# TRESBP ENVIRONMENTAL MONITORING SUMMARY MARCH 2014

#### **OVERVIEW**

In March, 2014:

- 55,527 m³ of sand was pumped to Snapper Rocks East.
- There was one media article relating to the night-time crossings of the Tweed bar by the Point Danger Marine Rescue Vessel to rescue a boat sinking at Byron Bay.
- Sea conditions were average to moderate for most of the month with two minor storms on the 16<sup>th</sup> and 28<sup>th</sup> with significant wave height reaching 3.7m and 3.1m respectively. Wave directions varied mostly from East to ENE.
- 1,024 vessel crossings were recorded for the month. (This is about 40% less than the March average)
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 36,000 m<sup>3</sup> (this is about 60% of the March average).

#### 1. SAND PUMPING & DREDGING

#### Sand Delivery March 2014

Pumped:  $55,527 \text{ m}^3$ Dredged:  $0 \text{ m}^3$ Total:  $55,527 \text{ m}^3$ 

#### Sand Delivery January to March 2014

Pumped:  $139,218 \text{ m}^3$ Dredged:  $0 \text{ m}^3$ Total:  $139,218 \text{ m}^3$ 

#### Stage II Sand Delivery March 2000 to March 2014

Pumped: 7,224,100 m<sup>3</sup>
Dredged: 2,061,972 m<sup>3</sup>
Total: 9,286,072 m<sup>3</sup>

This includes 22,870 m<sup>3</sup> of sand delivered by dredge to Palm Beach





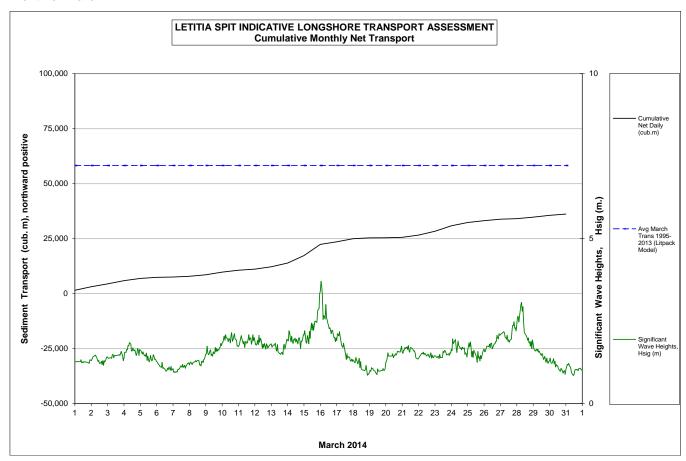


#### 2. INDICATIVE LONGSHORE TRANSPORT

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

In March 2014 the estimated natural sand transport (moving North towards the Tweed River entrance): was calculated to be in the order of 36,000 m<sup>3</sup>.

This result is about 60% of the average estimated sand transport quantity of approximately 59,000 m<sup>3</sup> for the month of March.



#### 3. MEDIA COVERAGE

There was one media article relating to the project area on 25<sup>th</sup> March (My Daily News)

The article related to the night-time crossings of the Tweed bar by the Point Danger Marine Rescue Vessel to rescue a boat sinking at Byron Bay.

### **4. TWEED RIVER ENTRANCE CONDITIONS**

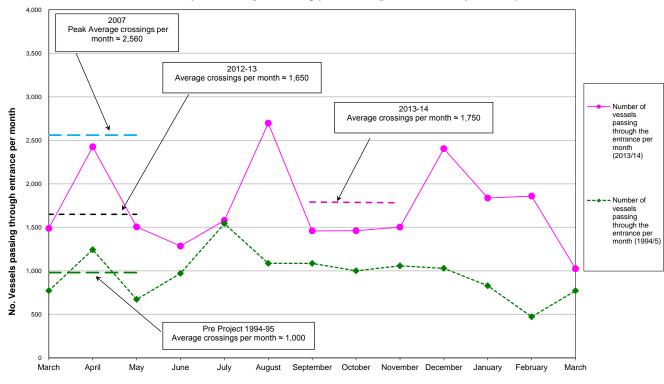
#### **MARINE RESCUE NSW - MONITORING RESULTS**

