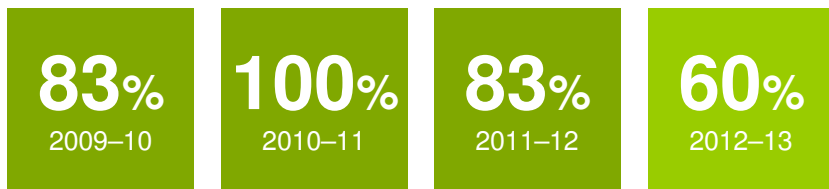


# Ballina Shire Council

## State of the Beaches 2012–2013

### Overall results

Percentage of sites graded as Good or Very Good:



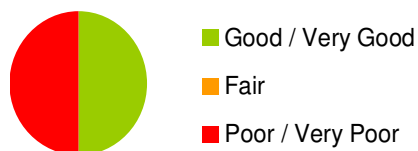
Six of the ten swimming sites were graded as Very Good or Good in 2012–2013. The overall fall in performance from previous years was due to the addition of four new sites to the program (three of which were provisionally graded as Poor).

### Ocean beaches



All three ocean beaches were graded Very Good or Good. The water quality at Seven Mile Beach was excellent, with all samples collected during 2012–2013 meeting the safe swimming limit. Shelly Beach and Lighthouse Beach also had good water quality and few potential sources of faecal contamination.

### Estuarine beaches

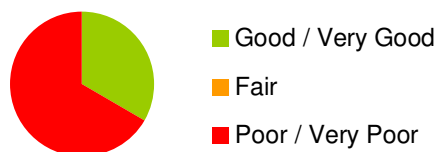


Two of the four estuarine swimming locations were graded as Good: Shaws Bay East and The Serpentine. These sites had mostly good water quality, but were susceptible to pollution following heavy rainfall.

Shaws Bay North and Shaws Bay West were added to the program in 2012 and both were provisionally graded as Poor.

It is recommended that swimming at estuarine beaches be avoided during and for up to three days following rainfall, or if there are signs of stormwater pollution such as discoloured water or floating debris.

### Lake/lagoon swimming sites



Lake Ainsworth South was added to the program in 2012 and was provisionally graded as Good. Over 80 per cent of samples

### Best beaches

#### Seven Mile Beach.

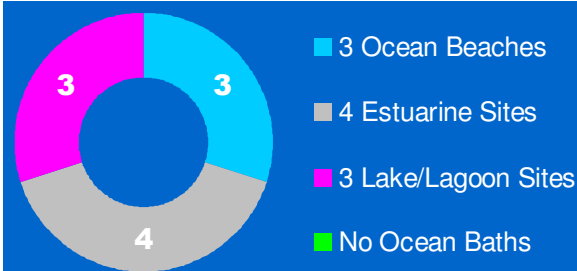
This beach had excellent water quality and was suitable for swimming almost all of the time.

10  
sites

every  
week

200  
samples

November –  
February



All sampling and laboratory analysis was fully funded by Ballina Shire Council.

collected from the site were below the safe swimming limit. Elevated enterococci levels were often recorded after more than 10 mm of rainfall and as a precaution, swimming should be avoided at these times.

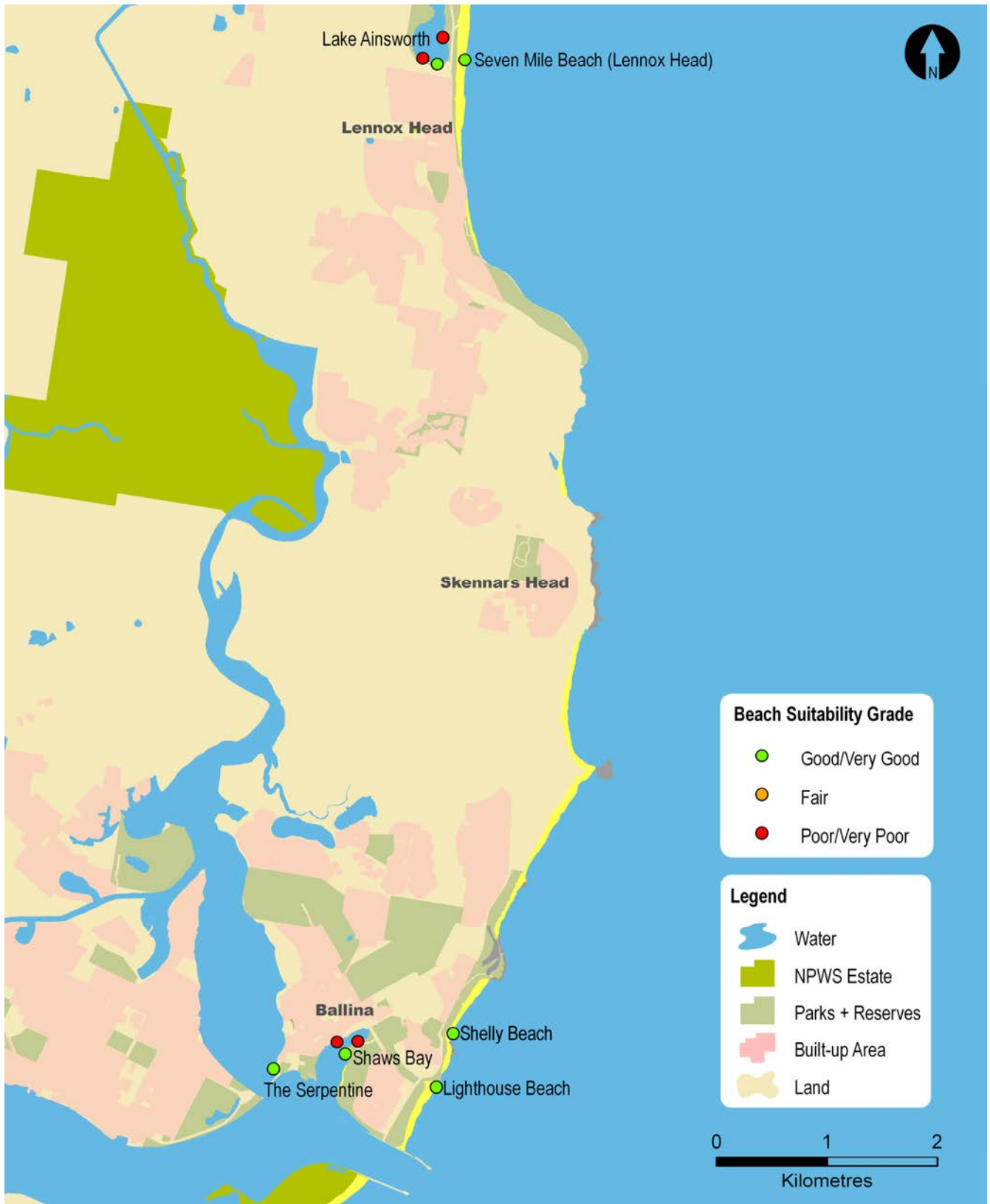
Lake Ainsworth East and Lake Ainsworth West were graded as Poor. As it is a new site, the grading for Lake Ainsworth East is provisional. While water quality was mostly suitable for swimming during dry weather conditions, elevated enterococci levels were recorded after low levels of rainfall. Swimming should be avoided during and for up to three days following rainfall or if there are signs of stormwater pollution such as discoloured water or floating debris.

