



Australian Government  
Bureau of Meteorology



## 2011/2012 Queensland Flood Season



1	2
3	4
5	6

1. Premier Anna Bligh inspecting the Charleville levee. ABC News Website.
2. Cunnamulla Bridge, 6am 8 February. ABC News Website.
3. St George from the air on the 8 February 2012. DNRM
4. Beardmore Dam from the air on 8 February 2012. DNRM
5. Mitchell Bridge on the 6 February 2012. Queensland Police.
6. Roma, Miscamble St on the 3 February 2012. ABC News Website.

## Revision history

Date	Version	Description
22 February 2012	1.0	Report Outline (J. Carey)
15 March 2013	1.1	First Draft (D. Berry)
17 March 2013	1.2	Checked by Andrew Preece
02 April 2013	1.3	Updated Meteorology Summary (S. Oates)
08 April 2013	1.4	Checked by Paul Birch
20 May 2013	1.5	Edited by S. Oates
11 June 2013	1.6	Edited by S.Oates

### Note:

1. Data in this report has been operationally quality controlled but errors may still exist.
2. This product includes data made available to the Bureau by other agencies. Separate approval may be required to use the data for other purposes. See Appendix 1 for DNRM Usage Agreement.
3. This report is not a complete set of all data that is available. It is a representation of some of the key information.

# Table of Contents

<b>1. Introduction</b>	<b>1</b>
1.1 Climate Information on back to back La Nina's	1
<b>2. Meteorological Summary</b>	<b>2</b>
2.1 Late November flooding in the Border and Western Queensland Rivers	2
2.2 Early December flooding in the Border and Western Queensland Rivers	2
2.3 Record flooding in late January and early February in Queensland's southern interior	2
Figure 2.3.1 Daily Mean Sea Level Pressure Charts (10am) from 24 <sup>th</sup> to 29 <sup>th</sup> January 2012	3
Figure 2.3.2 Daily Mean Sea Level Pressure Charts (10am) from the 31 <sup>st</sup> January to the 3 <sup>rd</sup> February 2012	4
Figure 2.3.3 24-Hour rainfall totals to 9am on the 31st January to the 3rd February 2012	5
Figure 2.3.4 Radar imagery from the Warrego radar from 04:00pm on 01/02/12 until 10:00am on 02/02/12	6
Figure 2.3.4 (cont) Radar imagery from the Warrego radar from 04:00pm on 02/02/12 until 10:00am on 03/02/12	7
2.4 Intense rainfall on the Sunshine Coast with flooding in the Mary, Mooloolo and Maroochy Rivers during late February 2012	7
2.5 Coral Sea low moves inland with flooding in the Burrum/Cherwell, Mary and Maroochy/Mooloolo Rivers during early March 2012	8
Figure 2.5.1 Mean Sea Level Pressure Charts from the 4 <sup>th</sup> to 6 <sup>th</sup> March 2012	8
2.6 Monsoon low tracks southeast from the Gulf of Carpentaria to Wide Bay with flooding in coastal rivers during March 2012	9
Figure 2.6.1 Daily (10am) Mean Sea Level Pressure Charts from 19 <sup>th</sup> to 22 <sup>nd</sup> March 2012	10
<b>3. Hydrology</b>	<b>11</b>
3.1 Peak River Heights	11
Figure 3.1.1 Queensland Peak Heights during the 2011- 2012 Wet Season	12
Table 3.1.1 2011 – 2012 Peak heights over western and southern Queensland and comparison to records	13
3.2 Rainfall Maps	24
Figure 3.2.1 Rainfalls recorded in Bungil, Wallam and Mungallala Creeks and the Maranoa and Balonne River catchments for the period 20/01/2012 – 04/02/2012	24
Figure 3.2.2 Rainfalls recorded in the Warrego River catchment for the period 20/01/2012 – 04/02/2012	25
Figure 3.2.3 Rainfalls recorded in the Maroochy River catchment for the period 20/02/2012 – 26/02/2012	26
3.3 Rainfall Intensity	27
Figure 3.3.1 Hourly hyetographs for Springdale TM and Mooga Hills TM above Roma in the Bungil Creek catchment area	28
Figure 3.3.2 Hourly hyetographs for Cooroy Alert and Cooran Alert in the Six Mile Creek catchment	29
Figure 3.3.3 Intensity Frequency Duration (IFD) rainfall analysis for Springdale TM and Mooga Hills TM	30
Figure 3.3.4 Intensity Frequency Duration (IFD) rainfall analysis for Cooroy Alert and Cooran Alert	31
3.4 Rainfall Totals	32
Table 3.4.1 Rainfall totals for the Georgina catchment	32
Table 3.4.2 Rainfall totals for the Diamantina catchment	32
Table 3.4.3 Rainfall totals for the Thomson, Barcoo and Cooper catchments	33
Table 3.4.4 Rainfall totals for the Warrego catchments	34
Table 3.4.5 Rainfall totals for the Bulloo catchments	35
Table 3.4.6 Rainfall totals for the Paroo catchments	35
Table 3.4.7 Rainfall totals for the Wallum and Mungallala catchments	36
Table 3.4.8 Rainfall totals for the Maranoa catchments	36
Table 3.4.9 Rainfall totals for the Balonne catchment	37
Table 3.4.10 Rainfall totals for the Condamine catchment	38
Table 3.4.11 Rainfall totals for the Myall catchment	38
Table 3.4.12 Rainfall totals for the upper Condamine catchment	39
Table 3.4.13 Rainfall totals for the Moonie catchment	40
Table 3.4.14 Rainfall totals for the Weir catchment	41

Table 3.4.15 Rainfall totals for the Border Rivers catchments.....	42
<b>3.5 Flood Hydrographs of Interest .....</b>	<b>45</b>
Figure 3.5.1 Flood hydrographs for Bungil Creek.....	45
Figure 3.5.2 Flood hydrographs for the Maranoa River .....	46
Figure 3.5.3 Flood hydrographs for the Balonne River .....	46
Figure 3.5.4 Flood hydrographs for the Warrego River .....	46
<b>3.6 Flood Warning Services.....</b>	<b>47</b>
Table 3.6.1 Number of flood warnings issued for each catchment during 2011/12.....	47
Figure 3.6.1 Number of flood warnings issued per day during 2011/12 .....	48
<b>Appendix 1. DNRM Usage Agreement.....</b>	<b>49</b>

# South West Queensland Floods

## January and February 2012

### 1. Introduction

The 2011 – 2012 Wet Season saw several significant rainfall events over Queensland that caused substantial river flooding.

The most significant of these events occurred during late January and early February over inland Queensland and New South Wales and resulted from a near stationary inland trough and the development and tracking southward of a monsoon low from the Gulf of Carpentaria region. Several days of moderate to heavy rainfall totals were recorded over the Central West, Warrego, Maranoa, Central Highlands and Channel Country Regions of Queensland. Daily rainfall totals were between 100 and 200 millimetres with 3 to 4 day rainfall totals of 300 to 400 millimetres recorded.

Record major flooding was recorded along Bungil Creek and the Maranoa and Balonne Rivers, including the towns of Mitchell, Roma, St George, Dirranbandi and Hebel. The largest flood since the record flood of 1990 was recorded in the Warrego River at Charleville, with levels reaching very close to the top of the newly completed levee. Other towns affected during this period include: Thallon, Flinton, Nindigully, Surat, Amby, Bollon, Augathella, Cunnamulla, Eulo, Hungerford, Quilpie, Thargomindah, Blackall, Isisford, Longreach, Windorah, Jericho and Alpha.

It has been reported that over 700 properties were directly affected as a result of flooding in Roma and Mitchell, with many more properties expected to have been affected elsewhere in the state.

Another significant event occurred on the Sunshine Coast in late February when an upper level low moved inland near Fraser Island and produced hourly rainfall totals in excess of 150mm between Cooroy and Cooran. This caused localised flash flooding and fast rises and moderate to major flooding in the Mary and North Maroochy Rivers.

This report provides a summary and analysis of the meteorology and hydrology of the significant rainfall events that occurred during the 2011 – 2012 Wet Season with the main emphasis on the record breaking floods that occurred during late January and early February across Queensland's southern interior.

The following link provides a complete list of [maps of the relevant river catchments and flood warning stations](#) referred to in this report.

### 1.1 Climate Information on back to back La Nina's

The following link discusses the significance of the La Nina events recorded between 2010 and 2012.

<http://www.bom.gov.au/climate/enso/history/La-Nina-2010-12.pdf>



## 2. Meteorological Summary

### 2.1 Late November flooding in the Border and Western Queensland Rivers

A deep surface trough extended across the interior of the state from the Gulf of Carpentaria to the western Darling Downs area on the 25<sup>th</sup> November 2011. The amplification of a middle level trough through Central Australia assisted to increase broad scale instability across inland Queensland. Warm, moist air fed into the surface trough and produced widespread showers and thunderstorms to areas around and east of the trough. The middle level system remained near stationary for two days producing widespread showers and thunderstorms across the same region the following day and 48 hour rainfall totals between 100 and 150 millimetres were recorded. River flooding resulted with major flood levels occurring in the Macintyre River at Goondiwindi, minor to moderate flooding in the Moonie River and areas of minor flooding in the Diamantina, Barcoo and Warrego Rivers.

### 2.2 Early December flooding in the Border and Western Queensland Rivers

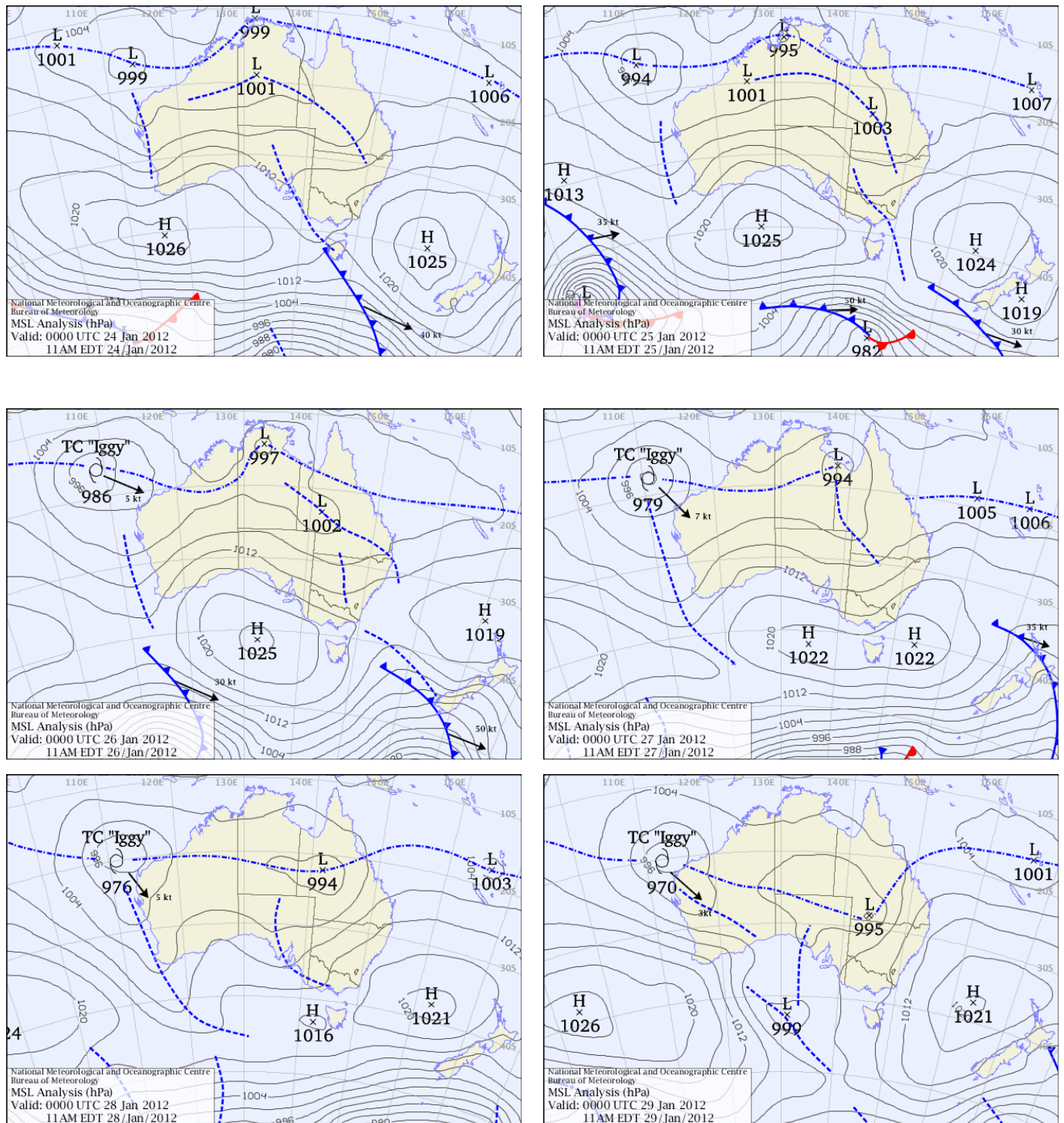
A surface trough over western Queensland deepened in response to the passage eastwards of an upper level trough across the southern interior of Queensland during the first week of December 2011. Widespread showers and thunderstorms developed in the moist unstable environment to the east of the trough between the 3<sup>rd</sup> and 7<sup>th</sup> December with 24 hour rainfall totals between 50 and 80 millimetres recorded. River level rises and moderate to major flooding resulted in the Maranoa River and along parts of Bungil Creek and the Balonne River. River rises and minor to moderate flooding was also recorded in the Weir, Moonie, Bulloo, Paroo and Warrego Rivers.

### 2.3 Record flooding in late January and early February in Queensland's southern interior

A surface trough extending from the Gulf of Carpentaria to the southern interior of Queensland remained near stationary for around 10 days between the 24<sup>th</sup> January and the 4<sup>th</sup> February 2012. This provided a very moist and unstable environment across the interior and eastern parts of the state, favourable for widespread showers and thunderstorms. The development of a series of surface and upper level low pressure systems across this period assisted to enhance the instability and increase the amount and intensity of showers and thunderstorms across the region. An upper level cut off low pressure system located over southern inland Queensland during the 24<sup>th</sup> January assisted to deepen the surface trough, increase the instability and enhance the shower and thunderstorm activity through the southern interior, particularly Bungil Creek and the Maranoa and Balonne River catchment areas. The increased shower and thunderstorm activity shifted westward during the 25<sup>th</sup> January with the movement westward of the upper level system, concentrating the enhanced showers and thunderstorms to the more western catchments of the Georgina, Bulloo and Paroo Rivers.

Further to this, a deep monsoon low developed on the northern end of the surface trough, around the Gulf of Carpentaria on the 26<sup>th</sup> January. The low tracked a south-southeast path across the interior of Queensland between the 26<sup>th</sup> and 29<sup>th</sup> January and produced widespread showers and thunderstorms particularly over the western and central river basins, and also about the western parts of the Fitzroy River catchment where intense rainfall caused very fast rises in Sapphire Creek.

The sequence of daily Mean Sea Level Pressure charts from the 24<sup>th</sup> to the 29<sup>th</sup> January 2012 is presented in Figure 2.3.1 and shows the near stationary inland trough and the movement of the tropical low as it tracked southeast from the Gulf of Carpentaria to south of the Queensland and New South Wales border.

**Figure 2.3.1 Daily Mean Sea Level Pressure Charts (10am) from 24<sup>th</sup> to 29<sup>th</sup> January 2012**

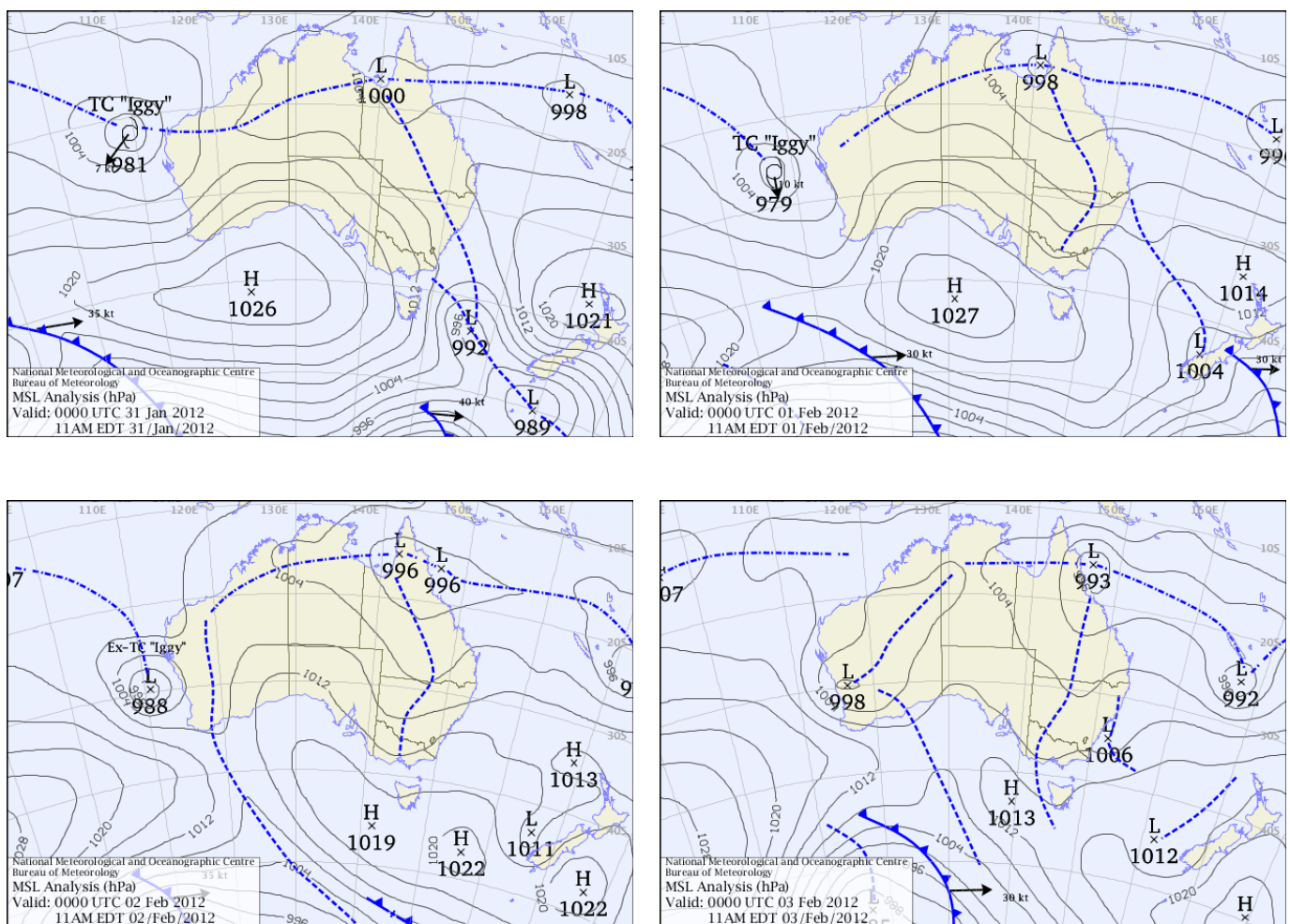
A weakened surface trough, in combination with middle level ridging over the southern interior caused more stabilisation of the atmosphere and a significant decrease in shower and thunderstorm activity across the region from the 29<sup>th</sup> to 30<sup>th</sup> January. However, amplification of the middle to upper level trough over Central Australia during the 31<sup>st</sup> January caused the surface trough to again deepen, increasing the instability across the interior of the state and again enhancing the amount and intensity of showers and thunderstorms across the central and southern interior of Queensland.

Further amplification of the middle level trough as it moved over western Queensland caused the surface trough to deepen even further and resulted in more widespread and intense showers, thunderstorms and rain across the central and southern interior of the state with average 24 hour rainfall totals across the Warrego, Maranoa and Balonne River catchments up to 100mm and isolated heavier falls up to 200mm. This activity continued until the 3<sup>rd</sup> February and caused widespread record flood levels along Bungil Creek and the Balonne and Maranoa Rivers and the highest recorded river levels in the Warrego River at Charleville since the record flood of 1990.

Rises and major flooding also occurred in the Belyando and Suttor Rivers in the Burdekin River catchment from this rainfall event.

The sequence of daily Mean Sea Level Pressure charts from the 31<sup>st</sup> January to the 3<sup>rd</sup> February 2012 is presented in Figure 2.3.2 and shows the near stationary trough through inland Queensland.

