



CLONCURRY FLOOD MARCH 1997

1. Introduction

Heavy rainfall occurred in the Cloncurry River catchment upstream of Cloncurry during the period 28th February to 7th March 1997. Severe flooding occurred in the township of Cloncurry during Sunday the 2nd March 1997. Approximately 40 houses in Cloncurry were affected by floodwaters and about 120 people were evacuated. About 26 houses in Cloncurry suffered considerable water damage. A number of properties in the area were isolated for several days. The Flinders Highway between Mt Isa and Cloncurry was cut in a number of places and remained closed for several days.

2. Meteorological Situation

Towards the end of February the monsoon trough pushed well south into northern Queensland, introducing a deep, moist northwest air flow as far south as Cloncurry. A low then developed on the monsoon trough. The high moisture levels in the air combined with the strong convergence and uplift associated with the low produced the large rainfall totals.

The rainfall eased as a southeasterly flow developed and pushed the monsoon trough to the north.

3. Flood Warning Network

The current network of rainfall and river height stations operated by the Bureau of Meteorology in the Cloncurry River area is shown on the attached map. The Cloncurry River upstream of Cloncurry has a catchment area of 5900 square kilometres. There are daily reporting rainfall stations at Devoncourt, Brightlands and Cloncurry. Rainfall data is also available from the telemetry station at Cloncurry TM. Manual river heights reports are received from Cloncurry as well as telemetry heights from Cloncurry TM, an automatic station operated by the Department of Natural Resources. Pluviograph data was obtained from the station at Cloncurry Airport.

4. Rainfall

Daily rainfall totals in millimetres for the flood period for rainfall stations in the network are listed below.

| Rainfall Station | 28/2/97 | 1/3/97 | 2/3/97 | 3/3/97 | 4/3/97 | 5/3/97 | 6/3/97 | 7/3/97 | Total |
|------------------|---------|--------|--------|--------|--------|--------|--------|--------|-------|
| Brightlands | 5 | 120 | 111 | 151 | 90 | 44 | 28 | 110 | 659 |
| Cloncurry | 75 | 3 | 95 | 257 | 63 | 48 | 18 | 30 | 589 |
| Cloncurry TM | 63 | 5 | 105 | 269 | 67 | 39 | 5 | 7 | 560 |
| Devoncourt | 54 | 45 | 163 | 113 | 134 | 36 | 44 | 156 | 745 |
| Fort Constantine | - | - | 32 | 179 | 44 | 76 | 15 | 35 | 381 |
| Julia Creek | 53 | 1 | 32 | 44 | 15 | 11 | 64 | 0 | 220 |

| | | | | | | | | | |
|--------|----|----|----|----|----|----|----|----|-----|
| Mt Isa | 27 | 66 | 16 | 11 | 84 | 45 | 45 | 16 | 310 |
|--------|----|----|----|----|----|----|----|----|-----|

The period of heaviest rain was in the 72 hour period to 0900 on the 4th March 1997. During this period Cloncurry TM reported 441 mm. This approximates to between a 1 in 50 year and 1 in 100 year rainfall event. The heaviest 24 hour rainfall of 269mm at Cloncurry TM on the 3rd has a similar Average Recurrence Interval as does the highest 12 hourly fall of 206mm. Hourly rainfall data is available from the pluviograph at Cloncurry Airport and these are shown in Figure 1.

5. River Heights

Reports were received from the telemetry station on the Cloncurry River at Cloncurry TM. These are shown on the attached hydrograph. The river at Cloncurry commenced rising early on the morning of Friday 28th February and reached it's peak height of 10.01 metres late in the night of Sunday the 2nd March. Reports from the observer at Cloncurry indicate that at this height water was just lapping the new road bridge. Higher flood levels were reported in the anabranch due to heavy local rainfall in the Coppermine Creek catchment.

