

TWEED SAND BYPASSING

OVERVIEW

In February 2020:

- 18,901 m³ was pumped to Snapper Rocks East.
- 0 m³ of sand was dredged.
- Significant wave heights ranged from calm to moderate (0.49 m to 2.50 m), with a maximum significant wave height of 2.50 m on 14th February. Wave directions were predominantly from the E and ESE.
- 822 vessel crossings were recorded for the month (This is 62% of the February average (2002 – 2019)).
- The modelled estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 67,157m³ (this is 115% of the February average of 58,286m³).

1. SAND PUMPING & DREDGING

Sand Delivery February 2020

Pumped:	18,901 m ³
Dredged:	0 m ³
Total:	18,901 m ³

The number of days sand was pumped this month = 17

Sand Delivery January to February 2020

Pumped:	36,554 m ³
Dredged:	0 m ³
Total:	36,554 m ³

Stage II Sand Delivery May 2000 to February 2020

Pumped:	9,686,006 m ³
Dredged:	2,471,874 m ³ *
Total:	12,157,880 m ³ *

* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between November and November 2005

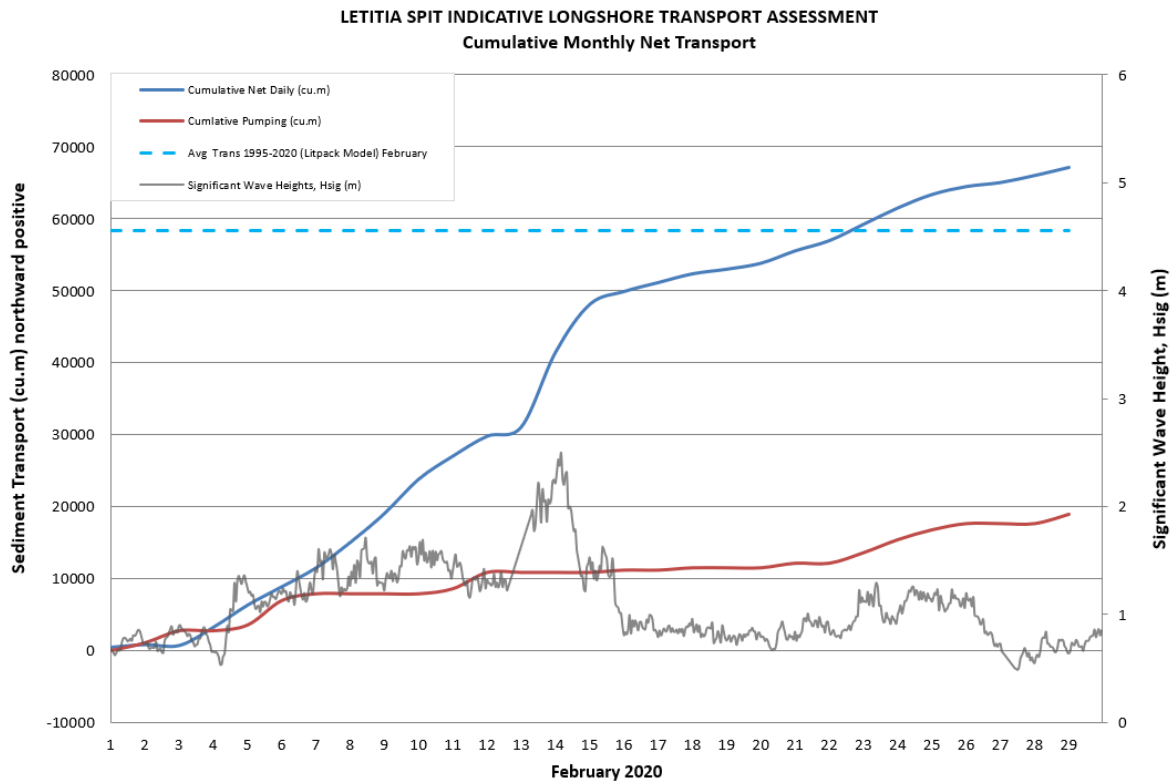
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2. INDICATIVE LONGSHORE TRANSPORT

The graph below is based on simplified sediment transport modelling and is indicative only.

In February 2020 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be 67,157 m³.

This result is 115% of the average estimated sand transport quantity of approximately 58,286m³ for the month of February.



