

TWEED SAND BYPASSING

ENVIRONMENTAL MONITORING SUMMARY – August 2024

1. SAND PUMPING & DREDGING

- 34,728 m³ was pumped to Snapper Rocks East.
- 77,298 m³ of sand was dredged.

Sand Delivery August 2024

Pumped: 34,728 m³

Dredged: 77,298 m³

Total: 112,026 m³

The number of days sand was pumped this month = 11

The number of days sand was dredged this month = 13

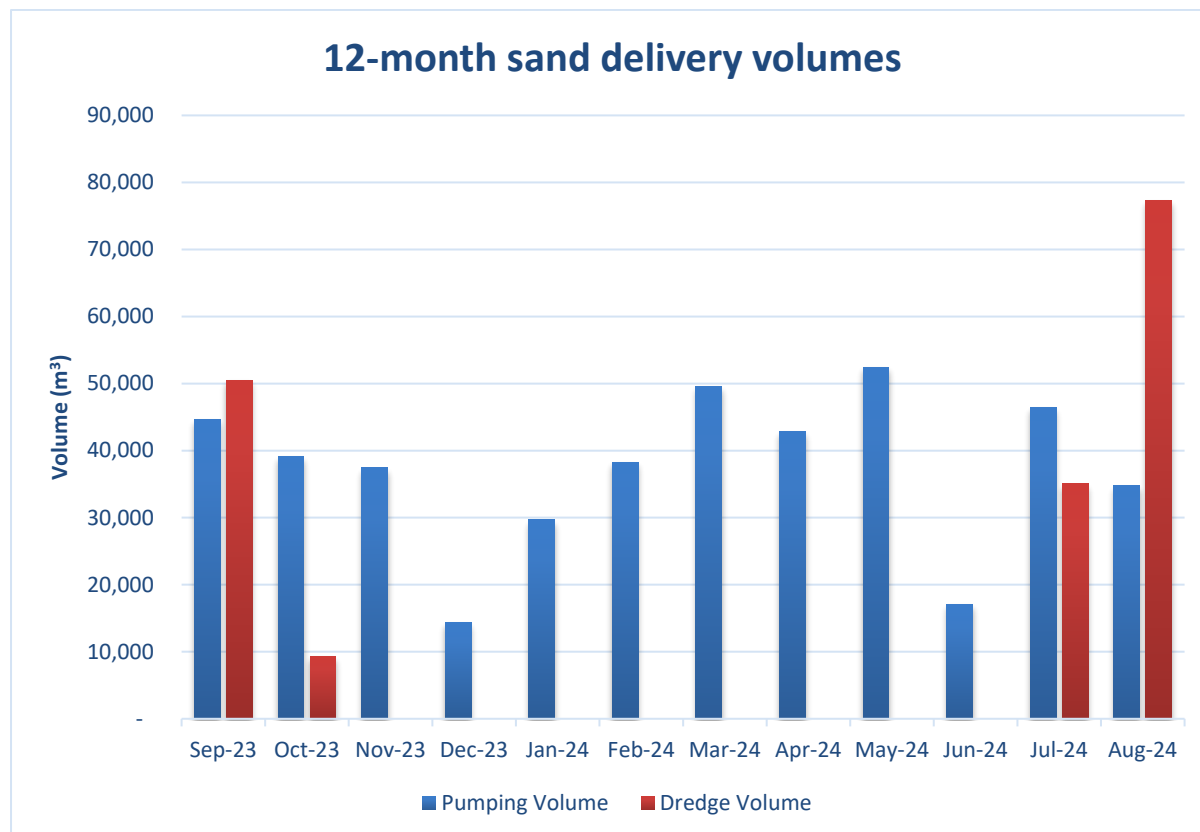
Sand Delivery May 2000 to August 2024

Pumped: 11,876,783 m³

Dredged*: 3,159,617 m³

Total*: 15,036,400 m³

* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between July 2005 and September 2005



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2. WAVE CONDITIONS

The first 2 weeks in August had energetic conditions with the maximum H_{sig} observed on the 13th of 3.21 m. Calmer conditions presented over the remainder of the month with wave heights consistently below 1.5 m H_{sig} .

