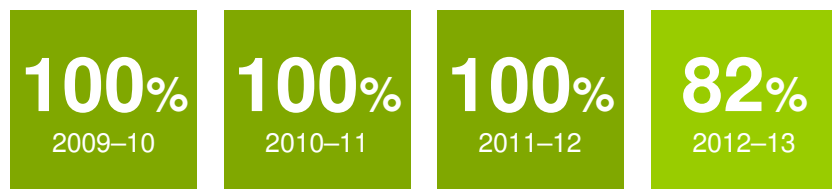


Port Stephens Council

State of the Beaches 2012–2013

Overall results

Percentage of sites graded as Good or Very Good:



Nine of the eleven swimming sites were graded as Very Good or Good in 2012–2013, a fall in performance from previous years. Two estuarine sites were downgraded to Poor due to the cumulative impacts of heavy rainfall and flooding events over the last three years (the assessment period was October 2010 to March 2013).

Ocean beaches



- Good / Very Good
- Fair
- Poor / Very Poor

All five ocean beaches were graded as Very Good. The water quality at Zenith, Box, Fingal and One Mile beaches has been consistently excellent for the last ten years or more. Birubi Beach has also performed well, with very few enterococci results exceeding the safe swimming limit. These beaches have few potential sources of faecal contamination.

Estuarine beaches



- Good / Very Good
- Fair
- Poor / Very Poor

Of the six estuarine beaches monitored in Port Stephens, Little Beach is the closest to the ocean and the only site graded as Very Good. Water quality was suitable for swimming almost all of the time, with enterococci levels rarely exceeding the safe swimming limit.

Dutchmans Beach, Lemon Tree Passage Tidal Pool and Karuah Tidal Pool were graded as Good. The water quality at these sites was suitable for swimming during dry weather conditions, but swimming should be avoided following heavy rainfall or when there are signs of stormwater pollution such as discoloured water or floating debris.

Bagnalls Beach and Georges Reserve were graded as Poor. Water quality at these sites was impacted by nearby stormwater drains and elevated levels of enterococci have been measured following only light rainfall. Swimming should be avoided during and for at least three days after rainfall or if there are signs of stormwater pollution such as discoloured water or floating debris.

Best beaches

Zenith Beach, Box Beach, Fingal Beach, One Mile Beach, Birubi Beach and Little Beach.

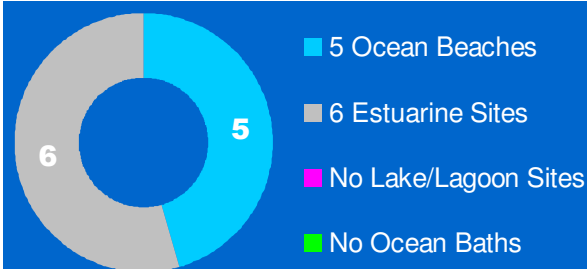
These beaches had excellent water quality and were suitable for swimming almost all of the time.

11
sites

every 6
days*

453
samples

year
round*



* Four locations were monitored by Hunter Water Corporation as a requirement of Environment Protection Licences. Samples were collected every sixth day throughout the year.

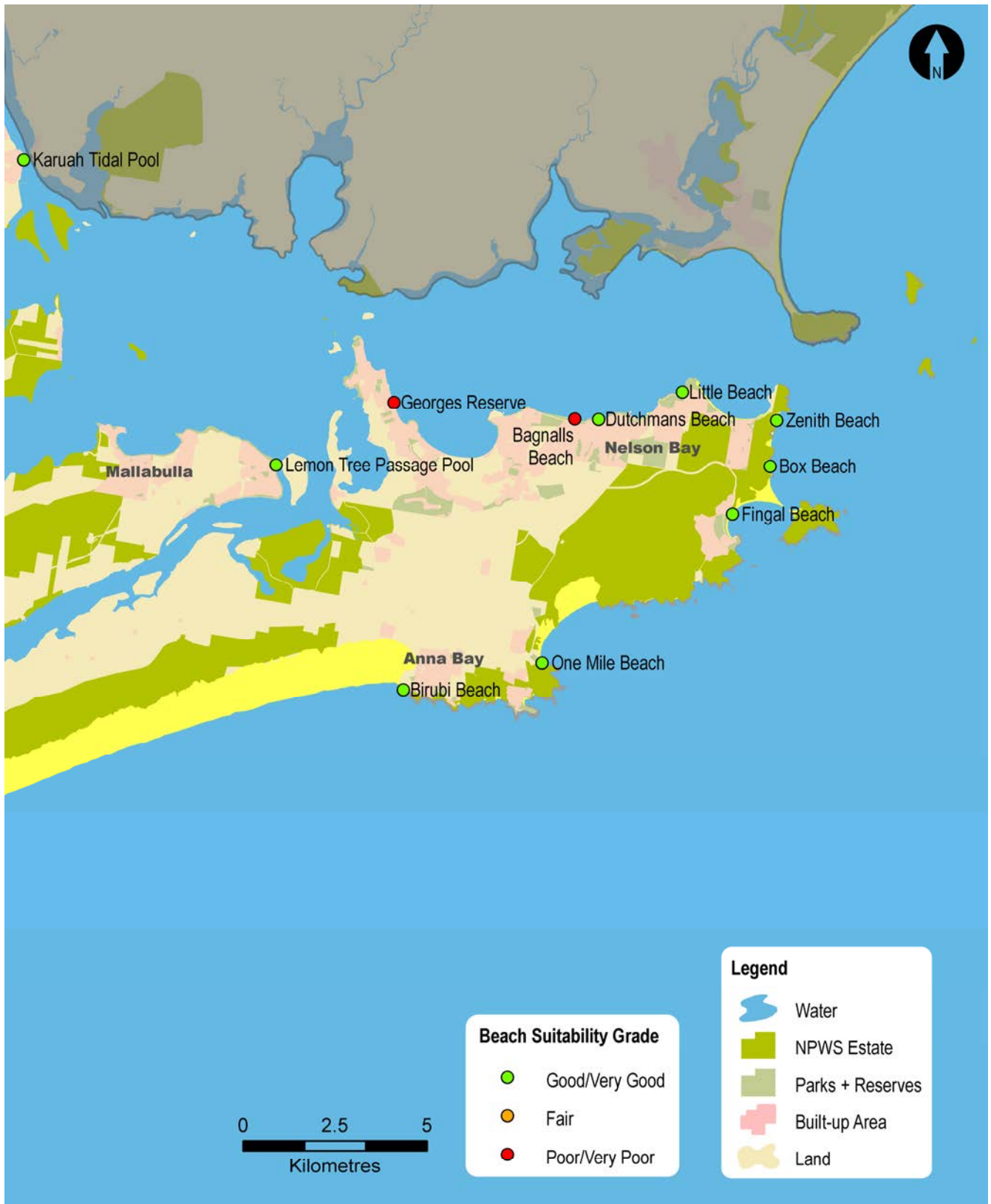
Seven locations were monitored by Port Stephens Council. Samples were collected weekly between October and March and sampling and laboratory analysis was fully funded by the council.

Management

Port Stephens Council responds to reports of suspected algal contamination and stormwater and sewage pollution by closing swimming areas and issuing public notices on the council website and in local papers. If sewage or stormwater contamination is suspected, the swimming area is closed and microbial water quality testing is undertaken until samples indicate that water quality is suitable for swimming.

In addition to the recreational water quality monitoring, Port Stephens Council conducts monitoring to assess estuarine health and to identify pollution sources as part of the Clean Waterways Program. This information is used to develop strategies to improve the health of waterways.

There are more than 4500 on-site sewage management systems in the Port Stephens Council area, many of which are located in semi-rural villages and rural areas. Potential environmental and health impacts are managed by the council through routine inspections, application assessment and management, and an 'approval to operate' database.



