

## Flood summary for the Dawson River at Taroom

- The town of Taroom is on the Dawson River in the Fitzroy catchment
- The flood heights at Taroom are measured on an automatic gauge owned by the Queensland Department of Environment and Resource Management (DERM) (Bureau station number: 035282) and a manual gauge owned by the Bureau of Meteorology (Bureau station number: 035115).
- 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)

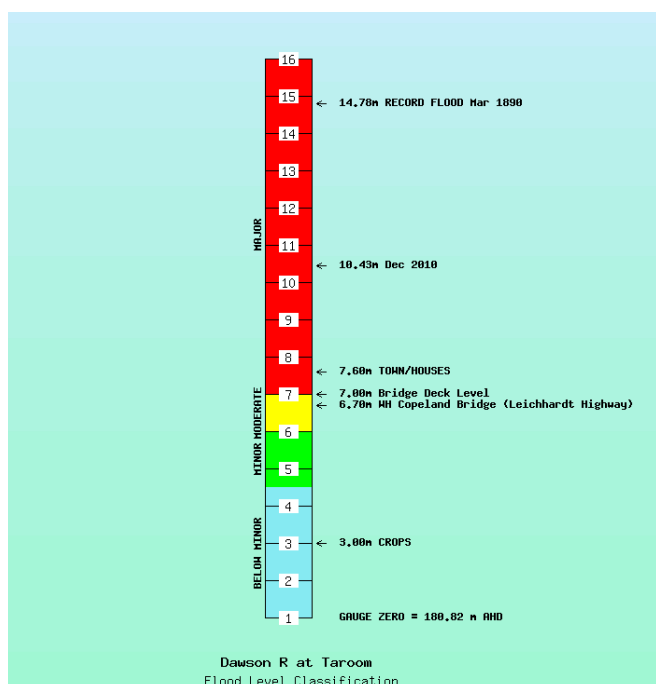
## Location map



Figure 1. Map showing location of Taroom.