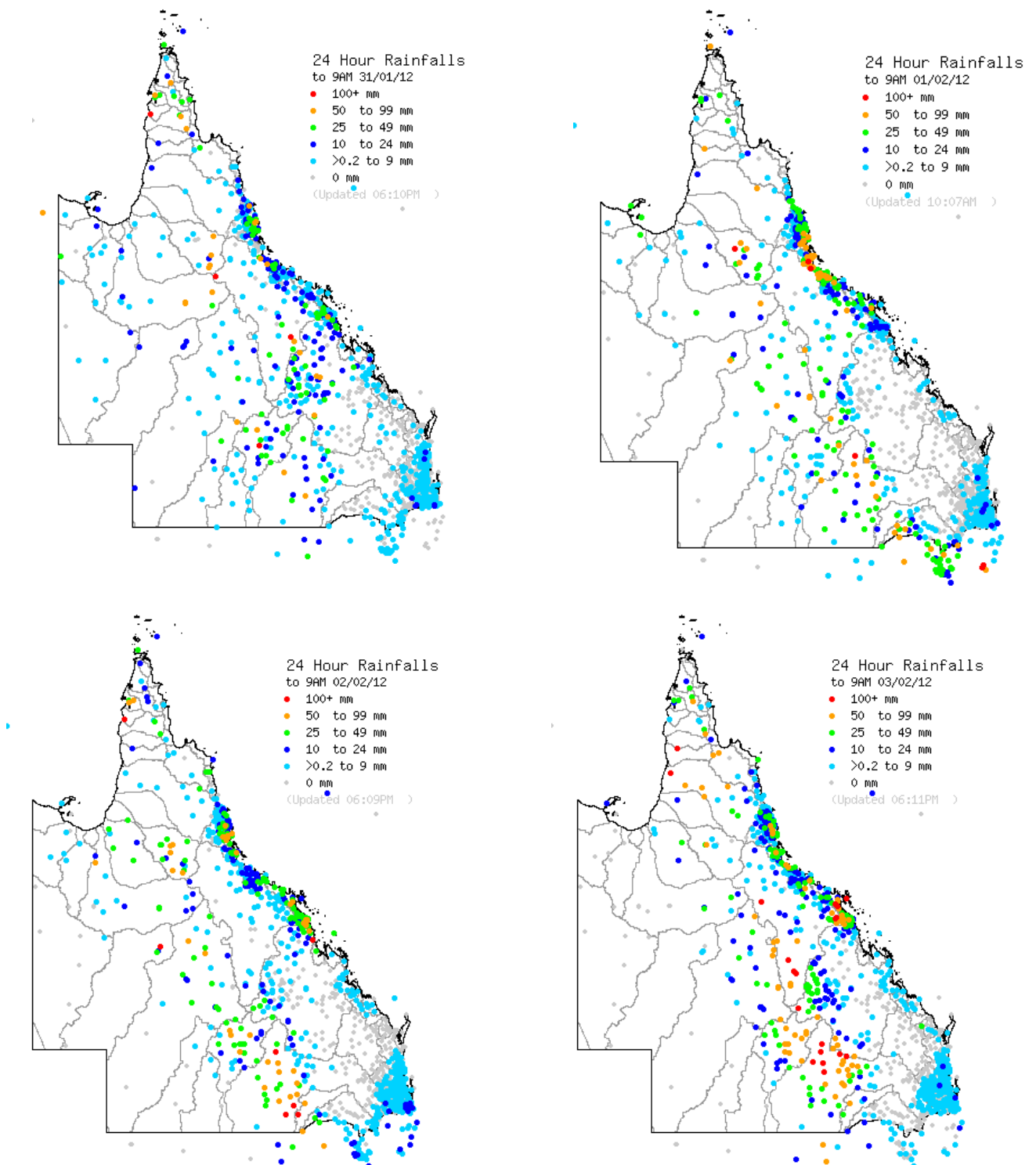
**Figure 2.3.2 Daily Mean Sea Level Pressure Charts (10am) from the 31<sup>st</sup> January to the 3<sup>rd</sup> February 2012**

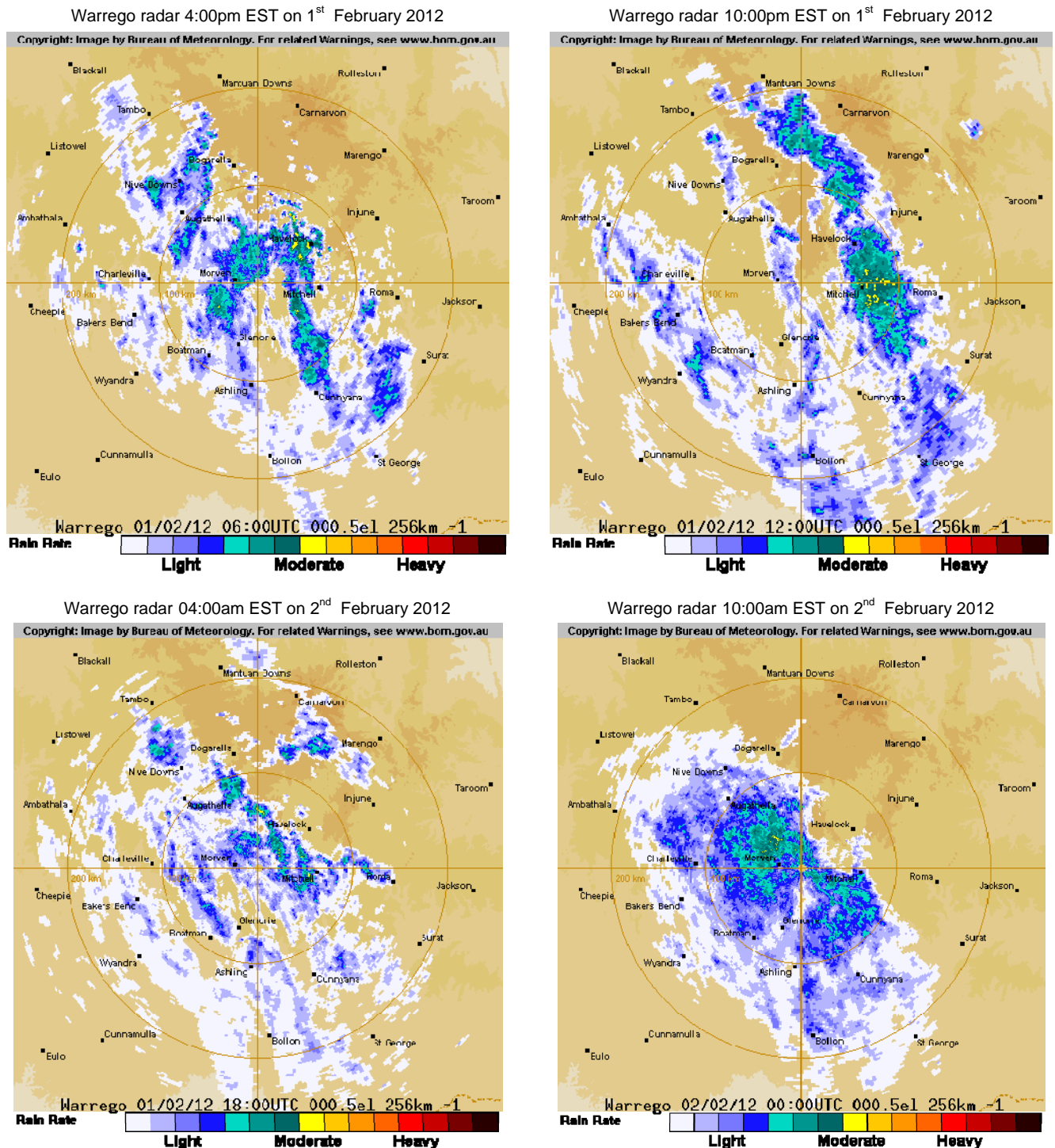


Daily rainfall maps for the period from the 31<sup>st</sup> January to the 3<sup>rd</sup> February 2012 are shown in Figure 2.3.3 and display the 24-hour rainfall totals recorded to 9am.

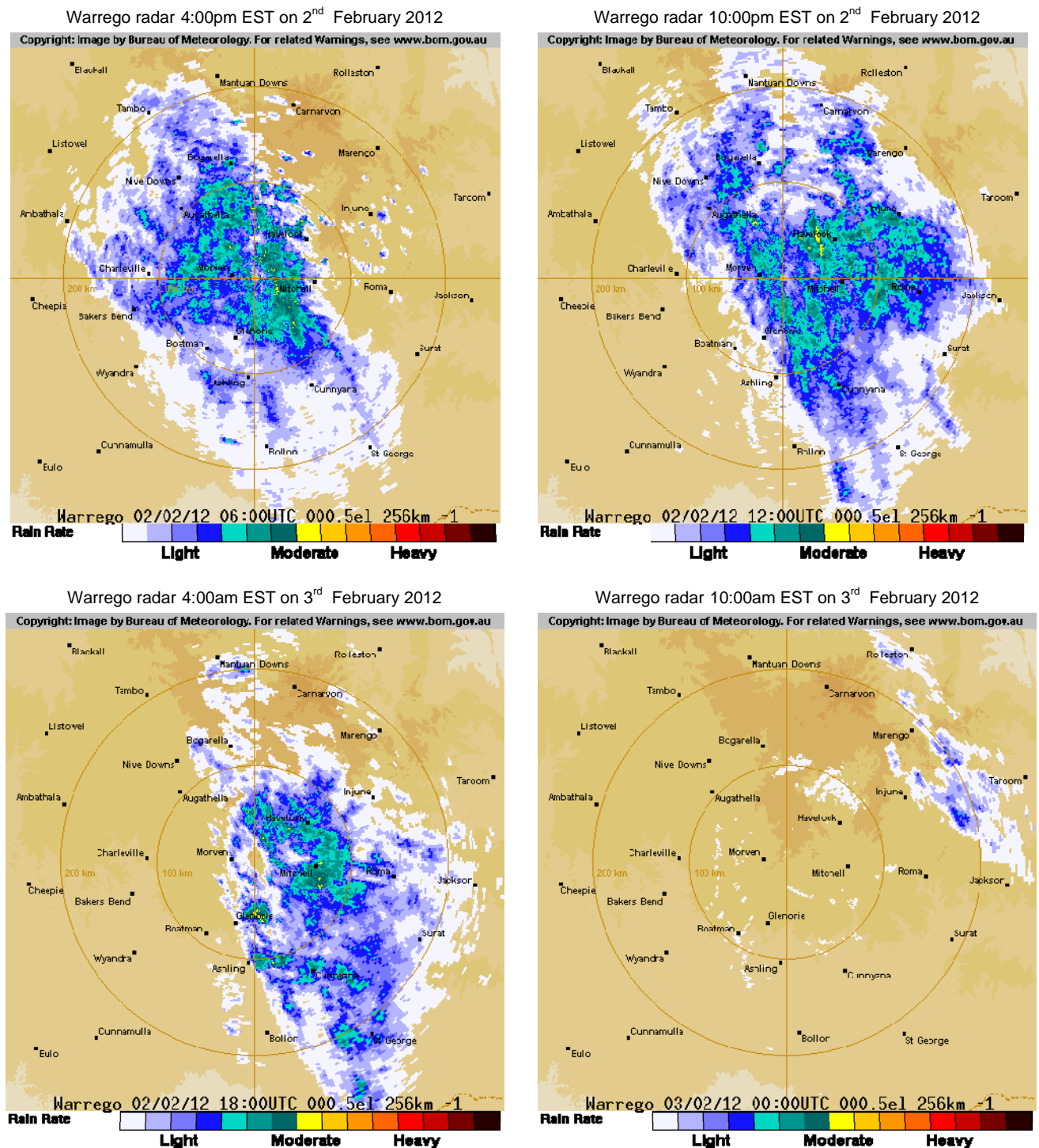
The sequence of imagery from the Warrego radar from the 1<sup>st</sup> to the 4<sup>th</sup> February 2012 is presented in Figure 2.3.4 and shows the intensity and extent of the rainband with embedded thunderstorms that developed in the vicinity of the surface trough on consecutive days and tracked eastwards across the southern interior.



**Figure 2.3.3 24-Hour rainfall totals to 9am on the 31st January to the 3rd February 2012**


**Figure 2.3.4 Radar imagery from the Warrego radar from 04:00pm on 01/02/12 until 10:00am on 02/02/12**

**Figure 2.3.4 (cont) Radar imagery from the Warrego radar from 04:00pm on 02/02/12 until 10:00am on 03/02/12**



## 2.4 Intense rainfall on the Sunshine Coast with flooding in the Mary, Mooloolo and Maroochy Rivers during late February 2012

An upper level low pressure system off the Queensland coast near Fraser Island and an associated surface trough, moved westward over land overnight on the 24<sup>th</sup> February 2012. This system produced intense rainfall over a period of 2 to 4 hours between Cooroy and Cooran, inland to

northwest of Noosa. The highest 1-hour rainfall total recorded was 181 millimetres at Cooroy Alert occurring between 9:50pm and 10:50pm on the 24<sup>th</sup> February 2012 with a 24-hour total of 346 millimetres to 12:20am on the 25<sup>th</sup> February 2012. Cooran Alert recorded 147 millimetres in 1 hour to 12:05am on the 25<sup>th</sup> February 2012 with a 24-hour total of 298 millimetres to 10:45pm on 25<sup>th</sup> February 2012. Localised flash flooding occurred in the towns of Cooroy, Cooran and Pomona. River flooding occurred in the Mary River with rises to the moderate flood level occurring at Gympie, and the North Maroochy River with rises to the major flood level at Eumundi.

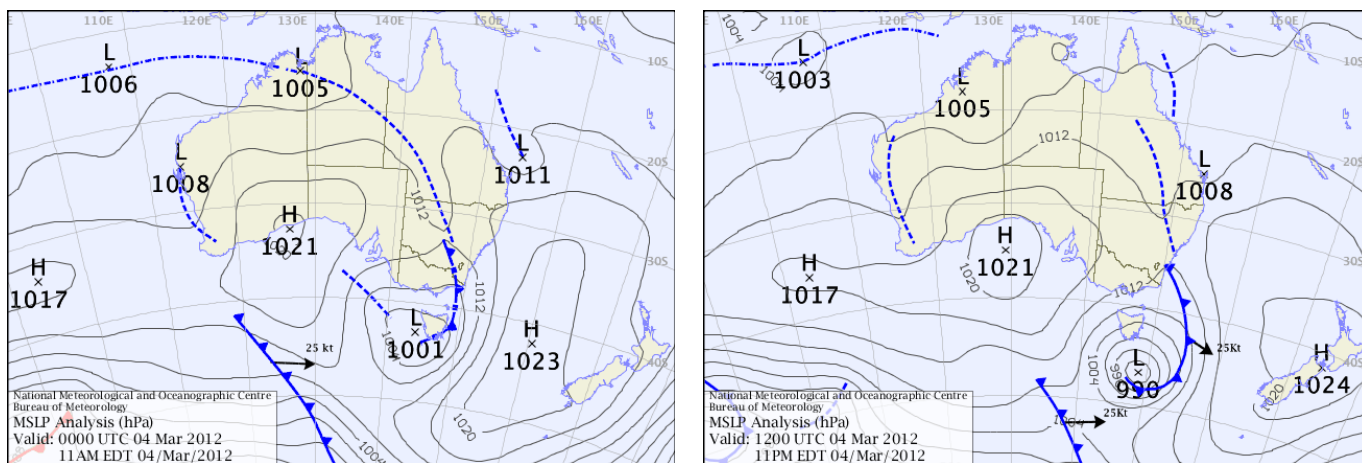
## 2.5 Coral Sea low moves inland with flooding in the Burrum/Cherwell, Mary and Maroochy/Mooloolo Rivers during early March 2012

A low pressure system identified over the Coral Sea on the 3<sup>rd</sup> March 2012 tracked southwest and crossed the east Queensland coast around Fraser Island on the evening of the 4<sup>th</sup> March 2012. A weak middle level low pressure system associated with the surface system assisted to drive a deep layer of moist northeast winds into coastal and nearby inland areas between Bundaberg and the Sunshine Coast. The low pressure system remained over land for around 48 hours and produced widespread 24-hour rainfall totals in excess of 100 millimetres to 9am on both the 5<sup>th</sup> and 6<sup>th</sup> March 2012. The heavy rainfall caused moderate to major flooding in the Burrum and Cherwell Rivers. Moderate flood levels occurred on the Mary River at Gympie, with major flood levels recorded in the Upper Maroochy River at Eumundi.

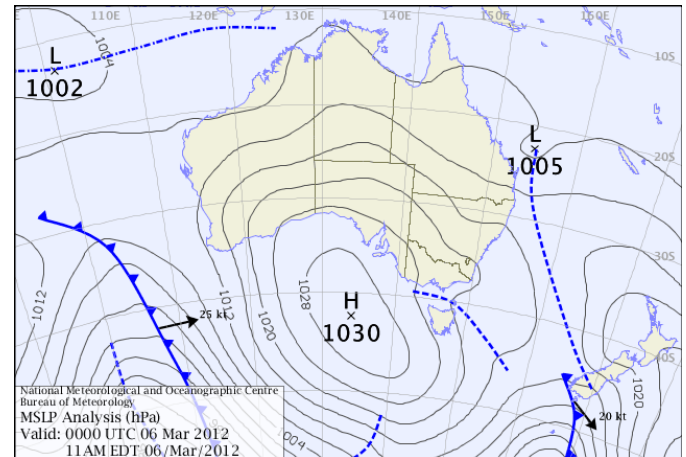
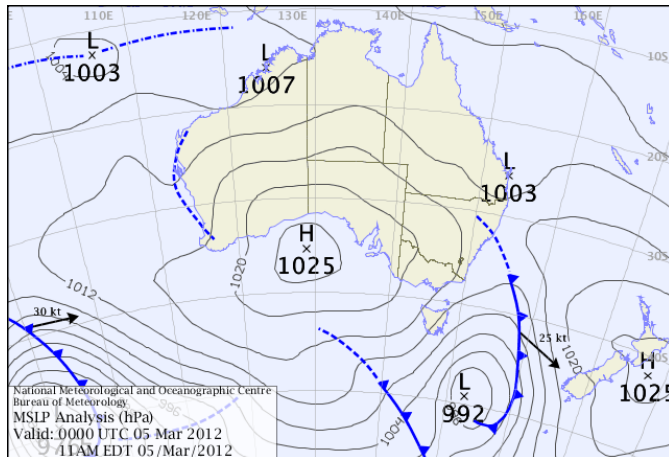
Firm ridging from a high pressure system centred over Adelaide pushed the low eastwards and back off the coast by the 6<sup>th</sup> March 2012 clearing the rainfall.

The sequence of Mean Sea Level Pressure charts from the 4<sup>th</sup> to the 6<sup>th</sup> March 2012 is presented in Figure 2.5.1 and shows the movement of the Coral Sea low onto the Capricornia coast.

