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Report to Environment Committee and Rural Services & Wairarapa Committee
from Gary Stephenson, Surface Water Quality Scientist
and Graham Sevicke-Jones, Section Leader, Planning & Resources, Wairarapa

Recreational Water Quality Report 2001/2002

1. Purpose

To present the results of the recreational water quality monitoring undertaken by the Wellington Regional Council and several of the territorial authorities in the Wellington Region during the period 1 November 2001 to 31 March 2002.

2. Background

The Wellington Regional Council and the Region's territorial authorities undertake a recreational water quality monitoring programme in order to:

- Fulfil their respective legislative responsibilities, and
- Establish background bacterial concentrations in surface waters, thereby permitting assessment of environmental contamination.

The results of this programme are assessed using the national recreational water quality guidelines published by the Ministry for the Environment and the Ministry of Health. These guidelines use bacteriological indicators to indicate the risk of faecal contamination with the potential for the presence of pathogens. Compliance with the guidelines in respect of the concentration of the indicator bacteria should ensure that people using water for contact recreation are not exposed to significant health risks.

3. Methods

Recreational water quality monitoring in the western Wellington Region was carried out by three territorial authorities and the Wellington Regional Council, and in the Wairarapa by the Wellington Regional Council. Ninety-six sites were visited weekly during the bathing season. On each occasion a single water sample was collected 0.2

metres below the surface in 0.5 metres water depth and analysed for the bacteria *Escherichia coli* (fresh water) or enterococci (marine) using membrane filtration. A total of 21 samples were taken at each site in the western Region, and 20 samples at each site in the Wairarapa.

4. **Results and Discussion**

The results are presented in detail in the report "On the Beaches. Recreational Water Quality of the Wellington Region, 2001 to 2002". The main findings are:

Fresh Water

- Recreational water quality in rivers of the Region was generally good during the 2001–2002 bathing season despite the unusually wet summer.
- Of the 21 freshwater sites monitored, 17 (80.95%) had *E. coli* concentrations above the “action” guideline of 410 cfu/100mL at some time during the bathing season.
- Fifty (80.65%) of the cases where freshwater sites exceeded the “action” guideline were associated with rainfall in the preceding 72 hours and, in nearly all cases, *E. coli* levels fell back below the guideline within a week.
- The observations are consistent with faecal contamination of fresh water typically being related to runoff during rainfall events.
- The amenity value of rivers in the Region was degraded by excessive algal growth for only about a month during the 2001–2002 bathing season. The problem was confined to rivers in the Wairarapa.

Marine

- Recreational water quality was good at the majority of the Region’s coastal beaches throughout the 2001–2002 bathing season.
- Of the 75 marine sites monitored, 34 (45.33%) had enterococci concentrations above the “action” guideline of 277 cfu/100mL at some time during the bathing season.
- Forty-four (62.86%) of the cases where marine sites exceeded the “action” guideline were from sites in the Porirua area: in particular, Porirua Harbour at Te Hiko Street, Titahi Bay at Bay Drive, and Titahi Bay at South Beach Access Road.
- Fifty-six (80%) of the cases where marine sites exceeded the “action” guideline were associated with rainfall, especially rainfall in the preceding 48 hours.
- The observations are consistent with urban stormwater, and diffuse-source runoff into rivers and streams, being the major contributors to faecal contamination of coastal water.

5. **Communications**

Copies of "On the Beaches. Recreational Water Quality of the Wellington Region 2001 to 2002" will be made available to all the territorial authorities in the Region and

to the Region's Medical Officer of Health. The report will also be made available to the public on the Wellington Regional Council's web-site. The brochure describing the recreational water quality programme, details of the monitored sites, and tables and graphs of the bacteriological data, are constantly available on-line at www.wrc.govt.nz/on-the-beaches.

6. Recommendations

- (1) *That the report be received.*
- (2) *That the Environment Committee thank the Kapiti Coast District Council, Hutt City Council, and Wellington City Council, for their support of the Region's recreational water quality monitoring programme.*

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