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3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

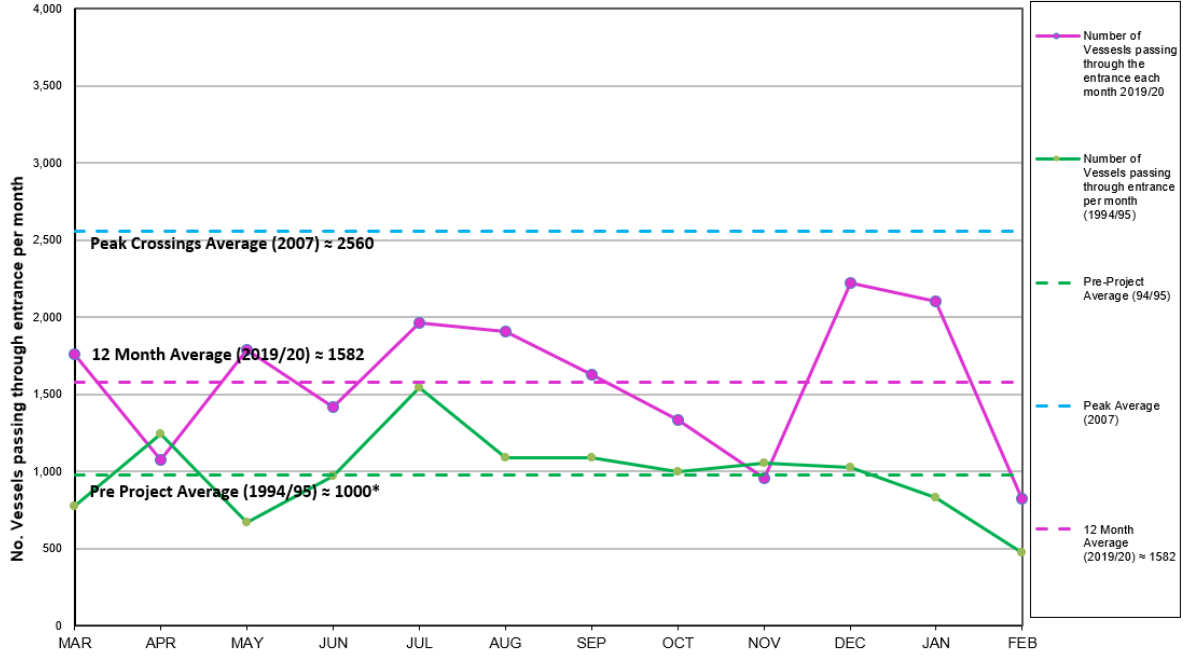
Date February 2020	Navigation Rating					Number of Crossings
	Impassable < - - - - > Good					
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						161
2						84
3						7
4						2
5						4
6						4
7						2
8						14
9						1
10						0
11						4
12						0
13						0
14						0
15						1
16						36
17						31
18						73
19						14
20						1
21						46
22						22
23						2
24						6
25						6
26						62
27						112
28						95
29						32
					Total:	822

