



## FLOOD WARNING SYSTEM for the DON RIVER

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



*Don River at Bowen, Feb 1999*

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

- [Flood Risk](#)
- [Previous Flooding](#)
- [Flood Forecasting](#)
- [Local Information](#)
- [Don ALERT System](#)
- [Flood Warnings and Bulletins](#)
- [Interpreting Flood Warnings and River Height Bulletins](#)
- [Flood Classifications](#)
- [Catchment Map](#)

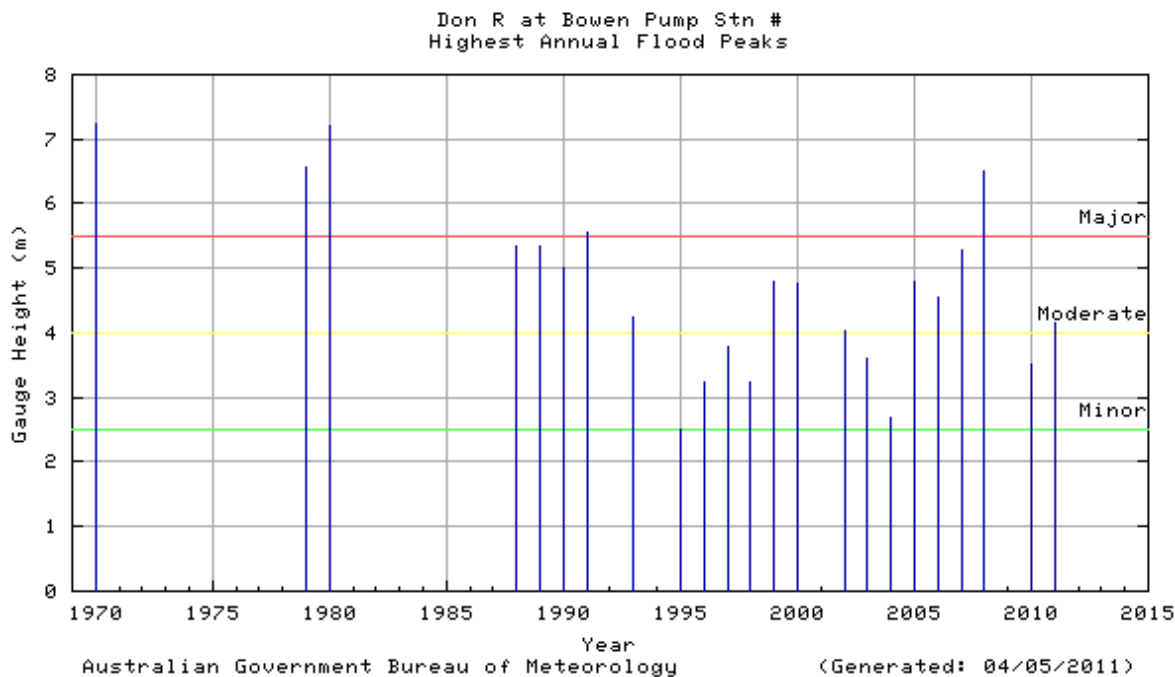
### Flood Risk

The Don River drains an area of about 1200 square kilometres, rising in the Clarke Ranges and flowing in a northerly direction to its mouth at Bowen. The river falls about 250 metres in the 60 kilometres from its source, near Mt Roundhill, to Mt Buckley. Downstream of Mt Buckley the bed gradient remains relatively steep until the Bowen delta area is reached. The upper catchment is used for beef cattle production while the rich soils of the lower Don delta are extensively used for cropping.

Flood warning lead times are only about 3 to 9 hours due to the rapid stream rises and very high velocities in the lower Don River. Serious flooding occurs in the Queens Beach and Bowen delta areas and dwellings are at risk.

## Previous Flooding

Since settlement in 1861, historical records indicate that major floods occurred in 1869, 1870, 1884, 1910, 1916, 1918, 1928, 1940, 1946 and 1955. The highest recorded flood was in 1946 with rises to 9.70 metres on the flood gauge at Warden Bend. In recent years, major levels were reached in January 1970, February 1979, January 1980, March 1988, February 1991 and February 2008.



## Flood Forecasting

The Whitsunday Regional Council, in conjunction with the Bureau of Meteorology operates a flood warning system for the Don River catchment. The network consists mainly of automatic rainfall and river height stations which regularly forward data via radio telemetry to a base station located at the Council office in Bowen and the Bureau's Flood Warning Centre in Brisbane. The system provides early warning of heavy rainfall and river rises throughout the catchment and enables more accurate and timely flood warning and forecasts. The network also 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 Environment and Resource Management also operates automatic telemetry stations at Ida Creek and Reeves which are used in the flood warning system.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Don River catchment during flood events. Quantitative flood forecasts are issued when moderate flood levels are likely to be exceeded at Bowen Pump Station.

