

## Flood summary for the Mary River at Gympie

- The town of Gympie is on the Mary River in the Mary catchment
- The flood heights at Gympie are measured by an alert gauge (Bureau station number: 040993) and a manual gauge (Bureau station number: 040426) both owned by the Bureau of Meteorology.
- 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](http://www.bom.gov.au/hydro/flood/qld/brochures/river_maps.shtml)

## Location map

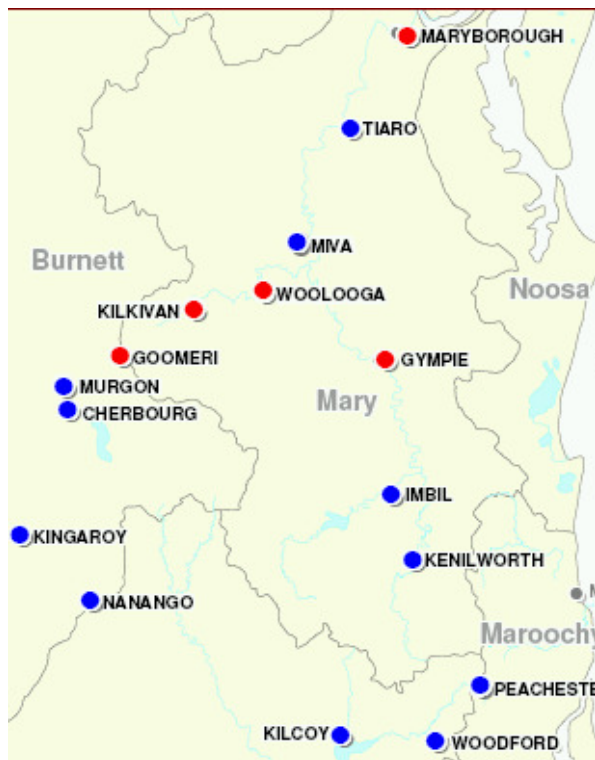


Figure 1. Map showing location of Gympie.

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

## Flood effects and severity

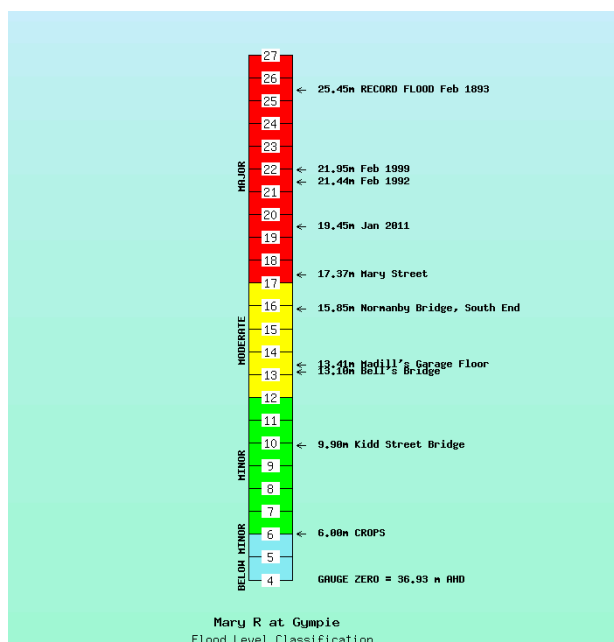


Figure 2. Flood level classifications and flood effects for Gympie.

- **Peaked at 19.45 metres on 11/01/2011.**
- Minor: 6 metres  
Moderate: 12 metres  
Major: 17 metres.
- Gauge zero is 36.93 metres AHD.
- Houses and businesses in the main street of Gympie were inundated. (Total properties affected is unknown at this stage.)
- Above major flood level (17 metres) from 10/01/2011 to 12/01/2011.
- Remained above minor flood level (6 metres) from 27/12/2010 to 31/12/2010 and again from 06/01/2011 to 15/01/2011.

## Rainfall summary

- Over 400mm recorded in the Mary River catchment during December 2010 and January 2011.
- Very heavy rainfall of over 600mm in the Upper Mary between 9am on 06/01/2011 and 9am on 13/01/2011. Most of the Mary catchment received over 400mm between 9am on 06/01/2011 and 9am on 13/01/2011.

