



## FLOOD WARNING SYSTEM for the KOLAN RIVER

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Kolan 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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*Kolan River at Monduran*

### Flood Risk

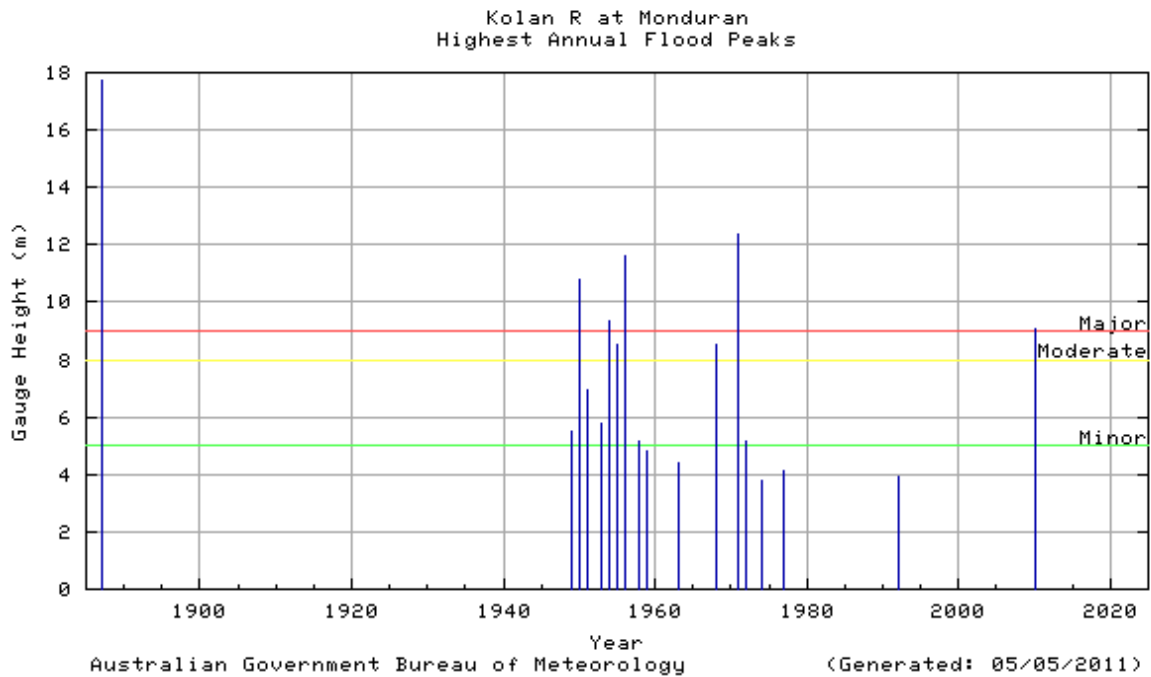
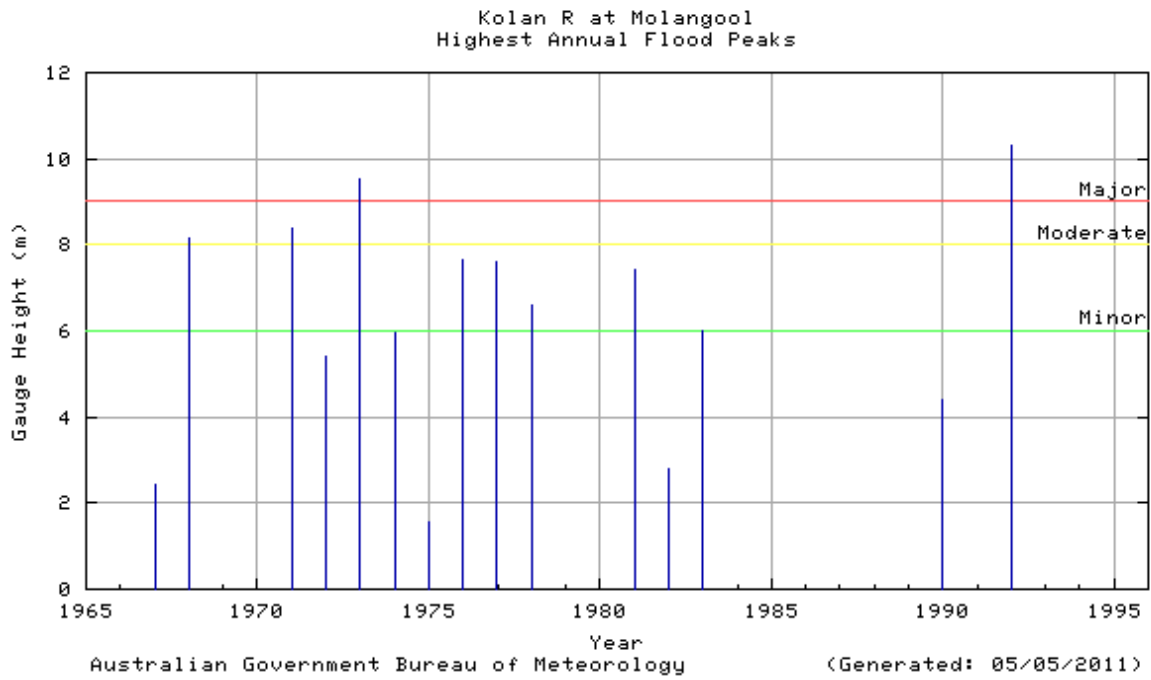
The Kolan River catchment is located in south east Queensland and covers an area of approximately 3,000 square kilometres. The river rises in the rugged Dawes Range, 100 kilometres northwest of Bundaberg. It meanders for a distance of 70 kilometres, generally in a southeasterly direction, before entering Lake Monduran and passing through the Fred Haigh Dam.

