

# Coffs Harbour City Council

**Ocean beaches:** Woolgoolga Main, Emerald, Diggers, Park, Jetty, Mid Sawtell.  
**Ocean pools:** Sawtell Rock Pool.



## Local government area description

Coffs Harbour City Council is situated on the NSW North Coast, approximately 550 kilometres north of Sydney. The council area has 68 kilometres of coastline, stretching from Red Rock in the north to Bundagen in the south and includes 21 beaches and 14 major coastal creeks. The Solitary Islands Marine Park encompasses much of the council's coastal waters.

The population of the area is 70,000 and approximately 91% of the population resides in towns along the coast. The council area is interspersed with sparsely populated rural areas, and approximately half is covered by forest.

Average rainfall is 1,700 mm a year and surface runoff is more than double the average for coastal NSW. Agriculture is very important to the region's economy – particularly beef and dairy farming, with extensive banana cultivation in the ranges. Industrial activities are generally small in scale (Coffs Harbour City Council 2004).

Research by Tourism Australia indicates that, on average each year, more than 865,000 people holiday in the Coffs Harbour City Council area and a further 675,000 people visit for the day. 'Going to the beach' is listed as a top activity by almost 80% of international tourists and almost 50% of domestic tourists holidaying in the area (Tourism Research Australia, 2008).

## Program outline

Seven swimming locations were monitored in the Coffs Harbour City Council area: six ocean beaches and one rockpool. These sites have also been monitored in previous years (DEC 2004b, DECC 2007, DEC 2008).

Enterococci samples were collected between the end of November 2008 and February 2009, the busiest period of the summer swimming season. Compliance was assessed against the NHMRC (1990) swimming water quality guidelines. It should be noted that only four samples were collected in each month and to calculate compliance an additional data point was 'borrowed' from an adjacent month.

## Rainfall

Rainfall data presented in the timeseries plots were obtained from the Bureau of Meteorology gauges at Yamba, Woolgoolga and Coffs Harbour. Rainfall data for each site is from the closest rain gauge.

## Ocean beaches

### *Guideline compliance*

A high level of compliance with NHMRC (1990) swimming water guidelines was recorded at all ocean beaches. Woolgoolga Main, Emerald, Jetty, Diggers, Park and Mid-Sawtell beaches were suitable for swimming during all three months in which compliance was assessed (Figure 5).

### *Response to rainfall*

Enterococci levels were generally low throughout the monitoring period. A single, very high result was recorded at Woolgoolga Main, Diggers and Park beaches in response to rainfall of more than 100 mm in mid-February 2009. Slightly elevated results were also measured at Jetty Beach and Mid Sawtell Beach during this event.