Source: Marine Rescue NSW, Point Danger

* Total does not include trawlers

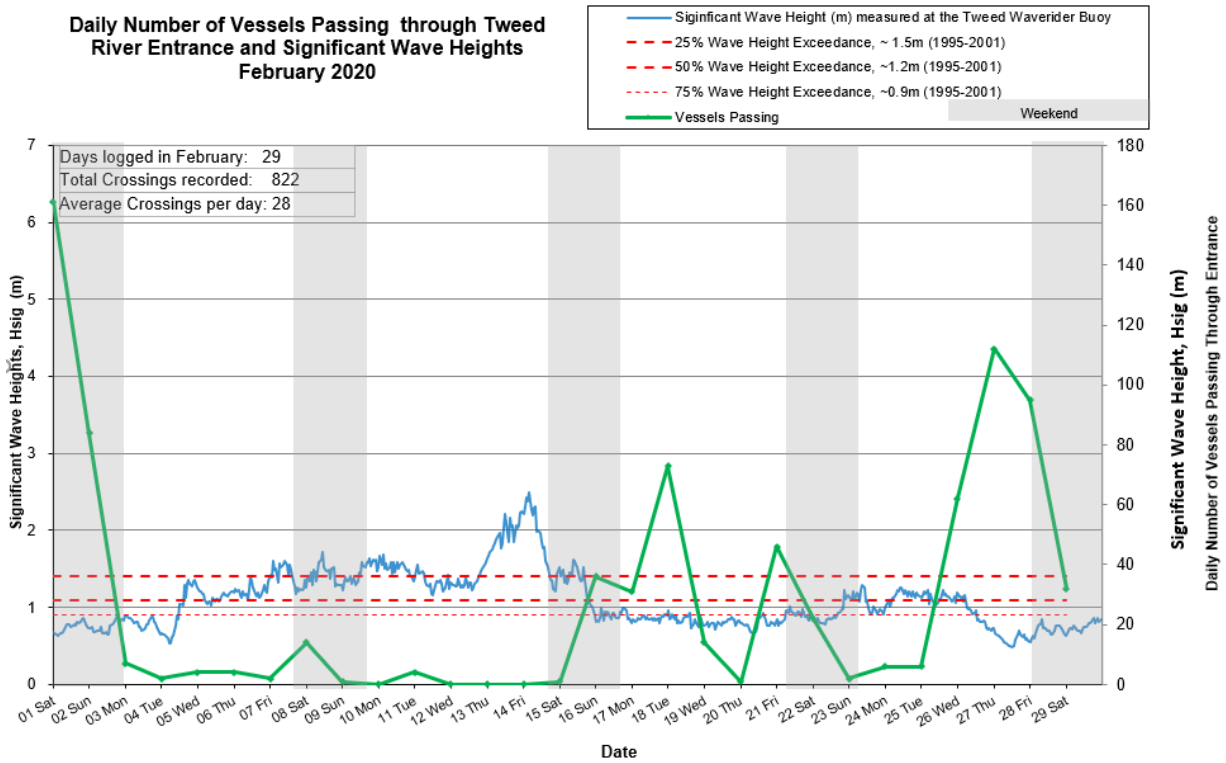
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Comparison of the number of vessels passing through the entrance per month 2019/20 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

Daily Number of Vessels Passing through Tweed River Entrance and Significant Wave Heights February 2020



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4. WAVE CONDITIONS

Wave conditions over the month: Significant wave heights ranged mostly from calm to moderate (0.49 m to 2.50 m), with a peak significant wave height of 2.50 m on 14th February. Wave directions were predominantly from the E and ESE.

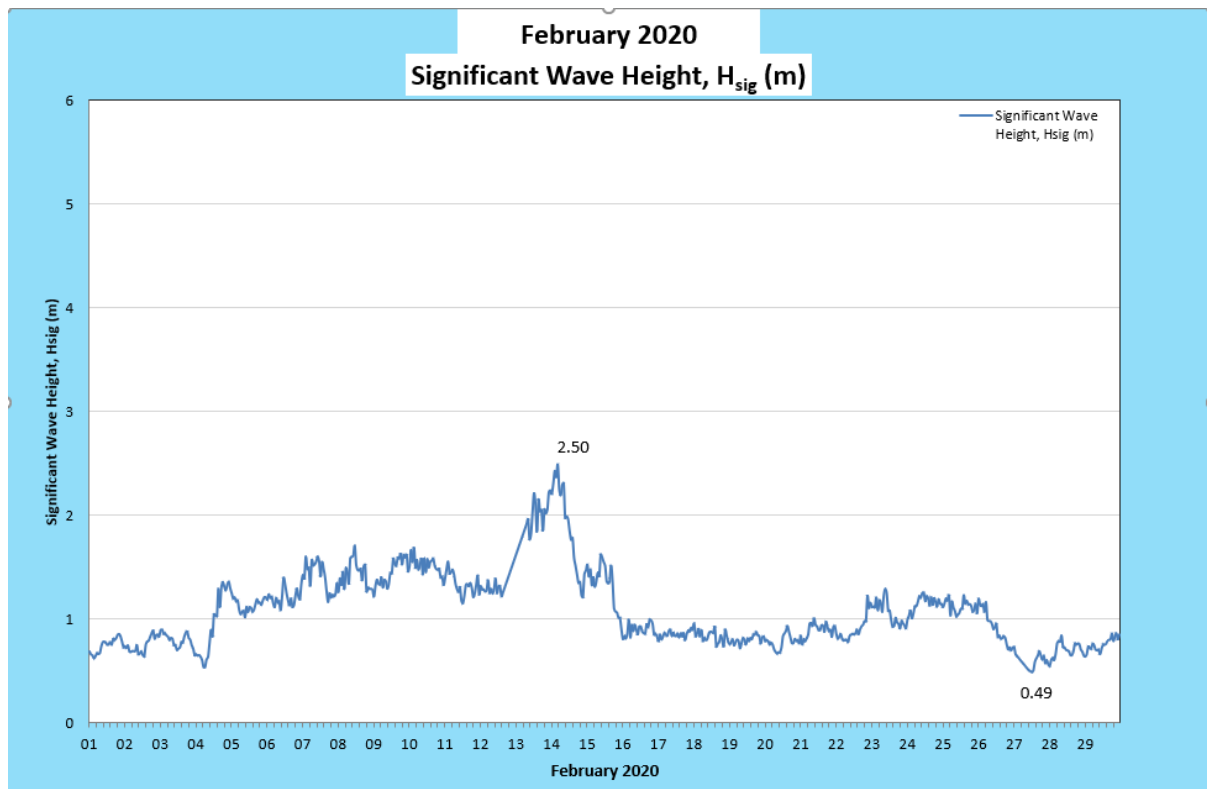
Monthly minimum significant wave height: 0.49 m on 27th February

