



FLOOD WARNING SYSTEM for the GILBERT RIVER

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Gilbert 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 September 2009)

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Einiasleigh River at Van Lee

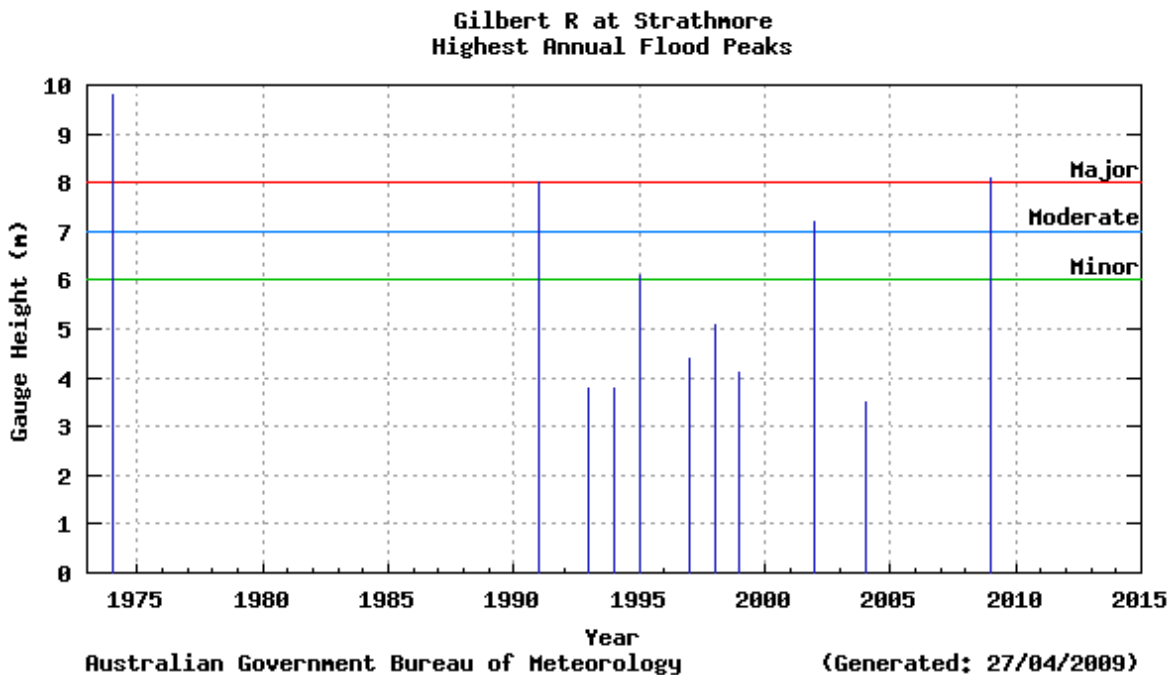
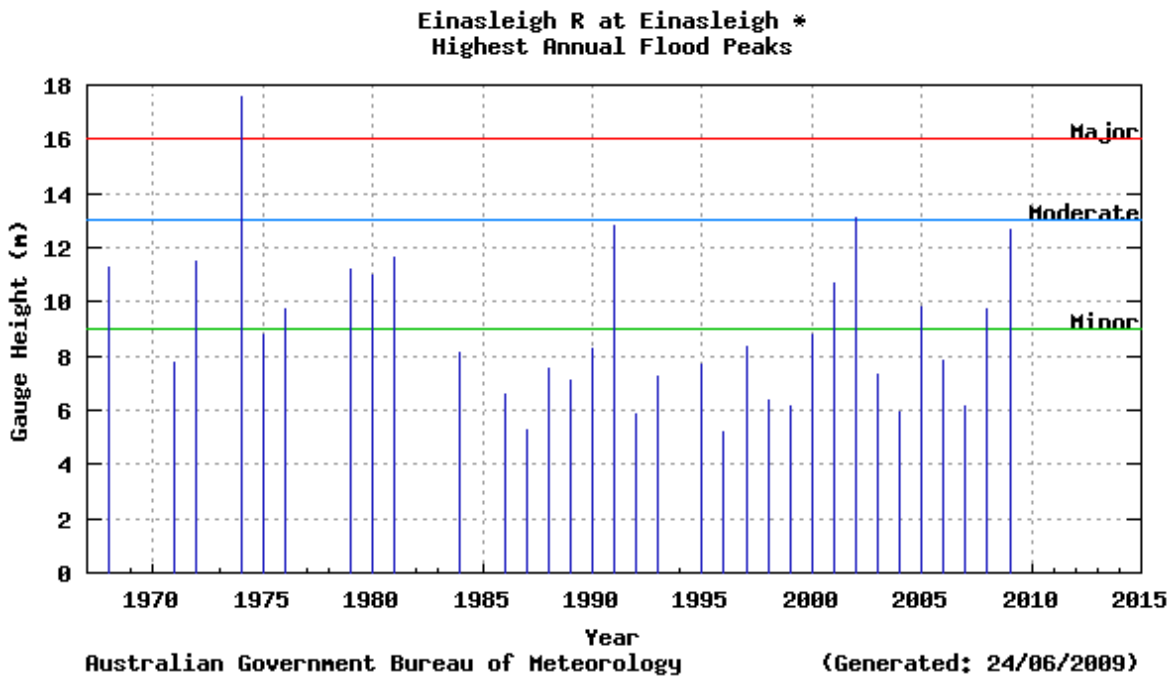
Flood Risk

