



FLOOD WARNING SYSTEM for the PAROO RIVER

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Paroo River. It includes reference information which will be useful for understanding Flood Warnings and River Height Bulletins issued by the Bureau's Flood Warning Centre during periods of high rainfall and flooding.



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(Last updated May 2011)

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Paroo River at Eulo

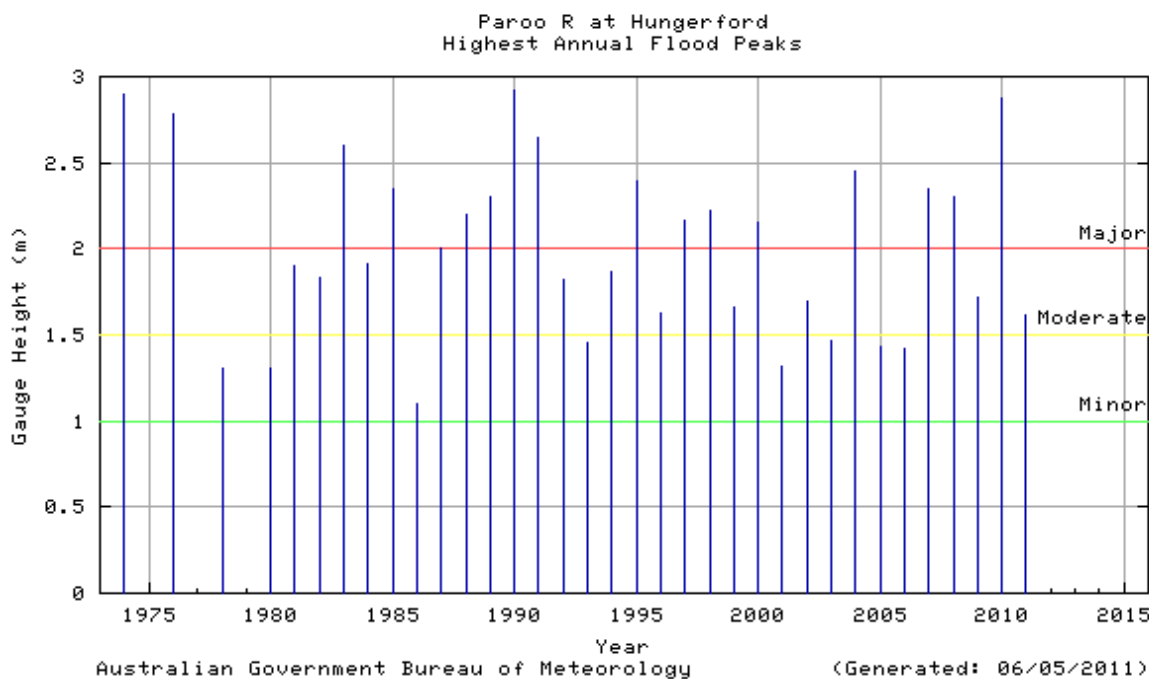
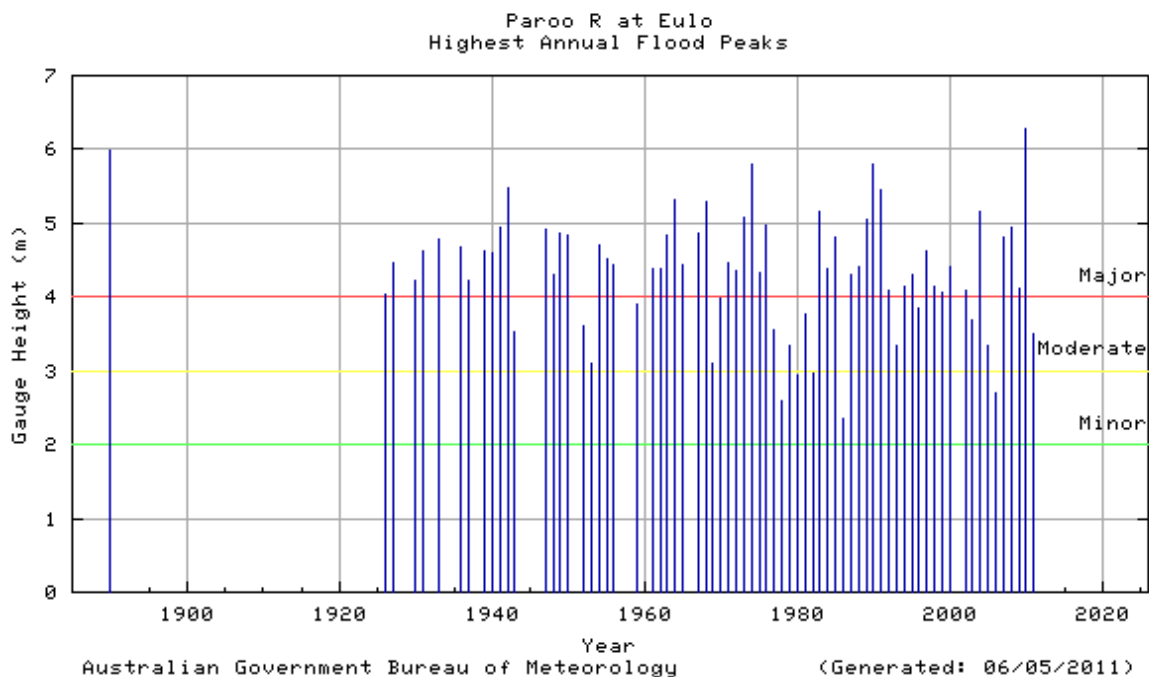
Flood Risk

