



# RECREATIONAL BATHING WATER QUALITY

## Annual Monitoring Summary 2010/11

### Why we monitor recreational bathing water quality



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

Bathing water quality in Nelson is generally very good. However, elevated bacteria levels can occur naturally, from various sources such as wild birds and animals and indirectly as pollution from human sources such as sewerage and from land uses, such as farming livestock. An increase in bacteria often occurs after periods of rainfall, when river flow increases from land run-off and storm water.

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

Recreation bathing grades are based on the bacteria levels from 20 samples at each site over the summer and their suitability for recreation, which includes an assessment of the bacteria sources for each site. The 2010/11 recreation grade is compared to the historic grade from 2007/08 when results are available for all routine monitoring sites, summarised in Table 1.

### Key Results

Nelson's beaches monitored at Nelson Haven (Atawhai), Cable Bay, Tahunanui Beach and Monaco (Wharf) all have Good recreation grades, which have not changed. Occasional exceedences have been associated with rainfall events and high spring tides re-suspending washed up debris from the beach. The occurrence of exceedences for each site are summarised in Figure 1 (see next page).

The Maitai River at Maitai Camp, Sunday Hole and Girlies Hole all have Fair recreation grades. Sunday Hole has improved bacteria counts, upgrading from a D to C. There was no change in the recreation grade for Collingwood Street, which remains at Very Poor due to contamination from sewerage and other sources such as wildfowl.

Monitoring of the Wakapuaka River at Paremata and Hira Reserve commenced in 2008, so there is no long term comparison for these interim sites. Both sites have Very Poor recreation grades. The elevated bacteria are from livestock, with unrestricted access to waterways and also from numerous wildfowl that congregate on the flats.

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.

**Tab. 1. Recreational Bathing Water Quality Results**

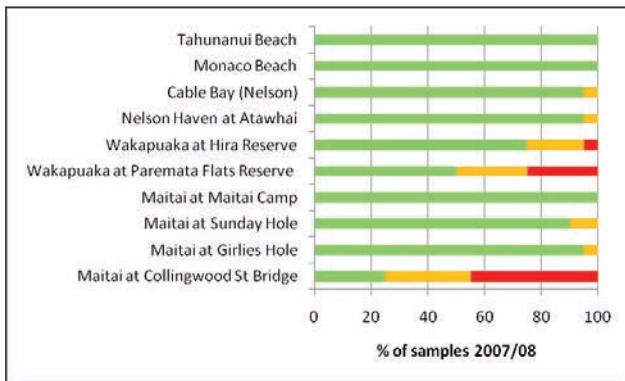
Site Name	Bacteria grade 2007/08	Recreation grade	Bacteria grade 2010/11	Recreation grade
Tahunanui Beach	B	Good**	B	Good
Monaco Beach	B	Good	B	Good
Cable Bay	B	Good	C*	Good-Fair*
Atawhai	C	Fair	B	Good
Hira Reserve	D	Very Poor	D	Very Poor
Paremata Flats	D	Very Poor	D	Very Poor
Maitai Camp	C	Fair	C	Fair
Sunday Hole	D	Poor	C	Fair
Girlies Hole	C	Fair	C	Fair
Collingwood St Bridge	D	Very Poor	D	Very Poor

\*2010/11 Cable Bay bacteria grade declined from B to C due to one elevated bacteria sample after rainfall. The primary source of bacteria is unexplained.

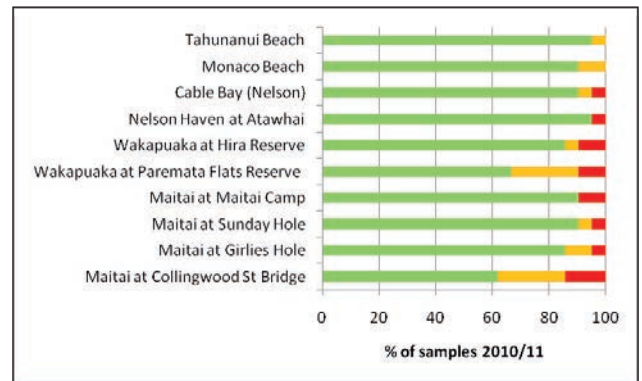
\*\* Sites with grades Fair to Good are suitable for recreation most of the time. Exceptions may include after rainfall.



**Fig. 1.** The percentage of samples for each site with Green, Amber Alert and Red Action exceedences in 2007/08 and 2010/11.



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



Red alert action exceedences occur when samples exceed 550 *E coli* for freshwater and 280 *Enterococci* for marine sites.

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

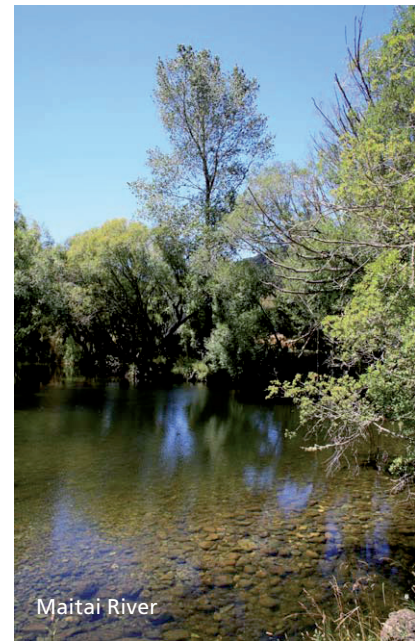
## Initiatives to improve recreational bathing water quality

### Working with land owners

The Council's 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 is a key focus for 2010/11. 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, phone 546 0308.

### NCC work in progress

- Nelson City Council has undertaken a considerable amount of work to replace old leaking sewerage pipes and cross-connections with storm water along Collingwood and Nile Street. This work has resulted in an improvement in water quality. More remedial work is planned as part of the proposed Maitai Catchment Plan.
- Source tracking has identified the bacteria sources from livestock animals and birds in the Lud. Further sampling is required to confirm whether septic tanks are contributing to high bacteria counts. Discussions are ongoing with landowners to manage livestock more sensitively by restricting access to waterways, to protect rivers and enhance biodiversity with riparian planting.
- Discussions are underway with the Public Health Service, other Councils and laboratory services to improve the timely reporting of laboratory tests and ways to inform the public about results and raise awareness of water quality issues.
- For further information about environmental monitoring please visit [www.nelsoncitycouncil.co.nz/environment](http://www.nelsoncitycouncil.co.nz/environment).



Maitai River



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