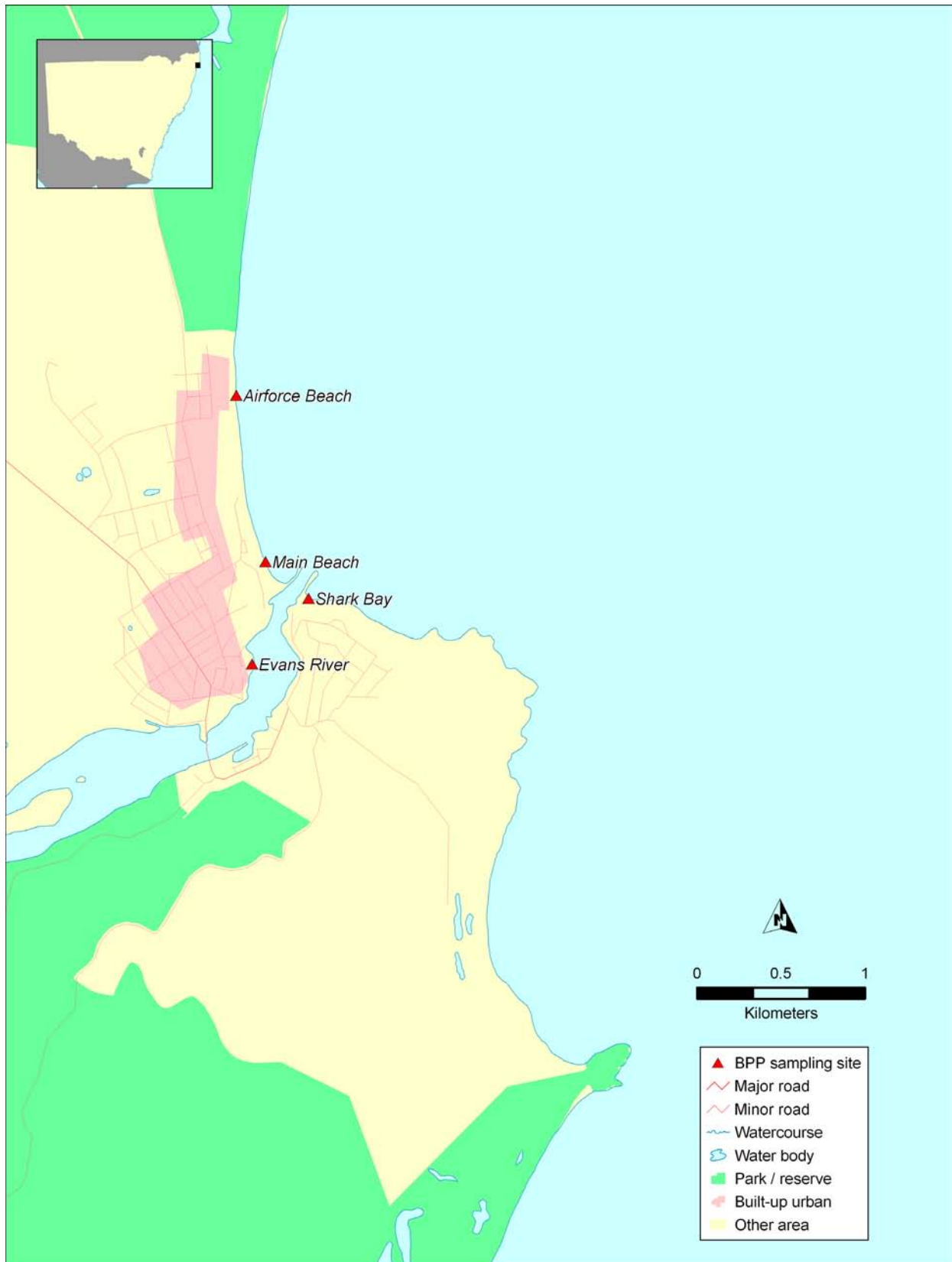


Ocean beaches: Airforce, Main, Shark Bay. **Estuaries:** Evans River



Local government area description

Richmond Valley Council is located on the Far North Coast of New South Wales and covers an area of 3051 square kilometres. The council area has approximately 35 kilometres of coastline, of which almost 27 kilometres is contained within National Parks.