**Figure 2.5.1 Mean Sea Level Pressure Charts from the 4<sup>th</sup> to 6<sup>th</sup> March 2012**





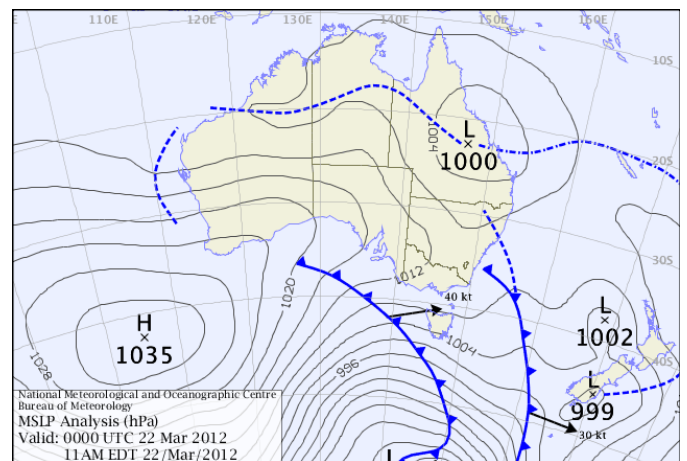
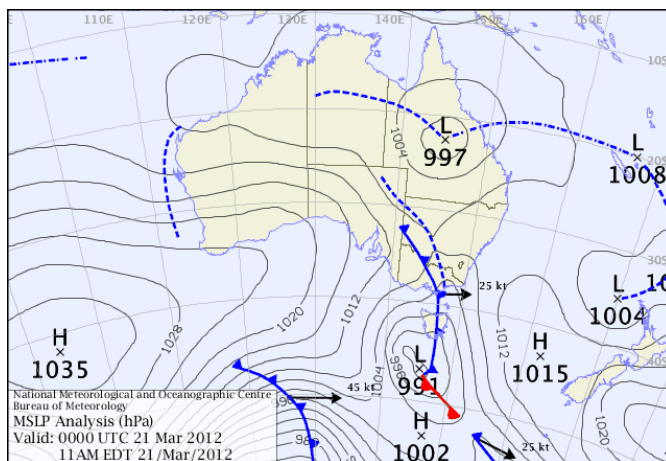
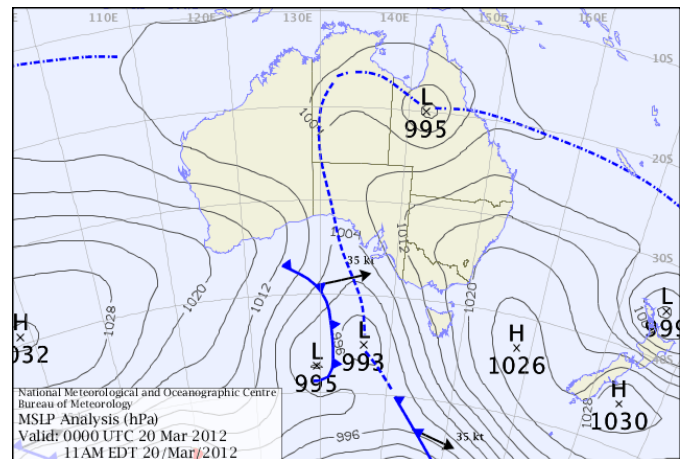
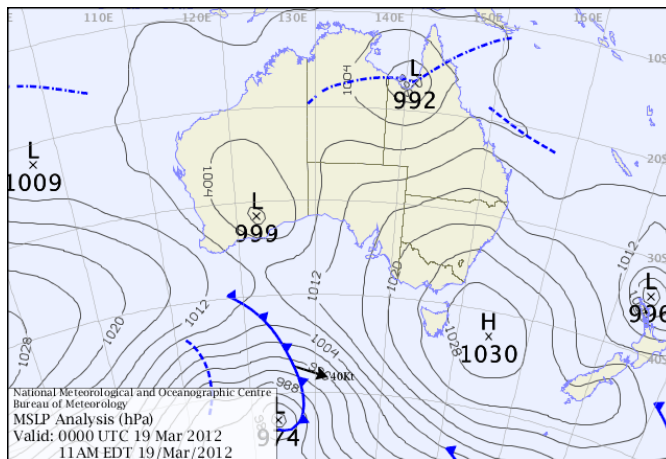


## 2.6 Monsoon low tracks southeast from the Gulf of Carpentaria to Wide Bay with flooding in coastal rivers during March 2012

A tropical low, linked to the monsoon trough, developed over the Gulf of Carpentaria on the 15<sup>th</sup> March 2012 and drifted overland in the Gulf region for 2 days. By the 17<sup>th</sup> March 2012, the low and associated monsoon trough deepened while positioned overland near Kowanyama and produced heavy rainfall near the low centre and along the Queensland North Tropical Coast in the vicinity of the monsoon trough. The low remained near stationary until the 20<sup>th</sup> March 2012 under the influence of a firm ridge that extended along the Queensland east coast. However, the approach of a middle level trough from the west and a short wave trough moving across southeast Queensland saw the ridge quickly erode and in response the monsoon low started to track southeast.

By the morning of the 21<sup>st</sup> March, the low was located to the east of Longreach and by the 23<sup>rd</sup> March 2012, had cleared the east coast near Gladstone. Heavy rain and thunderstorms followed the path of the low with 24-hour rainfall totals in excess of 100 millimetres recorded over eastern parts of the state. With the monsoon low over water off the Capricornia coast, a trough developed and extended southward onto the Sunshine Coast until the 24<sup>th</sup> March 2012 producing enhanced rain and thunderstorm with heavy falls. Throughout the event, flood warnings were required for the Norman, Gilbert, Flinders, Barron, Johnstone, Mulgrave, Russell, Tully, Murray, Herbert, Haughton, Don, Pioneer, Fitzroy, Baffle, Boyne, Calliope, Kolan, Mary and Thomson River catchments.

The sequence of daily Mean Sea Level Pressure charts showing the movement of the tropical low is presented in Figure 2.6.1.

**Figure 2.6.1 Daily (10am) Mean Sea Level Pressure Charts from 19<sup>th</sup> to 22<sup>nd</sup> March 2012**


## 3. Hydrology

Rainfall events of the 2011-2012 Wet Season caused major flooding in the Mulgrave, Herbert, Black, Burdekin, Haughton, Pioneer, Fitzroy, Baffle, Kolan, Burrum, Cherwell, Mary, Maroochy, Lower Brisbane, Logan, Macintyre, Weir, Moonie, Condamine, Balonne, Maranoa, Warrego, Paroo, Bulloo, Thomson and Diamantina River catchments.

The most significant flooding occurred across a wide area of southern and western Queensland in late January and early February where major flood levels were recorded in the Balonne, Maranoa Warrego, Paroo, Bulloo, Thomson and Barcoo Rivers and Cooper and Bungil Creeks.

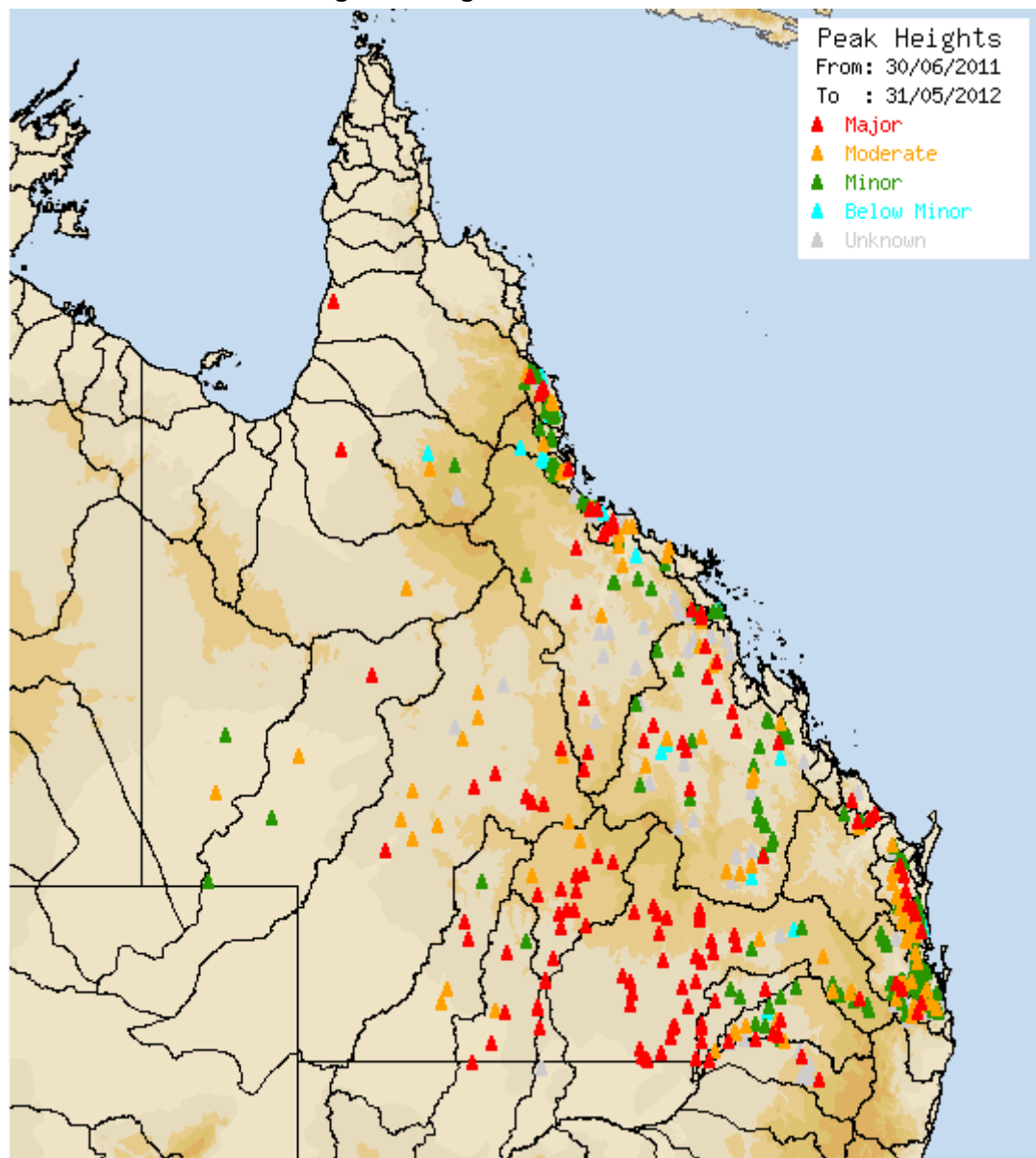
Record flood heights were recorded in a number of towns in the affected areas including Roma on Bungil Creek, Mitchell on the Maranoa River, and St George, Dirranbandi and Hebel on the Balonne River. The Warrego River at Charleville reached its highest levels since the record flood of 1990.

The Hydrology presented in this report has a strong emphasis on the record breaking flood event of late January and early February over southern inland Queensland but rainfall figures and Hydrographs for other significant flood events that occurred throughout the season are also presented.

### 3.1 Peak River Heights

A map displaying the peak river heights that occurred over Queensland between the 1st of October and the 30<sup>th</sup> April 2012 is shown in Figure 3.1.1. As is evident, river level rises above the moderate flood level occurred across a wide area of the state. However, most notable is the large area of major flooding through Queensland's southern interior.

Table 3.1.1 displays a comparison of the 2011 - 2012 western and southern Queensland recorded peak heights with historical peak heights, highlighting new peak height records which occurred at Roma, Mitchell, St George, Dirranbandi and other locations on Bungil Creek and the Balonne, Maranoa, Warrego and Thomson rivers.

**Figure 3.1.1 Queensland Peak Heights during the 2011- 2012 Wet Season**



**Table 3.1.1 2011 – 2012 Peak heights over western and southern Queensland and comparison to records**

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Bungil Creek</b>						
Tabers TM	5.05m 25/1/2012	Minor	1970	18th	Apr 2011	7.83m 6/3/1997
	5.08m 28/1/2012	Minor	1970	17th	Apr 2011	7.83m 6/3/1997
	8.45m 3/2/2012	Major	1970	1st	Previous record 7.83m 06/03/1997	New Record
Tindarra TM	5.41m 26/1/2012	Minor	2000	9th	Apr 2011	7.95m 19/4/2011
	8.30m 3/2/2012	Major	2000	1st	Previous record 7.95m 19/04/2011	New Record
Roma	5.70m 7/12/2011	Below Minor	1982*	34th	Apr 2011	8.10m 2/3/2010
	5.50m 8/12/2011	Below Minor	1982*	40th	Dec 2011	8.10m 2/3/2010
	6.29m 26/1/2012	Minor	1982*	25th	Apr 2011	8.10m 2/3/2010
	8.40m 3/2/2012	Major	1982*	1st	Previous record 8.10m 02/03/2010	New Record
Garrabarra	7.45m 8/12/2011	Moderate	1950	10th	Apr 2011	10.50m 3/3/2010
	6.00m 28/1/2012	Moderate	1950	22nd	Dec 2011	10.50m 3/3/2010
	10.4m 4/2/2012	Major	1950	2nd	Mar 2010	10.50m 3/3/2010
<b>Balonne River to Beardmore Dam</b>						
Surat (Manual)	5.38m 3/12/2011	Minor	1943*	+100th	Apr 2011	12.75m 4/1/2011
	8.60m 9/12/2011	Moderate	1943*	+50th	Apr 2011	12.75m 4/1/2011
	7.70m 18/12/2011	Moderate	1943*	+50th	Apr 2011	12.75m 4/1/2011
	10.43m 31/1/2012	Major	1943*	29th	Jan 2011	12.75m 4/1/2011
	11.79m 5/2/2012	Major	1943*	8th	Jan 2011	12.75m 4/1/2011
Surat TM (Auto)	8.60m 8/12/2011	Moderate	2004	9th	Apr 2011	12.30m 4/1/2011
	10.11m 3/1/2012	Major	2004	5th	Jan 2011	12.30m 4/1/2011
	11.41m 5/2/2012	Major	2004	4th	Jan 2011	12.30m 4/1/2011
Karoola Park (at Muckadilla Ck)	7.45m 7/12/2012	Moderate	1950	9th	Mar 2010	8.85m 2/3/2010
	8.42m 42/2012	Major	1950	5th	Mar 2010	8.85m 2/3/2010
Weribone TM	10.14m 8/12/2011	Major	1969	34th	Apr 2011	13.7m 3/3/2010
	10.22m 10/12/2011	Major	1969	32nd	Jan 2011	13.7m 3/3/2010
	9.65m 17/12/2011	Moderate	1969	36th	Dec 2011	13.7m 3/3/2010
	13.12m 4/2/2012	Major	1969	5th	Jan 2011	13.7m 3/3/2010

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Balonne River to Beardmore Dam</b>						
Weribone TM (cont)	12.47m 6/2/2012	Major	1969	10 <sup>th</sup>	Feb 2012	13.71m 3/3/2010
Warroo	8.90m 11/12/2011	Below Minor	1890	45 <sup>th</sup>	Jan 2011	16.61m 1890
	13.80m 5/2/2012	Major	1890	9 <sup>th</sup>	Jan 2011	16.61m 1890
<b>Maranoa River</b>						
Currawong	4.10m 7/12/2011	Minor	1956	9 <sup>th</sup>	Mar 2010	10.66m 1956
	4.20m 28/1/2012	Minor	1956	7 <sup>th</sup>	Mar 2010	10.66m 1956
	9.4m 2/2/2012	Major	1956	4 <sup>th</sup>	Mar 2010	10.66m 1956
	11.20m 3/2/2012	Major	1956	1 <sup>st</sup>	Previous record 10.66m 1956	New Record
	10.7m 4/2/2012	Major	1956	3 <sup>rd</sup>	Mar 2010	11.20m 03/02/2012
Mitchell (Manual)	4.00m 8/12/2011	Moderate	1864	20 <sup>th</sup>	Dec 2010	9.56m 1864
	3.00m 28/1/2012	Moderate	1864	38 <sup>th</sup>	Dec 2010	9.56m 1864
	9.84m 3/2/2012	Major	1864	1 <sup>st</sup>	Previous record 9.56m 1864	New Record
	9.50m 4/2/2012	Major	1864	3 <sup>rd</sup>	Feb 2012	9.84m 3/2/2012
Amby (at Amby Ck)	5.90m 6/12/2011	Minor	1992	4 <sup>th</sup>	Jan 2008	7.39m Dec 1992
	5.80m 8/12/2011	Minor	1992	5 <sup>th</sup>	Dec 2011	7.39m Dec 1992
	5.60m 16/12/2011	Minor	1992	6 <sup>th</sup>	Dec 2011	7.39m Dec 1992
	7.45m 3/2/2012	Major	1992	1 <sup>st</sup>	Previous record 7.39m Dec 1992	New Record
Springfield	9.05m 8/12/2011	Major	1950	11 <sup>th</sup>	Dec 2010	10.92m 2/3/2010
	7.40m 16/12/2011	Moderate	1950	27 <sup>th</sup>	Dec 2011	10.92m 2/3/2010
	6.72m 29/1/2012	Minor	1950	34 <sup>th</sup>	Dec 2011	10.92m 2/3/2010
	11.38m 3/2/2012	Major	1950	1 <sup>st</sup>	Previous record 10.92m 02/03/2010	New Record
Woodlands	6.85m 9/12/2011	Moderate	1950	13 <sup>th</sup>	Dec 2010	7.62m 29/7/1950
	6.65m 17/12/2011	Moderate	1950	18 <sup>th</sup>	Dec 2011	7.62m 29/7/1950
	6.00m 30/1/2012	Moderate	1950	38 <sup>th</sup>	Dec 2011	7.62m 29/7/1950
	7.80m 4/2/2012	Major	1950	1 <sup>st</sup>	Previous record 7.62m 29/07/1950	New Record
Old Cashmere TM	6.54m 12/12/2011	Moderate	1969	7 <sup>th</sup>	Mar 2010	9.72m 23/4/1990
	5.85m 19/12/2011	Moderate	1969	22 <sup>nd</sup>	Dec 2011	9.72m 23/4/1990
	10.95m 5/2/2012	Major	1969	1 <sup>st</sup>	Previous record 9.72m 23/04/1990	New Record

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest Since	Highest on record
<b>Balonne River downstream of Beardmore Dam</b>						
St George (Manual)	6.07m 8/2/2012	Major	1997	1 <sup>st</sup>	<a href="#">Previous record 5.53m 07/03/2010</a>	<b>New Record</b>
	9.23m 12/12/2011	Major	1968*	17 <sup>th</sup>	Jan 2011	13.39m 7/3/2010
	7.75m 20/12/2011	Major	1968*	34 <sup>th</sup>	Jan 2011	13.39m 7/3/2010
	13.95m 8/2/2012	Major	1968*	1 <sup>st</sup>	<a href="#">Previous record 13.39m 07/03/2010</a>	<b>New Record</b>
Whyenbah (Manual)	7.60m 14/12/2011	Major	1950	28 <sup>th</sup>	Jan 2011	8.18m Aug 1950
	7.22m 22/12/2011	Major	1950	42 <sup>nd</sup>	Dec 2011	8.18m Aug 1950
	8.19m 9/2/2012	Major	1950	1 <sup>st</sup>	<a href="#">Previous record 8.18m Aug 1950</a>	<b>New Record</b>
Hastings TM	6.32m 14/12/2011	Major	1965	13 <sup>th</sup>	Jan 2011	6.53m 10/01/2011
	6.10m 22/12/2011	Major	1965	20 <sup>th</sup>	Dec 2011	6.53m 10/1/2011
	6.61m 9/2/2012	Major	1965	1 <sup>st</sup>	<a href="#">Previous record 6.53m 10/01/2011</a>	<b>New Record</b>
Dirranbandi	5.05m 15/12/2011	Major	1917	30 <sup>th</sup>	Jan 2011	5.34m 12/1/2011
	4.79m 22/12/2011	Moderate	1917	+50 <sup>th</sup>	Jan 2011	5.34m 12/1/2011
	5.45m 10/2/2012	Major	1917	1 <sup>st</sup>	<a href="#">Previous record 5.34m 12/01/2011</a>	<b>New Record</b>
Narran River TM	4.76m 19/12/2011	Moderate	1965	16 <sup>th</sup>	Mar 2010	5.23m 15/3/2010
	4.72m 25/12/2011	Moderate	1965	27 <sup>th</sup>	Mar 2010	5.23m 15/3/2010
	5.36m 11/2/2012	Major	1965	1 <sup>st</sup>	<a href="#">Previous record 5.23m 15/03/2010</a>	<b>New Record</b>
Woolerbilla TM	6.10m 23/12/2011	Major	1965	20 <sup>th</sup>	Mar 1971	6.43m 07/03/1971
	6.10m 23/12/2011	Major	1965	20 <sup>th</sup>	Mar 1971	6.43m 07/03/1971
	6.68m 13/2/2012	Major	1965	1 <sup>st</sup>	<a href="#">Previous record 6.43m 07/03/1971</a>	<b>New Record</b>
Briarie Ck TM	4.78m 20/12/2011	Moderate	1968	6 <sup>th</sup>	Mar 2010	5.58m 15/3/2010
	5.72m 13/2/2012	Major	1968	1 <sup>st</sup>	<a href="#">Previous record 5.58m 15/03/2010</a>	<b>New Record</b>
Ballandool R TM	3.31m 23/12/2011	Minor	1965	13 <sup>th</sup>	Mar 2010	4.60m 16/3/2010
	3.33m 29/12/2011	Minor	1965	15 <sup>th</sup>	Mar 2010	4.60m 16/3/2010
	4.69m 15/2/2012	Major	1965	1 <sup>st</sup>	<a href="#">Previous record 4.60m 16/03/2010</a>	<b>New Record</b>
Hebel TM (Auto)	1.51m 23/12/2011	Moderate	1968	31 <sup>st</sup>	Jan 2011	2.37m 16/1/2011
	1.53m 28/12/2011	Moderate	1968	29 <sup>th</sup>	Jan 2011	2.37m 16/1/2011
	2.44m 15/2/2012	Major	1968	1 <sup>st</sup>	<a href="#">Previous record 2.37m 16/01/2011</a>	<b>New Record</b>