## Management

Ballina Shire Council has placed precautionary signage at lake and estuarine swimming locations advising that these areas may be affected by algal blooms.

If sewage contamination is suspected at a swimming site, the area is closed until testing indicates that the water is again suitable for swimming. Media releases are also issued during periods of heavy rain and minor flooding to advise which swimming sites are likely to be impacted by stormwater runoff.

A new wastewater treatment plant is under construction at West Ballina, with an expected completion date of October 2013. The new plant will have twice the capacity of the existing one, and will provide recycled wastewater via a dual reticulation system to new developments. Upgrades to the Lennox Head Wastewater Treatment Plant have also begun.



Sampling sites and Beach Suitability Grades in Ballina Shire Council

# Seven Mile Beach

Beach Suitability Grade: **Very Good**



Seven Mile Beach extends for over eight kilometres and is a significant tourism drawcard in the region. The sampling site is at the southern end of the beach, near the surf club. The beach is used throughout the year and is particularly popular during the Christmas holiday period.

The Beach Suitability Grade of Very Good indicates that the microbial water quality is considered suitable for swimming almost all of the time, with few potential sources of faecal contamination.

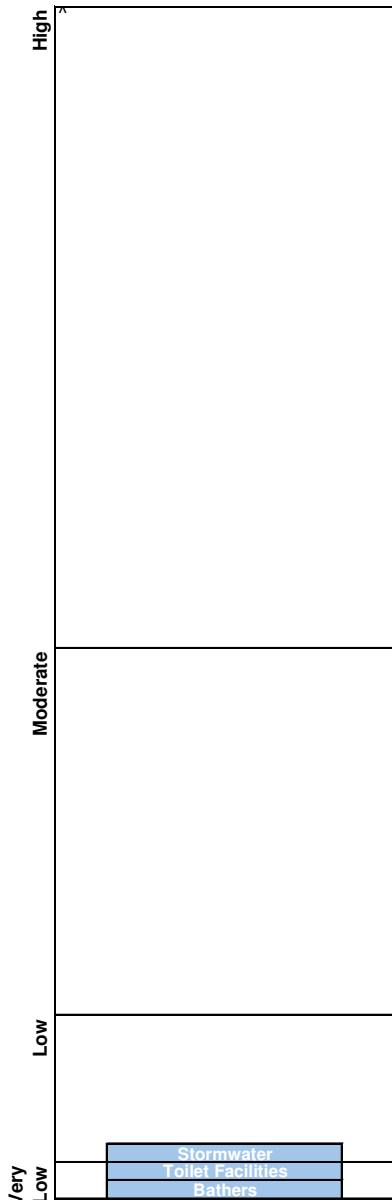
The response to rainfall graph indicates that levels of enterococci generally remain below the safe swimming limit across all rainfall categories, showing little response to rainfall.

The site has been monitored since 2002 and microbial water quality has been of a generally high standard.

See 'How to read this report' for key to map

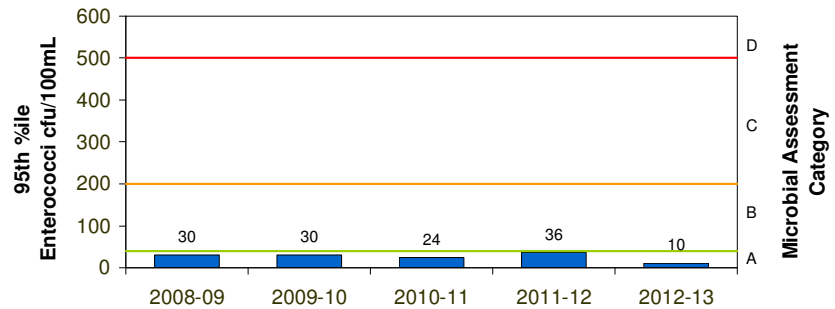
## Sanitary Inspection: **Low**

Source: ■ Very Low ■ Low ■ Moderate ■ High



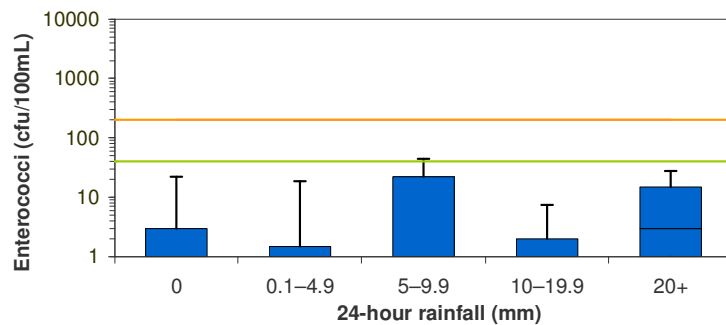
## Microbial Assessment: **A**

Monitoring period for 2012–13 result is November 2008 to February 2013.

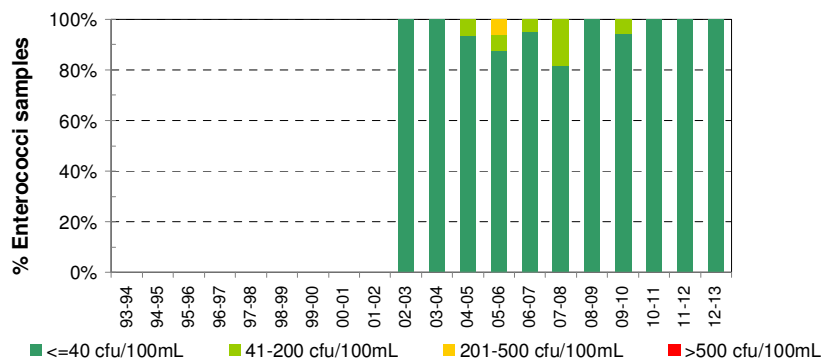


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Lake Ainsworth East

Beach Suitability Grade: **Poor**



See 'How to read this report' for key to map

Lake Ainsworth East is located on the eastern shore of Lake Ainsworth, a coastal freshwater lake. The lake is situated to the west of Seven Mile Beach and north of the township of Lennox Head.

