# Brisbane River below Wivenhoe Dam

**This brochure describes the flood risk and previous flooding in the Brisbane River catchment below Wivenhoe Dam, last updated in December 2025.**

## Flood Risk

The Brisbane River catchment covers an area of approximately 15,000 square kilometres of which about half is below Wivenhoe Dam. The Lockyer-Laidley Valley drains into the Brisbane River just downstream of Wivenhoe Dam near Lowood. The second major tributary, the Bremer River, flows into the Brisbane River at Moggill. Heavy rain in these areas can cause severe flooding of rural districts in the Lockyer and Bremer Valleys and along the Brisbane River. Lockyer and Laidley creeks are prone to significant flash flooding given their location at the top of the catchment, with towns including Grantham, Laidley, Helidon, and Forest Hill susceptible to rapidly rising water levels during heavy rainfall events.

Severe flooding of the Cities of Ipswich (refer to brochure for the Bremer River) and Brisbane has occurred on several occasions. Although Wivenhoe Dam significantly reduces the frequency of flooding in Brisbane City, major flooding can still occur. Tidal influences also affect much of the Lower Brisbane River and extend inland as far as Mount Crosby. This can lead to multiple peaks on the high tide at Brisbane City and can exacerbate river levels when periods of heavy rainfall combine with tide heights near or above the Highest Astrological Tide (HAT) level.

Multiple creeks flow through the Brisbane metropolitan area including Oxley, Norman and Bulimba Creeks on the southside, and Moggill and Enoggera Creeks in the northern and western suburbs. Creek flooding may affect multiple suburbs, worsened by backing-up from high-levels on Brisbane River, though backflow prevention devices may help mitigate backing-up impacts. Suburban creeks rarely contribute significant flow to the lower Brisbane River but flash flooding on these creeks can lead to significant community impact.

## Previous Flooding

Flood records for Brisbane extend back as far as the 1840's and indicate that the city has a long history of flooding. The largest flood of the 20th century occurred in January 1974, rising to a height of 5.45 metres on the Brisbane City Gauge at the river end of Edward Street. The flood caused widespread damage in Brisbane, affecting at least 8,000 properties. Another major flood occurred in January 2011, when the river peaked at 4.46 metres. Although lower than 1974, this flood also caused widespread property damage. The 2011 flood event was notable for the extreme flash flooding that devastated the Lockyer Valley, with significant loss of life.

More recently during the extreme multi-day rain event in February 2022, river levels at Brisbane City peaked at 3.85 metres. However, despite the lower river levels in comparison to the 2011 flood event, devastating flash flooding occurred, especially in the northern suburbs. This resulted in significant inundation of homes and businesses along with substantial infrastructure damage. The flash flooding was attributed to short duration, very intense rainfall occurring over already saturated areas following multiple days of heavy rainfall. 7-day accumulated rainfall totals of 1000 to 1100 mm to 1 March 2022 were recorded over some northern Brisbane suburbs, including a record daily rainfall total of 344.8 mm at Alderley on 28 February 2022.

Record multi-day catchment average rainfall accumulations were also recorded during the February 2022 rain event, surpassing previous records set during both the 1974 and 2011 rainfall events. This includes a record 4-day catchment average rainfall of 444.6 mm between 25 and 28 February 2022, eclipsing the previous record of 397.4 mm set between 25 and 28 January 1974.

