

# TRESBP ENVIRONMENTAL MONITORING SUMMARY

## September 2016

### OVERVIEW

In September 2016:

- 16,768 m<sup>3</sup> of sand was pumped to Snapper Rocks East.
- 0 m<sup>3</sup> of sand was pumped to Duranbah Beach.
- There were no media articles relating to the Project area during August.
- Wave heights ranged mostly from calm to moderate (0.36 to 2.22 m), with a maximum significant wave height of 2.22 m on 9<sup>th</sup> September. Wave directions varied from NE by N to SE by S but mostly from the SE by E.
- 1811 vessel crossings were recorded for the month (This is 106% of the September average).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 12,500 m<sup>3</sup> (this is about 44% of the September average of about 28,500 m<sup>3</sup>).

### 1. SAND PUMPING & DREDGING

#### **Sand Delivery September 2016**

Pumped:	16,768 m <sup>3</sup>
Dredged:	0 m <sup>3</sup>
Total:	16,768 m <sup>3</sup>

The number of days sand was pumped this month = 19

#### **Sand Delivery January 2016 to September 2016**

Pumped:	350,851 m <sup>3</sup>
Dredged:	41,938 m <sup>3</sup>
Total:	392,794 m <sup>3</sup>

#### **Stage II Sand Delivery April 2000 to September 2016**

Pumped:	8,453,916 m <sup>3</sup>
Dredged:	2,103,910 m <sup>3</sup> *
Total:	10,557,826 m <sup>3</sup> *

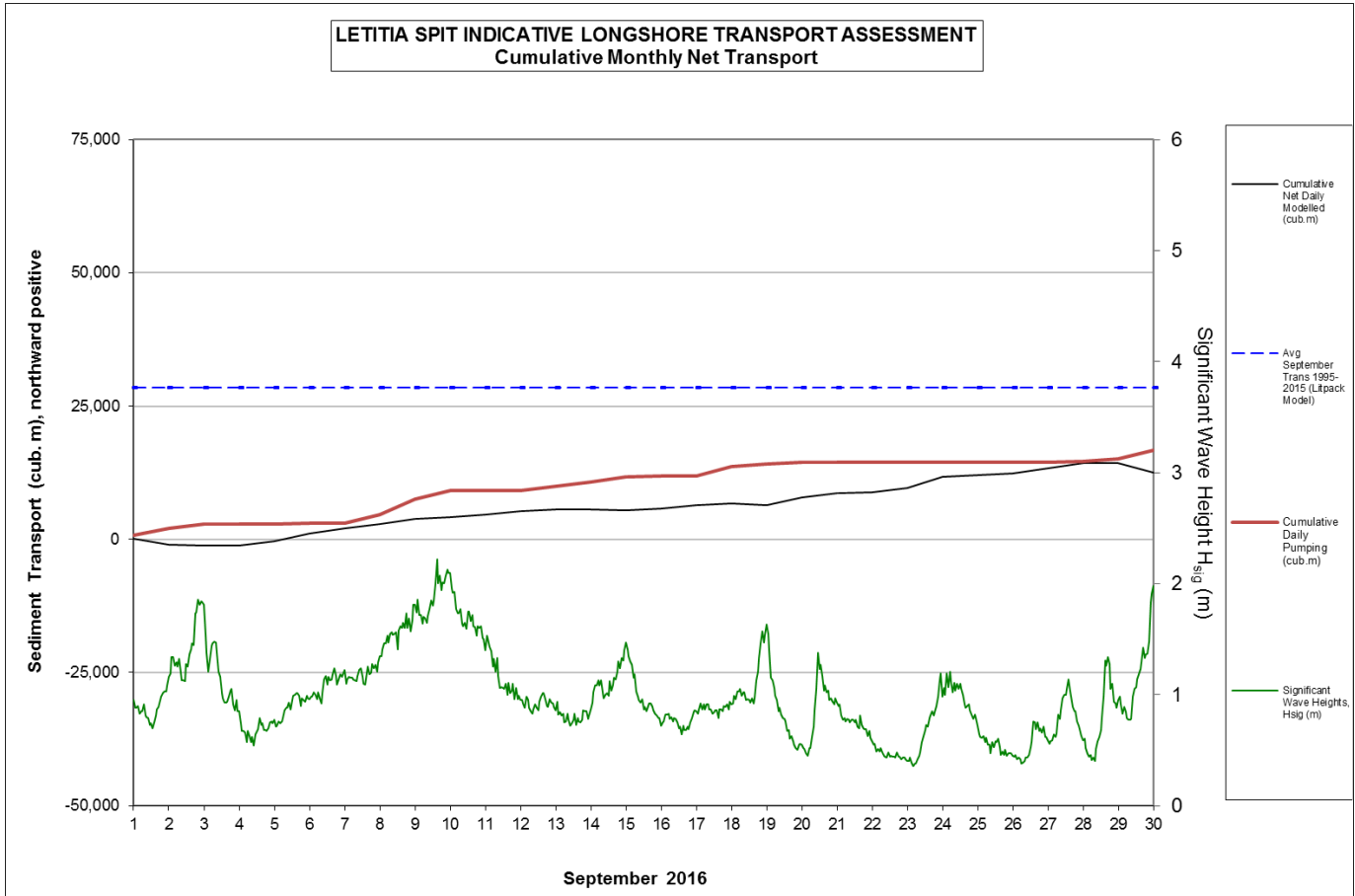
\* This Includes 22,870 m<sup>3</sup> of sand delivered by dredge to Palm Beach between June and September 2005