Sampling sites and Beach Suitability Grades in Port Stephens Council

Zenith Beach

Beach Suitability Grade: **Very Good**



Zenith Beach is 400 metres long and is within Tomaree National Park. Beach conditions are usually safe, but rips run out against each headland. Zenith Beach is not patrolled by lifeguards.

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

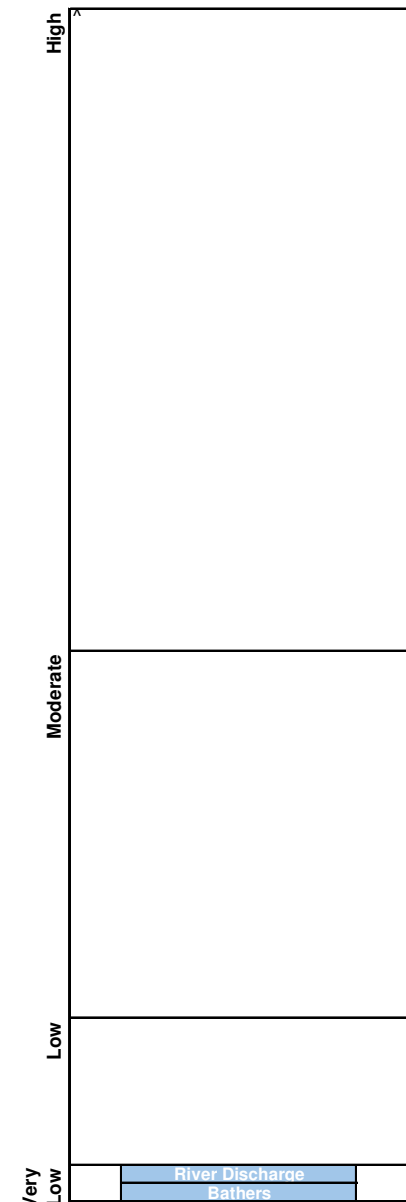
The response to rainfall graph indicates that enterococci levels had little response to rainfall and remained below the safe swimming limit across all rainfall categories.

The site has been monitored since 1996 and microbial water quality has generally been of a very high standard.

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

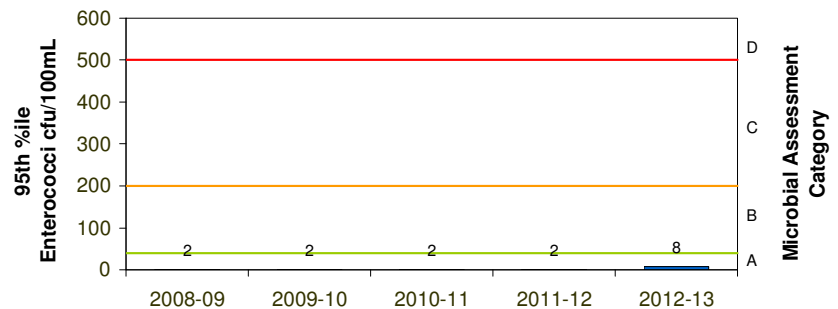
Sanitary Inspection: Low

Source: ■ Very Low ■ Low ■ Moderate ■ High



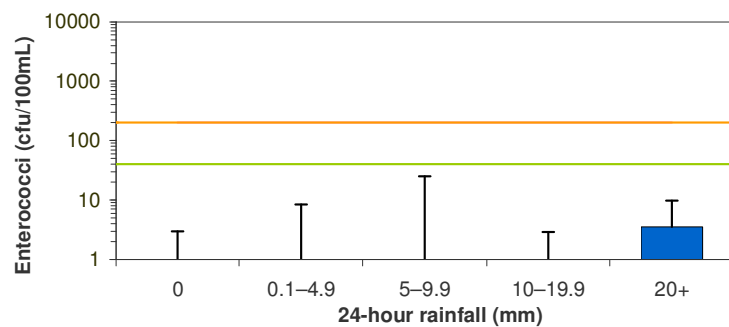
Microbial Assessment: A

Monitoring period for 2012-13 result is September 2011 to April 2013.

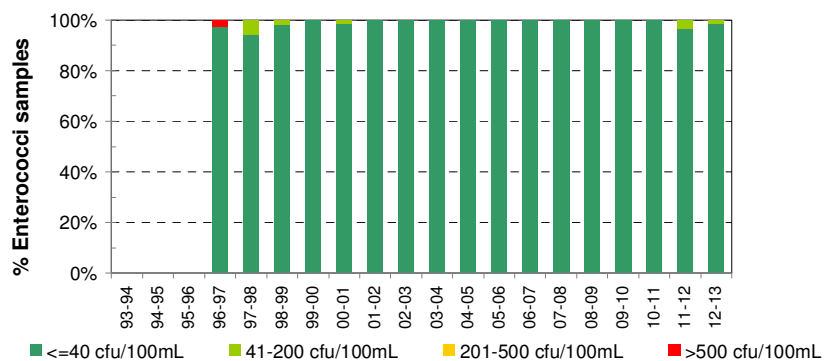


Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge

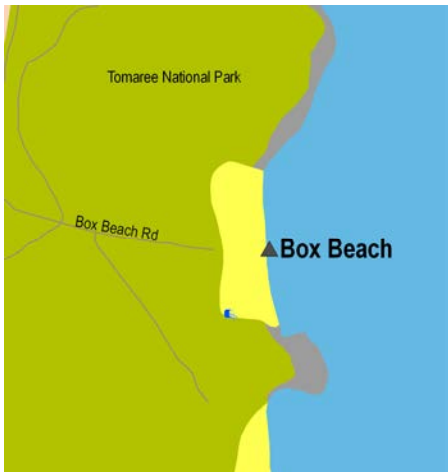


Trends in enterococci data through time



Box Beach

Beach Suitability Grade: **Very Good**



Box Beach is 350 metres long and within Tomaree National Park. Beach conditions are usually safe, but rips run out against the headlands during large swells.

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

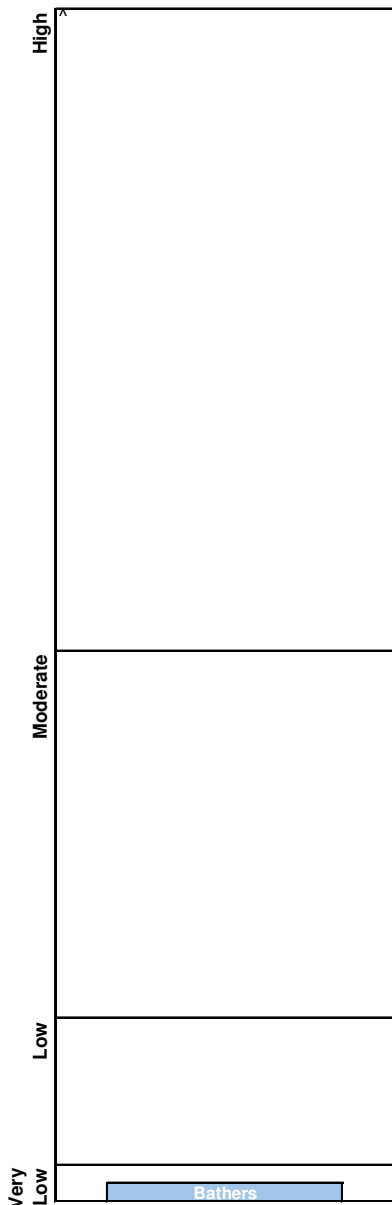
The response to rainfall graph indicates that enterococci levels had very little response to rainfall and remained well below the safe swimming limit across all rainfall categories.

The site has been monitored since 1996 and microbial water quality has generally been of a very high standard.

