



## FLOOD WARNING SYSTEM for the PINE & CABOOLTURE RIVERS

This brochure describes the flood warning system operated by the Australian Government, Bureau of Meteorology for the Pine and Caboolture Rivers. It includes reference information which will be useful for understanding Flood Warnings and River Height Bulletins issued by the Bureau's Flood Warning Centre during periods of high rainfall and flooding.



Contained in this document is information about:  
(Last updated May 2011)

- [Flood Risk](#)
- [Previous Flooding](#)
- [Flood Forecasting](#)
- [Local Information](#)
- [Flood ALERT System](#)
- [Flood Warnings and Bulletins](#)
- [Interpreting Flood Warnings and River Height Bulletins](#)
- [Flood Classifications](#)
- [Catchment Map](#)

*Pine River at Murrumba Downs*

### Flood Risk

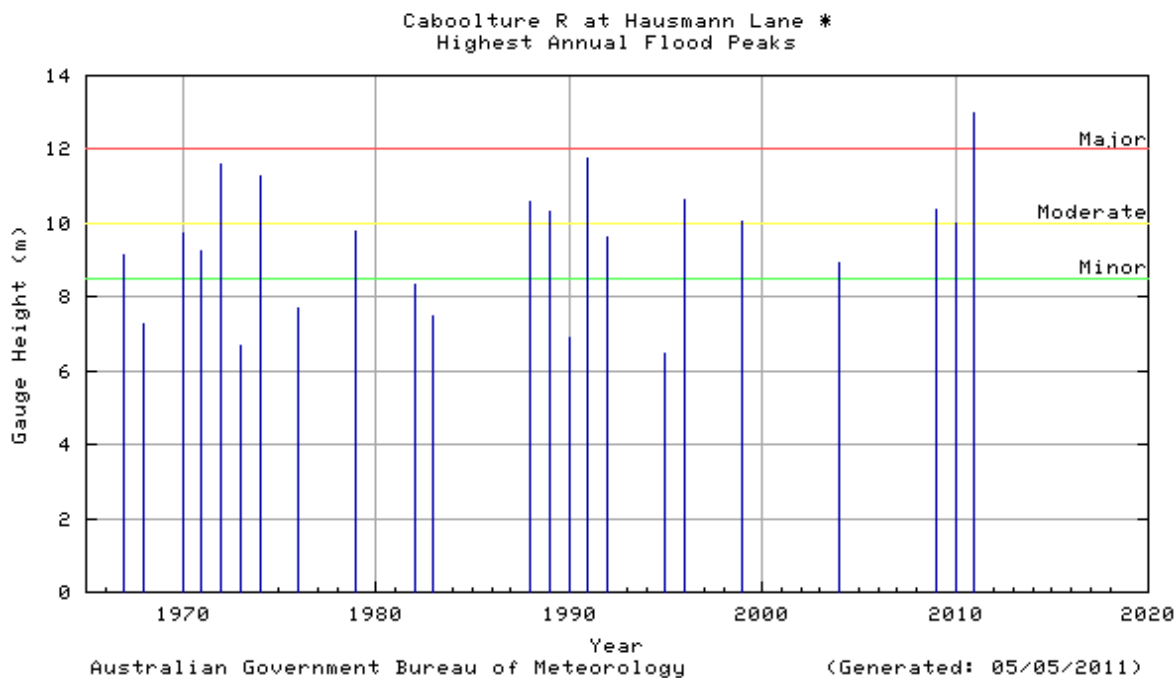
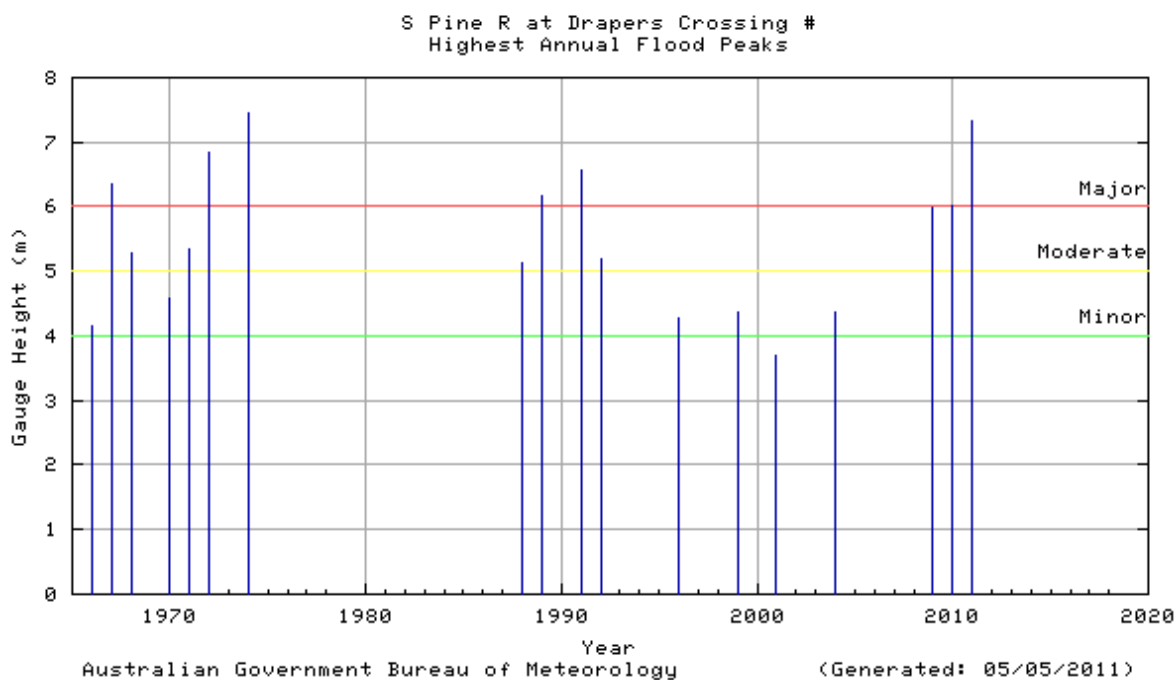
The Pine River catchment drains in a generally easterly direction from the relatively steep D'Aguiar Ranges towards the flat coastal plains of Bramble Bay between Sandgate and Redcliffe. The North Pine River and South Pine River join some 7 km upstream from the mouth, where the combined system forms an extensive coastal estuary. The North Pine Dam located in the middle of the catchment was completed in 1976. The Dam is operated by Seqwater.