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest Since	Highest on record
<b>Wallam and Mungallala Creeks</b>						
Mungallala	4.60m 3/2/2012	Major	2002	1 <sup>st</sup>	<a href="#">Previous record 4.5m 19/12/2010</a>	New Record
Deelamon	6.70m 4/2/2012	Major	1985	=1 <sup>st</sup>	Mar 2010	6.70m 4/3/2010
Homeboin	4.15m 4/2/2012	Major	1950	=3 <sup>rd</sup>	Mar 2010	4.70m 3/3/2010
Cardiff TM	6.35m 5/2/2012	Major	2000	3 <sup>rd</sup>	Mar 2010	7.63m 4/3/2010
Bollon	0.57m 29/1/2012	Minor	1977	45 <sup>th</sup>	Mar 2010	1.76m 5/3/2010
	1.78m 5/2/2012	Major	1977	1 <sup>st</sup>	<a href="#">Previous record 1.76m 5/3/2010</a>	New Record
<b>Warrego River</b>						
Drensmaine	5.85m 3/2/2012	Major	1983	4 <sup>th</sup>	Jan 2008	8.71 20/04/1990
Biddenham TM	2.77m 8/12/2011	Minor	1955	39 <sup>th</sup>	Mar 2010	7.20m 20/4/1990
	3.62m 16/12/2011	Minor	1955	16 <sup>th</sup>	Mar 2010	7.20m 20/4/1990
	5.25m 24/1/2012	Major	1955	7 <sup>th</sup>	Mar 2010	7.20m 20/4/1990
	6.84m 3/2/2012	Major	1955	2 <sup>nd</sup>	Apr 1990	7.20m 20/4/1990
	2.18m 9/3/2012	Minor	1955	49 <sup>th</sup>	Feb 2012	7.20m 20/4/1990
Wetlands	2.50m 28/1/2012	Minor	1990	19 <sup>th</sup>	Mar 2010	5.47m Apr 1990
	4.70m 2/2/2012	Major	1990	4 <sup>th</sup>	Feb 1997	5.47m Apr 1990
	5.10m 3/2/2012	Major	1990	2 <sup>nd</sup>	Apr 1990	5.47m Apr 1990
Lochinvar	6.55m 2/2/2012	Major	1956	6 <sup>th</sup>	Mar 2010	8.85m 19/4/1990
	7.60m 4/2/2012	Major	1956	5 <sup>th</sup>	Mar 2010	8.85m 19/4/1990
Augathella TM	4.20m 28/11/2011	Minor	1910	30 <sup>th</sup>	Feb 2011	7.30m 20/4/1990
	6.60m 3/2/2012	Major	1910	3 <sup>rd</sup>	Apr 1990	7.30m 20/4/1990
	6.77m 5/2/2012	Major	1910	2 <sup>nd</sup>	Apr 1990	7.30m 20/4/1990
	5.66m 28/2/2012	Moderate	1910	14 <sup>th</sup>	Feb 2012	7.30m 20/4/1990
	4.46m 25/3/2012	Minor	1910	27 <sup>th</sup>	Feb 2012	7.30m 20/4/1990



Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Warrego River (cont)</b>						
The 27 Mile Garden TM	1.94m 30/11/2011	Below Minor	1956	45th	Mar 2010	6.98m 20/4/1990
	3.29m 8/12/2011	Moderate	1956	17th	Mar 2010	6.98m 20/4/1990
	2.13m 14/12/2011	Minor	1956	41st	Mar 2010	6.98m 20/4/1990
	2.84m 17/12/2011	Minor	1956	25th	Mar 2010	6.98m 20/4/1990
	4.39m 25/1/2012	Major	1956	8th	Mar 2010	6.98m 20/4/1990
	5.94m 3/2/2012	Major	1956	2nd	Apr 1990	6.98m 20/4/1990
	2.56m 1/3/2012	Minor	1956	32nd	Feb 2012	6.98m 20/4/1990
Raceview TM	2.52m 31/1/2012	Major	2000	1st	Previous record 2.46m 18/01/2008	New Record
	1.78m 1/2/2012	Minor	2000	5th	Jan 2012	2.52m 31/1/2012
	1.62m 2/2/2012	Minor	2000	7th	Jan 2012	2.52m 31/1/2012
Charleville (Bradley's Gully)	2.14m 31/1/2012	N/A	2000	4th	Mar 2010	4.20m 2/3/2010
	1.75m 2/2/2012	N/A	2000	8th	Mar 2010	4.20m 2/3/2010
	1.85m 3/2/2012	N/A	2000	7th	Mar 2010	4.20m 2/3/2010
Charleville TM	4.14m 8/12/2011	Minor	1910	+50th	Mar 2010	8.54m 21/4/1990
	4.05m 9/12/2011	Minor	1910	+50th	Mar 2010	8.54m 21/4/1990
	4.15m 25/1/2012	Minor	1910	+50th	Mar 2010	8.54m 21/4/1990
	5.13m 26/1/2012	Moderate	1910	45th	Mar 2010	8.54m 21/4/1990
	7.78m 04/02/2012	Major	1910	2nd	Apr 1990	8.54m 21/4/1990
Mt Morris	4.15m 1/2/2012	Moderate	2010	15th	2010	5.64m 27/12/1971
	4.8m 3/2/2012	Moderate	2010	7th	2010	5.64m 27/12/1971
Warilda	3.15m 9/12/2011	Minor	1990	49th	Mar 2010	6.45m 19/1/2008
	3.35m 29/1/2012	Minor	1990	41st	Mar 2010	6.45m 19/1/2008
	4.70m 3/2/2012	Moderate	1990	20th	Mar 2010	6.45m 19/1/2008
	5.20m 5/2/2012	Major	1990	15th	Mar 2010	6.45m 19/1/2008
Oakpark	3.30m 17/12/2011	Moderate	1990	23rd	Mar 2010	8.00m Apr 1990
	4.00m 29/1/2012	Moderate	1990	15th	Mar 2010	8.00m Apr 1990
	4.70m 31/1/2012	Moderate	1990	10th	Mar 2010	8.00m Apr 1990
	7.00m 04/02/2012	Major	1990	=2nd	Feb 1997	8.00m Apr 1990

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest Since	Highest on record
<b>Warrego River (cont)</b>						
Binnowee TM	4.72m 26/1/2012	Minor	1997	12th	Mar 2010	10.40m Apr 1990
	5.90m 1/2/2012	Moderate	1997	5th	Mar 2010	10.40m Apr 1990
	8.84m 5/2/2012	Major	1997	2nd	Feb 1997	10.40m Apr 1990
Authoringa	4.50m 26/1/2012	Minor	1990	=7th	Mar 2010	9.72m 21/4/1990
	4.50m 29/1/2012	Minor	1990	=7th	Mar 2010	9.72m 21/4/1990
	9.80m 4/2/2012	Major	1990	1st	Previous record 9.72m 21/4/1990	New Record
Bakers Bend TM	6.58m 27/1/2012	Minor	1971	18th	Mar 2010	12.10m 21/4/1990
	11.4m 5/2/2012	Major	1971	2nd	Apr 1990	12.10m 21/4/1990
Wyandra TM	6.52m 29/1/2012	Minor	1910	23rd	Mar 2010	10.00m 23/4/1990
	9.95m 7/2/2012	Major	1910	2nd	Apr 1990	10.00m 23/4/1990
Wallen (Manual)	6.71m 30/01/2012	Minor	1990	13th	Mar 2010	10.36m 24/4/1990
	10.20m 8/2/2012	Major	1990	2nd	Apr 1990	10.36m 24/4/1990
Wallen TM (Auto)	7.15m 30/1/2012	Minor	2007	6th	Mar 2010	10.30m 7/3/2010
	10.44m 8/2/2012	Major	2007	1st	Previous record 10.30m 7/3/2010	New Record
Cunnamulla Bridge	6.80m 13/12/2011	Minor	1890	+50th	Mar 2010	11.07m 1890
	6.45m 23/12/2011	Minor	1890	+50th	Mar 2010	11.07m 1890
	7.80m 31/1/2012	Moderate	1890	43rd	Mar 2010	11.07m 1890
	9.98m 10/2/2012	Major	1890	6th	Mar 2010	11.07m 1890
Cunnamulla Weir TM	6.52m 14/12/2011	Minor	1992	24th	Mar 2010	8.75m 8/3/2010
	6.15m 20/12/2011	Minor	1992	=41st	Dec 2011	8.75m 8/3/2010
	6.35m 23/12/2011	Minor	1992	31st	Dec 2011	8.75m 8/3/2010
	7.48m 1/2/2012	Major	1992	12th	Mar 2010	8.75m 8/3/2010
	8.73m 11/2/2012	Major	1992	2nd	Mar 2010	8.75m 8/3/2010
	6.15m 6/3/2012	Minor	1992	=41st	Feb 2012	8.75m 8/3/2010

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Warrego River (cont)</b>						
Rocky	3.62m 15/12/2011	Minor	1945	+50th	Mar 2010	5.52m 11/3/2010
	4.60m 2/2/2012	Moderate	1945	27th	Mar 2010	5.52m 11/3/2010
	5.45m 13/2/2012	Major	1945	3rd	Mar 2010	5.52m 11/3/2010
	2.94m 3/3/2012	Minor	1945	+50	Feb 2012	5.52m 11/3/2010
	2.78m 8/3/2012	Minor	1945	+50	Feb 2012	5.52m 11/3/2010
<b>Paroo River</b>						
Quilpeta	4.50m 30/1/2012	Major	1968	3rd	Mar 2010	6.00m 3/3/2010
Alambie	3.95m 30/1/2012	Minor	1984	3rd	Mar 2010	6.64m Dec 2010
Eulo	4.85m 3/2/2012	Major	1890	=21st	Mar 2010	6.27m 5/3/2010
	4.35m 14/2/2012	Major	1890	=37th	Feb 2012	6.27m 5/3/2010
	3.95m 5/3/2012	Moderate	1890	+50th	Feb 2012	6.27m 5/3/2010
Carpet Springs	2.00m 7/12/2011	Moderate	1972	=8th	Mar 2010	3.00m 2/3/2010
	2.40m 20/12/2011	Moderate	1972	=3rd	Mar 2010	3.00m 2/3/2010
	2.00m 29/1/2012	Moderate	1972	=8th	Dec 2011	3.00m 2/3/2010
	2.00m 31/1/2012	Moderate	1972	=8th	Dec 2011	3.00m 2/3/2010
	1.95m 27/2/2012	Minor	1972	=9th	Dec 2011	3.00m 2/3/2010
	2.10m 3/3/2012	Moderate	1972	=6th	Dec 2011	3.00m 2/3/2010
Caiwarro	1.93m 6/12/2011	Minor	1967	+50th	Mar 2010	4.99m 8/3/2010
	2.40m 12/12/2011	Minor	1967	+50th	Mar 2010	4.99m 8/3/2010
	3.43m 24/12/2011	Moderate	1967	40th	Mar 2010	4.99m 8/3/2010
	4.28m 6/2/2012	Major	1967	14th	Mar 2010	4.99m 8/3/2010
	3.47m 17/2/2012	Moderate	1967	=38th	Feb 2012	4.99m 8/3/2010
	3.20m 9/3/2012	Moderate	1967	48th	Feb 2012	4.99m 8/3/2010

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Paroo River (cont)</b>						
Hungerford	1.40m 8/12/2011	Minor	1974	+50th	Mar 2011	2.92m 26/4/1990
	1.50m 15/12/2011	Moderate	1974	+50th	Mar 2011	2.92m 26/4/1990
	1.78m 26/12/2011	Moderate	1974	47th	Mar 2010	2.92m 26/4/1990
	1.42m 29/1/2012	Minor	1974	+50th	Dec 2011	2.92m 26/4/1990
	2.19m 8/2/2012	Major	1974	19th	Mar 2010	2.92m 26/4/1990
	1.82m 20/2/2012	Moderate	1974	=43rd	Feb 2012	2.92m 26/4/1990
	1.60m 5/3/2012	Moderate	1974	+50th	Feb 2012	2.92m 26/4/1990
	1.73m 11/3/2012	Moderate	1974	+50th	Feb 2012	2.92m 26/4/1990
	1.05m 24/3/2012	Minor	1974	+100th	Mar 2012	2.92m 26/4/1990
	1.25m 02/04/2012	Minor	1974	+100th	Mar 2012	2.92m 26/4/1990
<b>Bulloo River</b>						
Quilpie (Manual)	4.80m 11/12/2011	Moderate	1950	+50th	Mar 2011	7.85m 1/4/1963
	3.83m 20/12/2011	Minor	1950	+100th	Dec 2012	7.85m 1/4/1963
	5.20m 31/1/2012	Major	1950	36th	Mar 2011	7.85m 1/4/1963
	5.30m 2/2/2012	Major	1950	34th	Mar 2011	7.85m 1/4/1963
	3.90m 8/3/2012	Moderate	1950	+100th	Feb 2012	7.85m 1/4/1963
South Comongin	5.30m 30/1/2012	Major	1959	9th	Mar 2010	5.60m 27/12/1975
Autumnvale TM	5.64m 19/12/2011	Moderate	1968	48th	Mar 2011	8.22m 8/3/2010
	5.50m 23/12/2011	Moderate	1968	+50th	Dec 2012	8.22m 8/3/2010
	6.65m 5/2/2012	Moderate	1968	17th	Mar 2010	8.22m 8/3/2010
	5.22m 7/3/2012	Minor	1968	+50th	Feb 2012	8.22m 8/3/2010
	5.04m 14/3/2012	Minor	1968	+50th	Feb 2012	8.22m 8/3/2010
Thargomindah	4.60m 20/12/2011	Moderate	1949	+50th	Mar 2011	6.78m 9/1/1974
	4.98m 24/12/2011	Moderate	1949	50th	Mar 2011	6.78m 9/1/1974
	5.24m 8/2/2012	Moderate	1949	=31st	Mar 2010	6.78m 9/1/1974
	4.39m 8/3/2012	Minor	1949	+50th	Feb 2012	6.78m 9/1/1974
	4.22m 14/3/2012	Minor	1949	+50th	March 2012	6.78m 9/1/1974



Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Bulloo River (cont)</b>						
Thargomindah	4.34m 31/3/2012	Minor	1949	+50th	March 2012	6.78m 9/1/1974
<b>Thomson/Barcoo/Cooper</b>						
Bowen Downs TM	3.94m 27/1/2012	N/A	1999	12th	Dec 2010	4.84m 14/2/2009
	4.53m 4/2/2012	N/A	1999	6th	Dec 2010	4.84m 14/2/2009
	5.23m 9/2/2012	N/A	1999	1st	Previous record 4.84m 14/2/2009	<b>New Record</b>
	4.96m 25/3/2012	N/A	1999	2nd	Feb 2012	5.23m 9/2/2012
Muttaborra	4.10m 2/2/2012	Minor	1951	+50th	Dec 2010	8.48m 12/3/1955
	5.55m 4/2/2012	Moderate	1951	25th	Jan 2008	8.48m 12/3/1955
	5.17m 15/3/2012	Moderate	1951	37th	Feb 2012	8.48m 12/3/1955
Camoola Park	2.65m 28/1/2012	Minor	1954	+50th	Dec 2010	7.42m 23/2/2000
	4.30m 6/2/2012	Moderate	1954	23rd	Jan 2010	7.42m 23/2/2000
	3.70m 27/3/2012	Minor	1954	=16th	Feb 2012	7.42m 23/2/2000
Longreach TM	4.08m 3/2/2012	Minor	1894	+50th	Jan 2011	7.32m 27/1/1974
	4.76m 8/2/2012	Moderate	1894	35th	Feb 2010	7.32m 27/1/1974
	4.37m 30/3/2012	Moderate	1894	+50th	Feb 2012	7.32m 27/1/1974
Stonehenge East	2.97m 10/2/2012	Minor	1968	+50th	Feb 2010	6.88m 31/1/1974
	3.00m 15/2/2012	Moderate	1968	=49th	Feb 2010	6.88m 31/1/1974
	2.65m 30/3/2012	Minor	1968	+50th	Feb 2012	6.88m 31/1/1974
	2.65m 10/4/2012	Minor	1968	+50th	Feb 2012	6.88m 31/1/1974
Stonehenge West TM	4.24m 9/2/2012	Moderate	1968	44th	Dec 2010	8.20m 31/1/1974
	4.34m 15/2/2012	Moderate	1968	=42nd	Dec 2010	8.20m 31/1/1974
	3.29m 10/3/2012	Minor	1968	+50th	Feb 2012	8.20m 31/1/1974
	3.90m 10/4/2012	Minor	1968	48th	Feb 2012	8.20m 31/1/1974

Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Thomson/Barcoo/Cooper (cont)</b>						
Jundah	4.13m 12/2/2012	Moderate	1944	+50th	Dec 2010	8.46m 1/6/1955
	4.32m 17/2/2012	Moderate	1944	+50th	Jan 2010	8.46m 1/6/1955
	3.1m 5/3/2012	Minor	1944	+100th	Feb 2012	8.46m 1/6/1955
	3.23m 29/3/2012	Minor	1944	+100th	Feb 2012	8.46m 1/6/1955
	3.55m 14/4/2012	Minor	1944	+50th	Feb 2012	8.46m 1/6/1955
Tambo	3.30m 31/1/2012	Minor	1983	24th	Oct 2010	5.75m 22/5/1983
	5.15m 1/2/2012	Moderate	1983	6th	Feb 1997	5.75m 22/5/1983
	5.40m 2/2/2012	Moderate	1983	3rd	Apr 1990	5.75m 22/5/1983
Gillespie	5.00m 16/12/2011	Minor	1963	36th	Mar 2011	8.00m 20/4/1990
	5.80m 1/2/2012	Minor	1963	24th	Mar 2011	8.00m 20/4/1990
	7.72m 3/2/2012	Major	1963	4th	Apr 1990	8.00m 20/4/1990
Duneira	3.30m 3/2/2012	Moderate	1990	4th	Feb 1997	3.90m 20/4/1990
	3.65m 4/2/2012	Major	1990	2nd	Apr 1990	3.90m 20/4/1990
Blackall TM (Auto)	3.47m 29/11/2011	Minor	1950	+50th	Mar 2011	8.24m 21/4/1990
	3.28m 11/12/2011	Minor	1950	+50th	Nov 2011	8.24m 21/4/1990
	3.80m 17/12/2011	Minor	1950	+50th	Mar 2011	8.24m 21/4/1990
	3.28m 29/1/2012	Minor	1950	+50th	Dec 2011	8.24m 21/4/1990
	7.20m 4/2/2012	Major	1950	2nd	Apr 1990	8.24m 21/4/1990
Glencoe TM	2.07m 27/1/2012	Minor	1971	14th	Dec 2010	5.17m 19/4/1990
	2.13m 30/1/2012	Minor	1971	13th	Dec 2010	5.17m 19/4/1990
	2.58m 3/2/2012	Moderate	1971	7th	Dec 2010	5.17m 19/4/1990
Jericho	3.39m 4/2/2012	Major	1950	4th	Dec 2010	3.80m 20/4/1990 & 28/12/2010
Coolagh	7.13m 7/2/2012	Major	1963	5th	Feb 1997	8.99m 1/4/1963
Isisford	4.44m 22/12/2012	Minor	1906	25th	March 2011	8.92m 2/4/1963
	7.39m 8/2/2012	Major	1906	5th	Nov 2010	8.92m 2/4/1963
Oma	6.68m 9/2/2012	Major	1990	=5th	Nov 2010	8.02m 26/4/1990