## 2. INDICATIVE LONGSHORE TRANSPORT

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

In September 2016 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 12,500 m<sup>3</sup>.

This result is about 44% of the average estimated sand transport quantity of approximately 28,500 m<sup>3</sup> for the month of September.




## 3. MEDIA COVERAGE

There were no media articles relating to the project area during August.

**4. TWEED RIVER ENTRANCE USAGE**

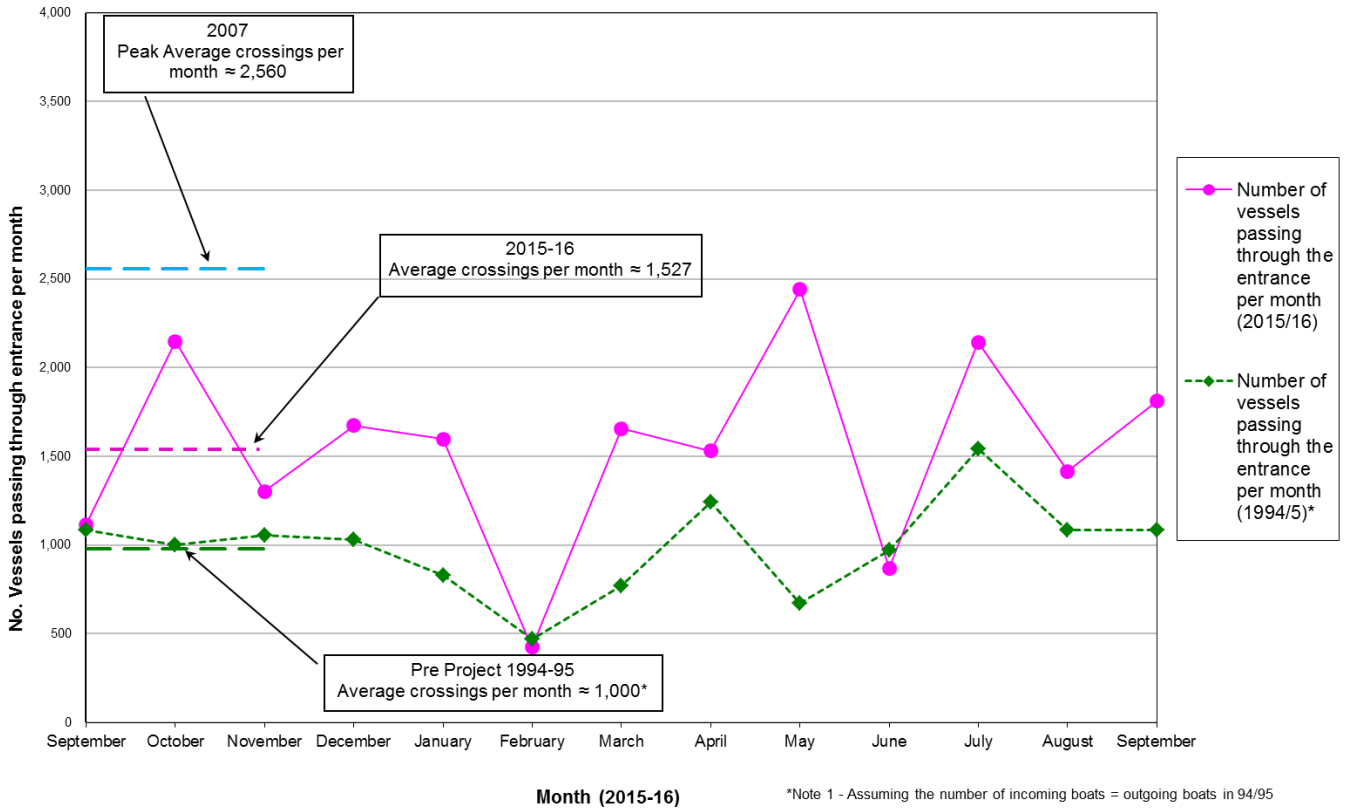
Marine Rescue NSW - Monitoring Results September 2016