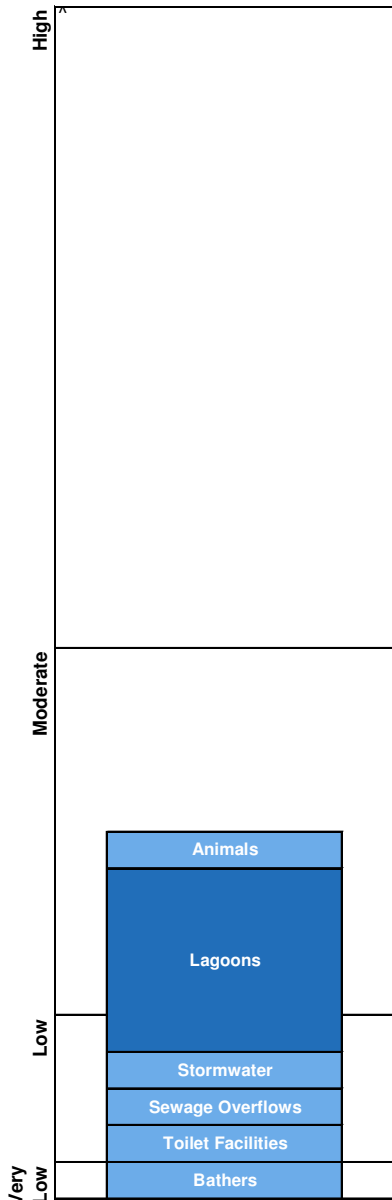
The Beach Suitability Grade of Poor indicates that the water quality is susceptible to faecal pollution, particularly after rainfall and occasionally during dry weather conditions, with potential faecal contamination from elsewhere within the lake.

The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, occasionally exceeding the safe swimming limit after only low levels of rain.

The site was monitored from 2002 until 2009, with sampling recommencing in 2012.

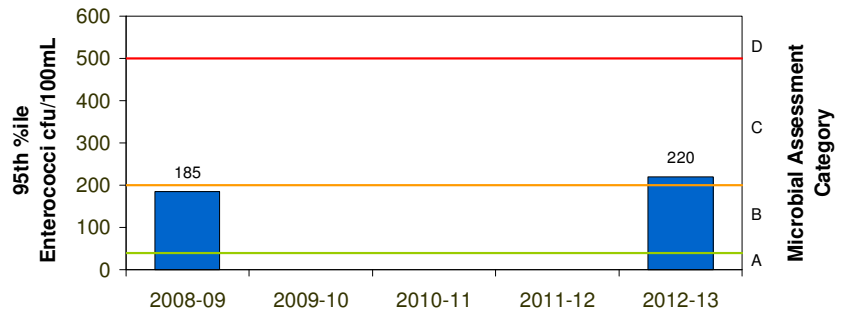
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



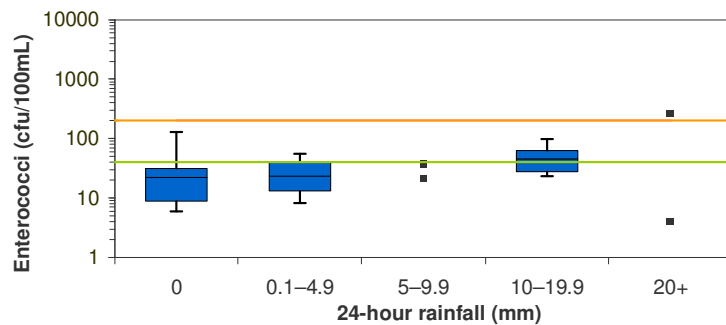
## Microbial Assessment: **C**

Monitoring period for 2012–13 result is November 2008 to February 2013.

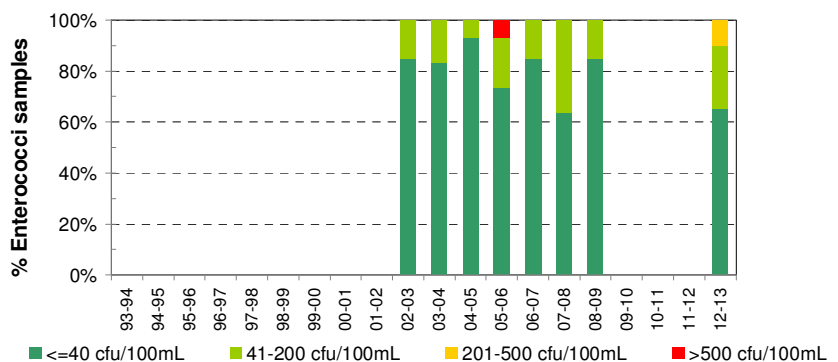


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Lake Ainsworth South

Beach Suitability Grade: **Good**



See 'How to read this report' for key to map

Lake Ainsworth South is located on the southern shore of Lake Ainsworth, a coastal freshwater lake. The lake is situated to the west of Seven Mile Beach and north of the township of Lennox Head.

The Beach Suitability Grade of Good indicates that the microbial water quality is generally suitable for swimming, but the water can be susceptible to pollution from a number of potential sources of faecal contamination.

The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, often exceeding the safe swimming limit after 10 mm or more of rain.

The site was monitored from 2002 until 2009, with sampling recommencing in 2012.

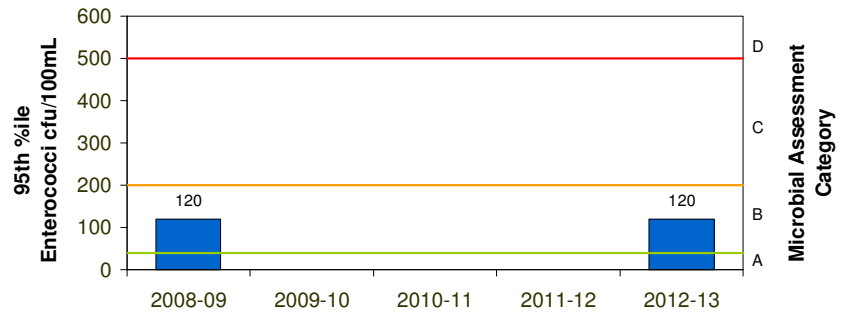
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



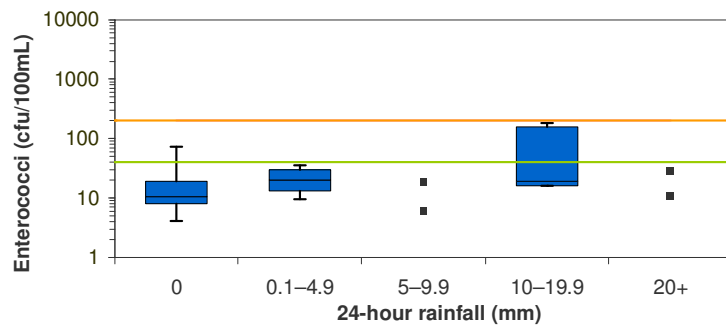
## Microbial Assessment: **B**

Monitoring period for 2012–13 result is November 2008 to February 2013.