The Paroo River catchment is located in south west Queensland and covers an area of approximately 31,000 square kilometres. The river rises in country to the north of Cheepie and flows in a southerly direction. It is joined by its major tributary, Beechal Creek, immediately below Humberburn before passing through Eulo, and eventually crossing the Queensland-New South Wales border at Hungerford. Floods normally develop in the headwaters of the Paroo River and Beechal Creek, however, flooding may result from heavy rainfall falling in the middle to lower reaches of the catchment.

The town of Eulo is not usually directly affected by floodwaters. The April 1990 and March 2010 floods at Hungerford, on the Queensland-NSW border, caused both inundation of a number of residences and isolation by floodwaters for a considerable period of time.

Previous Flooding

The Paroo River at Eulo has well documented history of flooding dating as far back as 1890 with Hungerford having records dating back since 1974. The significant flood peaks at Eulo and Hungerford are shown in the following diagrams.



Flood Forecasting

The Bureau of Meteorology operates a flood warning system for the Paroo River basin based on a rainfall and river height observations network shown on the map. The network consists of a number of volunteer rainfall and river height observers who forward observations by telephone when the initial flood height has been exceeded at their station, as well as automatic telephone telemetry stations at Humeburn and Caiwarro which are operated by the Bureau of Meteorology and the Department of Environment and Resource Management.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Paroo River during flood events. Quantitative flood forecasts are issued for locations at Eulo and Hungerford when moderate flood levels are likely to be exceeded.

Local Information

The Paroo and Quilpie shire Councils may be able to provide further information on flooding in your area of the Paroo River catchment.

Flood Warnings and Bulletins

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Paroo River regularly during floods. They are sent to radio stations for broadcast, and to local Councils, emergency services and a large number of other agencies involved in managing flood response activities. Flood Warnings and River Height Bulletins are available via :

Radio

Radio stations, particularly the local ABC, and local commercial stations, broadcast Flood Warnings and River Height Bulletins soon after issue.

Local response organisations

These include the Councils, Police, and State Emergency Services in the local area.

Internet/World Wide Web

Flood Warnings, River Height Bulletins and other weather related data is available on the Bureau's Web page at <http://www.bom.gov.au> . The Queensland Flood Warning Centre website is <http://www.bom.gov.au/qld/flood> .

Telephone Weather

Flood Warnings are available through a recorded voice retrieval system, along with a wide range of other weather related and climate information.

[Main Directory](#)

Phone 1900 955 360

Flood Warnings

Phone 1300 659 219

Telephone Weather Services Call Charges:

1900 numbers: 77c per minute incl. GST; 1300 numbers: Low call cost - around 27.5c incl. GST.
(More from international, satellite, mobile or public phones)

Interpreting Flood Warnings and River Height Bulletins

Flood Warnings and River Height Bulletins contain observed river heights for a selection of the river height monitoring locations. The time at which the river reading has been taken is given together with its tendency (e.g. rising, falling, steady or at its peak). The Flood Warnings may also contain predictions in the form of minor, moderate or major flooding for a period in the future. River Height Bulletins also give the height above or below the road bridge or causeway for each river station located near a road crossing.

One of the simplest ways of understanding what the actual or predicted river height means is to compare the height given in the Warning or Bulletin with the height of previous floods at that location.

The table below summarises the flood history of the Paroo River basin - it contains the flood gauge heights of the more significant recent floods.

River height station	Jan 1974	Feb 1976	May 1983	Apr 1990	Feb 1997	Jan 2004	Jan 2008	Jun 2009	Mar 2010
Quilpeta	-	-	-	4.43	-	3.90	3.35	-	6.00
Humburn	7.62	-	6.20	7.18	5.78	6.15	6.30	4.95	-
Eulo	5.79	4.96	5.06	5.80	4.63	5.15	4.95	4.12	6.27
Carpet Springs	2.92	-	-	-	-	2.40	-	-	3.00
Caiwarro	4.77	4.81	4.52	4.77	4.02	4.50	4.30	3.18	4.99
Hungerford	2.90	2.78	2.50	2.92	2.16	2.45	2.30	1.72	2.87

All heights are in metres on flood gauges.

