



## STAFF REPORT

**TO:** Environment & Planning Committee

**FROM:** Trevor James, Resource Scientist

**REFERENCE:** W416

**SUBJECT:** **SUMMER 2009/2010 RECREATIONAL WATER QUALITY SAMPLING PROGRAMME - REPORT EP10/05/16-** Report prepared for 20 May Meeting

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### 1. INTRODUCTION AND BACKGROUND

This report outlines the key results of bathing water quality monitoring at Tasman's 23 monitored beaches, swimming holes and water ski areas over the 2009/2010 summer. This season the full suite of sites was sampled (covering both river and marine areas). An additional site at Rangihaeata Beach was sampled as a result of public feedback over the previous year (making 24 sites regularly monitored for the season).

Sampling of recreational sites in Tasman District has been undertaken by Council since the mid-1990s. In 2005 Council began a new strategy of sampling the full suite one year and the four highest-use sites the next. Sampling protocols follow the Microbial Water Quality Guidelines<sup>1</sup>.

### 2. RESULTS AND DISCUSSION

Overall the number of exceedences at the regular monitoring sites was about average compared to previous years. A total of 15 exceedences of national guidelines<sup>1</sup> were recorded across the 24 regular bathing water sites for the 2009/2010 season (see Appendix Two for a map of the sites). This was out of 335 samples taken, which equates to 4.5% of samples exceeding guidelines (see Figures 1 and 2). This analysis excludes follow-up sampling at Roding River (Hackett and White Gates), Tukurua Stream, and North and South Kaiteriteri. Of these exceedences three were above alarm levels (the highest level), all at marine sites. There were 12 exceedences of alert levels of the national guidelines for the season with six at marine sites and six at freshwater sites.

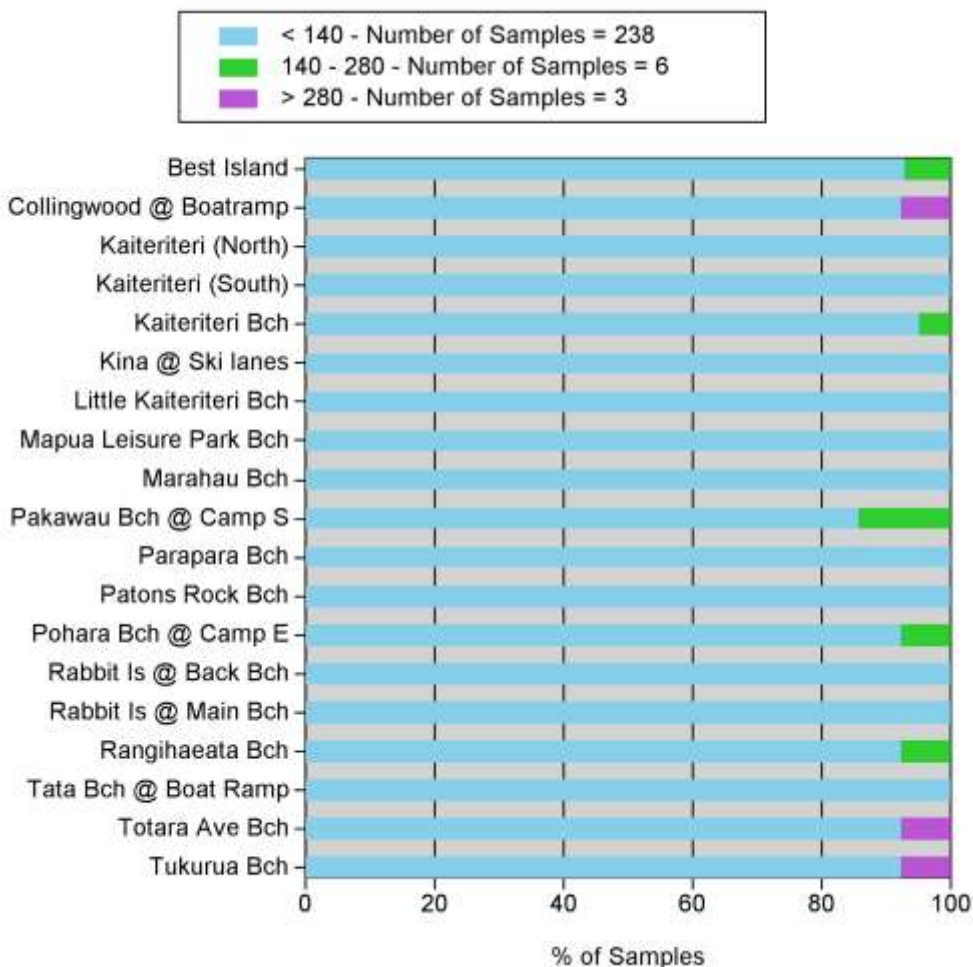
The one exceedence at Tukurua Beach, Collingwood Boat Ramp and Totara Avenue Beach on 1 December was related to rainfall.

