FLOOD WARNING SYSTEM for the NOOSA RIVER

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Noosa 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.

Lake Cootharaba at Boreen Point

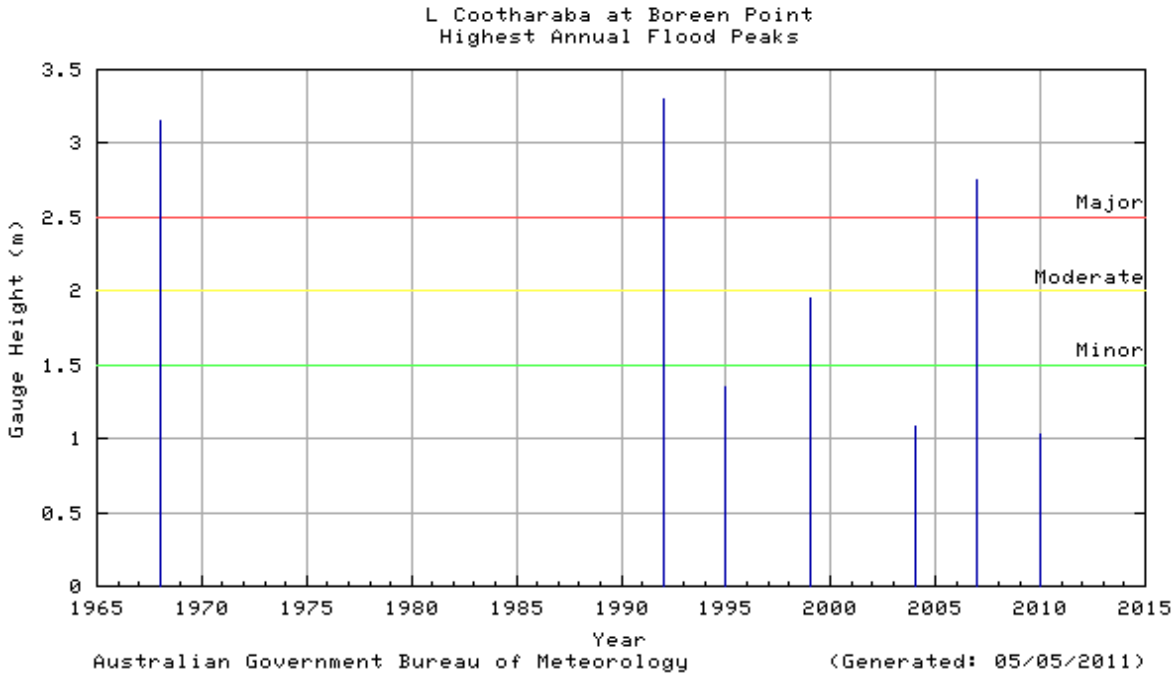
Contained in this document is information about:
(Last updated May 2011)