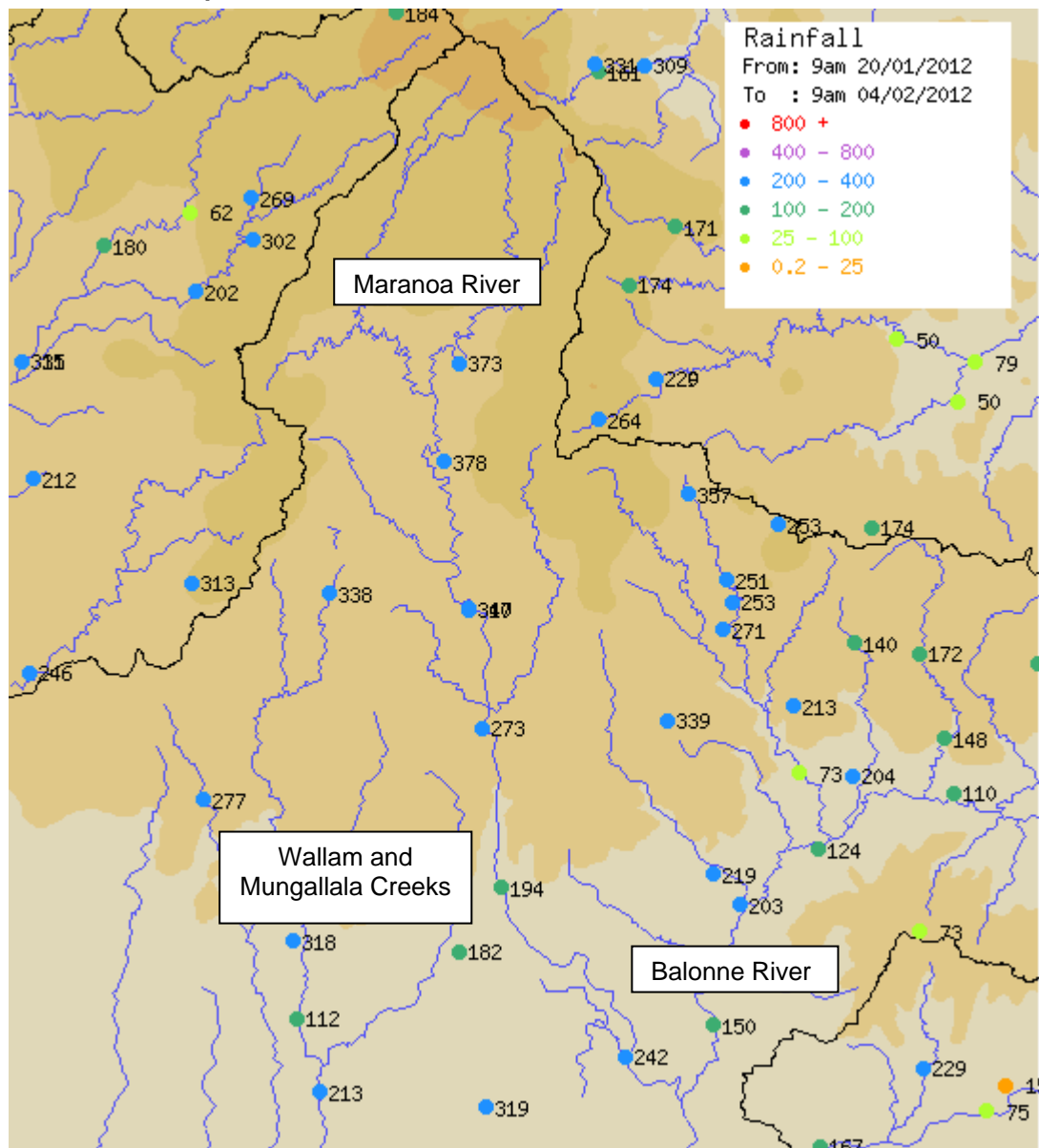
Gauging station	Peak Heights (metres)	Flood Classification	Start of record	Rank	Highest since	Highest on record
<b>Thomson/Barcoo/Cooper (cont)</b>						
Wahroonga	5.25m 10/2/2012	Major	1990	=6th	Nov 2010	7.21m 26/4/1990
Glenlock	5.95m 12/2/2012	Moderate	1989	8th	Dec 2010	7.86m 26/4/1990
Retreat TM	8.81m 14/2/2012	Major	2006	6th	Mar 2011	11.05m 25/1/2008
Windorah	3.56m 11/12/2011	Minor	1971	+100th	Mar 2011	8.48m 2/2/1974
	5.37m 16/2/2012	Major	1971	=40th	Mar 2011	8.48m 2/2/1974
	4.18m 07/03/2012	Moderate	1971	+90th	Mar 2011	8.48m 2/2/1974
	3.75m 31/03/2012	Minor	1971	+100th	Mar 2011	8.48m 2/2/1974
	3.95m 16/04/2012	Minor	1971	+100th	Mar 2011	8.48m 2/2/1974
Nappa Merrie TM	4.22m 4/3/2012	Minor	1949	28th	Mar 2010	10.13m 16/2/1974
<b>Diamantina River</b>						
Elderslie	3.6m 02/02/2012	Major	2000	=5th	Mar 2011	4.8m 11/02/2009
	3.1m 22/3/2012	Major	2000	13th	Feb 2012	4.8m 11/02/2009
Monkira	3.3m 1/1/2012	Minor	1949	+70th	Apr 2011	6.12m 02/1974
	3.55m 25/2/2012	Minor	1949	+50th	Jan 2012	6.12m 02/1974
	3.89m 14/03/2012	Minor	1949	=27th	Feb 2012	6.12m 02/1974
Birdsville	5.42m 10/04/2012	Minor	1949	43rd	Mar 2011	9.45m 07/02/1974

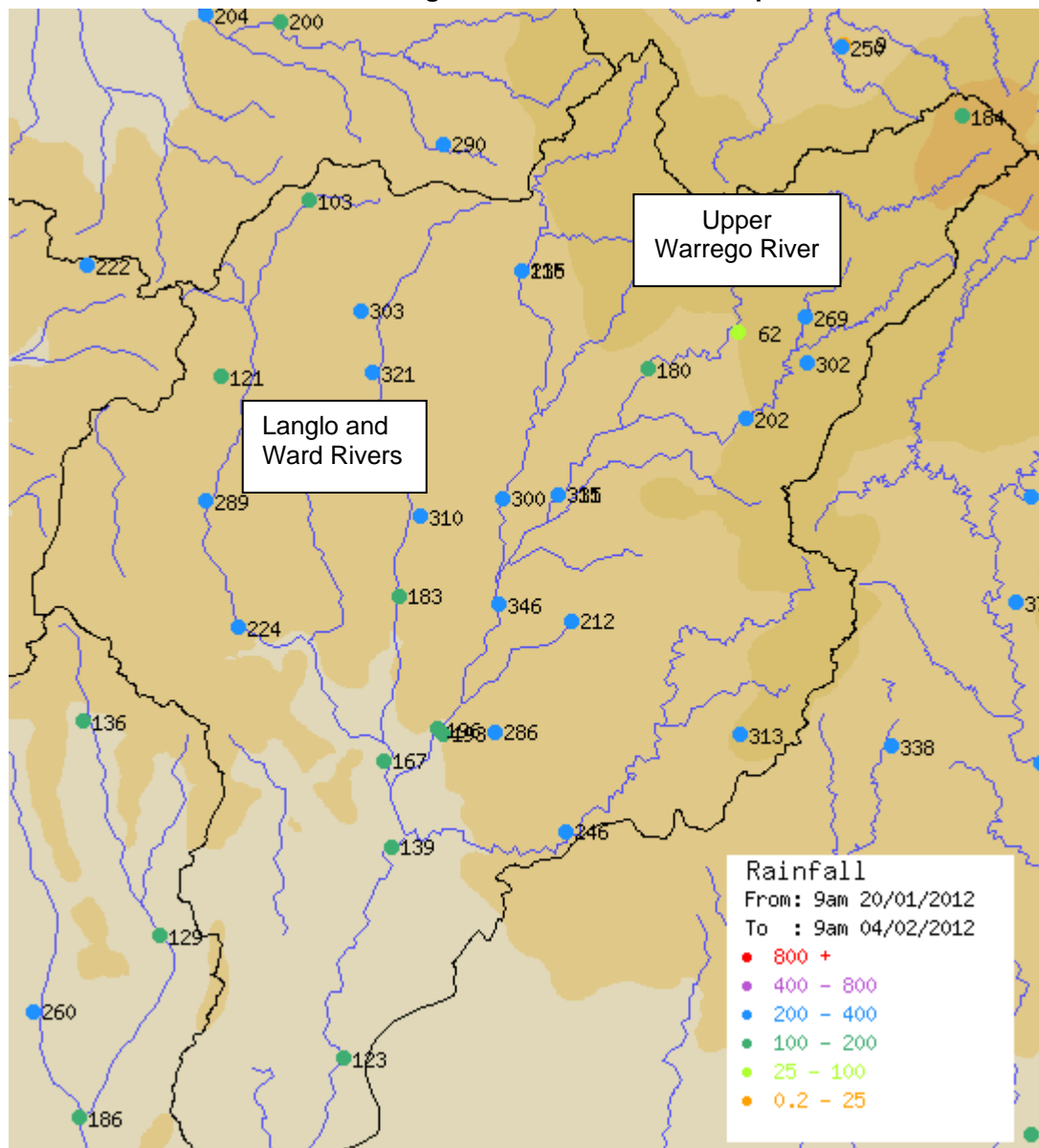
## 3.2 Rainfall Maps

In early February 2012, widespread rainfall totals in the order of 200-400mm were recorded throughout the upper Maranoa and Warrego Rivers and Bungil Creek catchments.

The rainfall amounts in Figures 3.2.1 to 3.2.4 are all given in millimetres.

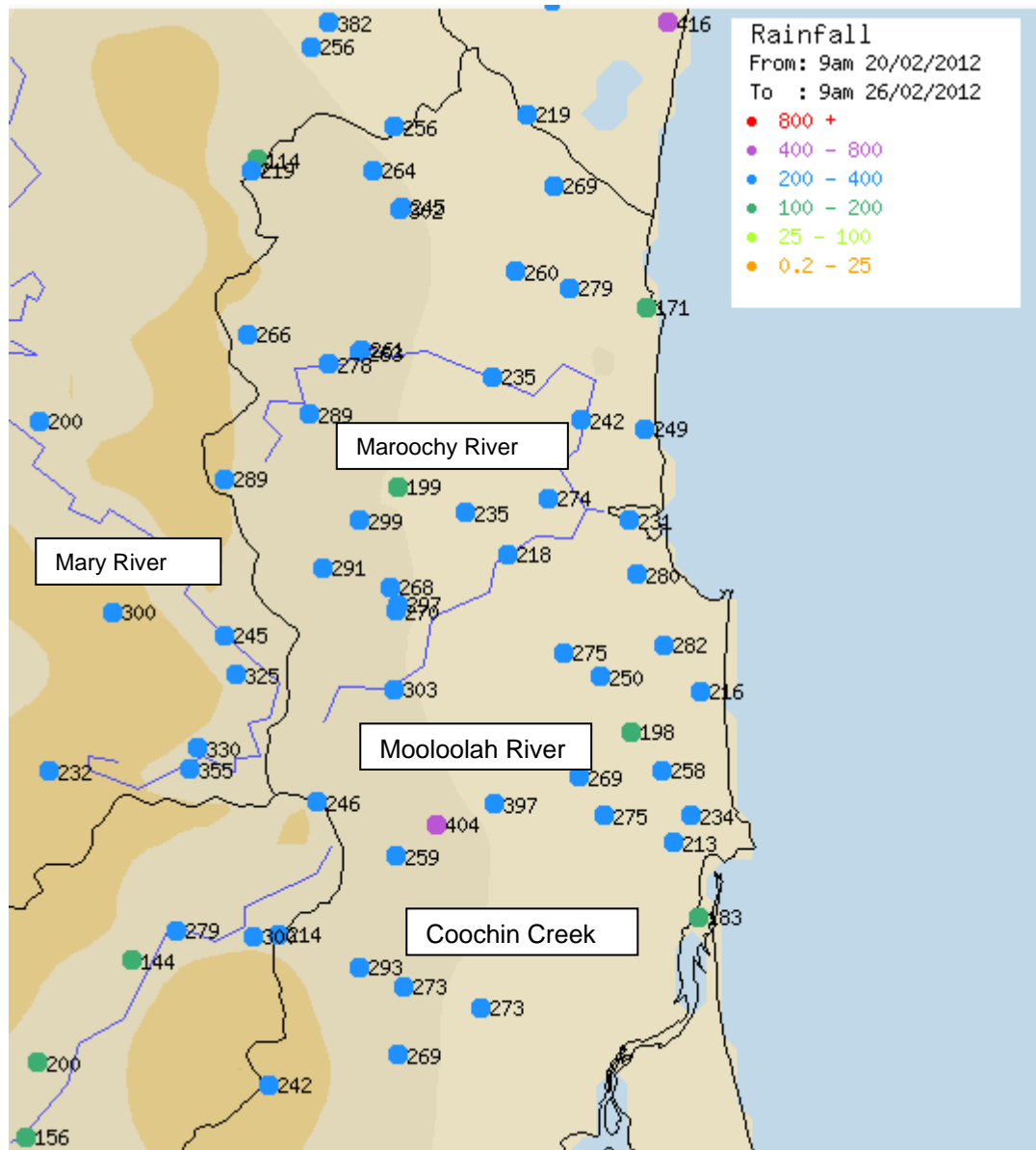
**Figure 3.2.1 Rainfalls recorded in Bungil, Wallam and Mungallala Creeks and the Maranoa and Balonne River catchments for the period 20/01/2012 – 04/02/2012.**



**Figure 3.2.2 Rainfalls recorded in the Warrego River catchment for the period 20/01/2012 – 04/02/2012**




**Figure 3.2.3 Rainfalls recorded in the Maroochy River catchment for the period 20/02/2012 – 26/02/2012.**



### 3.3 Rainfall Intensity

The most intense rainfall recorded during the January to February 2012 rainfall event over Queensland's southern interior occurred in the Condamine River catchment at Springdale and Mooga Hills on the 3<sup>rd</sup> February 2012, where 100 to 120 millimetres was recorded in a 6-hour period.

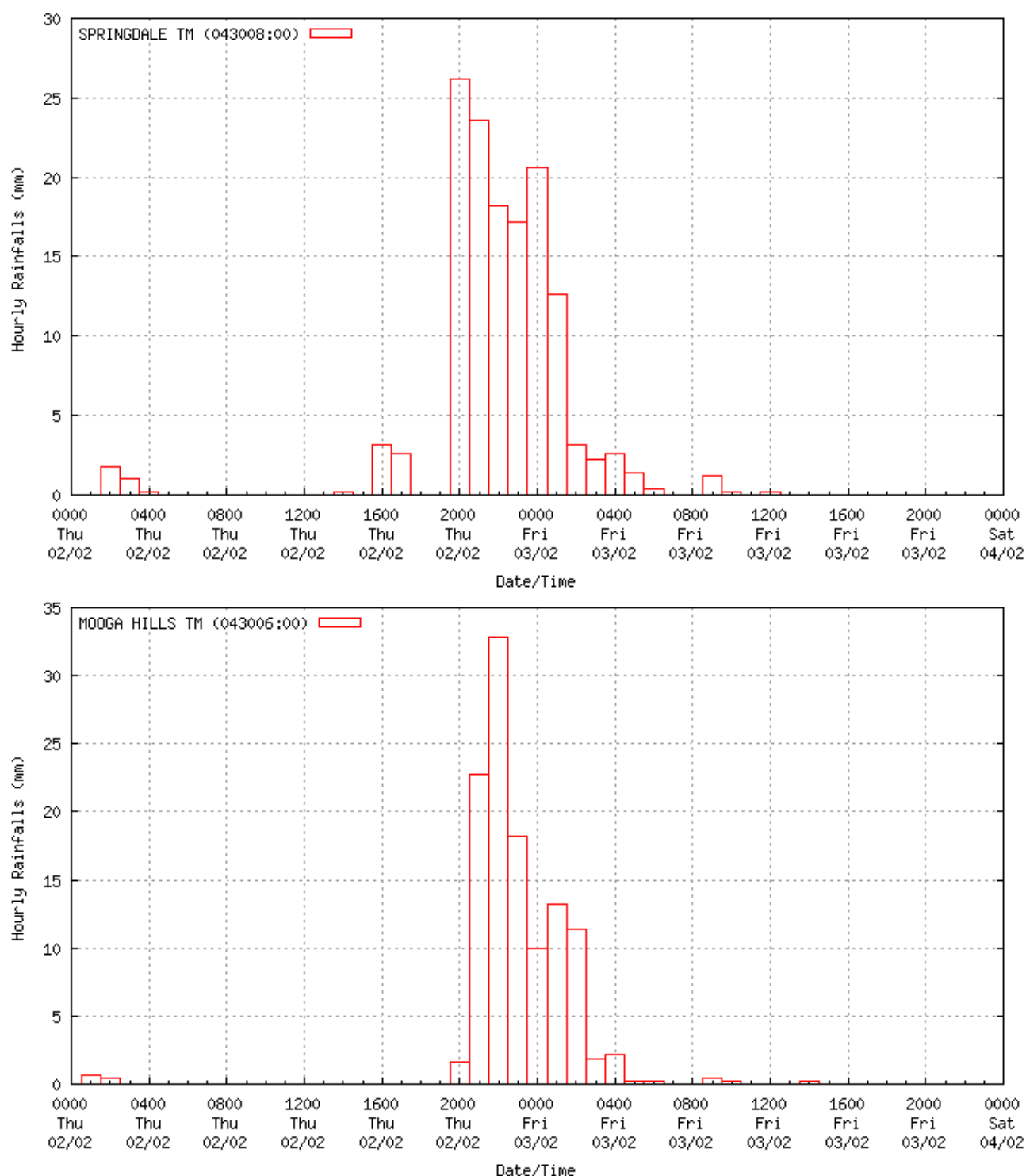
However, the most intense short duration rainfall recorded throughout the 2011-2012 Wet Season occurred at Cooroy Alert and Cooran Alert on Six Mile Creek in the Mary River catchment overnight on the 24<sup>th</sup> February 2012, where more than 300 millimetres was recorded in a 6-hour period.

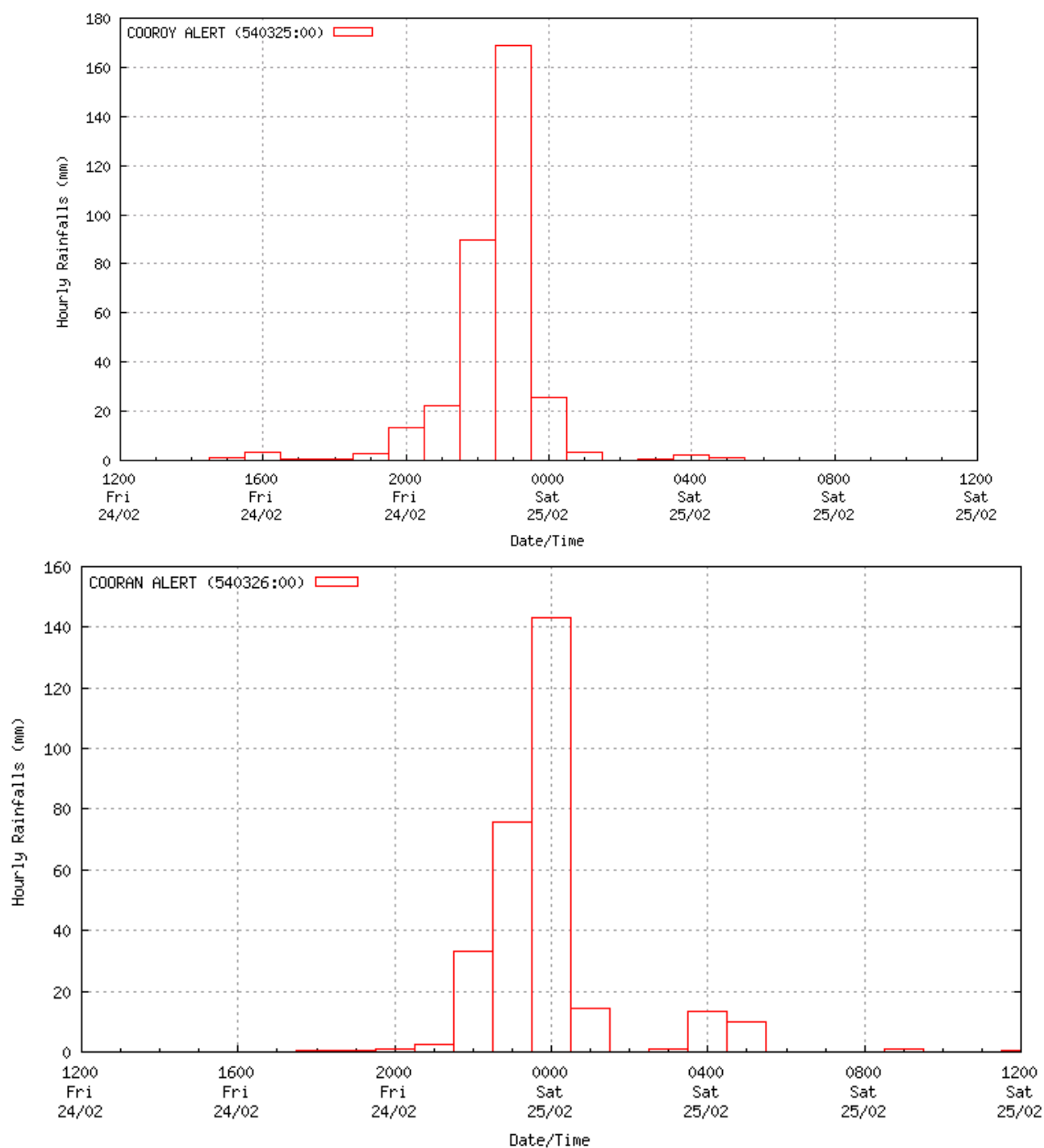
Hourly hyetographs (Figures 3.3.1 and 3.3.2) and Intensity Frequency Duration (IFD) analyses (Figures 3.3.3 and 3.3.4) have been produced for Springdale TM and Mooga Hills TM for the period from the 2<sup>nd</sup> to the 4<sup>th</sup> February and for Cooroy Alert and Cooran Alert from the 12 noon on the 24<sup>th</sup> February to 12 noon on the 25<sup>th</sup> February 2012.

