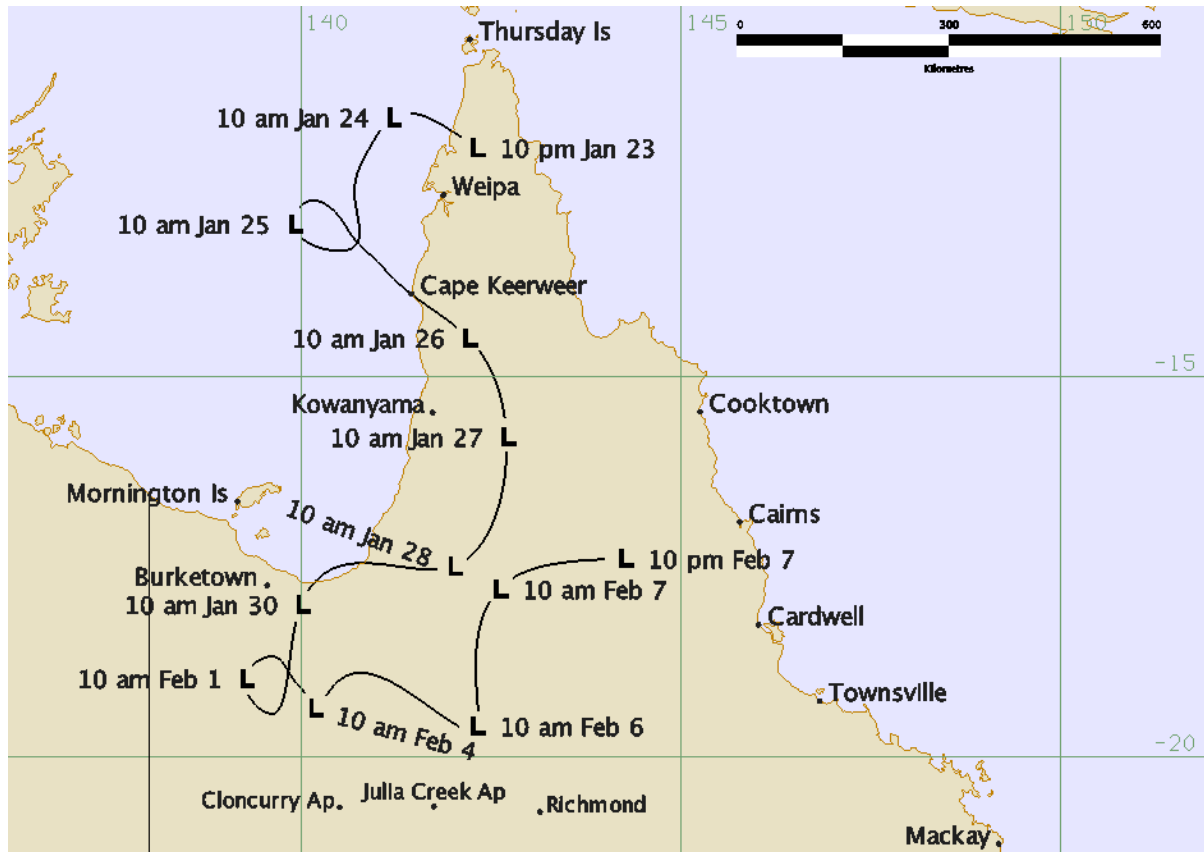


Tropical Low 13U – Townsville and northwest Queensland floods

January 23 to February 7, 2019

Queensland Regional Office



Tropical low 13U was the principal system associated with a long-lived and disastrous monsoon event that brought unprecedented rainfall and flooding to parts of northwestern Queensland and the Townsville area in late January and early February 2019.

A burst of monsoon westerlies formed the monsoon trough through the Arafura Sea and northern Gulf of Carpentaria on January 21st. A number of low centres were initially present around Cape York, before tropical low 13U was identified over land east of Mapoon on January 23rd. The system moved westward over the northeastern Gulf the following day and began to deepen. Tropical cyclone advices were issued for the Gulf coast, but the system moved back over Cape York Peninsula near Cape Keerweer early on the 26th of January before it could develop into a tropical cyclone.

Later on January 26th, torrential rainfall occurred with thunderstorms on the monsoon trough about the Mossman and Daintree areas of the north tropical coast. Mossman Central Mill recorded 562mm in the 24 hours to 9am on January 27th, while China Camp recorded 426mm, and Daintree Village 425mm. Rapid onset major, record flooding occurred in the Daintree river as a result.

Tropical low 13U then moved slowly southwest into the southern Gulf Country, where it stalled for five days between January 31st and February 5th. At the same time, the monsoon trough extended

from the low east into the Coral Sea through about Cardwell. A blocking high in the Tasman Sea contributed to keeping the monsoon trough near stationary in the Cardwell area during this period.

Periods of torrential rain occurred for about a week both near tropical low 13U - over northwest Queensland – and to the near south of the monsoon trough over the Herbert and Lower Burdekin district, most notably Townsville and surrounding areas.

Over the northwest, the areas around Cloncurry, Julia Creek, and Richmond received the heaviest falls. Numerous long-standing rainfall records were broken, both daily and weekly. Many locations received well over their average annual rainfall in under a week. Record rainfalls included:

- Land's End Station (east of Cloncurry): 637mm in 7 days, including 285mm on February 4th.
- Gregory Springs Station: 580mm in 7 days
- Richmond Post Office: 498mm in 7 days
- Bunda Bunda (northeast of Julia Creek): 452mm in 7 days, including 177mm on February 6th.
- Julia Creek: 233mm on February 5th

Record flooding occurred over a wide area, with major floods in the Flinders, Cloncurry, Albert, and Leichhardt Rivers. The Flinders river at Richmond broke the long-standing 1974 flood level. Graziers in the region suffered a staggering impact with over 300,000 cattle perishing in floodwaters at a cost of over \$300 million.

On the east coast, the Townsville, Bluewater, and Paluma areas received the heaviest falls. Again, long-standing records were broken and locations including Townsville received more than their annual rainfall in a week. Recorded rainfalls included:

- Woolshed: 368.8mm on February 2nd.
- Townsville Aero: 1052.8mm in 7 days
- Rollingstone: 1099mm in 7 days
- Upper Bluewater: 2223mm in 10 days
- Paluma Alert: 2212mm in 10 days
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- Woolshed 1669mm in 7 days
- Rollingstone Alert 1425mm in 7 days
- Townsville Aero 1257mm in 10 days

Major flooding occurred in the Ross, Haughton, Herbert, Burdekin, Ross, Bohle, Black, and Murray rivers. On Sunday February 3rd, further torrential thunderstorms developed over the Ross River catchment and dropped 300mm of rain in a few hours. The Ross River Dam reached nearly 250% capacity and its floodgates opened automatically to avert dam failure, exacerbating the pre-existing flooding of the Ross River in Townsville. Over 2000 properties in Townsville were flooded, and 3 deaths occurred as a result of floodwaters.

On February 6th, tropical low 13U began to move towards the northeast. On the evening of February 7th it was located about 160km west-southwest of Cairns and weakening. It was last observed as a discernible feature in a similar area on the morning of Friday February 8th.

Coastal Crossing Details

Crossing time: 5am EST Saturday 26 January 2019

Crossing location:

Cape Keerweer

70km SW of Aurukun