## Rockpools

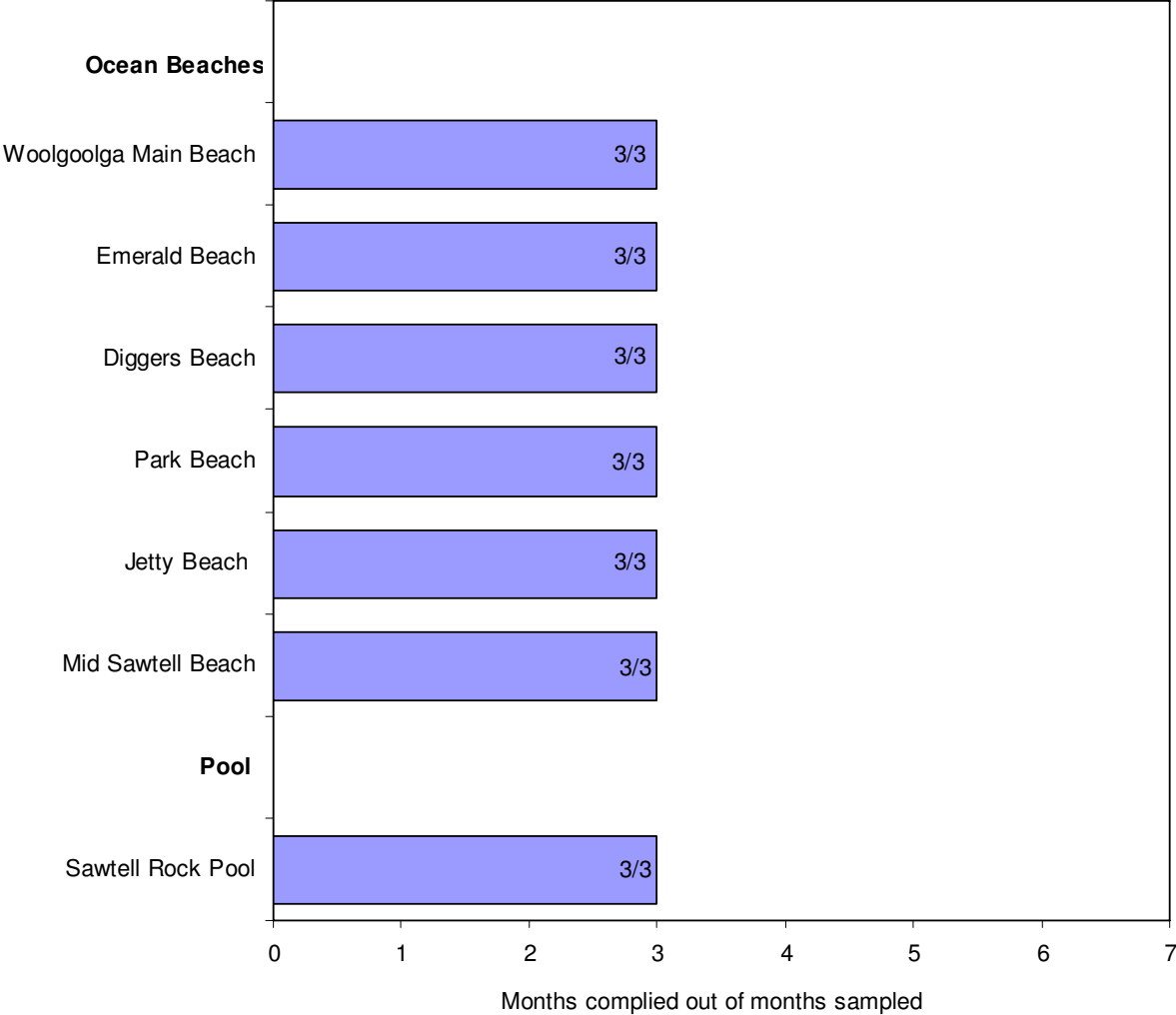
### *Guideline compliance*

A high level of compliance with NHMRC (1990) swimming water guidelines was recorded at Sawtell Rockpool (Figure 5). The site was suitable for swimming during all three months in which compliance was assessed (Figure 5).

### *Response to rainfall*

Enterococci levels were generally low throughout the monitoring period. A single, very high result was recorded at this site in response to intense rainfall in mid-February 2009.

**Figure 5: Summary of compliance with NHMRC (1990) microbiological guidelines for swimming at Coffs Harbour City Council swimming sites during the 2008–2009 summer swimming season**



# Woolgoolga Main Beach

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**Description** Woolgoolga Main Beach is a popular swimming and surfing location. It is patrolled seasonally and a surf club, toilet facilities and a car park are located at the beach. Although the beach is predominantly backed by dune vegetation, urban development surrounds the area with a shopping centre immediately adjacent to the beach.

**Pollution sources** Onsite wastewater management systems situated within the catchment and possible sewage overflows both represent possible pollution sources at this site. The local public toilets are sewered. Domestic animal faecal wastes are another possible source of contamination at this site.