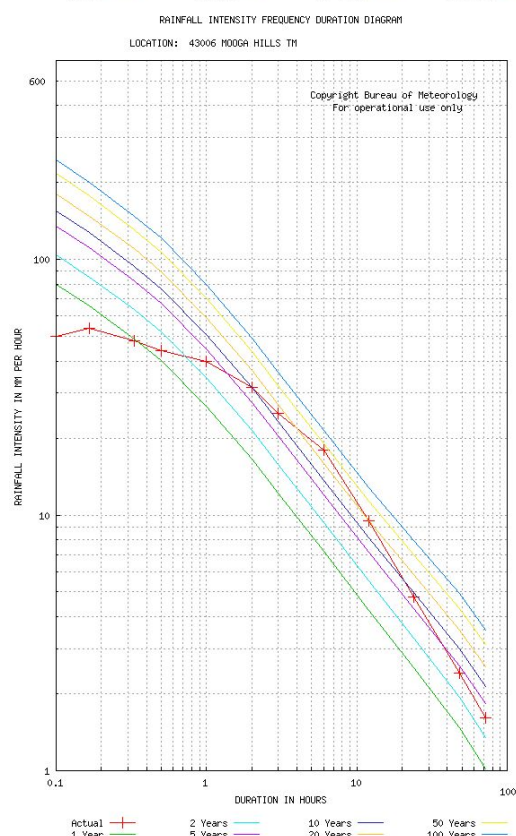
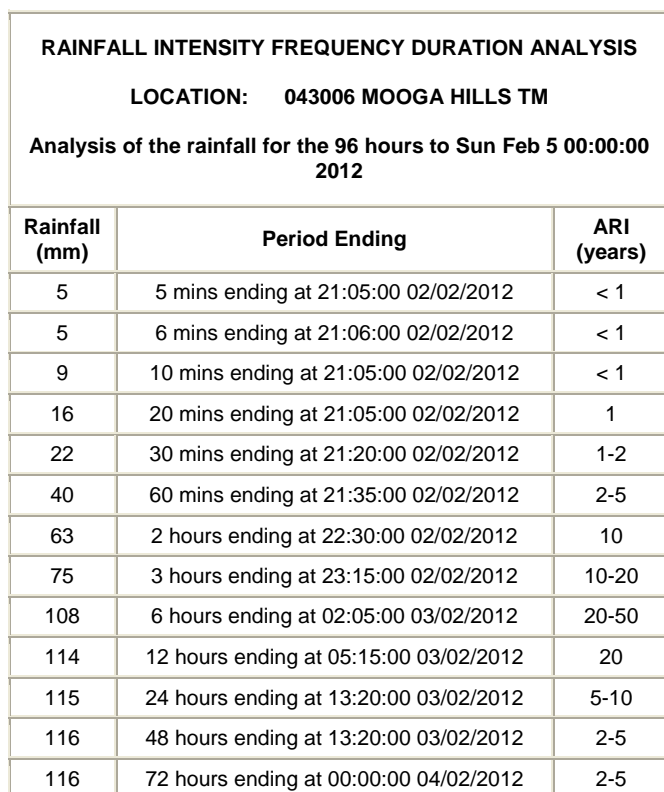
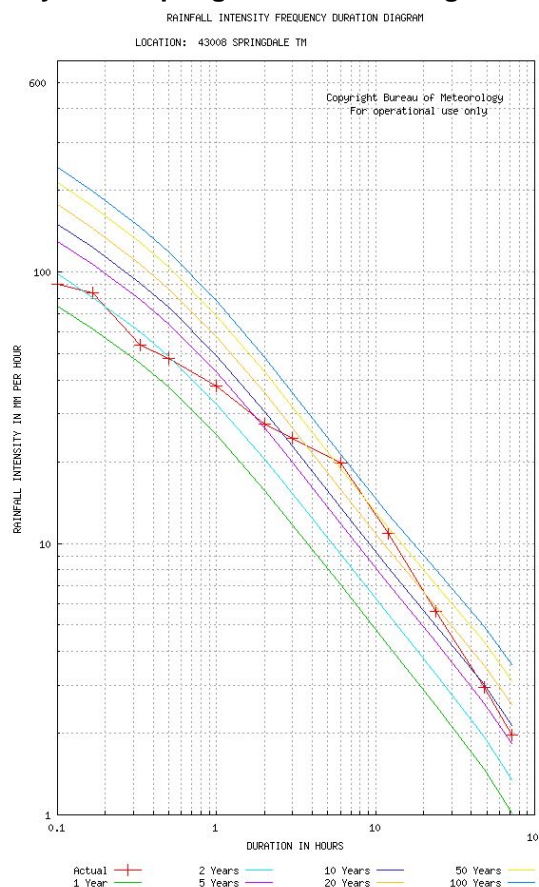
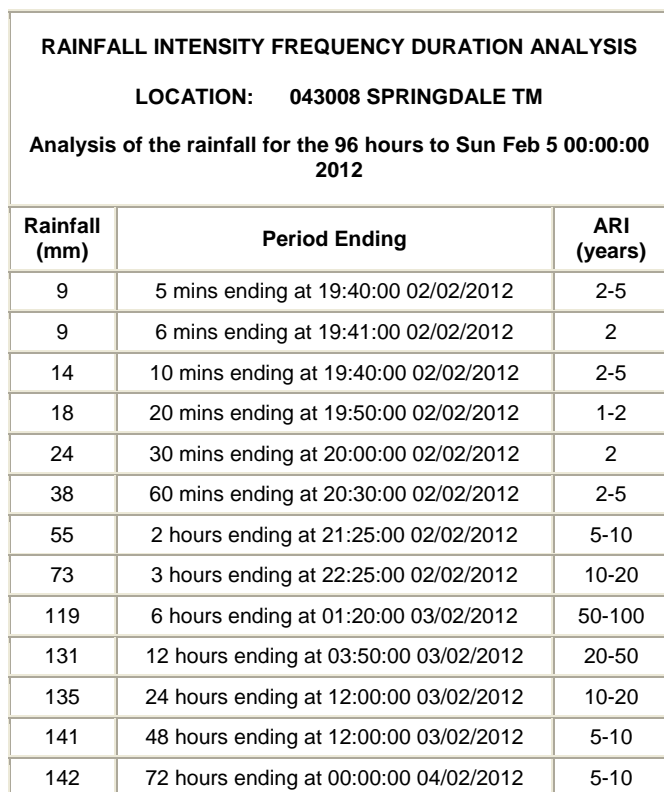
The most statistically significant short duration rainfall occurred at Cooroy where for the 1 hour duration to 10:20pm on 24<sup>th</sup> February 2012, the observed total of 181mm is assessed as being greater than 1% AEP intensity. (Figure 3.3.3)

**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.**

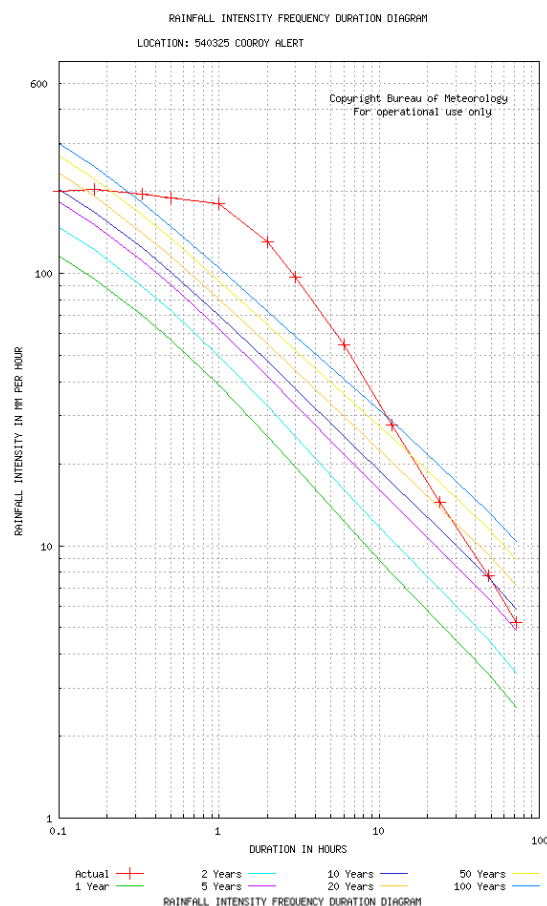
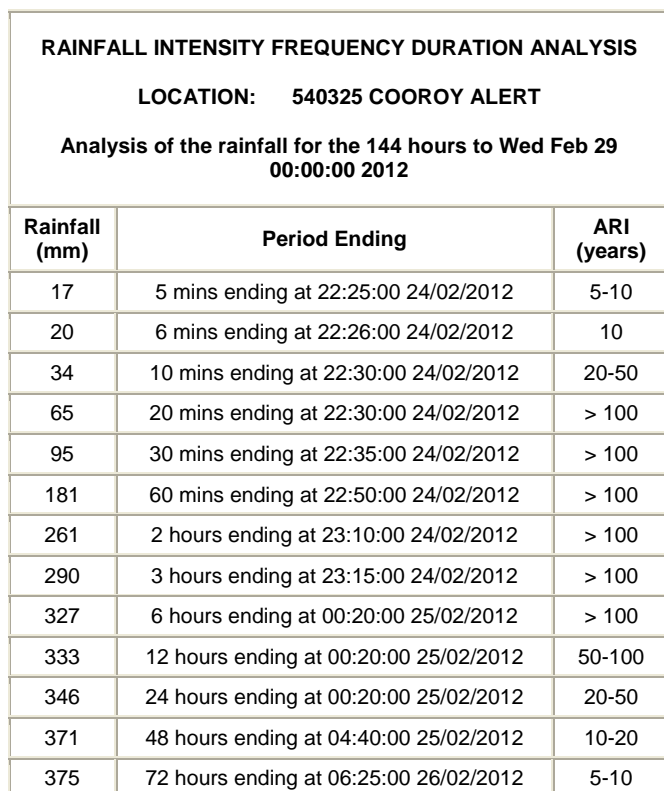
**Figure 3.3.1 Hourly hyetographs for Springdale TM and Mooga Hills TM above Roma in the Bungil Creek catchment area.**



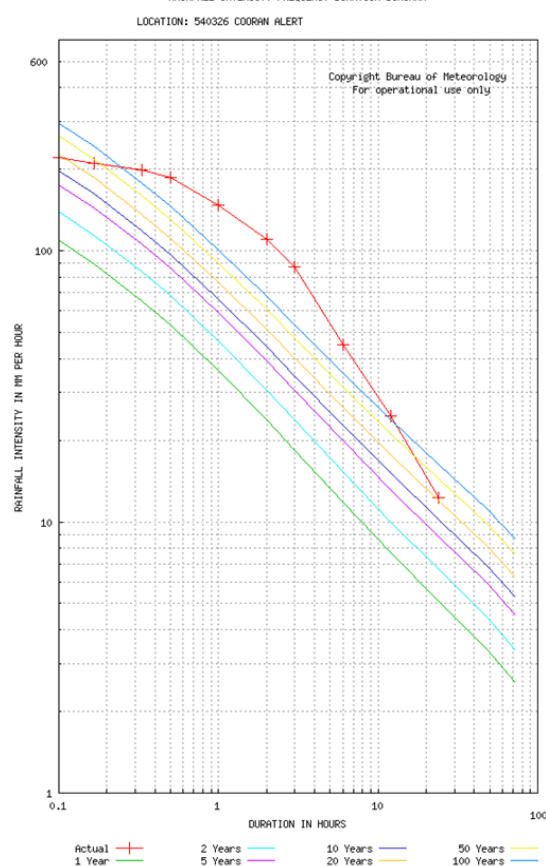
**Figure 3.3.2 Hourly hyetographs for Cooroy Alert and Cooran Alert in the Six Mile Creek catchment.**

**Figure 3.3.3 Intensity Frequency Duration (IFD) rainfall analysis for Springdale TM and Mooga Hills TM**



**Figure 3.3.4 Intensity Frequency Duration (IFD) rainfall analysis for Cooroy Alert and Cooran Alert.****RAINFALL INTENSITY FREQUENCY DURATION ANALYSIS****LOCATION: 540326 COORAN ALERT****Analysis of the rainfall for the 144 hours to Wed Feb 29 00:00:00 2012**

Rainfall (mm)	Period Ending	ARI (years)
18	5 mins ending at 23:40:00 24/02/2012	10-20
22	6 mins ending at 23:41:00 24/02/2012	20
35	10 mins ending at 23:45:00 24/02/2012	20-50
66	20 mins ending at 23:50:00 24/02/2012	> 100
93	30 mins ending at 23:50:00 24/02/2012	> 100
147	60 mins ending at 00:05:00 25/02/2012	> 100
221	2 hours ending at 00:05:00 25/02/2012	> 100
262	3 hours ending at 00:10:00 25/02/2012	> 100
270	6 hours ending at 00:30:00 25/02/2012	> 100
294	12 hours ending at 05:00:00 25/02/2012	> 100
298	24 hours ending at 20:45:00 25/02/2012	20-50
328	48 hours ending at 09:05:00 25/02/2012	5-10
339	72 hours ending at 07:50:00 26/02/2012	5-10



## 3.4 Rainfall Totals

The abbreviations used in the following tables include:

AL - ALERT Radio Telemetry, TM - Telephone Telemetry, AWS - Automatic Weather Station, SYN - Bureau Synoptic Station, Tr – Trace, ie slightly above zero.

Note: \* signifies automatic station, - signifies missing data. **Red** numbers show the highest totals recorded on a particular day.

**Table 3.4.1 Rainfall totals for the Georgina catchment**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Camooweal	4.6	0.4	0	0.4	14	13	0	0	6.6	0	0	0	0	0	39
Urandangi *	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
The Monument AWS *	0	0	0	0	0	26	0	0	2.8	0	0	0	0	0	29
Boulia TM *	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Boulia SYN	0	0	0	0	0	0	0	0	2.8	0.2	0	0	0	0	3
Trepell AWS *	0	6.2	2.4	0	1	96	0.8	10	14	1.6	5	0	0	0	137
Bedourie	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Maximum Rainfall	5	6.2	2.4	0.4	14	96	0.8	10	14	1.6	5	0	0	0	137

**Table 3.4.2 Rainfall totals for the Diamantina catchment**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Oondooroo TM *	2	6	0	0	0	15	0	6	16	12	113	0	0	0	170
Winton SYN	4.6	1	0	0	Tr	-	32/2	0.5	13	68	31	0.4	-	0	118
Winton AWS *	3.4	1.8	0.2	0	0	26	0.8	0	11	41	19	0.8	0	0	104
Mackunda Downs	-	11	-	-	-	72	1	18	21	-	-	-	-	-	123
Birdsville AWS *	0	0	0	0	0.6	3.6	0	0	0	0	0	0	0	0	4.2

<b>Maximum Rainfall</b>	<b>4.6</b>	<b>11</b>	<b>0.2</b>	<b>0</b>	<b>0.6</b>	<b>72</b>	<b>1</b>	<b>18</b>	<b>21</b>	<b>68</b>	<b>113</b>	<b>0.8</b>	<b>0</b>	<b>0</b>	<b>170</b>
-------------------------	------------	-----------	------------	----------	------------	-----------	----------	-----------	-----------	-----------	------------	------------	----------	----------	------------

**Table 3.4.3 Rainfall totals for the Thomson, Barcoo and Cooper catchments**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Gue	23	10	0.6	1	-	2.6	1	15	5.2	17	54	13	-	-	142
Torrens Creek TM *	50	29	28	92	25	2	0	0	2	29	29	60	38	10	394
Woodbine	11	29	-	1.4	-	-	-	1.2	39	6	-	19	36	2	145
Tiree	17	25	-	-	26	-	-	-	7	9.2	5.6	29	34	-	153
Jochmus	8	32	-	3	46	-	13	4	-	32	-	86	38	7	269
Eastmere	13	25	2.5	1.5	26	1.5	-	4.5/2	16	34	20	81	38	-	259
Holmleigh	29	36	31	-	-	-	-	5.6	3.6	9.4	0.6	5.6	-	-	121
Marengo	6	44	24	33	-	1.6	-	31	5	27	48	12	1.2	-	233
Bowen Downs TM *	7	13	12	37	-	-	-	3	16	2	66	3	1	-	160
Muttaborra	41	-	26	2.2	-	3	-	6	3.2	28	35	25	-	-	169
Aramac	16	0.6	13	0.8	-	0.8	3	-	8	4.4	2	19	9.4	-	77
Longreach TM *	20	0	46	0	0	26	1	0	1	25	21	11	0	0	151
Longreach AWS *	35	0.2	22	0	0	23	1.8	0.4	1.6	34	23	14	0.4	0	155
Darr TM *	13	9	38	0	0	26	2	0	1	33	36	8	0	0	166
Tambo SYN	19	36	2.4	4.6	0.5	0	7.2	28	38	26	39	83	0.2	0	284
Gillespie	14	8.8	-	64	-	21	-	-	15	46	9.2	-	-	-	178
Duneira	5	12	31	-	13	7	19	-	-	42	34	12	-	-	175
Blackall TM *	7	11	38	0	33	12	14	6	13	18	40	10	0	0	202
Blackall AWS *	21	6.6	34	0	20	14	16	3.4	6.8	16	22	11	0	0	171
Glencoe TM *	22	6	12	9.5	1.5	2.5	18	10	4	70	0	52	16	0.5	224
Glencoe	24	6.8	13	10	2	2.2	18	13	4	78	0	57	18	-	246
Lochnagar	27	8.6	9.6	-	21	-	10	28	1.2	11	3.2	48	5.6	-	173

Barcaldine SYN	26	19	66	Tr	0	1.2	9.6	0.8	26	6.4	35	28	2.4	-	220
Isisford	17	1	0	14	Tr	10	17	18	8	8.4	40	1.4	0	0	135
Navarra	-	-	-	-	-	35	-	6	4	-	-	-	-	-	45
Windorah SYN	6.2	0	0	0	Tr	13	23	0	Tr	0.7	0	0	0	0	43
Trinidad	20	-	-	-	-	9	27	13	0.6	3	-	-	-	-	73
Ballera AWS *	0	2.6	0	0	0	0	7	0	0	0	0	0	0	-	10
<b>Maximum Rainfall</b>	<b>50</b>	<b>44</b>	<b>66</b>	<b>92</b>	<b>46</b>	<b>35</b>	<b>27</b>	<b>31</b>	<b>39</b>	<b>78</b>	<b>66</b>	<b>86</b>	<b>38</b>	<b>10</b>	<b>394</b>

**Table 3.4.4 Rainfall totals for the Warrego catchments**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Carnarvon	20	9.4	3	17	6.5	-	-	-	11	7	28	50	19	-	171
Chesterton TM *	22	14	6.4	3	0	2.4	45	6	26	29	13	73	7.2	2.4	249
Derbyshire Downs	7.2	18	2	1.4	23	3	38	8.4	48	50	12	72	5.4	7.2	296
Wetlands	-	-	-	-	-	12	-	28	41	34	21	66	0	-	202
Augathella	36	60	34	0.8	30	-	-	3.4	10	7.6	50	-	-	-	232
Augathella TM *	28	59	31	1	30	5	13	3	8	6	48	82	0	0	314
Drensmaine TM *	5	39	16	0.2	0	1.2	3.6	30	11	11	39	57	1	0	214
Biddenham TM *	57	49	23	0.8	10	2.6	13	0.2	1.8	2.6	47	92	0	0	299
The 27 Mile Garden TM *	62	80	11	1.4	2.6	19	30	3.2	12	3.4	54	59	0.2	0	338
Dunvegan TM *	48	41	7	1.2	1	3.6	9.4	0.6	9.6	1.6	28	52	2.4	0	205
Raceview TM *	26	33	36	0.6	12	13	28	0.8	46	36	19	25	0	0	275
Charleville TM *	29	30	0.6	0	4.6	6.6	33	0.2	35	25	7	16	0.2	0	187
Charleville AWS *	30	31	0.2	0	5.2	7.4	28	0	36	20	7	17	0	0	182
Mt Morris	-	42	17	17	3	-	53	25	57	35	30	10	-	-	289
Warilda	37	44	10	-	0	2.8	90	4.8	17	1	11	6.8	0	0	224
Toliness	42	82	52	-	-	-	12	-	-	-	71	44	-	-	303

Balmacarra	38	84	-	8	-	9	-	-	65	10	59	28	-	-	301
Wansey Downs	52	71	-	9.6	-	4.6	22	9.6	38	7.8	49	45	-	-	309
Oakpark	-	-	-	-	-	-	-	-	183	-	-	-	-	-	183
Binnowiee TM *	20	30	0	1	28	10	34	0	18	4	9	13	0	0	167
Morven	20	28	67	9	7.2	17	-	0.4	14	11	36	73	-	-	283
Authoringa	63	16	-	3	1	7	17	-	42	50	19	28	-	-	246
Bakers Bend TM *	8.8	22	0.8	12	0	34	25	0.4	14	0.2	9.4	11	0	0	138
Wyandra TM *	8	38	0	17	1	23	30	1	2	2	0	1	0	0	123
Wallen	9	20	8	9.6	2.8	23	56	-	2	16	-	-	-	-	146
Cunnamulla SYN	5.6	50	39	Tr	0.2	16	91	5.6	9.6	2.2	0	Tr	0	0	219
Rocky	7	27	46	40	-	18	59	17	4	-	-	-	-	-	218
<b>Maximum Rainfall</b>	<b>63</b>	<b>84</b>	<b>67</b>	<b>40</b>	<b>30</b>	<b>34</b>	<b>91</b>	<b>30</b>	<b>183</b>	<b>50</b>	<b>71</b>	<b>92</b>	<b>19</b>	<b>7.2</b>	<b>338</b>

Table 3.4.5 Rainfall totals for the Bulloo catchments.