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<sup>1</sup> Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas, Ministry for the Environment and Ministry of Health, June 2003. ISBN: 0-478-24091-0

Given the Norovirus outbreak at the Tukurua Campground in early January, and public complaints, Council undertook sampling within the Tukurua Stream at the stream mouth. Once it became apparent that the stream at the mouth was used extensively for swimming by children and that the results were often above alert and sometimes above alarm levels, regular samples were collected from the site and upstream to try to find the source. A warning sign was placed at the swimming hole at the mouth for most of the season. The highest concentrations were found upstream of SH60 and microbial source tracking identified birds and ruminant animals (not septic tanks) to be the likely cause of the faecal contamination. Further investigation continues as to the exact source of contamination at this site. The farm upstream of SH60 is fully fenced and generally a tidy operation. It is possible that there was a dead animal in the stream. It is recommended that a site at the mouth of Tukurua Stream be added to the programme, at least in the short term, if the campground continues to operate and therefore the swimming hole continues to be patronised. It is very unlikely that water quality of the stream was the cause of the Norovirus outbreak and Nelson-Marlborough Public Health considered that the most likely cause was person-to-person contact in the campground.

Kaiteriteri Beach, the most popular beach in the region, had only one (alert) exceedence but this was not related rainfall. Two days following another sample result just below the alert level at this beach, additional samples were taken north and south of the site. Results at these sites were very low.