The Gilbert River catchment is located in north west Queensland and covers an area of approximately 47,000 square kilometres. The river rises in the Great Dividing Range approximately 150 kilometres southeast of Georgetown. The river flows in a northwesterly direction and is joined by its major tributary, the Einiasleigh River, downstream of Strathmore, before finally entering the Gulf of Carpentaria in a river delta 100 kilometres wide. The other main tributary, the Etheridge River, joins the Einiasleigh River downstream of Georgetown, which is the only town in this vast catchment. Smaller settlements can be found at Forsayth, Mt Surprise and Einiasleigh. Floods normally develop in the headwaters of the Gilbert and Einiasleigh Rivers, however general heavy rainfall situations can develop from monsoonal and cyclonic influences which can result in widespread flooding, particularly in the lower reaches below Strathmore.

The record major flood of January 1974 and the floods of February 1991 and in January and February 2009, caused widespread road closures and inundation of properties throughout the catchment.

Previous Flooding

Previous flood information for the Gilbert River is rather limited. Peak flood heights are available from the early 1970's, including the major events recorded in 1974, 1991 and 2009.



Flood Forecasting

The Bureau of Meteorology operates a flood warning system for the Gilbert River based on rainfall and river height observations network as shown on the map. The network consists of a combination 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 at Spanner Waterhole, Kidston Dam, Einasleigh, Mount Surprise, Routh River, Roseglen and at Rockfields, which are operated by the Queensland Department of Environment and Resource Management.

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

Local Information

The Etheridge Shire Council may be able to provide further information on flooding in your area of the Gilbert River catchment.

Flood Warnings and Bulletins

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Gulf River catchments, including the Gilbert River basin, 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/hydro/flood/qld>

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 Gilbert River basin - it contains the flood gauge heights of the more significant recent floods.

River height station	Jan 1956	Jan 1974	Jan 1991	Feb 1991	Mar 1995	Feb 2002	Jan 2009	Feb 2009
North Head	6.92	10.94	7.12	-	5.30	8.25	9.00	6.50
Green Hills	-	13.45	8.19	-	6.20	8.70	10.45	-
Riverview (Gilbert RV)	-	9.83	6.67	-	4.50	5.90	7.90	5.00
Rockfields	-	12.75	-	-	-	-	10.45	8.20
Strathmore	-	9.80	8.00	-	5.90	7.20	8.10	-
Spanner Waterhole	-	-	-	-	-	-	7.58	6.54
Kidston Dam Headwater	-	-	2.19	2.68	0.40	-	-	-
Kidston Dam Tailwater	-	-	3.68	4.16	-	-	-	-
Einasleigh	-	17.53	12.83	11.24	7.67	-	12.64	11.19
Eveleigh	-	-	-	-	-	-	7.55	6.60
Mt. Surprise	-	-	-	-	-	-	3.28	3.63
Van Lee	12.55	12.19	8.97	-	4.10	7.00	9.25	-
Routh River	-	5.56	5.12	4.32	-	-	4.82	4.94
Roseglen	-	9.39	7.92	6.31	-	-	8.09	7.70
Georgetown	7.50	6.50	-	-	-	6.30	5.50	-

All heights are in metres on flood gauges.

