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Report to the Environment Committee
from Kathryn Hooper, Resource Quality Officer

Investigation of Sewage Disposal Practices in the Orongorongo Valley, 1999-2000

1. Purpose

To inform the Committee of the findings of an investigation into Sewage Disposal Practices in the Orongorongo Valley.

2. Background

There are 70 huts (60 of which are privately licensed) in the Orongorongo Valley which operate on site sewage disposal systems. These have typically been long drop/pit latrine systems. However, lately, many of these toilets have been replaced with flushing systems, some of which are located over traditional longdrop pits. The Department of Conservation has expressed concerns about the suitability and efficiency of some of these toilets, and it is likely that some do not comply with the relevant rules in the Regional Plan for Discharges to Land.

The rules that apply to sewage discharges onto or into land are Rules 5, 6, 7 and 8. Rule 5 (permitted activity) applies to pit latrines. Rule 6 (permitted) applies to aerobically treated sewage. There are no systems like this in the Park. Rule 7 (permitted) applies to on-site sewage treatment and disposal such as flushing toilets over long-drop pits and small septic tank systems. Rule 8 relates to discharges of human sewage not otherwise provided for and is a discretionary activity. Most toilets in the Park fall under rule 5 or 7 and these have been attached for your information in Appendix 1.

The objectives of this investigation were:

- to determine whether sewage disposal practices in the Orongorongo Valley comply with the Rules in the Regional Plan for Discharges to Land.
- to determine whether these discharges are having, or have potential to cause, an adverse effect on the environment.

- to provide recommendations for future monitoring of sewage disposal practices in the Park.

3. Key Findings

Inspections of private huts in the valley revealed the following:

- Eight toilets appeared to have flushing systems over long drop holes.
- One hut was serviced by a small septic tank system which appeared to be effective and well maintained.
- One hut had a substandard septic tank system. Re-inspection revealed that this system is being upgraded to a flushing toilet over a long-drop pit.
- One hut had clearly not been used for some time, while the remainder had high usage.
- Six of the huts also appeared to have water from shower systems and sinks entering the pit.
- With one exception, all toilets were “existing” systems (i.e. installed before 17 December 1999). This is the date at which Rule 7 took effect.
- All toilets appeared hygienic and there were no offensive or objectionable odours detected coming from any toilet system.
- One toilet appeared to have a purpose built “overflow” system on the pit, presumably for when the pit overfills with water.

There did not appear to be many genuine pit-latrines remaining in the Park, with most comprising flush systems over a long-drop pit or connected to septic tanks.

Water samples were taken on 3 March 2000, during low flow summer conditions. Results indicated that Enterococci levels in the Orongorongo River and its tributaries were very low, and it is unlikely that human sewage is contributing to the few enterococci bacteria present.

Levels of faecal coliforms in the sample taken from the tributary that runs through the camping area in the valley were somewhat higher than in other samples taken (392 CFU/100ml). This warrants further investigation, as there are a number of huts and toilets that are near this tributary which could be the source of the contamination.

Levels of faecal coliforms at nine other sites in the Orongorongo River and its tributaries ranged from 6 to 42 CFU/100ml. As a comparison, the Upper Wainuiomata River recorded a median of 31 CFU/100ml during 1998/99, and the Orongorongo River site (at Bridge) recorded a median of 38 CFU/100ml over the same period (Annual Freshwater Quality Report: Wellington Region 1998/99, WRC Publication No. WRC/RINV-G-99/20).

There is potential for contamination of the Orongorongo River and its tributaries from inappropriate sewage disposal practices in the valley. Ensuring that the sewage disposal systems comply with Rules in the Regional Plan is the best way to ensure risks of contamination are minimised.

4. **Further Action**

As a result of this study, the following actions will be taken:

- The WRC will continue to liaise with DoC and Hutt City Council so that any concerns about sewage disposal in the Orongorongo Valley are documented.
- Sampling and hut inspections will be undertaken in the valley during wet winter conditions to assess compliance with relevant Rules in the Plan.
- The WRC will continue to liaise with the Orongorongo Club and hut licensees in order to raise awareness of the environmental requirements of the Council.

5. **Communication**

Copies of this report will be distributed to the Department of Conservation and Hutt City Council. Copies are also available for members of the public requesting information of this nature.

6. **Recommendations**

That the report be received and the contents noted.

Report prepared by:

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Attachments: 1