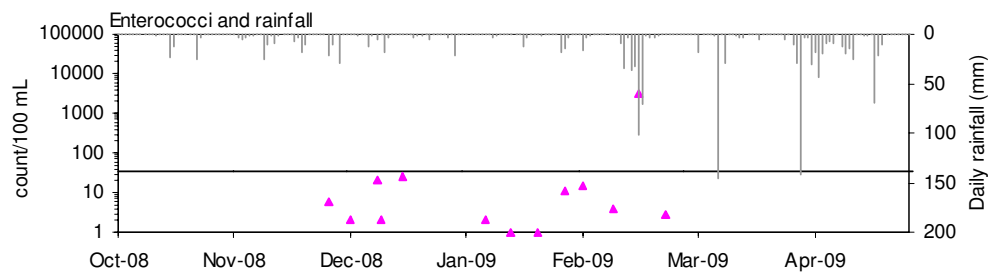
**Compliance** Woolgoolga Main Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.

**Compliance with NHMRC (1990) swimming guidelines at Woolgoolga Main Beach**

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

**Timeseries plots** Enterococci levels were generally low throughout the monitoring period. A very high result was measured in February 2009 in response to more than 100 millimetres of rainfall.



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# Emerald Beach

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**Description**

Emerald Beach lies to the north of Dammerals Head. The beach is accessed at the southern end, where there are amenities, picnic facilities and a park. This is a popular swimming beach that is patrolled during the summer.

**Pollution sources**

Sewage pumping stations and on-site wastewater management systems are potential pollution sources. Elevated bacterial levels have previously been measured in Fiddamans Creek, which discharges to the north of the sampling site. Domestic animal droppings may also be a potential pollution source.

**Compliance**

Emerald Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.



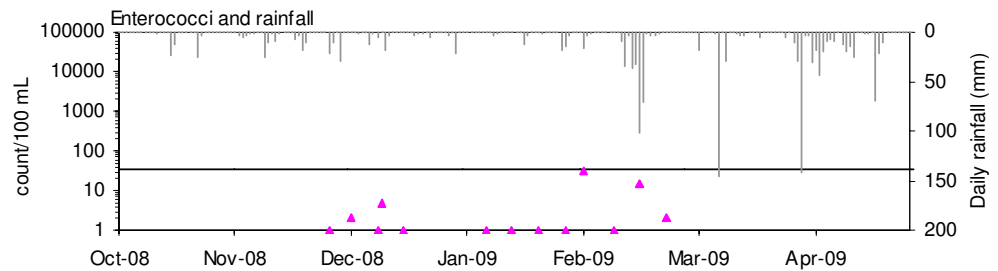
**Compliance with NHMRC (1990) swimming guidelines at Emerald Beach**

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

**Timeseries plots**

Enterococci levels were generally low, remaining below the geometric mean guideline throughout the monitoring period.



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# Diggers Beach

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**Description** Diggers Beach is positioned between Diggers and Macauleys headlands. It is 1 kilometre long and divided by a small rocky outcrop at the northern end of the beach. Jordans Creek drains across this end of the beach. There are carparks at the southern end of the beach which is a popular swimming and surfing location. Above the sampling location there is a public toilet and resort development behind sand dunes.



**Pollution sources** Stormwater runoff from Jordans Creek and the outlet at the northern end of the beach are potential pollution sources. Sewage pumping stations are located in the catchment and a seweried public toilet is located directly behind the sampling site.

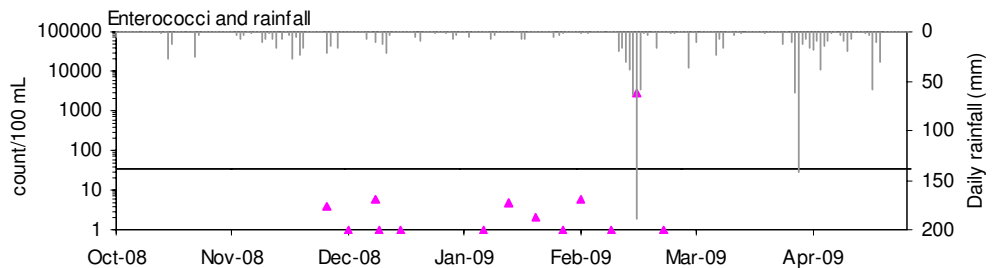
**Compliance** Diggers Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.

**Compliance with NHMRC (1990) swimming guidelines at Diggers Beach**

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

**Timeseries plots** Enterococci levels were generally low throughout the monitoring period. A very high result was measured in February 2009 in response to more than 100 millimetres of rainfall.