- Minimum H_{sig} : 0.41 m on 18 August 2024
- Maximum H_{sig} : 3.21 m on 13 August 2024
- Number of days where $H_{sig} < 1$ m at some point: 17
- Number of days where $H_{sig} > 2$ m at some point: 7

Note: H_{sig} is defined as the average of the highest $\frac{1}{3}$ of waves recorded over a period of approximately 30 minutes



(Source: Tweed Heads Waverider buoy; Queensland Government)

A link to data recorded by the Tweed Heads and Tweed Offshore Waverider buoys is available at:

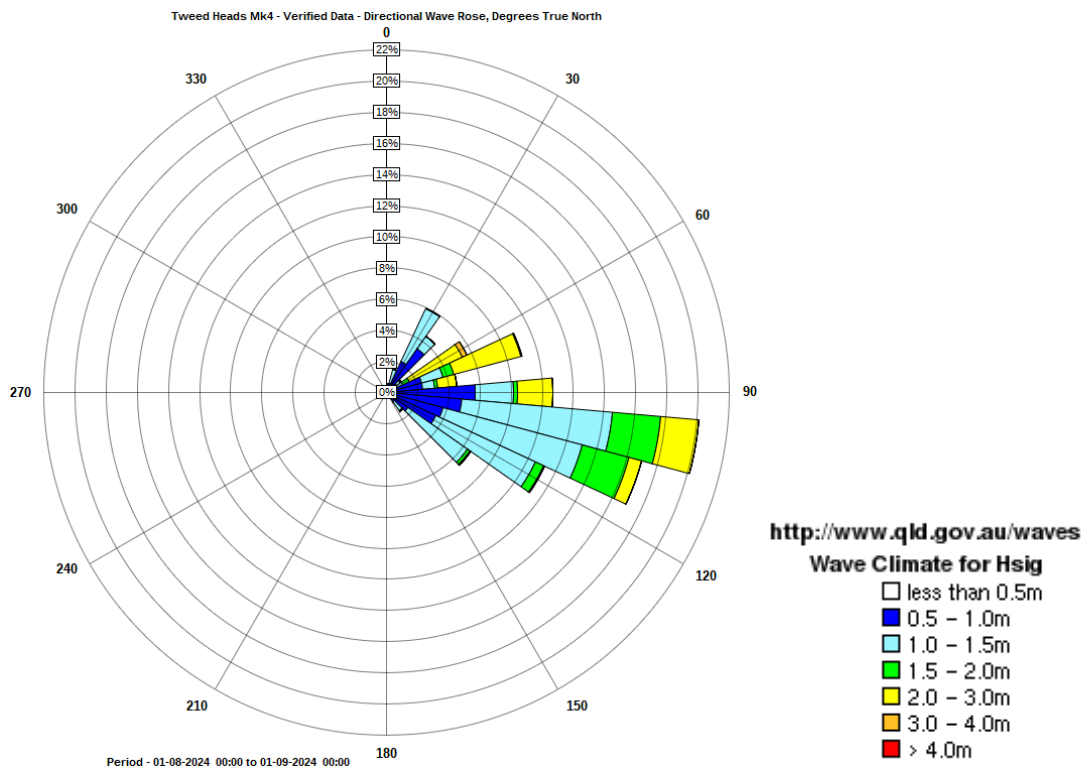
<http://www.qld.gov.au/waves>

<https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-offshore>

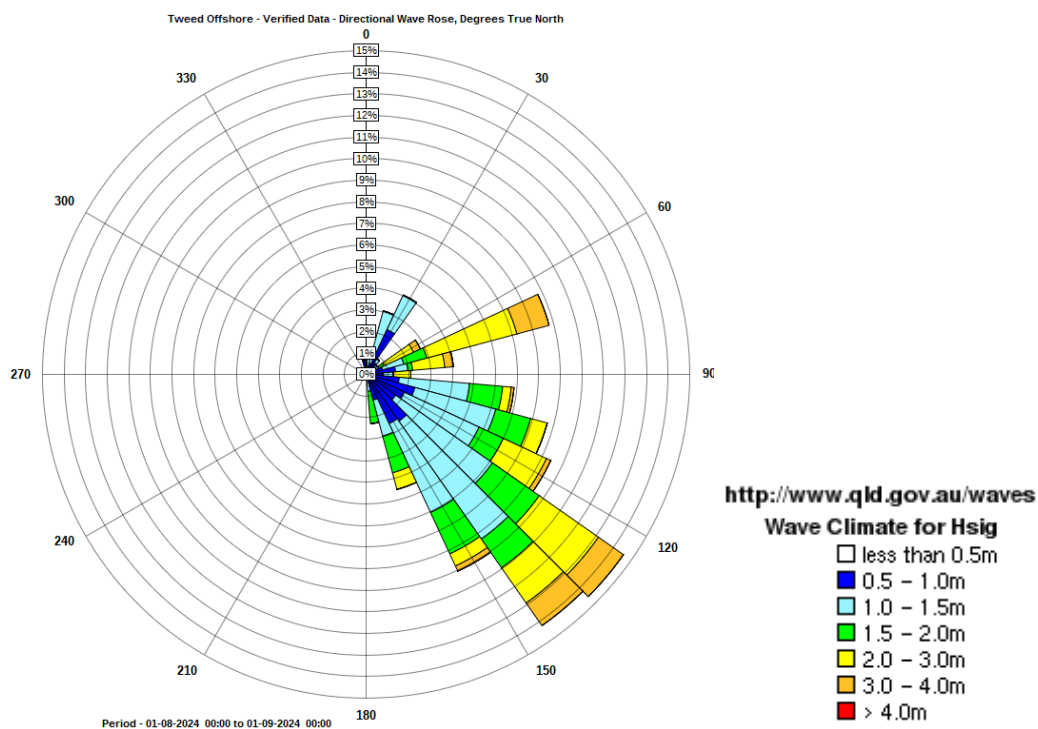
<https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-heads>

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NEARSHORE WAVE DIRECTION



OFFSHORE WAVE DIRECTION

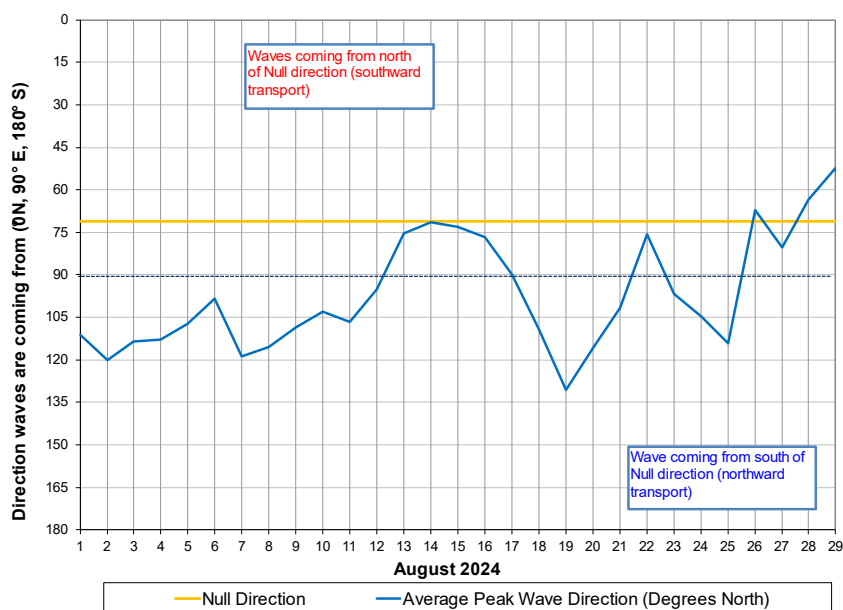
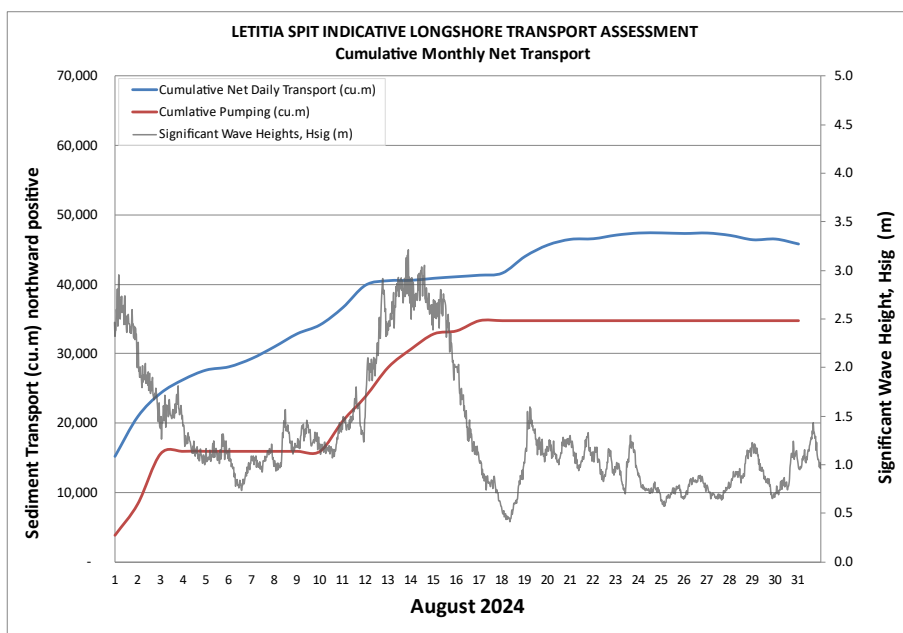


