

Report 12.514
Date 23 October 2012
File N/50/01/05

Committee Environmental Wellbeing
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Floodplain Management Plan Implementation: Annual progress report to June 2012

1. Purpose

To advise the Committee on progress made to June 2012, implementing the Hutt, Otaki, Waikanae Floodplain Management Plans (western FMPs), and the Lower Wairarapa Valley Development Scheme (LWVDS) upgrade.

2. The decision-making process and significance

No decision is being sought in this report.

This report provides an update on progress made with implementing the floodplain management projects for information.

3. Background

This is the tenth annual report on the implementation of the western FMPs and the fifth annual report on the Wairarapa capital works.

Western FMPs

The Hutt, Otaki and Waikanae Floodplain Management Plans (Western FMPs) were completed in 2001, 1998 and 1997 respectively. They recommend structural, non-structural and environmental measures to reduce the flood risk to the respective floodplains and improve the environment. Greater Wellington has adopted a 40-year time frame to fully implement the three FMPs at a total cost of \$98M. Implementation of the FMPs commenced in 2000 and \$36.5 million has been spent up to the end of June 2012. The Flood Protection, 2012-2022 Operating Plan provides a further \$41 million for implementing the three FMPs.

LWVDS

A major review of the LWVDS, completed in 2006, recommended a structural upgrade programme to improve the security of the flood defences in the lower valley. The original programme was for implementation over 8 years, commencing in 2007/08 and estimated to cost \$7.82 million. Generally the work involved strengthening river bank protections and upgrading of stopbanks on the Ruamahanga and Tauherenikau rivers. The programme was reviewed at the end of last year and a proposal to amend it was submitted to the Council. This was approved and the new programme will cost \$8.2 million with a contingency sum of \$2.25 million to be used at the end of the programme if needed. The period was also extended to 11 years. A total of \$4.3 million has been spent to June 2012. The Flood Protection 2012-2022 Operating Plan provides a further \$7.3 million to complete the project.

Waiohine FMP

The process for developing a FMP for the Waiohine floodplain commenced in 2008/09 and is progressing. The Flood Protection 2012-2022 Operating Plan provides \$5.8 million for implementation of the project during the period from 2013/14 to 2015/16, once the development of the Plan is complete.

4. Summary progress

The FMP implementation is progressing well with the target of completing the western projects by 2040 and the Wairarapa project by 2022. **Attachments 1 to 5** provide a summary by project of implementation progress. Table 1 below shows the summary of financial progress to date and the forecast by 2022. The progress, shown as 'percent complete' to June 2012 and the forecast progress to 2022 was computed by discounting current dollars to dollars at the time of adoption of the respective FMPs and is shown in Table 2.

Table 1 Expenditure Summary

River	Total 40 year budget (\$M) ¹	Expenditure in 2011/12(\$M) ²	Expenditure to June 2012 (\$M) ²	Total expenditure forecast to 2022 (\$M) ²
Hutt	78.00	3.6	25.2	66.2
Otaki	12.07	1.2	7.0	13.4
Waikanae	8.69	-	4.3	6.5
Total western FMPS	98.76	4.8	36.5	86.1
LWVDS	8.2	1.1	4.3	11.6
Waiohine	5.5	-	-	5.8
Total	112.08	5.9	40.8	103.5

Notes:

1. Hutt, Otaki, Waikanae and LWVDS budgets are based on 1999, 1998, 1997 and 2007 dollar (FMP dollars) values respectively.
2. Expenditure figures have not been converted to FMP dollars.

Table 2 Progress Summary

River	Budget/Expenditure FMP dollars		% Complete		
	Total budget (\$M)	Expenditure to June 2012 (\$M)	Actual to June 2012 in dollar terms	Forecast to June 2022 in dollar terms	June 2012 (Flood damages saved)
Hutt	78	16.98	22%	51%	21%
Otaki	12.07	5.25	43%	73%	70%
Waikanae	8.69	3.79	44%	57.6%	69%
LWVDS	7.82	4.3	55%	100%	

4.1 Non-structural measures

The Hutt and Kapiti flood hazard information has been included in Hutt City and Kapiti district plans. The Kapiti flood hazard has been amended to reflect the reduced flood risk from the Chrystalls stopbank and Jim Cooke Park realignment works. The Wairarapa flood hazard information has been included in the Wairarapa combined district plan. An Upper Hutt district plan change to include the Hutt River flood hazard was notified on 3 October 2012.

4.2 Structural measures

4.2.1 Hutt River

By the end of June 2012, \$25.2 million had been spent in implementing the Hutt River FMP. The project is now about 22% complete on the basis of FMP dollars and progressing well.

The Ava to Ewen project, Belmont improvements, Whirinaki Crescent stopbank upgrade and the Bridge Road edge protection works are complete. The Boulcott/Hutt stopbank project is progressing well to a shortened programme and the project was about 50% complete by June 2012.

At this stage, the flood damage saved benefits can be estimated at 21% on the basis of works completed. The components of works completed are the Ava to KGB (LB) and Ava to Melling (RB) projects. The planning and design for the City Centre stopbank and channel improvements has commenced in October 2012. The flood damages saved benefits would reach 50% when the Boulcott/Hutt and City Centre stopbanks are completed. These stopbanks are scheduled for completion by 2013 and 2021 respectively.

4.2.2 Kapiti Rivers

By the end of June 2012, \$11.3 million had been spent implementing the Kapiti FMPs. Implementation of the Otaki and Waikanae FMPs is now 43% and 44% complete respectively. In Otaki, the Chrystalls stopbanks, the Rangiuuru floodgates, the Mangapouri culverts and about 52% of the river management

works upstream of SH1 are complete. In Waikanae the Kauri Puriri works, Otaihanga Road raising, Jim Cooke Park realignment and part of Otaihanga edge protections are complete. About 59% of the planned river management works are now complete.

