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Report to Environment Committee
from Andrew Jones, Groundwater Scientist

2000 Annual Groundwater Report

1. Purpose

To inform the Committee of the completion of the 2000 Annual Groundwater Report and its key findings.

2. Background

This annual report summarises the results of groundwater quantity and quality monitoring activities undertaken throughout the Region during 2000. The report supplements the hydrological database and technical reports that contain more extensive data and analysis.

3. Key Findings

During 2000 the condition of groundwater in the Wellington Region was generally healthy with levels and quality within recorded maxima and minima. The drought period early in 2001 has since reduced water levels in many aquifers to record low values.

Notable features of the year include:

- Rainfall across the Region in 2000 was generally at or slightly below, long-term averages, particularly during the winter months. This pattern is reflected in most rainfall recharge aquifers where levels were at or below average levels during the year. The below average rainfall during winter has exacerbated the effect of the drought this summer on groundwater levels because winter is the predominant recharge period.

- Flow in most of the Region's rivers was 65-100% below average. This pattern has resulted in the water levels of river-recharged aquifers being at or slightly below, average during 2000.
- Elevated nitrate levels continued to be detected under the Hautere Plain on the Kapiti Coast. Nitrogen isotope sampling and groundwater dating has been undertaken to determine the source of the contamination. Results of these samples are expected in July 2001.
- Chemical analyses from other groundwater zones were consistent with previous results.
- Significant increases in allocation occurred in a number of aquifers on the Kapiti Coast, the Lower Wairarapa Valley, Te Ore Ore and north of Masterton at Rathkeale.

4. **Actions Arising from Findings**

In response to the findings of this report, and in light of growing concerns about the use of shallow groundwater in the Kapiti Coast area, three additional monitoring wells have been added to our monitoring network.

These wells are located in the Paraparaumu area between State Highway 1 and the Coast. Monitoring water levels in these wells will provide us with a better understanding about the use of shallow groundwater and whether action needs to be taken to ensure the sustainable use of this resource in the future.

5. **Communications**

Copies of the report are available to councillors on request.

The report will be sent to major groundwater users including territorial authorities and the Utility Services Division of the Regional Council.

6. **Regional Policy Statement Implementation**

The monitoring to which this report refers assists the implementation of the Regional Policy Statement. It provides the information basis for a range of groundwater quantity, quality and conservation implementation methods (section 5.5); contributes to the Regional Monitoring Strategy described in section 15.7; and helps assess the extent to which the anticipated environmental results set out in the Policy Statement are being achieved.

7. Recommendation

That the report be received and the information noted.

Report prepared by:

Approved for submission

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