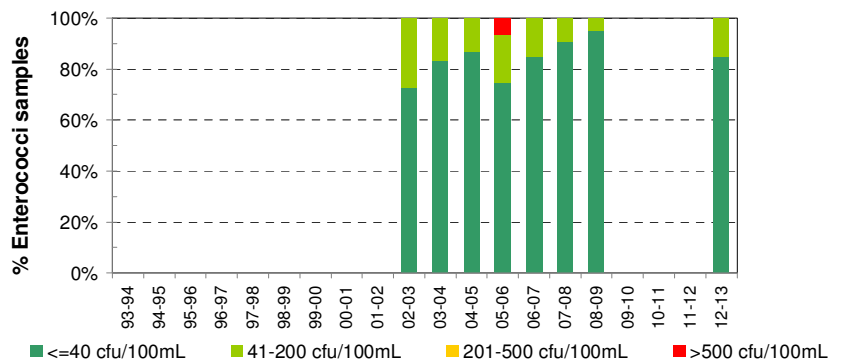


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time





# Lake Ainsworth West

Beach Suitability Grade: **Poor**



Lake Ainsworth West is located on the western shore of Lake Ainsworth, a coastal freshwater lake. The lake is situated to the west of Seven Mile Beach and north of the township of Lennox Head.

The Beach Suitability Grade of Poor indicates that the water quality is susceptible to faecal pollution, particularly after rainfall and occasionally during dry weather conditions, with potential faecal contamination from elsewhere within the lake.

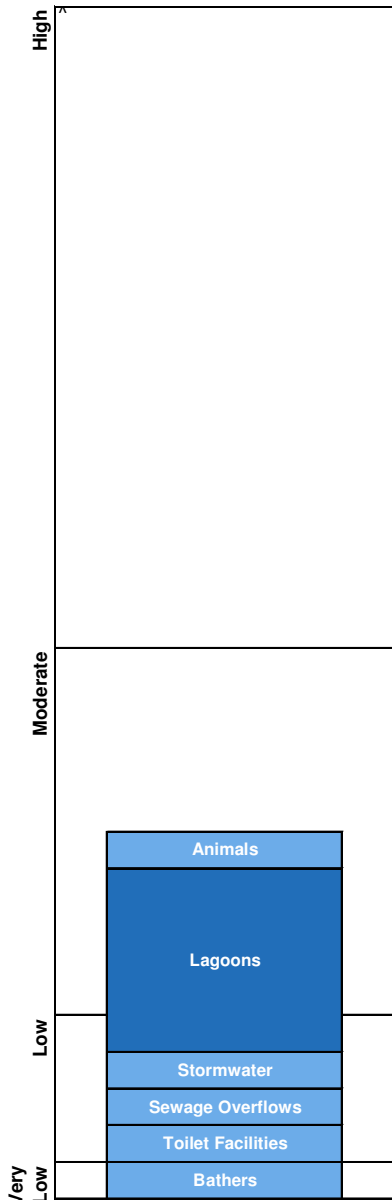
The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, often exceeding the safe swimming limit after only low levels of rain.

The site has been monitored since 2002.

See 'How to read this report' for key to map

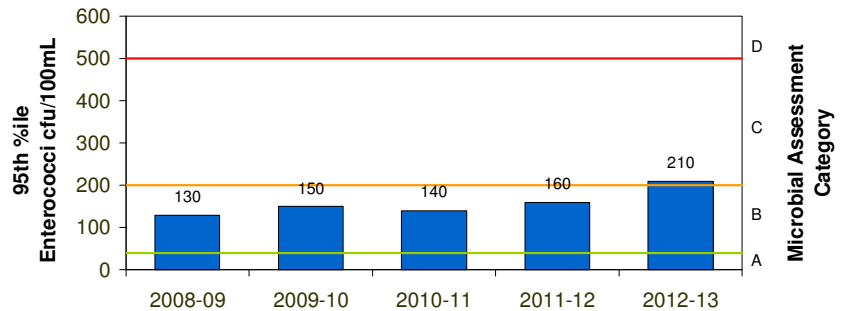
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



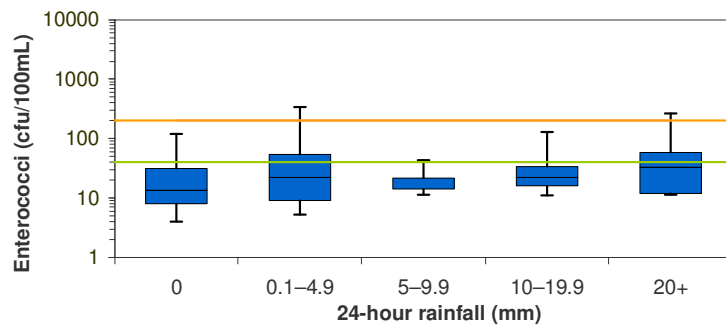
## Microbial Assessment: **C**

Monitoring period for 2012-13 result is November 2008 to February 2013.

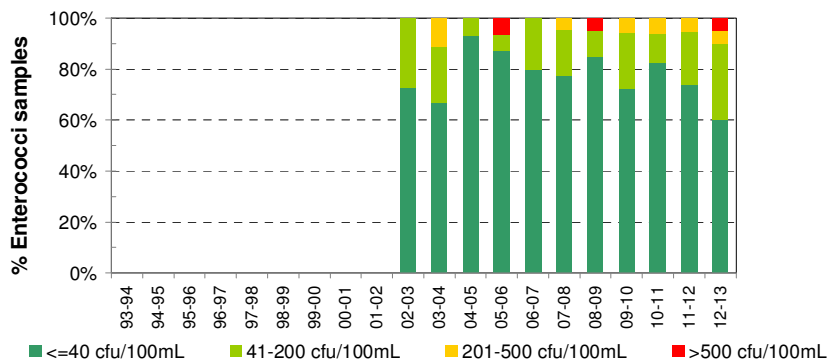


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Shelly Beach

Beach Suitability Grade: **Good**



Shelly Beach is approximately 700 metres long and is backed by a narrow coastal reserve and urban development. The sampling site is adjacent to the surf club at the southern end of the beach.

The Beach Suitability Grade of Good indicates that the microbial water quality is generally suitable for swimming, but the water can be susceptible to pollution from a number of potential sources of faecal contamination.

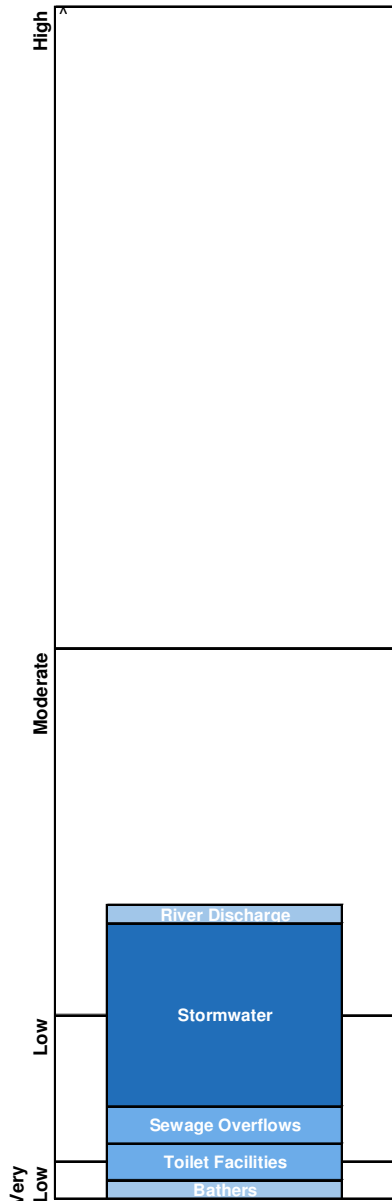
The response to rainfall graph indicates that enterococci levels increased with increasing rainfall often exceeding the safe swimming limit in response to 5 mm of rainfall.

