TRESBP ENVIRONMENTAL MONITORING SUMMARY JUNE 2015

OVERVIEW

In June 2015:

- 50,999 m³ of sand was pumped to Snapper Rocks East and 2,076 m³ of sand pumped to Duranbah.
- There was 1 media article relating to the project area. Detail is given in Section 3.
- Wave heights ranged mostly from average to moderate (0.9 to 1.9 m) with two moderate sea events on the 6th (up to 1.9 m) and on 11th to 13th (up to 2 m). Wave directions varied from ENE to ESE but mostly from East to ESE.
- 1374 vessel crossings were recorded for the month. (this is about 20% less than the June average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 58,000 m³ (which is close to the June average).

1. SAND PUMPING & DREDGING

Sand Delivery June 2015

Pumped: $53,075 \text{ m}^3$ Dredged: 0 m^3 Total: 53.075 m^3

The number of days sand was pumped this month = 28

Sand Delivery January to June 2015

Pumped: $256,936 \text{ m}^3$ Dredged: 0 m^3 Total: $256,936 \text{ m}^3$

Stage II Sand Delivery April 2000 to June 2015

Pumped: 7,807,319 m³

Dredged: 2,061,972 m³ *

Total: 9,869,291 m³ *







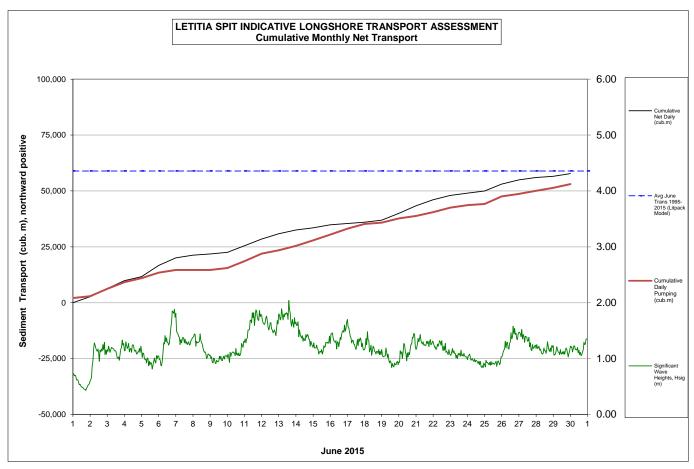
^{*} This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In June 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 58,000 m³.

This result is close to the average estimated sand transport quantity of approximately 59,000 m³ for the month of June.



3. MEDIA COVERAGE

ABC Gold Coast published a report on the 1st that Bern Young of ABC spoke to Dr Brendan Logan the Senior Project Manager for the Tweed Sand Bypassing Project in Breakfast with Bern Young ABC radio programme.







4. TWEED RIVER ENTRANCE CONDITIONS

MARINE RESCUE NSW - MONITORING RESULTS

Weekends and public holidays

	Navigation Rating ImpassableGood					
Date	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	Number of Boats
1 st						41
2 nd						36
3 rd						49
4 th						55
5 th						79
6 th						6
7 th						37
8 th						252
9 th						87
10 th						29
11 th						2
12 th						10
13 th						0
14 th						32
15 th						24
16 th						20
17 th						9
18 th						89
19 th						58
20 th						28
21 st						12
22 nd						33
23 rd						44
24 th						61
25 th						74
26 th						12
27 th						10
28 th						83
29 th	_		_			28
30 th						74
					Total	1374

Source: Marine Rescue NSW, Point Danger

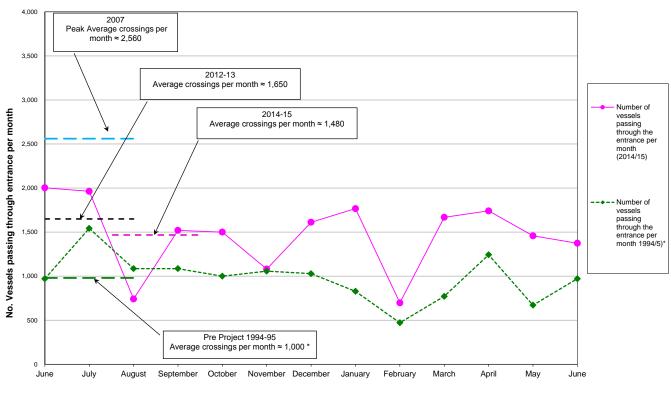






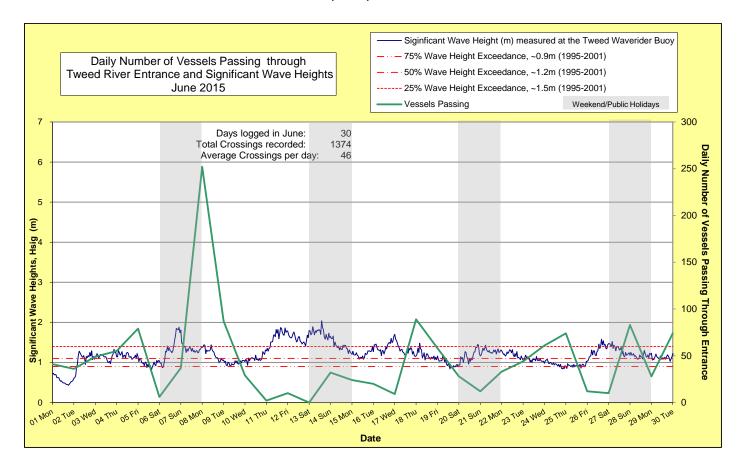
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Comparison of the Number of Vessels Passing Through the Entrance per month 2014/15 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



Month (2014-15)

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









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5. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from average to moderate (0.9 to 1.9 m) with two

moderate sea events on the 6th (up to 1.9 m) and on 11th to 13th (up to 2 m). Wave

directions varied from ENE to ESE but mostly from East to ESE.

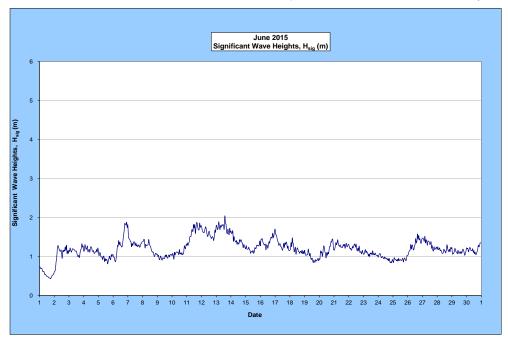
Monthly minimum significant wave height: 0.4 m on 1st June. Monthly maximum significant wave height: 2.0 m on 13th June.

Number of days on which waves were below 1.0 m: 10 days

Number of days on which waves were above 2.0 m: 1 day

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

