

TRESBP ENVIRONMENTAL MONITORING SUMMARY

NOVEMBER 2015

OVERVIEW

In November 2015:

- 29,360 m³ of sand was pumped to Snapper Rocks East.
- There were no media articles relating to the project area during November.
- Wave heights ranged mostly from calm to average (0.6 to 1.5 m) with a maximum significant wave height of 1.8 m on 9th November. Wave directions varied from NNE to ESE but mostly from E to ESE.
- 1,303 vessel crossings were recorded for the month. (This is 20% less than the November average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 16,000 m³ (this is about 50% of the November average of about 31,000 m³).

1. SAND PUMPING & DREDGING

Sand Delivery November 2015

Pumped:	29,360 m ³
Dredged:	0 m ³
Total:	29,360 m ³

The number of days sand was pumped this month = 21

Sand Delivery January to November 2015

Pumped:	497,907 m ³
Dredged:	0 m ³
Total:	497,907 m ³

Stage II Sand Delivery April 2000 to November 2015

Pumped:	8,048,290 m ³
Dredged:	2,061,972 m ³ *
Total:	10,110,262 m ³ *

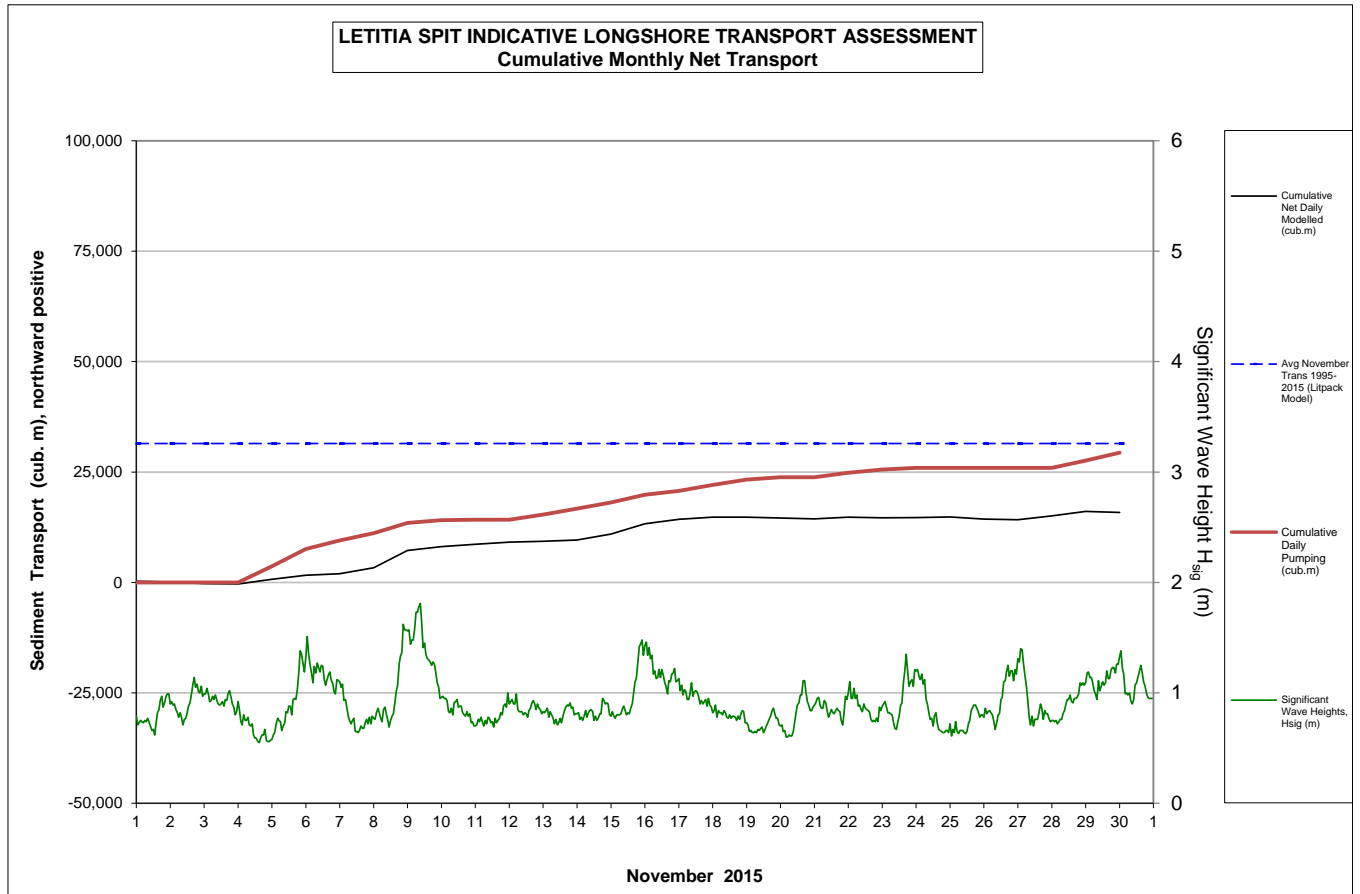
* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In November 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 16,000 m³.