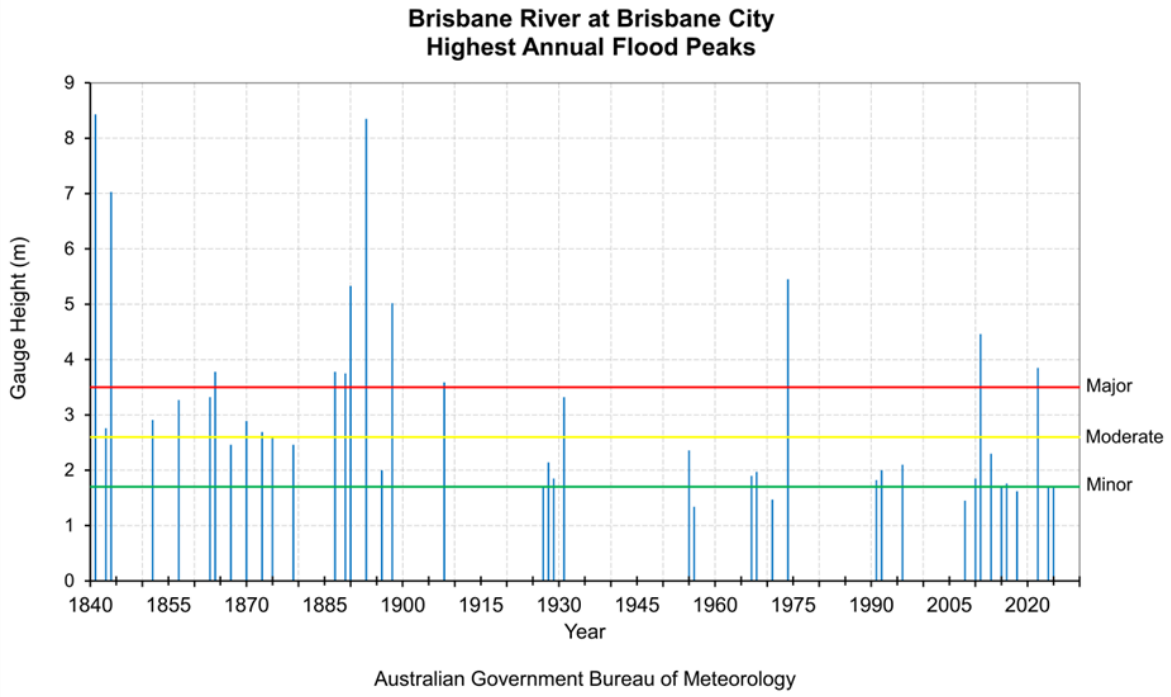
More recently in March 2025, the passage of ex-Tropical Cyclone Alfred resulted in flash flooding, but significant riverine flooding was not recorded. The most significant flood impacts were observed in the Laidley area with the Warrego Highway cut by floodwaters, multiple evacuations, inundation of properties and flood rescues in Laidley. No river level data was available at Laidley during this event. However, the peak level at Laidley was expected to be above the major flood level based on observations at a nearby gauge.

