



Northern Territory Government

NORTHERN TERRITORY STORM SURGE MAPPING YIRRKALA - STORM SURGE INUNDATION for 2100

Primary Storm Surge Zone (100 Year ARI) Secondary Storm Surge Zone (1,000 Year ARI) Extreme Storm Surge Zone (10,000 Year ARI)

The technical information forming the basis of this storm tide (commonly known as storm surge) inundation mapping is contained in the following report prepared by GHD Pty Ltd.

'Report for Gulf of Carpentaria Storm Tide and Inundation Study, Stages 1 and 2 Final Report' March 2013.

Tropical Cyclone Storm Tide (tidal influence + storm surge + wave setup) levels for Yirrkala were estimated from the above study for the three distinct Average Recurrence Intervals (ARI). These open coast estimates are based on two off-shore sites located at latitude -12.239 and -12.269 and longitude 136.788 and 136.904 respectively. The estimated 100 year, 1000 year and 10000 year ARI Storm Tide levels are 2.7 and 2.5 metres AHD (Primary Tide), 3.3 and 3.1 metres AHD, (Secondary Tide) and 3.9 and 3.8 metres AHD (Extreme Tide), respectively. The mapped extents are based on the two off-shore site estimates but are proportioned to allow for their difference in level.

The map shows the total storm tide hazard risk due to tropical cyclones in terms of the ocean water level comprising the combined effects of the highest astronomical tide plus storm surge plus wave setup for three statistical ARI. The 'Primary Storm Tide Zone' refers to the extent of inundation for a storm event of 100 year ARI (with approximately a 40% chance of exceedance within any 50 year period). The 'Secondary Storm Tide Zone' refers to the further extent of inundation for a storm event of 1,000 year ARI (with approximately a 5% chance of exceedance within any 50 year period). The 'Extreme Storm Tide Zone' refers to the further extent of inundation for a storm event of 10,000 year ARI (with approximately a 0.5% chance of exceedance within any 50 year period). The extents do not include the possible effects of very localised wave runup.

The Primary, Secondary and Extreme Storm Tide Zones on this map were developed from the latest topographical contours (Aerial Photography 2012) and using the above estimated levels. These Storm Tide Zones are considered to be indicative only.

Average Recurrence Interval (ARI) is also called Return Period of the Risk and is defined as the 'average' number of years between successive events of the same or greater magnitude. The ARI of a storm event gives no indication of when a storm tide of that magnitude may occur. Highest Astronomical Tide is the highest ocean level expected for any combination of astronomical conditions alone and has an equivalent ARI approximately 18.6 years.

For further information contact:
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Storm surge maps are available on www.nt.gov.au/floods

GENERAL FEATURES

Building		Drain	
Road, track		High water mark (approx.)	
Powerline		Index contour, value	
Tank: water/non-water		Intermediate contour	
Watercourse		Spot elevation	

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Water Resources Division, Department of Land Resource Management,
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metres 0 200 400 600 metres

Black numbered lines are 500 metre intervals of the Map Grid of Australia (MGA) Zone 53
Transverse Mercator Projection Horizontal Datum: GDA 94 Vertical Datum: Australian Height Datum (AHD) metres
Base topographic information supplied by NT Department of Lands, Planning & Environment.

This map was produced for the Government of Australia (see back of map)

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