This result is about 50% of the average estimated sand transport quantity of approximately 31,000 m³ for the month of November.



3. MEDIA COVERAGE

There were no media articles relating to the project area during November

4. TWEED RIVER ENTRANCE CONDITIONS

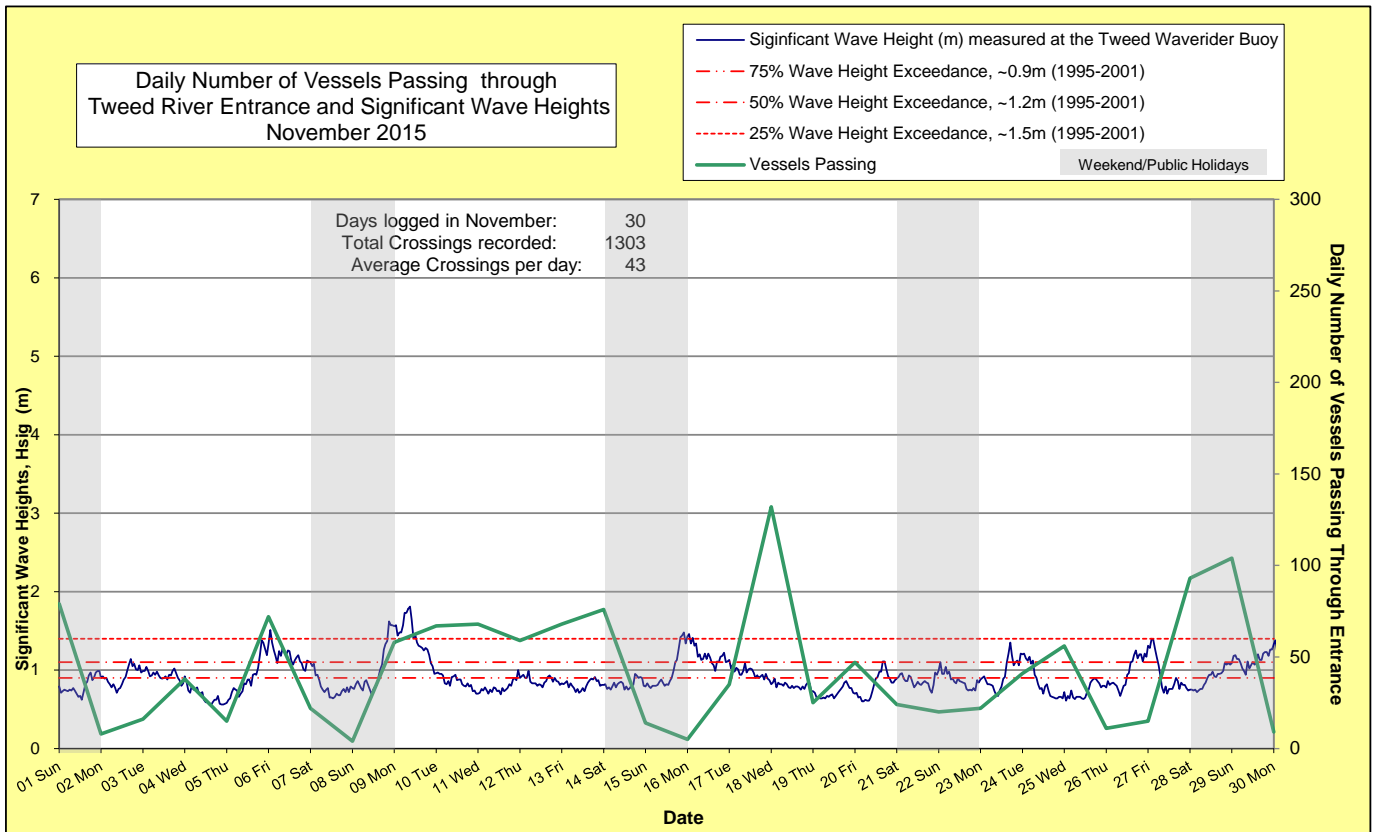
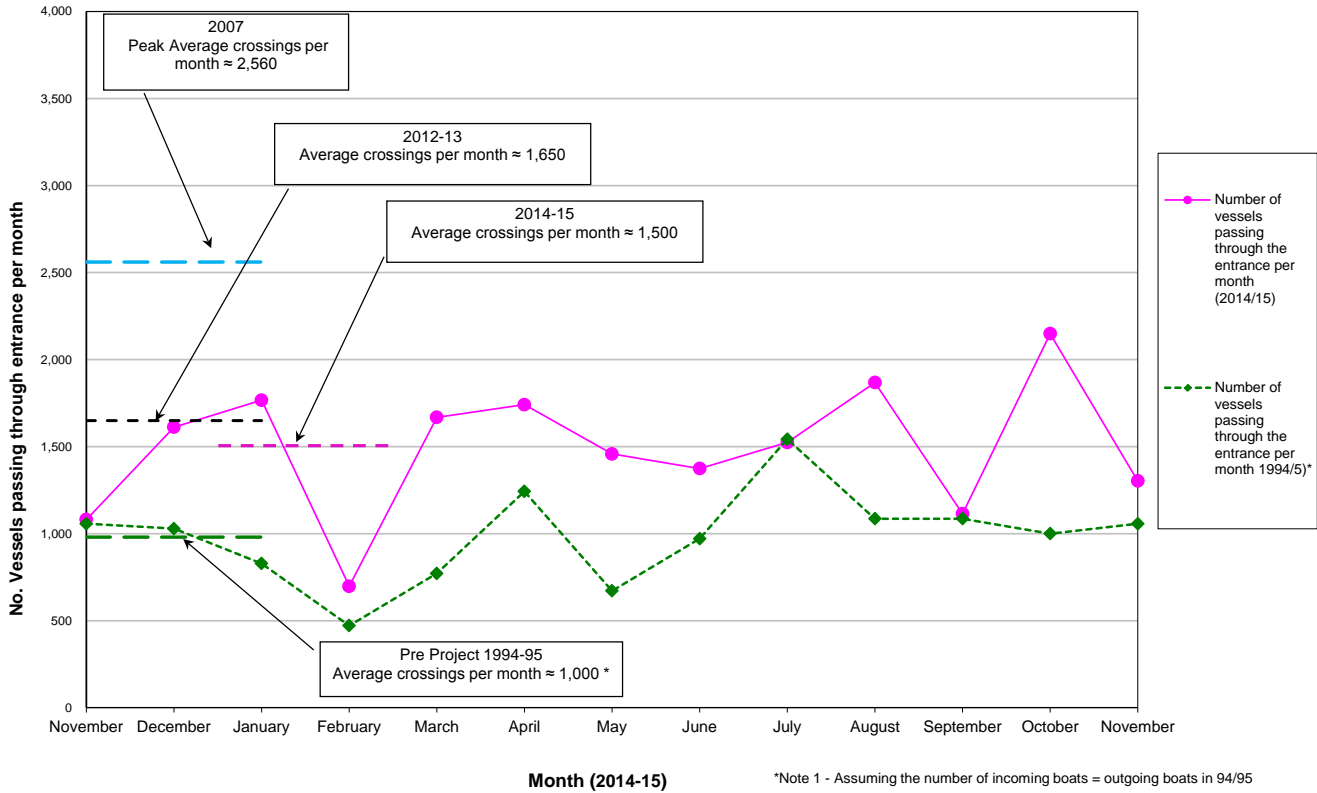
MARINE RESCUE NSW - MONITORING RESULTS