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

## Flood effects and severity

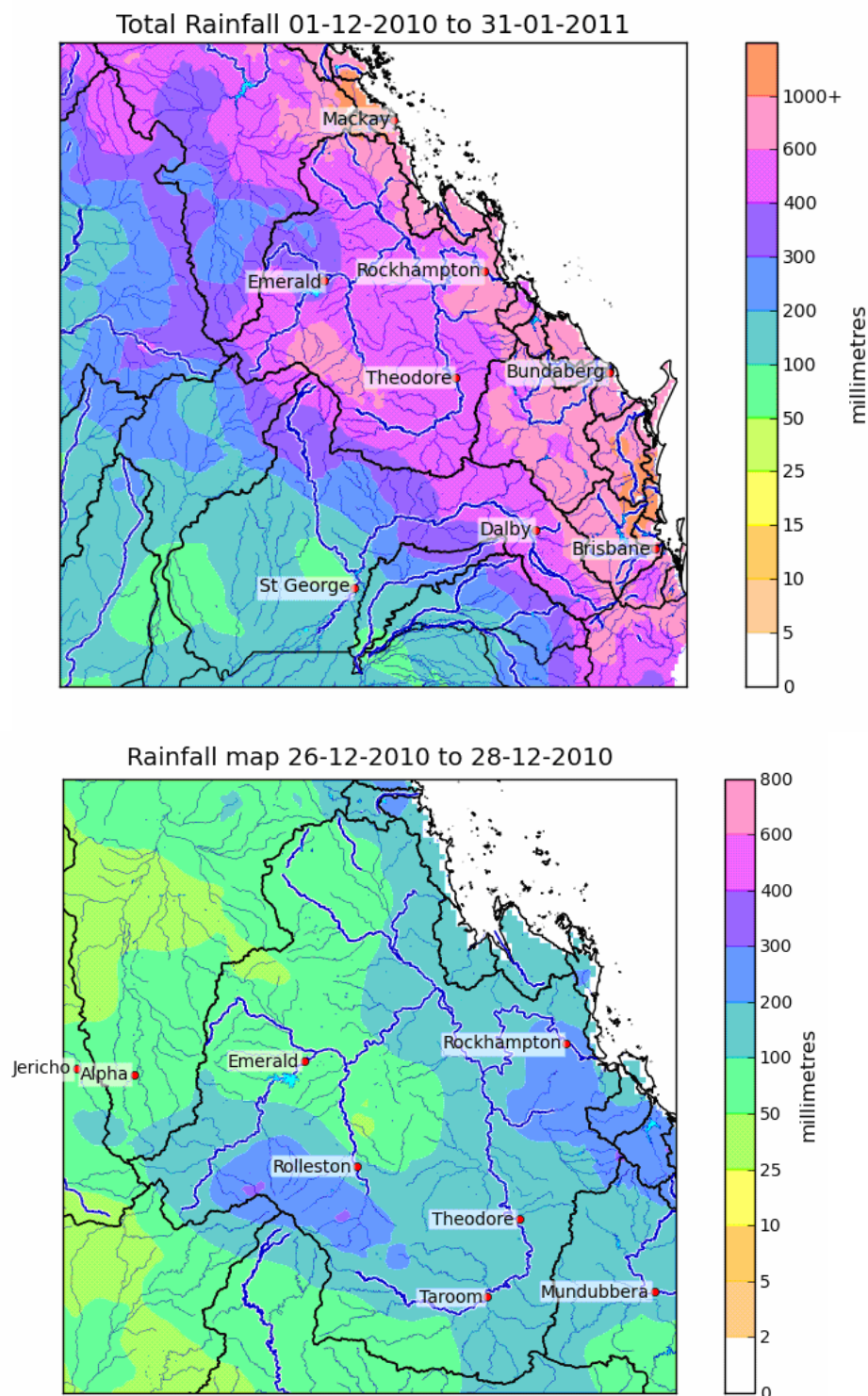


- **Peaked at 10.43 metres on 29/12/2010.**
- Minor: 4.5 metres  
Moderate: 6 metres  
Major: 7 metres.
- Gauge zero is 180.82 metres AHD.
- Many houses were inundated (Source ABC)
- The highest river peak for December 2010 was 10.43 metres, recorded on 29/12/2010. This peak was the highest recorded since February 1956.
- Three other major flood peaks were recorded on 05/12/2010, 13/12/2010 and 20/12/2010.
- Above major flood level (7 metres) from 04/12/2010 to 07/12/2010, 13/12/2010 to 14/12/2010, 20/12/2010 to 21/12/2010 and again from 27/12/2010 to 01/01/2011.

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

## Rainfall summary

- Over 600 mm of rainfall was recorded in the upper Dawson and over 400 mm in the middle Dawson during December 2010.
- Very heavy rainfall of over 200 mm was recorded in the upper Dawson River between 9 AM on the 26/12/2010 and 9am on the 28/12/2010. The area around Taroom recorded between 100 and 200 mm in the same time period. This rainfall was the most significant during December.



**Figure 3. Rainfall map from 01/12/2010 to 31/01/2011 (top) and for the 48 hours to 9 AM on the 28/12/2010 (bottom).**

## Rainfall Intensity

- Maximum rainfall intensities for two selected stations at Boxvale TM on the Upper Dawson River and Windamere TM on Jundah Creek are shown in Table 1, however they were all well above the 1% Annual Exceedence Probability (100 year Average Recurrence Interval).

**Table 1. Recorded maximum rainfall intensities for Windamere and Boxvale on the Upper Dawson River for December 2010 and January 2011.**

Rainfall Duration	Windamere TM			Boxvale TM		
	Rainfall (mm)	Period ending	ARI (years)	Rainfall (mm)	Period ending	ARI (years)
12hr	72	10:40 AM 27/12/2010	2-5	107	02:35 AM 27/12/2010	5-10
24hr	107	10:40 AM 27/12/2010	2-5	134	2:35 PM 27/12/2010	5-10
48hr	134	3:15 PM 27/12/2010	5-10	149	2:40 PM 27/12/2010	2-5
72hr	140	6:25 PM 27/12/2010	2-5	158	2:45 PM 27/12/2010	2-5

Note: A flood frequency analysis would be required to assess the probability of flood levels reached at each location. The frequency analysis in this report is for rainfall only.