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Listowel Downs	39	10	2.6	-	3.8	-	35	1.2	85	0.6	7.8	13	-	-	198
Adavale	9.6	12	-	-	-	21	55	4.4	28	1.8	1.8	-	-	-	134
Quilpie TM *	2	2	4	0	0	3	66	0	10	2	0	0	0	0	89
Quilpie SYN	2.6	2.2	2.7	0	0	7.2	64	1	8.2	2.2	0	0	0	0	90
South Comongin	-	-	-	-	-	-	32	-	6.4	-	-	-	-	-	38
Thargomindah AWS *	2.4	0.4	0	0.6	0	13	17	0.2	9.4	0	0	0	0	0	43
Maximum Rainfall	39	12	4	0.6	3.8	21	66	4.4	85	2.2	7.8	13	0	0	198

Table 3.4.6 Rainfall totals for the Paroo catchments.

Station Name	24 hour rainfall to 9am on														



	January									February					Total (mm)
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Cowley	-	32	15	-	-	107	146	-	5.5	-	-	-	-	-	306
Boothulla	31	23	-	-	2.2	3.6	64	-	8.5	1.6	2.8	-	-	-	137
Quilpeta	48	5	-	-	19	10	160	10	8	0	-	-	-	-	260
Humeburn TM *	-	-	-	-	-	-	185	-	1	-	-	-	-	-	186
Allambie	4.4	36	2.8	10	0.4	14	55	0.4	1.8	2.4	0.4	-	-	-	128
Eulo	31	-	-	-	-	66	33	3	4	4	-	-	-	-	141
Hungerford	-	-	13	10	-	25	17	8	6.4	-	-	-	-	-	79
<b>Maximum Rainfall</b>	<b>48</b>	<b>36</b>	<b>15</b>	<b>10</b>	<b>19</b>	<b>107</b>	<b>185</b>	<b>10</b>	<b>8.5</b>	<b>4</b>	<b>2.8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>306</b>

Table 3.4.7 Rainfall totals for the Wallum and Mungallala catchments.

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Kenilworth	18	12	29	2.4	6.8	23	3	-	42	70	53	38	-	-	297
Cunnyana	-	-	-	-	-	-	-	-	18	20	47	48	-	-	133
Cardiff TM *	0	17	9	2	13	60	7	0	21	30	33	21	0	0	213
Rosehill	0.4	40	1.6	0.4	12	14	10	0.2	59	46	81	37	-	0.4	302
Bollon	7.4	55	11	4.6	0.4	36	9.1	0.4	36	14	26	37	6.4	0	243
Mungallala	6.4	16	17	3.8	5.4	8.2	7.2	30	6.4	34	57	121	0	-	312
Glenorie	27	16	16	8	12	23	3.8	1	87	26	27	29	0.2	-	276
South Plains	-	30	9.6	18	64	14	-	-	-	35	-	-	-	-	171
Mulga Downs	1	68	6.6	13	3.2	74	13	1.6	3	8.8	1	7.6	-	-	201
Maximum Rainfall	27	68	29	18	64	74	13	30	87	70	81	121	6.4	0.4	312

Table 3.4.8 Rainfall totals for the Maranoa catchments.

	24 hour rainfall to 9am on	
Station Name		

	January									February					Total (mm)
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Munnaweena	19	16	20	5	4	-	10	3.2	38	102	39	110	-	-	366
Havelock	12	12	5	18	13	2	-	4	9.4	68	106	110	-	-	360
Mitchell SYN	11	17	3	12	22	5	10	9.6	17	51	72	108	-	0	338
Mitchell TM *	6	15	2	12	20	5	9	7	16	50	70	104	-	-	316
Springfield	11	6.8	4.4	2.2	4.2	6	9	2.4	14	20	91	100	1	-	272
Woodlands	4	11	4	3.2	1.6	7	8.4	1.4	15	36	39	62	2	-	194
Old Cashmere TM *	0	10	4	7	1	4	3	2	3	40	83	80	0	0	237
<b>Maximum Rainfall</b>	<b>19</b>	<b>17</b>	<b>20</b>	<b>18</b>	<b>22</b>	<b>7</b>	<b>10</b>	<b>9.6</b>	<b>38</b>	<b>102</b>	<b>106</b>	<b>110</b>	<b>2</b>	<b>0</b>	<b>366</b>

**Table 3.4.9 Rainfall totals for the Balonne catchment.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Miles AWS *	0	0	0	1	0	0	0	0	0	0	1	1	1	0	3
Drillham	-	4	30	18	3	39	0	1	-	-	-	-	-	-	95
Dulacca	6	-	84	20	2	-	-	-	-	-	-	32	-	-	144
Pine Hill Crossing	-	-	222	47	-	-	-	-	-	-	-	5	-	-	274
Warkon	0	1	21	4	0	49	4	2	4	2	-	22	0	-	109
Yuleba Forestry TM *	-	-	-	17	1	91	2	1	0	0	0	36	0	0	148
Wallumbilla		7	30	25	2	12	-	-	-	3	8	50	-	-	137
Surat SYN		2	9	1	3	39	8	5	12	4	6	33	3	0	125
Springdale TM *	15	11	101	2	10	2	4	18	9	39	6	135	1	0	353
Tabers TM *	2	13	63	34	1	34	2	10	5	11	3	71	1	0	250
Mooga Hills TM *	16	11	18	3	1	36	6	3	42	0	1	115	0	0	253
Tindarra TM *	5	10	91	15	0	22	3	8	5	13	2	79	1	0	255
Fairfield	-	7	44	-	-	55	-	6	5	-	30	50	16	-	213

Roma AWS *	6	7	19	6	61	29	4	7	12	25	4	88	1	0	270
Karoola Park	-	-	-	-	-	16	7	-	25	53	64	52	3	-	220
Dalmally	-	-	43	7	46	-	-	-	6	91	53	91	2	-	339
Weribone TM *	0	2	0	28	2	12	3	1	30	33	38	53	1	0	203
Warroo	-	-	-	-	-	15	5	5	7	35	83	-	-	-	150
Maximum Rainfall	16	13	222	47	61	91	8	18	42	91	83	135	16	0	353

**Table 3.4.10 Rainfall totals for the Condamine catchment.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Brigalow Bridge TM *	9	0	21	18	0	45	0	0	0	0	0	0	0	0	93
Ballon TM *	0	1	19	15	0	6	0	0	0	0	0	0	1	0	42
Darr Creek TM *	0	0	20	64	1	9	0	0	0	0	0	0	1	0	96
Beruna	-	-	25	8	-	9	-	-	-	-	-	-	-	-	42
Seven Oaks TM *	0	1	18	6	0	11	0	0	0	0	0	0	0	0	37
Horse Creek TM *	0	2	15	14	0	10	0	0	0	0	0	0	1	0	42
Chinchilla	-	-	4	9	-	23	0	-	-	-	-	-	-	-	36
Bedarra TM *	0	1	12	22	1	19	1	0	0	0	0	0	0	0	56
Hannaford	-	1	137	14	0	38	0	0	-	0	-	2	0	-	193
Namarah	-	-	13	2	-	17	4	1	3	12	3	14	4	-	73
Maximum Rainfall	9	2	137	64	1	45	4	1	3	12	3	14	4	0	193

**Table 3.4.11 Rainfall totals for the Myall catchment.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Munnaweena	19	16	20	5	4	-	10	3	38	102	39	110	-	-	366

Havelock	12	12	5	18	13	2	-	4	9	68	106	110	-	-	360
Mitchell SYN	11	17	3	12	22	5	10	10	17	51	72	108	-	0	338
Mitchell TM *	6	15	2	12	20	5	9	7	16	50	70	104	-	-	316
Springfield	11	7	4	2	4	6	9	2	14	20	91	100	1	-	272
Woodlands	4	11	4	3	2	7	8	1	15	36	39	62	2	-	194
Old Cashmere TM *	0	10	4	7	1	4	3	2	3	40	83	80	0	0	237
<b>Maximum Rainfall</b>	<b>19</b>	<b>17</b>	<b>20</b>	<b>18</b>	<b>22</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>38</b>	<b>102</b>	<b>106</b>	<b>110</b>	<b>2</b>	<b>0</b>	<b>366</b>

**Table 3.4.12 Rainfall totals for the upper Condamine catchment.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Carrs Lookout AL *	26	18	51	8	14	41	31	3	0	1	5	1	1	0	200
The Head	17	17	58	6	15	34	30	4	-	1	7	3	0	-	193
Killarney	5	10	26	1	1	10	-	-	-	-	-	-	-	-	53
Killarney AL *	3	8	22	0	1	5	18	0	0	0	0	0	0	0	57
Elbow Valley TM *	2	10	24	0	0	6	17	0	0	1	7	0	0	0	67
Elbow Valley AL *	1	9	21	0	0	5	15	0	0	1	7	0	0	0	59
Cherrabah AL *	3	12	29	1	0	6	29	0	1	0	6	0	0	0	87
Emu Vale AL *	0	4	19	1	0	9	21	0	0	0	0	0	0	0	54
Murrays Bridge AL *	0	4	16	0	0	5	14	0	0	0	0	0	0	0	39
Oakington	-	6	37	3	4	11	30	3	-	1	4	2	0	-	100
Mosely's AL *	0	4	26	2	3	8	25	0	0	1	1	1	0	0	71
Yangan AL *	0	3	16	5	2	7	21	0	0	0	0	0	0	0	54
Yangan	-	4	19	7	1	11	24	-	-	-	0	0	-	-	67
Warwick Hermitage AWS *	0	3	23	1	0	14	21	0	0	0	0	1	0	0	63
Dalveen AL *	0	8	20	1	1	5	26	1	0	0	4	0	0	1	67
Connolly Dam AL *	0	1	14	0	0	3	11	0	0	0	1	0	0	0	30

Warwick (Scots Col.) TM *	0	1	21	1	0	13	18	0	0	0	0	1	0	0	55
Warwick AL *	0	1	17	1	0	11	13	0	0	0	1	0	0	0	44
Maryvale	-	6	21	2	2	12	35	1	0	0	4	1	-	-	83
Glengallan Creek AL *	0	1	18	2	-	7	12	0	0	0	3	0	0	0	43
Bony Mountain AL *	0	3	16	0	1	12	14	0	1	1	1	1	0	0	50
Allora TM *	0	0	15	4	0	7	13	0	0	0	0	1	0	0	40
Victoria Hill AL *	0	0	14	1	0	7	7	0	4	1	0	0	0	0	34
Ellangowan	-	1	18	4	-	9	6	-	1	-	-	-	-	-	39
Cambooya TM *	0	0	9	1	0	7	7	0	0	0	0	1	1	0	26
Felton	4	-	17	1	0	5	-	0	5	-	-	-	-	-	33
Warahgai TM *	0	1	24	0	0	5	7	0	0	0	0	0	0	0	37
Warahgai AL *	0	0	22	0	0	4	6	0	1	0	0	0	0	0	33
Leyburn TM *	0	0	20	1	15	6	6	0	0	0	0	1	0	0	49
Grays Gate Exchange TM *	0	0	12	1	0	11	2	0	0	0	0	0	0	0	27
Mt Pechey AL *	4	4	29	4	3	11	4	0	1	0	0	4	1	1	66
Cooby Creek Dam	1	1	17	2	2	6	2	0	-	-	-	-	-	-	32
Toowoomba AWS *	1	9	27	2	1	26	9	1	0	0	0	1	1	0	78
Mt Kynoch	1	13	58	5	-	-	-	3	1	-	-	-	-	-	81
Oakey AWS *	0	1	7	3	2	7	1	0	0	0	0	0	4	0	25
Oakey TM *	0	1	6	2	0	7	1	0	0	0	0	0	2	0	19
Jondaryan	-	-	6	10	-	4	-	-	-	-	-	-	-	-	20
<b>Maximum Rainfall</b>	<b>26</b>	<b>18</b>	<b>58</b>	<b>10</b>	<b>15</b>	<b>41</b>	<b>35</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>200</b>

Table 3.4.13 Rainfall totals for the Moonie catchment.

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Cherry Park	-	9	6	-	-	15	-	-	-	39	-	7	-	-	75



The Deep Crossing	-	2	78	4	-	24	-	-	-	-	-	-	-	-	<b>108</b>
Traighli	-	2	115	9	7	17	1	-	-	1	-	-	-	-	<b>151</b>
Southwood	-	-	47	-	-	14	4	-	-	3	-	-	-	-	<b>68</b>
Caithness	-	-	-	-	-	-	-	-	-	5	-	10	-	-	<b>15</b>
Mt Driven	-	-	-	-	-	-	-	-	-	58	54	55	-	-	<b>167</b>
Nindigully	-	28	3	4	-	25	8	7	9	20	122	35	-	-	<b>261</b>
<b>Maximum Rainfall</b>	<b>0</b>	<b>28</b>	<b>115</b>	<b>9</b>	<b>7</b>	<b>25</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>58</b>	<b>122</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>261</b>

**Table 3.4.14 Rainfall totals for the Weir catchment.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Dunmore Exchange TM *	0	0	35	1	0	13	1	0	0	0	0	0	0	0	51
O'connor TM *	0	2	63	2	0	24	0	0	0	0	-	-	-	-	91
Avoca TM *	0	7	66	3	0	9	2	0	0	0	0	0	2	0	90
Ballymena TM *	0	6	37	1	0	12	2	0	0	13	0	0	4	0	75
Gunn Bridge (Derm) TM *	0	13	24	0	0	5	2	0	0	49	0	0	3	0	96
Wyaga TM *	0	9	46	0	0	9	3	0	0	2	0	0	3	0	72
Kilbronae TM *	0	5	33	0	0	3	5	0	0	6	0	0	0	0	52
Medpark Bridge TM *	0	8	31	0	0	5	5	1	0	16	0	0	3	0	70
Bybera TM *	0	6	39	0	0	2	10	0	0	1	0	0	2	0	60
Kerimbilla TM *	0	4	29	1	0	2	10	0	0	9	0	0	2	0	58
Giddi Giddi South TM *	0	1	-	-	-	5	13	0	0	19	0	1	0	0	39
Hartmann Bridge TM *	0	14	25	0	0	10	8	0	0	51	2	0	0	0	111
Surrey TM *	0	13	11	0	0	16	7	2	0	47	22	4	0	0	122
Arden Downs TM *	0	6	14	2	0	13	2	1	0	57	5	-	-	-	101
Talwood	-	13	10	6	-	14	8	4	-	59	17	-	-	-	130
Mungindi SYN	0	21	2	18	Tr	8	16	3	4	30	76	13	0	0	191

<b>Maximum Rainfall</b>	<b>0</b>	<b>21</b>	<b>66</b>	<b>18</b>	<b>0</b>	<b>24</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>59</b>	<b>76</b>	<b>13</b>	<b>4</b>	<b>0</b>	<b>191</b>
-------------------------	----------	-----------	-----------	-----------	----------	-----------	-----------	----------	----------	-----------	-----------	-----------	----------	----------	------------

**Table 3.4.15 Rainfall totals for the Border Rivers catchments.**

Station Name	24 hour rainfall to 9am on														Total (mm)
	January									February					
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Ben Lomond TM *	2	4	11	2	1	-	-	-	-	21	3	2	4	0	50
Swan Vale TM *	1	0	10	0	0	0	5	5	2	17	0	0	1	0	42
Danthonia TM *	0	0	7	1	0	0	6	5	1	27	5	1	3	0	56
Little Valley TM *	-	1	7	2	-	-	4	3	-	26	6	-	3	-	51
Elsmore TM *	0	0	8	1	6	0	5	4	0	23	7	0	4	0	58
Stannifer TM *	0	1	7	2	1	1	6	3	6	36	8	0	6	0	77
Ferndale TM *	4	2	12	-	12	-	5	4	4	34	12	-	24	-	112
Inverell TM *	-	1	10	1	1	0	4	2	1	29	9	-	12	-	71
Inverell SYN	0	0	11	2	2	0	6	4	2	34	13	0	20	0	95
Glen Innes SYN	1	5	10	1	1	1	6	5	1	28	2	1	6	0	67
Glen Innes TM *	3	2	10	1	0	1	5	5	1	29	0	0	1	0	59
Silverdale TM *	0	0	10	3	1	0	5	4	0	31	6	0	0	0	61
Bukkulla TM *	0	0	13	2	0	0	6	4	0	35	10	0	0	0	71
Westholme TM *	0	0	11	4	0	0	7	2	1	24	10	0	0	0	60
Ridgelands TM *	-	-	25	-	-	-	28	2	-	64	3	1	2	-	124
Yetman Bridge TM *	0	0	20	1	0	1	23	2	1	37	1	2	0	0	86
Amiens Knob AL *	0	5	21	0	1	4	44	2	1	1	5	0	0	2	86
Storm King Dam Inflow AL *	2	7	29	2	4	6	24	0	1	7	2	0	0	1	85
Mountain Station Ck AL *	1	6	29	1	7	7	25	0	2	3	2	0	0	1	84
Storm King Dam H/w AL *	1	7	28	1	3	6	28	0	1	4	2	0	0	1	82
Dalcouth AL *	1	13	31	0	2	6	27	0	1	1	2	0	0	0	84
Kettle Swamp Creek AL *	0	11	23	0	1	6	31	0	0	2	1	0	0	0	75

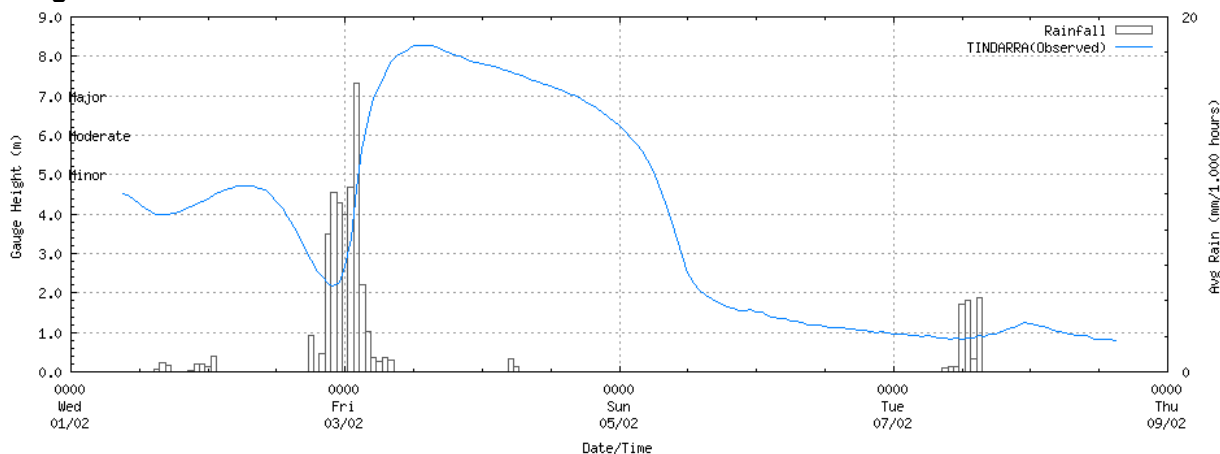
Granite Street AL *	0	10	23	0	1	5	29	0	0	0	1	0	0	0	<b>69</b>
Stanthorpe AL *	0	11	-	-	2	4	-	1	0	0	1	0	0	0	<b>19</b>
Stanthorpe SYN	0	11	21	4	2	5	28	1	1	0	1	0	0	0	<b>74</b>
Applethorpe AWS *	0	16	27	2	1	7	33	1	0	1	4	0	0	0	<b>92</b>
Wallangarra	-	8	19	-	2	-	-	1	1	56	1	-	-	-	<b>89</b>
Wallangarra TM *	1	8	19	2	0	1	9	2	1	51	1	0	0	0	<b>94</b>
Accomodation Creek AL *	0	3	23	0	0	4	20	2	1	14	0	0	0	1	<b>68</b>
Ballandean	-	2	22	-	-	-	23	2	-	21	0	-	-	-	<b>70</b>
Ballandean Hill AL *	0	1	21	0	0	3	22	2	1	16	1	0	1	1	<b>69</b>
Farnbro TM *	0	1	18	2	5	3	17	1	2	12	0	0	0	0	<b>61</b>
Bolivia TM *	-	5	14	-	-	1	12	1	2	34	-	-	-	-	<b>69</b>
Broadwater Creek TM *	0	10	16	0	7	5	36	1	0	1	2	0	0	0	<b>78</b>
Broadwater Creek AL *	0	12	18	0	8	5	39	1	0	1	2	0	0	0	<b>86</b>
Pikedale TM *	0	3	21	4	0	5	27	1	0	3	4	0	1	0	<b>69</b>
Glenlyon Dam	-	1	21	3	-	2	19	-	3	28	2	-	1	-	<b>81</b>
Glenlyon Dam Tw TM *	0	0	20	3	1	1	19	2	1	24	2	0	2	0	<b>75</b>
Tenterfield SYN	2	13	34	1	2	4	21	2	4	23	2	1	3	1	<b>112</b>
Emmaville TM *	0	2	16	2	0	0	6	4	1	32	0	0	2	0	<b>65</b>
Haystack TM *	-	-	14	-	1	2	10	3	3	52	2	-	2	-	<b>86</b>
Beardy Junction	-	-	13	-		2	11	2	2	43	-	-		-	<b>73</b>
Texas SYN	0	1	15	2	1	1	21	1	3	31	0	4	1	0	<b>82</b>
Texas TM *	0	0	17	1	0	0	21	2	2	34	1	3	1	0	<b>82</b>
Oaky Creek TM *	0	2	17	3	1	0	24	1	0	39	1	0	2	0	<b>90</b>
Barongarook TM *	0	0	21	2	0	3	17	0	0	0	0	0	1	0	<b>44</b>
Terraine TM *	0	0	23	0	0	2	26	0	1	0	0	0	0	0	<b>52</b>
Coolmunda Dam Hw TM *	0	0	16	2	0	0	19	1	0	0	0	0	0	0	<b>38</b>
Inglewood Bridge TM *	0	3	36	2	0	2	21	0	0	2	0	0	1	0	<b>67</b>
Woodspring TM *	0	3	29	0	0	4	15	0	0	0	0	0	9	0	<b>60</b>