The council area stretches 85 kilometres inland to the Great Dividing Range and comprises natural bushland, timber country, grazing land, sugar cane plantations and coastal heath.

The population of the area is just over 20 000, with population centres at Casino, Evans Head and the villages of Coraki, Woodburn and Broadwater/Rileys Hill. Population is estimated to be currently growing at a rate of two percent each year (Richmond Valley Council 2006).

Program outline

Four swimming locations were monitored in the Richmond Valley council area during summer 2007–2008. The sites were three ocean beaches and an estuarine swimming location in Evans River.

Faecal coliform and enterococci samples were collected between October 2007 and April 2008 to assess compliance with NHMRC (1990) swimming water quality guidelines. It should be noted that the five samples necessary to calculate compliance were not collected in all months. Where only four samples were collected, the closest sample in time from an adjacent month was 'borrowed' in order to provide the five data points required.

Rainfall

Rainfall data presented in the timeseries plots were obtained from the Bureau of Meteorology's gauges at Evans Head RAAF Bombing Range.

Ocean beaches

Guideline compliance

Airforce Beach, Main Beach and Shark Bay consistently complied with the NHMRC swimming water quality guidelines in all seven months of the 2007–2008 summer season (Figure 3).

Response to rainfall

Water quality at the ocean beaches generally showed little response to rainfall, with low faecal coliform and enterococci levels measured throughout the monitoring period despite heavy rain.

Evans River

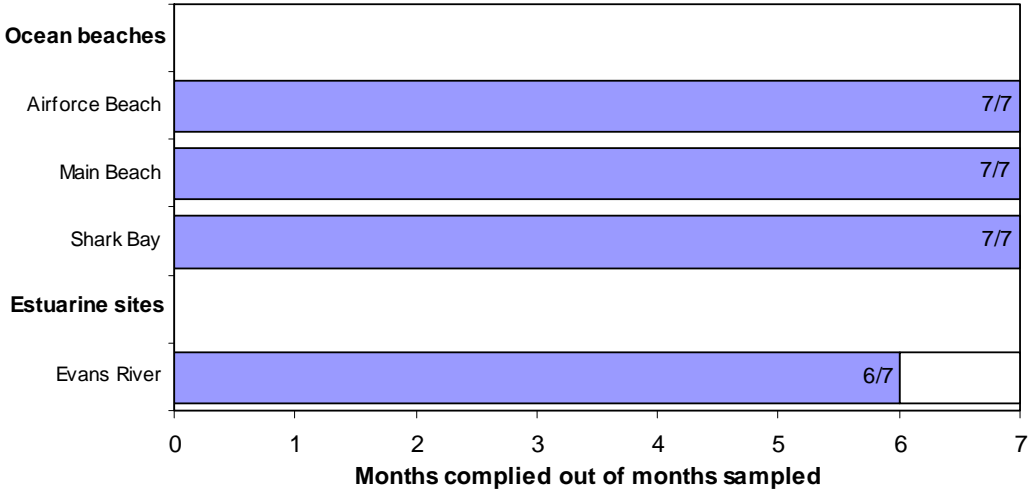
Guideline compliance

The swimming location on the Evans River also had a high level of compliance with the NHMRC (1990) swimming water quality guidelines. The site was suitable for swimming in six of the seven months between October 2007 and April 2008.

Response to rainfall

Water quality in the Evans River showed some response to rainfall, with elevated levels of faecal coliforms and enterococci recorded in January and February during wet weather conditions.

Figure 3: Summary of compliance with NHMRC (1990) microbiological guidelines for swimming at Richmond Valley Council swimming sites during the 2007–2008 summer swimming season



Airforce Beach

See page 25 for key to map

Description Airforce Beach is located on a 31 kilometre stretch of beach between Richmond River in the north and Evans River in the south; the second longest beach in New South Wales. The sampling site is located directly adjacent to the 4WD beach access track on Terrace Street at Evans Head.

