TRESBP ENVIRONMENTAL MONITORING SUMMARY SEPTEMBER 2014

OVERVIEW

In September, 2014:

- 35,081 m^3 of sand was pumped to Snapper Rocks East.
- There were 4 media articles relating to the project area. Details are given in Section 3.
- Sea conditions were calm to average for most of the month (significant wave heights 0.5 to 1.7 m) with no recorded storms. Wave directions varied mostly from East to ESE.
- 1520 vessel crossings were recorded for the month (this is about 10% less than the September average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 30,000 m^3 (this is about 110% of the September average).

1. SAND PUMPING & DREDGING

Sand Delivery September 2014

Pumped:	35,081 m^3
Dredged:	0 m^3
Total:	35,081 m^3

The number of days sand was pumped this month = 22

Sand Delivery January 2014 to September 2014

Pumped:	399,783 m^3
Dredged:	0 m^3
Total:	399,783 m^3

Stage II Sand Delivery April 2000 to September 2014

Pumped:	7,484,665 m^3
Dredged:	2,061,972 m^3 *
Total:	9,546,637 m^3 *

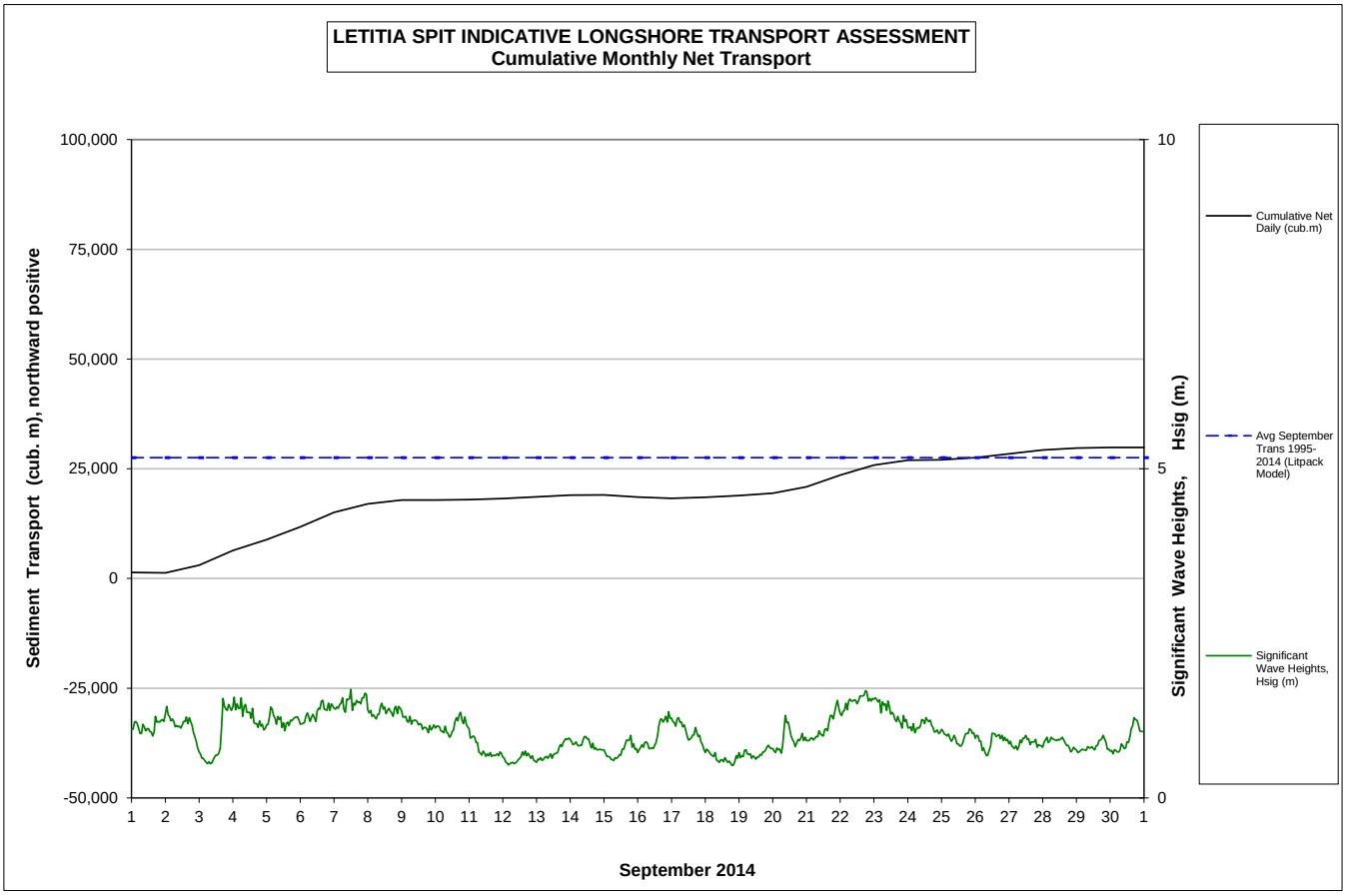
* This Includes 22,870 m^3 of sand delivered by dredge to Palm Beach between June and September 2005.

