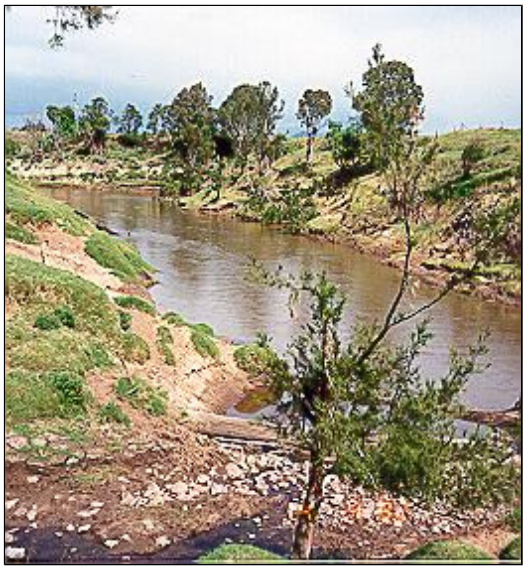
FLOOD WARNING SYSTEM for the LOGAN & ALBERT RIVERS

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



Logan River near Beaudesert

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

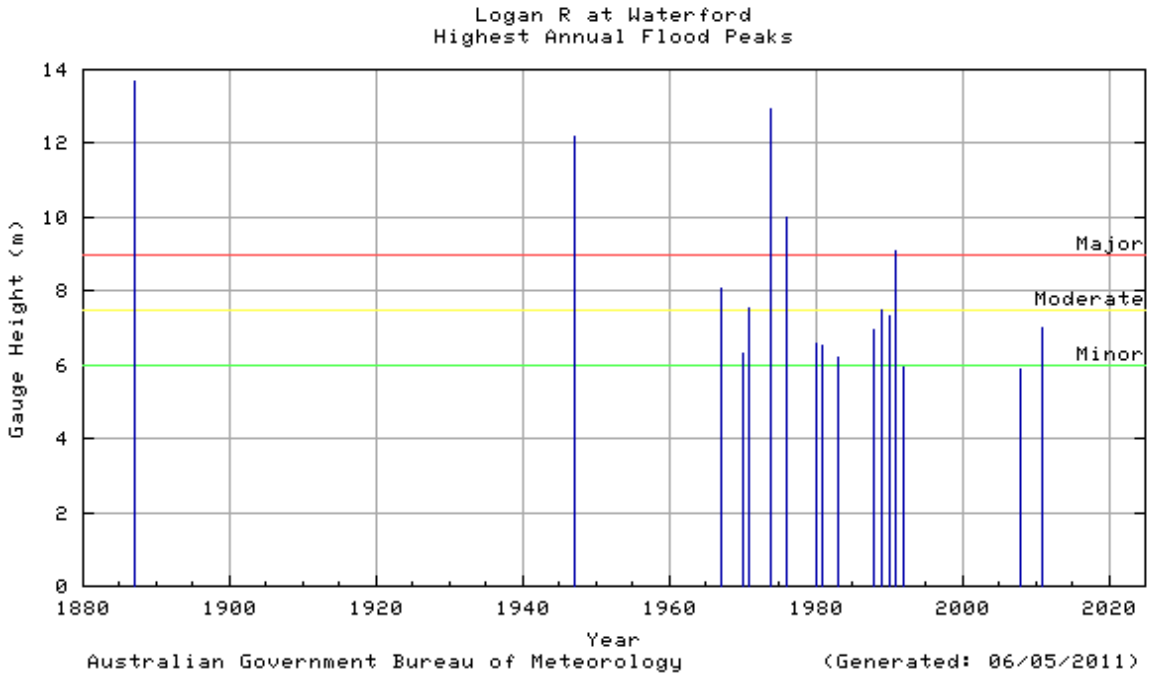
Flood Risk

The Logan River has a catchment area of about 3850 square kilometres and lies in the south east corner of Queensland. The catchment extends from the Logan City-Beenleigh area in the north to the McPherson Ranges in the south on the Queensland-NSW border. The major tributaries are the Albert River and Teviot Brook. Smaller tributaries include Running, Christmas, Burnett and Canungra Creeks in the headwaters. Major flooding is experienced in both rural and urban areas of the catchment although major flooding in the upper part of the catchment does not necessarily result in significant flooding in the lower catchment.

Scrubby and Slacks Creeks in the lower reaches of the Logan River can be subject to flash flooding as well as backwater flooding during major river flood events.

Previous Flooding

Records of large floods in the Logan-Albert Rivers extend back as far as 1887, and since then there have been several major flood events. The flood of January 1974 was the most severe in the lower reaches this century. Severe floods have occurred in the upper reaches of the Logan River in February 1976 and February 1991.



Flood Forecasting

The Bureau of Meteorology operates a flood warning system for the Logan and Albert River catchments 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 which are operated by the Department of Natural Resources & Water and the Bureau of Meteorology.

In conjunction with the Logan City Council, the Bureau also operates an ALERT radio telemetry network of Floodwarning stations in the lower reaches of the Logan River in the Slacks Creek and Scrubby Creek catchments, as well as the station at Waterford on the Logan River. These rainfall and river height stations regularly send data via radio telemetry to a base station located in Council offices and the Bureau's Flood Warning Centre in Brisbane. The system provides early warning of heavy rainfalls and river rises throughout the catchment and enables more accurate and timely flood warning and forecasts.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Logan and Albert Rivers during flood events. Quantitative flood forecasts are issued for Waterford when the level is likely to exceed 6.0 metres or minor flood level.

