

# TRESBP ENVIRONMENTAL MONITORING SUMMARY

## August 2016

### OVERVIEW

In August 2016:

- 32,622 m<sup>3</sup> of sand was pumped to Snapper Rocks East.
- 6,239 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 high (0.37 to 2.88 m), with a maximum significant wave height of 2.88 m on 4<sup>th</sup> August. Wave directions varied from NE by N to SE by E but mostly from the ESE.
- 1416 vessel crossings were recorded for the month. (This is 92% of the August average).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 54,000 m<sup>3</sup> (this is about 119% of the August average of about 45,000 m<sup>3</sup>).

### 1. SAND PUMPING & DREDGING

#### **Sand Delivery August 2016**

Pumped:	38,861 m <sup>3</sup>
Dredged:	0 m <sup>3</sup>
Total:	38,861 m <sup>3</sup>

The number of days sand was pumped this month = 22

#### **Sand Delivery January 2016 to August 2016**

Pumped:	334,083 m <sup>3</sup>
Dredged:	41,938 m <sup>3</sup>
Total:	376,021 m <sup>3</sup>

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

Pumped:	8,437,148 m <sup>3</sup>
Dredged:	2,103,910 m <sup>3</sup> *
Total:	10,541,058 m <sup>3</sup> *

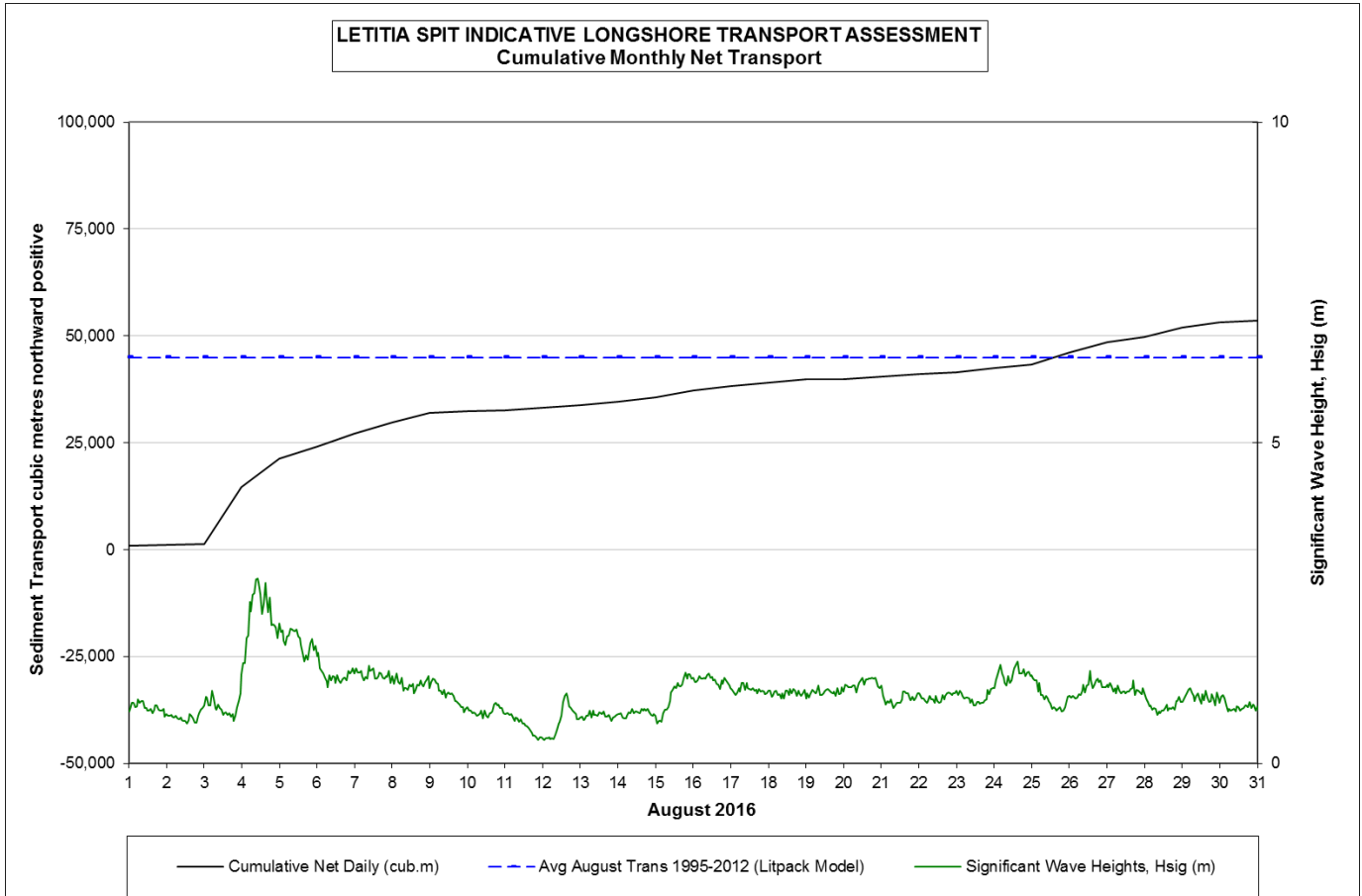
\* This Includes 22,870 m<sup>3</sup> of sand delivered by dredge to Palm Beach between August and September 2005