2. INDICATIVE LONGSHORE TRANSPORT

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

In September 2014 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 30,000 m^3.

This result is about 110% of the average estimated sand transport quantity of approximately 28,000 m^3 for the month of September.



3. MEDIA COVERAGE

There was one media article on 5th (GC Bulletin) related to an employer allowing his employees a day off when big surf hit Gold Coast beaches.

There was one media article on the 9th (Northern Star) relating to a photo of the sand pumping jetty selected as the photo of the day.

There were two media articles on 17th and 18th (Gold Coast Bulletin) relating to Climate Council predicting impacts of rising sea levels on the coastal infrastructure of Gold Coast beaches.

4. TWEED RIVER ENTRANCE CONDITIONS

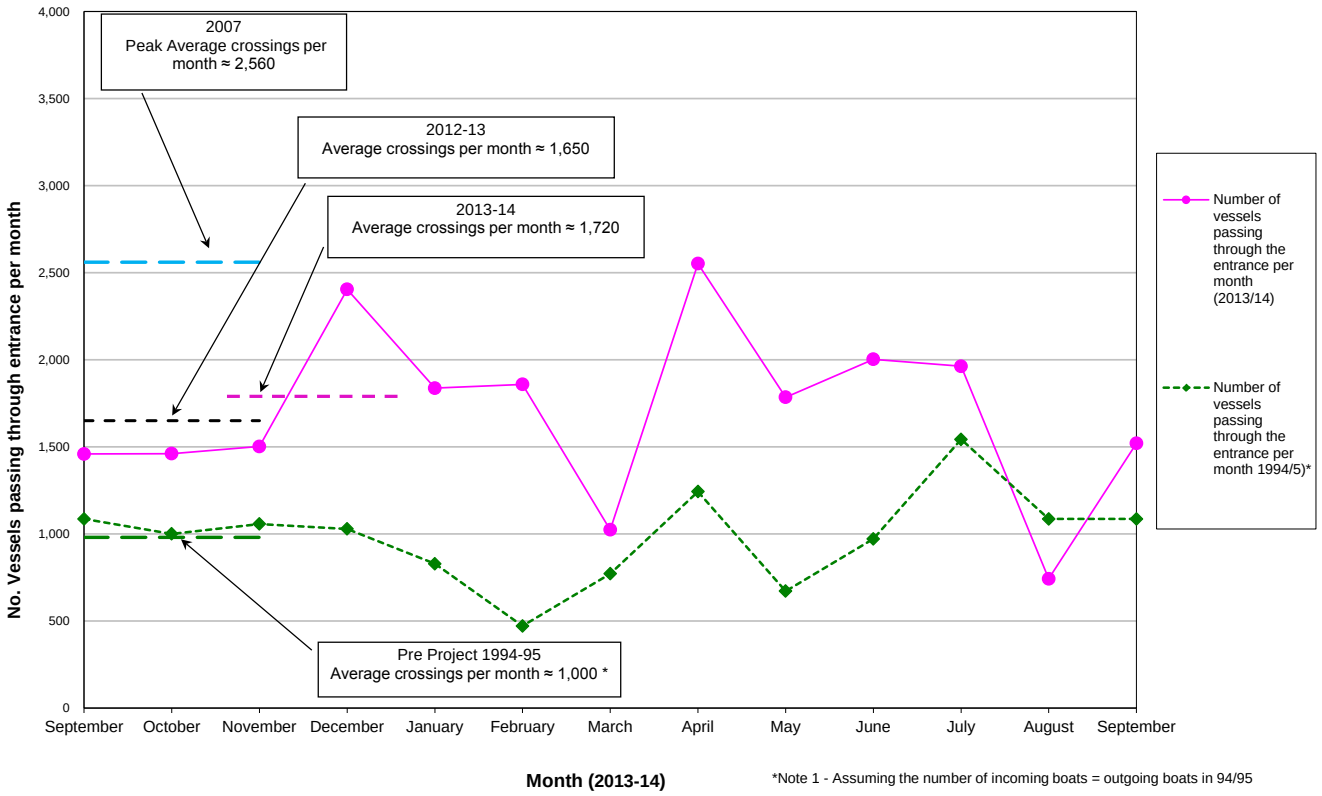
MARINE RESCUE NSW - MONITORING RESULTS

Weekends and public holidays

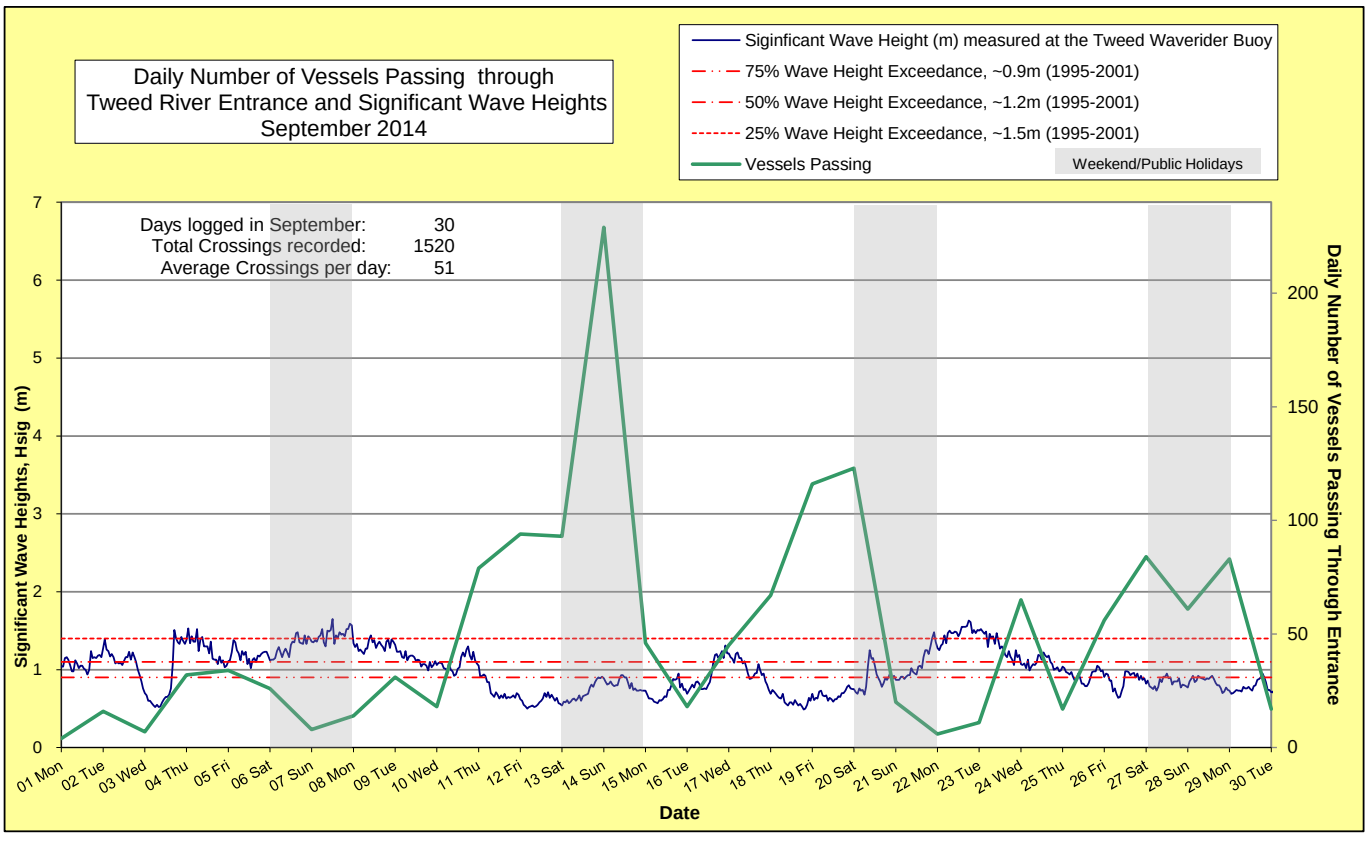
Date	Navigation Rating Impassable----------Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1st						4
2nd						16
3rd						7
4th						32
5th						34
6th						26
7th						8
8th						14
9th						31
10th						18
11th						79
12th						94
13th						93
14th						229
15th						46
16th						18
17th						45
18th						67
19th						116
20th						123
21st						20
22nd						6
23rd						11
24th						65
25th						17
26th						56
27th						84
28th						61
29th						83
30th						17
					Total	**1520**

Source: *Marine Rescue NSW, Point Danger*

Comparison of the Number of Vessels Passing Through the Entrance per month
2013/14 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