## Flood event timeline

**Table 2. Flood timeline for Taroom**

Time/Date	Event Description	Gauge Height (metres)	Comment
5:29 PM 01/12/2010	First warning issued		First warning issued referencing flooding at Taroom
01/12/2010	First time it exceeded minor flood level	4.5	Remained above the minor flood level for ~11 days.
03/12/2010	First time it exceeded moderate flood level	6.0	Remained above the moderate flood level for ~7 days.
04/12/2010	First time it exceeded major flood level	7.0	Remained above the major flood level for ~3 days.
9:00 AM 05/12/2010	Major flood peak	7.28	
07/12/2010	Fall below major	7.0	
10/12/2010	Fall below moderate	6.0	
11/12/2010	Fall below minor	4.5	
12/12/2010	Exceeded minor flood level	4.5	Remained above the minor flood level for ~ 5days.
12/12/2010	Exceeded moderate flood level	6.0	Remained above the moderate flood level for ~ 4days.
13/12/2010	Exceeded major flood level	7.0	Remained above the major flood level for ~ 1 day.
12:30 PM 13/12/2010	Major flood peak	7.20	
14/12/2010	Fall below major	7.0	
16/12/2010	Fall below moderate	6.0	
17/12/2010	Fall below minor	4.5	
19/12/2010	Exceeded minor flood level	4.5	Remained above the minor flood level for ~ 16 days.
19/12/2010	Exceeded moderate flood level	6.0	Remained above the moderate flood level for ~ 5 days.
20/12/2010	Exceeded major flood level	7.0	Remained above the major flood level for ~ 1 day.
7:00 PM 20/12/2010	Major flood peak	7.09	
21/12/2010	Fall below major	7.0	
24/12/2010	Fall below moderate	6.0	
27/12/2010	Exceeded moderate flood level	6.0	Remained above the moderate flood level for ~ 7 days.
27/12/2010	Exceeded major flood level	7.0	Remained above the major flood level for ~ 6 days.

7:00 PM 29/12/2010	Major flood peak	10.43	3 <sup>rd</sup> highest flood peak on record for Taroom. Greater than February 1956.
01/01/2011	Final fall below major	7.0	
02/01/2011	Final fall below moderate	6.0	
03/01/2011	Final fall below minor	4.5	
3:55 PM 10/01/2011	Final warning issued referencing flooding at Taroom		

## Flood Heights at Taroom

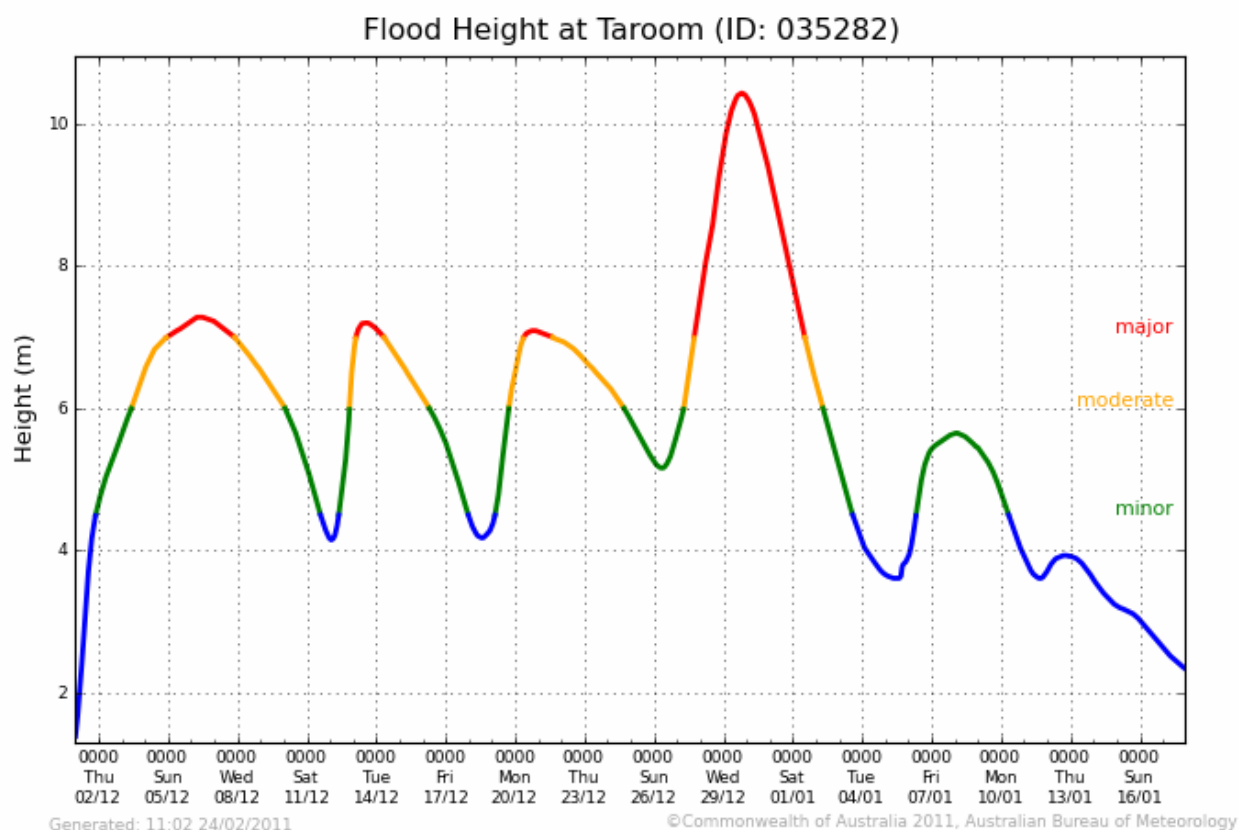


Figure 4. Flood Heights at Taroom automatic gauge for December 2010 and January 2011.