## 2. INDICATIVE LONGSHORE TRANSPORT

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

In August 2016 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 54,000 m<sup>3</sup>.

This result is about 119% of the average estimated sand transport quantity of approximately 45,000 m<sup>3</sup> for the month of August.




## 3. MEDIA COVERAGE

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

#### 4. TWEED RIVER ENTRANCE USAGE

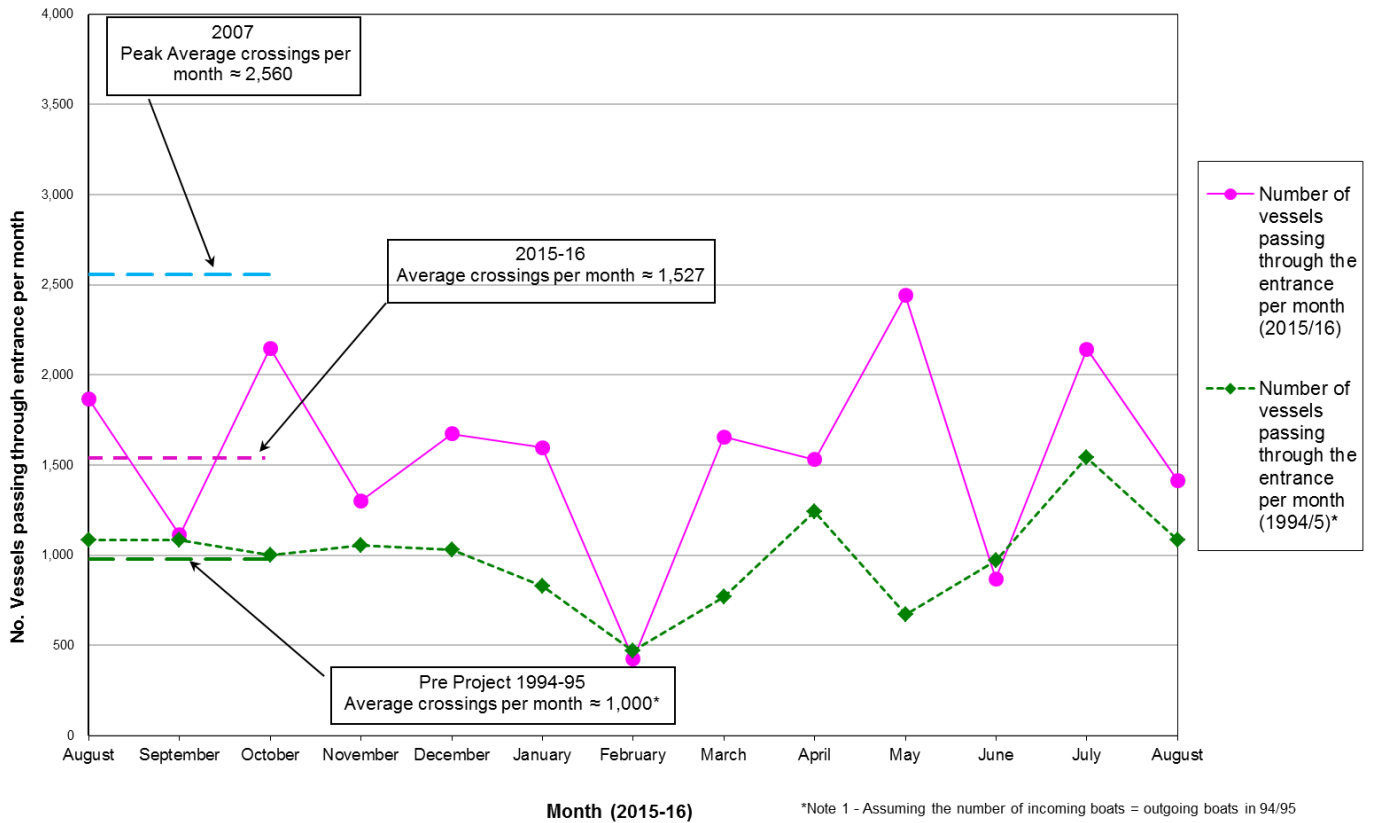
Marine Rescue NSW - Monitoring Results

 Weekends and public holidays

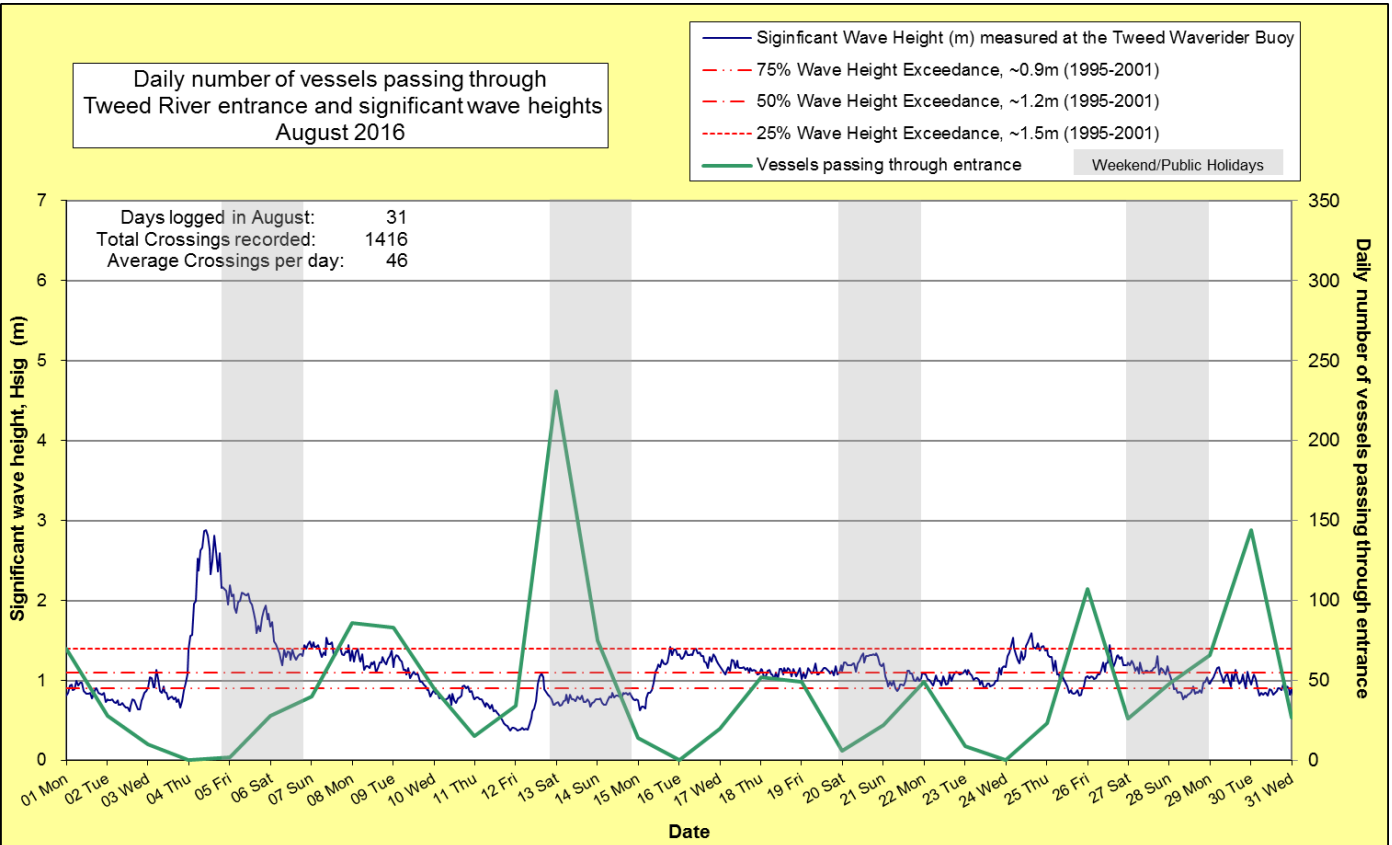
Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1 <sup>st</sup>						70
2 <sup>nd</sup>						28
3 <sup>rd</sup>						10
4 <sup>th</sup>						0
5 <sup>th</sup>						2
6 <sup>th</sup>						28
7 <sup>th</sup>						40
8 <sup>th</sup>						86
9 <sup>th</sup>						83
10 <sup>th</sup>						45
11 <sup>th</sup>						15
12 <sup>th</sup>						34
13 <sup>th</sup>						231
14 <sup>th</sup>						75
15 <sup>th</sup>						14
16 <sup>th</sup>						0
17 <sup>th</sup>						20
18 <sup>th</sup>						52
19 <sup>th</sup>						49
20 <sup>th</sup>						6
21 <sup>st</sup>						22
22 <sup>nd</sup>						49
23 <sup>rd</sup>						9
24 <sup>th</sup>						0
25 <sup>th</sup>						23
26 <sup>th</sup>						107
27 <sup>th</sup>						26
28 <sup>th</sup>						48
29 <sup>th</sup>						66
30 <sup>th</sup>						144
31 <sup>st</sup>						27
						<b>Total</b>
						1416