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3. INDICATIVE LONGSHORE TRANSPORT

The first graph below is based on simplified sediment transport modelling and is indicative only. The second graph indicates the wave direction in relation to the shoreline null direction (a wave direction coming from south of this line generally results in northward transport of sand).

In August 2024, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 45,700 m³. This result is 108 per cent of the average estimated sand transport quantity of approximately 42,400 m³ for August.



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4. BEACH AND SURF AMENITY OBSERVATIONS

As consistently observed in previous months, Duranbah is still experiencing scarping of the nourishment that was completed in May. Plenty of sand still remains within Rainbow Bay. This beach building is observed annually as part of seasonal variations.



Rainbow Bay 14 August *south aspect



Rainbow Bay 14 August *north aspect







Greenmount 14 August



Duranbah 14 August

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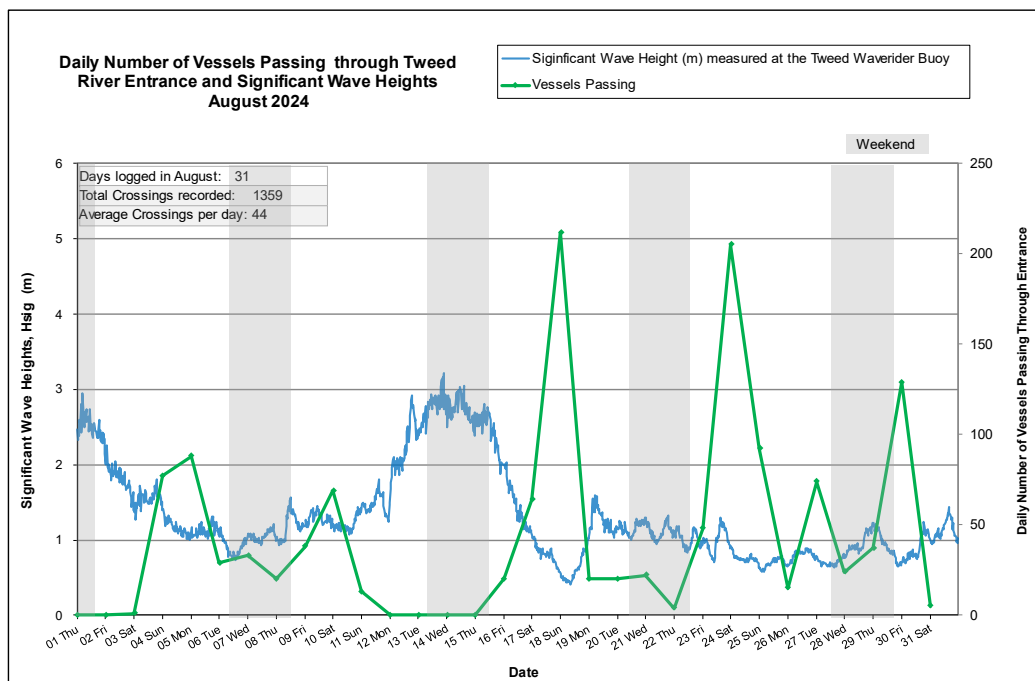
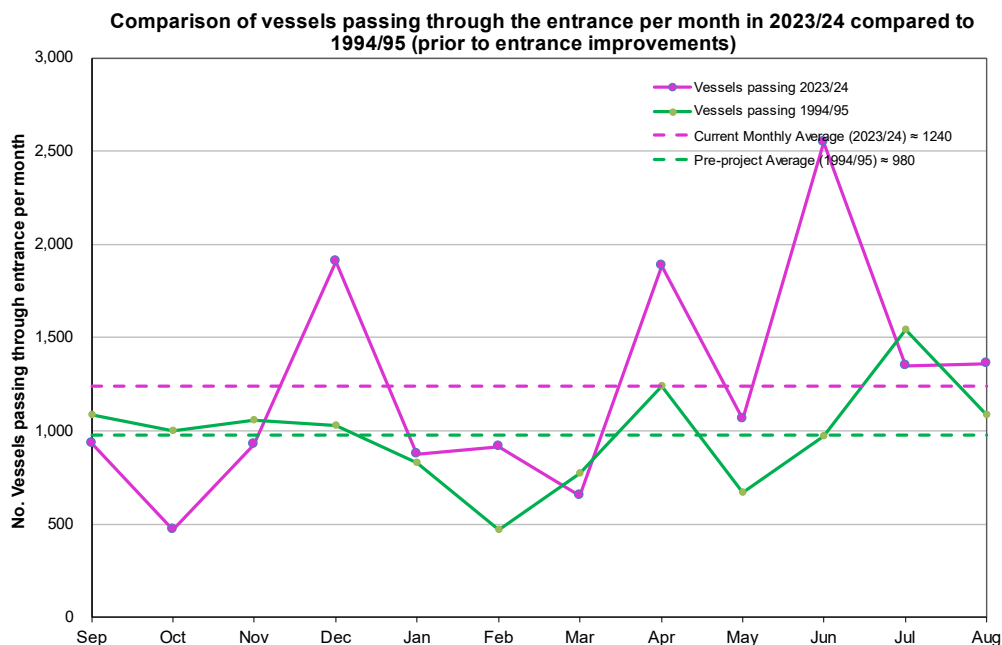
Snapper was observed to be the favourable surf location in August with tubes and long walls extending through to Rainbow Bay.

	
Snapper Rocks 1 August	Snapper Rocks 11 August
	
Snapper Rocks 11 August	Snapper Rocks 12 August

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5. TWEED RIVER ENTRANCE USAGE

A total of 1,359 Tweed River entrance vessel crossings were recorded for the month (75 per cent of the August average (2002–2024)). Entrance met the navigability objectives as defined in the legislation during August.



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Date August 2024	Navigation Rating					Number of Crossings
	Impassable <-----> Good					
	Impassable	Difficulty Encountere d	Some Difficulty Encountere	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						0
2						0
3						1
4						77
5						88
6						29
7						33
8						20
9						38
10						69
11						13
12						0
13						0
14						0
15						0
16						20
17						64
18						212
19						20
20						20
21						22
22						4
23						48
24						205
25						92
26						15
27						74
28						24
29						37
30						129
31						5
					Total:	1,359

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

Source: Marine Rescue NSW, Point Danger