Local Information

The Logan City Council and Scenic Rim Regional Council are able to provide further information on flooding in your area of the Logan and Albert River catchments.

Flood Warnings and Bulletins

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Logan and Albert River catchments 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 Logan and Albert River catchments - it contains the flood gauge heights of the more significant recent floods.

River height station	Jan 1974	Feb 1976	Feb 1991	May 1996	Feb 2001	Mar 2004	Jan 2008	Jan 2011
Lumeah	8.04	9.25	9.01	9.95	6.64	8.78	4.56	5.16
Bromfleet	16.36	14.88	9.53	13.97	12.53	13.08	15.23	11.82
Wolffdene	13.70	9.77	4.86	8.73	7.91	7.39	8.00	6.99
Boonah	-	8.16	8.50	6.88	4.56	3.90	7.10	7.20
The Overflow	13.03	12.47	13.40	8.66	6.48	6.07	8.02	-
Dulbolla	10.06	12.00	14.40	11.80	8.80	9.00	12.90	11.10
Round Mountain	15.33	16.98	16.83	13.20	11.44	10.81	15.60	14.07
Beaudesert	-	-	-	7.75	8.36	9.02	13.20*	6.64
Yarrahappini	20.75	18.54	18.80	14.85	12.35	10.70	15.40	15.12
Maclean Bridge	21.22	18.35	18.55	15.00	12.10	10.12	15.15	15.65
Waterford	12.95*	10.00*	9.06	7.50	4.35	3.21	5.90	7.00
Eagleby	7.25*	5.28*	5.00	3.94	-	-	-	-

All heights are in metres on flood gauges.
[*] Estimated peak flood heights from flood marks and other information.

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

LOGAN AND ALBERT RIVER CATCHMENTS - ASSESSMENT OF THE FLOOD POTENTIAL

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

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

Average catchment rainfalls in excess of 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 Logan River below Maclean Bridge and the Albert River below Bromfleet extending downstream.

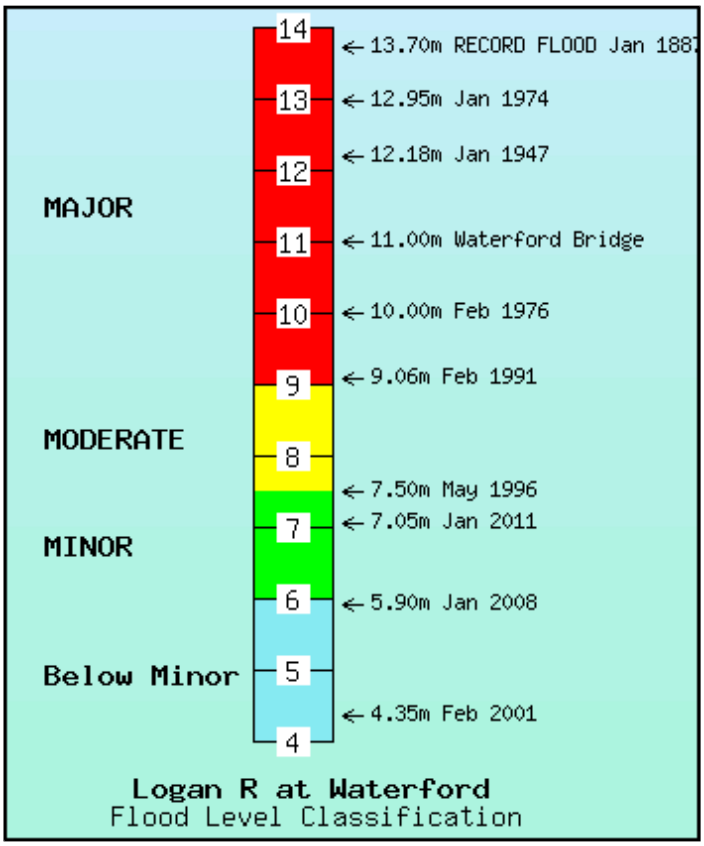
Flood Classifications

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 Logan and Albert River catchments.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Lumeah	-	9.30 (B)	5.0	-	7.0	-	9.0
Bromfleet	4.0	16.80 (B)	9.0	16.0	12.0	-	16.0
Wolffdene	-	-	6.0	-	8.0	-	10.0
Beenleigh	2.0	-	3.0	3.0	4.5	-	6.0
Boonah	4.0	6.00 (B)	4.0	4.0	5.0	7.0	6.0
The Overflow	7.0	7.60 (B)	8.0	9.0	9.0	-	12.0
Dulbolla	4.0	-	6.0	12.0	10.0	-	12.0
Round Mountain	-	13.00 (B)	6.0	-	9.5	-	13.0
Beaudesert	-	9.80 (B)	5.5	-	7.8	-	8.3
Yarrahappini	-	17.40 (B)	10.0	12.0	14.0	-	16.0
Maclean Bridge	6.0	17.00 (A)	10.0	-	13.5	15.2	16.0
Waterford	4.0	11.00 (B)	6.0	-	7.5	9.0	9.0
Eagleby	3.0	10.40 (B)	3.0	3.5	4.0	7.0	5.0

All heights are in metres on flood gauges.
(B) = Bridge (A) = Approaches

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 Logan-Albert River flood warning network

Click here to view map as: PNG PDF (556K bytes)

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