



## FLOOD WARNING SYSTEM for the HAUGHTON RIVER

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



*Haughton River at Hustons Farm*

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

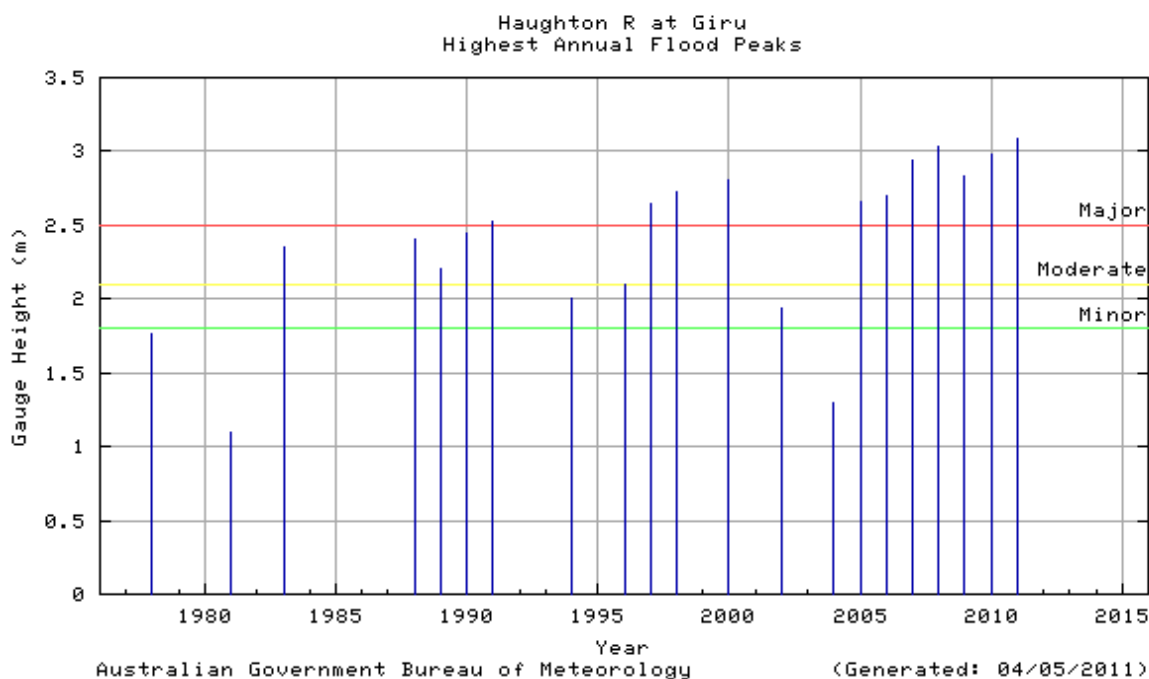
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### Flood Risk

The Haughton River catchment covers an area of approximately 1850 square kilometres and includes the major tributaries, Reid River and Major Creek. Barratta Creek is the overflow for both the Haughton and Burdekin Rivers. The headwaters of the Haughton catchment rise in the Hervey Range. As this is a relatively small catchment and due to the rapid response of the catchment to rainfall, travel times are very short. Heavy rainfalls over the catchment are capable of causing major flooding of agricultural areas adjacent to the waterways and major flooding of residential and commercial areas in Giru. The township has a levee constructed around the town to protect it from floods up to about 2.30 metres on the flood gauge.

## Previous Flooding

Flood records for Giru only go back to 1978. The highest flood on record occurred in February 2011 with a recorded peak height of 3.09 metres on the flood gauge, causing widespread inundation of the Giru township.



## Flood Forecasting

The Burdekin Shire Council, in conjunction with the Bureau of Meteorology operates a flood warning system for the Haughton River catchment. The ALERT network consists of automatic rainfall and river height stations which regularly forward data via radio telemetry to a base station located at the Council office in Ayr 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 Queensland Department of Environment and Resource Management also operates a number of automatic telephone telemetry stations throughout the catchment.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Haughton River catchment during flood events. Quantitative flood forecasts are issued when moderate flood levels are likely to be exceeded at Giru, with an objective to provide between 3 and 12 hours warning of these flood levels.

## Local Information

The Burdekin Shire Council is able to provide further information on flooding in your area of the Haughton River catchment.

## Haughton ALERT System

The Haughton ALERT Flood Warning System was completed in 1993 as a co-operative project between the Bureau of Meteorology and the then Thuringowa City Council. The system, now transferred to Burdekin Shire Council, comprises of a network of rainfall and river height stations which report via VHF radio to a base station computer located in the Council office in Ayr. The stations send reports for every 1 millimetre of rainfall and every 50 millimetre change in river height.

