

Report To: Operations Committee

Meeting Date: 15 December 2008

Report From: Ken Tarboton, Group Manager Rivers and Drainage

River Scheme Capital Works Reprioritisation

Executive Summary

River scheme works require reprioritisation due to significant flood damage incurred since April 2008; results of recent engineering investigations and to better coordinate scheme works with other developments.

Reprioritisation recommendations are made for each river scheme and include changes to Annual Plans actions.

1 Recommendations

That the Operations Committee under its delegated authority:

- 1 Receives the report, River Scheme Capital Works Reprioritisation.**

That the Operations Committee recommend that the Regional Council:

- 1 Receives the report, River Scheme Capital Works Reprioritisation.**
- 2 Reprioritises Waioeka-Otara Scheme works at an additional cost of \$100,000 which includes deferring Peterson's Stopbank restoration.**
- 3 Reprioritises Kaituna Scheme works reducing scheme expenditure for the current financial year by \$110,000 which includes no longer undertaking Puarenga Stopbank raising works.**
- 4 Undertakes essential flood damage repair works in the Whakatane-Waimana Scheme at an additional cost of \$325,000, with \$250,000 to come from the scheme's flood damage reserve.**

2 Introduction

Staff, with assistance from constituent councillors, have recently completed a cycle of ratepayer liaison meetings for the major river schemes. Predicted renewals and capital works programmes that have been developed as part of the Asset Management Plan review and financial modelling showing the impact of this expenditure on scheme rates for the following 50 years was discussed with the liaison groups. Most of the schemes are facing significant expenditure and corresponding rate increases in the near future

and there was considerable concern about affordability of the schemes, particularly in the current financial climate. As a result of these discussions it is prudent to look at options for postponing works where possible to limit future rate increases. Recommended reprioritisation of some planned works for the current financial year follows:

3 Waioeka-Otara Rivers Scheme

3.1 Peterson's Stopbank

The capital works programmed for Waioeka-Otara Scheme includes restoration (raising) of Peterson's Stopbank that is located on the left bank of the Waioeka River downstream of its confluence with Otara River. The budgeted value of those planned works is \$100,000.

The planned works for redevelopment of the Opotiki Harbour Mouth are located close to Mr Peterson's property which may be used to dispose of surplus material from the harbour development works. If this occurs the planned stopbank raising works may not be required. The Waioeka-Otara Liaison Group recommended at its meeting on 20 November 2008 that it would be prudent to postpone the planned stopbank restoration works until there is greater certainty with the harbour mouth proposals.

Staff have discussed this with the landowner and he accepts that the postponement of works is prudent. He is happy to wait for the development proposal to progress, but retains the right to have the flooding issue remedied by the scheme if works associated with the harbour development don't come to fruition.

3.2 Capacity review of Waioeka and Otara Rivers

A capacity review of the Waioeka and Otara Rivers had been scheduled in the Asset Management Plan to occur in the 2011/2012 financial year. Modelling of the river system hydraulics, particularly in the lower reaches of the rivers and confluence area, has been carried out by consultants for Opotiki Harbour Mouth developers (and is still continuing) to assess the affect of the mouth proposals on the existing flood protection system and the likely long term morphological changes that may occur in the rivers. It is prudent to review the river scheme at the same time as harbour development mitigation is investigated to ensure consistent design hydrology is used and river scheme upgrades and harbour development mitigation are consistent with each other. To achieve this it is proposed that the capacity review planned for 2011/2012 is brought forward to the current financial year. The cost of this capacity review (including modelling of different options) is estimated at approximately \$50,000.

3.3 Flood damages

The Waioeka and Otara Rivers have experienced several flood events over the past eight months (April, July and August 2008). Significant erosion repairs are required as a result of those flood events with an estimated net cost of approximately \$127,000 (net cost after postponing some non-urgent maintenance works out to next financial year). This issue was discussed with the Liaison Group who agreed that it was important to get the repair works completed before further flooding made the repair cost even greater.

Additional erosion repair is also required adjacent to planned work at Thornton Rest Home at an additional expense of \$20,000.

3.4 Summary

Staff recommend that:

- The Peterson Stopbank restoration work be postponed until the harbour mouth works are known.
- The capacity review project is brought forward into the current financial year.
- The urgent flood repair works is carried out as soon as possible.

The net increase in expenditure for the scheme for the current financial year after adopting the above reprioritisation is estimated at \$100,000.

4 Kaituna Catchment Control Scheme

4.1 Puarenga Stream

The capital works programme for upper Kaituna Scheme includes restoration of the Puarenga Stream stopbanks. The budgeted value of the planned works is \$95,000.

A recently completed capacity review of the Puarenga Stream (report available on request) has shown that the existing stopbank heights meet the current design standard (1% AEP plus predicted climate change) and that no stopbank raising works are required at this stage. The condition assessment of the stopbanks found some relatively minor repairs and maintenance works will be required under the existing maintenance budget.

