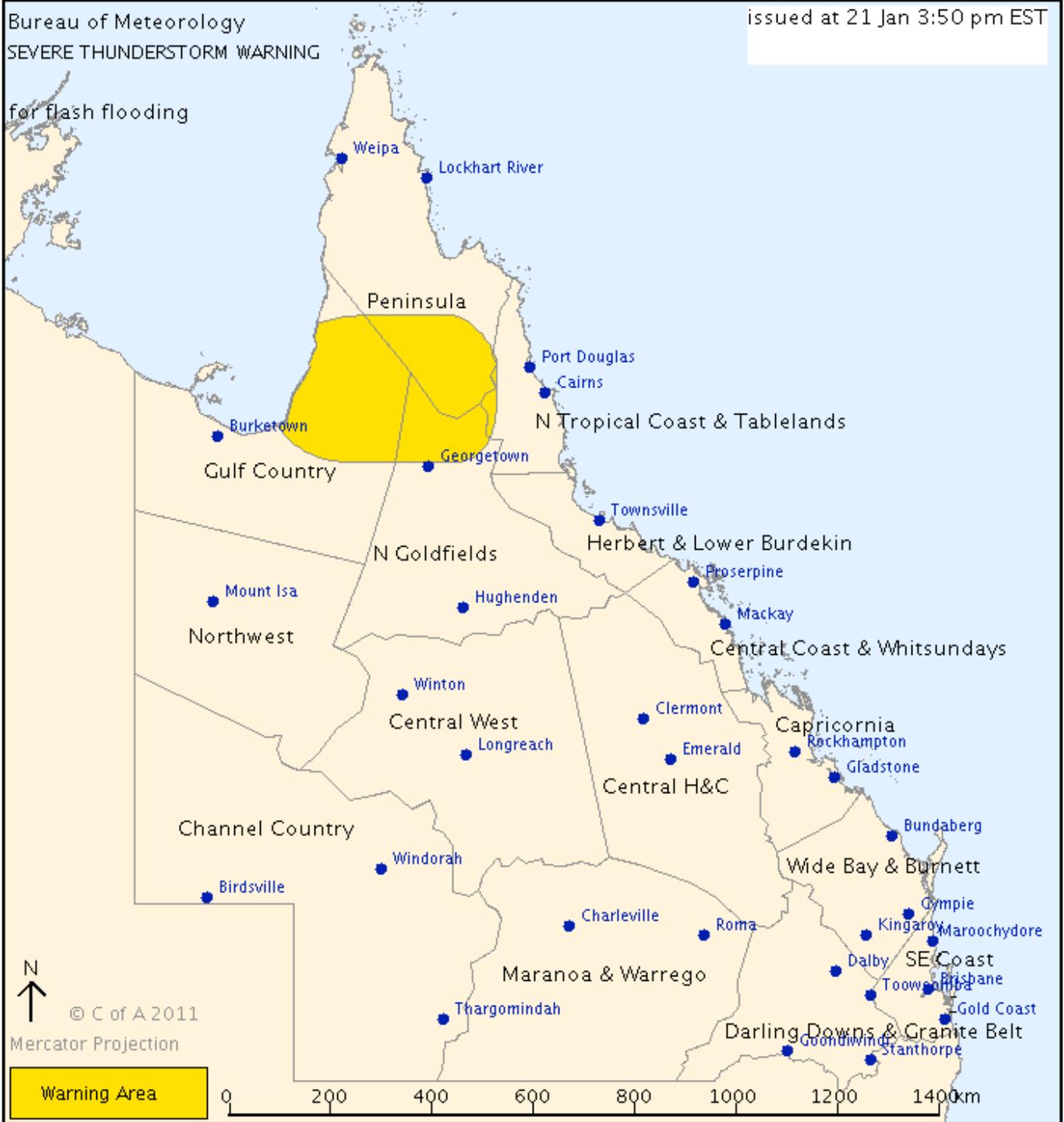
**SEVERE THUNDERSTORM WARNING**  
for **FLASH FLOODING**  
For people in parts of the  
Peninsula,  
Gulf Country,  
Northern Tropical Coast and Tablelands and  
Northern Goldfields and Upper Flinders Forecast Districts.

Issued at 3:50 pm Friday, 21 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Delta Downs Station and Palmerville.



issued at 21 Jan 3:50 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:50 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **FLASH FLOODING**

For people in parts of the

Peninsula,

Gulf Country,

Northern Tropical Coast and Tablelands and

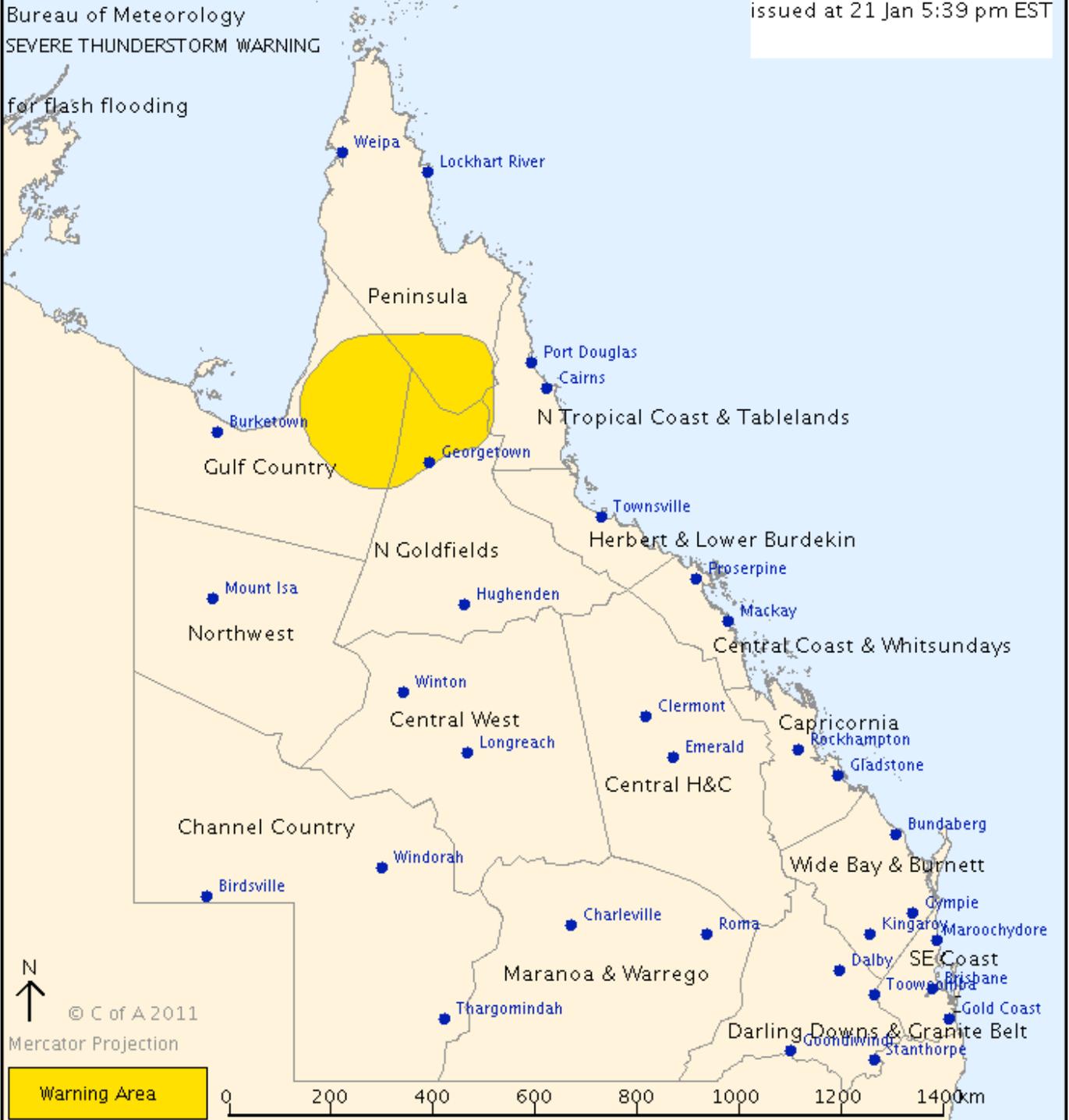
Northern Goldfields and Upper Flinders Forecast Districts.

Issued at 5:39 pm Friday, 21 January 2011.