## Local Information

The Whitsunday Regional Council and the local State Emergency Service (SES) access flood information from the ALERT system. Residents who are in flood threatened areas should contact the Whitsunday Regional Council or SES for detailed local information and be prepared to take appropriate action before floodwaters reach their property.

## Don River ALERT System

The Don River ALERT Flood Warning System was completed in 1989 as a co-operative project between the Bureau of Meteorology and the then Bowen Shire Council. It also received very strong support from the local SES and its volunteers who contributed some funds to the project and assisted in its installation. The system 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 Bowen. The stations send reports for every 1 millimetre of rainfall and every 50 millimetre change in river height.

In consultation with the Whitsunday Regional Council, the Bureau issues Flood Warnings for the Don River. The Don River can respond very quickly to heavy rainfall and warnings rely on the ALERT system and local arrangements.

The base station computer in the Whitsunday Regional 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 Don 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 Don River catchment - it contains the flood gauge heights of the more significant recent floods.

River height station	Jan 1970	Jan 1980	Mar 1988	Feb 1991	Feb 1999	Jan 2005	Feb 2007	Feb 2008	Mar 2011
Ida Creek	7.06	8.27	5.29	5.80	-	3.60	5.95	7.90	3.11
Mt Dangar	-	-	-	7.50	5.75	5.50	6.90	9.40	3.45
Reeves	-	10.38	7.62	7.43	5.08	5.11	-	9.16	4.66
Bowen Pump Station	7.25	7.20	5.35	5.55	4.80	4.79	5.29	6.50	4.15

All heights are in metres on flood gauges.

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

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

Major flooding requires a large scale rainfall situation over the Don River catchment. 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 Don River catchment downstream of Reeves and extending into the Don River delta area.

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

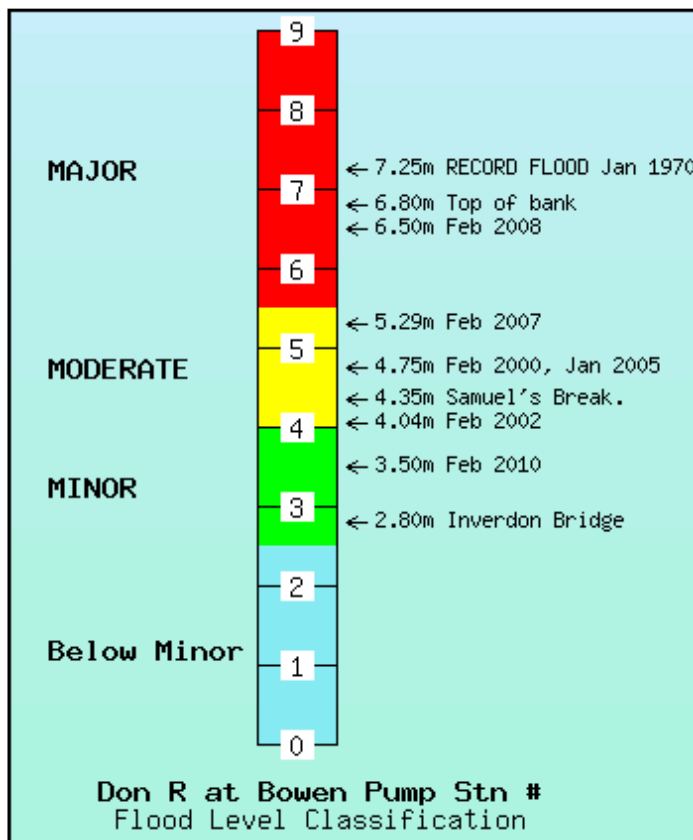
### Flood Classifications

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 Don River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Ida Creek	-	-	2.5	-	4.0	-	5.5
Mt Dangar	-	1.2 (C)	2.5	-	4.0	-	5.5
Reeves	-	-	3.0	-	5.0	-	7.0
Bowen Pump Station	-	2.8 (B)	2.5	-	4.0	-	5.5

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

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 Don River flood warning network.**

Click here to view map as:     [PNG](#)     [PDF](#) (512K bytes)

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

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

---

[Home](#) | [About Us](#) | [Contacts](#) | [Freedom of Information](#) | [Careers](#) | [Search](#) | [Site Map](#) | [Help](#) | [Feedback](#)  
[Weather & Warnings](#) | [Climate Information](#) | [Water Information](#) | [Radar](#) | [RSS](#) | [Learn About Meteorology](#)

---

© [Copyright](#) Commonwealth of Australia 2011, Bureau of Meteorology (ABN 92 637 533 532)

Please note the [Copyright Notice](#) and [Disclaimer](#) statements relating to the use of the information on this site and our site [Privacy](#) and [Accessibility](#) statements. Users of these web pages are deemed to have read and accepted the conditions described in the Copyright, Disclaimer, and Privacy statements. Please also note the [Acknowledgement](#) notice relating to the use of information on this site. No unsolicited commercial email.