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

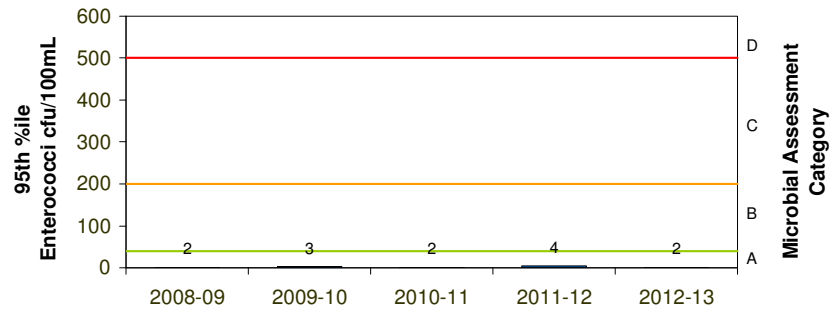
Sanitary Inspection: **Very Low**

Source: ■ Very Low ■ Low ■ Moderate ■ High



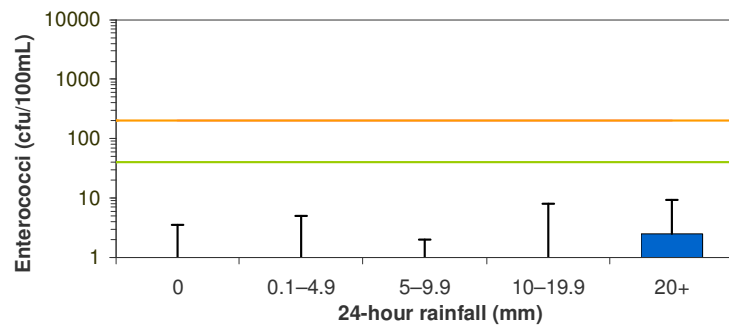
Microbial Assessment: **A**

Monitoring period for 2012–13 result is September 2011 to April 2013.

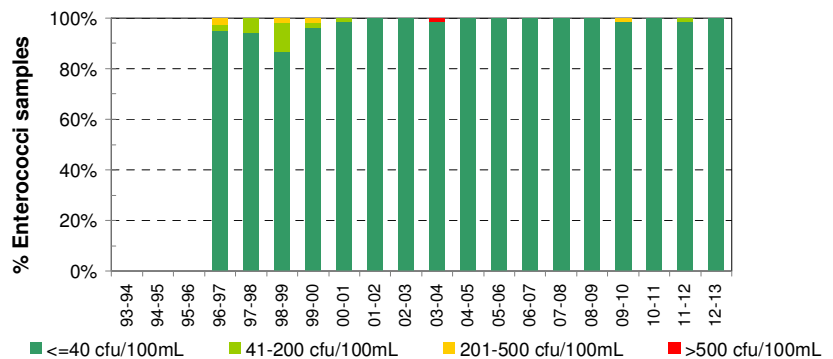


Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge



Trends in enterococci data through time



Fingal Beach

Beach Suitability Grade: **Very Good**



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

Fingal Beach is approximately 2.7 kilometres long and within Fingal Bay. Beach conditions are generally safe, with the best conditions in the patrolled area or towards the southern end of the beach.

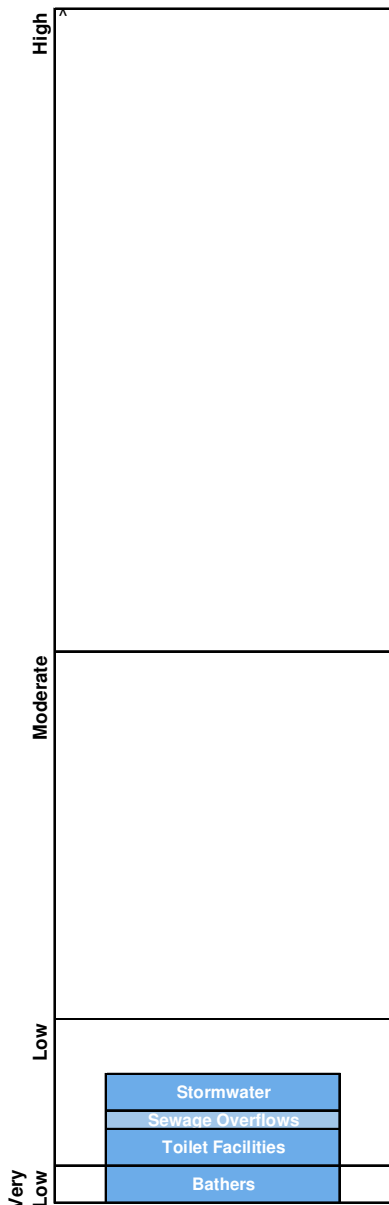
The Beach Suitability Grade of Very Good indicates that the microbial water quality is considered suitable for swimming almost all of the time, with few potential sources of faecal contamination.

The response to rainfall graph indicates that enterococci levels increased slightly with increasing rainfall, but generally remained below the safe swimming limit across all rainfall categories.

The site has been monitored since 1996 and microbial water quality has generally been of a very high standard.

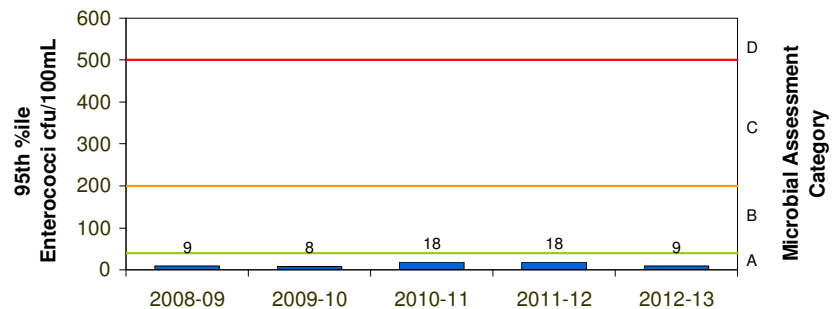
Sanitary Inspection: Low

Source: ■ Very Low ■ Low ■ Moderate ■ High



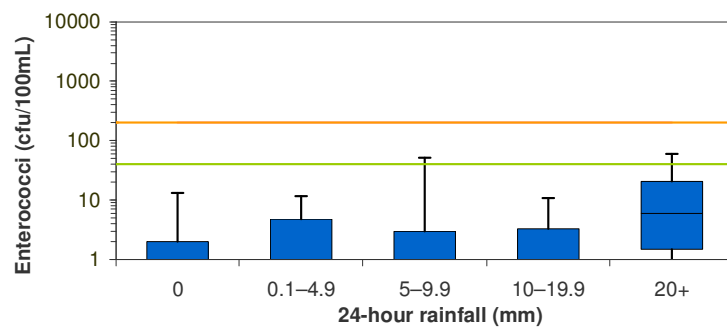
Microbial Assessment: A

Monitoring period for 2012–13 result is September 2011 to April 2013.

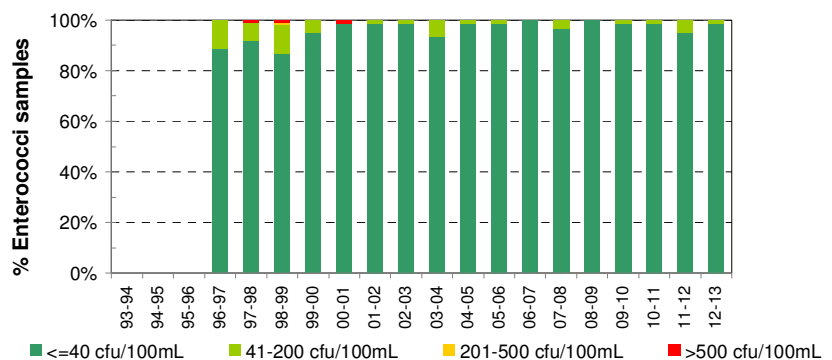


Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge



Trends in enterococci data through time



One Mile Beach

Beach Suitability Grade: **Very Good**



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

This 1.3 kilometre stretch of beach is at the southern end of Anna Bay. Beach conditions are relatively safe and lifeguards patrol the southern end of the beach between late September and mid-April.