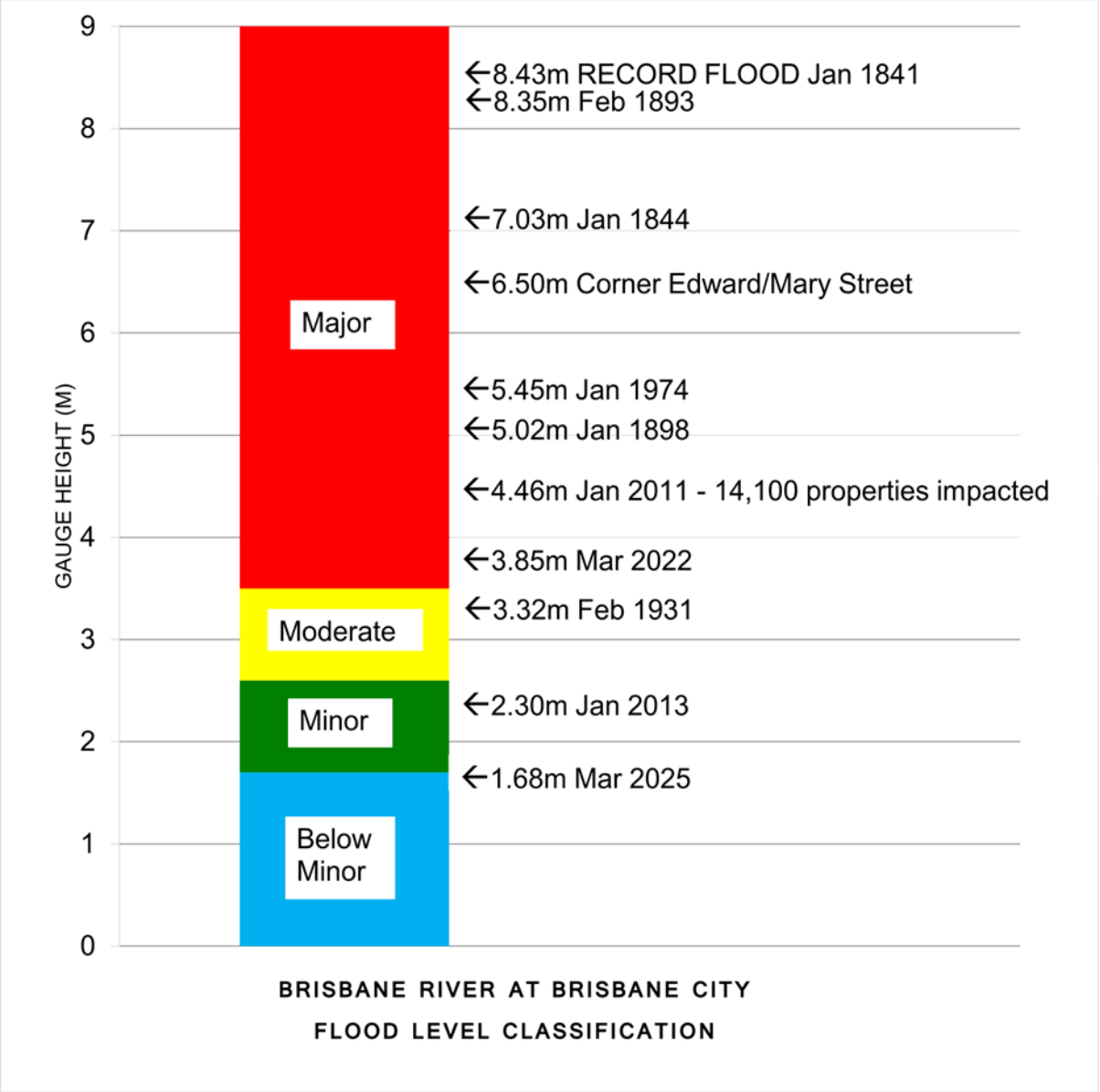
The record flood peak at Brisbane is 8.43 metres set back in 1841, but the catchment (including dams and urban development) has changed significantly since then.

The table below summarises the flood history of the Brisbane River catchment below Wivenhoe Dam. It contains the flood gauge heights of some of the more significant flood peaks.

| Flood Event | Gatton | Laidley | Glenore Grove | Lowood | Mt Crosby | Moggill | Jindalee | Brisbane City |
|---|---|---|---|---|---|---|---|---|
| **Jan 1841** | - | - | - | - | - | - | - | 8.43 |
| **Feb 1893** | 16.33 | - | - | 26.39 | 32.00 | 24.50 | 17.90 | 8.35 |
| **Feb 1931** | 9.14 | - | - | 18.49 | 21.78 | 15.40 | 9.60 | 3.32 |
| **Mar 1955** | 9.14 | - | - | 18.14 | 20.72 | 13.70 | 7.30 | 2.36 |
| **Jan 1974** | 14.63 | - | 14.94 | 22.02 | 26.74 | 19.95 | 14.10 | 5.45 |
| **Jan 2011** | 15.38 | 8.85 | 15.34 | 22.66 | 26.18 | 17.87 | 12.25 | 4.46 |
| **Jan 2013** | 13.57 | 8.95 | 15.10 | - | 13.41 | 7.92 | 4.64 | 2.30 |
| **Feb 2022** | *15.41 | - | **15.00 | **16.62 | 18.87 | 14.20 | - | 3.85 |

All heights are in metres on flood gauges.
* Data from Gatton Alert gauge
** Estimated by council






## Further Information

- Latest rainfall and river heights
- Queensland Service Level Specification
- Catchment map: Queensland Brisbane Basin map
- National Arrangements for Flood Forecasting and Warning
- Brisbane Flood Factsheet Jan 2011 Floods
- Lockyer Valley Flood Factsheet Jan 2011 Floods