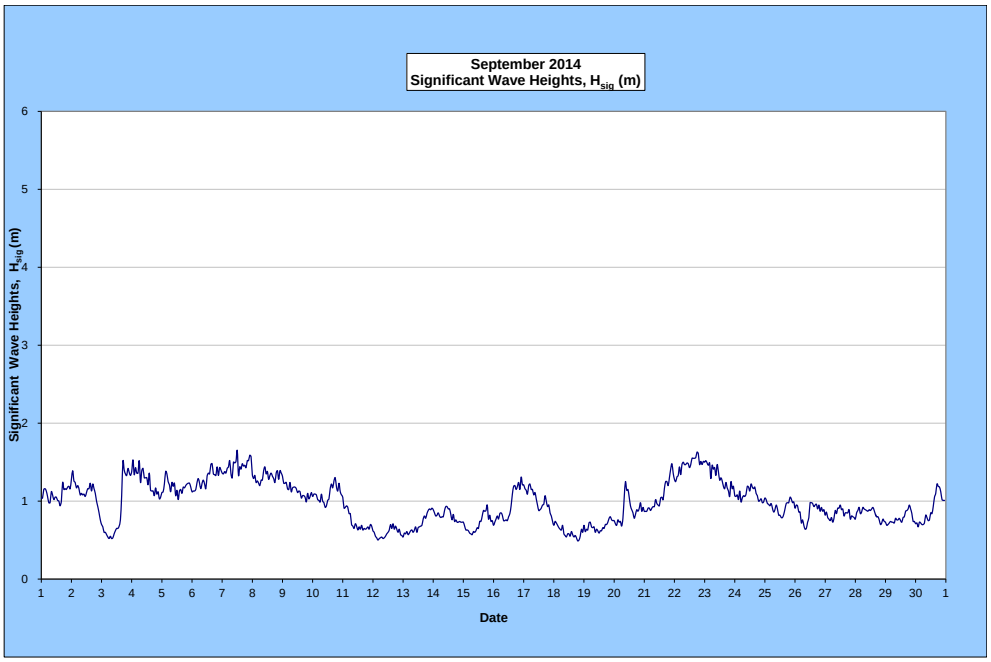
5. WAVE CONDITIONS

Wave Conditions over the month: Significant wave heights were calm to average for most of the month (0.5 to 1.5 m) with no recorded storms. Wave directions varied mostly from East to ESE.

Monthly minimum significant wave height: 0.5 m on 18th September.
Monthly Maximum significant wave height: 1.7 m on 7th September.
Number of days on which waves were below 1.0 m: 23 days
Number of days on which waves were above 2.0 m: Nil

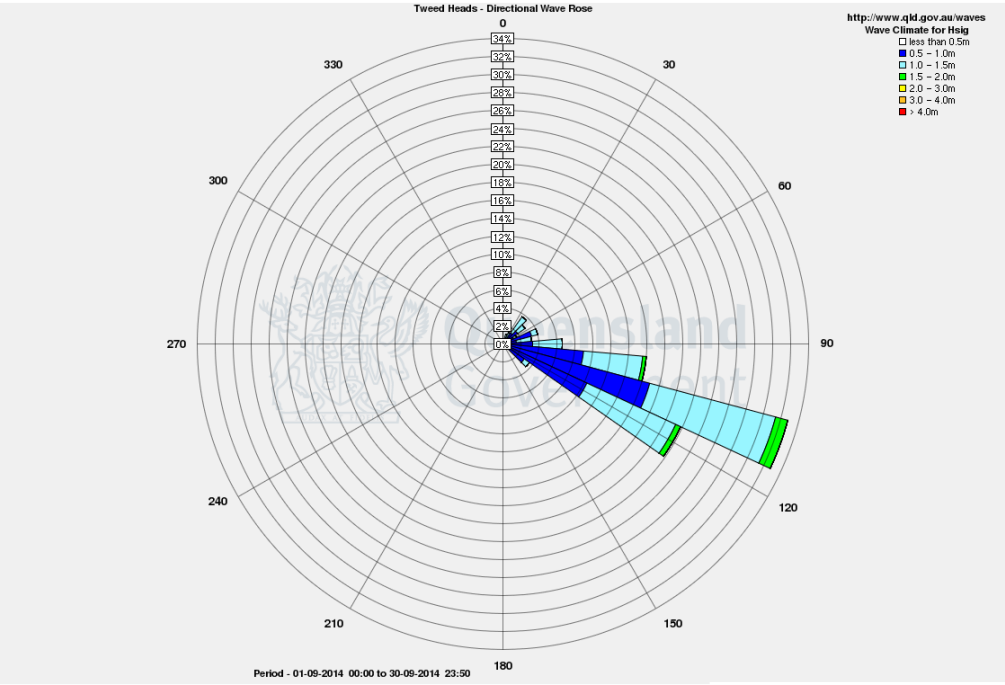
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

*(**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



END

***Source:** Queensland Government*