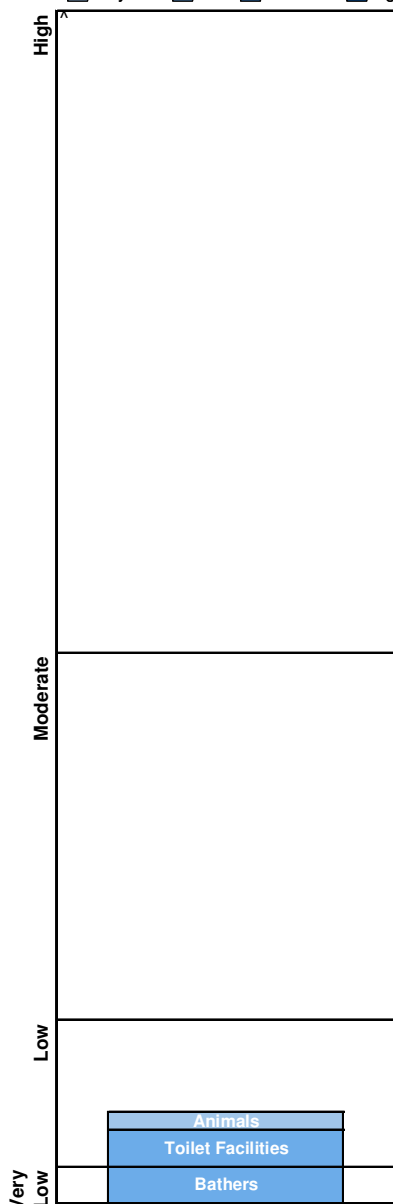
The Beach Suitability Grade of Very Good indicates that the microbial water quality is considered suitable for swimming almost all of the time, with few potential sources of faecal contamination.

The response to rainfall graph indicates that enterococci levels had little response to rainfall and remained below the safe swimming limit across all rainfall categories.

The site has been monitored since 1996 and microbial water quality has generally been of a very high standard.

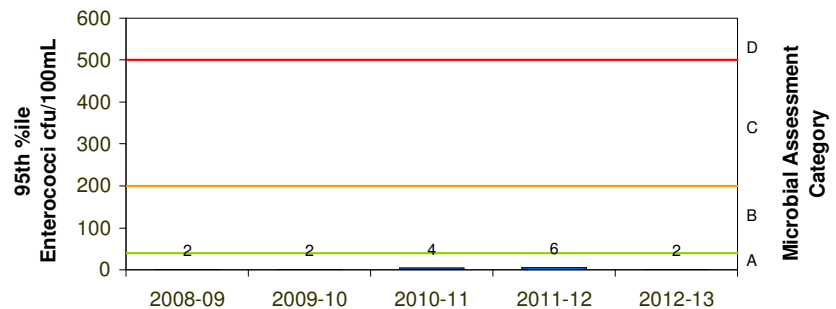
Sanitary Inspection: Low

Source: ■ Very Low ■ Low ■ Moderate ■ High



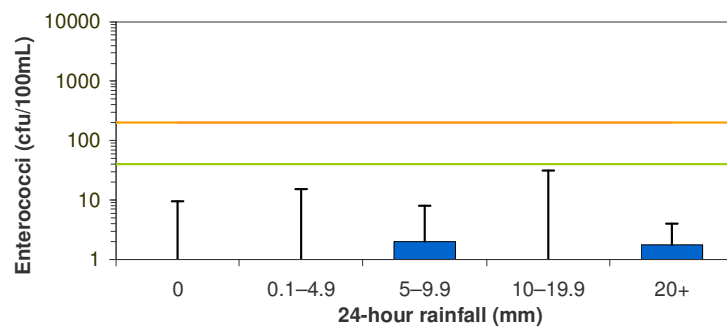
Microbial Assessment: A

Monitoring period for 2012–13 result is September 2011 to April 2013.

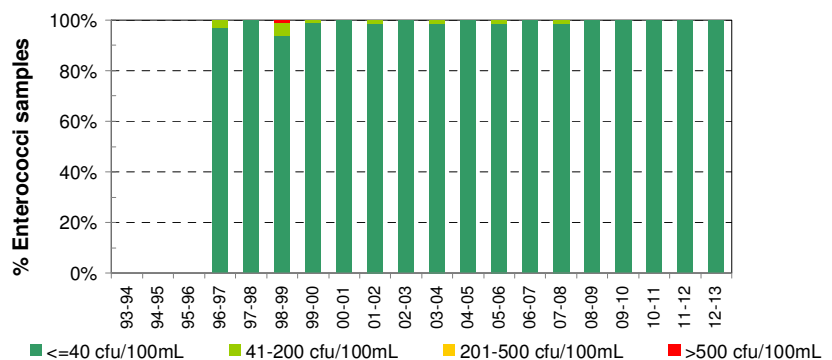


Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge



Trends in enterococci data through time



Birubi Beach

Beach Suitability Grade: **Very Good**



Birubi Beach lies among rocky outcrops at the northern end of Stockton Bight, which contains over 30 kilometres of beaches and coastal dunes. There are few facilities close by, but the site is adjacent to a surf club and the area is popular with swimmers and surfers.

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.

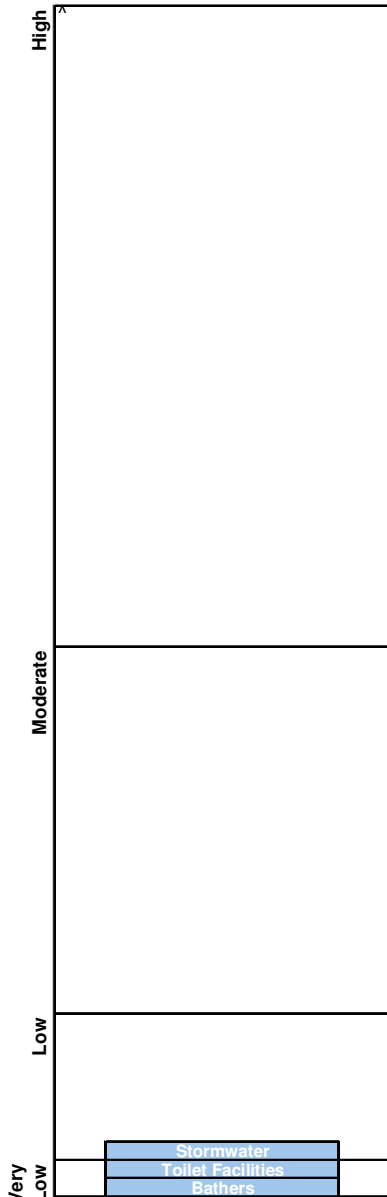
The response to rainfall graph indicates that enterococci levels increased slightly in response to rainfall but generally remained below the safe swimming limit across all rainfall categories.

The site has been monitored since 2004 and microbial water quality has generally been of a high standard.

