

Flood summary for the Caboolture River at Caboolture

- The town of Caboolture is located on the Caboolture River in the Caboolture River catchment.
- The flood heights at Caboolture are measured on an alert gauge called Caboolture WTP (Water Treatment Plant) that is owned by the Moreton Bay Regional Council (Bureau station number: 540243).
- A detailed map of the flood warning network is available on the Bureau website at http://www.bom.gov.au/hydro/flood/qld/brochures/river_maps.shtml

Location map



Figure 1. Map showing location of Caboolture.

Note: Red dots are reported flood inundated towns or cities and blue dots are flood affected towns or cities.

Flood effects and severity

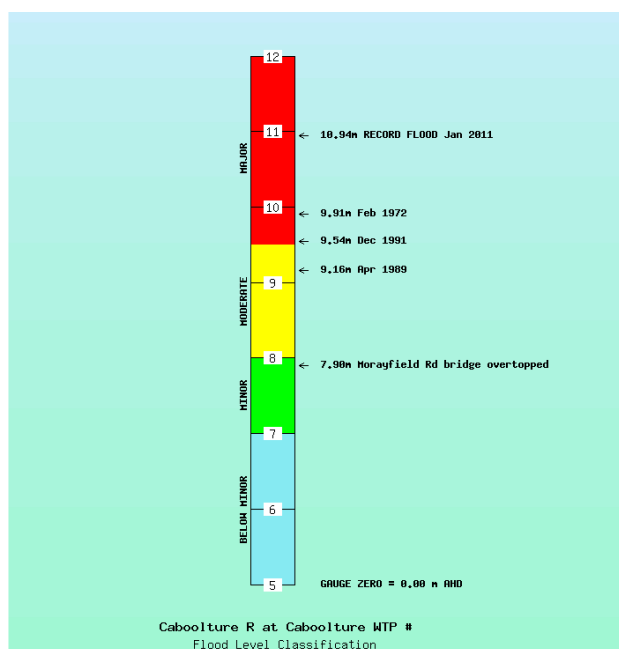


Figure 2. Flood level classifications and flood effects for Caboolture.

- **Peaked at 10.94 metres on 11/01/2011.**
- Minor: 7 metres
Moderate: 8 metres
Major: 9.5 metres.
- Gauge zero is 0.0 metres AHD.
- Estimated 300 houses and also roads and public infrastructure affected in the Caboolture area (Courier Mail).
- On 11/01/2011 Caboolture exceeded minor flood level (7 metres), peaked at 10.94 metres (major) and fell below minor flood level (7 metres).

Rainfall summary

- Over 600mm of rainfall was recorded throughout most of the Caboolture catchment with totals of over 1000mm in the upper parts of the catchment during December 2010 to January 2011.
- Over 400mm of rainfall was recorded in the Upper Caboolture catchment for the 48 hours to 9am on 12/01/2011.