The site has been monitored since 2002. Microbial water quality has generally been of a high standard, with a small percentage of elevated enterococci results recorded in some years.

See 'How to read this report' for key to map

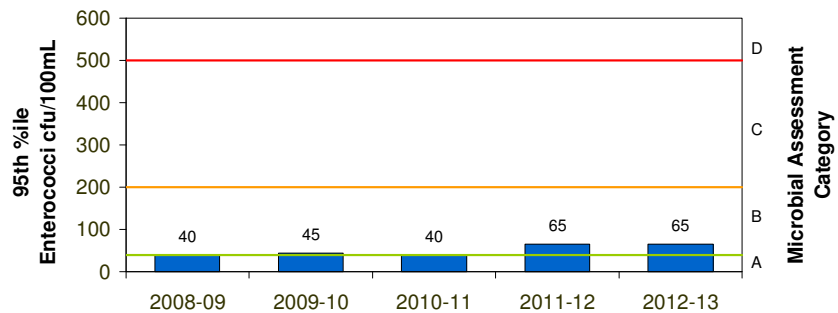
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



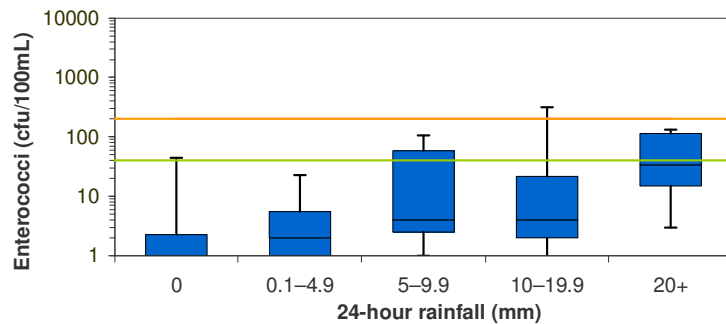
## Microbial Assessment: **B**

Monitoring period for 2012–13 result is November 2008 to February 2013.

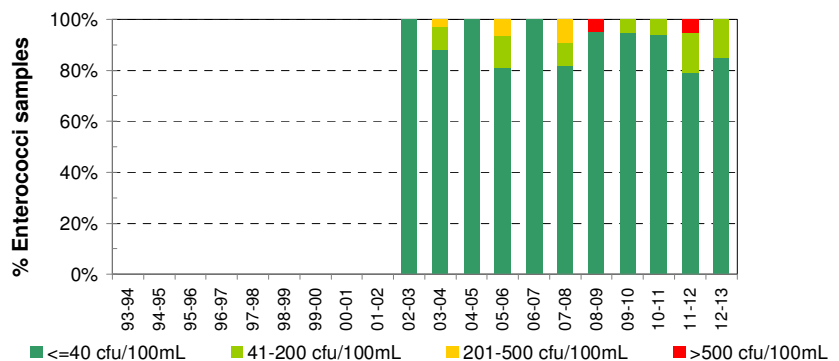


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time





# Shaws Bay West

Beach Suitability Grade: **Poor**



See 'How to read this report' for key to map

The sampling site is located on the western side of Shaws Bay, an inlet near the mouth of the Richmond River. A training wall protects the bay but allows tidal flushing. The bay is primarily used for swimming.

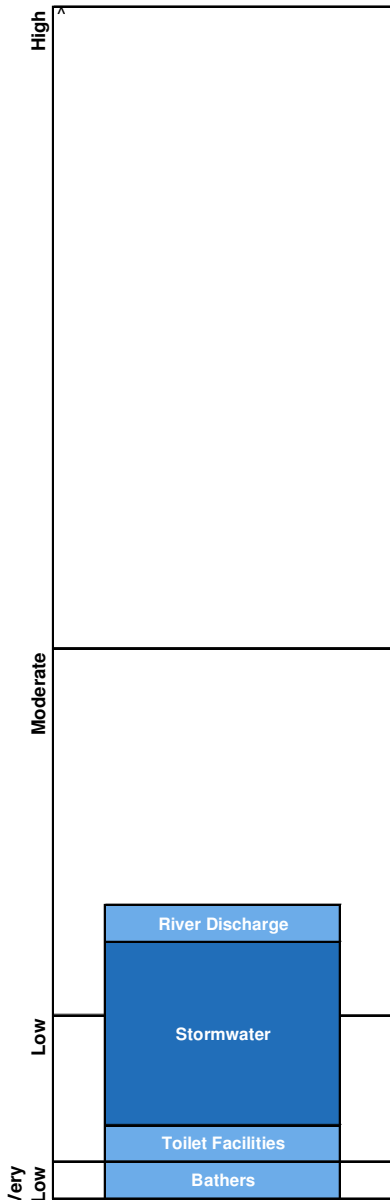
The Beach Suitability Grade of Poor indicates that the microbial water quality is susceptible to faecal pollution with a number of potential faecal contamination sources including local stormwater runoff and discharge from the Richmond River.

The response to rainfall graph indicates that enterococci levels increased with increasing rainfall, often exceeding the safe swimming limit in response to 10 mm or more of rain.

The site was monitored from 2002 until 2009, with sampling recommencing in 2012.

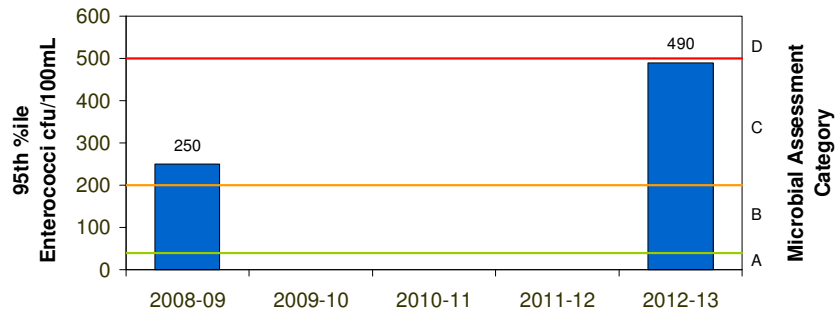
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



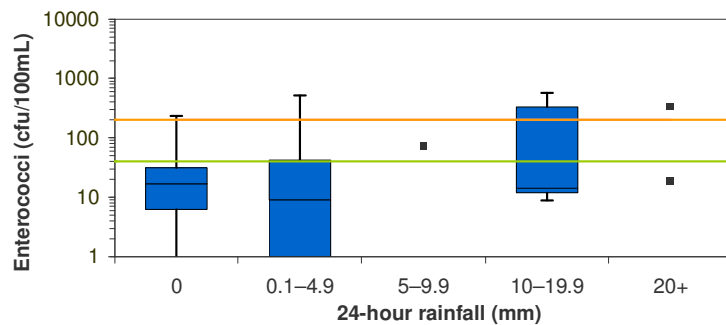
## Microbial Assessment: **C**

Monitoring period for 2012–13 result is November 2008 to February 2013.