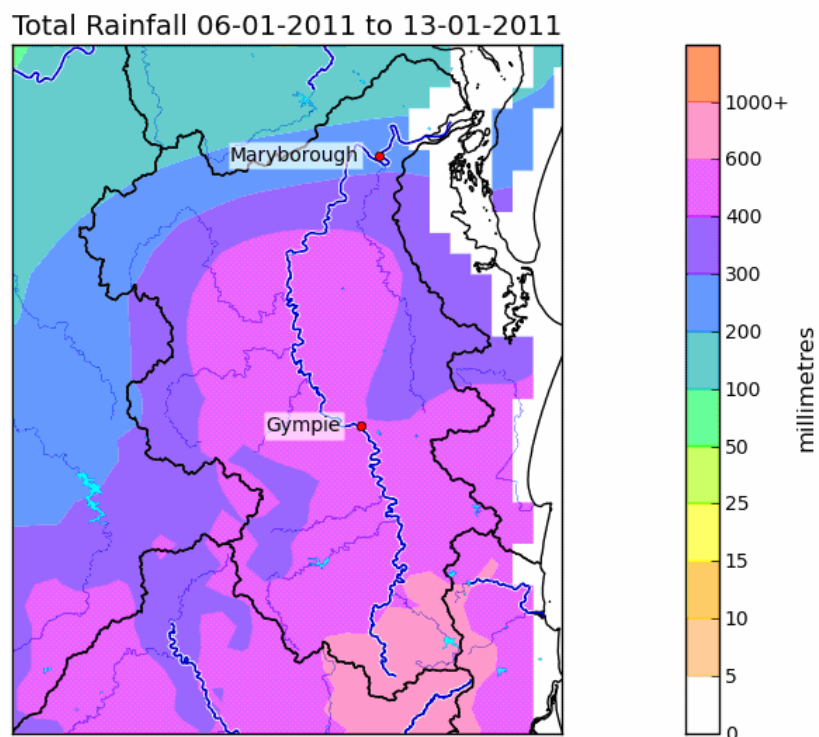
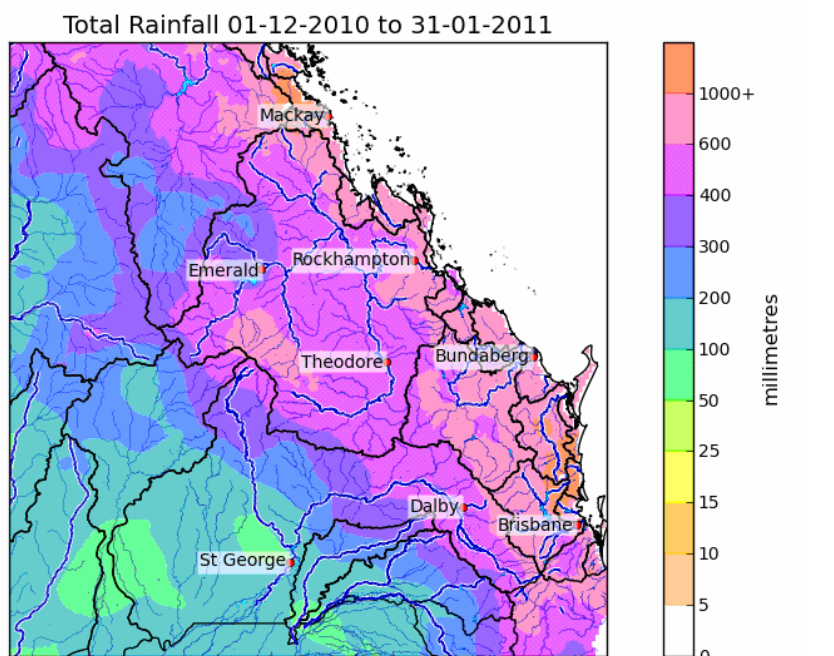


Figure 3. Rainfall map from 01/12/2010 to 31/01/2011 (top) and for 9am on 06/01/2011 to 9am on 13/01/2011 (bottom).

## Rainfall Intensity

- Maximum rainfall intensities for one selected station at West Bellthorpe AL in the upper part of the Mary River catchment, is shown in Table 1.
- The most significant rainfall intensities for December 2010 and January 2011 occurred in the 12 to 72 hour duration periods ending on the 12/01/2011, with less than a 1% Annual Exceedence Probability (greater than 100 year Average Recurrence Interval).