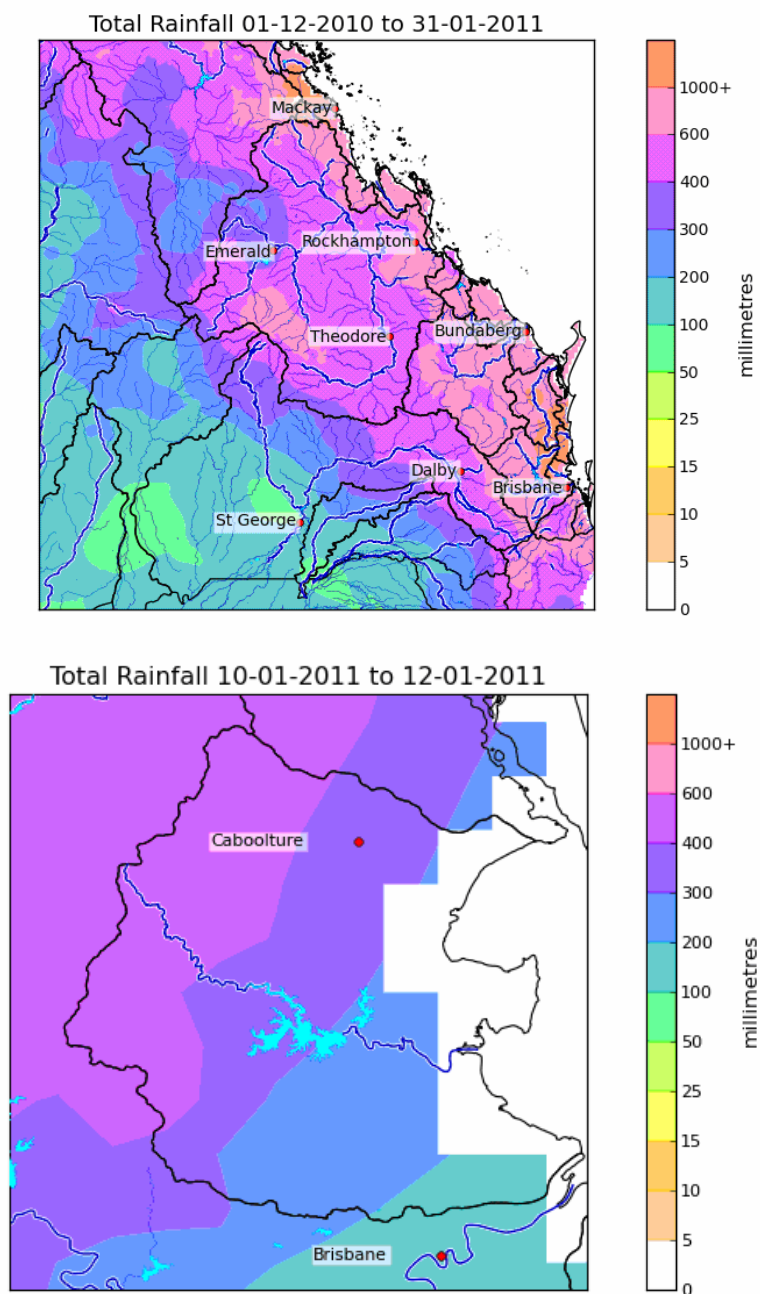


Figure 3. Rainfall map for December 2010 and January 2011 (top) and rainfall map for the 48 hours to 9am on 12/01/2011 (bottom).

Rainfall Intensity

- Maximum rainfall intensities for four selected stations at Wamuran AL on Waraba Creek, Caboolture WTP AL and Upper Caboolture AL on the Caboolture River and Moorina AL near Burpengary Creek are shown in Tables 1 and 2.
- The most significant rainfall intensities for December 2010 and January 2011 at all four sites occurred on the 11/01/2011. An exception to this was the 24 hour rainfall intensity at Caboolture WTP for the period ended 5:55 PM on the 11/01/2011 which equalled the 5-10% Annual Exceedence Probability (10-20 year Average Recurrence Interval).

Table 1. Recorded Maximum Rainfall Intensities for Caboolture WTP AL and Upper Caboolture AL on the Caboolture River for December 2010 and January 2011.

Rainfall Duration	Caboolture WTP AL			Upper Caboolture AL		
	Rainfall (mm)	Period ending	ARI (years)	Rainfall (mm)	Period ending	ARI (years)
3 hr	154	9:55 AM 11/01/2011	50-100	160	10:05 AM 11/01/2011	100
6 hr	222	10:05 AM 11/01/2011	> 100	262	10:45 AM 11/01/2011	> 100
12hr	266	2:00 PM 11/01/2011	50-100	308	2:20 PM 11/01/2011	> 100
24hr	272	5:55 PM 11/01/2011	10-20	315	6:05 PM 11/01/2011	20-50
48hr	397	1:45 PM 11/01/2011	20-50	434	1:50 PM 11/01/2011	20-50
72hr	451	9:05 PM 11/01/2011	20-50	483	9:20 PM 11/01/2011	20-50

Table 2. Recorded Maximum Rainfall Intensities for Wamuran AL on Waraba Creek and Moorina AL near Burpengary Creek for December 2010 and January 2011.

Rainfall Duration	Wamuran AL			Moorina AL		
	Rainfall (mm)	Period ending	ARI (years)	Rainfall (mm)	Period ending	ARI (years)
60 min	77	10:40 AM 11/01/2011	20	103	9:35 AM 11/01/2011	> 100
2 hr	129	10:30 AM 11/01/2011	50-100	179	10:20 AM 11/01/2011	> 100
3 hr	176	10:45 AM 11/01/2011	> 100	214	10:15 AM 11/01/2011	> 100
6 hr	280	11:10 AM 11/01/2011	> 100	310	10:50 AM 11/01/2011	> 100
12hr	351	2:40 PM 11/01/2011	> 100	395	2:45 PM 11/01/2011	> 100
24hr	369	6:50 PM 11/01/2011	50-100	406	7:15 PM 11/01/2011	> 100
48hr	530	1:25 PM 11/01/2011	> 100	537	1:55 PM 11/01/2011	> 100
72hr	598	6:50 PM 11/01/2011	50-100	580	3:35 PM 11/01/2011	50-100

Flood event timeline

Table 3. Flood timeline for Caboolture.