## Comparison with previous floods

- Start of record 1864.
- Third highest flood peak on record for Taroom.
- Last major flood was 7.26 metres in March 2010 but previous to that was 7.46 metres in 1998.
- Record flood: 14.78 metres in 1890.

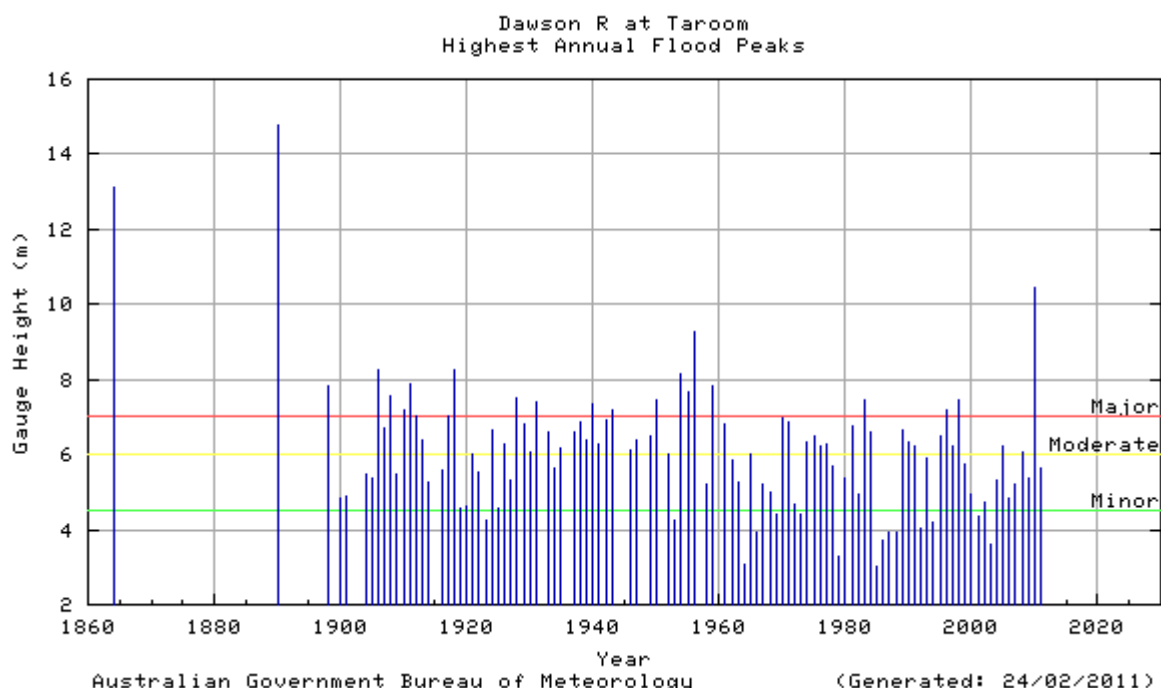


Figure 5. Highest annual flood peaks for the Dawson River at Taroom

## Warning and Forecast Service

- Significant runoff commenced during September with flood warnings for the Dawson River issued between 5/9/2010 and 13/9/2010 and again between 22/9/2010 and 4/10/2010.
- Further rainfall occurred in late November with warnings commencing 22/11/2010 and continuing through to 17/1/2011.
- A total of 94 warnings were issued for the Fitzroy River system including the Dawson River during December 2010 and January 2011.
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Table 3. Table of peak height predictions for Taroom.

Time of Height Forecast	Forecast	Peak
<b>5:29 PM 01/12/2010 First warning issued. River height at the time was 3.95m (below minor)</b>		
5:29 PM on Wednesday the 1st of December 2010	Moderate flood levels are expected at Taroom this week. Further forecasts will be made once upstream peaks have been observed.	Rising limb forecasts – reach a level and expected to continue rising
10:13 AM on Thursday the 2nd of December 2010	Further rises and moderate flooding is expected at Taroom within the next 24 to 36 hours, however river levels are not expected to reach the major flood level of 7 metres.	
9:59 AM on Friday the 3rd of December 2010	Moderate flood levels at Utopia Downs and Tarana Crossing are continuing and will extend to Taroom this morning. Further rises to the major flood level of 7 metres are possible over the weekend.	
4:31 PM on Friday the 3rd of December 2010	Moderate flood levels are continuing at Utopia Downs, Tarana Crossing and Taroom. Further rises to the major flood level of 7 metres at Taroom are possible over the weekend.	