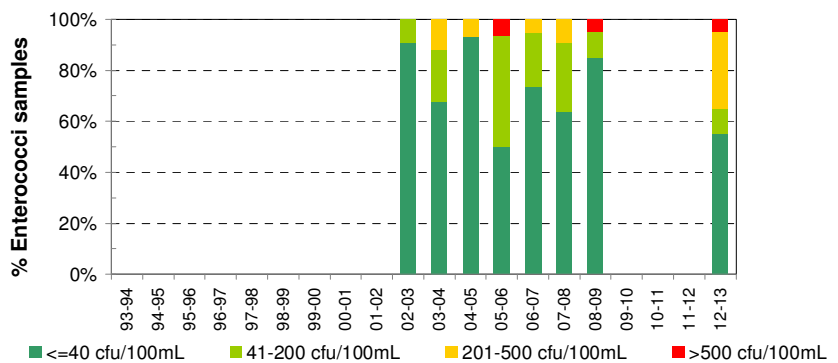


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Shaws Bay North

Beach Suitability Grade: **Poor**



The sampling site is located on the northern side of Shaws Bay, an inlet near the mouth of the Richmond River. A training wall protects the bay but allows tidal flushing. The bay is primarily used for swimming.

The Beach Suitability Grade of Poor indicates that the microbial water quality is susceptible to faecal pollution with a number of potential faecal contamination sources including stormwater and discharge from the Richmond River.

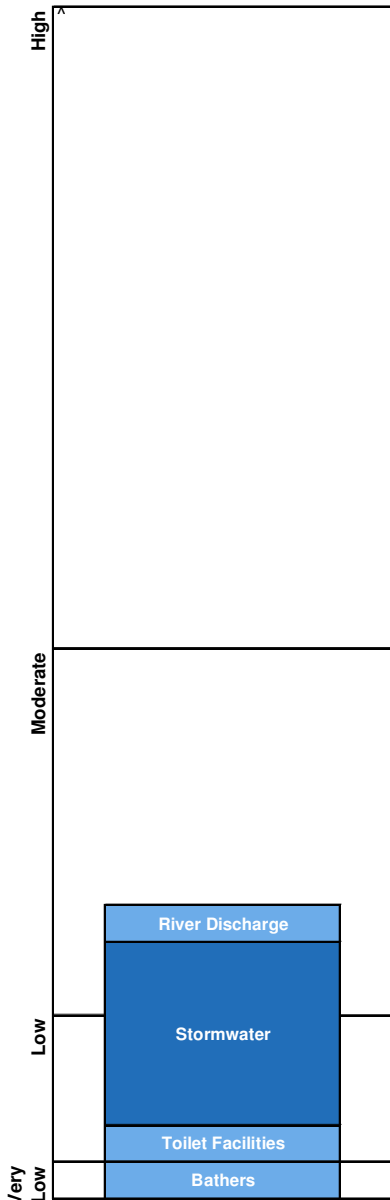
Enterococci levels generally increased with increasing rainfall and often exceeded the safe swimming limit in response to little or no rain.

The site was monitored from 2002 until 2009, with sampling recommencing in 2012.

See 'How to read this report' for key to map

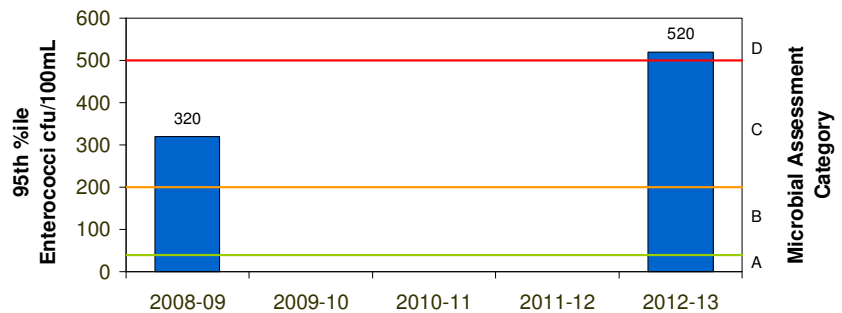
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



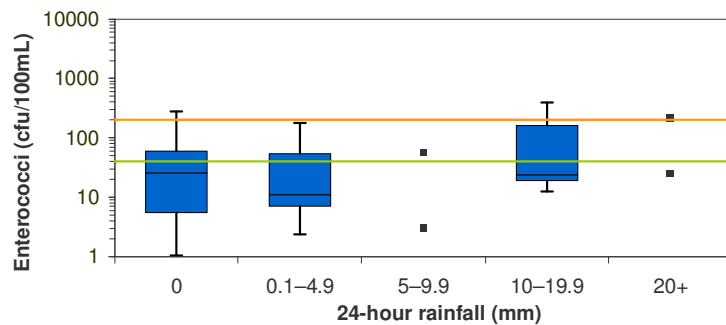
## Microbial Assessment: **D**

Monitoring period for 2012–13 result is November 2008 to February 2013.

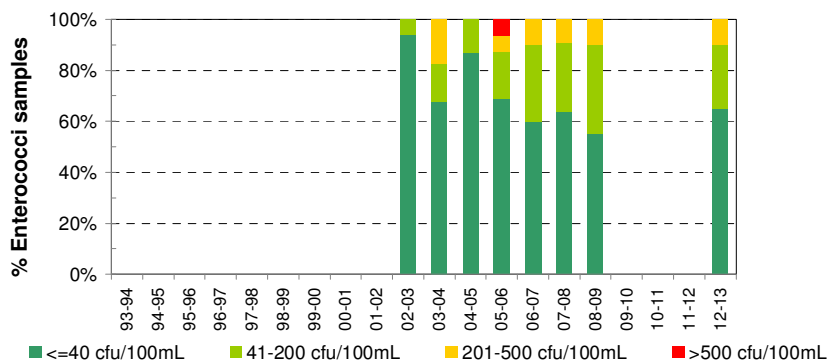


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Shaws Bay East

Beach Suitability Grade: **Good**



See 'How to read this report' for key to map

The sampling site is located on the eastern side of Shaws Bay, an inlet near the mouth of the Richmond River. A training wall protects the bay but allows tidal flushing. The bay is primarily used for swimming.