Inglewood AWS *	0	9	39	1	0	4	17	0	0	3	0	0	0	0	74
Bengalla TM *	0	22	33	0	0	1	23	0	1	10	1	2	0	0	93
Coolatai TM *	-	1	24	-	-	-	16	4	-	26	6	3	-	-	79
New Kildonan TM *	0	19	20	0	0	1	22	0	1	12	1	1	1	0	78
Goondiwindi SYN	0	19	13	0	0	2	18	Tr	0	29	1	Tr	2	0	84
Boomi (Offtake) TM *	-	16	9	-	-	3	14	-	-	51	29	16	-	-	138
<b>Maximum Rainfall</b>	<b>4</b>	<b>22</b>	<b>39</b>	<b>4</b>	<b>12</b>	<b>7</b>	<b>44</b>	<b>5</b>	<b>6</b>	<b>64</b>	<b>29</b>	<b>16</b>	<b>24</b>	<b>2</b>	<b>138</b>

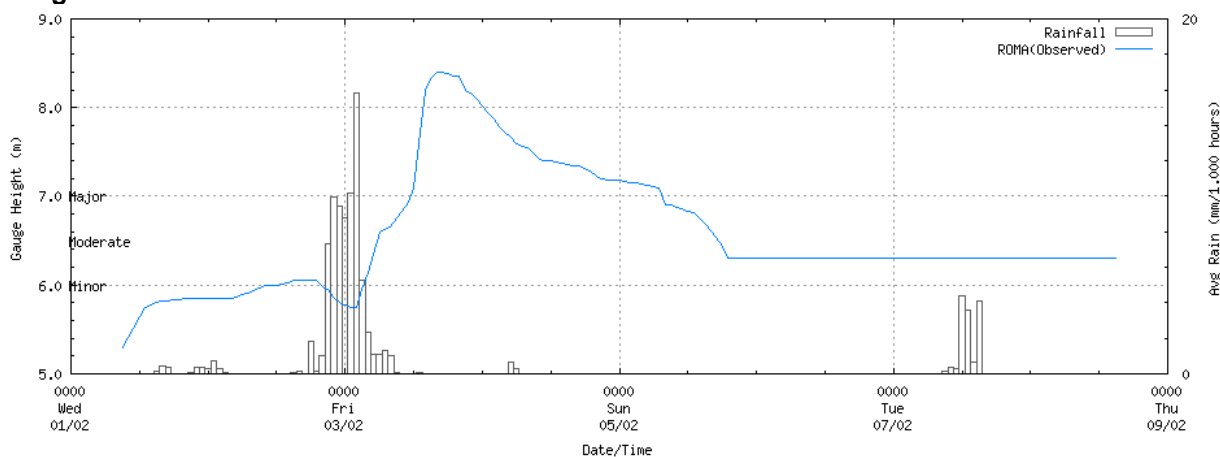
## 3.5 Flood Hydrographs of Interest

Figure 3.5.1 Flood hydrographs for Bungil Creek

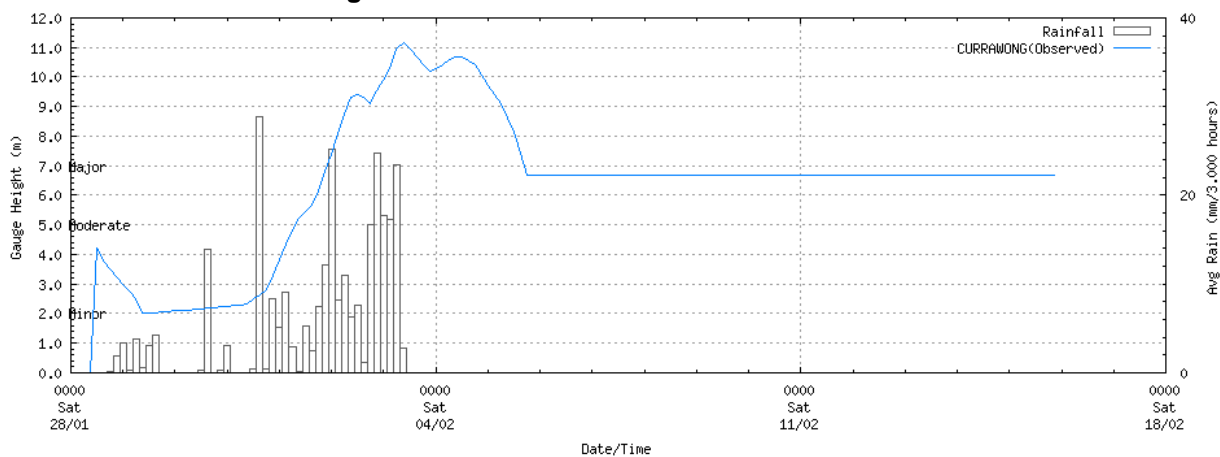
### Bungil Creek at Tindarra TM

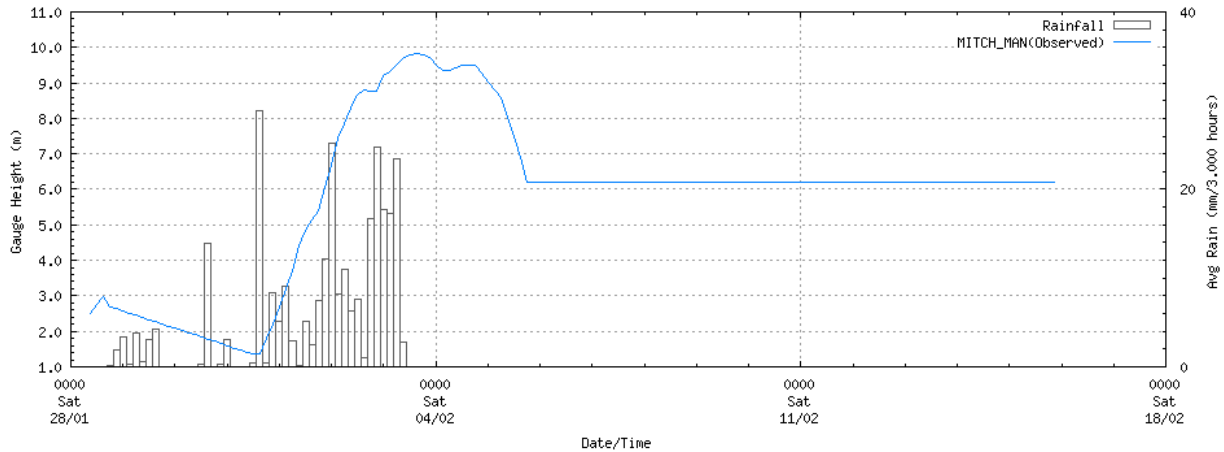
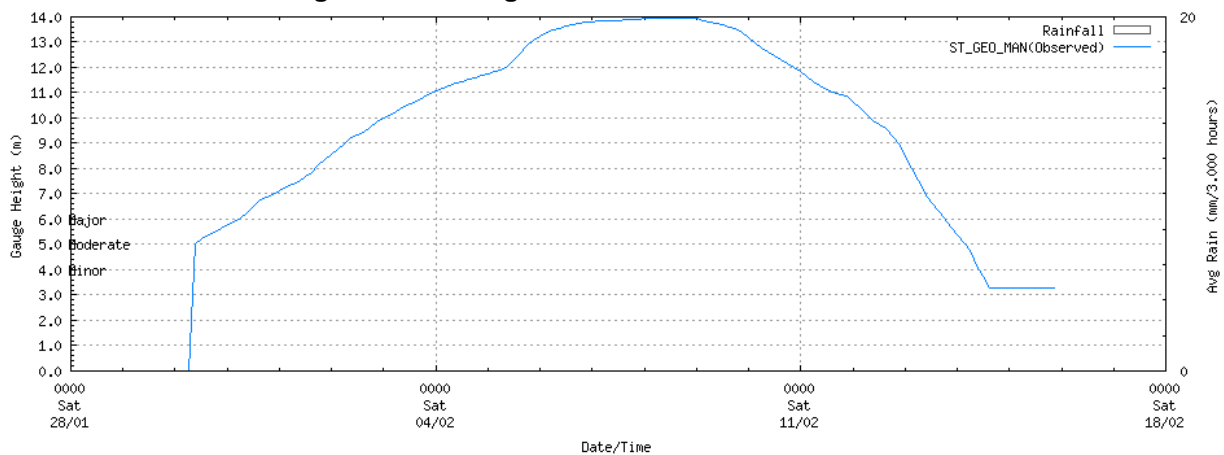
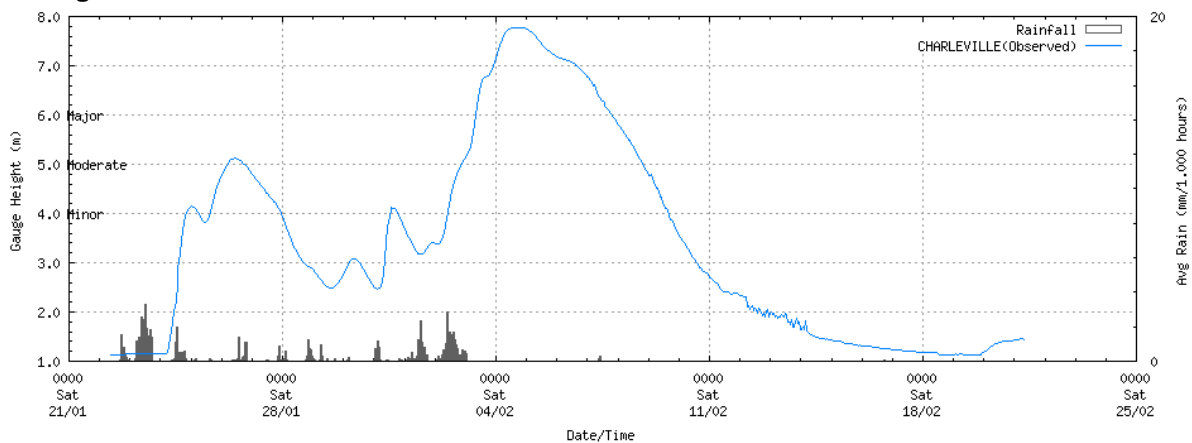


### Bungil Creek at Roma Manual



### Maranoa River at Currawong Manual



**Figure 3.5.2 Flood hydrographs for the Maranoa River****Maranoa River at Mitchell manual gauge****Figure 3.5.3 Flood hydrographs for the Balonne River****Balonne River at St George Manual Gauge****Figure 3.5.4 Flood hydrographs for the Warrego River****Warrego River at Charleville TM**



## 3.6 Flood Warning Services

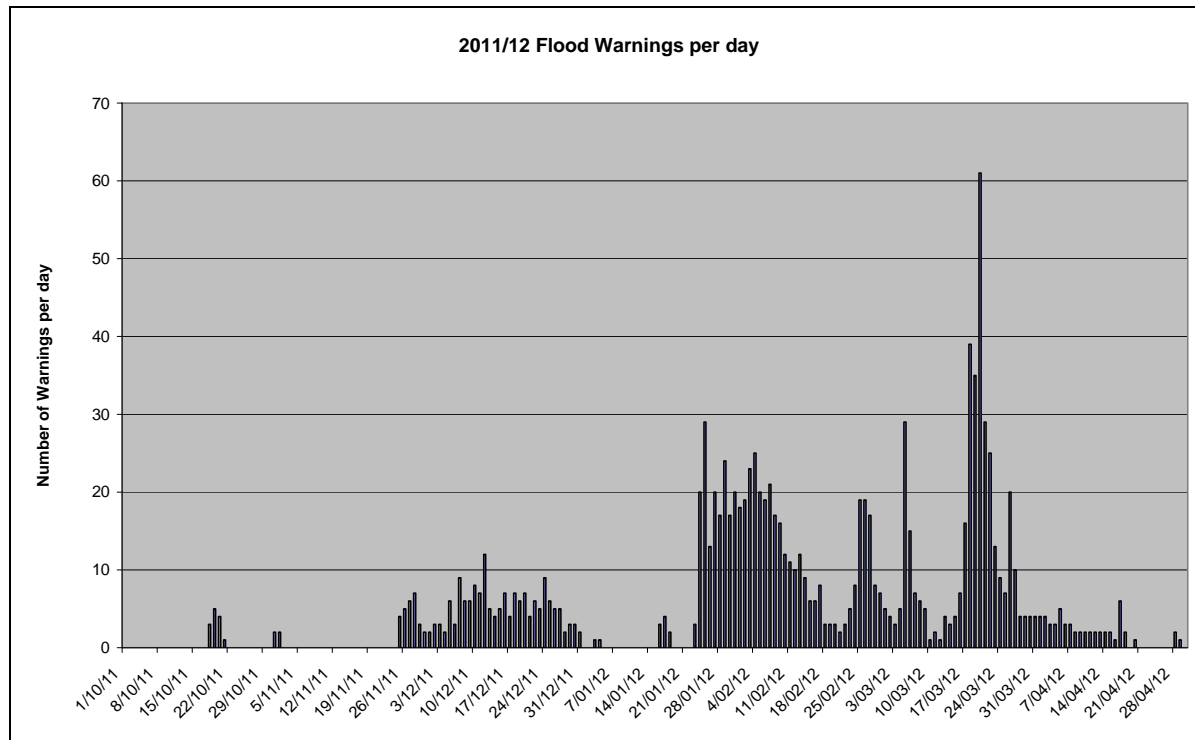
During the 2011 - 2012 Wet Season a total of 1164 flood warnings were issued between the 1<sup>st</sup> October 2011 and the 30<sup>th</sup> April 2012. Outlined in Table 3.6.1 are the total number of warnings issued in each basin and the dates of the first and last warnings for the season.

**Table 3.6.1 Number of flood warnings issued for each catchment during 2011/12**

Catchments	First Warning	Last Warning	Number of warnings issued
Barron	4:39pm 18/03/2012	1:51pm 20/03/2012	14
Border	8:55am 26/11/2011	8:33am 11/02/2012	47
Bulloo	4:54pm 10/12/2011	9:14am 9/03/2012	34
Burdekin	9:01am 3/02/2012	9:05am 27/02/2012	33
Burrum and Cherwell	8:44am 5/03/2012	6:51pm 5/04/2012	4
Coastal Rivers Central	3:18pm 26/02/2012	7:19am 23/03/2012	41
Coastal Rivers North	10:21am 18/10/2012	7:59am 27/03/2012	77
Coastal River South	9:59am 24/12/2011	6:18am 29/04/2012	103
Condamine	8:82am 31/10/2011	7:15am 27/02/2012	120
Don and Proserpine	11:06pm 17/02/2012	4:38pm 21/03/2012	16
Fitzroy	11:43pm 28/01/2012	9:39am 02/03/2012	54
Gulf	8:25am 5/12/2011	9:07am 7/04/2012	74
Haughton	6:10am 18/03/2012	11:28pm 21/03/2012	24
Herbert	7:24am 26/01/2012	6:04pm 20/03/2012	9
Johnstone	1:12am 20/03/2012	5:23am 20/03/2012	2
Kolan, Baffle, Boyne and Calliope	8:32am 29/01/2012	9:34am 25/03/2012	15
Logan and Albert	4:10am 12/12/2011	2:22pm 26/01/2012	10
Mary	12:45am 25/01/2012	8:06am 24/03/2012	56
Moonie	8:54am 26/11/2011	9:47am 14/02/2012	40
Mulgrave and Russell	12:17pm 19/03/2012	12:47pm 27/03/2012	17
Noosa and Maroochy	7:38pm 24/01/2012	4:45pm 18/03/2012	25
Paroo	8:55am 3/12/2011	9:14am 9/03/2012	46
Pioneer	10:35pm 18/03/2012	4:36pm 21/03/2012	17
Thomson, Barcoo, and Cooper	9:11am 09/12/2011	9:47am 15/04/2012	48
Tully and Murray	9:25pm 19/10/2011	3:31pm 27/03/2012	19
Wallam and Mungallala	8:23am 29/01/2012	7:30am 9/02/2012	18
Warrego	11:53am 24/01/2012	9:44am 16/02/2012	54
Western Rivers	5:02pm 25/11/2011	11:04am 20/04/2012	147

Figure 3.6.1 shows the number of warnings that were issued on each day of the Wet Season from the 1<sup>st</sup> October 2011 to the 30 April 2012. The busiest period occurred during late March as the tropical low tracked southeast across Queensland from the Gulf of Carpentaria to the Capricornia region producing widespread rainfall and river flooding across many catchments simultaneously.

**Figure 3.6.1 Number of flood warnings issued per day during 2011/12**



## Appendix 1. DNRM Usage Agreement



**Queensland Government**

**Department of Natural Resources and Mines**

### User Licence for Digital Data

#### Permitted use:

- You may use the data for your own purposes (including supply to consultants for a specific consultancy project for you, but the consultants must return or destroy the data when the project is finished). You must not sell or distribute the data.
- You must display this copyright notice on any copies of the data, however altered, reformatted or redisplayed, if you supply the data to a consultant or copy it for backup purposes: "© The State of Queensland (Department of Natural Resources and Mines) [2013]".
- You may create and distribute hardcopy products and non-editable digital images (e.g. pdf files) based on or containing the data, provided all the following conditions are met:
  - The product(s) must be distributed at no charge, and revenue cannot be generated to offset any free distribution (e.g. advertising/sponsorship).
  - You must display this acknowledgment on the product(s): "Based on or contains data provided by the State of Queensland (Department of Natural Resources and Mines) [year]. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws."
  - You must include metadata with the product(s) and the metadata must incorporate as a minimum the metadata supplied with this data.

#### Obligations:

- You must not use the data for direct marketing or in breach of the privacy laws.
- If you wish to distribute the data or distribute product(s) for a charge you must organise a different licence, by contacting the Department of Natural Resources and Mines (Phone: [marketing@nrw.qld.gov.au](mailto:marketing@nrw.qld.gov.au)).

#### Ownership:

The State of Queensland, as represented by the Department of Natural Resources and Mines (NRM), is the owner of the intellectual property rights in and to the data, or has the right to make this data available under licence arrangements. External contributors to data are listed on the website <http://www.nrm.qld.gov.au/water/monitoring/index.html>.

#### Disclaimer and indemnity:

You agree to accept all responsibility and risks associated with the use of the data. NRM makes no representations or warranties in relation to the data, and, you agree that, to the extent permitted by law, all warranties relating to accuracy, reliability, completeness, currency or suitability for any particular purpose and all liability for any loss, damage or costs (including consequential damage) incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the data are excluded or limited. You agree to continually indemnify the State of Queensland and NRM (and their officers and employees) against any loss, cost, expense, damage and liability of any kind (including consequential damage and liability in negligence) arising directly or indirectly from or related to any claim relating to your use of the data or any product made from the data.