



STAFF REPORT

TO: Environment & Planning Committee

FROM: Trevor James

REFERENCE: W416

SUBJECT: **SUMMER 2006 / 2007 RECREATIONAL WATER QUALITY SAMPLING PROGRAMME - REPORT EP07/03/06** - Report Prepared for 28 March Meeting

1. INTRODUCTION

This report briefly outlines the results of monitoring four popular beaches / water ski areas over the 2006 / 2007 summer (Kaiteriteri, Mapua, and Rabbit Island Main Beach and Back Beach). Most summer seasons see 25-30 sites sampled (see Figure 1). This year following approval of the programme by Nelson Marlborough Public Health, TDC cutback the number of sites to be able to undertake a sanitary survey (contaminant source survey) at Pohara Creek (which flows out onto Pohara Beach). This enabled the programme to stay within its budget while still maintaining weekly sampling at the most regularly used sites.

A media article (very similar content to this report) discussing these results was released in March, 2007. For the first time for this Council results were posted on the Council website within a week of each sampling event (see <http://www.tasman.govt.nz/index.php?Swimmingwaterquality>).

The next summer seasons monitoring programme will see the resumption of sampling at most of the sites sampled in previous years.

2. RESULTS

At Kaiteriteri and Mapua water quality for swimming for the 2006 / 2007 summer was very good and compares well to previous years.

Unusually though, Rabbit Island at the Main Beach had two alert-level exceedences¹ and Rabbit Island at Back Beach (at the boat ramp on Boat Ramp Road) had one Alert Level exceedence of the national guideline. These results are not a particular cause for concern as there were no samples above 'Alarm level' of the guidelines and so there was no need for any action to be taken, signage or otherwise. However, there were other results significantly above detection². All subsequent re-sample results were within acceptable levels for contact recreation.

¹ The rate of exceedence this season was ~10% (2 of 21 samples) compared to ~2.6% across the whole record (4 of 154 samples).

² Comparing 95th percentiles for this season against the full record, this season at Rabbit Island Main Beach is four times higher.

As per standard practice, if a site failed to meet the guideline, an additional sample is taken within two-three days of the first sample. All three sampling events where exceedences were recorded were preceded by rainfall events in the days prior to sampling (see Table 1 for conditions at sampling).

Comparing to previous years, this is the first time we have seen any results at Rabbit Island Main Beach over 30 *Enterococci*/100ml in the previous four years of sampling. In those four years only two results above detection. The exceedence at the Back Beach site was the first such exceedence for this site which has four years of monitoring results available.

It is interesting that there was no correlation between results at the Rabbit Island sites and the Mapua Beach site, given they are influenced by water from the Waimea Inlet and Waimea River.

This data shows, as is typically the message, that swimming or water skiing at beaches and rivers are best avoided immediately after rain.

Table 1: Beach Conditions at the Time of Sample Exceedence Result*

Date of Exceedence	Rainfall Prior to Sampling	Wind Conditions During Sampling	Tide at Sampling
4 January	43mm in five days prior	Light Northerly	High
11 January (Back Beach only)	35mm in three days prior	Strong North-easterly	Almost high, coming in
30 January	29mm in four days prior	Moderate Westerly	Four hours past high

* All sampling occurred in fine weather.

There were no obvious reasons for the poorer water quality at Rabbit Island. There were no malfunctions of the sewage treatment plant at Bell's Island occurred in this period (Mike Shruer, *pers com*), and two of the three exceedences were at or near high tide which is greater than six hours since the last time the sewage discharge occurred. In 2004 / 2005 when the upgrade of the sewage treatment plant was undertaken and the quality of the discharge was poorer than normal there were no exceedences of guidelines. Another possible source of contamination was a very small (1-5m³) leakage in the sewage sludge disposal line on Rabbit Island that occurred before Christmas. However, the likelihood of any affect from this leak is very low as the site of the leak was remote from the beach and there is considerable treatment potential in the sandy soil beneath the site. The septic tank facilities are another possible source but these are checked regularly and appear to be working correctly. Groundwater results from monitoring bores on the island will scrutinised closely to see if a source can be identified but a full-scale investigation is not warranted given no exceedence of 'Alarm Levels'.

Pohara Creek Sanitary Survey

Two significant leads as to the source of contamination have been found in the Pohara Creek catchment and further work is underway by David Lewis, environmental health officer, with follow up with investigations on private property.

3. RECOMMENDATIONS

It is recommended that the Committee:

NOTE the contents of the report

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