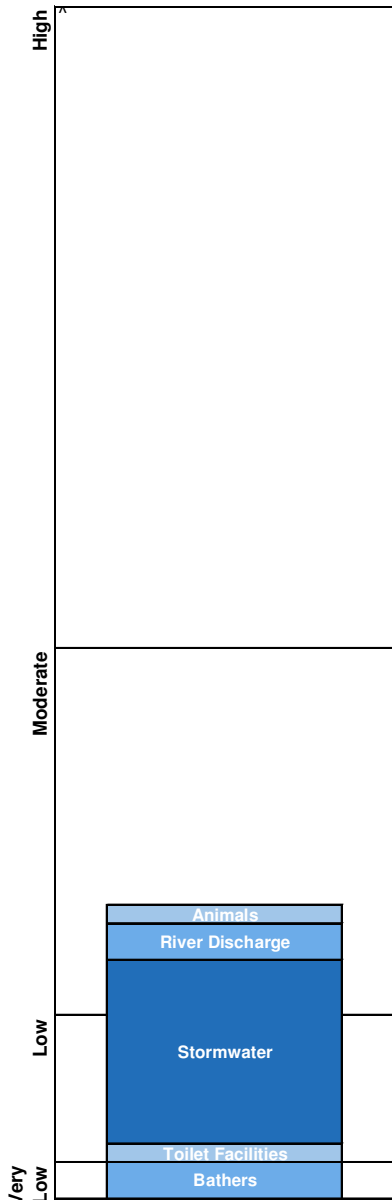
The Beach Suitability Grade of Good indicates that the water quality is safe for swimming most of the time but can be susceptible to pollution after heavy rain, with potential faecal contamination sources including stormwater runoff and discharge from the Richmond River.

The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, usually exceeding the safe swimming limit in response to 20 mm or more of rainfall.

The site has been monitored since 2002.

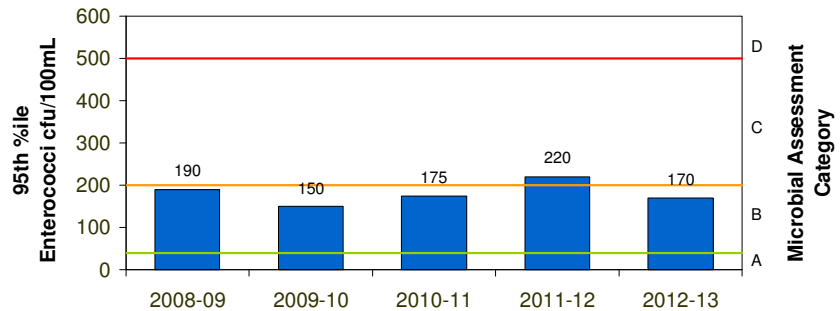
## Sanitary Inspection: **Moderate**

Source: Very Low Low Moderate High



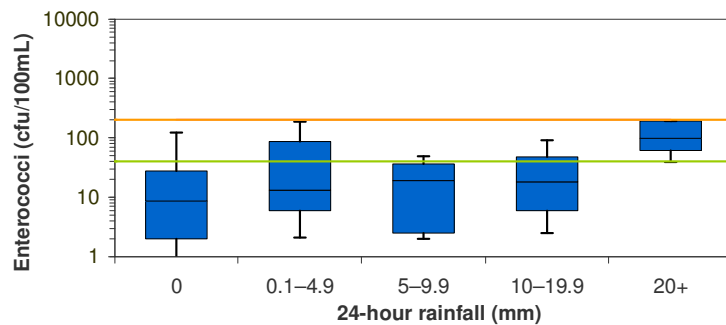
## Microbial Assessment: **B**

Monitoring period for 2012–13 result is November 2008 to February 2013.

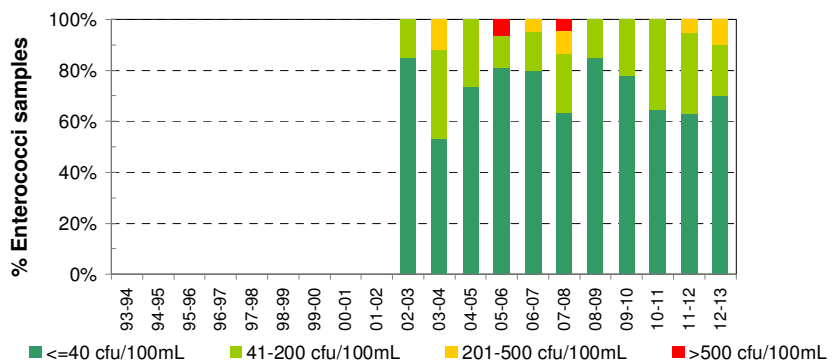


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# The Serpentine

Beach Suitability Grade: **Good**



The Serpentine is situated in North Creek, a tributary of the Richmond River. It is a popular swimming and fishing location in summer. The waterway is characterised by flat, shallow sandbars.

The Beach Suitability Grade of Good indicates that the microbial water quality is generally suitable for swimming, but the water may be susceptible to pollution from several potential sources of faecal contamination including discharge from the Richmond River.

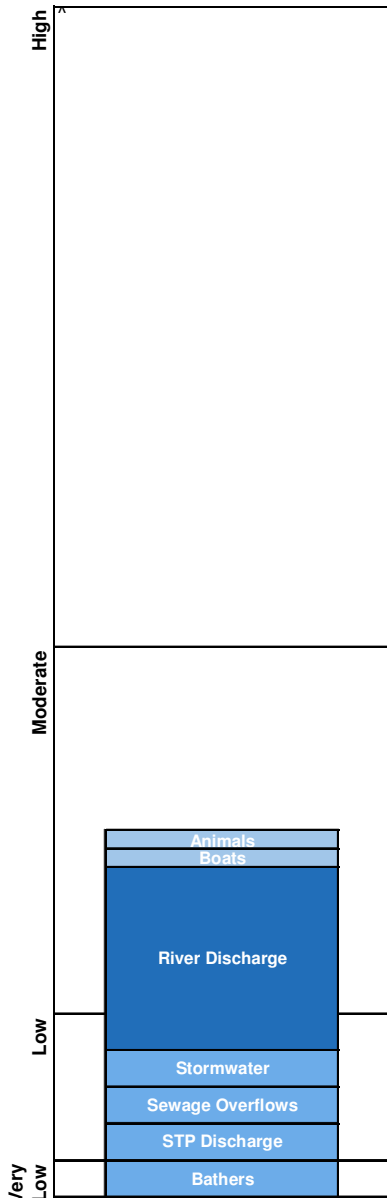
The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, often exceeding the safe swimming limit in response 5 mm of rainfall or more.

The site has been monitored since 2002.