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

GILBERT RIVER CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

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

100mm in 24 hours in isolated areas, with lesser rains of 50mm over more extensive areas will cause stream rises and the possibility of minor flooding. If similar rainfalls have been recorded in the previous 2-3 days, then moderate to major flooding may develop.

100mm in 24 hours will cause isolated flooding in the immediate area of the heavy rain.

General 100mm or heavier falls in 24 hours over a wide area will most likely cause major flooding, particularly in the middle to lower reaches of the Gilbert, Etheridge and Einasleigh Rivers.

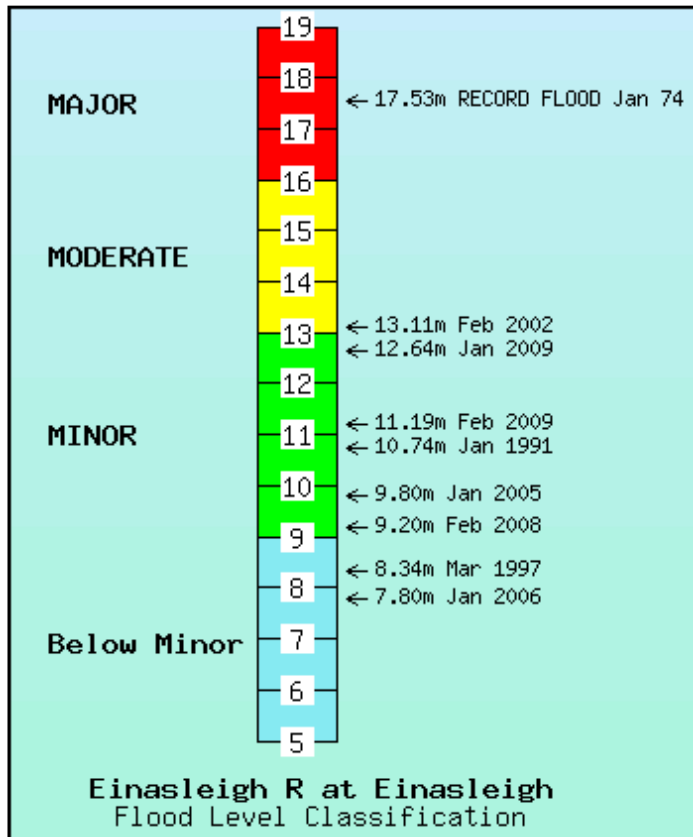
Flood Classifications

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 Gilbert River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
North Head	3.00	-	5.0	-	8.0	-	9.0
Green Hills	4.0	-	6.0	12.5	8.0	-	10.0
Riverview (Gilbert RV)	1.0	0.0 (X)	4.5	8.5	7.5	-	8.5
Rockfields TM	-	6.0 (B)	-	-	-	-	-
Strathmore	3.0	0.3 (X)	6.0	7.0	7.0	-	8.0
Spanner Waterhole TM	-	-	-	-	-	-	-
Kidston Dam HW TM	-	-	-	-	-	-	-
Kidston Dam TW TM	-	-	-	-	-	-	-
Einasleigh TM	-	-	9.0	-	13.0	-	16.0
Eveleigh	3.0	3.0 (A)	4.5	9.0	7.0	-	9.0
Mt. Surprise TM	-	-	-	-	-	-	-
Van Lee	3.0	5.0 (X)	5.0	11.0	9.0	-	12.0
Routh River TM	-	-	-	-	-	-	-
Roseglen TM	-	-	-	-	-	-	-
Georgetown	4.0	4.4 (B)	4.5	6.0	5.0	6.5	6.5

All heights are in metres on flood gauges.

(B) = Bridge (A) = Approaches (C) = Causeway (X) = Crossing (d/s) = Downstream

The above details are current at the time of preparing this document, but are subject to review. Up-to-date flood classifications and other details for all flood warning stations are at:

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

Catchment Map showing the Gilbert River flood warning network

Click here to view map as: [PNG](#) [PDF](#) (633K bytes)

For further information, contact:

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

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