Severe thunderstorms are likely to produce very heavy rainfall and flash flooding in the warning area over the next several hours. Locations which may be affected include Croydon and possibly Palmerville.



issued at 21 Jan 5:39 pm EST



Emergency Management Queensland advises that people should:

- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 8:40 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

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Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

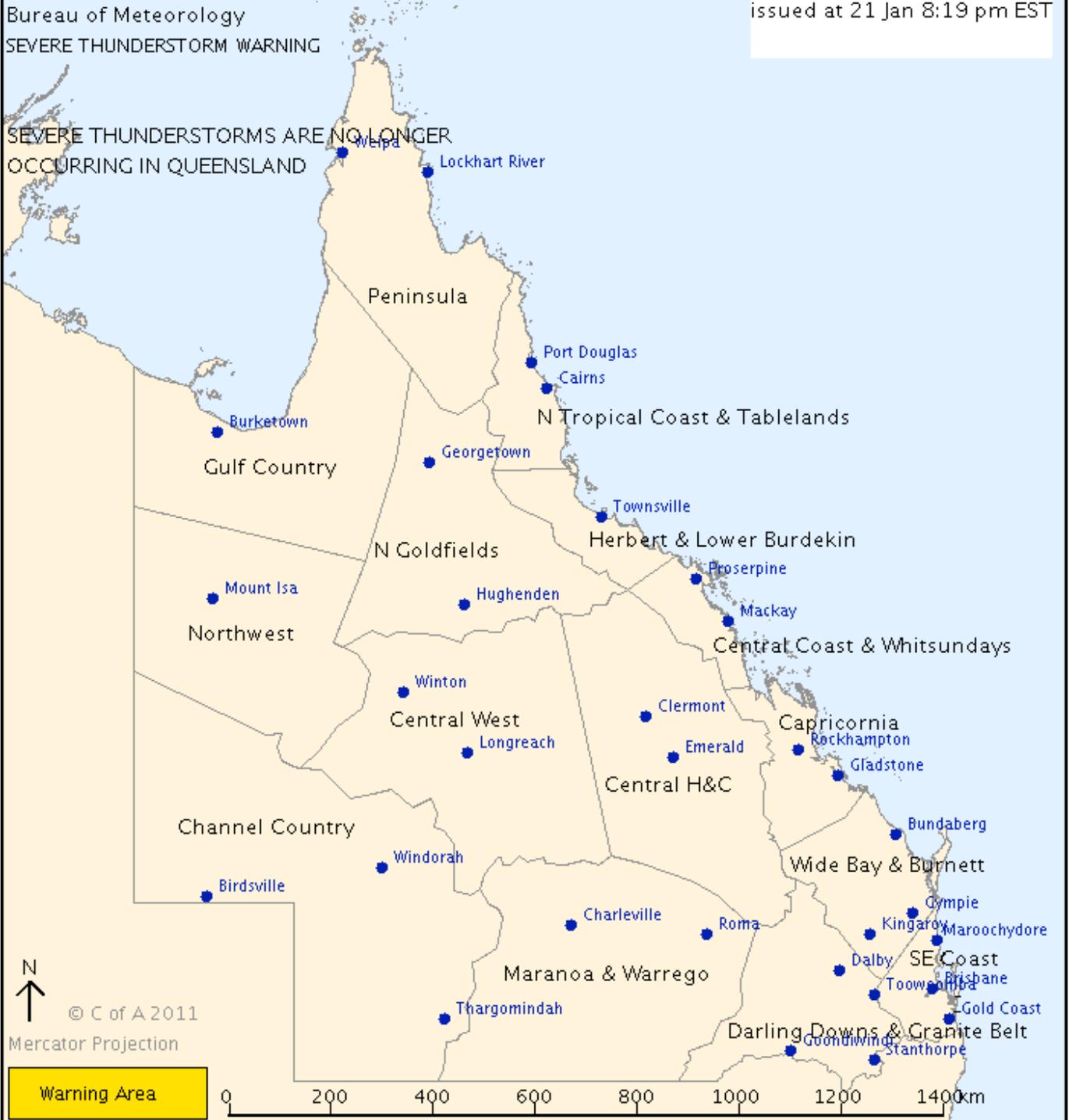
Issued at 8:19 pm Friday, 21 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 21 Jan 8:19 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

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Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

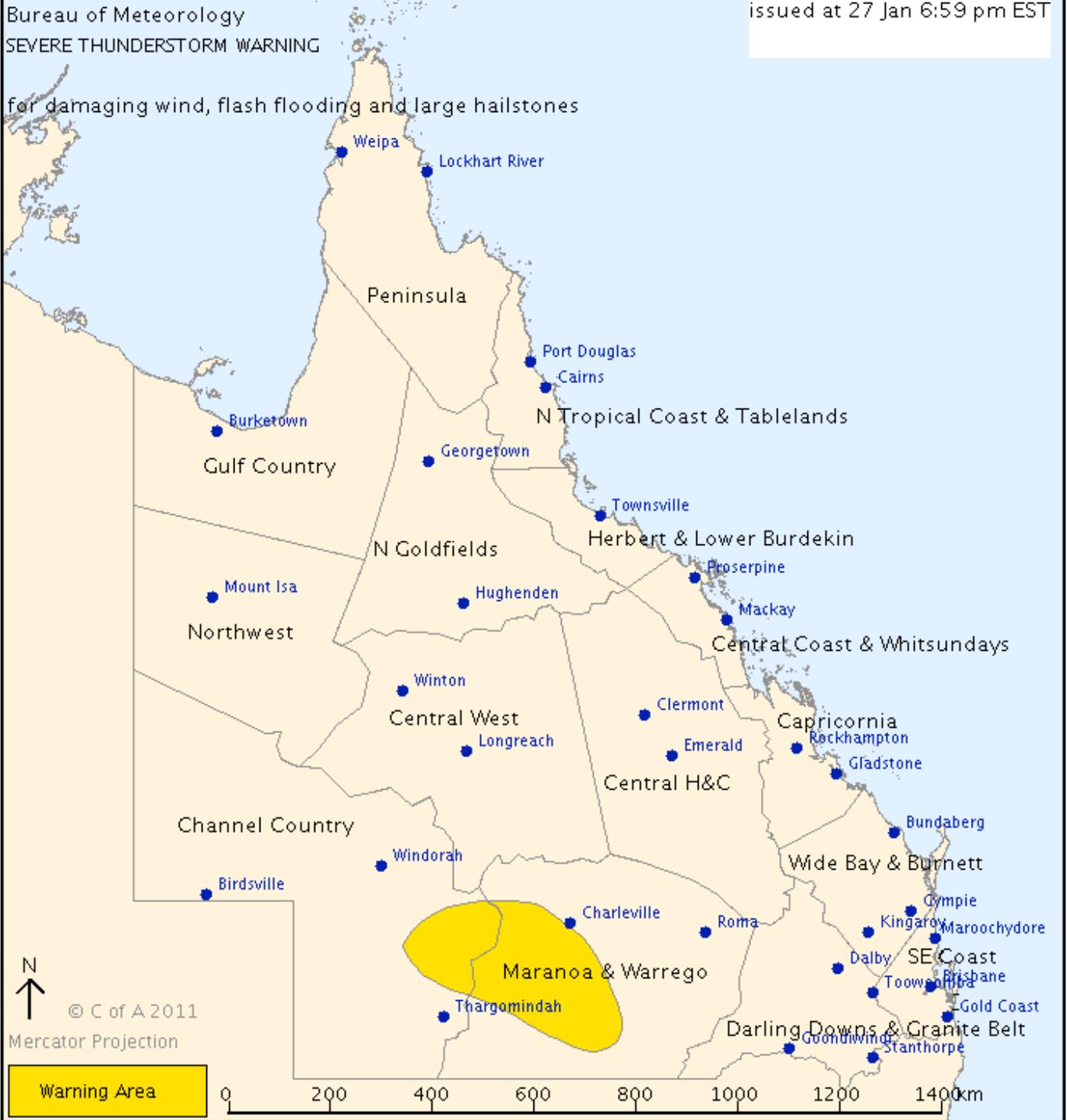
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND, FLASH FLOODING and LARGE HAILSTONES**  
For people in parts of the  
Channel Country and  
Maranoa and Warrego Forecast Districts.

Issued at 6:59 pm Thursday, 27 January 2011.

Severe thunderstorms are likely to produce damaging winds, very heavy rainfall, flash flooding and large hailstones in the warning area over the next several hours. Locations which may be affected include Cunnamulla, Quilpie, Eromanga and Mount Margaret.



issued at 27 Jan 6:59 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Avoid driving, walking or riding through flood waters.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 10:00 pm.

Authorised for release to the public by the Bureau of Meteorology, 25 March 2011

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Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

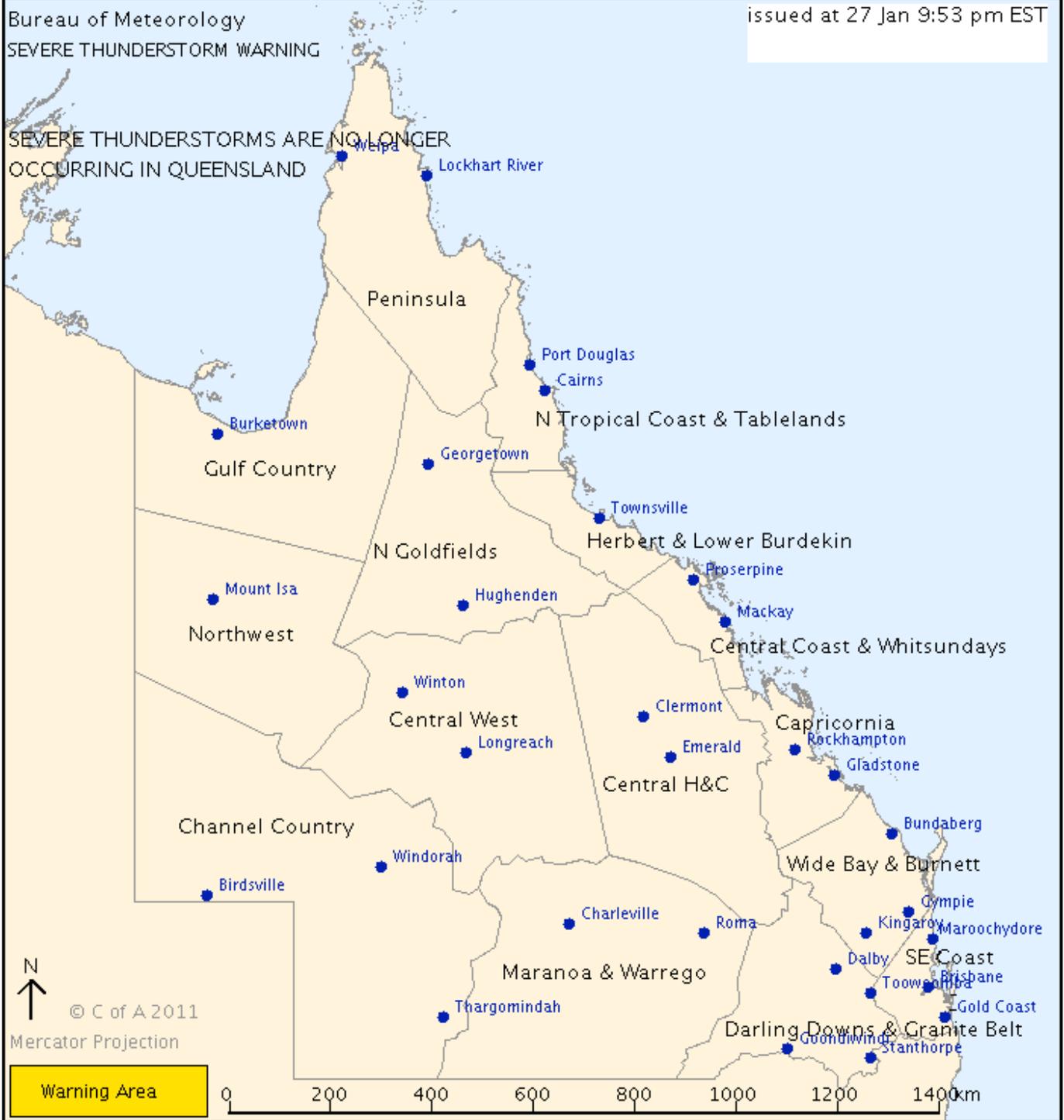
Issued at 9:53 pm Thursday, 27 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 27 Jan 9:53 pm EST