See 'How to read this report' for key to map

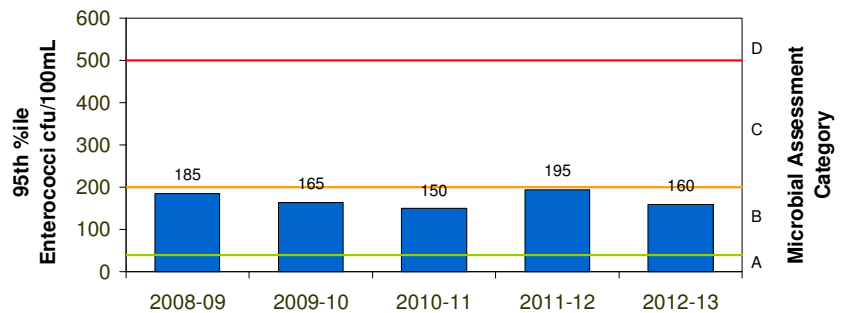
## Sanitary Inspection: **Moderate**

Source: ■ Very Low ■ Low ■ Moderate ■ High



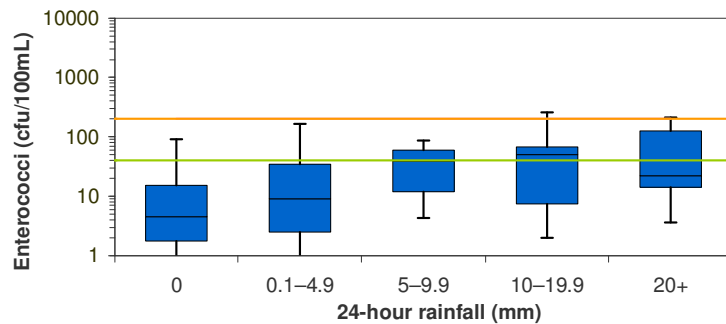
## Microbial Assessment: **B**

Monitoring period for 2012–13 result is November 2008 to February 2013.

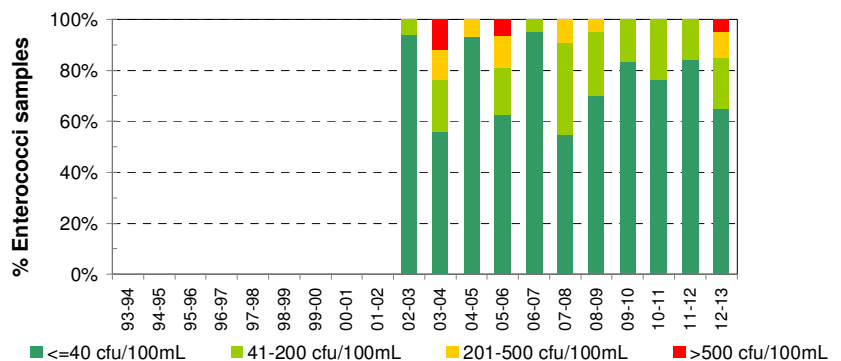


## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time



# Lighthouse Beach

Beach Suitability Grade: **Good**



Lighthouse Beach is situated to the north of the sea wall at the mouth of the Richmond River. The beach is used by swimmers during the summer months and is also very popular with surfers and for fishing. The sampling site is at the northern end of the beach.

The Beach Suitability Grade of Good indicates that the microbial water quality is generally suitable for swimming, but the water may be susceptible to pollution from a few minor sources of faecal contamination.

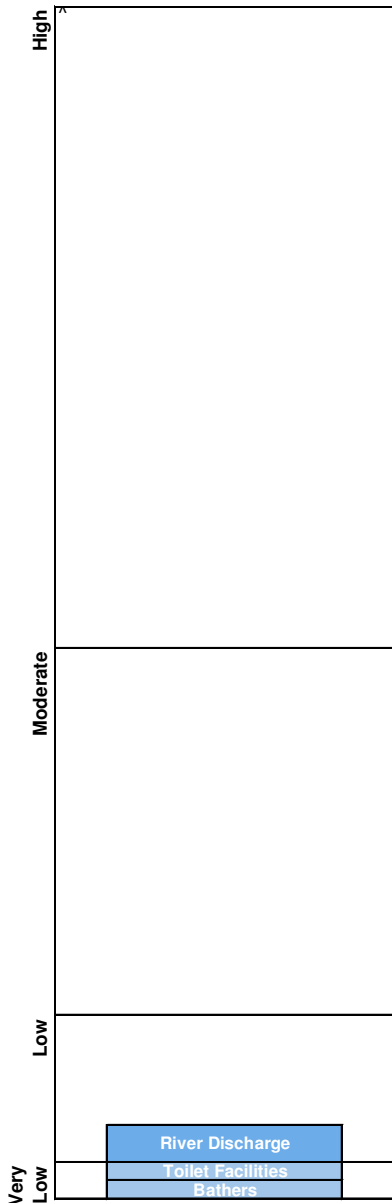
The response to rainfall graph indicates that levels of enterococci increased slightly in response to rainfall, but generally remain below the safe swimming limit across all rainfall categories.

The site was monitored in 2002–2003, and since 2009–2010.

See 'How to read this report' for key to map

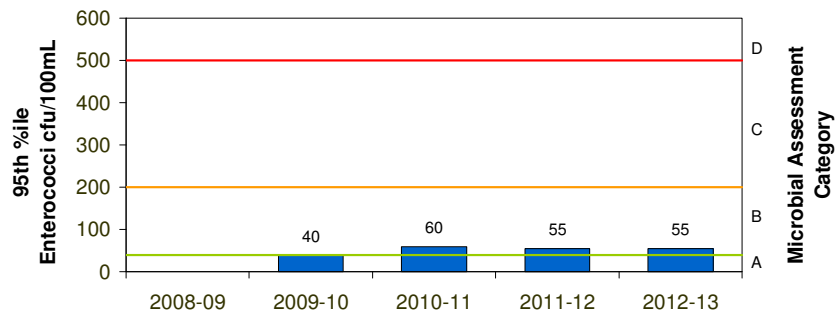
## Sanitary Inspection: **Low**

Source: ■ Very Low ■ Low ■ Moderate ■ High



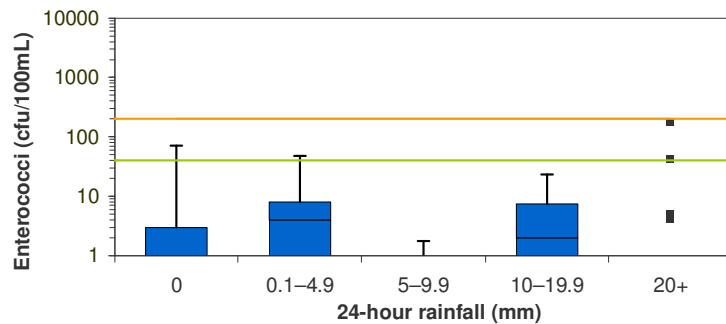
## Microbial Assessment: **B**

Monitoring period for 2012–13 result is November 2009 to February 2013.



## Response to rainfall

Rainfall from Ballina rain gauge



## Trends in enterococci data through time

