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Committee Environment Committee
Author Kirsten Forsyth, Policy Advisor
Ted Taylor Section Leader, Resource Investigations

Riparian management implementation

1. Purpose

To present reports about two projects that are part of the implementation of the Riparian Management Strategy to the Committee.

2. Background

Greater Wellington adopted its Riparian Management Strategy in July 2002 (see Environment Committee report 02.333). In the Strategy, Greater Wellington said that it would:

- assess and report on the achievements of the pilot programmes; and
- identify the high priority catchments where Greater Wellington will give financial support to riparian work.

These projects have been completed and two reports, *Riparian rehabilitation – what difference does it make?* and *Selecting catchments for streamside management assistance* have been published. The reports are available in the Councillors' lounge and extra copies will be available at the meeting.

3. Riparian rehabilitation – what difference does it make?

The riparian pilot programme was established to:

- document the effects of riparian rehabilitation on stream ecosystems and the wider environment; and
- build on Greater Wellington's knowledge and experience of working with stakeholders to carry out riparian rehabilitation in the most effective way.

There are three streams in the programme – the Enaki Stream near Carterton, the Kakariki Stream near Waikanae and the Karori Stream in Wellington City. These streams were selected as pilot areas so that we could test and monitor riparian management on three very different kinds of stream environments.

This programme is unique in New Zealand because of the range of variables being monitored (water quality, fish presence, channel structure and riparian vegetation) and because the results are compared with sites that are within the same catchment, rather than with sites that are in a pristine stream nearby.

The streams have been monitored upstream and within the rehabilitation areas since 2001. The results from 2001 to 2003 have been assessed and are presented in the report.

Key results from the first three years are:

- marked improvements in bank stability and lower water temperatures in the Enaki and Kakariki Streams;
- significantly decreased algal growth and consequently more diverse aquatic insect life in the Enaki Stream;
- little change in water quality, insects or fish in the Kakariki Stream; and
- virtually no change in the health of the Karori Stream.

The improvements in bank stability in the two rural streams (Enaki and Kakariki) have been achieved mainly because stock access has been removed. Further improvements in water quality and stream health are expected when the plants grow higher and provide better shade.

Shade has been achieved faster on the Enaki, which is more incised and planted mainly with willows. The Kakariki has been planted mainly with native plants that are slower growing, and are now only about one to two metres tall.

The lack of change in Karori Stream's health reflects the overriding impact of urban stormwater on water quality and stream life. Improvements to urban streams like this will probably start with enhanced amenity value. This stream is in a high profile recreation area (the Makara Peak Mountain Bike Park) and is already raising the profile of urban streams in Wellington City.

A higher profile for urban streams helps raise community awareness about their value to people and the wider environment (rather than them being regarded as places where people can throw their weeds and rubbish).

4. Selecting catchments for streamside management assistance

Greater Wellington's Riparian Management Strategy outlines what the Council will do to promote the appropriate management of riparian areas on private land. This will be to —

- Provide information and advice to landowners about the appropriate management of streams, and
- Provide funding to assist landowners to re-vegetate the riparian areas of high value streams with appropriate species.

This project was to identify the high value streams using criteria that were adopted in the Strategy. The criteria are:

- The stream already has a reasonable amount of high quality aquatic habitat that can be extended and improved by riparian management.
- Riparian management will be effective at rehabilitating any degraded aquatic habitat in the stream catchment.
- The stream will be able to be a functioning ecosystem for the aquatic life that would naturally live there (for example, there are no major barriers to fish passage).
- The stream could provide ecological links and corridors once it is rehabilitated because of the relatively short distance to the sea or Lake Wairarapa.
- The selected stream catchments are representative of the range of stream types in the region.

Using Geographic Information System (GIS) modelling, the selection process for this project was completed in February 2004. After confirmation of the GIS desktop results against actual stream and catchment conditions, 12 catchments that collectively meet the criteria in the strategy were selected. They are:

- Waitohu Stream and Otaki River (flow to the Kapiti Coast)
- Ration Creek (flows to the Pauatahanui Inlet)
- Mangaroa River (Hutt River tributary)
- Karori Stream and Wainuiomata River (flow to Cook Strait)
- Glendu Creek and Kaiwhata River (flow to Wairarapa east coast)
- Owhanga Stream (flows to Lake Wairarapa from the Tararua Range)
- Waiohine River (Ruamahanga River tributary)
- Upper Ruamahanga River (source in the Tararua Range)
- Waihora Stream (lower Ruamahanga River tributary).

It should be emphasised that these are high value streams that we have identified for restoration. The Council, in its long-term strategic plan, has also identified six degraded streams. In one instance – the Waitohu Stream – there is an overlap. Restoration of streamside areas in the lower Waitohu catchment should help rehabilitate its degraded stream sections to the high ecological standard that exists upstream.

5. Where to from here?

The riparian pilot monitoring programme will continue until at least 2006. The long-term results from this study will be of immense value to both Greater Wellington and other councils around the country; they will provide reliable information about planted riparian margins, and what happens to streams after they are fenced.

The programme for delivering advice and financial assistance to landowners in the selected catchments is to be called “Streams Alive”. “Streams Alive” is

being delivered to landowners by the Land and Rivers Management Department. To date, advice and plants have been provided to five landowners who had independently approached Greater Wellington staff. These landowners are in the Mangaroa, Waihora, Waitohu, and Otaki catchments.

6. Strategic context

These projects contribute to three of the Take 10 quality for life elements adopted in Greater Wellington's ten-year plan. These are biodiversity (protecting, restoring and managing the region's most important ecosystems), water (protecting aquatic ecosystems) and community (ensuring people have useful information about our region).

7. Communications

Riparian rehabilitation – what difference does it make?

This has been distributed to a number of regional councils and interested parties.

Selecting catchments for streamside management assistance

This will be distributed to people who expressed interest in the development of the strategy including:

- iwi groups
- Federated Farmers
- Wellington Fish and Game Council
- local branches of Forest and Bird
- the Department of Conservation; and
- all district and city councils in the region.

8. Recommendation

It is recommended that the Committee:

(1) receive the report, and

(2) note the contents.

Report prepared by:

Report approved by:

Report approved by:

Kirsten Forsyth
Policy Advisor

Nicola Shorten
Manager, Resource Policy

Jane Bradbury
Divisional Manager,
Environment

Report prepared by:

Report approved by:

Report approved by:

Ted Taylor
Section Leader, Resource
Investigations

Steve Blakemore
Manager, Planning and
Resources

Colin Wright
Divisional Manager,
Wairarapa