



Report 08.30
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Committee Catchment Management
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Kapiti Flood Event – 8th January 2008

1. Purpose

Inform the Committee of the flood event that occurred on 7 - 8 of January 2008, the flood damage incurred and the follow-up work required.

2. Significance of the decision

The matters for decision in this report **do not** trigger the significance policy of the Council or otherwise trigger section 76(3)(b) of the Local Government Act 2002.

3. Hydrology of the 7 - 8 January flood event

The January 7 - 8 flood event was caused by a north-westerly airflow that slowed down over the north-west area of the Wellington region. Heavy rain fell in parts of the western Tararua ranges, Akatarawa hills and the Kapiti Coast.

River flows in the western Wellington region were mostly less than a mean annual, causing only minor damage. The exceptions were the smaller rivers and streams of the Kapiti Coast, which had flood return periods of 8-15 years, as follows:

- 15 years for the Waitohu Stream
- 10 years for the Mangaone Stream
- 8 years for the Waikanae River

The event, including recorded rainfall and river flows, is described in detail in the technical report prepared by Laura Watts from the Environmental Monitoring and Investigations Department. (**Attachment 1**)

4. Flood damage assessment

The January 7 - 8 flood event caused significant damage to rural property and infrastructure on the Waitohu and Mangaone Streams. There was some damage to GW flood protection works on the Waikanae and Otaki Rivers, but overall, our schemes performed well.

Detailed assessment of damages to our flood protection systems is well advanced but not fully complete at the time of writing this report. A more detailed inspection and assessment of the Waitohu Stream is required and we will update the Committee at the meeting if there are any significant changes to the information detailed here. We have also made good progress on inspecting and offering advise to landowners in Reikorangi, Te Horo and Otaki.

Damage to private property and infrastructure

Damage that has been drawn to our attention and inspected include:-

- Erosion to the banks to the Ngatiawa Stream, close to camp buildings at 82 Terrace Road, Reikorangi.
- Erosion to the banks of the Mangaone Stream, close to the house at 83 Mangaone North Road. The flood eroded a large section of this property and came to within 8 metres of the house.
- Flooding (from the Mangaone Stream) of a property at 99 Te Horo Beach Road. The house needed to be evacuated.
- Flooding around a house in Convent Road, Otaki. The house needed to be evacuated.
- Extensive flooding and erosion to rural land along the Mangaone and Waitohu Streams.
- Extensive damage to the NIMT rail bridge across the Waitohu.

The above property owners are currently making private arrangements to repair the flood damage to their property or are liaising with their respective insurance companies. We are yet to receive any applications for assistance under the GW's "Isolated Works Outside a Scheme Area" funding policy. We believe a funding application will be made by the owners of 83 Mangaone North Road and that it will fit the funding criteria.

The event has again highlighted the issue of responsibility for the maintenance of watercourses. A memo prepared for Councillors in 2004 has been put in the Councillor's Bulletin for information.

Damage to Greater Wellington managed schemes and watercourses

The most significant damage occurred in the Waikanae River, Mangaone Stream and Waitohu Steam. There was only minor damage in the Otaki River, however preventative maintenance will be necessary.

Waikanae River

- Damage to Kebbell's bed level control weir, Kebbell's rock wall and the access track behind the rock wall.
- Minor erosion adjacent to the rock groynes at Maple Lane and Jim Cooke Park.
- Slumped culvert outlet and groyne at Jim Cooke Park.
- Eroded river banks near to the walkway at Blakes corner above Greenaway Rd.

- Slumped river edge, willows and block lining at Hollands track below Greenaway Road.
- Bank erosion adjacent to the Otaihanga Boating Club.
- Gravel build up in the lower reaches of the river.

Mangaone Stream

- Eroded rock bed control weirs at 46 Te Horo Beach Road
- Gravel build up downstream of rock weirs, between 46 and 120 Te Horo Beach Road.

