

RECREATIONAL BATHING WATER QUALITY

Annual Monitoring Summary 2012/13

Why we monitor recreational bathing water quality



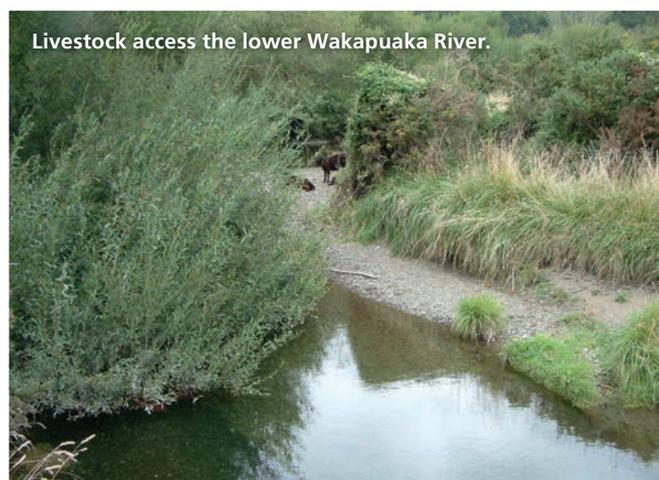
Swimming in the Maitai River.

monitoring data from the last five summers is shown in Table 1. These grades indicate the risk of getting sick from harmful bugs when swimming, surfing or otherwise exposed to freshwater or seawater at each site. Five years of data is used as it gives a better indication of risk than annual data. The number of bacteria exceedances for 2012/13 and the preceding summer are also compared in Figure 1 to highlight recent changes that may be attributable to wetter weather conditions resulting in more storm water run-off or other sources such as septic tank and sewage leaks.

Key Results

Nelson's beaches at Nelson Haven (Atawhai), Cable Bay, Tahunanui Beach and Monaco (Wharf) have all retained Good recreation grades (Table 1). Occasional exceedances in previous years have been associated with rainfall events and high spring tides re-suspending washed up debris from the beach.

The Maitai River at Maitai Camp has continued to show improved bacteria counts over the last two summers, maintaining the Good recreation grade. Sunday Hole and Girlies Hole both have Fair recreation grades. Wildfowl and dogs are the most likely sources of faecal bacteria at these urban parkland sites. There was no change in the recreation grade for Collingwood St, which remains at Very Poor due to contamination from sewerage and other sources such as wildfowl.



Livestock access the lower Wakapuaka River.

Nelson's swimming holes and beaches are regularly used by locals and visitors over summer. Bacteria levels are monitored at our recreational bathing water sites over summer to minimise the risk of illness from harmful water borne bacteria and viruses.

Bathing water quality in Nelson is generally very good. However, higher bacteria levels can occur from various sources such as wild birds, animals, sewage and farm livestock. An increase in bacteria often occurs after periods of rainfall, when river flow increases from land run-off and stormwater.

Nelson City Council reports weekly bacteria results to the Nelson Marlborough District Health Board (NMDHB). Sites with elevated Red Alert bacteria counts are re-sampled within 24 hours. The NMDHB is consulted on the potential sources of bacteria, the risk to public health and the appropriate action required, including public health warnings.

The most recent grading of our bathing sites based on

Table 1. Recreational Bathing Water Quality Grades based on 2008/09 – 2012/13 data.

Site Name	Bacteria grade	Recreation grade
Tahunanui Beach	B	Good
Monaco Beach	B	Good
Cable Bay	B	Good
Atawhai	B	Good
Hira Reserve	C	Poor
Paremata Flats	D	Very Poor
Maitai Camp	B	Good
Sunday Hole	C	Fair
Girlies Hole	C	Fair
Collingwood St Bridge	D	Very Poor

Good – satisfactory for swimming most of the time.

Fair – generally satisfactory for swimming, though there are many potential sources of faecal material.

Poor – generally unsuitable for swimming, as indicated by historical water quality results.

Very Poor – should be avoided for swimming.

In all cases caution should be taken during or following periods of rainfall, and swimming avoided if water is discoloured.