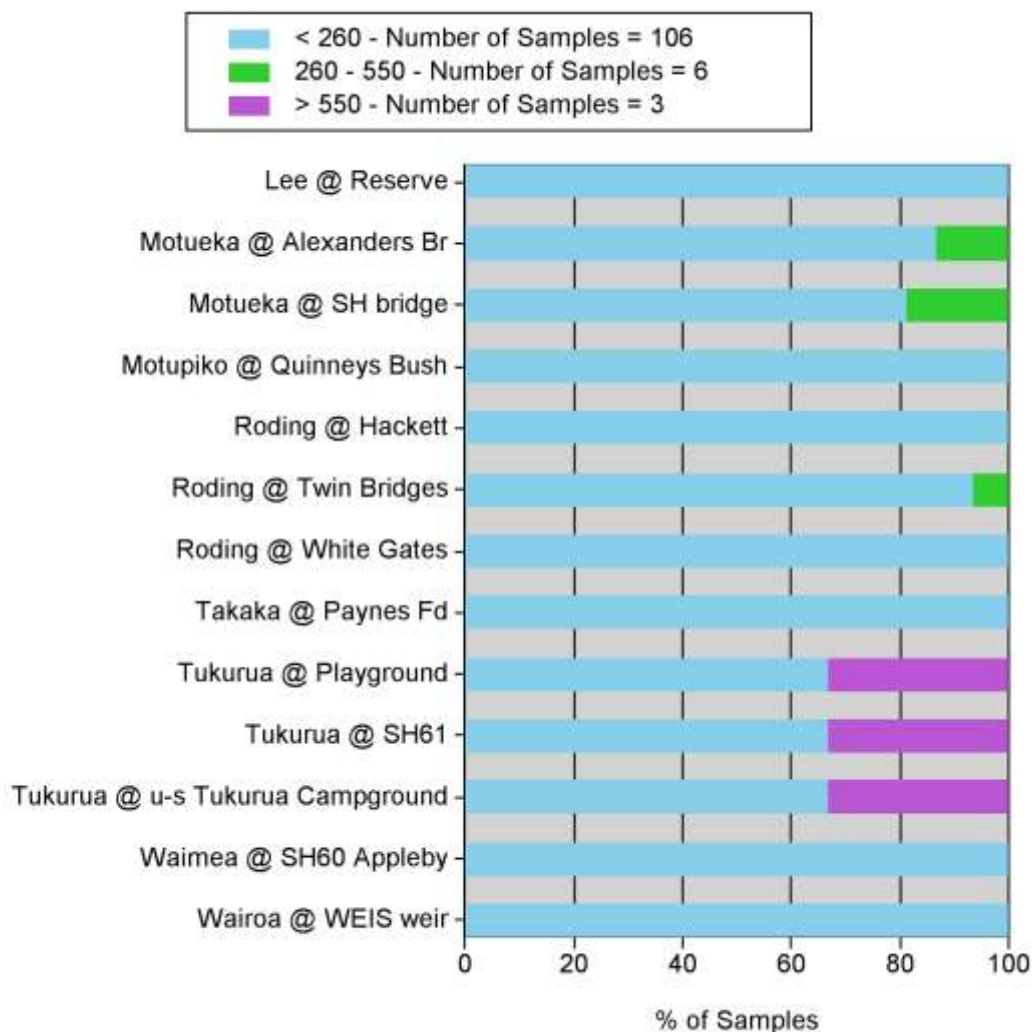


**Figure 1: Percentage of samples exceeding national guidelines for contact recreation water quality at marine beaches for the 2009-2010 season (one-off samples were taken from Kaiteriteri Beach North and South).**

The site at Rangihaeata Beach had consistently good water quality which partly reflects good water quality in the Takaka River. Comments were received from the original complainants about improved water quality at the beach to the north-west of Rangihaeata (at the end of Fraser Road and east of the Onahau River mouth) towards the end of the season. This is most likely due to improved dairy farm effluent treatment at two farms within the catchment. Previously dairy effluent was found from time to time on this beach.

Water quality on the Takaka River at Paynes Ford appears to have improved considerably with locals also commenting that there is reduced filamentous green algae and increased water clarity.

Five alert level exceedences were experienced on the Motueka River and one of these was not related to rainfall (531 *E.coli*/100ml).



**Figure 2: Percentage of samples exceeding national guidelines for contact recreation water quality at freshwater sites for the 2009/2010 season (Roding @ Hackett and White Gates and the Tukurua Stream sites are not part of the core programme).**

According to national guidelines the monitoring authority must resample as soon as possible after becoming aware of an exceedence of an Alarm level. If such a follow-up sample also exceeds then warning signs should be erected. No follow-up samples exceeded guidelines.

Water quality at the Roding River appeared better than previous years.

While it was intended to post results on the Council website within three days of each sampling event (see <http://www.tasman.govt.nz/index.php?Swimmingwaterquality>) this did not happen until mid-January due to IS issues.

### **3. NEXT SAMPLING SEASON**

Next season we will go back to sampling the three most popular sites (Kaiteriteri, Mapua and Rabbit Island). Due to the poorer water quality in Tukurua stream it is hoped to sample Tukurua Stream swimming hole at the mouth next season and then alternating years (with the full suite of sites).

### **4. CONCLUSIONS**

Water quality this season at regular bathing sites was good, with only 4.5% of samples above alert levels guidelines. Most of these exceedences were related to high rainfall and were typical. Following complaints, additional sampling was undertaken at Tukurua Stream and regular exceedences of guidelines were found. The action taken by Council was to erect a warning sign and undertake an investigation to try and find the source.

