

Flooding and erosion along the Lower Waitaki River

Living on a floodplain

Flat land, fertile soils and proximity to water for irrigation and recreation make the lower Waitaki an attractive place to live. As a floodplain however, it is an area naturally exposed to erosion and flooding that can spread across wide areas, impacting people and property.

The goal of Otago Regional Council and Environment Canterbury's river engineering team is to provide the community with an adequate level of safety, security and resilience from flooding and erosion. Normally, we do this by meeting with the river rating district liaison committee and setting a budget and schedule of works to meet the agreed goals. Unfortunately, we sometimes experience unplanned flood events that cause damage that cannot be remedied with the normal works plan or budget.

What has happened?

Last summer, heavy rainfall events caused significant erosion at 13 locations along the lower Waitaki River. This means we need to work together with you, and other lower Waitaki residents, to revise the budget for works and/or the level of community protection that can be provided. To fully repair each of these sites would cost about \$1 million. This would restore flood and erosion protection measures for the community to the levels in place prior to last summer's flood events.

At a community meeting in July, most of those who attended confirmed they wanted the \$1m work package completed but did not want to pay for it and felt that Meridian should pay the full cost.

Subsequently, a meeting was held between Meridian Energy and Environment Canterbury chief executives. Meridian Energy has confirmed its commitment to contributing 40% of rating district costs as agreed under the current funding model, but no additional funds.

Who is affected?

Environment Canterbury and Otago Regional Council are working together to gather the views of ratepayers to develop a solution that meets the needs of landowners (which may vary by region).

Owners of the 13 directly affected sites have a significantly increased erosion and flood risk to their property.

Four of the eroded sites require a minimum level of repair as they are considered critical to residents of lower Waitaki and threaten:

- **A power pylon**
Transpower has agreed to contribute funds for its protection.
- **A community water supply**
The lower Waihao Rural Water Supply Scheme intake is at significant risk. Waimate District Council has agreed to consider a financial contribution to this, noting the financial constraints it is facing.
- **An urupā (Māori cemetery)** and
- **An irrigation scheme race.**

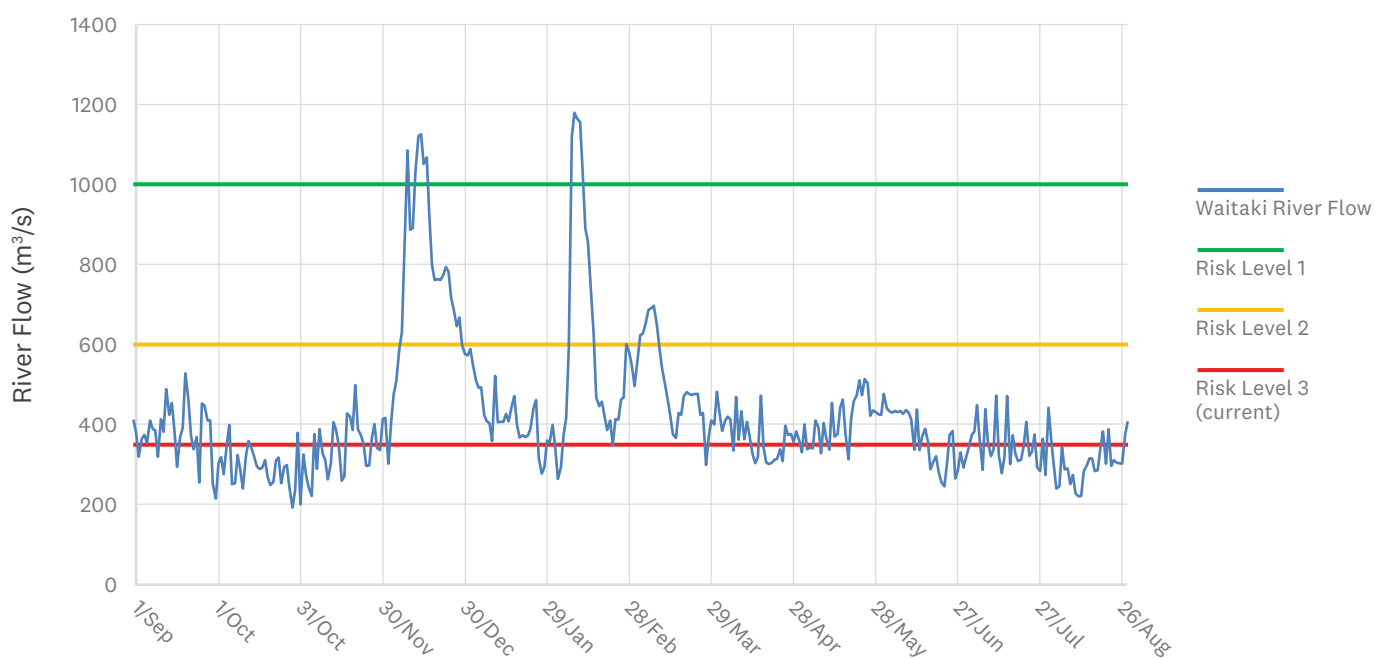
All ratepayers/residents in the lower Waitaki rating district are affected by a slightly increased flood risk.