11:06 AM on Saturday the 4th of December 2010	Peak about 7 metres during Sunday	7.28 metres at 9:00 AM Sun 05/12/2010
10:25 AM on Monday the 6th of December 2010	The Dawson River at Taroom continues to rise very slowly with major flooding in the area. Levels are expected to peak around the current levels of 7.25 metres but will remain above 7 metres into Tuesday.	
10:27 AM on Wednesday the 8th of December 2010	Moderate flood levels continue to fall at Taroom.	
10:50 AM on Saturday the 11th of December 2010	Renewed rises are expected above Taroom during the weekend.	Rising limb forecasts – reach a level and expected to continue rising
6:28 PM on Saturday the 11th of December 2010	A return to at least moderate flood levels should be expected at Taroom next week.	
6:28 PM on Saturday the 11th of December 2010	Reach at least 6.5 metres early next week.	
11:20 AM on Sunday the 12th of December 2010	A return to flood levels of around 7 metres should be expected at Taroom this week.	
6:08 PM on Sunday the 12th of December 2010	A return to flood levels of around 7 metres should be expected at Taroom this week.	
11:19 AM on Monday the 13th of December 2010	Peak around 7 metres on Monday.	7.20 metres at 12:30 PM Mon 13/12/2010
9:28 AM on Tuesday the 14th of December 2010	Flood levels at Taroom are falling and will continue to do so.	
10:57 AM on Saturday the 18th of December 2010	Further rises and minor to moderate flooding is expected downstream to Taroom during the weekend and early next week.	Rising limb forecasts – reach a level and expected to continue rising
11:06 AM on Sunday the 19th of December 2010	A return to moderate flood level is likely at Taroom today.	
5:54 PM on Sunday the 19th of December 2010	Minor flood levels are rising at Taroom. River levels are forecast to reach around 7 metres again early this week.	
11:30 AM on Monday the 20th of December 2010	Major flood levels continue to rise at Taroom with river levels forecast to peak just over 7 metres during Tuesday.	7.09 metres at 7:00 PM Mon 20/12/2010
10:56 AM on Tuesday the 21st of December 2010	Major flood levels have peaked around 7 metres at Taroom and will continue easing during Tuesday.	
10:16 AM on Wednesday the 22nd of December 2010	Moderate flood levels will continue to fall slowly at Taroom.	
10:49 AM on Thursday the 23rd of December 2010	At this stage, moderate flood levels will continue to fall at Taroom although further rainfall is forecast for the area.	
6:51 AM on Monday the 27th of December 2010	Overnight heavy rainfall in the Upper Dawson River is expected to produce fast river level rises and a return to moderate to major flood levels at Taroom.	Rising limb forecasts – reach a level and expected to continue rising
1:25 PM on Monday the 27th of December 2010	Overnight heavy rainfall in the Upper Dawson River is expected to produce fast river level rises and a return major flood levels at Taroom.	
5:57 PM on Monday the 27th of December 2010	Possibly exceed 8 metres by Wednesday with further rises.	
7:06 AM on Tuesday the 28th of December 2010	Peak around 8.3 metres by Wednesday	10.43 metres at 7:00 PM Wed 29/12/2010
1:09 PM on Tuesday the 28th of December 2010	Peak near 9 metres (major) during Wednesday	
6:51 PM on Tuesday the 28th of December 2010	Peak near 9.5 metres (major) overnight Wednesday	
12:24 AM on Wednesday the 29th of December 2010	Expected to peak below or at 10 metres (major) overnight.	

8:59 AM on Wednesday the 29th of December 2010	Peak above 10 metres Wednesday or overnight	
4:21 PM on Wednesday the 29th of December 2010	Peak around 10.6 metres overnight	
7:12 AM on Thursday the 30th of December 2010	Levels will remain high through Thursday.	
<b>3:55 PM on Monday the 10th of January 2011</b>	<b>Final warning issued referencing flooding at Taroom</b>	
<b>7:54 AM on Monday the 17th of January 2011</b>	<b>Final Fitzroy River warning</b>	

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