The Caboolture River is situated about 40 km north of Brisbane and has a total catchment area of 370 square kilometres. It rises in the D'Aguiar Ranges and flows in an easterly direction towards the coast, passing through Caboolture and entering Deception Bay (the northern part of Moreton Bay) near the township of Beachmere. Its major tributaries include Wararba, Sheep Station, King John and Lagoon Creeks.

The Pine and Caboolture system is susceptible to episodes of rapid flooding which can cause significant damage to public and private property throughout the catchment. Continuing increases in population have accentuated the potential flood risk to life and property, and this trend is unlikely to abate given the current growth in the area.

### Previous Flooding

Records dating back to 1966 indicate a few major floods that have occurred in the Pine and Caboolture Rivers. Significant flood events with major flooding were reported in 1967, 1972, 1974, 1989, 1991, 2010 and 2011.



## **Flood Forecasting**

In conjunction with the Moreton Bay Regional Council and Seqwater, the Bureau of Meteorology operates a flood warning system for the Pine and Caboolture Rivers, based on the network of rainfall and river height stations shown on the map.

The Bureau's Flood Warning Centre issues Flood Warnings and River Height Bulletins for the Pine and Caboolture River catchments during flood events.

## **Local Information**

The Moreton Bay Regional Council is able to provide further information on flooding in your area of the Pine and Caboolture River catchments.

## **Flood ALERT System**

Since the mid 1990's, an automated flood monitoring system in the Pine and Caboolture River catchments has been progressively developed by Seqwater and Councils.

The system is comprised of a network of rainfall and river height field stations located in the catchment which report via VHF radio to a base station computer located in the Moreton Bay Regional Council office at Strathpine and at Seqwater and Bureau offices. The field stations send reports for every 1 millimetre of rainfall and every 50 millimetre change in river height.

In consultation with the Moreton Bay Regional Council and Seqwater, the Bureau issues Flood Warnings for the Pine and Caboolture Rivers.

The base station computers located in the Moreton Bay Regional Council office collect the data and has software that displays it in graphical and tabular form. The data is also received by the Bureau's Flood Warning Centre where it is used in hydrologic models to produce river height predictions.

## **Flood Warnings and Bulletins**

The Bureau of Meteorology issues Flood Warnings and River Height Bulletins for the Pine and Caboolture River catchment regularly during floods. They are sent to radio stations for broadcast, and to local Councils, emergency services and a large number of other agencies involved in managing flood response activities. Flood Warnings and River Height Bulletins are available via :

### **Radio**

Radio stations, particularly the local ABC, and local commercial stations, broadcast Flood Warnings and River Height Bulletins soon after issue.

### **Local response organisations**

These include the Councils, Police, and State Emergency Services in the local area.

