

## **Report 99.546**

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Report to Landcare Committee  
from Geoff Dick, Manager, Flood Protection (Operations)

### **Flood Protection Group 1998/99 Asset Maintenance Report**

#### **1. Purpose**

To report on the maintenance of Flood Protection infrastructural assets during the 1998/99 year.

#### **2. Background**

The Flood Protection Group is responsible for some \$50 million of assets in the western part of the Wellington Region. These include stopbanks, edge protection works such as rocklines and willow planting, river berms, detention dams, land, and buildings.

In June each year, the Operations section prepares a proposed annual maintenance programme. This is divided into the Wellington and Kapiti operation areas. This programme lists the work to be completed in priority order with estimates. The annual maintenance programme is designed to ensure that Flood Protection assets maintain their effectiveness and that overall, their condition does not deteriorate.

Quality standards for the maintenance programme include:

- Regular monitoring during the year. This includes fortnightly meetings of Flood Protection Operations management staff, and regular site inspections by the Manager, Flood Protection (Operations).
- An annual peer review by Wairarapa Division engineering staff. This review is carried out by experienced staff who are able to make an in depth assessment of the state of the assets.

- Preparation of an annual asset maintenance report which is submitted to the Landcare Committee. This report details the work carried out in the programme, notes any variations or work not completed, and provides a statement on the condition of Flood Protection assets in the western part of the region.

The annual asset maintenance report is also an important step in achieving a clear audit from Audit NZ. It provides written evidence that Flood Protection Business Plan Performance Indicators, linked to the annual maintenance programme, have been met.

### 3. Operations and Maintenance Consents

Resource consents permitting routine maintenance works in the Hutt, Otaki and Waikanae Rivers were granted during the year. These consents allow maintenance staff to carry out their routine duties in the river within sensible constraints. The global consents allow much better planning of maintenance work without the need to apply for individual consents.

### 4. Peer Review

**Attachment 1** is a copy of the peer review audit undertaken by Wairarapa Division staff on 5 August 1999.

Peer reviews are undertaken to provide an independent review of the maintenance standards being achieved in regard to scheme assets. The visits are a very good forum for exchanging ideas and testing maintenance procedures and priorities.

This year's review focused on assets and maintenance standards in the Otaki and Waikanae Rivers.

The peer review summary is noted below:

“Seven sites of Waikanae and Otaki River works in the Kapiti Coast were randomly selected for this year's audit of the rivers managed by the Flood Protection Group of the Landcare Division. These inspections were considered to provide a reasonably representative overview of river asset maintenance standards for the Kapiti Coast Rivers.

The reviewers are pleased to note that some capital works of the Floodplain Management Plans of both schemes have commenced or will commence shortly, however, they would like to see full implementation of the Plans. They are of the view that adequate resources are being applied to maintain the schemes' assets to an appropriate standard.

The few areas that we recommend the scheme managers give attention to are:

- The possible reduction of the flood capacity of the Kauri/Puriri Road stopbank due to aggradation of the river and the silting of the berm area;

- The improvement of the batter slope and/or the berm width of part of the stopbank near the Winstone screening plant area, and
- Continuation of planting willows at Upper Taylors until they are well established.”

All three matters raised above will be attended to.

## 5. **Asset Maintenance Report**

An asset maintenance report has been prepared for flood protection assets in the Western part of the region. This report is available for Councillors to review, and will be tabled at the meeting.

The conclusions of the report are as follows:

- The 1998/99 annual maintenance programme was severely disrupted by the flood events of 20/21 and 28 October 1998. The flood events in the Hutt and Waikanae Rivers were the largest events since 1939 and, at least, 1955 respectively. Flood protection systems generally performed well. No stopbank systems were breached, but significant seepage occurred in the Boulcott stopbank in the Hutt Valley. Two major erosions on the Waikanae River threatened at least three houses.
- The October 1998 flood events caused significant damages to flood protection systems. The damages and consequences of the event were thoroughly reported to Council, and a flood repair programme within an estimated cost of \$1,756,747 and a capital improvement programme totalling \$2,975,000 were approved. Following these approvals maintenance programmes were reconstructed and a flood damage repair programme prepared. The flood damage repairs are due to be completed in June 2000.
- Routine maintenance was completed largely in accordance with the prepared programme despite the extra work involved in cleaning up and repairing the flood damage.
- Excellent progress was made with the flood damage repairs. At 30 June 1999 the flood damage repairs were approximately 70 percent complete. Much of the planning work for the capital improvements was well underway.
- Immediately following the floods, emergency cross-blading was quickly carried out to provide temporary protection to vulnerable sites. At Sunny Glen and Maple Lane in the Waikanae River, and at Owen Street and Nash Street on the Hutt River temporary groynes were also constructed to provide a greater level of security to the temporary repairs.
- Long term repairs have been completed at Elbow Park, Manor Park, Stokes Valley, Nash Street and Boulcott stopbank on the Hutt River, and at Taylors, Hughes and Chrystalls on the Otaki River. This work will have maintained or enhanced the security of these schemes.

- The remaining flood damage repairs will be completed in the 1999/2000 financial year. At the completion of this work the security (level of service) of the major river schemes will have been returned to or improved on pre October 1998 flood standards. All urgent repairs to existing assets will have been repaired.
- Peer review audits continue to confirm that the maintenance of assets is being completed to an acceptable standard, but some areas of bank edge erosion need to be monitored closely.
- On the Otaki River, construction of new edge protection works (Capex and renewal through the maintenance programme) is now becoming urgent as older, poor quality edge protection works fail.
- The Hutt River berms were cleaned up and repaired following the October flood events and returned to current standards. However, there is increasing pressure on the Hutt River berms from motor vehicles leading to conflicts with other river users and increased damage. This will need careful management in the future.
- Granting of long term consents for routine operations on the Hutt, Otaki and Waikanae Rivers will allow for better management of problems as they occur and certainty for developing work programmes.
- Once the programmed flood damage repairs are completed in 1999/2000, overall Flood Protection infrastructural assets will not have declined in condition, and will continue to provide existing levels of service (or an increased level of service where capital improvements have been completed).

## 5. Recommendation

*That the report be received and the contents noted.*

Report prepared by:

Approved for submission:

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