Time/Date	Event Description	Gauge Height (metres)	Comment
9:58 AM 11/01/2011	First warning issued		
11/01/2011	First time it exceeded minor flood level	7.0	Remained above minor flood level for ~1 day
11/01/2011	First time it exceeded moderate flood level	8.0	Total time above moderate flood was ~1 day
11/01/2011	First time it exceeded major flood level	9.5	Total time above major flood was ~1 day
1:20 PM 11/01/2011	Major flood peak	10.94	New record
11/01/2011	Final fall below major	9.5	
11/01/2011	Final fall below moderate	8.0	
11/01/2011	Final fall below minor	7.0	
7:03 AM 13/01/2011	Final warning issued		

Flood Heights at Caboolture

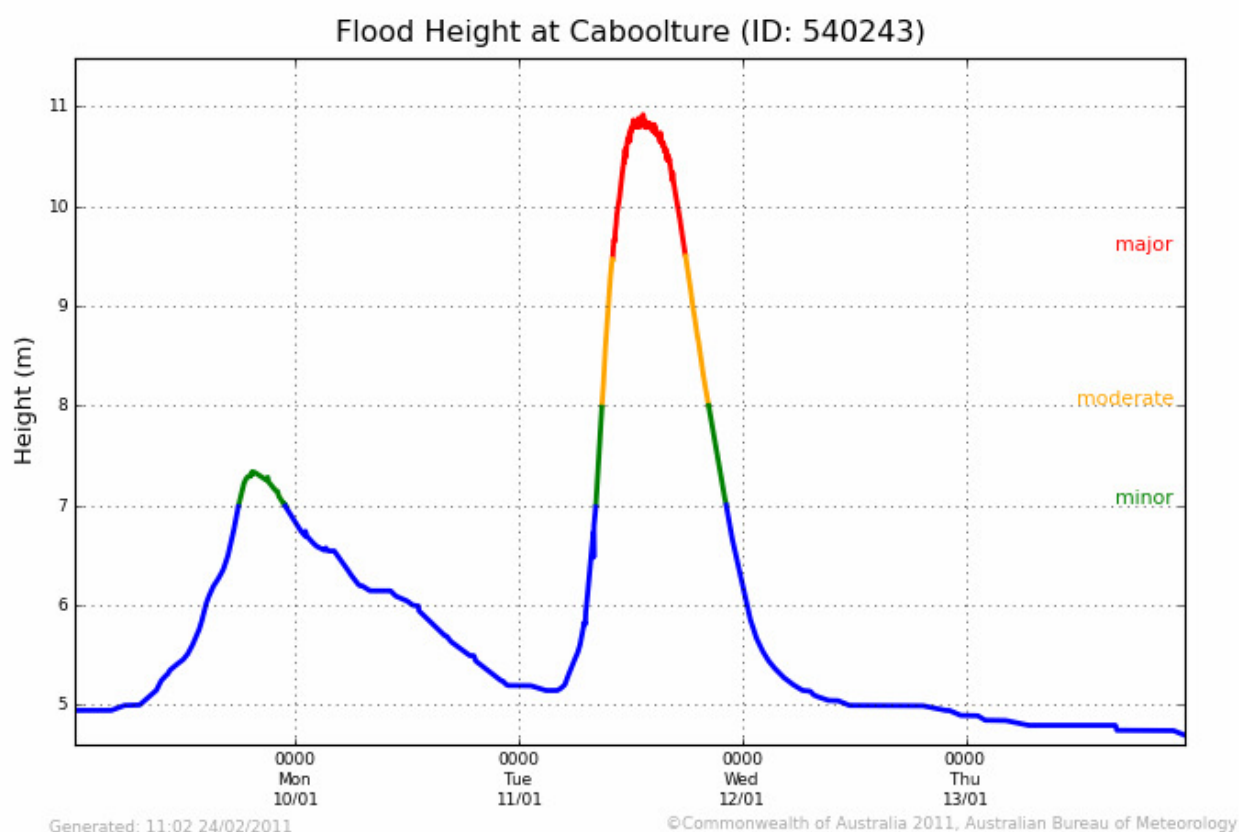


Figure 4. Flood heights for Caboolture alert gauge.