4.2.3 LWVDS

Implementation of the LWVDS development works programme commenced in 2007/08. All works programmed up to 2011/12 amounting to about 55% of the total project were completed. The total expenditure to June 2012 is \$4.3 million.

4.3 Environmental enhancement works

Significant environmental enhancement works have been completed with all the above capital projects. Environmental strategies have been completed for the Hutt, Otaki and Waikanae Rivers. These strategies generally include planting native trees, improving existing walkways or providing new walkways and general landscaping. A review of the Waikanae Environmental Strategy, undertaken as part of the 10 yearly review of the Waikanae FMP, is now complete and will be published soon. The Friends of the Waikanae and Otaki Rivers are playing a significant part in the implementation of these strategies.

4.4 Emergency Management

Most of the emergency management measures identified in the FMPs to enhance the existing systems have been completed. Providing flood warning to local authorities and selected land owners are continued on an on-going basis.

4.5 FMP progress reviews

All three western FMPS have adopted a 40 year timeframe to fully implement with progress reviews proposed every 10 years. The 10 yearly progress review of the Waikanae FMP is now complete and the reviews of Otaki and Hutt FMPs are programmed for the three year period from 2012/13 to 2014/15.

5. 2011/12 Targets and achievements

Significant progress was made on all FMP projects during 2011/12. A total of \$5.9 million was spent during the year. The highlights for 2011/12 are summarised below.

Western FMPs

In the Hutt, The Boulcott/Hutt stopbank project reached a major milestone with the commencement of construction in the beginning of the 2011/12 financial year. The stopbank works and associated works were about 50% complete by the end of June 2012 and currently progressing to a shortened construction programme to complete the works by June 2013, one year ahead of schedule.

In Otaki, the purchase of the LINZ land between SH1 and Chrystalls was completed and work progressed with the planning for implementing structural works identified in the Lower Waitohu project.

LWVDS

The Tobin stopbank project was completed ahead of schedule by bringing forward the budget from 2012/13. Work completed included purchase of land, reconstruction of the stopbank and berm protection work.

Other works included completion of boulder protection works to Pauls Bank at Lake Onoke, boulder groynes at 2 locations and boulder rip rap protection to about 250m of the banks on Ruamahanga River.

Total amount of major works carried out up to 30 June 2012 are:

- Stopbank at Tobin and Davenport - 550 m
- Boulder rip rap protection - 250 m
- Boulder groynes - 4 nos
- Planting native shrub - 1,420 plants
- Clearing of 5 ha land for Biodiversity planting in 2012/13.

6. 2012/13 works programme

Western FMPS

The total western FMP budget for 2012/13 is \$6.1 million. The key western FMP projects for 2012/13 include:

- Working with UHCC to complete the **district plan change** to include the revised Hutt River and Mangaroa flood hazards in the Upper Hutt district plan.
- Completing the remaining works on the **Boulcott/Hutt stopbank project** including the retaining walls at Connolly Street, northern section of the stopbank and the extension of Military Road stormwater pipe.
- Completing project scoping for the **City Centre stopbank** project in the Hutt River.
- Progressing with the land entry agreements and completing permitted maintenance works in the **Lower Waitohu Stream**.

LWVDS

The total LWVDS budget for 2012/13 is \$0.441 million. The key projects for 2012/13 include:

- Planting native shrubs on the lower Ruamahanga River for wave damage erosion protection and planting at Macland Farm for biodiversity purposes.
- Top up of Ruamahanga stopbanks upstream of Lake Onoke to bring them to the same standard as Pauls Bank.
- Constructing boulder groynes and rip rap protection on the Ruamahanga River and at Pauls Bank.

7. Activities proposed to 2022

The Flood Protection 2012-2022 Operating Plan provides a total of \$63 million to implement the Hutt, Otaki, Waikanae and Waiohine FMPs and the LWVDS development works. The programme also includes completing the 10 yearly progress reviews of the western FMPs.

7.1 Hutt

The programme provides for completing all stopbanks on the left bank from Kennedy Good Bridge to Ava Rail Bridge to provide the HRFMP recommended standard of protection to the Hutt CBD. In undertaking this work, planning approval for river widening and the Pharazyn Street stopbank opposite the City Centre will also be sought though budget for completion of construction of the Pharazyn Stopbank is not included in the LTP. The Boulcott/Hutt stopbank, which is a component of this project, is programmed for completion by 2013. Upper Hutt projects including Maoribank bed stabilisation and Ebdentown protection works will be completed. The extent of both Upper Hutt projects will be determined in consultation with NZTA.

7.2 Waikanae

In Waikanae, the Jim Cooke Park stopbank project will be completed by 2016. Further environmental enhancement works will continue through the period.

7.3 Otaki

The programme provides for completing the Lower Waitohu Stream project and the North stopbank improvements by 2014. The programme also provides for south stopbank improvements and further bank edge protection works and environmental enhancement works to be completed from the mouth to the Otaki Gorge.

7.4 Wairarapa

The programme provides for completing the revised LWVDS development works schedule by 2022 and progressing with the Waiohine FMP implementation works.

8. Communication

This report is written primarily for internal purposes. However, a copy will be sent to HCC, UHCC and KCDC for their information.

9. Recommendations

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*

Report prepared by:

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- Attachment 1: Hutt FMP summary progress table
- Attachment 2: Otaki FMP summary progress table
- Attachment 3: Waikanae FMP summary progress table
- Attachment 4: Wairarapa Projects - LWVDS summary progress table
- Attachment 5: Waiohine summary progress table