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 August 2016



## 5. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to high (0.37 to 2.88 m), with a maximum significant wave height of 2.88 m on 4<sup>th</sup> August. Wave directions varied from NE by N to SE by E but mostly from the ESE.

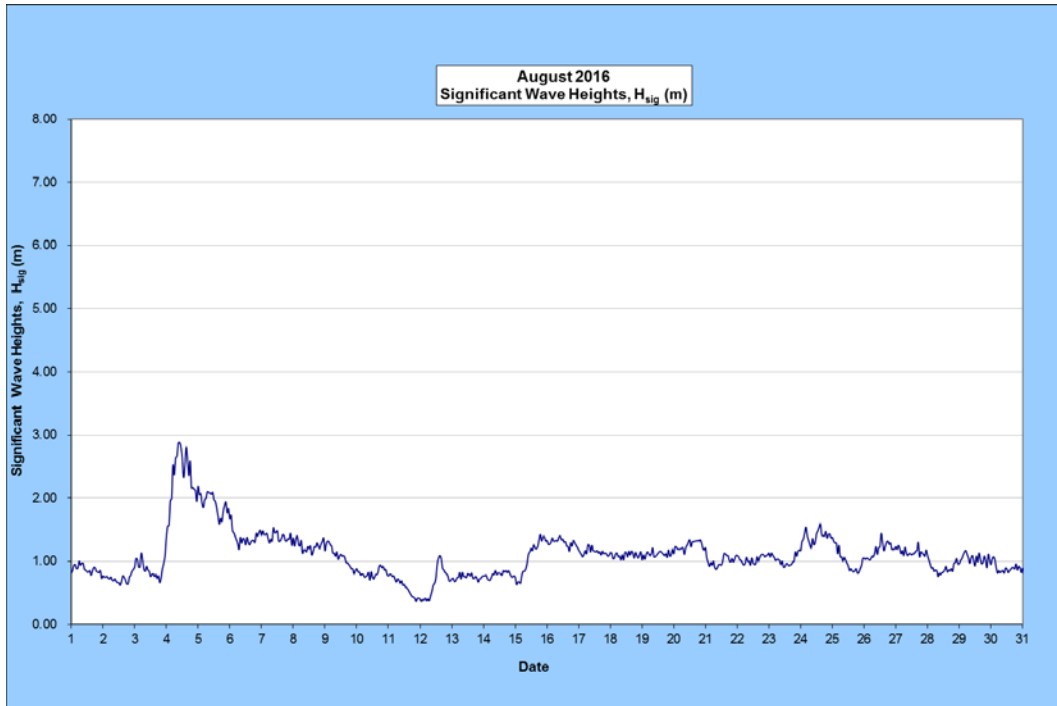
Monthly minimum significant wave height: 0.37 m on 11<sup>th</sup> August

Monthly maximum significant wave height: 2.88 m on 4<sup>th</sup> August

Number of days on which waves were below 1.0 m at some point in the day: 17 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