Comparison with previous floods

- Start of record 1972 with 3 major flood peaks in the record
- Last major flood was 9.54 metres December 1991 but previous to that was 9.91 metres in February 1972.

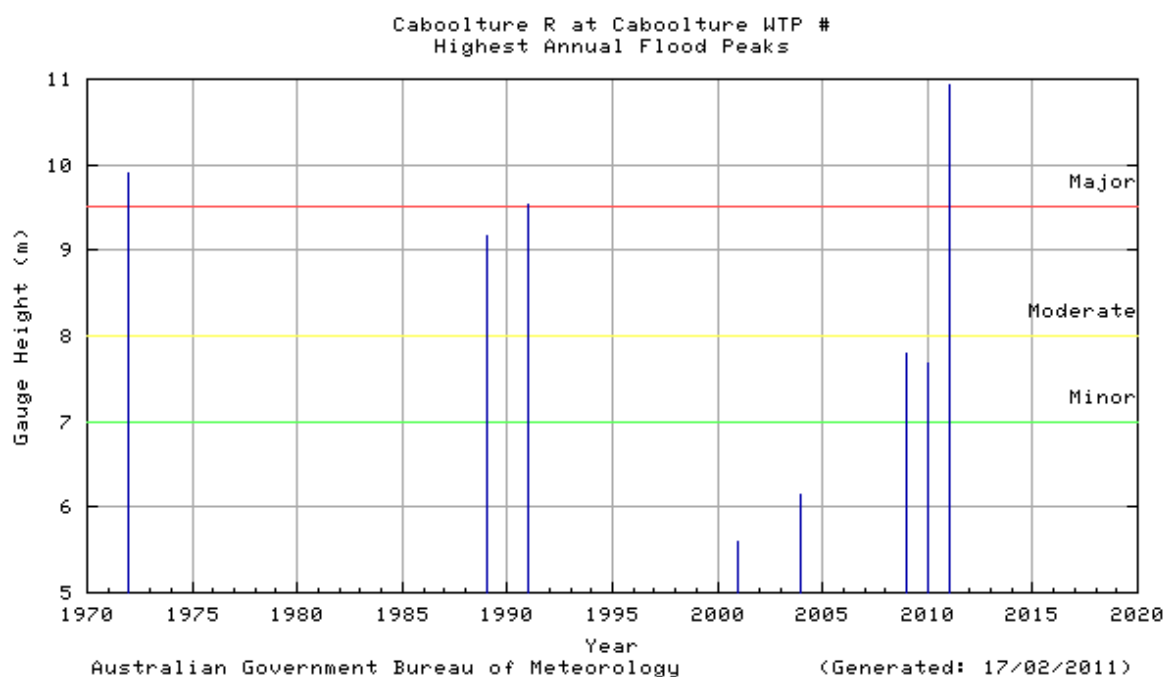


Figure 5. Highest annual flood peaks for the Caboolture River at Caboolture.

Warning and Forecast Service

- Heavy rainfall occurred in January 2011 with warnings commencing 11/1/2011 and continuing through to 13/1/2011.
- A total of 7 warnings were issued for the Pine River system including the Caboolture River during January 2011.
- The Bureau does not provide a quantitative forecasting service for the Caboolture River.

Table 4. Summary of warnings that referred to flooding at Caboolture.

Time of warning	Warning text	Peak
9:58 AM on Tuesday the 11th of January 2011	Very heavy rainfall during Tuesday morning has resulted in fast river rises and moderate to major flooding along the Caboolture River. At 9:50am Tuesday, the river level at Caboolture was 9.34 metres and rising with moderate flooding.	
11:24 AM on Tuesday the 11th of January 2011	Very heavy rainfall during Tuesday morning has resulted in extreme river rises and widespread major flooding along the Caboolture River and in Burpengary Creek. At 11:15am Tuesday, the river level at Caboolture was 10.44 metres and rising with major flooding.	
2:09 PM on Tuesday the 11th of January 2011	Major flooding continues at Caboolture, where at 1:40pm Tuesday the river level was 10.79 metres and near a peak.	10.94 metres at 1:20 PM Tues 11/01/2011

Note: This table does not include all forecasts issued during these flood events.