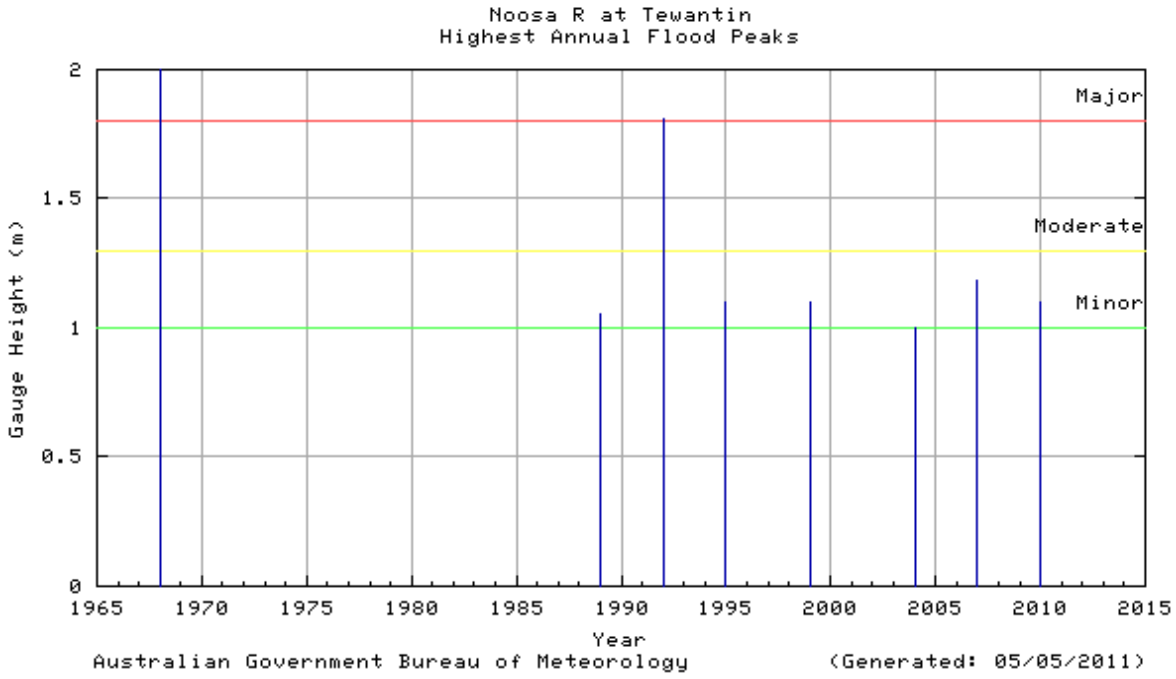
Flood Risk

The Noosa River has a catchment area of approximately 1900 square kilometres at its mouth. The Noosa River flows into Lake Cootharaba and Lake Cooroibah before flowing through Tewantin and out to its mouth at Noosa Heads. At Noosaville and Tewantin, the 1992 flood of 1.8 metres resulted in twelve homes being severely flooded. Many others along the Noosa River were surrounded by water which went under high-set homes and flooded businesses. The damage was not as bad as in 1968 when the Noosa River peaked at two metres. At Boreen Point, the caravan and camping grounds, the Lake Cootharaba Sailing Club, five houses and the general store were all flood damaged in the 1992 event. Lake Cootharaba peaked at 3.30 metres and Lake Cooroibah at 2.55 metres. Both these peaks were greater than those in 1968.

Previous Flooding

Only the two major floods in February 1992 and August 2007 have occurred, since the initial flood warning network was installed in 1987, however historical records show the 1968 flood was of similar magnitude. The figure below shows the annual peak heights which have been recorded at Lake Cootharaba and Tewantin.





Flood Forecasting

The Bureau of Meteorology operates a flood warning system for the Noosa River catchment based on a rainfall and river height monitoring network shown on the map. The network consists of an automatic ALERT system, as well as 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.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Noosa River during flood events. Qualitative flood forecasts are issued when moderate flood levels are likely to be exceeded.

Local Information

The Sunshine Coast Regional Council is able to provide further information on flooding in your area of the Noosa River catchment.

Noosa River ALERT System

The Noosa River ALERT system was installed in January 2001 by the Noosa Shire Council, with the assistance of the Bureau. It was funded through the Regional Flood Mitigation Program. The system consists of a network of rainfall and river height field stations which report via VHF radio to base station computers in the Council office at Tewantin and in the Flood Warning Centre in Brisbane.

The Noosa River monitoring network has eight field stations - three which measure lake level/river height and rainfall, and four which measure only rainfall in the headwater areas. The remaining station continuously monitors the tide at Noosa Heads. These field stations send reports for every 1 millimetre of rainfall and every 50 millimetre change in water level. The base station computer collects the data and has software that displays it in graphical and tabular form. The data is transmitted to the Bureau's Flood Warning Centre in Brisbane where it is used in hydrologic models to produce river height predictions during times of heavy rain and flooding.