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

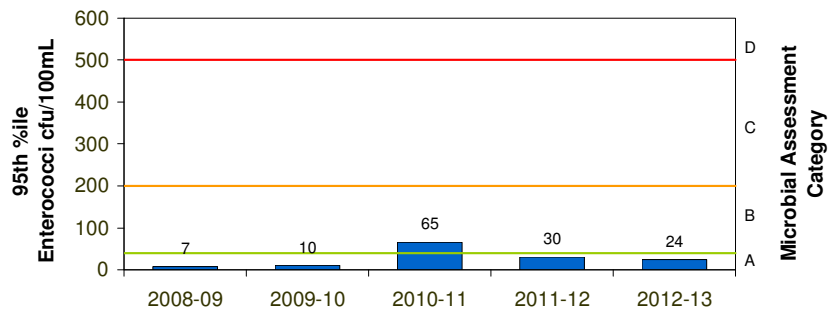
Sanitary Inspection: Low

Source: ■ Very Low ■ Low ■ Moderate ■ High



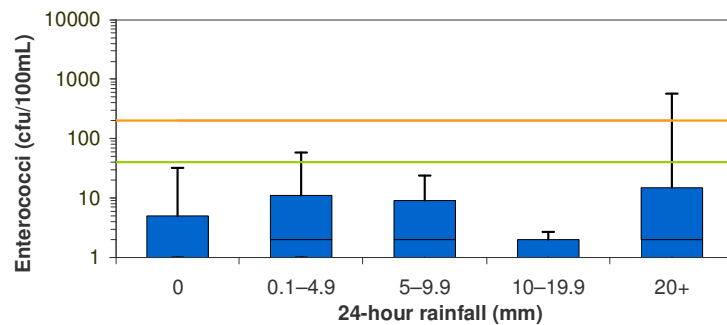
Microbial Assessment: A

Monitoring period for 2012–13 result is October 2010 to March 2013.

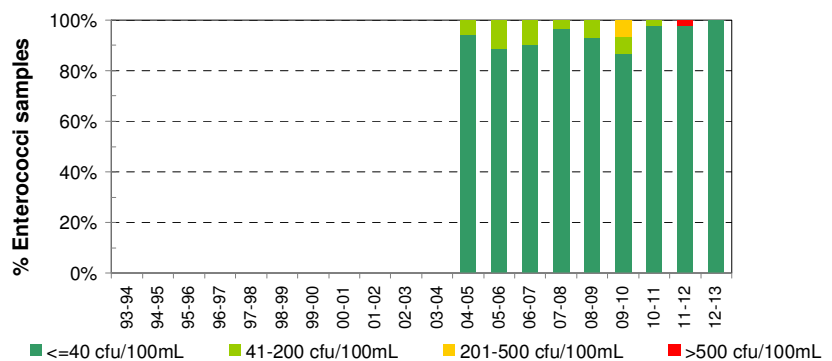


Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge



Trends in enterococci data through time



Little Beach

Beach Suitability Grade: **Very Good**



Little Beach is a netted estuarine beach located on the southern shore of Port Stephens, approximately three kilometres from the ocean. The beach is adjacent to a foreshore park and picnic area and is popular with families with small children.

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.

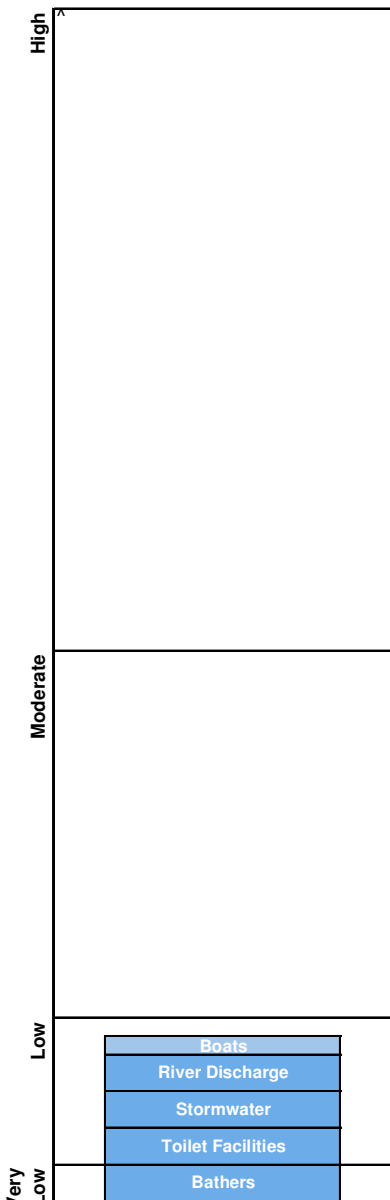
The response to rainfall graph indicates that enterococci levels showed little response to rainfall and generally remained below safe swimming limits across all rainfall categories.

The site has been monitored since 2004 and microbial water quality has generally been of a high standard.

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

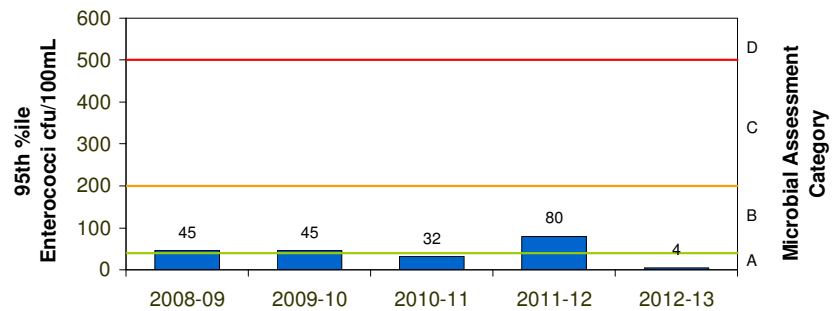
Sanitary Inspection: Low

Source: ■ Very Low ■ Low ■ Moderate ■ High



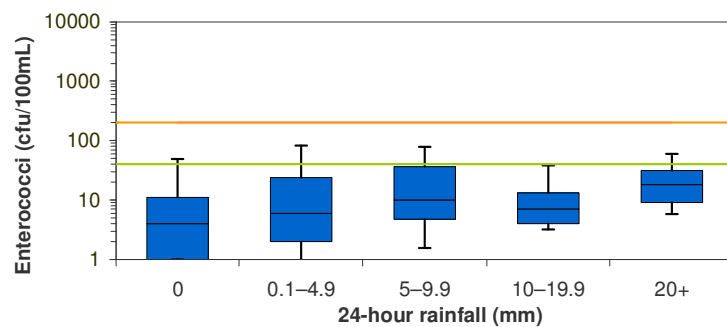
Microbial Assessment: A

Monitoring period for 2012–13 result is October 2010 to March 2013.

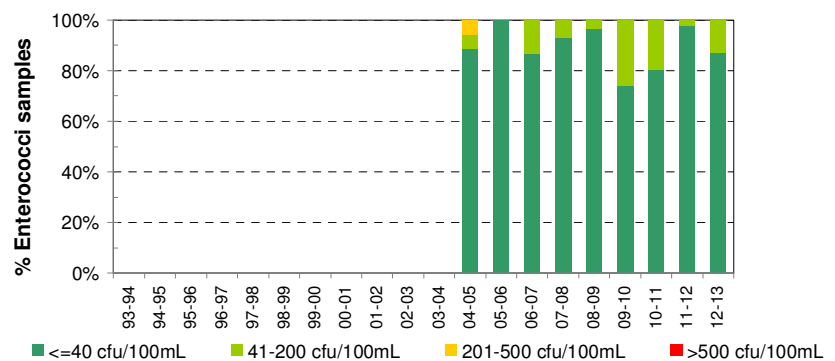


Response to rainfall

Rainfall from Nelson Bay WWTP rain gauge



Trends in enterococci data through time



Dutchmans Beach

Beach Suitability Grade: **Good**



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

Dutchmans Beach (also known as Dutchies Beach) is on the southern shore of Port Stephens, approximately five kilometres from the ocean. The beach is adjacent to a foreshore park and picnic area and is popular with the local community and tourists.

