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Report to the Landcare Committee
from Philippa Crisp, Landcare Advisor (Environmental Stewardship)

Forest Condition Update - Catchments

1. Purpose

To inform the Landcare Committee about the state of the forest environment in the Council's water collection areas. This report will be accompanied by a presentation at the meeting, outlining an analysis of the results of environmental monitoring undertaken over the last four years.

2. Analysis of Forest Health Monitoring Reports

Councillors will be aware that forest health monitoring has been occurring in the Council's natural forests for several years. In some cases plot data extends back to the 1950s. This information provides us with a wealth of information about the long-term health and viability of the Council's natural forests. It also enables us to monitor trends and provides early warning of threats to the forest, (e.g., pathogens like moths or fungi).

Officers received reports on various monitoring activities last year. This information provided an opportunity to analyse the results from the various sources and to come up with a better picture of the condition of the forests and to adapt our management practices in response to any new findings.

We initially undertook the analysis to provide the Council's Water Group with information to identify and prioritise pest management requirements for this year in the Catchments to achieve their water quality objectives. However, we consider that the information would also interest Councillors and decided to report to this Committee.

This report and presentation will cover the following questions:

- What is the condition of the catchments now?
- What condition should the catchments be in and do we have the appropriate service levels to achieve this?
- Where to from here?

3. **What Is the Condition of the Catchments Now?**

Landcare's monitoring work looks at a range of variables and provides data (facts on tree growth, seedling numbers, likely animal numbers, etc). This information is then analysed and put together to give an overall picture of what may be happening in the forests; like pieces of a jigsaw forming a picture. It is not a pure science; balancing theory and experience to form judgements and interpret the information accurately.

The key findings in relation to water quality objectives are:

- animal monitoring shows that possum numbers are below the accepted service level of 5 percent Residual Trap Catch rate in the Wainuiomata/Orongorongo Catchment, but that control is needed in the Hutt Catchment;
- vegetation monitoring indicates that there is a need for large vertebrate control in both catchments. Seedlings in the browse range of goats and deer, are depleted;
- a forest health survey of insect and fungal damage shows the forest to be in good condition in terms of the effects of these pathogens;
- there are only a few weed species present in the catchments, but some weed control is needed, particularly in the Wainuiomata Catchment.

I will provide further details of these matters during the presentation at the meeting.

4. **What Condition Should the Catchments Be In and Do We Have the Appropriate Service Levels to Achieve This?**

Catchment management is an evolving field and there is little scientific information to benchmark our work. We are undertaking leading edge work in this area.

The catchments are managed primarily to meet the Council's water supply objectives. Landcare's activities in the catchments aim to ensure the treatment plants receive good quality water and to minimise public health risks from contaminants in the water. The goal of catchment management then is to ensure a sustained healthy vegetative cover and to maintain low animal numbers in the area. A secondary effect of good catchment management is that it contributes towards maintaining biodiversity values.

The Parks and Forests Environmental Asset Management Plan (AMP) sets service levels for managing and monitoring of animal pests. Good service levels are established for possum control in the AMP. However, further work is needed on large vertebrates (deer, goats, pigs, etc). Monitoring methods to determine fairly accurate numbers and the presence of these animals are not well established. Work is still underway to determine appropriate service levels for plant pests monitoring and control.

Service levels currently relate to ensuring water quality objectives are met. If the catchments are also to be seen as venues for *halting the decline in biodiversity*, or even *turning the tide* (Report 00.357, to be considered at the 22 February 2001 Environment Committee), then service levels may need to be revisited to achieve this goal. Landcare is working with the Environment and Wairarapa Divisions on biodiversity.

5. **Where To From Here?**

Analysis of the monitoring work revealed a need for action to address problem areas. As a result, large vertebrate control is currently being undertaken in both catchments (and also in the Pakuratahi Forest). We are currently mapping plant pest infestations in all the natural forests. Plant pest work will be considered in future once the infestations are accurately determined and a control or eradication strategy developed.

The key findings raised in 3 above are also being addressed. We are currently undertaking work to develop large vertebrate monitoring programmes. We will also be carrying out work on determining appropriate service levels to be programmed into the work schedules on large animal control and pest plant control.

6. **Communication**

No public relations or communication opportunities are available.

7. **Recommendation**

That the Landcare Committee receive the report and note the contents.

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