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# Park Beach

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**Description**

Park Beach is the central beach for Coffs Harbour. The southern end is patrolled, popular for swimming and surfing and has numerous facilities. The beach is backed by a fenced and vegetated foredune and the catchment contains dense urban and commercial development.

**Pollution sources**

Sewage pumping stations and a sewer public toilet are located behind the sampling site. Domestic animal droppings are also potential sources of pollution.

**Compliance**

Park Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.



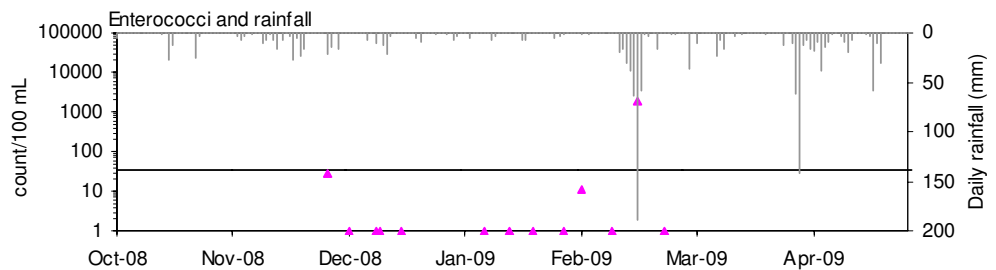
**Compliance with NHMRC (1990) swimming guidelines at Park Beach**

	DEC '08	JAN '09	FEB '09
<b>ENT</b>	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

**Timeseries plots**

Enterococci levels were generally low throughout the monitoring period. A very high result was measured in February 2009 in response to more than 100 millimetres of rainfall.



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# Jetty Beach

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**Description** Jetty Beach is approximately 1.4 kilometres long and extends south from a marina to Corambirra Point. There is no surf at the beach and it is a popular swimming location during summer. The beach is backed by a line of vegetation, behind which there is urban development. The sampling site is located at the northern end of the beach, between Coffs Harbour Jetty and the marina.



**Pollution sources** Urban stormwater is discharged from drains at the northern and southern ends of the beach. Boat effluent and contamination from the marina and domestic animal droppings are also potential sources of pollution.

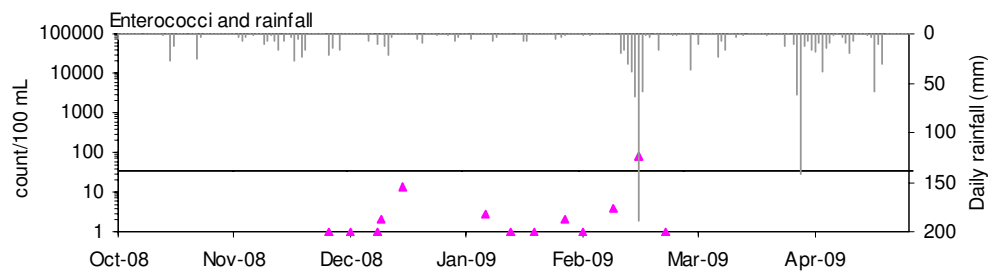
**Compliance** Jetty Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.

**Compliance with NHMRC (1990) swimming guidelines at Jetty Beach**

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

**Timeseries plots** Enterococci levels were generally low throughout the monitoring period. A slightly elevated result was measured in February 2009 in response to more than 100 millimetres of rainfall.



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# Mid Sawtell Beach

## Description

Mid Sawtell Beach is two kilometres long and backed by a vegetated foredune. Amenities include a caravan park and surf club situated towards the centre of the beach near the sampling area is located. The beach is used throughout the year with increased use during the summer months.

## Pollution sources

Stormwater from the highly urbanised catchment is drained by two stormwater outlets positioned at the centre of the beach on either side of the sampling location. A sewage pumping station and a sewer public toilet are also situated in this area. Domestic animal droppings are another potential pollution source.

## Compliance

Mid Sawtell Beach complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.