- Emergency Management Queensland advises that people should:
- \* Beware of fallen trees and powerlines.
  - \* Avoid driving, walking or riding through flood waters.
  - \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

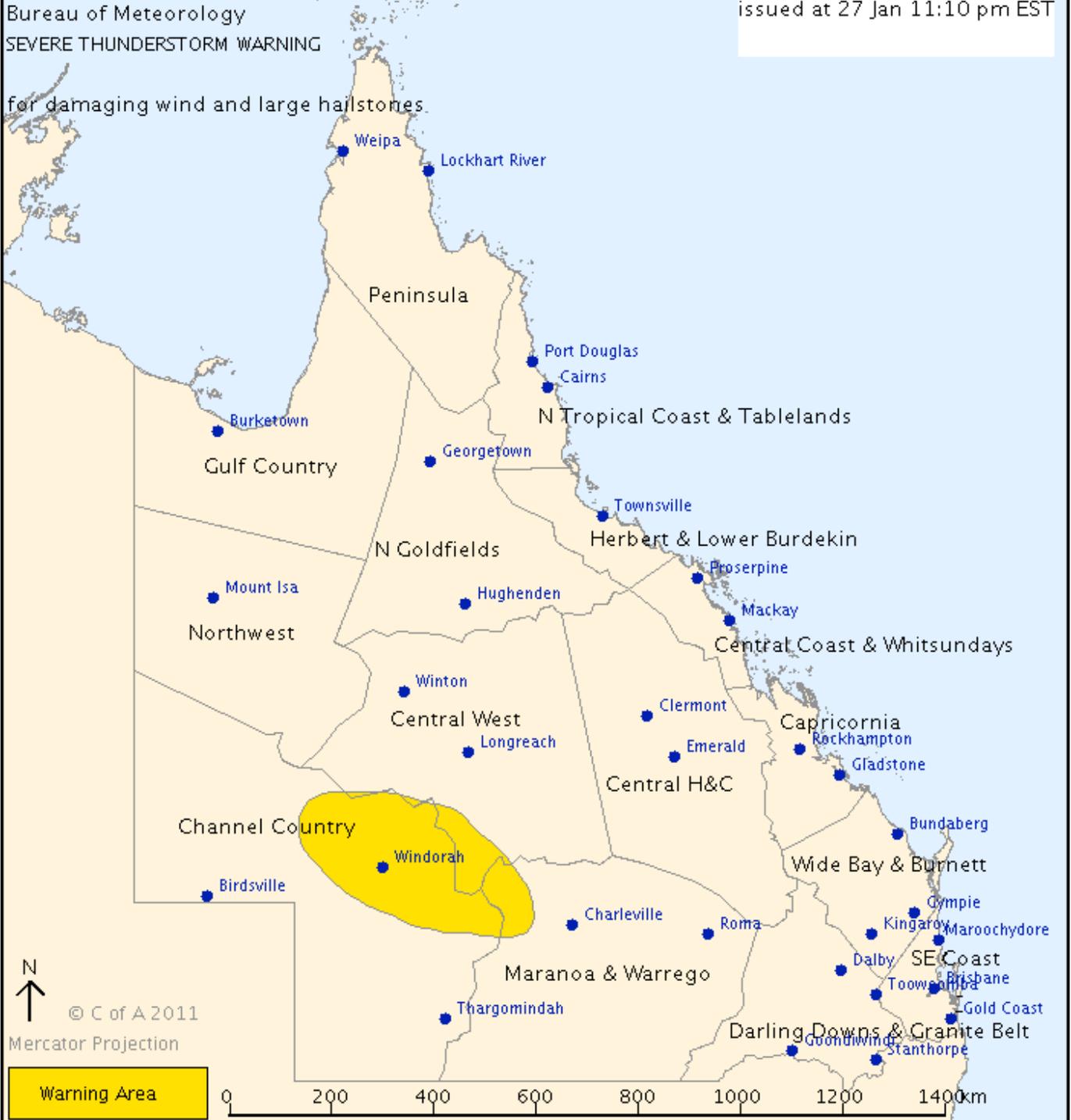
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **LARGE HAILSTONES**  
For people in parts of the  
Central West,  
Channel Country and  
Maranoa and Warrego Forecast Districts.

Issued at 11:10 pm Thursday, 27 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Windorah, Stonehenge, Adavale and Jundah.



issued at 27 Jan 11:10 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 2:10 am Friday.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

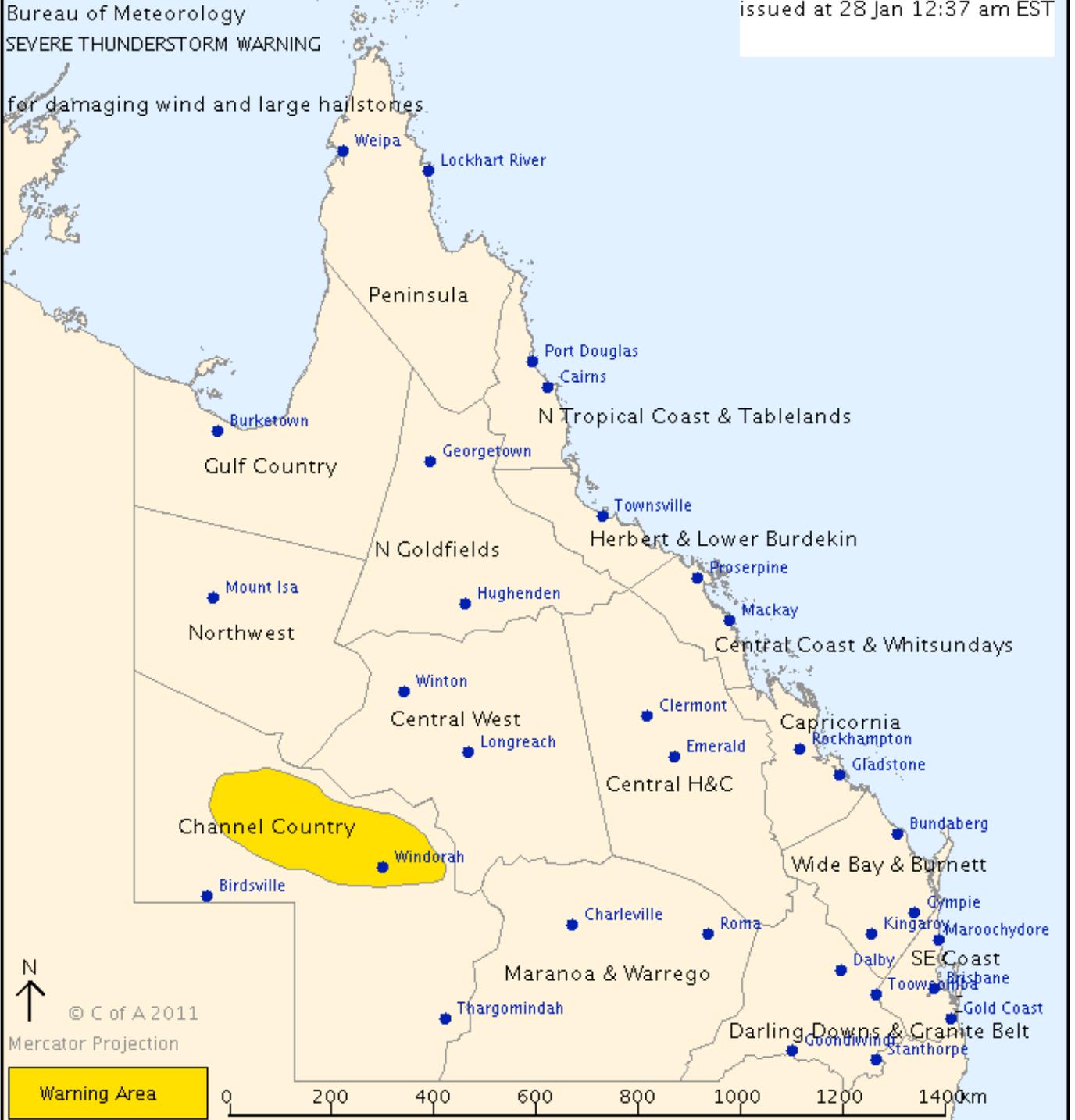
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and LARGE HAILSTONES  
For people in parts of the  
Channel Country Forecast District.