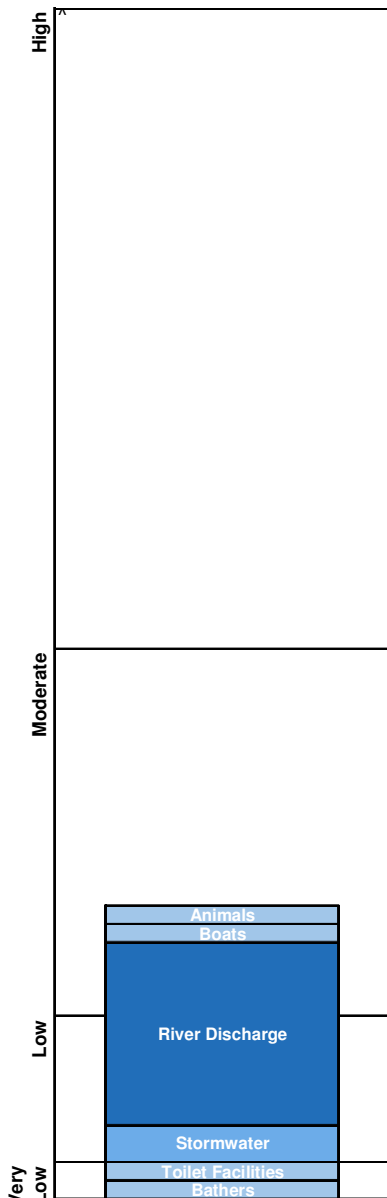
The Beach Suitability Grade of Good indicates that the microbial water quality is considered suitable for swimming most of the time but the water may be susceptible to pollution from a number of potential sources of faecal contamination, including river discharge.

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

The site has been monitored since 2005 and microbial water quality has generally been of a high standard.

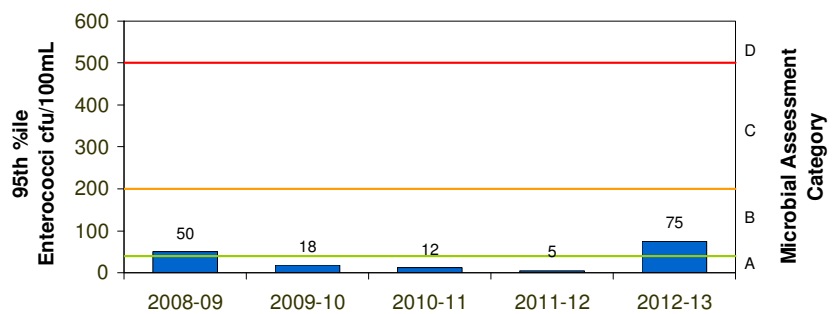
Sanitary Inspection: Moderate

Source: ■ Very Low ■ Low ■ Moderate ■ High



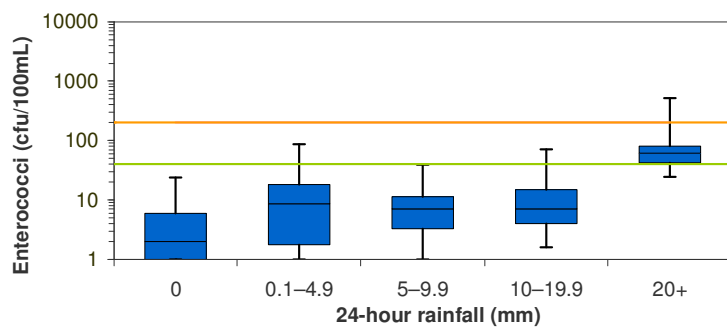
Microbial Assessment: B

Monitoring period for 2012–13 result is October 2010 to March 2013.

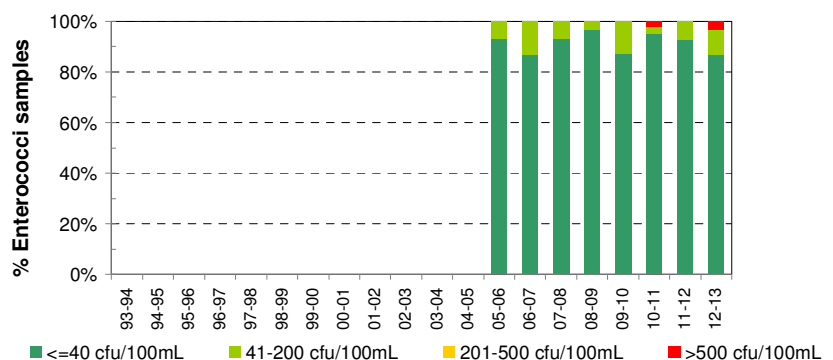


Response to rainfall

Rainfall from Nelson Bay WWTP rain gauge



Trends in enterococci data through time



Bagnalls Beach

Beach Suitability Grade: **Poor**



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

Bagnalls Beach is located on the southern shore of Port Stephens, approximately six kilometres from the ocean. The beach is adjacent to a foreshore park and picnic area and is a popular play area for children. It is also a very popular off-leash dog walking area.

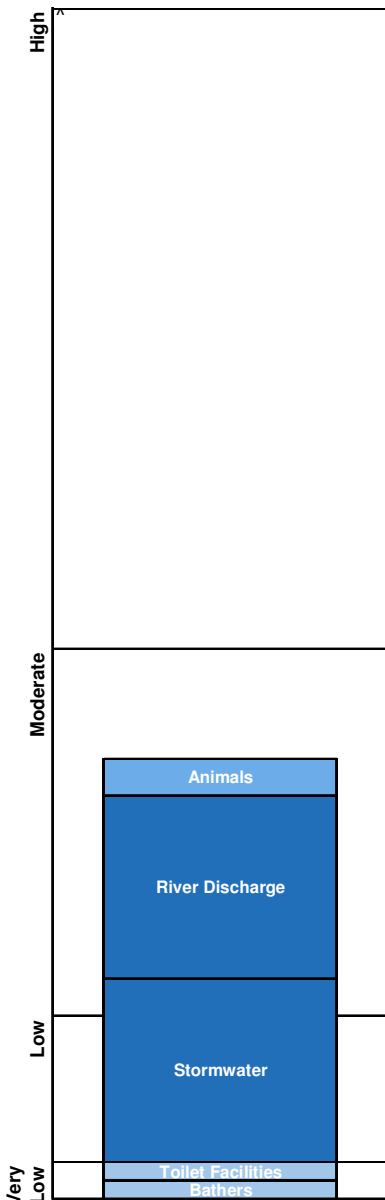
The Beach Suitability Grade of Poor indicates that the water quality is susceptible to faecal pollution, particularly after rainfall and occasionally during dry weather conditions, with potential faecal contamination from river discharge and stormwater.

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

The site has been monitored since 2004 and microbial water quality has varied among years.

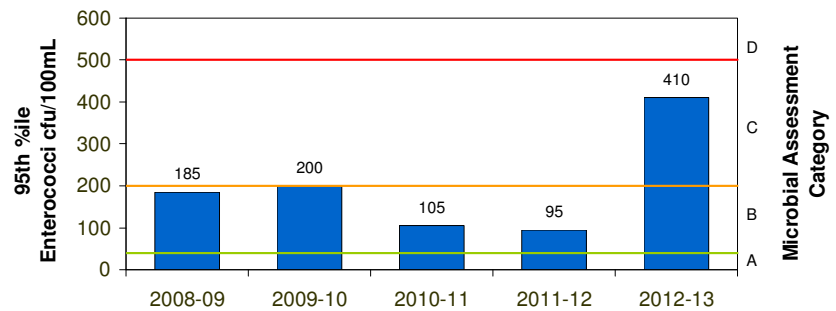
Sanitary Inspection: Moderate

Source: ■ Very Low ■ Low ■ Moderate ■ High



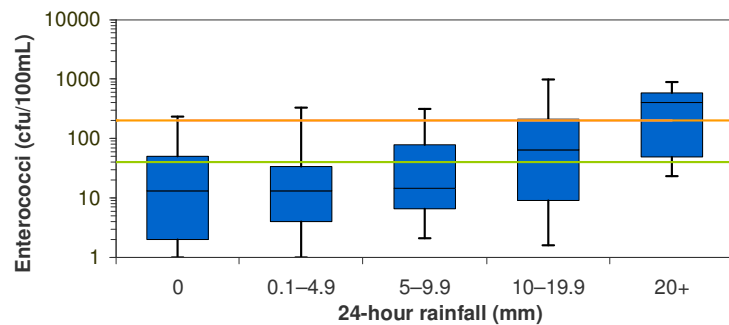
Microbial Assessment: C

Monitoring period for 2012–13 result is October 2010 to March 2013.

