

Report 11.396
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Committee Economic Wellbeing Committee
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Planning

Confirmation of Asset Condition for 2010/11 and Proposed Work Programme 2011/12

1. Purpose

- To report back the recommendations of the ten Wairarapa River Management Scheme Advisory Committee Meetings held during March – May 2011.
- To report on the maintenance activities completed on the 15 river schemes in the region and seek endorsement for the current condition rating of the infrastructural assets as at 30 June 2011.
- To seek endorsement for the proposed 2011/12 works programmes proposed for the river schemes.
- To report on the development of the Flood Protection asset management system, SAP Plant Maintenance.

2. The decision-making process and significance

The matters requiring decision in this report have been considered by officers against the requirements of Part 6 of the Local Government Act 2002.

2.1 Significance of the decision

Officers have considered the significance of the matter, taking the Council's significance policy and decision-making guidelines into account. Officers recommend that the matter be considered to have low significance.

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

3. Background

The Flood Protection Department is responsible for the infrastructural assets that form the basis of flood protection schemes in the Wellington region. These

assets have a total value of approximately \$189 million (2007 valuation) and provide flood and erosion protection to property and people residing on the floodplains of these rivers.

The monitoring of scheme assets over the past financial year provides reassurance to Council that the various assets are being managed appropriately, maintained to the desired standard, will perform when needed and, where necessary, are being enhanced by a works programme.

4. Summary

Our annual asset inspections showed that the majority of frontline flood defences are well maintained, are in good condition and provide the desired level of service. The weather experienced during the past year was favourable for the Western area and meant that the planned work programmes were completed on schedule without significant problem.

In the Wairarapa area a flood in September 2010 caused significant damages and the repair work required additional funding from flood damage reserves.

For the Wairarapa schemes, performance statements are prepared each year reporting on asset management plan performance indicators. The performance criteria of the schemes have been generally met on all of the schemes, except for a few minor issues.

The Western areas stop bank condition ratings and Wairarapa scheme performance statements are contained in Attachments 1 – 8 of this report and summarised in Section 6 below.

5. SAP Plant Maintenance

The asset management system, SAP Plant Maintenance (PM) has been operating within the Flood Protection Department since August 2009. A project to progress the use of SAP Plant Maintenance within the Department commenced in June 2011.

The objectives of the project are to:

- Identify issues, review data and develop reporting requirements.
- Review business processes and achieve consistency across the department
- Review roles and provide additional training for staff
- Complete quality checks on asset data

A number of staff workshops were held to gather information and discussions were held with other asset groups including Parks, Water Supply and ICT. An external consultant has been facilitating the process and has been working closely with the Operations and ICT teams to ensure the data structure and integrity enable the reporting requirements for our specific business needs.

Data verification and condition rating of all river assets including field inspections was completed. Following successful testing within the new SAP data base structure, the reporting of condition rating will be available.

The 5 year revaluation of Flood Protection Assets is scheduled for completion by June 2012 and the delivery of the improvement project, detailed above, will provide a robust system for the revaluation process.

6. Scheme Summaries

6.1 Western

6.1.1 Hutt River

Infrastructural assets on the Hutt River are constructed to provide a high level of service and are maintained to the appropriate standard. This is warranted given the scheme's importance in protecting one of the most developed floodplains in New Zealand. The total value of flood protection assets on the Hutt River is \$62.0M (2007 valuation).

With only a few minor flood events over the last year and settled weather patterns, all programmed work was completed per programme and to budget (\$1.15M), with the exception of gravel extraction, which was down on expected volumes due to the lack of demand. Annual asset inspections showed that frontline flood defences such as stop banks, rock lines, debris fences, groynes and other edge protection works are well maintained and in good condition.

1,925 tonnes of rock was used along the river to top up existing rock lines groynes and construct one new rock groyne at Manor Park.

Rejuvenation of the willow lines continued, with 1,860 willow trees planted during the year. Booth willows have been cut back and in some areas replaced with matsudana hybrid willow varieties. Native planting has continued and 2,671 native trees were planted on the river berms.

The 2010/11 stopbank condition rating is included in **Attachment 1** and shows 92% of the stopbank length meets or exceeds the required standard.