Issued at 12:37 am Friday, 28 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Windorah, Bedourie, Jundah and Davenport Downs Station.



issued at 28 Jan 12:37 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 3:40 am.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

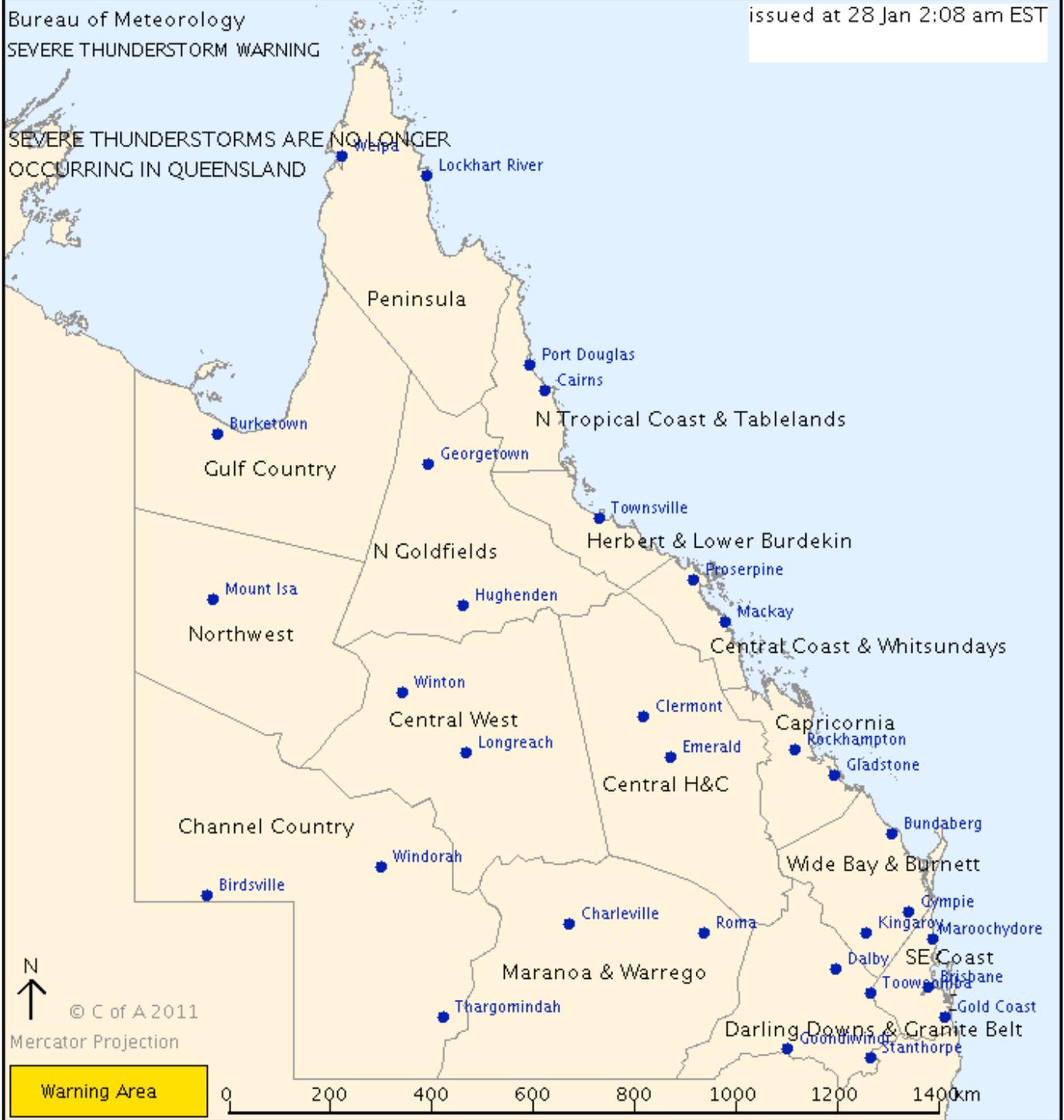
Issued at 2:08 am Friday, 28 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 28 Jan 2:08 am EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND**  
For people in parts of the  
Darling Downs and Granite Belt Forecast District.

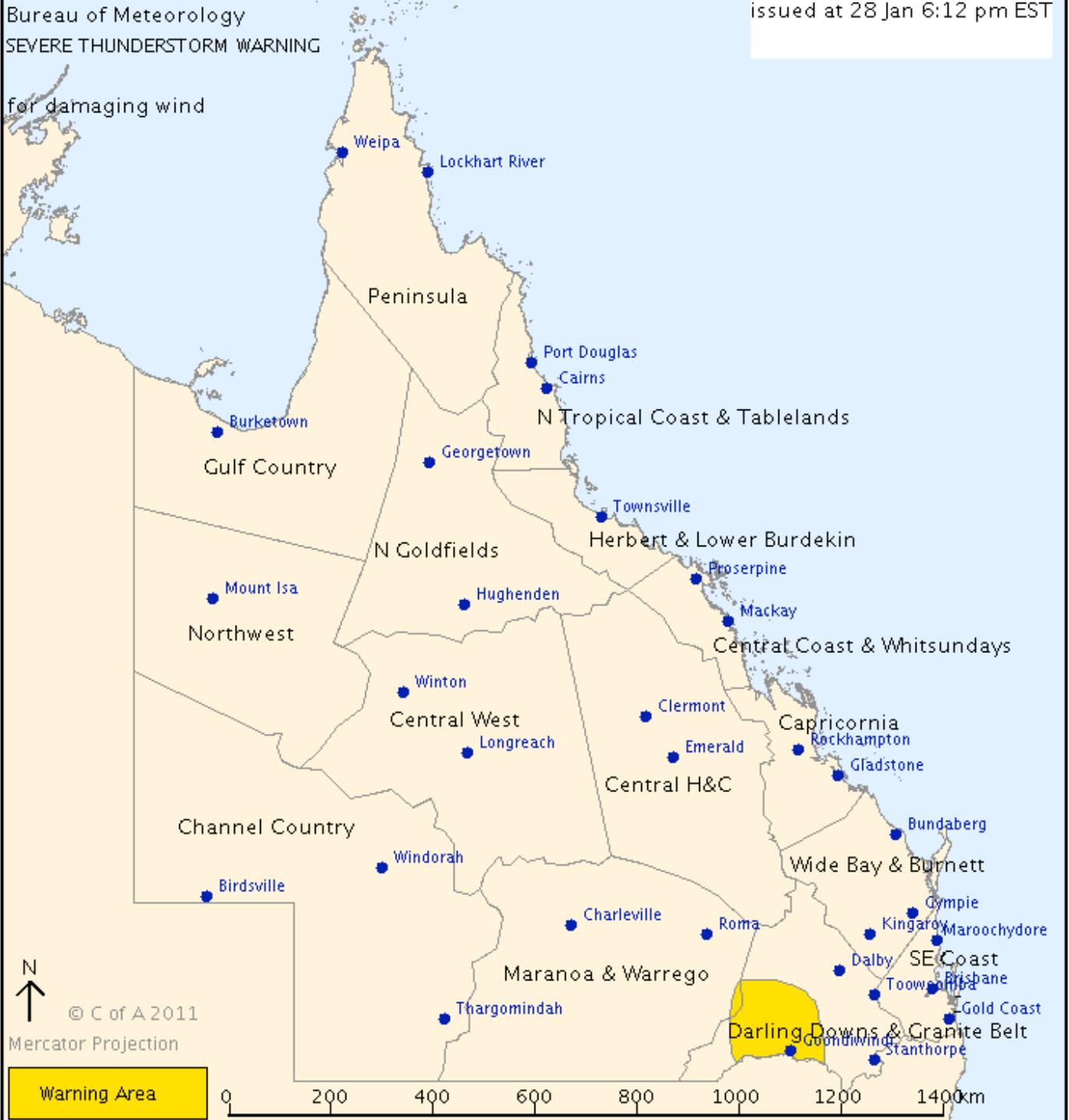
Issued at 6:12 pm Friday, 28 January 2011.

Severe thunderstorms are likely to produce damaging winds in the warning area over the next several hours. Locations which may be affected include Goondiwindi.

Thunderstorms likely in the north in a very moist and unstable airmass south of the monsoon trough. Possible thunderstorms over the interior due to a surface trough - damaging wind gusts are the only likely severe phenomena expected.



issued at 28 Jan 6:12 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:15 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