What are some options for repairs?

Please see the graph below which explains the risk level for these options.

| SCENARIO | COST | WHAT DOES THIS MEAN FOR ME? |
|--|---|---|
| A. Current: minimal repairs only at critical sites | Cost \$280K (\$159K already spent on urgent repairs) | <ul style="list-style-type: none"> • Critical sites: this is a short-term solution. Following minimal repairs these sites would be risk level 2 (yellow). • Other damaged sites: the other nine damaged sites have a higher risk of additional erosion and flooding. These sites would be risk level 3 (red). • All lower Waitaki rating district residents: if only the minimum urgent works are done there would be a moderate risk of flooding – slightly higher than pre-flood levels. This is because the remaining eroded sites are more vulnerable to flooding, which can spread over a wide area. |
| B. Full repairs at the four critical sites only | Cost \$700K | <ul style="list-style-type: none"> • Critical sites: protection would be restored to pre-flood levels at critical sites only. These four sites become characterised as risk level 1 (green). • Other damaged sites: private landholders at the other nine sites have a higher risk of additional erosion and flooding. These sites would be risk level 3 (red). • All lower Waitaki rating district residents: repairing these sites would alleviate the majority of community flood risk. All lower Waitaki residents return to a lower risk of flooding. Risk level 1 (green). |
| C. Full repairs at each of the 13 sites | Cost \$1.04 million | <ul style="list-style-type: none"> • All lower Waitaki rating district residents: risk level 1 is restored for all sites. Protection restored to pre-flood levels. |

Waitaki River | average daily flow September 2019 to August 2020



What are the risks?

Unless we undertake the full schedule of proposed repairs at each of the 13 damaged sites, lower Waitaki residents face a higher risk that erosion and flooding could cause damage to people and property than before. However, we want to gauge what the community believes is an acceptable level of risk, if any.

The graph over the page shows the average river flow over the last 12 months, which is roughly indicative of what might happen this year. Essentially, when the river flow goes above the risk levels indicated in the graph below, there is a higher chance of more erosion at the existing sites. This in turn means a greater risk of erosion and flooding, both of land adjacent to the river and the wider lower Waitaki area.

Residual risk

If scenario A, B or any other partial repair option is chosen, it should be noted that there will be an elevated level of residual risk as a consequence. Partially repaired sites and damaged sites are more vulnerable to further erosion and flood flows are less likely to be contained within the main river channel. This could cost more if it is decided to repair these sites at a later date.

If full repairs are done, how could this affect my rates?

Under the current rating district funding model, individual landowners at some of the 13 sites would be asked for a one-off payment, which varies based on the work required.

All ratepayers in the lower Waitaki River rating district would be subject to an additional contribution. This would mainly affect targeted rates, with possibly a nominal increase to general rates as determined through the Long-Term Plan and Annual Plan processes.

To work out how this proposal might affect your rates bill, check your most recent rates demand. If you pay Waimate District Council rates find the *ECan lower Waitaki* rate that you are currently charged. If you pay Otago Regional Council rates, identify the line for *Lower Waitaki River Management A* and/or *B*. This amount is a portion of your total rates bill and is roughly equal to the dollar amount that your targeted rate would increase by to cover the cost of repairs. It could be paid back over a period of time (eg. one to five years). You can look up your current rates demand as follows:

- Waimate www.waimatedc.govt.nz/property-rates/rates — go to “Search Your Property”
- Waitaki www.orc.govt.nz/rates/rates-calculator

Although rates vary depending on where your land is located, we have provided some general examples to illustrate the amount your targeted rate could increase if we proceed with the full package of repairs.

| CAPITAL VALUE | CURRENT TARGETED RATE (example only) | POTENTIAL RATES INCREASE (if we proceed with the full package of repairs) |
|---------------|---|---|
| \$160,000 | \$120 | <ul style="list-style-type: none">• about \$120 over one year OR• \$24 per year over 5 years |
| \$290,000 | \$360 | <ul style="list-style-type: none">• about \$360 over one year OR• \$72 per year over 5 years |
| \$570,000 | \$709 | <ul style="list-style-type: none">• about \$709 over one year OR• \$141.80 per year over 5 years |
| \$990,000 | \$1,232 | <ul style="list-style-type: none">• about \$1,232 over one year OR• \$246.40 per year over 5 years |