Pollution sources Potential pollution sources at this location include litter, fishing waste and fuel spills/leaks from 4WD traffic.

Compliance Airforce Beach was monitored between October 2007 and April 2008 and complied with NHMRC (1990) swimming guidelines in all seven months of the 2007–2008 summer swimming season.



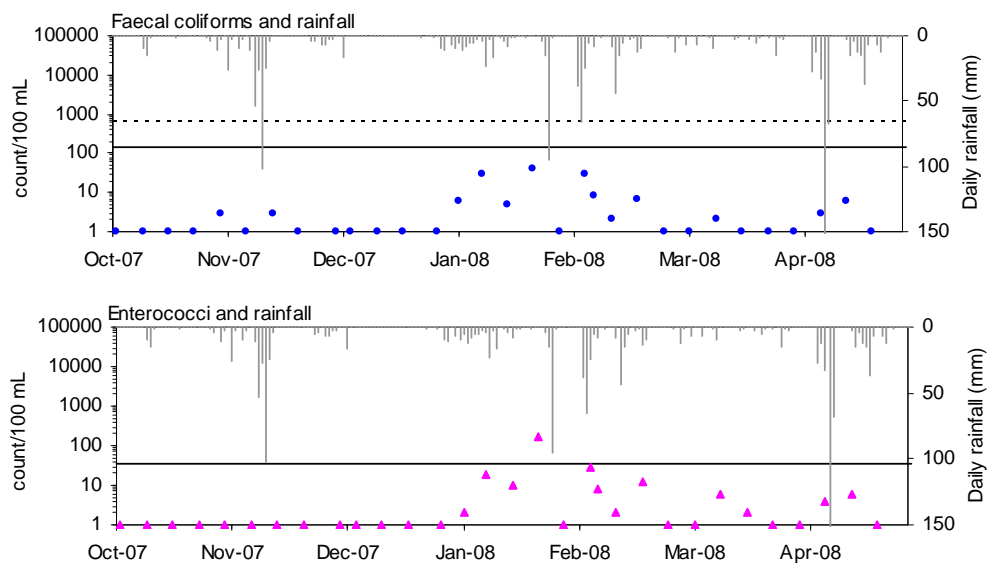
Compliance with NHMRC (1990) swimming guidelines at Airforce Beach

	OCT '07	NOV '07	DEC '07	JAN '08	FEB '08	MAR '08	APR '08
FC	PASS	PASS*	PASS*	PASS	PASS	PASS*	PASS*
ENT	PASS	PASS*	PASS*	PASS	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 faecal coliforms and enterococci were generally very low over the monitoring period, showing little response to rainfall. A single elevated enterococci level was recorded in January 2008.



See page 5 for key to graph

Main Beach

See page 25 for key to map

Description

Main Beach is located at the southern end of a 31 kilometre stretch of beach between Richmond River in the north and Evans River in the south; that is the second longest beach in New South Wales. The sampling site is located directly in front of the Evans Head - Casino Surf Life Saving Club on Captain Cook Drive at Evans Head.



Pollution sources

Potential pollution sources at this location include litter and stormwater discharges from the Evans River. Bather shedding may also be a source of faecal contamination when large numbers of swimmers use the beach during holiday periods.

Compliance

Main Beach was monitored between October 2007 and April 2008 and complied with NHMRC (1990) swimming guidelines in all seven months of the 2007–2008 summer swimming season.