Historical flood heights for all river stations in the Paroo River Floodwarning network, as shown on the map, are available from the Bureau of Meteorology upon request.

PAROO RIVER CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

Major flooding requires a large scale rainfall situation over the Paroo River catchment. The following can be used as a rough guide to the likelihood of flooding in the catchment :

75mm in 24 hours over isolated areas, with lesser rains of 50mm over more extensive areas will cause stream rises and the possibility of minor flooding. If lesser rainfalls have been recorded in the previous 24 to 72 hrs, then moderate to major flooding may develop.

100mm in 24 hours will cause isolated flooding in the immediate area of the heavy rain.

General 100mm or heavier falls in 24 hours over a wide area will most likely cause major flooding. In the lower reaches these falls may cause relatively fast initial rises at Eulo, Caiwarro and Hungerford, before upstream rises occur.

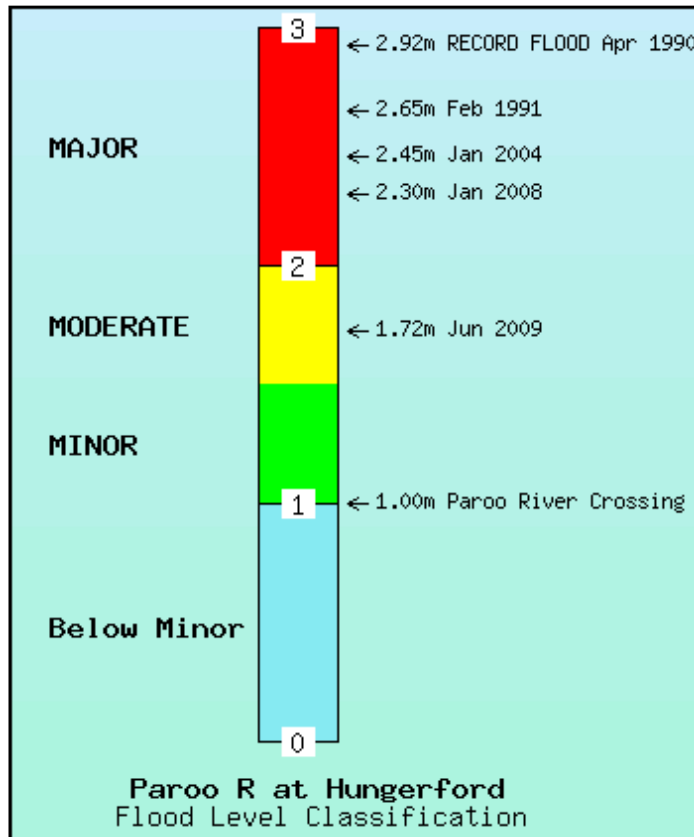
Flood Classifications

At each flood warning river height station, the severity of flooding is described as minor, moderate or major according to the effects caused in the local area or in nearby downstream areas. Terms used in Flood Warnings are based on the following definitions.

Major Flooding : This causes inundation of large areas, isolating towns and cities. Major disruptions occur to road and rail links. Evacuation of many houses and business premises may be required. In rural areas widespread flooding of farmland is likely.

Moderate Flooding : This causes the inundation of low lying areas requiring the removal of stock and/or the evacuation of some houses. Main traffic bridges may be closed by floodwaters.

Minor Flooding : This causes inconvenience such as closing of minor roads and the submergence of low level bridges and makes the removal of pumps located adjacent to the river necessary.



Each river height station has a pre-determined flood classification which details heights on gauges at which minor, moderate and major flooding commences. Other flood heights may also be defined which indicate at what height the local road crossing or town becomes affected by floodwaters.

The table below shows the flood classifications for selected river height stations in the Paroo River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Quilpeta	0.5	-	2.0	-	3.0	-	4.0
Humeburn	-	4.50 (B)	1.8	-	2.8	-	4.3
Eulo	2.0	3.00 (A)	2.0	3.0	3.0	-	4.0
Carpet Springs	1.5	1.90 (C)	1.9	-	2.0	-	2.5
Caiwarro	-	-	1.5	-	2.5	-	3.5
Hungerford	0.5	1.00 (X)	1.0	1.0	1.5	2.5	2.0

All heights are in metres on flood gauges.

(B) = Bridge (A) = Approaches (C) = Causeway (X) = Crossing

The above details are correct at the time of preparing this document. Up-to-date flood classifications and other details for all flood warning stations in the network are at:

<http://www.bom.gov.au/hydro/flood/qld/networks/index.shtml>

Catchment Map showing the Paroo River flood warning network

Click here to view map as: [PNG](#) [PDF](#) (394K bytes)

For further information, contact:

The Regional Director, Bureau of Meteorology, GPO Box 413, Brisbane Q 4001

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