

RECREATIONAL BATHING WATER QUALITY

Annual Monitoring Summary 2013/14

Why we monitor recreational bathing water quality

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 that may be present.

Bathing water quality in Nelson is generally very good. However, higher bacteria levels can occur from various sources such as wild birds, animals, sewerage 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 Action bacteria counts that have unexplained sources 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, which may include public health warnings.

The number of Red Action bacteria counts for the summer monitoring programme and overall long term trend in Suitability for Recreation Grade based on data from the last five summers' monitoring is shown in Table 1. These grades indicate the level of 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 year to year data. The comparison between sites for 2013/14 Green, Amber Alert and Red Action bacteria counts is also provided in Figure 1.

Table 1. Recreational Bathing Water Grades 2013/14.

Site Name	Number of Red Action Exceedances in 2013/14	Bacteria grade	Overall trend in Suitability for Recreation
Tahunanui Beach	2	B	Good
Monaco Beach	3	C	Fair
Cable Bay	1	B	Good
Nelson Haven (Atawhai)	3	C	Fair
Hira Reserve	2	D	Very Poor
Paremata Flats Reserve	5	D	Very Poor
Maitai Camp	1	B	Good
Sunday Hole	1	C	Fair
Girllies Hole	1	C	Fair
Collingwood St Bridge	7	D	Very Poor

All sites had 22 water samples taken over the 2013/14 summer, except 21 samples for Cable Bay.

Good – satisfactory for swimming most of the time.

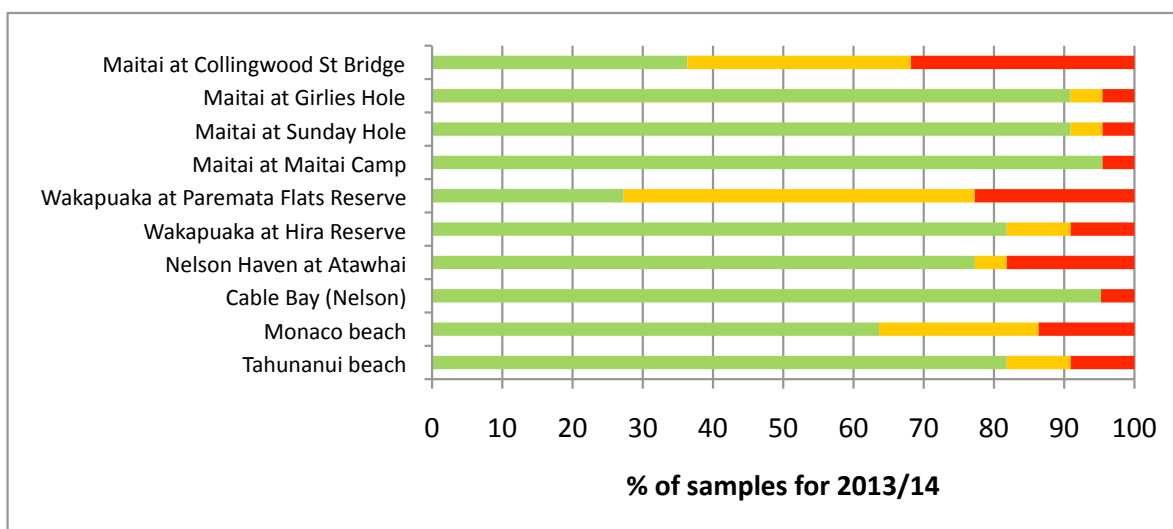
Fair – generally satisfactory for swimming, though there are many potential sources of faecal material.

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.

Fig. 1. The percentage of samples for each site with Green, Amber Alert and Red Action exceedances in 2013/14.



Red alert action exceedances occur when samples exceed 550 *E coli* /100ml 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



Key Results

All of the recreation bathing monitoring sites had at least one red alert bacteria exceedance for the 2013/14 summer. Most exceedances were explained by wet-weather effects, due to sampling when bathing sites were contaminated by storm water run off. Strong onshore winds re-mobilised sediment with bacteria on the same day at Nelson Haven and Monaco.

Nelson's marine recreation sites at Tahunanui Beach and Cable Bay have retained Good recreation grades, with Nelson Haven (Atawhai) and Monaco (Wharf) attaining Fair grades.

The Maitai River bathing holes continue to show improved bacteria counts over the last three summers. The Maitai camp maintained the Good recreation grade. Sunday Hole and Girlies Hole both only had one exceedance but remain with the Fair recreation grade due to the long term trend of elevated bacteria counts over five years. 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 dogs and wildfowl.

The Wakapuaka River at Hira Reserve has previously showed an improvement with no red alert bacteria exceedances in 2011/12 and 2012/13. However, the Very Poor grade was assigned to Hira Reserve due to two exceedances in 2013/14, from stormwater runoff and the long term trend of elevated bacteria counts.

There were five red action exceedances at Paremata Flats Reserve on the Wakapuaka River. These occurred during both dry and wet conditions, indicating a localised bacteria source, such as that 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.



Maitai swimming hole in Branford Park.

INITIATIVES FOR IMPROVING RECREATIONAL BATHING WATER QUALITY

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 Nelson's streams and rivers 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 advice please contact Lynne Hall, Land Management Adviser 546 0308.

Council is currently working with landowners to fence off livestock from accessing waterways. This will prevent livestock standing and defecating in waterways used for domestic drinking water supplies and recreation. It will also reduce disturbance to the stream bed and bank erosion from movement of livestock.

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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