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Committees Environment
Rural Services and Wairarapa

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Recreational Water Quality Report 2002/03

1. Purpose

To present the results of the recreational water quality monitoring undertaken by the Greater Wellington Regional Council and several of the territorial authorities in the Wellington Region during the period 1 November 2002 to 31 March 2003.

2. Background

The Greater 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 against 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 four territorial authorities and the Greater Wellington Regional Council, and in the Wairarapa by the Greater Wellington Regional Council. Ninety-eight 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 with the exception of three sites in Oriental Bay, which were discontinued mid-season as shoreline restoration works were undertaken, and Ruamahanga River at Bentley's Beach, where sampling did not commence until mid-December 2002.

4. Results and Discussion

The results are presented in detail in "On the Beaches. Recreational Water Quality of the Wellington Region, 2002 to 2003". The main findings are:

4.1 Fresh Water

- Recreational water quality in rivers of the Region was generally good during the 2002–2003 bathing season.
- Of the 22 freshwater sites monitored, 14 (63.64%) had *E. coli* concentrations above the “action” guideline of 410 cfu/100mL at some time during the bathing season.
- Fifteen (83.33%) of the cases where freshwater sites exceeded the “action” guideline were associated with rainfall in the preceding 72 hours and, in all of these 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 and re-suspension of sediments during rainfall events.
- The amenity value of rivers in the Region was very rarely degraded by excessive algal growth during the 2002–2003 bathing season, with the problem confined to the Waipoua and Ruamahanga Rivers in the Wairarapa.

4.2 Marine

- Recreational water quality was good at the majority of the Region's coastal beaches throughout the 2002–2003 bathing season.
- Of the 76 marine sites monitored, 18 (23.68%) had enterococci concentrations above the “action” guideline of 277 cfu/100mL at some time during the bathing season.
- Thirteen (50.00%) of the cases where marine sites exceeded the “action” guideline were from sites in the Porirua area and ten (38.46%) were from sites in the Hutt.
- Eighteen (69.23%) 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 2002 to 2003" 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. 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.gw.govt.nz/on-the-beaches.

6. **Recommendations**

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

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