

STAFF REPORT

TO: Environment & Planning Committee

FROM: Trevor James, Resource Scientist

REFERENCE: W416

SUBJECT: **SUMMER 2008 / 2009 RECREATIONAL WATER QUALITY SAMPLING PROGRAMME - REPORT EP09/04/09** - Report prepared for Meeting of 23 April 2009

1. INTRODUCTION

This report outlines results of bathing water quality monitoring at Tasman's three most popular beaches (Kaiteriteri, Mapua and Rabbit Island) over the 2008/2009 summer, plus some additional monitoring at Motueka Beach and a sanitary survey of Murchison Creek.

Bathing water quality monitoring in Tasman District has been ongoing since the mid-1990s. During that time many of the core sampling sites have remained the same and in addition several short-term investigation sites have been sampled. Since the 2006/2007 season Council only samples at the full suite of sites every second year and in the alternate year only the three most popular beaches are sampled allowing resources to be available for a sanitary survey (source identification) to be carried out.

This summer the sanitary survey was carried out at Murchison Creek in Murchison. While not used for contact recreation, this stream is used by local children and dogs for secondary contact recreation (e.g. creek play and fishing).

As a result of concerns raised by residents in Motueka, sampling was carried out on ten occasions at Motueka Beach (500 metres south of Old Wharf Road). About 10-20 swimmers use this beach consistently through the season. Concern was raised about effluent from stormwater drains and from a live-aboard yacht in the area.

This season we were able to achieve considerable efficiency of sampling effort by combining forces with the Engineering Department, who coincidentally had a summer student doing work at Kaiteriteri every Tuesday (the same day when recreational water quality sampling is carried out). As 80% of the sampling effort is in driving time, this was a considerable saving.

The full suite of sites covering both river and marine areas in Tasman and Golden Bay will be sampled again in the 2009/2010 summer.

2. RESULTS AND DISCUSSION

2.1 Kaiteriteri, Mapua and Rabbit Island

A total of six exceedences of national guidelines¹ were recorded across the three most popular bathing water sites for the 2008/2009 season (see Appendix Three for a map of the sites). This was out of 62 samples taken which equates to about 10% of samples exceeding guidelines (see Figures 1 and 2). Of these exceedences all were above alarm levels (the highest level). However, all follow-up samples taken within one-two days of the exceedence were back down to the typical very low levels (near the lower level of detection). Three of these exceedences on 22 January at Kaiteriteri, Mapua and Rabbit Island were during dry weather and all were above detection (>2000 *Enterococci*/100ml). This is very unusual to have such consistency across widely dispersed sites. It is suspected there may have been cross-contamination or lab error; although all obvious potential sources of error were investigated and discounted. The remaining three exceedences were at Mapua Beach (2) and Rabbit Island and were due to rainfall events. The Mapua Beach results were possibly exacerbated by earthworks associated with construction of a seawall.

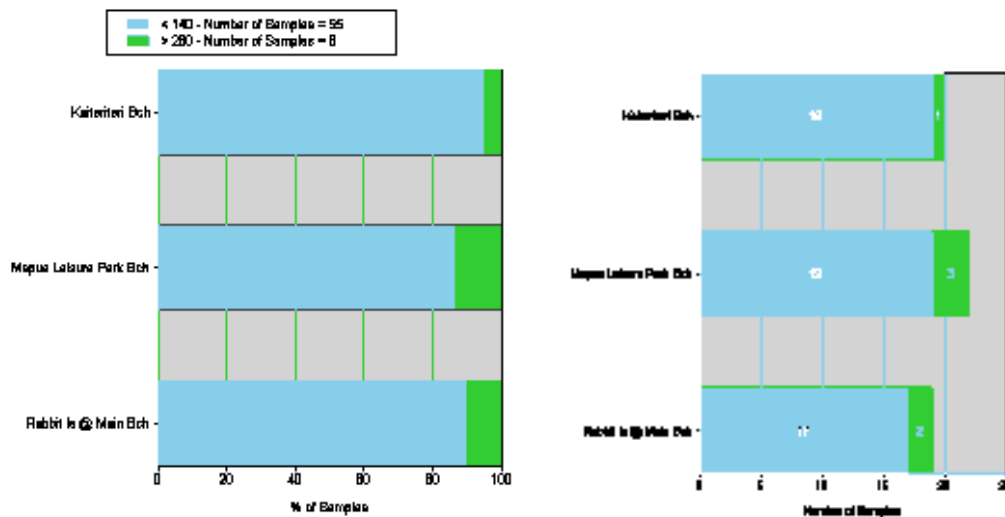


Figure 1a and 1b: Percentage (1a) and number (1b) of samples exceeding national guidelines for contact recreation water quality at marine beaches for the 2008/2009 season.

Council results were posted on the Council website within three days of each sampling event (see <http://www.tasman.govt.nz/index.php?Swimmingwaterquality>). Please view this site for further information on individual sites.

¹ 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

2.2 Motueka Beach

No exceedences were recorded for this beach, even during or after rainfall events.

2.3 Murchison Creek Sanitary Survey

A report regarding this summer's sanitary survey at Murchison is available on request. Of all the 56 sites in the 'State of the Environment' River Quality Monitoring Programme, Murchison Creek in Murchison is amongst the highest in faecal bacteria concentrations and fails to meet stock drinking water guidelines, let alone bathing water quality guidelines. These concentrations are also consistently high apart from winter when the concentrations were typically within bathing water quality guidelines. All of the tributaries of this creek arise as springs.

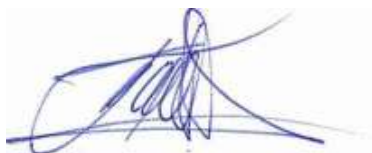
The survey found a number of tributaries contributing faecal contamination with the most likely source being intensive dairy and dry-stock farming. The most upstream reaches of this creek which are generally in intensive livestock farming areas had the highest concentrations. The pattern of lower winter concentrations is typical for streams flowing through areas of intensive livestock farming. It is recommended that these creeks be fenced even though they are small in size. A Stream Care Group exists in this catchment and the potential exists for cooperation between the farmer and this group for riparian planting.

3. CONCLUSIONS

While results this season showed a relatively moderate number of exceedences of national recreational water quality guidelines compared to previous years, rainfall events accounted for 50% of these, which is typical through New Zealand. The other 50% of exceedences could have been due to lab or sampling error. Overall however, water quality at Kaiteriteri, Mapua and Rabbit Island can be described as very good.

4. RECOMMENDATIONS

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



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