**Table 1. Recorded maximum rainfall intensities for West Bellthorpe AL in the upper part of the Mary River catchment for December 2010 and January 2011.**

Rainfall Duration	West Bellthorpe AL		
	Rainfall (mm)	Period ending	ARI (years)
12hr	245	9:05 PM 09/01/2011	50-100
24hr	349	4:20 AM 10/01/2011	> 100
48hr	481	4:35 AM 11/01/2011	> 100
72hr	605	1:20 AM 12/01/2011	> 100

## Flood event timeline

**Table 2. Flood timeline for Gympie**

Time/Date	Event Description	Gauge Height (metres)	Comment
8:17 AM 27/12/2011	First time it exceeded minor flood level	6.0	Remained above minor flood level for ~5 days
31/12/2011	Fall below minor	6.0	
5:19 PM 06/01/2011	First warning issued		
06/01/2011	Exceeded minor flood level	6.0	Remained above minor flood level for ~10 days
07/01/2011	First time it exceeded moderate flood level	12.0	Total time above moderate flood was ~8 days
10/01/2011	First time it exceeded major flood level	17.0	Total time above major flood was ~2 days
5:00 AM 11/01/2011	Major flood peak	19.45	
12/01/2011	Final fall below major	17.0	
14/01/2011	Final fall below moderate	12.0	
15/01/2011	Final fall below minor	6.0	
8:54 AM 15/01/2011	Final warning issued		

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## Flood Heights at Gympie

## Warning and Forecast Service

- Significant runoff commenced during early December with flood warnings for the Mary River issued between 12/12/2010 and 14/12/2010 and again between 19/12/2010 and 22/12/2010.
- Further heavy rainfall occurred in early January with warnings commencing on 06/01/2011 and continuing through to 15/01/2011.
- A total of 43 warnings were issued for the Mary River system including Gympie during December 2010 and January 2011.

**Table 3. Table of peak height predictions for Gympie**

Time of Height Forecast	Forecast	Peak
<b>06/01/2011 First warning issued. Height at the time was 6.14m (minor)</b>		
2:25 PM on Friday the 7th of January 2011	Reach at least 12 metres overnight Friday with further rises as rainfall continues.	Rising limb forecasts – reach a level and expected to continue rising  12.04 metres at 9:15 PM Fri 07/01/2011
7:12 PM on Friday the 7th of January 2011	Reach at least 12 metres (moderate flood level) overnight Friday, with further rises and 13 metres possible as the heavy rainfall remains in the catchment.	
11:15 PM on Friday the 7th of January 2011	Further rises to 13 metres likely as the heavy rainfall remains in the catchment.	
2:09 AM on Saturday the 8th of January 2011	Further rises to above 13 metres expected. Peak around 13.5 metres during Saturday morning.	13.09 metres at 3:36 AM Sat 08/01/2011  13.54 metres at 6:24 AM Sat 08/01/2011
5:57 AM on Saturday the 8th of January 2011	Reach at least 14 metres during Saturday with further rises possible.	14.04 metres at 11:04 AM Sat 08/01/2011
10:05 AM on Saturday the 8th of January 2011	Peak around 14.3 metres during Saturday.	14.34 metres at 3:16 PM Sat 08/01/2011
6:36 PM on Saturday the 8th of January 2011	14.4 metres at 4:30pm and close to peak.	14.44 metres at 5:53 PM Sat 08/01/2011
6:08 AM on Sunday the 9th of January 2011	Remain above 13 metres today with further rises possible as rainfall continues.	
11:01 AM on Sunday the 9th of January 2011	Reach at least 16 metres overnight. A major flood level above 17 metres is possible if rainfall continues.	16.04 metres at 5:22 AM Mon 10/01/2011
1:55 PM on Sunday the 9th of January 2011	Reach at least 17 metres early on Monday. Higher levels above 17 metres are likely as rainfall continues.	17.04 metres at 9:51 AM Mon 10/01/2011
5:50 PM on Sunday the 9th of January 2011	Exceed 17 metres early Monday. Higher levels expected during Monday.	
10:10 PM on Sunday the 9th of January 2011	Exceed 17 metres early Monday. Reach at least 19 metres during Monday afternoon.	19.04 metres at 9:40 PM Mon 10/01/2011
6:12 AM on Monday the 10th of January 2011	Exceed 20 metres overnight Monday.	19.45 metres at 5:00 AM Tues 11/01/2011
11:29 AM on Monday the 10th of January 2011	Reach around 20 metres overnight Monday.	
11:00 PM on Monday the 10th of January 2011	Peak around 20 metres overnight Monday.	

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