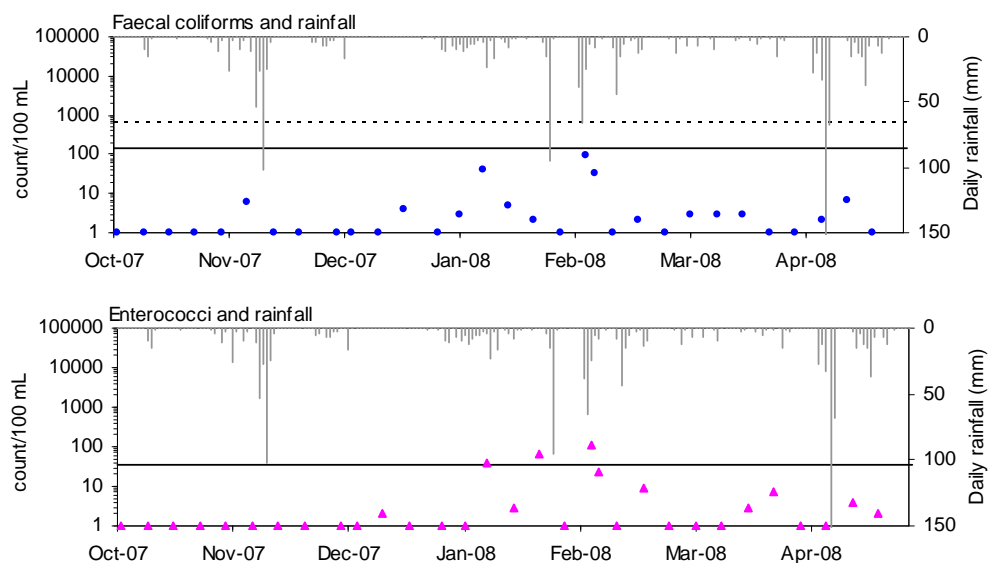
Compliance with NHMRC (1990) swimming guidelines at Main Beach

	OCT '07	NOV '07	DEC '07	JAN '08	FEB '08	MAR '08	APR '08
FC	PASS	PASS*	PASS*	PASS	PASS	PASS*	PASS*
ENT	PASS	PASS*	PASS*	PASS	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 faecal coliforms remained low over the monitoring period, with all values below the guideline levels. Levels of enterococci were generally low, with three slightly elevated results recorded in January and February 2008 in response to rainfall.



See page 5 for key to graph

Shark Bay

See page 25 for key to map

Description Shark Bay is a small beach located between the southern entrance wall to the Evans River and the cliffs below Razorback Lookout. There is good access to the beach with parking available, making it a popular beach for fishing, picnics and swimming. Samples are collected from the middle of the beach.

Pollution sources Potential pollution sources at this location include litter and stormwater from the Evans River. Bather shedding may also be a source of faecal contamination when large numbers of swimmers use the beach during holiday periods.

Compliance Shark Bay was monitored between October 2007 and April 2008 and complied with NHMRC (1990) swimming guidelines in all seven months of the 2007–2008 summer swimming season.