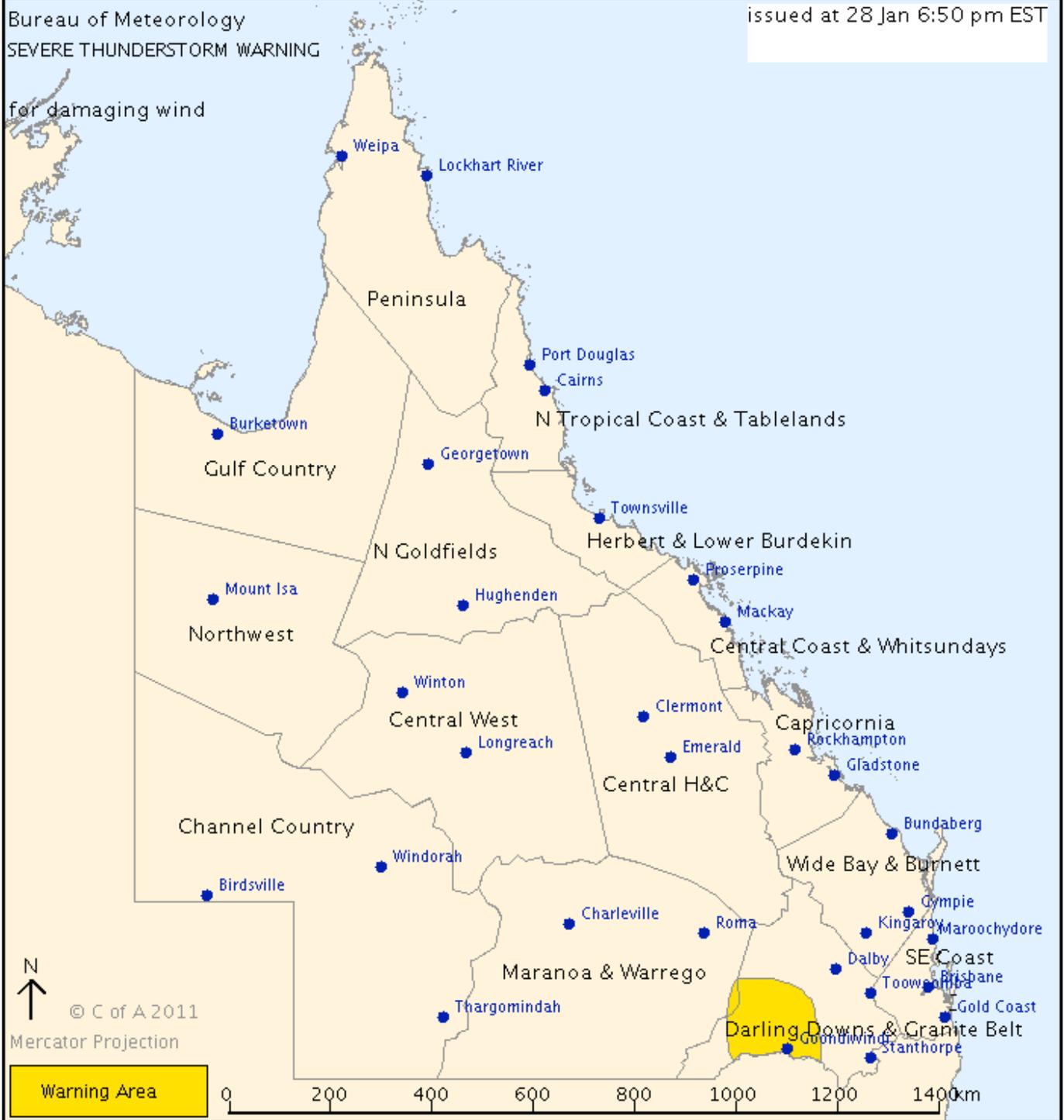
**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND**  
For people in parts of the  
Darling Downs and Granite Belt Forecast District.

Issued at 6:50 pm Friday, 28 January 2011.

Severe thunderstorms are likely to produce damaging winds in the warning area over the next several hours. Locations which may be affected include Goondiwindi.



issued at 28 Jan 6:50 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:50 pm.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **LARGE HAILSTONES**  
For people in parts of the  
Central West,  
Channel Country and  
Maranoa and Warrego Forecast Districts.

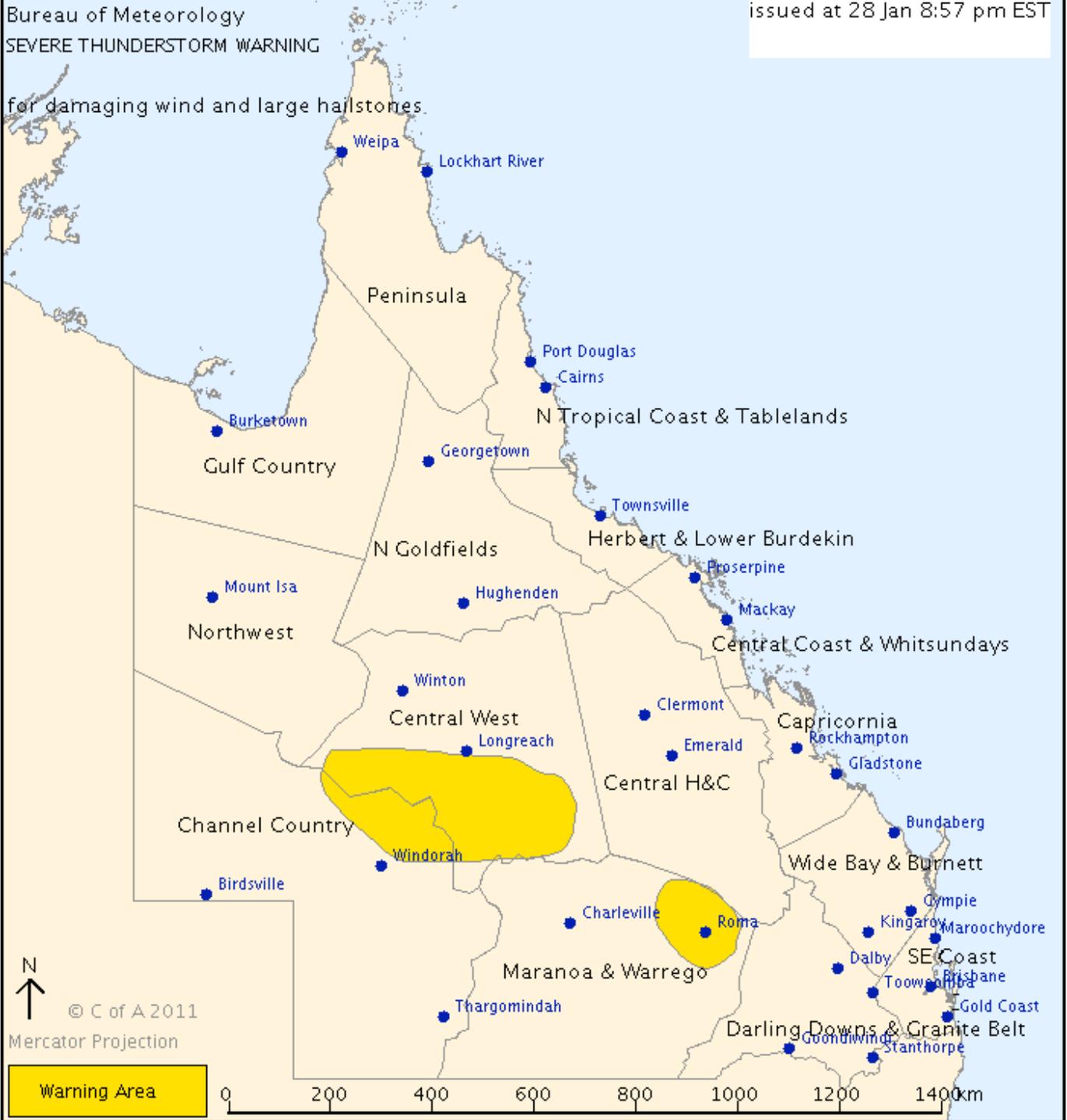
Issued at 8:57 pm Friday, 28 January 2011.

Severe thunderstorms are likely to produce damaging winds over the next several hours in parts of the Central West and Channel Country districts. Locations which may be affected include Isisford, Tambo, Blackall, Stonehenge and Jundah.

Severe thunderstorms are likely to produce damaging winds and large hailstones over the next several hours in parts of the Maranoa and Warrego district. Locations which may be affected include Roma, Mitchell and Injune.



issued at 28 Jan 8:57 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 12:00 am Saturday.



Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

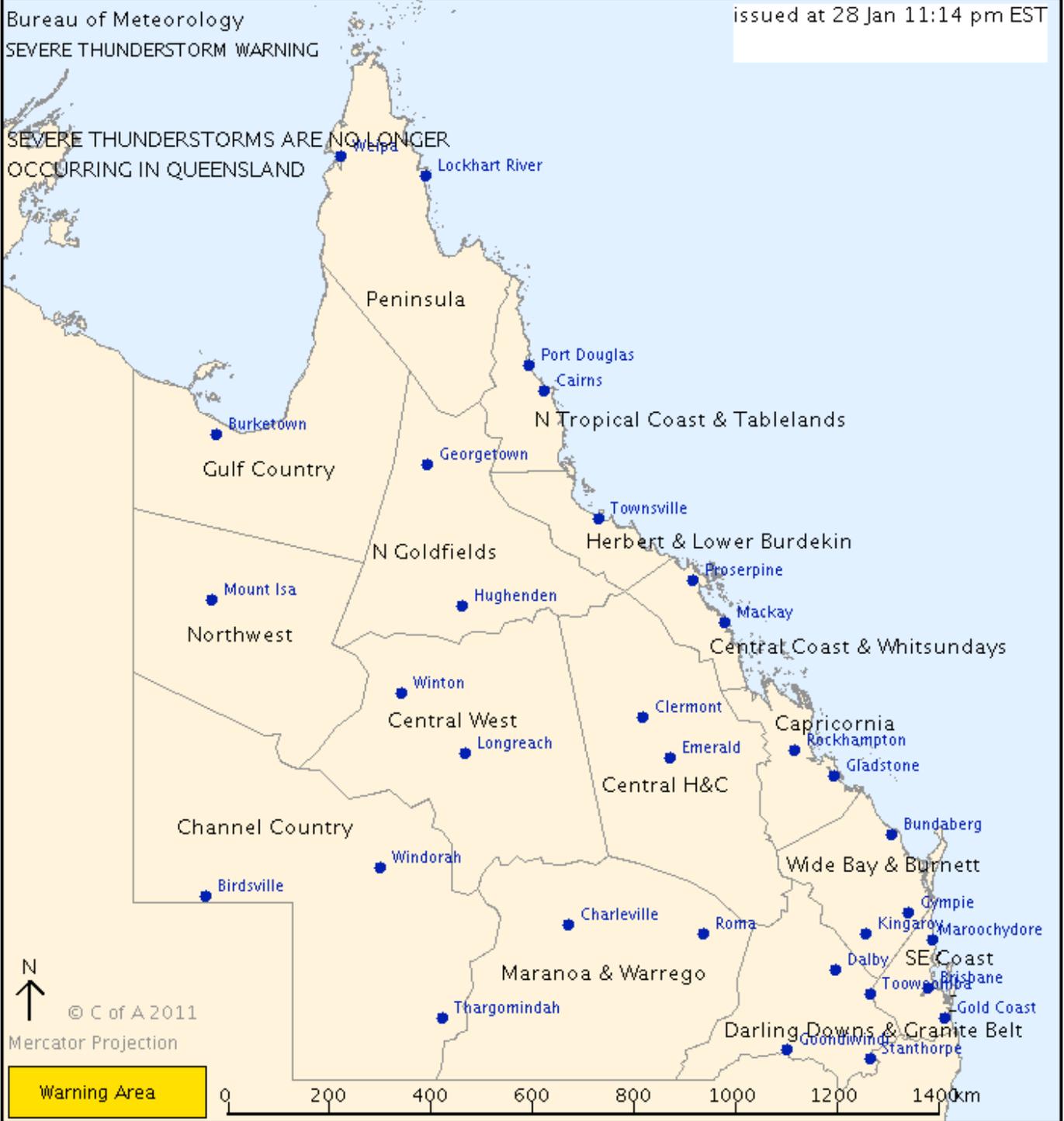
Issued at 11:14 pm Friday, 28 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 28 Jan 11:14 pm EST



Emergency Management Queensland advises that people should:

- \* Beware of fallen trees and powerlines.
- \* Avoid driving, walking or riding through flood waters.
- \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.