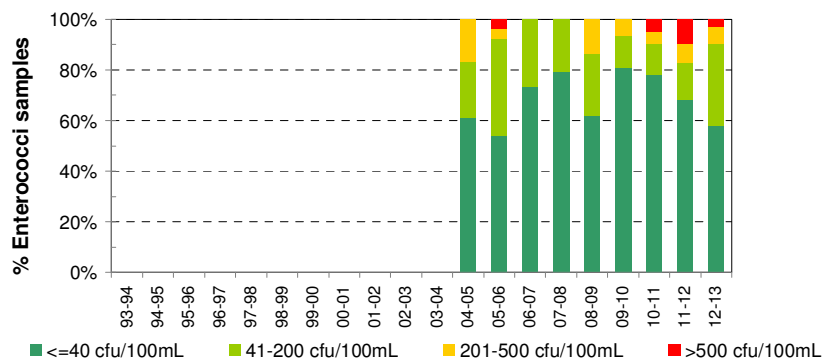


Response to rainfall

Rainfall from Nelson Bay WWTP rain gauge



Trends in enterococci data through time



Georges Reserve

Beach Suitability Grade: **Poor**



Georges Reserve is located on the southern shore of Port Stephens, approximately ten kilometres from the ocean. The beach is adjacent to a foreshore park and picnic area. The beach and park are popular with the local community and tourists.

The Beach Suitability Grade of Poor indicates that the water quality is susceptible to faecal pollution, particularly after rainfall, with several potential sources of faecal contamination, including river discharge.

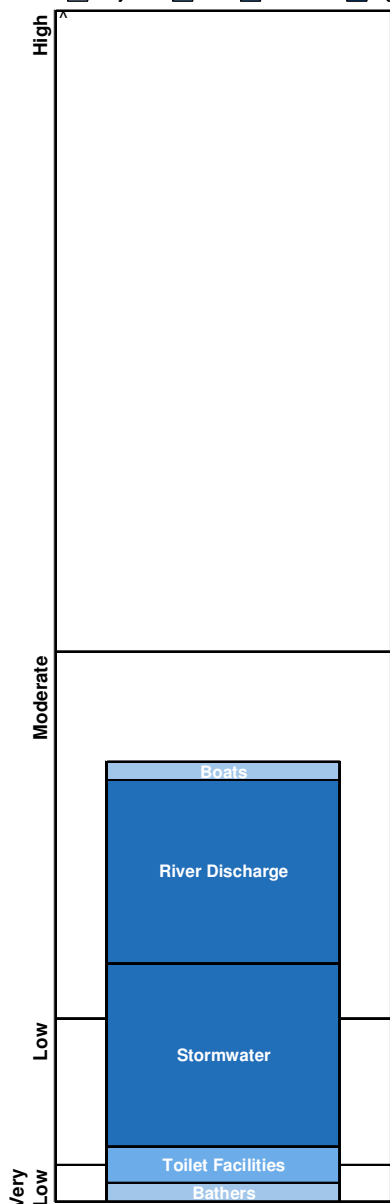
The response to rainfall graph indicates that enterococci levels increased with increasing rainfall, often exceeding the safe swimming limit after light rain.

The site has been monitored since 2004 and microbial water quality has varied among years.

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

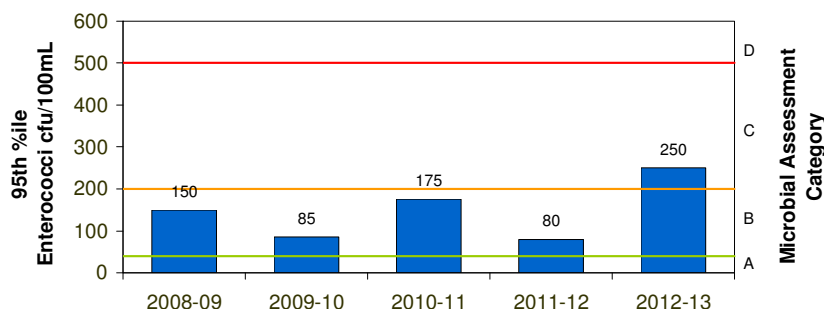
Sanitary Inspection: Moderate

Source: ■ Very Low ■ Low ■ Moderate ■ High



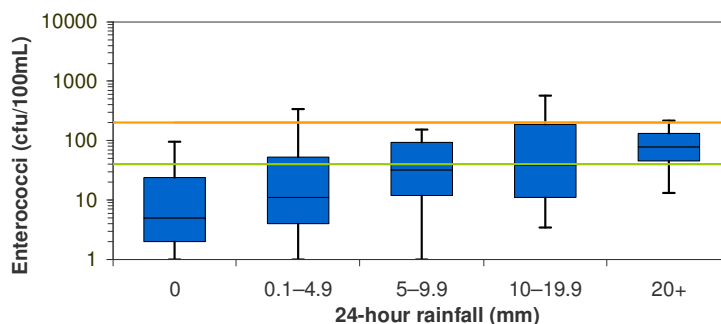
Microbial Assessment: C

Monitoring period for 2012–13 result is October 2010 to March 2013.

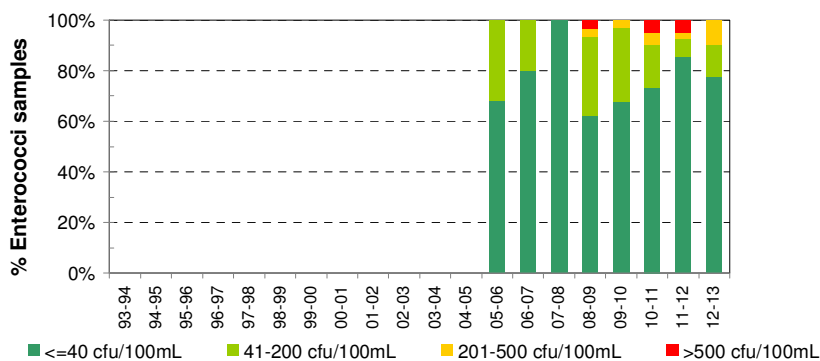


Response to rainfall

Rainfall from Nelson Bay WWTP rain gauge



Trends in enterococci data through time



Lemon Tree Passage Tidal Pool Beach Suitability Grade: Good



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

Lemon Tree Passage Tidal Pool is a netted swimming enclosure located in a shallow arm of Port Stephens, approximately 15 kilometres from the ocean. The baths are adjacent to a foreshore park, boat ramp and picnic areas and are popular in summer.

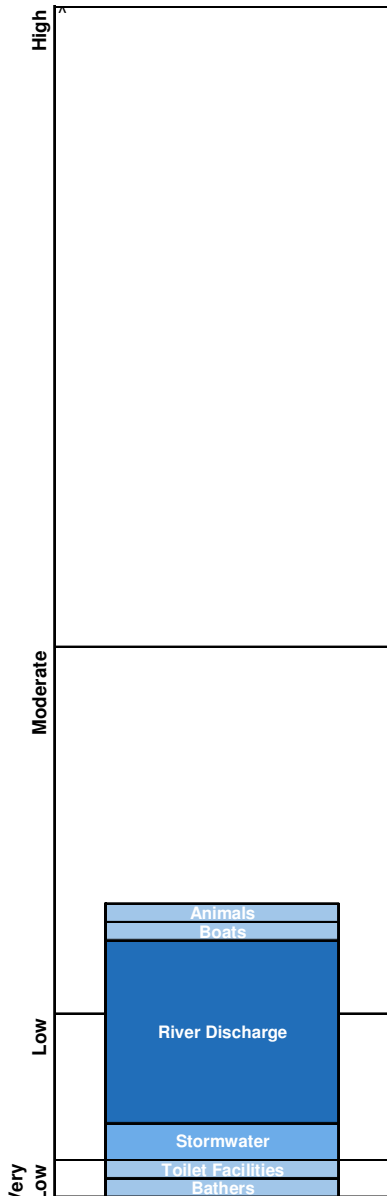
The Beach Suitability Grade of Good indicates that the microbial water quality is generally suitable for swimming but the water may be susceptible to pollution from several potential sources of faecal contamination, including river discharge.