Flood Warnings and Bulletins

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Noosa River and adjoining river systems 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 Noosa River catchment - it contains the flood gauge heights of the more significant recent floods.

River height station	- 1968	Feb 1992	Mar 1992	Feb 1995	Feb 1999	Mar 2004	Aug 2007	Mar 2010
Coops Corner	-	7.25	6.22	5.84	5.60	-	7.00	4.27
Boreen Point	3.15	3.30	1.50	1.35	1.95	1.08	2.75	1.03
Lake Cooroibah	-	2.55	1.25	1.00	1.45	1.18	2.05	1.43
Tewantin	2.00	1.81	1.10	1.10	1.10	1.00	1.18	1.10

All heights are in metres on flood gauges.

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

NOOSA RIVER CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

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

Average catchment rainfalls in excess 200mm in 24 hours, may result in stream rises and the possibility of moderate to major flooding and local traffic disabilities in the middle to lower reaches of the Noosa River below Tewantin extending downstream.

Average catchment rainfalls in excess 300mm in 24 hours, may result in significant stream rises and the possibility of severe major flooding and local traffic disabilities in the middle to lower reaches of the Noosa River below Tewantin extending downstream.

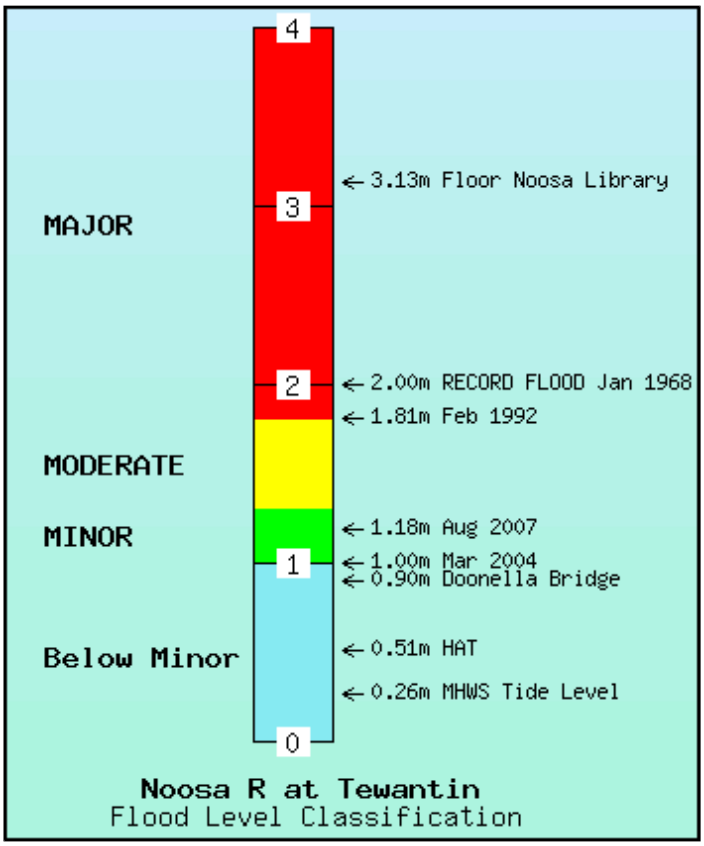
Flood Classifications

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 Noosa River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Coops Corner	-	-	-	-	-	-	-
Boreen Point	1.0	-	1.5	-	2.0	2.7	2.5
Lake Cooroibah	1.0	-	1.0	-	1.5	-	2.0
Tewantin	0.9	0.90 (R)	1.0	-	1.3	1.8	1.8

All heights are in metres on flood gauges. (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:

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

Catchment Map showing the Noosa River flood warning network

Click here to view map as: PNG PDF (253K bytes)

For further information, contact:
The Regional Director, Bureau of Meteorology, GPO Box 413, Brisbane Q 4001
