

FLOOD WARNING SYSTEM for the MACINTYRE AND WEIR RIVERS

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Macintyre and Weir Rivers. 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.



Macintyre River at Goondiwindi

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(Last updated September 2019)

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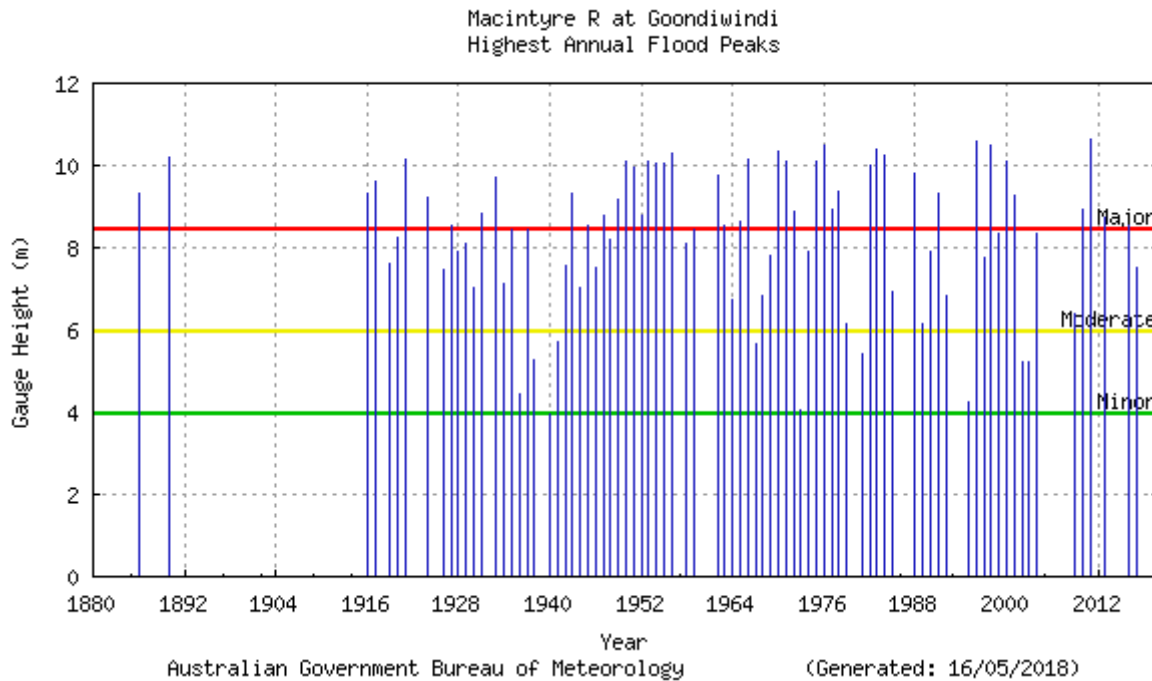
Flood Risk

The Macintyre and Weir Rivers drain an area of about 44,000 square kilometres, most of which lies in the southern border parts of Queensland, with a small part of the basin extending into New South Wales. The Macintyre River has three main tributaries - the Macintyre River in New South Wales, the Dumaresq River along the border, and the Macintyre Brook. Major flooding can occur along each of these river systems causing isolation of towns and rural lands, and severe flooding at times in the Goondiwindi area.

Major flooding is also experienced along the Weir River which joins the Macintyre about 200 kilometres downstream from Goondiwindi, near Talwood.

Previous Flooding

Records of large floods at Goondiwindi extend back as far as 1886, and since then more than 60 major floods have occurred. In 1956, Goondiwindi experienced three major floods within six months which prompted the building of levee banks to protect the town. The 1996 flood of 10.6 metres stood as the Goondiwindi record flood until January 2011 when the Macintyre River reached 10.64 metres.



Flood Forecasting

The Goondiwindi Regional Council, in conjunction with the Bureau of Meteorology operate a flood warning system for the Border River catchments. The ALERT network consists of automatic rainfall and river height stations which regularly forward data via radio telemetry to base stations located at Inglewood and the Bureau's Flood Warning Centre in Brisbane. The system provides early warning of heavy rainfall and river rises in the catchment and enables more accurate and timely flood warning and forecasts. The balance of the network consists of volunteer rainfall and river height observers who forward observations by telephone when the initial flood height has been exceeded at their station. The Department of Natural Resources and Mines also operates a number of automatic telemetry stations throughout the catchment which also provides data during floods.

The Bureau Flood Warning Centre in Brisbane issues Flood Warnings and River Height Bulletins for the Macintyre and Weir Rivers during flood events. River height predictions are given for a number of flood affected towns, including Talwood, Inglewood, Texas and Goondiwindi. The Bureau of Meteorology's Flood Warning Centre located in Sydney, provides forecasts and warnings for the NSW towns of Bogggabilla on the Macintyre River and Mungindi on the Barwon River.

Local Information

The Goondiwindi Regional Council is able to provide further information on flooding in the area of the Macintyre and Weir River catchment.