If you need help, please call us on **0800 324 636**

Lower Waitaki erosion repair survey

| | |
|------------|----------|
| Name: | Address: |
| Telephone: | |
| Email: | |

There are three options being explored for the remediation:

| | A. | B. | C. |
|---|--|--|-----------------------------|
| PROPOSED REPAIRS | Minimal repair to 4 critical sites | Full repair to 4 critical sites | Full repair to all 13 sites |
| SITES REPAIRED | <ul style="list-style-type: none">a community water supplya power pylonan urupā (Māori cemetery)an irrigation scheme race | <ul style="list-style-type: none">a community water supplya power pylonan urupā (Māori cemetery)an irrigation scheme race | All 13 damaged sites |
| RISK TO CRITICAL SITES AFTER REPAIRS | Level 2 – moderate | Level 1 – low | Level 1 – low |
| RISK TO OTHER DAMAGED SITES AFTER REPAIRS | Level 3 – high | Level 3 – high | Level 1 – low |
| RISK TO ALL COMMUNITY AFTER REPAIRS | Moderate* Slightly higher than pre-flood levels. | Level 1 – low* | Level 1 – low |
| COST | \$280,000 | \$700,000 | \$1,040,00 |

*See note regarding residual risk on page 2 of the notes.

1. What is your preference for what remediation work is undertaken? *Choose just one*

- ☐ Do the **minimum** repair work needed now (scenario A)
- ☐ Do **all** repair work on the four critical sites only (scenario B)
- ☐ Repair **all** thirteen sites (scenario C)

2. What factors did you consider when making your decision? *Select all that apply*

- | | |
|--|--|
| <input type="checkbox"/> Level of repair to critical sites | <input type="checkbox"/> Paying for the work over more than one year |
| <input type="checkbox"/> Level of repair to all sites | <input type="checkbox"/> Total cost of each option |
| <input type="checkbox"/> Risk to community | <input type="checkbox"/> Whether I can afford it |
| <input type="checkbox"/> Other, please specify: | |

3. Of the factors you considered, which is the most important to you? *Choose just one*

- | | |
|--|--|
| <input type="checkbox"/> Level of repair to critical sites | <input type="checkbox"/> Paying for the work over more than one year |
| <input type="checkbox"/> Level of repair to all sites | <input type="checkbox"/> Total cost of each option |
| <input type="checkbox"/> Risk to community | <input type="checkbox"/> Whether I can afford it |
| <input type="checkbox"/> Other, please specify: | |

4. If only the minimum remediation work is done (scenario A – the four critical sites) *Select all that apply*

- ☐ I believe the level of erosion and/or flood risk to my property is acceptable
- ☐ I believe the level of erosion and/or flood risk to the 13 damaged sites is acceptable
- ☐ I believe the level of erosion and/or flood risk to the community is acceptable
- ☐ I'm not sure

5. What is your preference for how the repair work is funded, if it were to proceed? *Choose just one*

- ☐ I would be willing to pay an additional targeted rate over one year
- ☐ I would be willing to pay an additional targeted rate over a set period (i.e., 5 years)
- ☐ Other, please specify:

6. How much do you agree or disagree that all landowners who live in the lower Waitaki benefit from the flood protection provided under the current river rating district objectives? *Please circle the appropriate number*

| | | | | |
|----------------|----------|------------|----------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Agree | Agree | Don't Know | Disagree | Strongly Disagree |

7. How much do you agree or disagree that all landowners who live in the lower Waitaki rating district have some responsibility for maintaining the river to reduce the effects of erosion and flooding?

Please circle the appropriate number

| | | | | |
|----------------|----------|------------|----------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Agree | Agree | Don't Know | Disagree | Strongly Disagree |

8. If you were the project manager, what would you do about these sites that need repairing?

Please attach additional sheets if needed

9. Would you be open to us contacting you at a later date, if we need clarification or more information?

- ☐ Yes ☐ No

10. Please let us know the rating class or classes of the land that you own. *Tick as many as apply*

Environment Canterbury

- ☐ Class A
- ☐ Class B
- ☐ Urban
- ☐ I'm not sure

Otago Regional Council

- ☐ Lower Waitaki River Management A
- ☐ Lower Waitaki River Management B

If you need help, please call us on **0800 324 636**

Please return the completed survey by
Friday 25 September (no stamp necessary) to:

Environment Canterbury, Freepost 1201
Attention: Shaun McCracken

Thank you for taking the time to complete the survey. We appreciate your help.