**Australian Government**  
**Bureau of Meteorology**

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

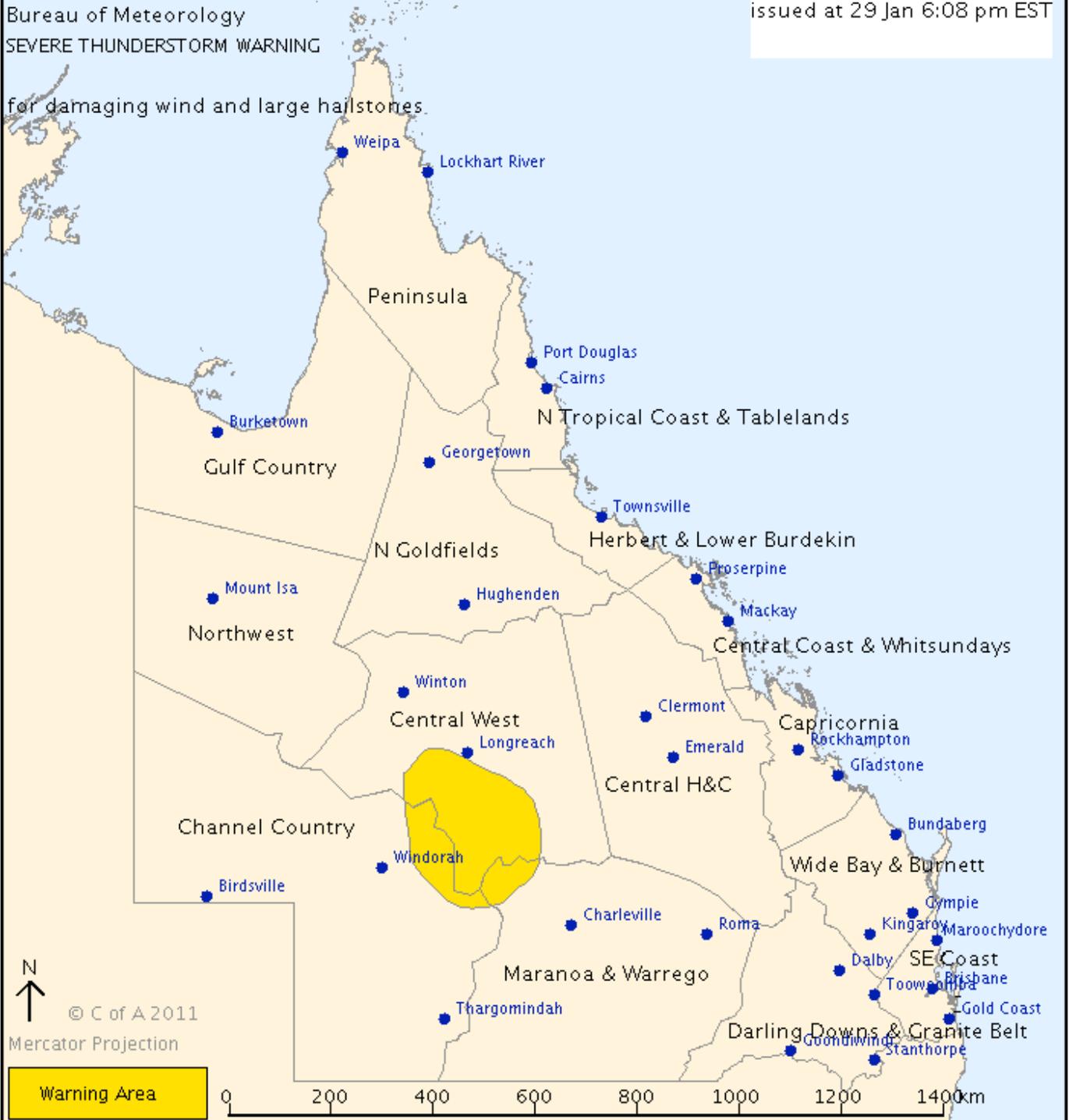
SEVERE THUNDERSTORM WARNING  
for DAMAGING WIND and LARGE HAILSTONES  
For people in parts of the  
Central West,  
Channel Country and  
Maranoa and Warrego Forecast Districts.

Issued at 6:08 pm Saturday, 29 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Isisford, Blackall, Stonehenge and Adavale.



issued at 29 Jan 6:08 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:10 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND** and **LARGE HAILSTONES**  
For people in the Northwest and parts of the Gulf Country, Northern Goldfields and Upper Flinders, Central West and Channel Country Forecast Districts.

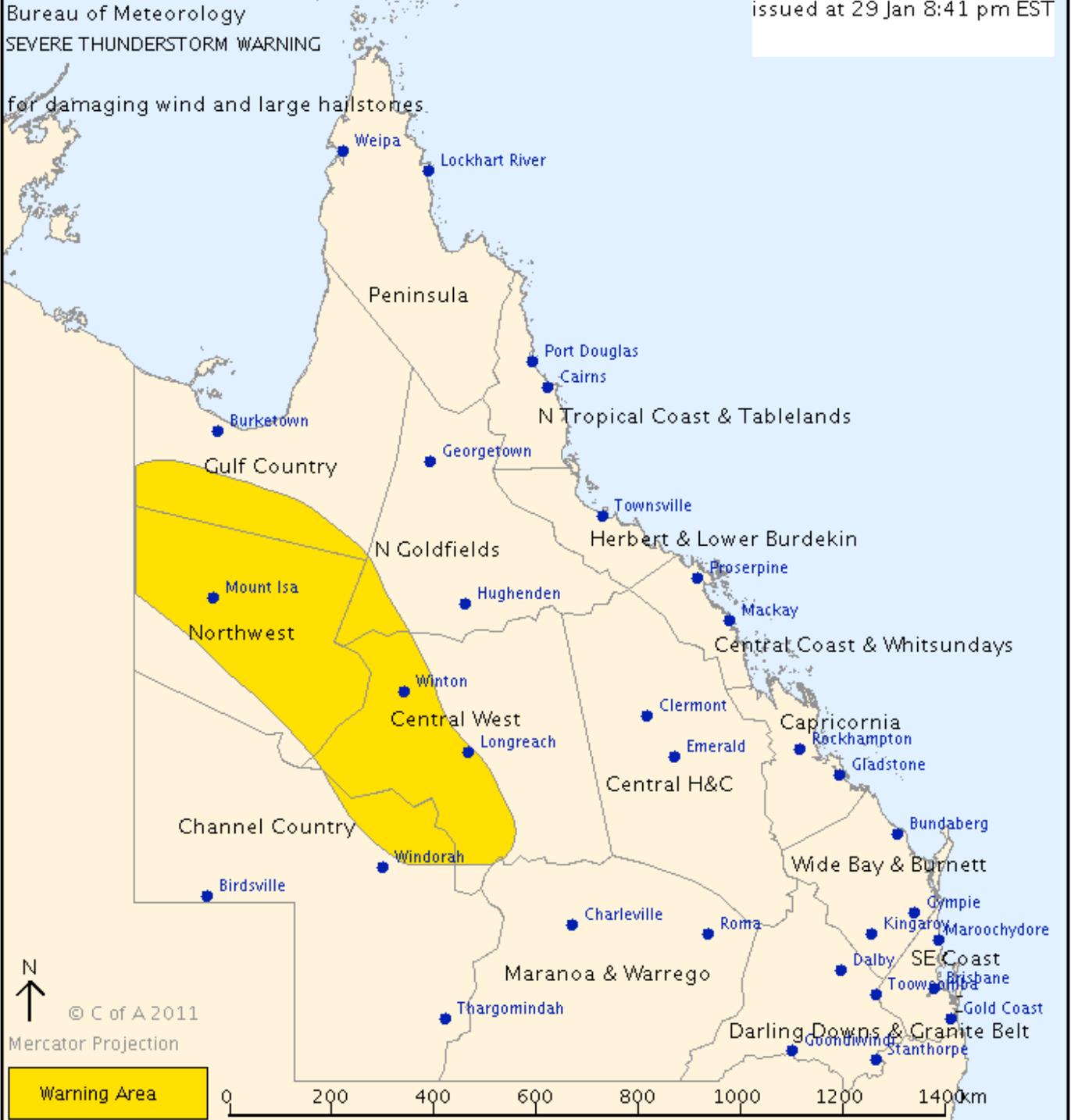
Issued at 8:41 pm Saturday, 29 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Longreach, Winton, Mount Isa, Cloncurry, Isisford, Julia Creek, Camooweal, Dajarra Hotel and Kamilaroi Station.