Waitohu Stream

- Significant damage to willow protection planting and erosion of the stream banks, particularly in the upper reaches.
- Significant deposits of debris along the entire length of the stream
- Gravel build up at various locations, particularly between the SH1 and the rail bridges

Otaki River

- Minor damage to young willow protection planting at the cliffs, Upper Rahui south bank. River realignment works will be required to prevent further damage.
- Minor river bank erosion at Leithbridge.
- Slumping of a section of the Stresscrete rock wall (60m)

5. Flood damage estimates and response

The total damage to Greater Wellington managed assets and watercourses is estimated at \$186,000. A summary of the individual components of work required is contained in **Attachment 2**

A summary of the work proposed in response to the damage from the January flood is as follows:

- Complete repairs to assets and watercourses to a total value of \$146,000, as set out in the above table (excluding the Otaihanga Boating Club Repairs of \$40,000).
- Design and cost the repair of 450m of eroded river bank at Otaihanga in accordance with the recommendations in the Waikanae Floodplain Management Plan. Undertake the most urgent section (the 200m at the upstream end) as a capital work in 2008/09. Our current proposal is to reconstruct the berm to the design channel alignment and then line the face with rock rip rap.
- Carry out further hydraulic analysis of the Mangaone Stream to assess preferred channel alignments and overflow paths.
- Hold a debrief meeting with KCDC to ascertain whether the responses to the event were adequate and where improvements can be made.

- Complete the schedule of requests for assistance from landowners and provide funding assistance where appropriate.

Comments

The majority of areas affected have been inspected and advice given to affected landowners where appropriate.

Repair works are underway with most of the debris blockages removed and assets being restored.

A debrief has been held with KCDC staff. KCDC opened its emergency control centre for the event and report that they were very happy with about how it operated. The pager system used to contact and update the residents in Otaihanga and Convent Road, Otaki worked well. KCDC were able to respond quickly to properties affected by the flood. They reported that 2 flap gates (one a KCDC asset, the other a GW asset) at Otaihanga did not operate as intended. These will be investigated. KCDC are concerned about maintenance responsibilities on the Mangaone Stream, upstream of SH1. A number of property owners were unwilling to remove debris from the stream on their land, to the potential detriment of downstream owners. At this stage our response to this issue will be to send out a letter to land owners reminding them of their responsibilities regarding keeping waterways clear.

The major matter to be considered is the erosion of the banks adjacent to the Otaihanga Boating Club. The erosion is within 5m of a low level stopbank which protects the houses along Makora Rd from floods up to a 10 year return period. The Waikanae Floodplain Management Plan identified the need for permanent works in this area at an estimated cost of \$414,000 (approximately \$560,000 in today's dollars). We have cross bladed gravel into this area twice in the last few years to maintain the alignment and could do so again at a cost of approximately \$40,000 but it is felt it is time for a more permanent solution. The proposal would be to rebuild the berm to the preferred channel alignment and construct a rock lining to protect the bank. The current LTCCP has \$515,000 for house raising along Makora Rd over the next 4 years. One option is to use the first years funding , \$124,000, to construct a portion of the bank edge protection works and defer the house raising a year. This option along with some maintenance work would allow us to complete the most urgent section of the erosion and then, depending on the uptake of the house raising finance could be completed in subsequent years.

6. Financial Considerations

The total cost of the storm damage has been assessed at \$186,000.

The Kapiti maintenance programme is being reviewed and work prioritised as a result of the flood. We believe we can cover much of the flood damage repairs, excluding the Otaihanga work, from within existing maintenance budgets, by deferring some uncommitted routine maintenance work.

The reworked flood damage repair and maintenance programme can be done within existing Divisional Manager's delegated authority, including and draw down from flood reserves.

A reallocation of the 2008/09 house raising budget to undertake bank edge protection as capital works will require Council approval through the annual plan process. This Committee is asked to endorse the recommendation for Council to reallocate the house raising budget of \$124,000 in 2008/09 for use on bank edge protection at Otaihanga. There would then be an opportunity for the community to comment on the proposal as part of the normal 2008/09 Annual Plan consultation process.

7. Communications

Communications efforts will be focused on ensuring we have responded to all of the requests to inspect flood damage and to offer advice and assistance where possible. No specific press releases are proposed.

8. Recommendations

That the Committee:

1. ***Receives the report.***
2. ***Notes the content of the report.***
3. ***Endorses the reallocation of \$124,000 of capital expenditure at Otaihanga from house raising to bank edge protection in the draft 2008/09 annual plan.***

Report prepared by:

Report approved by:

Report approved by:

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Attachment 1: Technical report of 8th January 2008 Flood Event

Attachment 2: Flood damage assessment