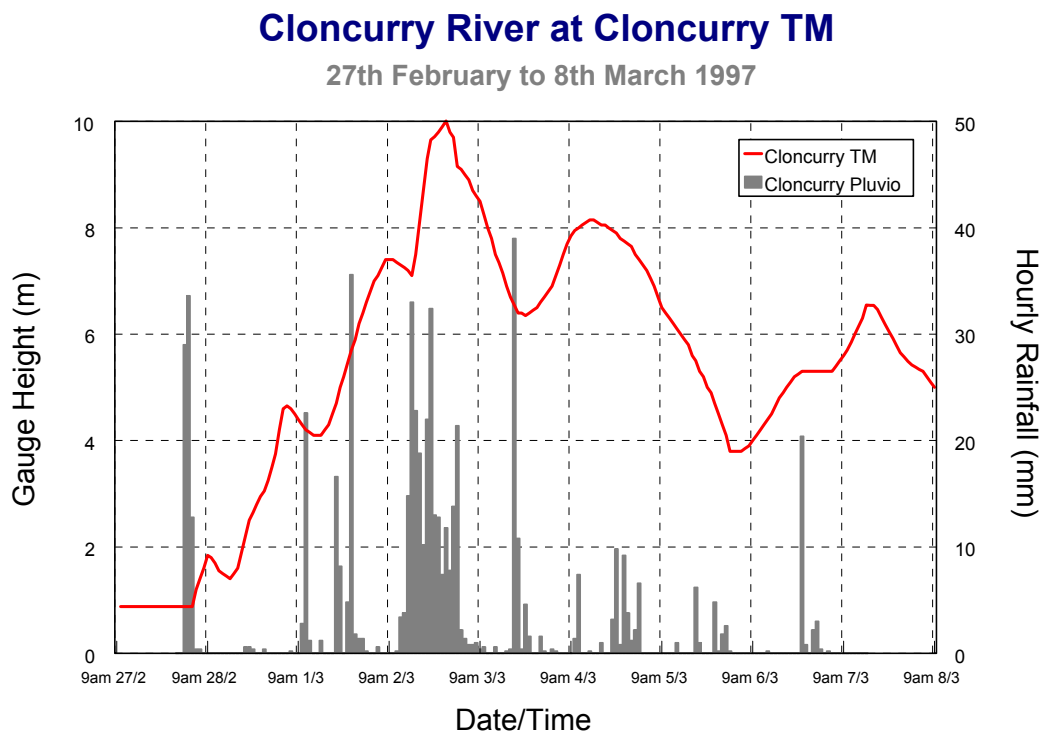


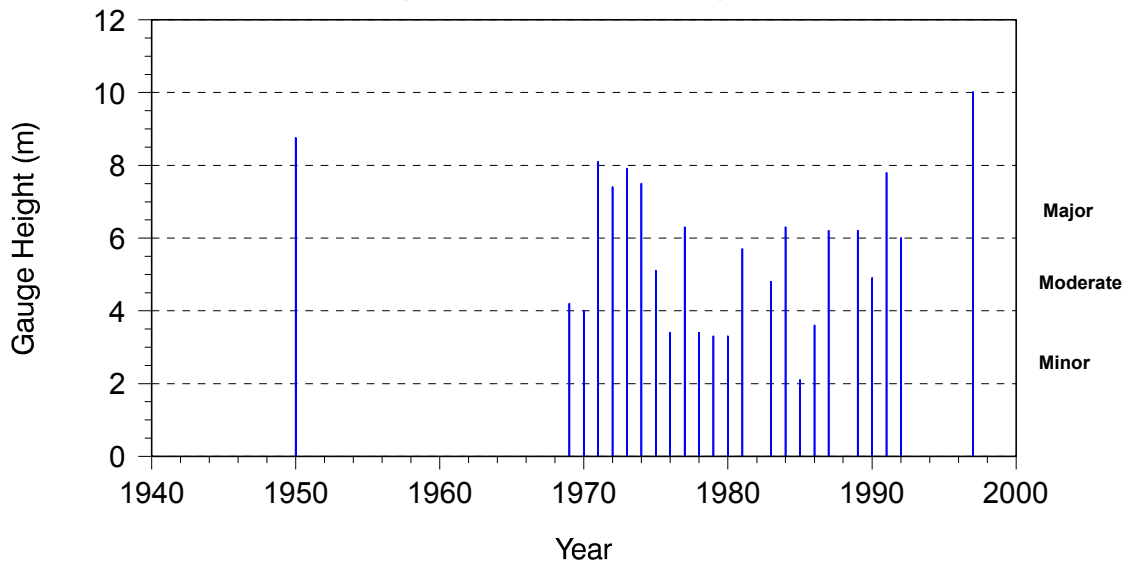
Fig 1

Further heavy rain upstream of Cloncurry caused renewed rises on the 4th March and during the 6th and 7th March but these peaks were below the major peak of the 3rd March.

The figure below shows the history of flooding in Cloncurry. The 1997 flood peak of 10.01 metres is the highest since Bureau records commenced in 1950. The 1950 flood peak is the next highest on record at 8.76 metres which is approximately 1.25 metres below the 1997 peak. In recent times there was a significant flood peak of 7.80 metres in January 1991.

Cloncurry River at Cloncurry

Highest Annual Flood Height



6. Preliminary Recommendations

The current flood warning network requires upgrading with the addition of more rainfall stations in the network upstream of Cloncurry. Suggested locations are at Selwyn, Mt Tracey, Glen Idol, Mt Collis (or O'Haras Gap) and in the upper Malbon River area.

At least one river height station is also recommended. A possible suitable site is on the Cloncurry River at Malbon just downstream of the Malbon River junction.

Field investigations are required to locate suitable sites for any proposed stations.

Any further action requires the involvement of Cloncurry Shire Council.