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 <sup>st</sup>						60
2 <sup>nd</sup>						95
3 <sup>rd</sup>						3
4 <sup>th</sup>						1
5 <sup>th</sup>						32
6 <sup>th</sup>						69
7 <sup>th</sup>						72
8 <sup>th</sup>						52
9 <sup>th</sup>						4
10 <sup>th</sup>						0
11 <sup>th</sup>						0
12 <sup>th</sup>						18
13 <sup>th</sup>						19
14 <sup>th</sup>						24
15 <sup>th</sup>						35
16 <sup>th</sup>						23
17 <sup>th</sup>						5
18 <sup>th</sup>						53
19 <sup>th</sup>						57
20 <sup>th</sup>						23
21 <sup>st</sup>						30
22 <sup>nd</sup>						48
23 <sup>rd</sup>						116
24 <sup>th</sup>						8
25 <sup>th</sup>						12
26 <sup>th</sup>						3
27 <sup>th</sup>						0
28 <sup>th</sup>						0
29 <sup>th</sup>						30
30 <sup>th</sup>						100
31 <sup>st</sup>						32
					Total	1,024

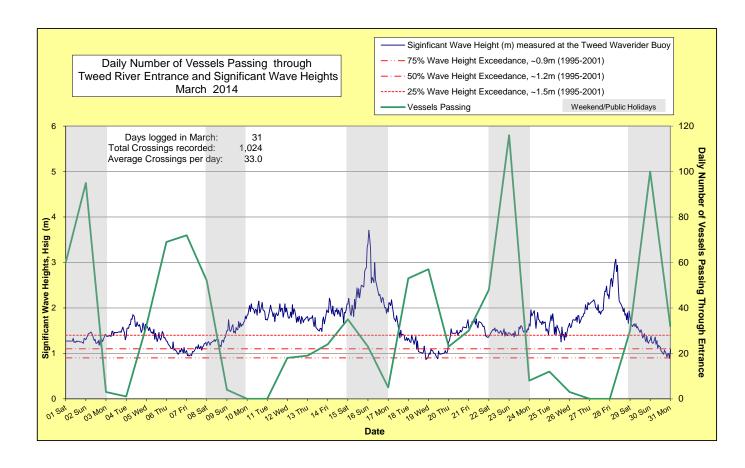
Source: Marine Rescue NSW, Point Danger

## 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)



Month (2013-14)

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



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#### **5. WAVE CONDITIONS**

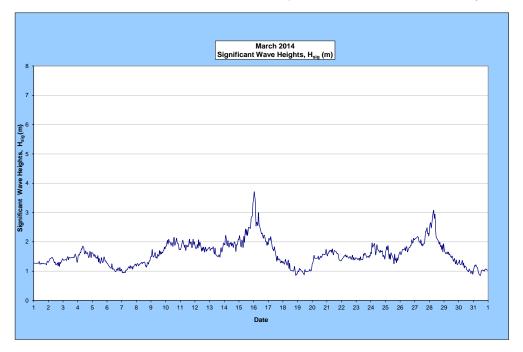
Wave Conditions over the month:

Significant wave heights were average to moderate throughout the month with two minor storms (occurring on the 16<sup>th</sup> and 28<sup>th</sup>) with significant wave height to 3.7m and 3.1m respectively. Wave direction ranged from East to ENE.

<u>Major sea events</u>: 10<sup>th</sup> to 12<sup>th</sup>, 14<sup>th</sup> to 17<sup>th</sup> and 26<sup>th</sup> to 28<sup>th</sup> of March <u>Monthly minimum significant wave height</u>: 0.9 m on 31<sup>th</sup> March. <u>Monthly Maximum significant wave height</u>: 3.7 m on 16<sup>th</sup> March. <u>Number of days on which waves were below 1.0 m</u>: 6 days <u>Number of days on which waves were above 2.0 m</u>: 10 days

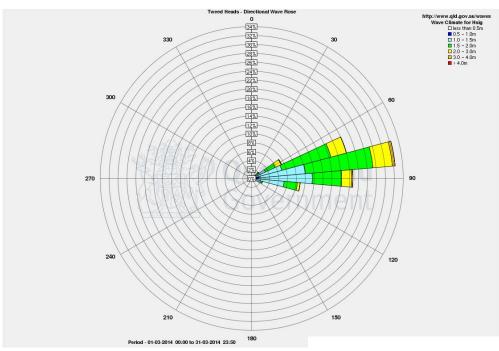
**Note:** Significant wave heights or  $H_{sig}$  is the average of the highest one third of recorded waves.

(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