### **Internet/World Wide Web**

Flood Warnings, River Height Bulletins and other weather related data is available on the Bureau's Web page at <http://www.bom.gov.au> . The Queensland Flood Warning Centre website is <http://www.bom.gov.au/qld/flood> .

### **Telephone Weather**

Flood Warnings are available through a recorded voice retrieval system, along with a wide range of other weather related and climate information.

[Main Directory](#)

Phone 1900 955 360

Flood Warnings

Phone 1300 659 219

**Telephone Weather Services Call Charges:**

1900 numbers: 77c per minute incl. GST; 1300 numbers: Low call cost - around 27.5c incl. GST.  
(More from international, satellite, mobile or public phones)

**Interpreting Flood Warnings and River Height Bulletins**

Flood Warnings and River Height Bulletins contain observed river heights for a selection of the river height monitoring locations. The time at which the river reading has been taken is given together with its tendency (e.g. rising, falling, steady or at its peak). The Flood Warnings may also contain predictions in the form of minor, moderate or major flooding for a period in the future. River Height Bulletins also give the height above or below the road bridge or causeway for each river station located near a road crossing.

One of the simplest ways of understanding what the actual or predicted river height means is to compare the height given in the Warning or Bulletin with the height of previous floods at that location.

The table below summarises the flood history of the Pine and Caboolture River catchments - it contains the flood gauge heights of the more significant floods.

River height station	Feb 1972	Jan 1974	Apr 1989	Dec 1991	Apr 2009	May 2009	Oct 2010	Jan 2011
Baxters Creek	-	-	-	-	4.95	4.65	4.68	9.20
Dayboro	-	-	-	-	5.97	6.27	-	-
North Pine Dam	-	-	-	-	-	39.90	40.10	41.08
Lake Kurwongbah	-	-	-	-	21.84	22.19	21.16	-
Youngs Crossing	-	-	-	-	4.82	6.42	8.27	13.27
Petrie	-	5.10	-	-	3.04	4.79	-	-
Samford Village	-	-	-	-	2.40	4.70	5.00	4.60
Drapers Crossing	6.68	7.44	6.18	6.55	4.97	5.97	6.00	7.32
Cash's Crossing	-	-	-	-	4.00	4.80	5.10	5.60
Burpengary (Rowley Road)	20.30	20.00	20.00	20.20	20.15	20.02	18.25	-
Burpengary (Dale Street)	11.15	-	10.81	10.45	10.19	10.79	9.74	11.19
Upper Caboolture	11.58	11.30	10.29	11.76	10.64	10.29	9.44	13.01
Wamuran	30.61	-	30.11	30.26	29.37	29.02	28.67	30.67
Caboolture	9.91*	-	9.16*	9.54*	7.79	-	7.69	10.94

All heights are in metres on flood gauges. [\*] These heights were obtained using surveyed flood marks.

Historical flood heights for all river stations in the Pine and Caboolture River Floodwarning networks, as shown on the map, are available from the Bureau of Meteorology upon request.

### **PINE AND CABOOLTURE CATCHMENTS - ASSESSMENT OF THE FLOOD POTENTIAL**

Major flooding requires a large scale rainfall situation over the Pine and Caboolture River catchments. Once the North Pine Dam is at full capacity, overflowing occurs and inundation of the Petrie area begins. The following can be used as a rough guide to the likelihood of flooding in the catchment:

Average catchment rainfalls of in excess of 200mm in 12 hours causes minor to moderate flooding in both the Pine and Caboolture catchments. This flooding will cause minor traffic difficulties as well as inundation of low lying areas.

Average catchment rainfalls of in excess of 300mm in 12 hours causes serious major flooding to occur. Rises in stream height will severly affect traffic capabilities and will affect houses and businesses on a widespread level. Releases from the North Pine Dam spillway during flood events causes the closure of Youngs Crossing Road.