Δ AEP to accommodate prolonged periods of wetter weather

(- 50,000)

4.2 Rotoiti and Rotorua Lakes level control resource consent

The existing resource consent for operating the Okere Gates (Lake Rotoiti) and Ohau Channel (Lake Rotorua) lake level control structures expires in 30 June 2010.

The cost of renewing these consents was not included in the current Annual Plan budget and is expected to cost approximately \$50,000 this financial year. The remaining \$20,000 to renew the consent will occur in the following financial year and is included in the current draft Ten Year Plan budget.

(+50,000)

4.3 Lower Kaituna River

The capital works programmed for lower Kaituna Scheme includes stopbank restoration works on three sections of the Kaituna River in the vicinity of the Waiari Stream confluence. The budgeted value of these planned works is \$397,800 and the overall budgeted sum for lower Kaituna Capital works for 2008/2009 is \$1,248,200.

The recently completed capacity review of Kaituna River has shown that the scope of this work has increased significantly, particularly if predicted climate change affects are included. This issue and the programmed capital works for the next ten years was discussed at the scheme liaison group meeting on 4 November 2008. The Liaison Group had concerns about the financial implications of completing all of these capital works and requested that staff prepare a plan of reprioritised capital works for a further scheme meeting to be convened in the New Year.

For the current financial year we are committed to completing the planned Raparapahoe Left stopbank works that are currently underway and also the Bell Road stopbank upgrade that remains as a high priority work. It is expected that the Raparapahoe Canal works currently underway; plus some carry over works from the previous financial year; plus the Bell Road works will be completed at close to the budgeted sum (ie \$1,248,200).

It is recommended that the main river stopbank works be postponed and included in the Ten Year Plan works programme subject to further consultation with the scheme ratepayers.

4.4 Waiari Stream stopbank works

Stage 1 of the Waiari Stream stopbank restoration works to reinstate its 1% AEP design standard has been completed. The Stage 2 works had advanced to the 'tender invitation' stage at the time of the Liaison Group meeting. The Liaison Group recommended that these stopbank raising works be deferred until the more urgent flood repair works (refer below) were completed and the scheme meeting to discuss capital work priorities was held. The affect of this deferral is to reduce planned capital expenditure in the current financial year by approximately \$300,000. Despite this deferral, some works are required to remove dredged sediment from the Waiari floodway that had been placed there in anticipation of it being used to assist with the stopbank raising works. The net affect of deferring the work, but continuing with removing the dredged material will be reduction in capital expenditure of approximately \$250,000.

4.5 Flood damages

The lower Kaituna River has experienced several flood events during April, July and August 2008. Significant erosion repairs are required as a result of those flood events with an estimated net cost of approximately \$140,000 (net cost after postponing some non-urgent maintenance works out to next financial year). This issue was discussed with the Liaison Group who agreed that it was important to get the repair works completed as a higher priority than the planned stopbank raising works.

4.6 Summary

Staff recommend that:

- The planned Puarenga Stopbank raising works are no longer required.
- The Waiari Stream stopbank raising works (stage 2) be deferred.
- The urgent flood repair works is carried out as soon as possible.

The net affect of the above is a decrease in expenditure for the scheme for the current financial year of approximately \$110,000. F

5 Whakatane-Waimana River Scheme

5.1 Flood damages

The Whakatane and Waimana Rivers experienced several flood events during April, July and August 2008. Significant erosion repairs are required as a result of those flood events with an estimated net cost of approximately \$820,000 (net cost after postponing some non-urgent maintenance works out to next financial year). Discussion was held with the Liaison Group on 25 November 2008 to obtain some recommendation regarding the flood repair works that are required. Due to the huge expense involved staff proposed two options for repair works; all required works at \$820,000, and only completing the urgent/essential works at \$526,000. The group had concerns about the cost of the works as well as the likelihood of increased costs to the scheme resulting from changes to overhead recovery and service costs, and recommended that no over budget expenditure should occur until other proposed cost increases are made available.

Notwithstanding the Liaison Group recommendation, staff have concerns that a significant proportion of these works, if left unrepaired, will cause property losses and result in even more costly works in the long term. Staff have looked closely at deferring as much of the non-urgent maintenance works as possible and also the option of less costly remedial works (but with higher risk of further damage) in locations where the consequences are less severe to reduce the estimated repair costs. Applying these savings and still only doing the essential works reduces the net over-expenditure to the scheme to approximately \$325,000.

5.2 Flood reserves

All of the schemes accumulate reserves to help fund extraordinary flood repairs when they occur. The policy set out in the scheme's Asset Management Plan requires that the reserve fund cannot be drawn down to fund repairs unless the event exceeds a '5 year' size flood event. The series of events that occurred during April, July and August did not individually exceed the '5 year' threshold however their quick succession, coupled with saturated soil conditions, definitely made the river banks more vulnerable to erosion damages. The balance of the Whakatane-Waimana scheme flood reserve is currently approximately \$250,000. Considering the Liaison Group recommendation to keep expenditure constrained, staff support the withdrawal from the flood reserve on this occasion.