### **5. RECOMMENDATIONS**

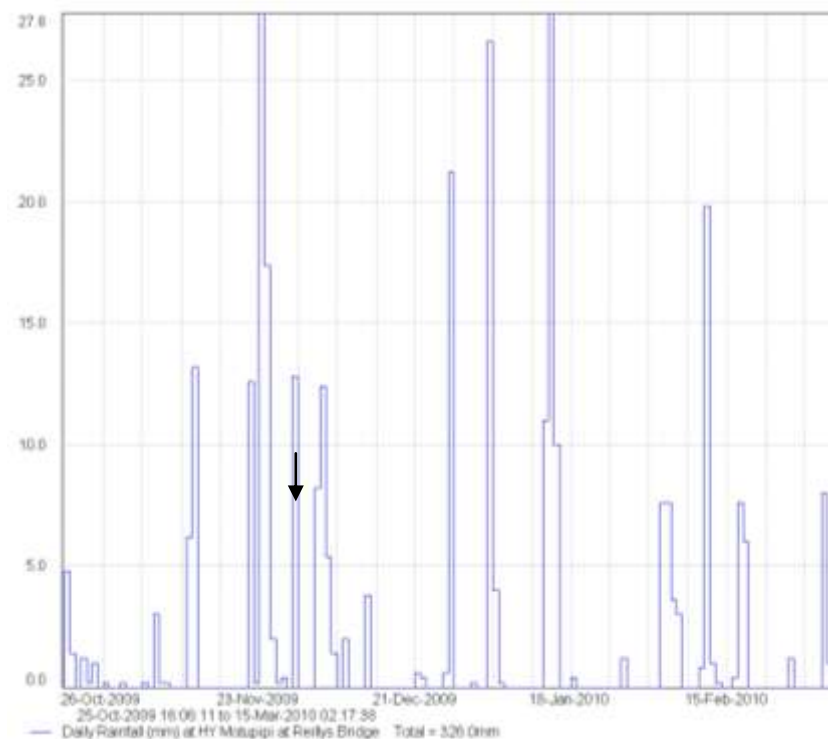
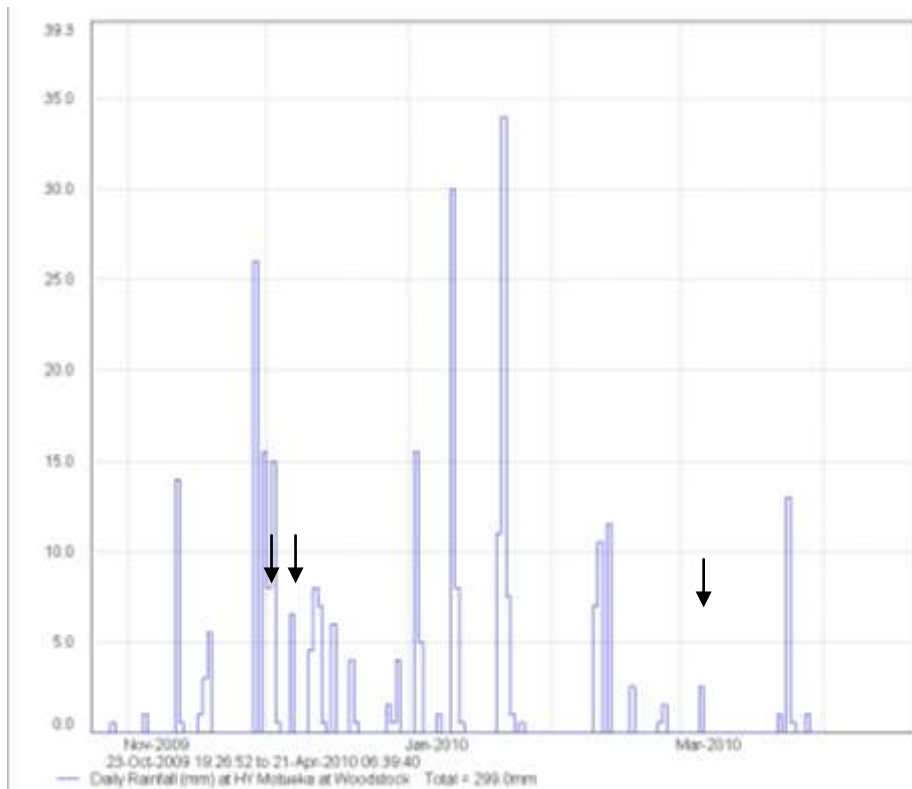
**It is recommended that the Committee notes the contents of the report**



Trevor James  
**Resource Scientist**

## Appendix One

Rainfall patterns related to specific sampling events. Motupipi rainfall is indicative of Golden Bay sites, and Richmond for Tasman Bay sites. Arrows indicate the sampling days when exceedances occurred (arrows approximate to 2 and 4 Dec and 2 Mar).



Sampling sites for the Contact Recreation Water Quality Monitoring Programme.