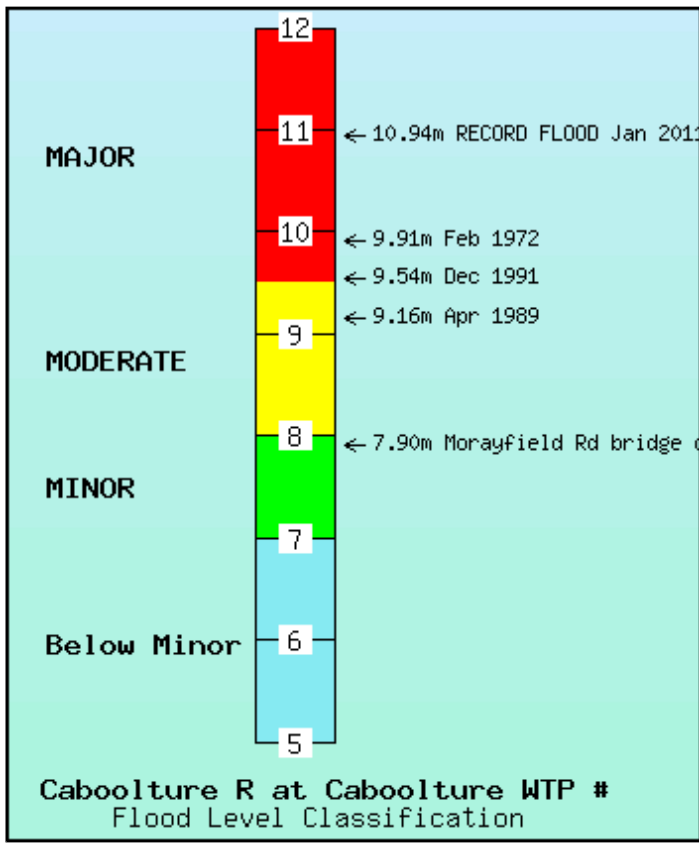
### Flood Classifications

At each flood warning river height station, the severity of flooding is described as minor, moderate or major according to the effects caused in the local area or in nearby downstream areas. Terms used in Flood Warnings are based on the following definitions.

**Major Flooding :** This causes inundation of large areas, isolating towns and cities. Major disruptions occur to road and rail links. Evacuation of many houses and business premises may be required. In rural areas widespread flooding of farmland is likely.

**Moderate Flooding :** This causes the inundation of low lying areas requiring the removal of stock and/or the evacuation of some houses. Main traffic bridges may be closed by floodwaters.

**Minor Flooding :** This causes inconvenience such as closing of minor roads and the submergence of low level bridges and makes the removal of pumps located adjacent to the river necessary.



Each river height station has a pre-determined flood classification which details heights on gauges at which minor, moderate and major flooding commences. Other flood heights may also be defined which indicate at what height the local road crossing or town becomes affected by floodwaters.

The table below shows the flood classifications for selected river height stations in the Pine and Caboolture River catchments.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
North Pine Dam	-	39.6 (F)	-	-	-	-	-
Lake Kurwongbah	-	20.42 (S)	-	-	-	-	-
Youngs Crossing	-	3.49 (B)	6.0	-	7.5	-	9.5
Petrie	-	-	3.5	-	5.5	-	7.1

Samford Village	-	-	4.8	-	5.3	-	5.8
Drapers Crossing	-	-	4.0	-	5.0	-	6.0
Cash's Crossing	-	-	6.3	-	6.7	-	8.1
Normanby Way	-	-	3.7	-	3.9	-	4.6
John Bray Park	-	-	3.4	-	3.7	-	4.3
Murrumba Downs	-	-	2.3	-	2.5	-	4.1
Burpengary (Rowley Road)	-	20.0 (B)	15.0	-	20.0	-	20.5
Burpengary (Dale Sreet)	-	-	8.8	-	9.7	-	10.5
Upper Caboolture	-	-	8.5	-	10.0	-	12.0
Wamuran	-	30.60 (B)	29.0	-	30.0	-	30.5
Caboolture WTP	-	7.90 (B)	7.0	-	8.0	-	9.5

All heights are in metres on flood gauges. (B) = Bridge (F) = Full Supply Level (S) = Spillway

The above details are correct at the time of preparing this document. Up-to-date flood classifications and other details for all flood warning stations in the network are at:

<http://www.bom.gov.au/hydro/flood/qld/networks/index.shtml>

### Catchment Map showing the Pine and Caboolture River flood warning network

Click here to view map as: [PNG](#) [PDF](#) (308K bytes)

**For further information, contact:**

**The Regional Director, Bureau of Meteorology, GPO Box 413, Brisbane Q 4001**

---

[Home](#) | [About Us](#) | [Contacts](#) | [Freedom of Information](#) | [Careers](#) | [Search](#) | [Site Map](#) | [Help](#) | [Feedback](#)  
[Weather & Warnings](#) | [Climate Information](#) | [Water Information](#) | [Radar](#) | [RSS](#) | [Learn About Meteorology](#)

---

© [Copyright](#) Commonwealth of Australia 2011, Bureau of Meteorology (ABN 92 637 533 532)

Please note the [Copyright Notice](#) and [Disclaimer](#) statements relating to the use of the information on this site and our site [Privacy](#) and [Accessibility](#) statements. Users of these web pages are deemed to have read and accepted the conditions described in the Copyright, Disclaimer, and Privacy statements. Please also note the [Acknowledgement](#) notice relating to the use of information on this site. No unsolicited commercial email.