The current annual works programme budget is \$1,163,467.

For the western area the flood contingency reserve closing balance was \$1,982,554 with the Major Flood Damage Reserve Fund closing balance at \$1,819,949. These balances are considered adequate although the MFDRF needs to continue to grow to \$6M.

6.1.2 Otaki River

The annual asset inspection confirmed the infrastructural assets along the Otaki River are in good condition. There have not been any large flood events in the Otaki River for several years and improvements and regular maintenance has continued to improve assets within the scheme. Otaki River infrastructural assets are valued at \$16.5M (2007 valuation).

Maintenance tasks completed during 2010/11 included:

- Topping up of existing rock groynes at Tracey's (450 tonnes)
- Repairing rock lining along Mangahahene rock wall (450 tonnes)
- Rejuvenation of booth willows in the upper river below Taylor's
- Planting of 1,230 willow poles and stakes
- Extraction of 42,840 cubic meters of gravel
- Planting, mulching and releasing of native plants, in liaison with the Otaki Friends groups.

The 2010/11 stopbank condition rating is included in **Attachment 1** and shows 88% of the stopbank length meets or exceeds the required standard.

The current annual works programme budget is \$452,182.

6.1.3 Waikanae River

The annual maintenance inspection showed that the Waikanae River flood protection assets are in good condition. Waikanae River infrastructural assets are valued at \$6.7M (2007 valuation). Maintenance tasks completed during the 2010/11 year included gravel extraction 2,320 cubic metres from below Jim Cook Park, tree layering, track maintenance and topping up of the low areas on the Otaihunga stop bank.

The 2010/11 stopbank condition rating is included in **Attachment 1** and shows 48% of the stopbank length meets or exceeds the required standard. The balance, at Jim Cook Park Stopbank is the main reason the overall condition rating is low, staff have programmed for capital improvements to commence in 2013/14

The current annual works programme budget is \$97,054.

6.1.4 Wainuiomata River

The flood protection scheme on the Wainuiomata River mainly comprises of stopbanks, outlet structures and willow planting. The scheme has a 2007 valuation of \$1.3M and overall the infrastructural assets on the scheme are in good condition. Willow rejuvenation and re planting of dead and dying willows is ongoing and still the main focus of works on this river.

The current annual works programme budget is \$33,854.

6.1.5 Porirua Stream

The Porirua Stream scheme includes infrastructural assets through the central business district and the Stebbings and Seton Nossiter dams valued at \$5.5M (2007). The dam structures have comprehensive safety reviews carried out every 5 years which focus on major safety aspects and part define the long term care of dam structures. The latest annual inspection for each dam indicated that they are in good condition.

A bed level survey of the CBD reach to assess gravel build up was completed in 2009/10 which confirmed that no gravel extraction was required and observations during the latest audit inspection confirmed this.

Some components of the scheme do require further investigation including cracks in the Porirua City Centre flood walls, seepage on the Stebbings Dam face and vegetation growth on the Seton Nossitor dam.

The current annual works programme budget is \$104,627.

6.2 Wairarapa

A heavy rainfall event over 5/6 September 2010 caused flooding in all the rivers flowing out of the Tararuas. The flows down the main Ruamahanga River reached a 7 to 8 year return period at Wardells Bridge and a 5 to 6 year return period at Waihenga Bridge.

Following this event there were a number of smaller floods. The latter part of the winter and spring was very wet which contributed to soft river banks and then, combined with the floods, caused a significant amount of flood damage.

The total flood damage was in the order of \$503,000. Of this approximately \$149,000 was funded from maintenance budgets, \$177,000 from Council's flood damage reserves and \$177,000 from the Scheme's reserves.

The volume of gravel extracted during the year was 200,000 cubic metres. This is indicative of the general recession within the building industry, in comparison to the 2006/7 year when 300,000 cubic metres was extracted.

River Management Scheme Advisory Committee inspections were undertaken on all the rivers managed by Greater Wellington staff together with annual scheme meetings at which the Committees endorsed the past years work and approved the proposed work programme for 2011/12. This report seeks endorsement from the Economic Committee for those proposed work programmes.