 Weekends and public holidays

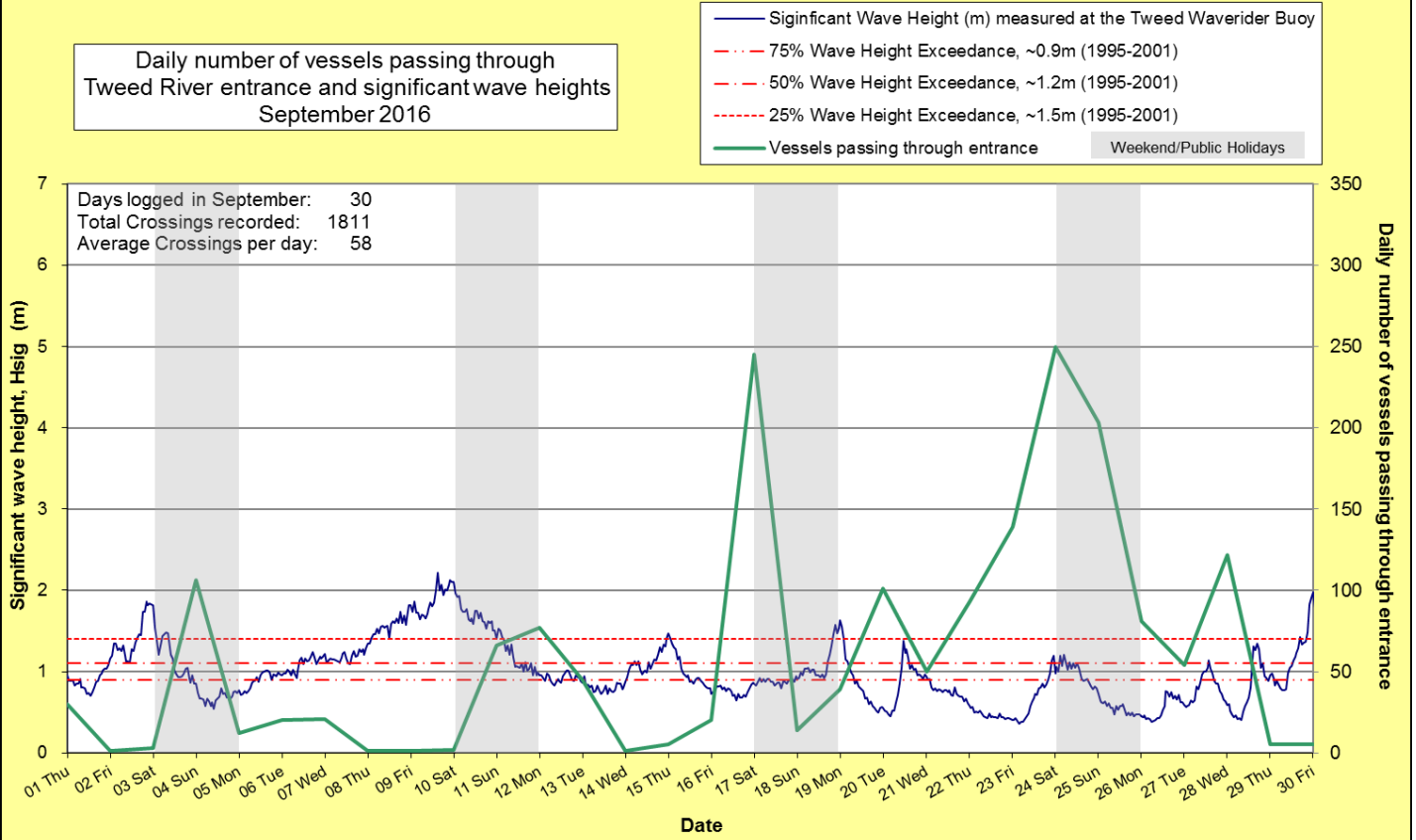
Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1 <sup>st</sup>						30
2 <sup>nd</sup>						1
						3
						106
						12
6 <sup>th</sup>						20
7 <sup>th</sup>						21
8 <sup>th</sup>						1
9 <sup>th</sup>						1
						2
						66
						77
13 <sup>th</sup>						45
14 <sup>th</sup>						1
15 <sup>th</sup>						5
16 <sup>th</sup>						20
						245
						14
						39
20 <sup>th</sup>						101
21 <sup>st</sup>						50
22 <sup>nd</sup>						93
23 <sup>rd</sup>						139
						250
						203
						81
27 <sup>th</sup>						54
28 <sup>th</sup>						122
29 <sup>th</sup>						5
30 <sup>th</sup>						4
						<b>Total</b>
						1811