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

The site has been monitored since 2004 and microbial water quality has generally been of a high standard.

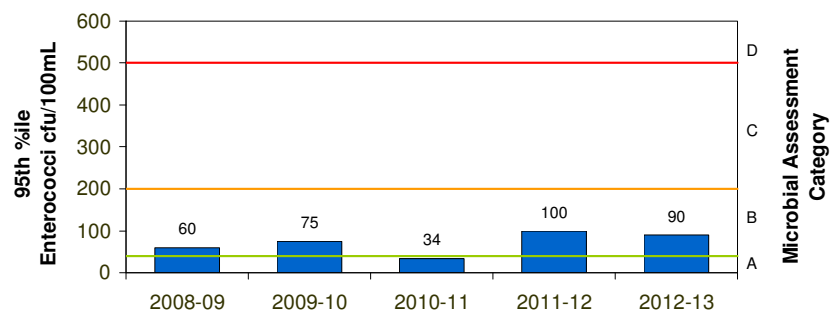
Sanitary Inspection: Moderate

Source: ■ Very Low ■ Low ■ Moderate ■ High



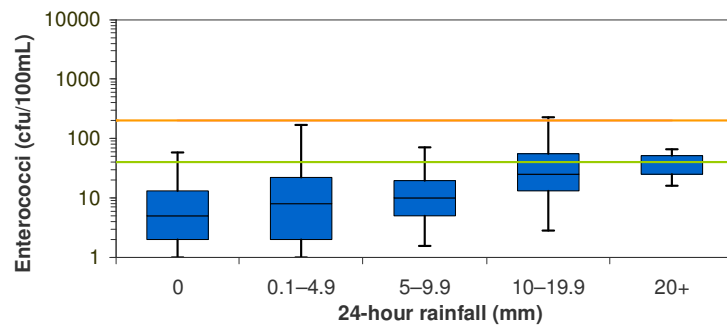
Microbial Assessment: B

Monitoring period for 2012–13 result is October 2010 to March 2013.

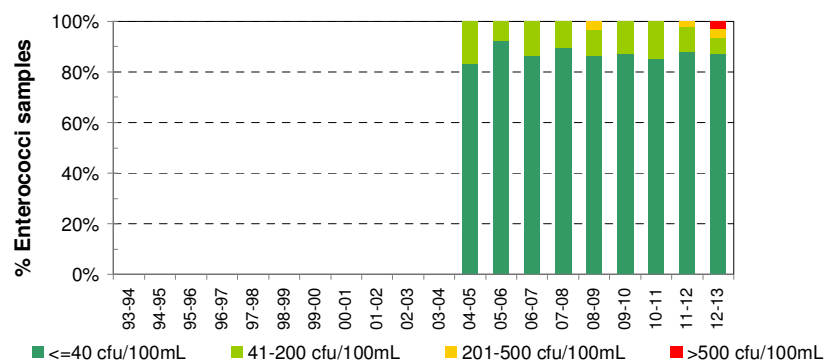


Response to rainfall

Rainfall from Nelson Bay WWTP rain gauge



Trends in enterococci data through time



Karuah Tidal Pool

Beach Suitability Grade: **Good**



Karuah Tidal Pool is a netted swimming enclosure located in the lower reaches of the Karuah River, approximately 25 kilometres from the ocean. The baths are adjacent to a foreshore park and picnic area and are popular with local residents and tourists with small children.

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 river discharge.

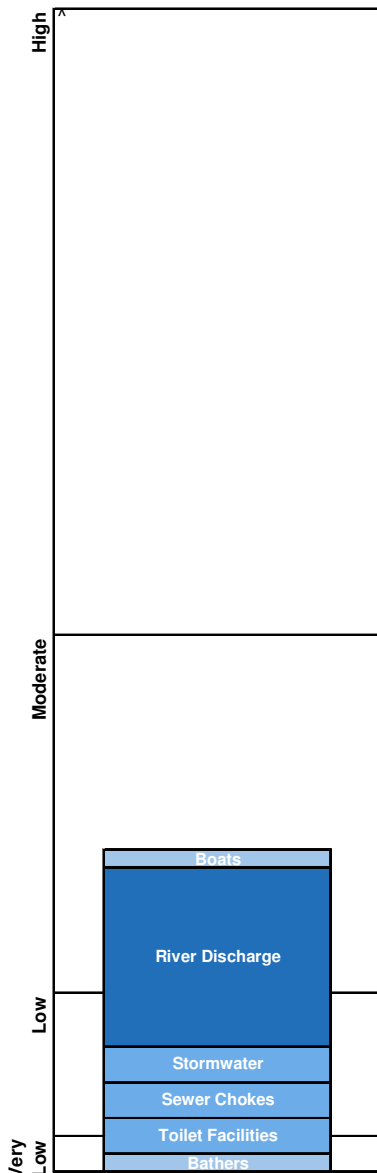
The response to rainfall graph indicates that enterococci levels increased with increasing rainfall, frequently exceeding the safe swimming limit in response to 20 mm of rainfall.

The site has been monitored since 2004 and microbial water quality has generally been of a high standard.

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

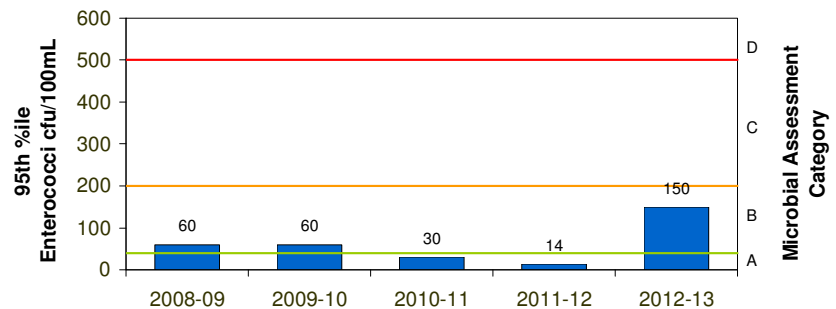
Sanitary Inspection: Moderate

Source: ■ Very Low ■ Low ■ Moderate ■ High



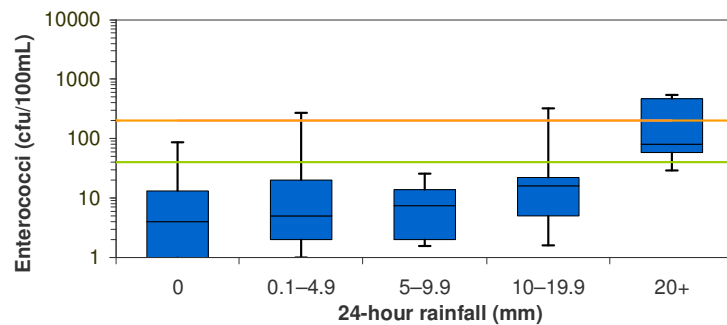
Microbial Assessment: B

Monitoring period for 2012–13 result is October 2010 to March 2013.



Response to rainfall

Rainfall from Boulder Bay WWTP rain gauge



Trends in enterococci data through time