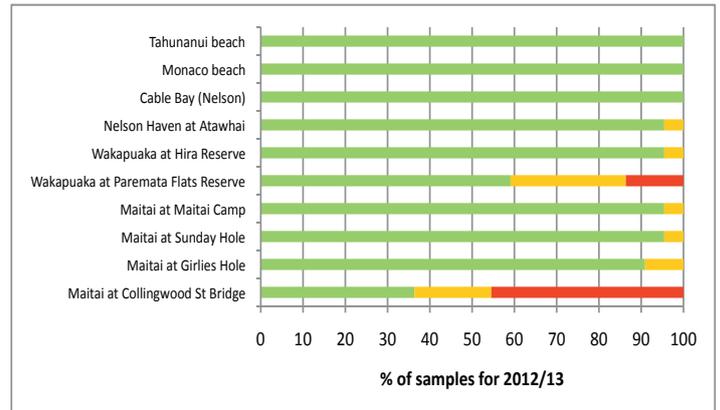
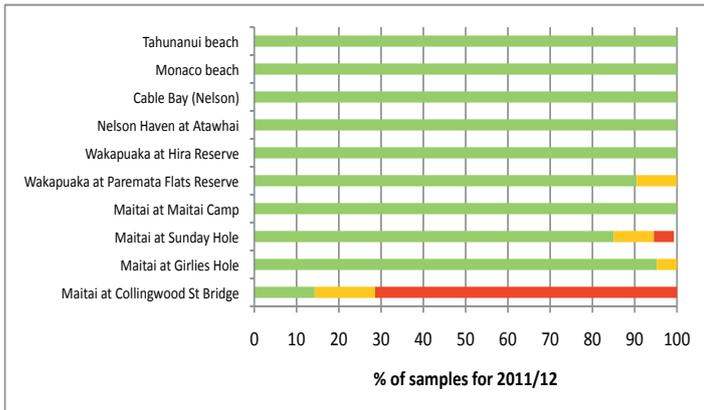
Wakapuaka River at Hira Reserve also shows a continued improvement with no red alert bacteria exceedances over the last two summers. Fencing and riparian planting on several properties in the upper Lud and its tributaries will reduce faecal bacteria and bank erosion by preventing stock accessing waterways. The overall recreation grade has improved from Very Poor to Poor.

The 2011/12 summer was unusually wet with 56 rain days and over 1000 mm of rain recorded compared to 31 rain days and 350 mm of rain over the 2012/13 summer. Increased storm water run off contributed to the greater number of

exceedances for Maitai at Collingwood St and at Sunday Hole in 2011/12 compared to 2012/13. However, no exceedances were recorded at Paremata Flats in 2011/12. The three red alerts at Paremata Flats in 2012/13 were not associated with preceding rainfall events and so were most likely from a localised bacteria source, associated with livestock, feral animals and wildfowl immediately upstream of the sampling site.

A health warning remains in place for the lower Maitai below Collingwood Street Bridge and for the Wakapuaka River at Paremata Flats Reserve warning people not to swim at these sites.

Figure 1. The percentage of samples for each site with Green, Amber Alert and Red Action exceedances in 2011/12 and 2012/13.



Red alert action exceedances occur when samples exceed 550 *E coli* for freshwater and 280 *Enterococci* /100ml for marine sites.

Green, Amber and Red Alert levels for bacteria counts per 100ml.

Freshwater	< 260	260 - 550	> 550
Marine	< 140	140 - 280	> 280

WHAT ARE WE DOING ABOUT IT?

Working with land owners

The Nelson City Council Land Management Adviser provides free advice for land owners and financial assistance towards fencing and native plants for riparian planting and biodiversity enhancement. Improving water quality in the Lud and Wakapuaka River is a key focus. Residents are being visited to discuss the water quality results and provided advice on best practice land management and related issues including maintenance of septic tanks. If you are interested in receiving further advice please contact Lynne Hall, Land Management Adviser 546 0308.

Nelson City Council work in progress

Council has undertaken a considerable amount of work to replace old leaking sewer pipes and cross-connections with storm water along Collingwood and Nile Street. NELMAC is embarking on a sewer maintenance programme in urban Nelson using dye testing and a smoke generator to locate and repair damaged sewer pipe infrastructure.



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