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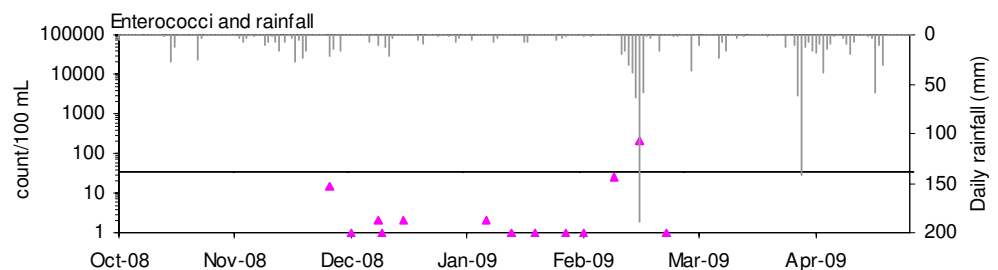
### Compliance with NHMRC (1990) swimming guidelines at Mid Sawtell Beach

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

## Timeseries plots

Enterococci levels were generally low throughout the monitoring period. A slightly elevated result was measured in February 2009 in response to more than 100 millimetres of rainfall.



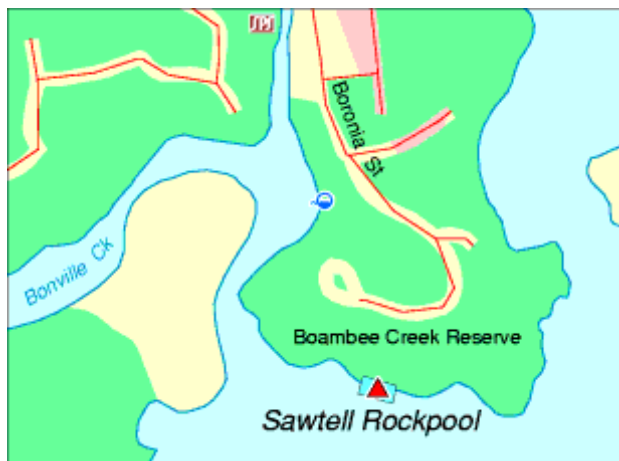
See page 5 for key to graph

# Sawtell Rockpool

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## Description

Sawtell Rockpool is located at the northern end of Bonville Beach, near the mouth of Bonville Creek. The pool has moderate use all year round and is popular in the summer with children and the elderly.



## Pollution sources

The pool may be affected by discharge from Bonville Creek. The creek waters are potentially affected by urban stormwater runoff and overflows from several sewage pumping stations in the catchment.

## Compliance

Sawtell Rockpool complied with NHMRC (1990) swimming guidelines in all three months between December 2008 and February 2009.

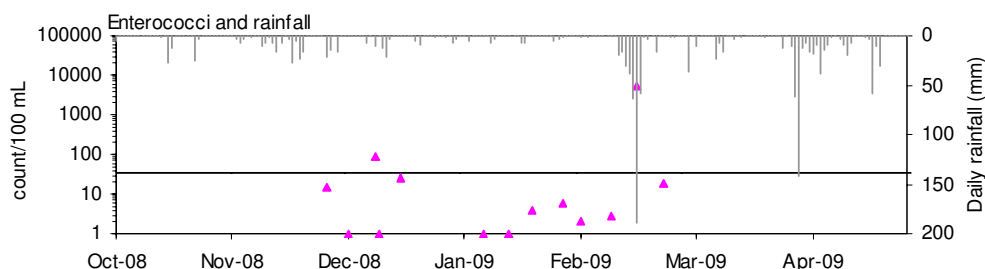
### Compliance with NHMRC (1990) swimming guidelines at Sawtell Rockpool

	DEC '08	JAN '09	FEB '09
ENT	PASS*	PASS*	PASS*

\* Only four samples were collected in this month. An additional data point was borrowed from an adjacent month to calculate compliance.

## Timeseries plots

Levels of enterococci remained generally low over the monitoring period. A very high result was recorded in February 2009 in response to more than 100 millimetres of rainfall.



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