 Weekends and public holidays

Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1 st						79
2 nd						8
3 rd						16
4 th						38
5 th						15
6 th						72
7 th						22
8 th						4
9 th						58
10 th						67
11 th						68
12 th						59
13 th						68
14 th						76
15 th						14
16 th						5
17 th						35
18 th						132
19 th						25
20 th						47
21 st						24
22 nd						20
23 rd						22
24 th						41
25 th						56
26 th						11
27 th						15
28 th						93
29 th						104
30 th						9
						Total
						1303

Source: Marine Rescue NSW, Point Danger

Comparison of the Number of Vessels Passing Through the Entrance per month
2014/15 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



5. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to average (0.6 to 1.5 m) with a maximum significant wave height of 1.8 m on 9th November. Wave directions varied from NNE to ESE but mostly from E to ESE.

Monthly minimum significant wave height: 0.6 m on 4th November

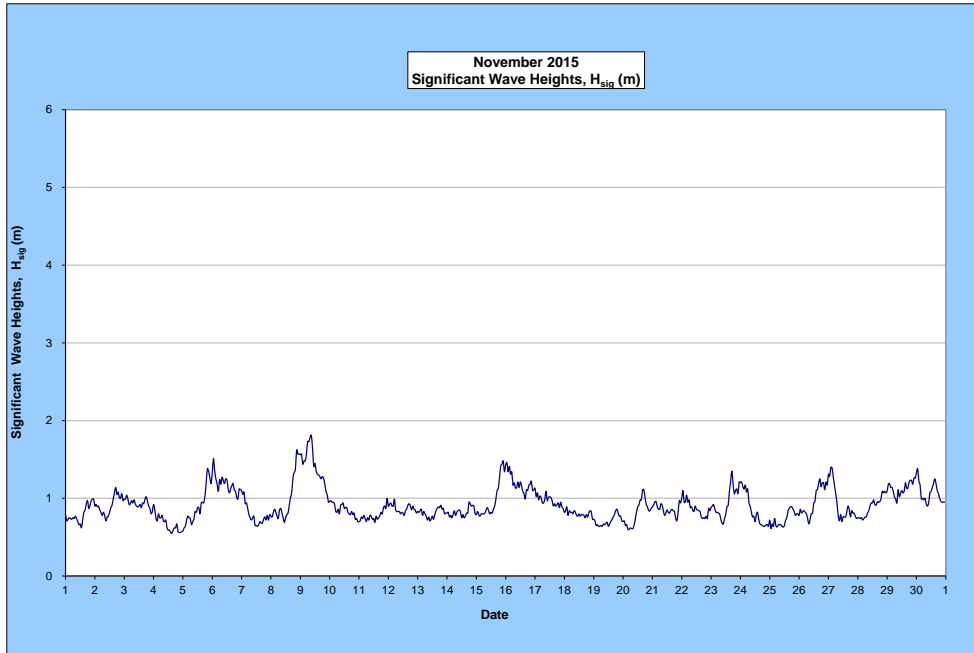
Monthly maximum significant wave height: 1.8 m on 9th November

Number of days on which waves were below 1.0 m at some point in the day: 30 days

Number of days on which waves were above 2.0 m at some point in the day: None

Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

(Source: Tweed & Brisbane Wave Buoy; Queensland Government)



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

WAVE DIRECTION