6.2.1 Lower Wairarapa Valley Development Scheme

The flood in September 2010, which read 5.13 metres at the Waihenga gauge station, caused considerable damage to banks at Harber's, Wilde's, Tucker's, Blundell's, Wall's and Tobin's along the Ruamahanga river.

The damage to the banks at Harber's and Wilde's were repaired with flood damage funds, and the damage to Blundell's, Tucker's and Wall's was repaired with funds within the maintenance budget.

Although the damage to Tobin's stopbank was due to the floods, a considerable cause was the close proximity of the stopbank to the river channel. A major capital upgrade had been planned in a few years time and this was brought forward to address the problem.

As a result of this flood, some other work in the approved programme had to be deferred such as boulder protection work and the next stage of the Tauanui Delta stopbank work. All other maintenance and development works have been completed to programme and on budget.

Funding for the Development Works Programme is being reviewed as part of the current LTP process. A proposal to increase capital expenditure and extend the project is being considered.

The 2010/11 Performance Statement for the Lower Wairarapa Valley Development Scheme is shown in **Attachment 2**. The scheme's Asset Management Plan performance criteria have been satisfied, albeit a few minor exceptions.

The current annual works programme budget is \$1,582,824 with the flood contingency reserve closing balance being \$1,621,908 and the Major Flood Damage Reserve Fund closing balance being \$827,713.

6.2.2 Waiohine - Mangatarere River

The physical condition of the Waiohine - Mangatarere scheme is continuing to improve. Very little work was necessary in the lower reaches of the river (below State Highway 2 Bridge) in 2010/2011. The replacement of vegetative edge protection with rock groynes is ongoing and generally the most vulnerable sites are targeted as a priority on an annual basis.

The September flood resulted in the need for additional damage response works to be undertaken which involved approximately 700 linear metres of channel alignment works in addition to the regular maintenance involved with the consent. The majority of expense involved with the flood damage was covered by the scheme maintenance with \$1,054 being withdrawn from the scheme reserves.

The scheme's Asset Management Plan performance criteria have mainly been satisfied; however the criteria relating to stopbank berm width has not been satisfied. 14.6% (target is less than 10%) of the total stopbank length has a berm width of less than 20m. The Waiohine Floodplain Management Plan is currently under review and a significant upgrade and/or relocation of stopbanks is a likely outcome with funding available for work to commence in 2013/2014.

The 2010/11 Performance Statement for the Waiohine – Mangatarere Scheme is shown in **Attachment 3**.

The current annual works programme budget is \$308,400 with the flood contingency reserve closing balance being \$446,474 and the Major Flood Damage Reserve closing balance being \$27,299.

6.2.3 Waingawa River

The physical condition of the scheme is continuing to improve. Bed and beach recontouring continue to be the predominant works undertaken, with follow up willow planting once areas are stabilised.

There are a few areas of erosion, which are directly affecting farmland and there are still areas identified within the active channel which need to be addressed to achieve the design channel alignment.

The 2 year return period flood event in September 2010 required approximately 300m of flood damage response work (channel alignment) undertaken. The costs involved with the flood damage were funded by scheme maintenance. The scheme's Asset Management Plan performance criteria have been satisfied, with the exception of the peer review of scheme works.

The 2010/11 Performance Statement for the Waingawa River Scheme is shown in **Attachment 4**.

The current annual works programme budget is \$164,700 with the flood contingency reserve closing balance being \$71,835 and the Major Flood Investment Fund closing balance being \$18,200.

6.2.4 Upper Ruamahanga - Mt Bruce

This scheme remains in a development phase, and as such requires targeted channel alignment work, planting of the buffer zones, and edge protection works such as willow lopping and clumping. The flood event in September 2010 was approximately a 7-8 year return period event and damage response work involved 1,900 linear metres of in-stream works in addition to consented works. \$9,047 was withdrawn from the scheme reserve for this work.

The Asset Management Plan annual performance criteria have been mainly satisfied for the scheme. The 2010/11 Performance Statement for the Mt Bruce Scheme is shown in **Attachment 5**.

The current annual works programme budget is \$110,000 with the flood contingency reserve closing balance being \$71,860 and the Major Flood Investment Fund closing balance being \$6,188.