Source: Marine Rescue NSW, Point Danger

Comparison of the number of vessels passing through the entrance per month 2015/16 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



Daily number of vessels passing through Tweed River entrance and significant wave heights September 2016



## 5. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to moderate (0.36 to 2.22 m), with a maximum significant wave height of 2.22 m on 9<sup>th</sup> September. Wave directions varied from NE by N to SE by E but mostly from the ESE.

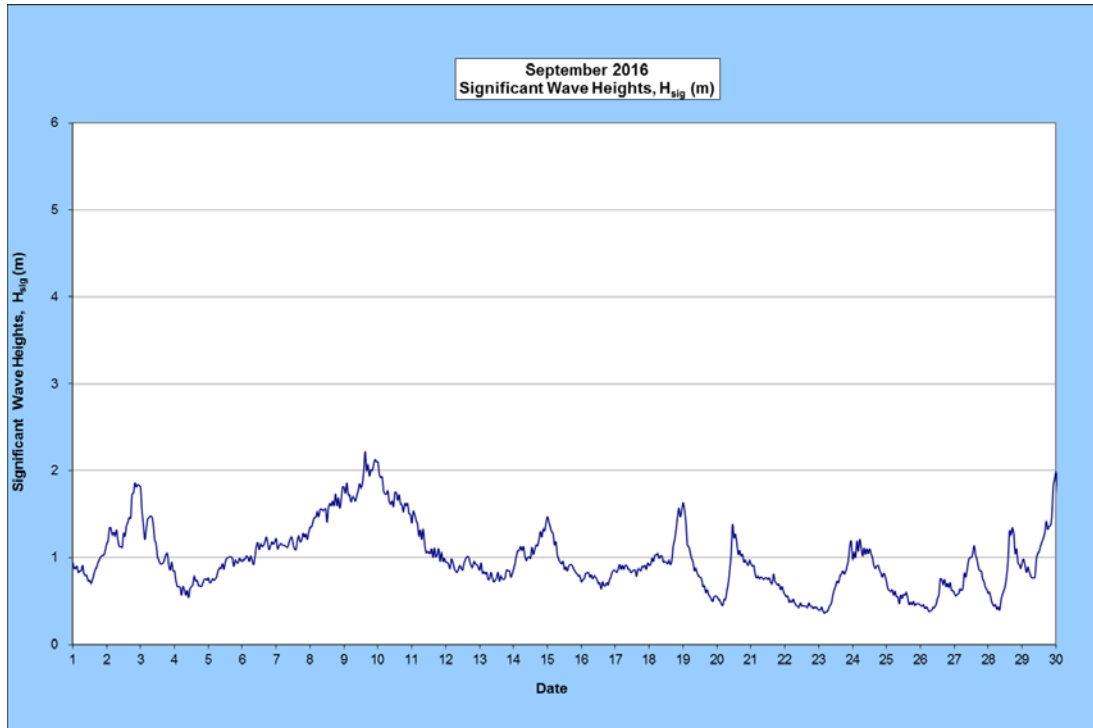
Monthly minimum significant wave height: 0.37 m on 23<sup>th</sup> September

Monthly maximum significant wave height: 2.22 m on 9<sup>th</sup> September

Number of days on which waves were below 1.0 m at some point in the day: 25 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 height of the highest one-third of waves recorded over a period of typically 15 minutes.



(Source: Tweed 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

<http://www.qld.gov.au/waves>  
Wave Climate for Hsig

- less than 0.5m
- 0.5 – 1.0m
- 1.0 – 1.5m
- 1.5 – 2.0m
- 2.0 – 3.0m
- 3.0 – 4.0m
- > 4.0m

Source: Queensland Government