Trepell Airport recorded a wind gust of 92 km/hr at 8:34 pm EST.



issued at 29 Jan 8:41 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 11:45 pm.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

**for DAMAGING WIND and LARGE HAILSTONES**

For people in the Northwest and parts of the Gulf Country, Northern Goldfields and Upper Flinders, Central West and Channel Country Forecast Districts.

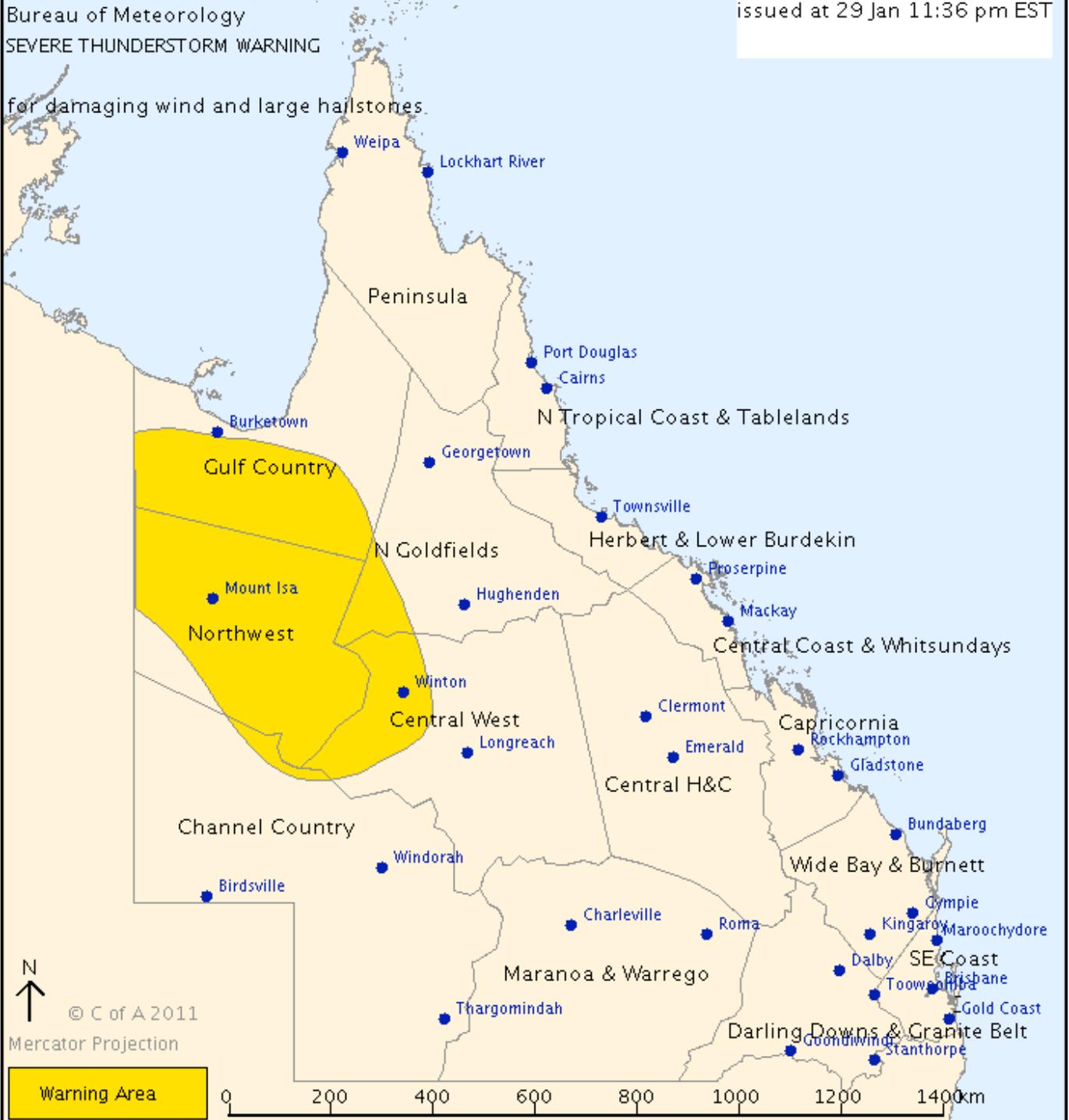
Issued at 11:36 pm Saturday, 29 January 2011.

Severe thunderstorms are likely to produce damaging winds and large hailstones in the warning area over the next several hours. Locations which may be affected include Winton, Mount Isa, Cloncurry, Julia Creek, Camooweal, Boulia, Dajarra Hotel, Kamilaroi Station and Augustus Downs Station.

Trepell Airport recorded a wind gust of 92 km/hr at 8:34 pm EST Saturday.  
Winton Airport recorded a wind gust of 87 km/hr at 10:54 pm EST Saturday.



issued at 29 Jan 11:36 pm EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 2:40 am Sunday.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041

Bureau of Meteorology

Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**

for **DAMAGING WIND**

For people in the

Gulf Country and parts of the

Northern Goldfields and Upper Flinders and

Northwest Forecast Districts.

Issued at 2:57 am Sunday, 30 January 2011.

Severe thunderstorms are likely to produce damaging winds in the warning area over the next several hours. Locations which may be affected include Mount Isa, Cloncurry, Burketown, Mornington Island, Normanton, Julia Creek, Camooweal, Karumba and Delta Downs Station.

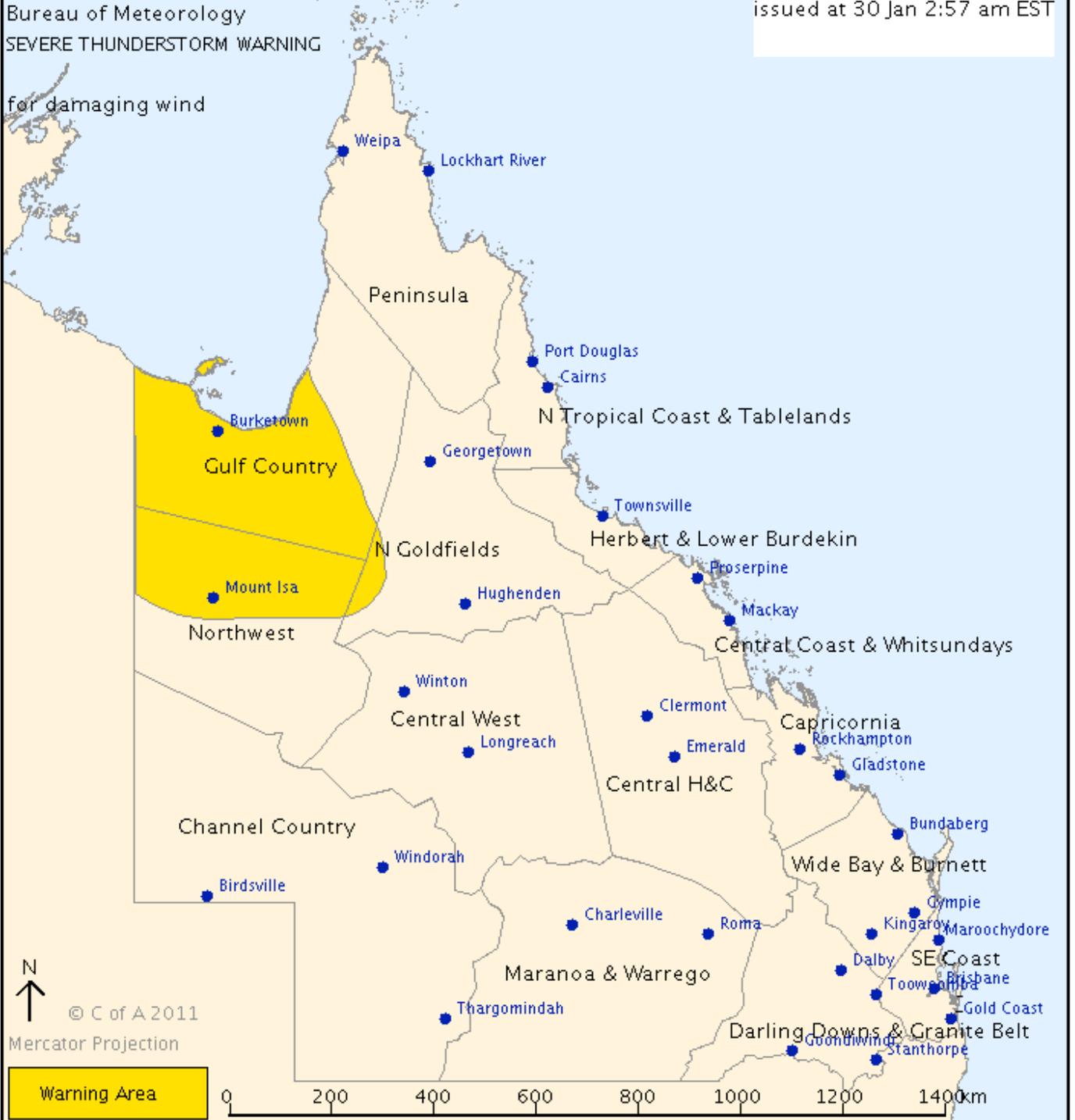
The Severe Thunderstorm Warning has been cancelled for the Central West and Channel Country Forecast districts.

Trepell Airport recorded a wind gust of 92 km/hr at 8:34 pm EST Saturday.

Winton Airport recorded a wind gust of 87 km/hr at 10:54 pm EST Saturday.



issued at 30 Jan 2:57 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 6:00 am.



**Australian Government**  
**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

**TOP PRIORITY FOR IMMEDIATE BROADCAST**

**SEVERE THUNDERSTORM WARNING**  
for **DAMAGING WIND**  
For people in parts of the  
Gulf Country Forecast District.

Issued at 5:56 am Sunday, 30 January 2011.