Monthly maximum significant wave height: 2.50 m on 14th February

Number of days on which waves were below 1.0 m at some point in the day: 18 days

Number of days on which waves were above 2.0 m at some point in the day: 2 days

Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes

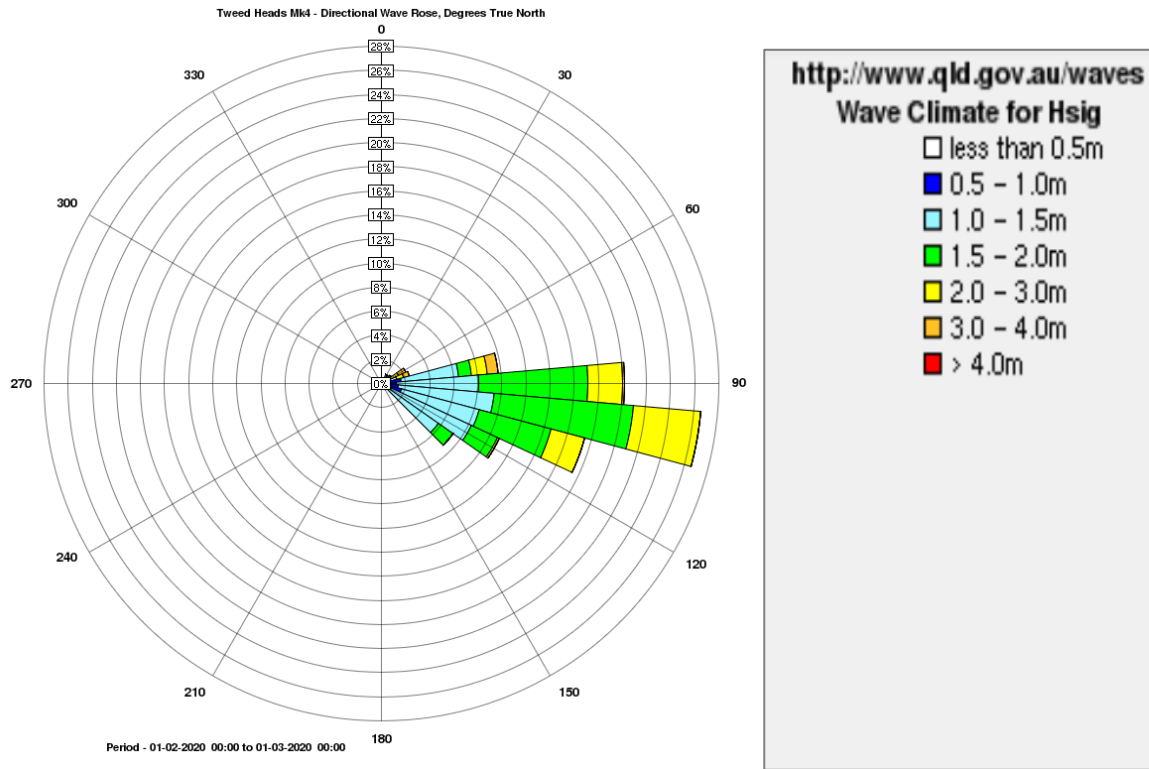


(Source: Tweed Heads Waverider Buoy; Queensland Government)

A link to data recorded by the Tweed Waverider Buoy is available at: <http://www.qld.gov.au/waves>

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WAVE DIRECTION



(Source: Tweed Heads Waverider Buoy; Queensland Government)