Flood Warnings and Bulletins

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Macintyre and Weir River catchment 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 Council, 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

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 Macintyre and Weir River catchment - it contains the flood gauge heights of the more significant recent floods.

Flood Event	Talwood	Texas	Inglewood	Boggabilla	Goondiwindi
Jan/Feb 1956	-	10.11*	12.50*	-	10.27
Feb 1976	4.74	10.80	11.73	12.83	10.50
Jan 1996	4.22	7.20	9.75	12.54	10.60
Jul/Aug 1998	4.36	7.10	9.15	12.13	10.48
Sept 2010	-	6.71	7.50	9.94	8.83
Oct 2010	3.46	5.21	3.63	-	8.93
Jan 2011	3.97	9.21	9.15	12.56	10.64
Jan 2013	4.70	-	4.37	-	8.73
Mar/Apr 2017	-	-	-	9.38	8.49

All heights are in metres on the flood gauges.

[*] These heights have been taken at old gauge sites and may not relate to existing gauge sites.

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

**MACINTYRE AND WEIR RIVER CATCHMENT
- ASSESSMENT OF THE FLOOD POTENTIAL**

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

50mm in 24 hours over isolated areas, with lesser rains of 25mm 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. 50mm in 24 hours will cause isolated flooding in the immediate area of the heavy rain.

Generally 50mm or heavier falls in 24 hours over a wide area will most likely cause major flooding, particularly in the middle to lower reaches of the Macintyre and Dumaresq Rivers, the Macintyre Brook and Weir River and extending downstream to Mungindi and the New South Wales and Queensland border.

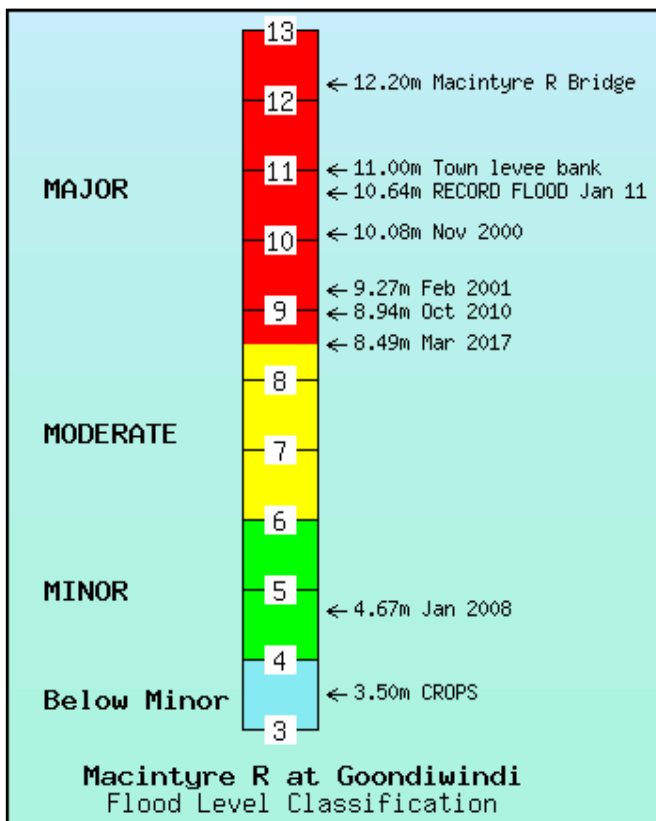
Flood Classifications

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.

Minor Flooding : Causes inconvenience. Low-lying areas next to watercourses are inundated. Minor roads may be closed and low-level bridges submerged. In urban areas inundation may affect some backyards and buildings below the floor level as well as bicycle and pedestrian paths. In rural areas removal of stock and equipment may be required.

Moderate Flooding : In addition to the above, the area of inundation is more substantial. Main traffic routes may be affected. Some buildings may be affected above the floor level. Evacuation of flood affected areas may be required. In rural areas removal of stock is required.

Major Flooding : In addition to the above, extensive rural areas and/or urban areas are inundated. Many buildings may be affected above the floor level. Properties and towns are likely to be isolated and major rail and traffic routes closed. Evacuation of flood affected areas may be required. Utility services may be impacted.



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 Macintyre and Weir River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Texas	2.0	7.50 (R)	6.0	7.0	7.0	6.7	8.0
Inglewood Bridge	-	10.40 (B)	5.0	9.0	9.0	10.1	10.0
Boggabilla	-	-	5.0	-	11.5	-	12.0
Goondiwindi	4.0	12.20 (B)	4.0	3.5	6.0	10.0	8.5
Talwood	2.0	3.70 (B)	3.0	3.2	3.5	-	4.0

All heights are in metres on flood gauges.

(B) = Bridge (R) = Road

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:

[Flood gauge information](#)

For the latest rainfall and river height conditions please use the following link:

[Latest rainfall and river heights](#)

For the latest rainfall and river height network map please use the following link:

[Network maps](#)

For further information, contact:

The Flood Services Manager, Bureau of Meteorology, GPO Box 413, Brisbane Q 4001