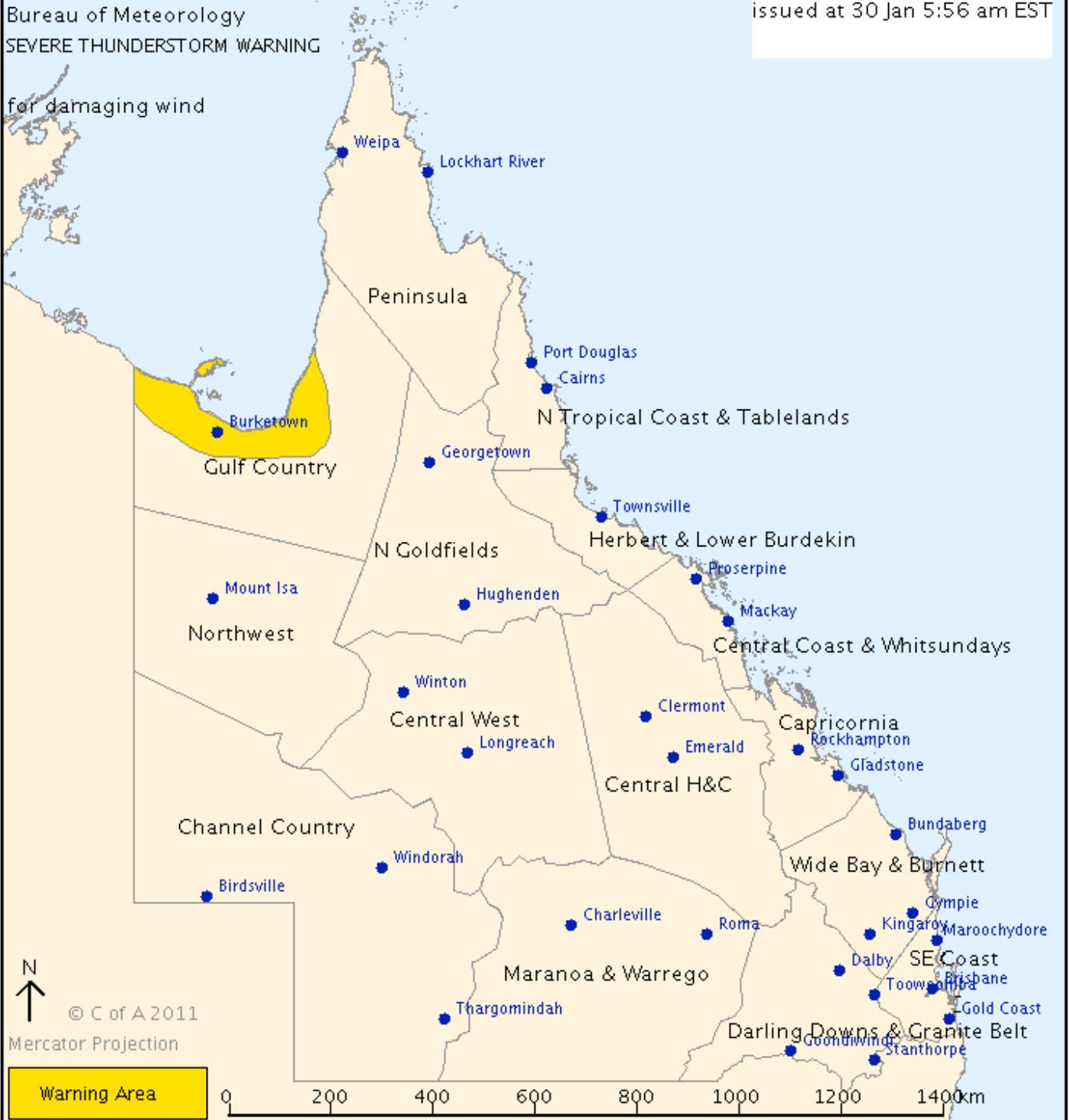
Severe thunderstorms are likely to produce damaging winds in the warning area over the next several hours. Locations which may be affected include Burketown, Mornington Island, Normanton, Karumba, Delta Downs Station and Westmoreland Station.

The Severe Thunderstorm Warning has been cancelled for the Northern Goldfields, Upper Flinders and Northwest Forecast Districts.

Burketown recorded a wind gust of 94 km/hr at 4:27 am EST Sunday.  
Winton Airport recorded a wind gust of 87 km/hr at 10:54 pm EST Saturday.  
Trepell Airport recorded a wind gust of 92 km/hr at 8:34 pm EST Saturday.



issued at 30 Jan 5:56 am EST



Emergency Management Queensland advises that people should:

- \* Move your car under cover or away from trees.
- \* Secure loose outdoor items.
- \* Seek shelter, preferably indoors and never under trees.
- \* Avoid using the telephone during a thunderstorm.
- \* Beware of fallen trees and powerlines.
- \* For emergency assistance contact the SES on 132 500.

The next warning is due to be issued by 9:00 am.



**Australian Government**

**Bureau of Meteorology**

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.

IDQ20041  
Bureau of Meteorology  
Queensland Regional Office

TOP PRIORITY FOR IMMEDIATE BROADCAST

CANCELLATION SEVERE THUNDERSTORM WARNING

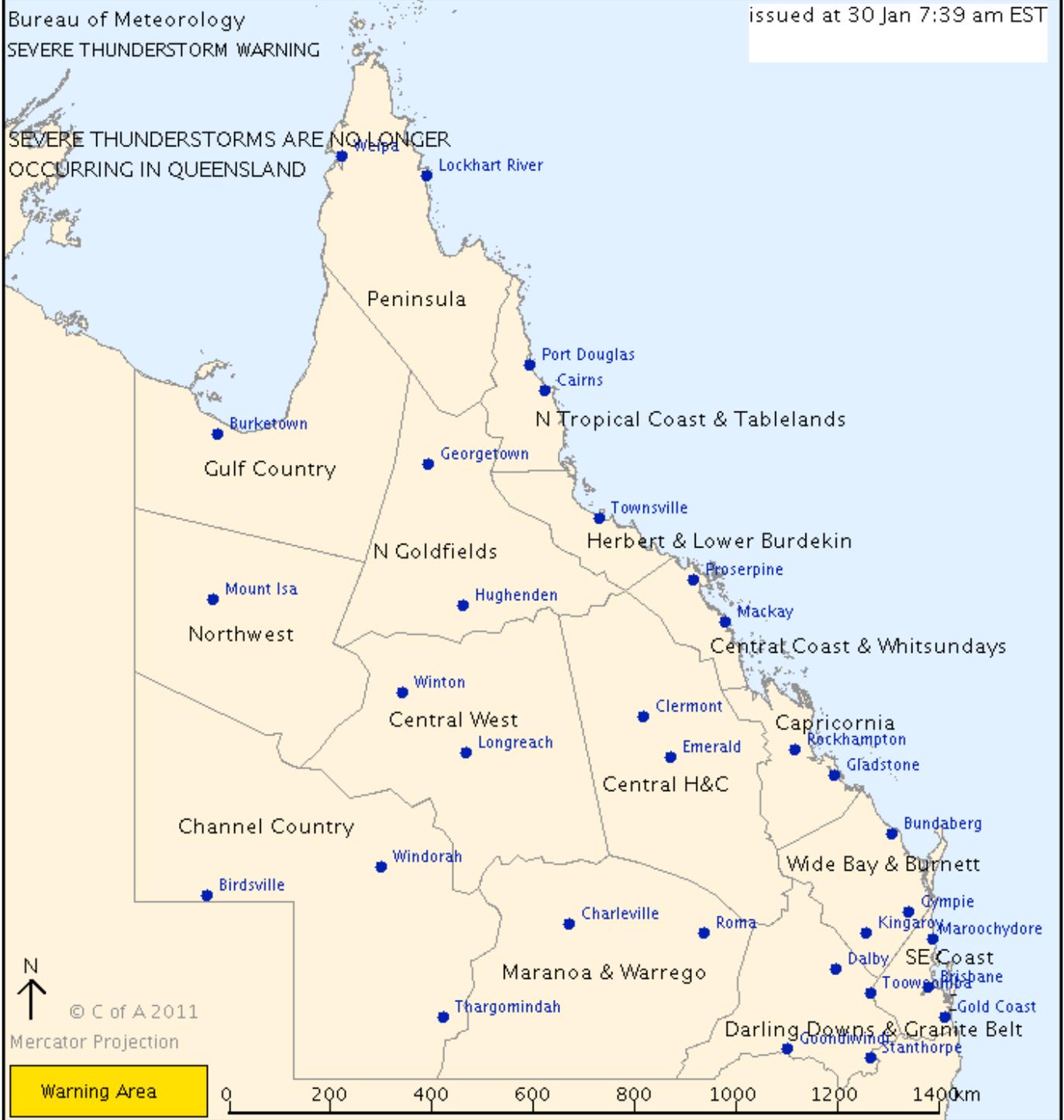
Issued at 7:39 am Sunday, 30 January 2011.

Severe thunderstorms are no longer occurring in QUEENSLAND.

The immediate threat of severe thunderstorms has passed, but the situation will continue to be monitored and further warnings will be issued if necessary.



issued at 30 Jan 7:39 am EST



- Emergency Management Queensland advises that people should:
- \* Beware of fallen trees and powerlines.
  - \* Avoid driving, walking or riding through flood waters.
  - \* For emergency assistance contact the SES on 132 500.

Warnings are also available through TV and Radio broadcasts, the Bureau's website at [www.bom.gov.au](http://www.bom.gov.au) or call 1300 659 219. The Bureau and Emergency Management Queensland would appreciate warnings being broadcast regularly.