5.3 Summary

Staff recommend that the urgent/essential works only be carried as described above, with resulting net increase in operation expenditure of approximately \$325,000 to be reduced by the recommended flood reserve withdrawal of \$250,000 resulting in \$75,000 requiring loan funding.

6 Rangitaiki-Tarawera River Scheme

6.1 Waitepuru Stream/Awarua Drain

The capital works programmed for Rangitaiki-Tarawera Scheme includes some new capital works associated with the Matata Flood Recovery works (i.e. Waitepuru Stream diversion and Awarua Drain stopbank construction works). The budgeted value of these planned works is \$440,000.

We have recently learned that Environment Court mediation to get approval for these works to proceed has failed. Staff are investigating whether the lower section of the proposed works (i.e. Awarua Drain stopbank works), that are less contentious to the objectors, can be covered by a separate resource consent to enable those works to proceed. The probability of getting these works completed this financial year is becoming slight, however staff will continue the progress approvals for the work.

6.2 Flood damages

The Rangitaiki River experienced several flood events during April, July and August 2008. Significant erosion repairs are required as a result of those flood events with an estimated cost of approximately \$300,000. Staff have reviewed all planned maintenance works and estimate that most of the additional flood repairs can be offset by postponing non-urgent maintenance works.

6.3 Summary

Staff recommend that the flood works be carried as described above, with minimal net increase in operational expenditure.

7 Analysis of Options

Various options for urgent flood repair works have been investigated, ranging from carrying out the full amount of known repairs to doing nothing. The staff recommendation is, where-ever possible, to postpone non-urgent maintenance works in favour of completing the most essential flood repairs. Additionally with the Whakatane-Waimana Scheme staff recommend that the flood reserve be drawn down to help offset repair costs and trialling of some less robust alternative methods to minimise repair costs where ever possible.

8 Community Views

All of these reprioritised works proposals have been discussed with the effected scheme liaison groups and they agree with the proposed changes. The exception being the Whakatane-Waimana Liaison Group who recommended that no extra expenditure occur on flood damage repairs until their scheme overhead costs and regional contribution percentages are provided for consultation.

9 Financial Implications

Current Budget

The financial implications of the recommendations above are summarised as follows:

Waioeka-Otara Rivers Scheme: Net additional operating expenditure of \$100,000.

Kaituna Catchment Control Scheme: Net reduction in operating expenditure of \$110,000.

Whakatane-Waimana Rivers Scheme: Net additional operating expenditure of \$75,000 after withdrawal of \$250,000 from the scheme's flood reserve.

Rangitaiki-Tarawera Rivers Scheme: No net additional operating expenditure proposed.

Future Implications

The schemes that require planned over-expenditure will raise the deficit via loans. The loan repayment period will be 20 years.

Most of the postponed non-urgent maintenance works will be reprogrammed for future years. This is not expected to cause increased expenditure in future year's, however some rescheduling of works will result.

Ten Year / Annual Plan Implications

As above

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for Group Manager Rivers and Drainage

28 November 2008

River Scheme Capital Works Reprioritisation

**Operations Committee
16 December 2008**

Prepared by Ken Tarboton

River Scheme Works Reprioritisation

Waioeka-Otara (additional cost) +\$100,000

Petersons Stopbank - postpone

-\$100,000

Capacity Review - advance from 2011/2012

+\$ 50,000

Essential Flood repairs

+\$150,000

• Scheme consulted and recommended repair before further flooding. Notes things worse

Kaituna

(cost saving)

-\$110,000

Puarenga stopbank not required

-\$50,000

Rotoiti & Rotorua consents

\$50,000

Waiari stopbank – deferred

-\$250,000

Essential Flood repairs

\$140,000

• Scheme consulted, recommended deferring capital works in favour of flood repairs. Tender that had been advertised was cancelled.

Whakatane-Waimana

(additional cost)

+\$75,000

Essential Flood repairs

\$325,000

Withdrawal from flood reserves

-\$250,000

820K of repair works. Absolutely essential \$325K. On discussion of TFR upcoming costs on OH, Engineering changes - started briefing Scheme on - Scheme does not want to undertake any flood repairs. Note this is a council decision and our best technical analysis is to do at least essential work

Rangitaiki-Tarawera

(on budget)

Essential Flood repairs

\$300,000

Maintenance deferrals

-\$300,000

↳ 5yr's

Can undertake essential works by rescheduling + deferring maintenance without impact on budget.

Floods not big enough to occur reserves according to our policies (AUP). Requesting Council to as outside of Action / AUP's severe reserves.