Below the Dam and the Bucca Range, the Kolan River enters a wide coastal plain, generally under large areas of sugar cane cultivation. Gin Gin Creek, its major tributary, rises in the Burnett Range 35 kilometres west of Gin Gin and flows in a easterly direction joining the Kolan River 10 kilometres above Bucca Weir. Floods normally develop in the headwaters of the Kolan River and Gin Gin Creek and its major tributaries, however, Fred Haigh Dam has a significant effect on reducing major flooding in the lower reaches. Flooding from local area heavy rainfall may still occur in areas downstream of Bucca Weir.

Since the Fred Haigh Dam was completed in 1974, only minor to moderate flooding had been recorded before December 2010. In December 2010 the dam spilled by 3.85 metres causing major flooding.

### Previous Flooding

Previous flood information for the Kolan River is well documented. Monduran has peak heights dating back to 1887, with Molangool dating back to 1967.



## Flood Forecasting

The Bureau of Meteorology operates a flood warning system for the Kolan River catchment 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 a automatic telephone telemetry stations at Springfield, Fred Haigh Dam and Gin Gin Creek, which are operated by the Department of Environment and Resource Management.

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

## Local Information

The Bundaberg Regional Council is able to provide further information on flooding in your area of the Kolan River catchment.

## Flood Warnings and Bulletins

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

River height station	Feb 1950	Mar 1956	Jan 1968	Feb 1971	Mar 1977	Mar 1992	Feb 2003	Dec 2010
Molangool	-	-	8.15	8.36	7.60	10.30	-	-
Springfield TM	-	-	9.24	10.24	9.21	12.27	11.23	9.28
Fred Haigh Dam*	-	-	-	-	1.73	1.68	-	3.85
Monduran	10.82	11.58	8.53	12.34	4.10	3.90	-	9.10
Gin Gin Creek	-	-	10.06	6.77	5.07	12.66	6.71	8.52
Bucca Weir	-	-	-	-	-	20.95	-	18.73
Gooburrum P/S	-	-	-	-	-	-	-	8.28

All heights are in metres on flood gauges.

[\*] Indicates height in metres over the Spillway

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

### KOLAN RIVER CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

Major flooding requires a large scale rainfall situation over the Kolan River catchment. However, the Fred Haigh Dam has a significant effect on reducing major flooding in the lower reaches. 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 lower reaches of the Kolan River below the Fred Haigh Dam and extending downstream.

Average catchment rainfalls in excess 300mm in 24 hours, may result in significant stream rises and the possibility of major flooding and local traffic disabilities in the lower reaches of the Kolan River below the Fred Haigh Dam and extending downstream.

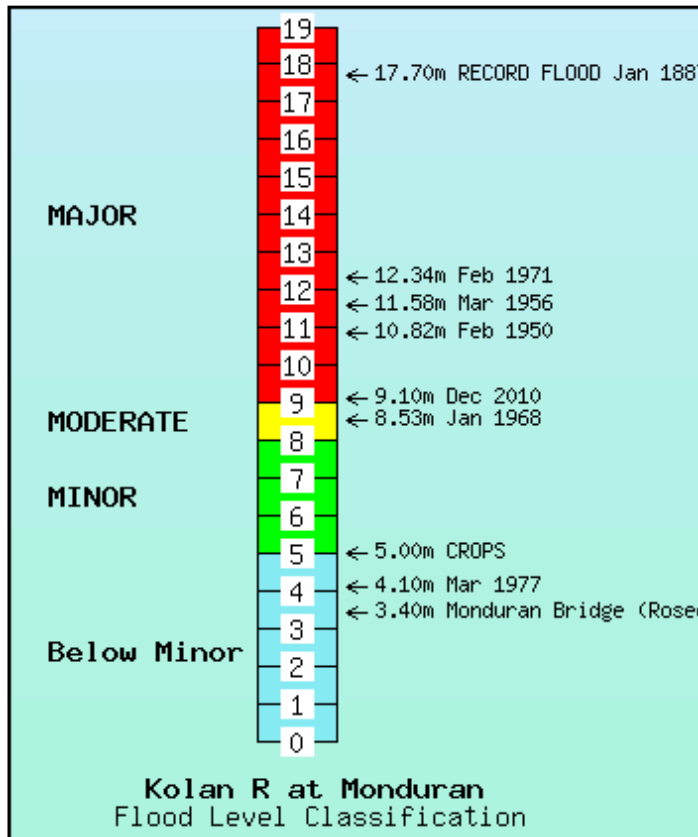
### Flood Classifications

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 Kolan River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Molangool	1.0	1.00 (C)	6.0	-	8.0	-	9.0
Springfield TM	-	-	7.0	-	9.0	-	10.0
Fred Haigh Dam	-	0.0 (S)	1.0*	-	1.5*	-	2.0*
Monduran	3.0	3.40 (B)	5.0	5.0	8.0	-	9.0
Gin Gin Creek	-	-	5.0	-	7.0	-	9.0
Bucca Weir	-	16.20 (W)	17.5	-	18.5	-	19.0
Gooburrum P/S	-	-	4.5	-	5.5	-	6.0

All heights are in metres on flood gauges. [\*] Indicates height in metres over the Spillway (B) = Bridge (C) = Causeway (W) = Weir (S) = Spillway

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 Kolan River flood warning network

Click here to view map as:     [PNG](#)     [PDF](#) (264K bytes)

***For further information, contact:***

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

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