In consultation with the Burdekin Shire Council, the Bureau issues Flood Warnings for the Haughton River.

The base station computer in the Burdekin Shire Council office collects the data and has software that displays it in graphical and tabular form. This data is also received by the Bureau's Flood Warning Centre where it is used in hydrologic models to produce river height predictions.

## Flood Warnings and Bulletins

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

River height station	Jan 1978	Mar 1990	Feb 1991	Mar 1997	Apr 2000	Feb 2007	Feb 2008	Feb 2009	Jan 2010	Feb 2011
Flora Valley	8.90	8.20	7.70	7.70	-	8.90	-	-	-	-
Mt Piccaninny	9.09	7.73	7.81	6.65	7.83	9.13	10.51	6.21	6.51	7.63
Major Creek	-	11.72	10.97	11.70	-	10.76	11.39	10.27	8.78	10.37
Powerline	11.50	10.87	10.41	9.84	10.62	11.07	12.12	9.22	9.00	9.00
Hustons Farm	10.54	9.46	9.30	9.85	9.65	-	-	-	-	-
Giru	1.77*	2.44*	2.53*	2.65	2.85	2.94	3.03	2.94	2.99	3.09

All heights are in metres on flood gauges.

[\*] Indicated height in metres prior to the construction of the Giru levee.

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

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

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

Average catchment rainfalls of in excess of 200mm in 24 hours may cause moderate to major flooding and traffic disabilities to develop, particularly in low-lying areas of the Haughton River catchment downstream of Hustons Farm, extending into the Giru township and Haughton River delta area.

Average catchment rainfalls of in excess of 300mm in 24 hours may cause major flooding and traffic disabilities to develop, particularly in low-lying areas of the Haughton River catchment downstream of Hustons Farm, extending into the Giru township and Haughton River delta area.

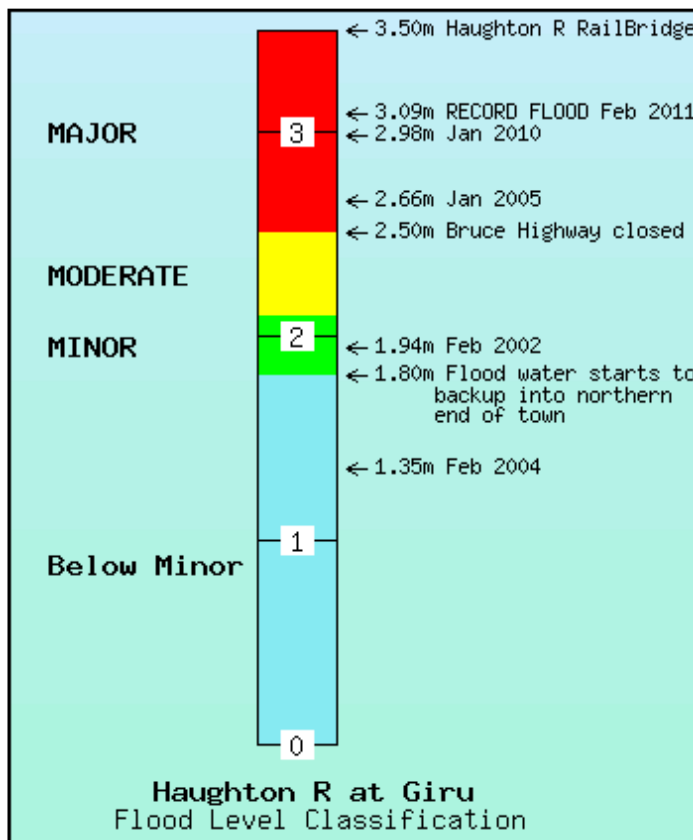
### Flood Classifications

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 Haughton River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Flora Valley	3.0	12.0 (B)	5.0	5.0	5.5	5.0	6.0
Mt Piccaninny	-	-	3.0	-	4.0	-	5.0
Major Creek	-	-	7.0	-	8.0	-	9.5
Powerline	-	-	5.0	-	6.0	-	8.0
Hustons Farm	3.0	6.1 (B)	4.0	4.0	5.0	4.6	6.7
Giru	1.0	3.5 (B)	1.8	-	2.1	2.5	2.5

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

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 Haughton River flood warning network

Click here to view map as:     [PNG](#)     [PDF](#) (300K bytes)

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

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

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