6.2.5 Upper Ruamahanga - Te Ore Ore

The scheme continues to be in a stable condition with the ongoing works programme focussing on maintenance of existing groynes, addition of new groynes at specific erosion spots, lopping of willows, and channel alignment work.

Flood damage response work involved 650 linear metres of in-stream works in addition to consented works. This work was covered by the scheme budget. The Asset Management Plan annual performance criteria have been largely satisfied for the scheme. The 2010/11 Performance Statement for the Te Ore Ore River Scheme is shown in **Attachment 6**.

The current annual works programme budget is \$134,500 with the flood contingency reserve closing balance being \$139,917 and the Major Flood Investment Fund closing balance being \$6,188.

6.2.6 Upper Ruamahanga – Gladstone

This scheme remains in the development phase, with the focus over the last few years on improving the design channel alignment. The works programme is now focussed on extensive willow planting of the stabilised buffer zones, which was not previously possible.

Flood damage response work involved 1520 linear metres of in-stream works in addition to consented works. \$19,017 was withdrawn from the scheme reserve for this work.

The Asset Management Plan annual performance criteria have been largely satisfied for the scheme. The 2010/11 Performance Statement for the Gladstone River scheme is shown in **Attachment 7**.

The current annual works programme budget is \$138,000 with the flood contingency reserve closing balance being \$53,901, and the Major Flood Investment Fund closing balance being \$6,188.

6.2.7 Waipoua River

The physical condition of the scheme is continuing to improve through the recommendation of the Scheme Advisory Committee to increase the use of hard edge protection measures as funding permits.

Willow planting and cabling is still the predominant work, which is followed up with the construction of boulder groynes.

There are few areas of bank erosion, which are directly affecting farmland. However, there are still areas located within the active channel which needs to be addressed to achieve the design channel alignment.

The September 2010 flood event was slightly less than a 2-year event in the Waipoua River. Approximately 485m of flood damage response works (channel alignment and rock groynes) were undertaken following this flood. The expense involved with the flood damage was covered by the scheme budget.

The Asset Management Plan annual performance criteria have been satisfied, albeit a minor exception. The 2010/11 Performance Statement for the Waipoua River Scheme is shown in **Attachment 8**.

The current annual works programme budget is \$94,500. The flood contingency reserve closing balance was \$50,638 with the Major Flood Damage Reserve Fund closing balance being \$18,200.

6.2.8 Other Schemes

The other three schemes managed by the department are the Kopuaranga, Taueru and the Whangaehu. These schemes are relatively small and involve keeping the channel clear from obstructions and as such have no major assets to report on.

Willow tree clearance works in the Kopuaranga River have been quite successful in improving flow capacities, following a targeted aerial application of herbicide in 2007/2008 and the ongoing mechanical clearing and the spraying of regrowth. There has been some interest expressed from landowners, upstream from Mauriceville, to extend the scheme. This is an indication that they are recognising that the scheme is producing successful results.

7. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Accepts** the Wairarapa River Management Scheme Advisory Committee recommendations that:
 - (i) *The Scheme Annual Reports and Financial Statements be accepted*
 - (ii) *The proposed 2011/12 works programmes be approved.*
 - (iii) *The Scheme rates for the year 2011/12 be approved.*
4. **Confirms** that the 15 River Management Schemes in the region have been maintained to the satisfaction of Council.

Report approved by:



Colin Munn

Team Leader Operations

Report approved by:



Graeme Campbell

Manager, Flood Protection

Report approved by:



Wayne O'Donnell

General Manager, Catchment Management

Attachments

Attachment 1: 2010/11 Stopbank condition performance measure – Western Area

Attachment 2: 2010/11 Performance Statement for the LWVDS

Attachment 3: 2010/11 Performance Statement for the Waiohine - Mangatarere Scheme

Attachment 4: 2010/11 Performance Statement for the Waingawa River Scheme

Attachment 5: 2010/11 Performance Statement for the Mt Bruce Scheme

Attachment 6: 2010/11 Performance Statement for the Te Ore Ore Scheme

Attachment 7: 2010/11 Performance Statement for the Gladstone Scheme

Attachment 8: 2010/11 Performance Statement for the Waipoua Scheme