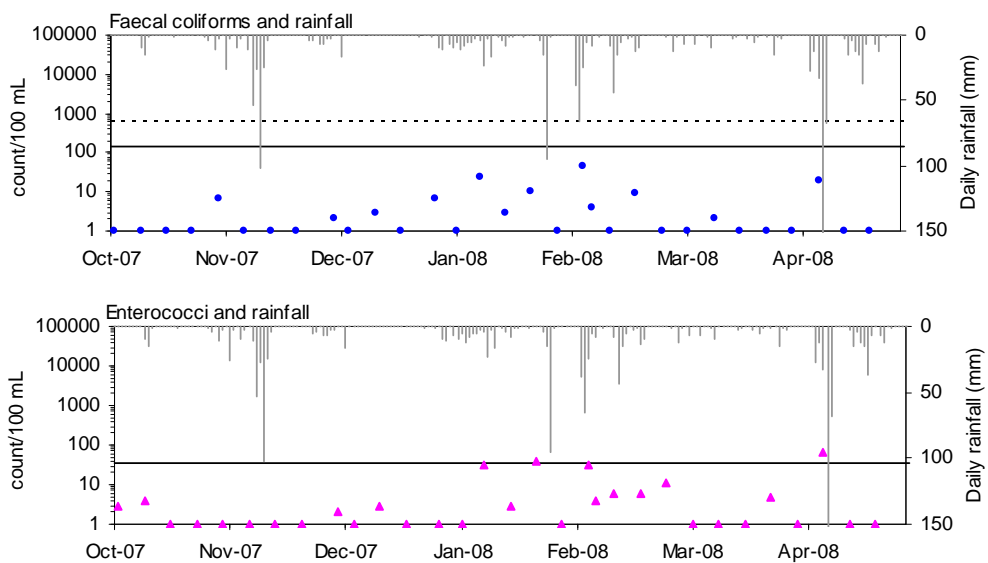


Compliance with NHMRC (1990) swimming guidelines at Shark Bay

	OCT '07	NOV '07	DEC '07	JAN '08	FEB '08	MAR '08	APR '08
FC	PASS	PASS*	PASS*	PASS	PASS	PASS*	PASS*
ENT	PASS	PASS*	PASS*	PASS	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 faecal coliforms remained low over the monitoring period, with all values below the guideline levels. Levels of enterococci were generally low, with two slightly elevated results recorded in January and April 2008 in response to heavy rainfall.



See page 5 for key to graph

Evans River

See page 25 for key to map

Description

The Evans River is approximately 20 kilometres long, with the entrance at the town of Evans Head. The sampling site is located near the stormwater outlet adjacent the rotunda in the Silver Sands Caravan Park, Park St, Evans Head.

Pollution sources

Potential pollution sources at this location include litter, fishing waste, pollution from stormwater drains, septic waste, fuel and oil from passing boats, onsite sewage treatment systems and runoff from agricultural activities within the upper catchment.

Compliance

Evans River was monitored between October 2007 and April 2008 and complied with NHMRC (1990) swimming guidelines in six of the seven months of the 2007–2008 summer swimming season. The site failed in February 2008 owing to elevated levels of enterococci and faecal coliforms.



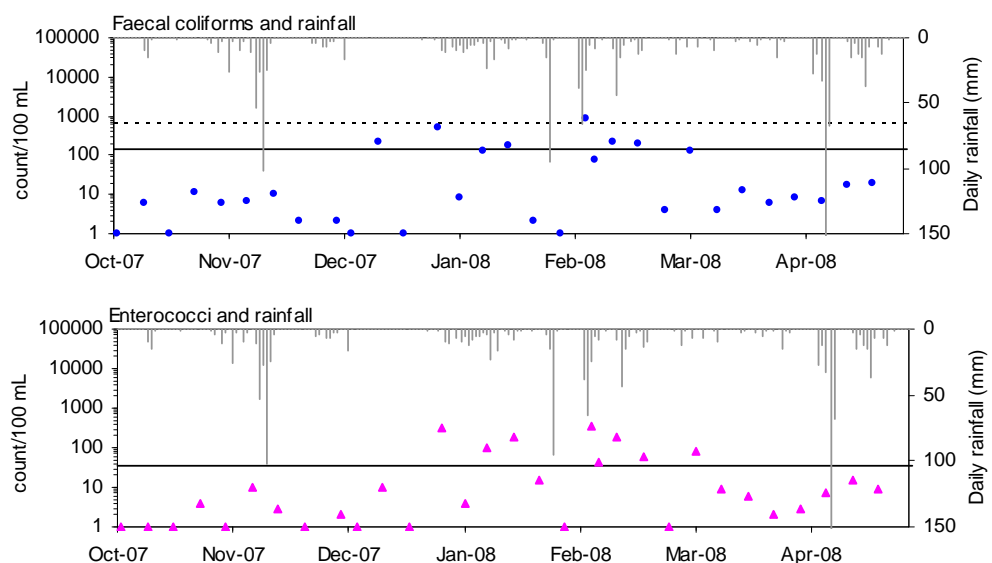
Compliance with NHMRC (1990) swimming guidelines at Evans River

	OCT '07	NOV '07	DEC '07	JAN '08	FEB '08	MAR '08	APR '08
FC	PASS	PASS*	PASS*	PASS	FAIL	PASS*	PASS*
ENT	PASS	PASS*	PASS*	PASS	FAIL	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 faecal coliforms and enterococci were slightly higher in the Evans River compared to the ocean beaches, with elevated bacterial levels recorded in December 2007, January 2008 and February 2008, in both wet and dry weather conditions.



See page 5 for key to graph