



Photo – Detention Dam 46, one of 27 dams in the Porewa Scheme



horizons
REGIONAL COUNCIL

POREWA VALLEY SCHEME MEETING
6 AUGUST 2024

TODAYS AGENDA

1. Welcome and introductions
2. Regional overview of river and drainage management
3. Operational update 2023-24
4. The Long-term Plan & key scheme related decisions
5. The year ahead
 - Financial summary
 - Maintenance based programmes
 - Asset condition and repairs
 - Capital programme
 - Flood vulnerability assessment
6. Next steps



Photos – Moutoa Gates in the Lower Manawatū Scheme.

Moutoa Gates are a focus of the capital programme in 2024-25 with support from Central Government co-funding through the Climate Resilience Fund.

SCHEME COMMITTEES

| Area | River Schemes | Scheme meeting date |
|---------------|---------------------------|---------------------|
| Northern Area | 1. Forest Road | |
| | 2. Haunui | |
| | 3. Lower Whanganui River | 31 July 9 am |
| | 4. Makirikiri | 12 August 12.30 pm |
| | 5. Matarawa | 31 July 12 pm |
| | 6. Ohakune | |
| | 7. Pakihi Valley | |
| | 8. Pohangina – Ōroua | 16 August 10 am |
| | 9. Porewa Valley | 6 August 12 pm |
| | 10. Rangitikei River | 6 August 9 am |
| | 11. Ruapehu DC | |
| | 12. Turakina | 30 July 9 am |
| | 13. Tutaenui | 30 July 12 pm |
| | 14. Upper Whanganui | 22 August 10 am |
| | 15. Whangaehu- Mangawhero | 6 August 3 pm |
| Central Area | 16. Ashhurst Stream | |
| | 17. Kahuterawa | |
| | 18. Lower Manawatū | 7 August 9 am |
| Eastern Area | 19. Lower KIWITEA | 16 August 1 pm |
| | 20. Mangatainoka | 20 August 10 am |
| | 21. South-East Ruahine | 20 August 3 pm |
| | 22. Tararua | |
| | 23. Tawataia - Mangaone | |
| | 24. Upper Manawatū | 20 August 12.30 pm |
| Southern Area | 25. Foxton East | |
| | 26. Himatangi | |
| | 27. Hōkio | |
| | 28. Koputaroa | 2 August 10 am |
| | 29. Makerua | 2 August 1:30 pm |
| | 30. Manawatū | 7 August 1 pm |
| | 31. Moutoa | 21 August 10 am |
| | 32. Ōhau Manakau | 21 August 1 pm |
| | 33. Te Kawau | 9 August 1 pm |
| | 34. Whirokino | |

- There are 34 schemes, 21 of these have committees.
- Scheme meetings were put on hold due to covid in 2022.
- 6 scheme meetings held in 2023-24, post Cyclone Gabrielle.
- Scheme Chairs meetings 6 March and 27 June 2024.
- 21 Scheme Liaison meetings from 30 July to 22 August 2024.

Changes since last full set of meetings

- Increased capital programme (post covid investment).
- Horizons organisational restructure. River Management now alongside other non-regulatory programmes and reporting to Councils' Integrated Catchment Committee.
- New Government legislation - Freshwater, Dams etc.
- Increased regulatory complexity and scrutiny.
- Cyclone Gabrielle, inflationary increases, staff changes, Long-term Plan process and new Infrastructure Strategy.



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RIVER AND DRAINAGE SCHEMES

Purpose is to protect people, property and infrastructure from flooding and allow for productive potential of land to be realised.

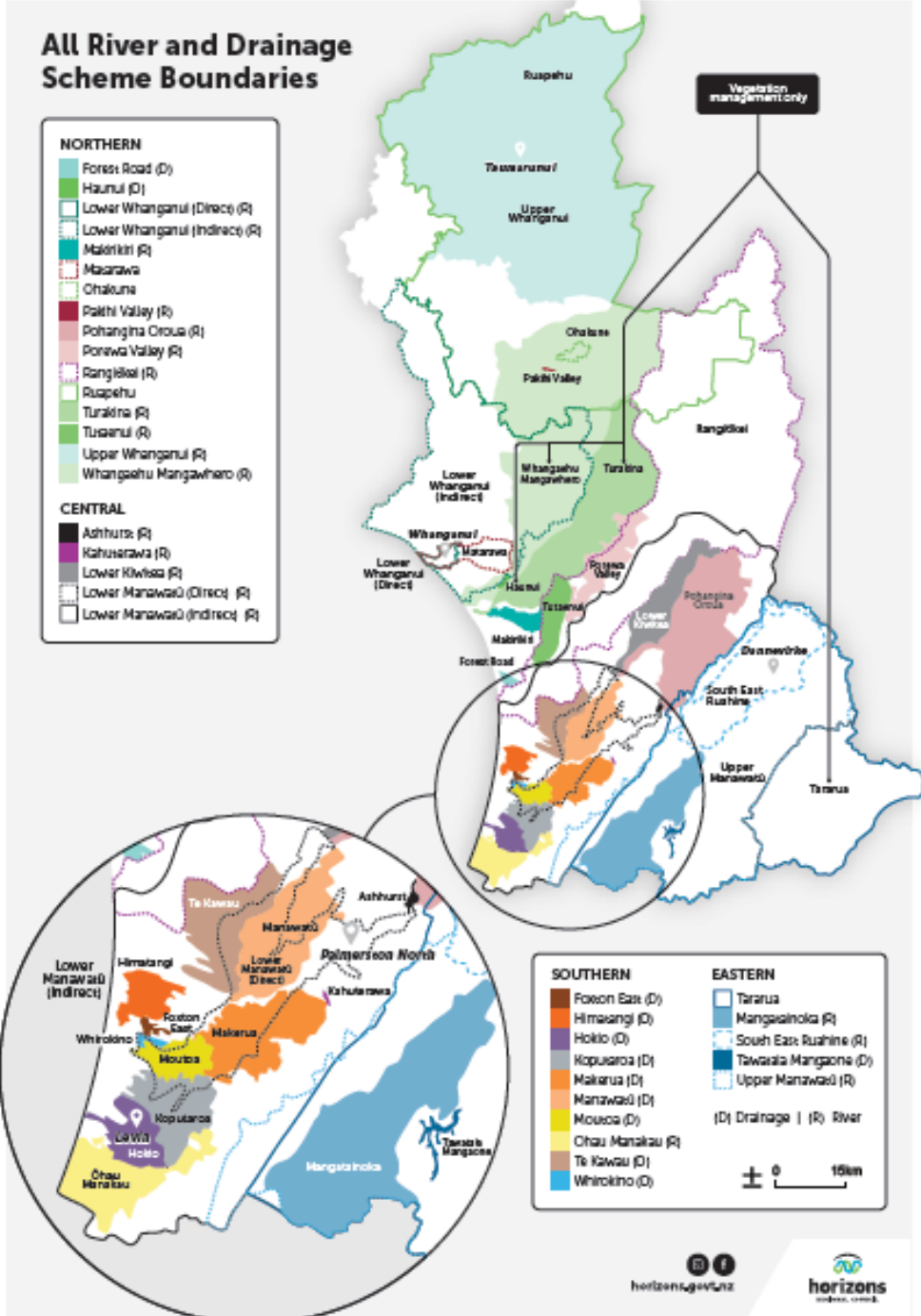
Schemes operate at a significant scale:

- There are 34 schemes: 23 river, 11 drainage.
- In 2023-24, 3,794 assets valued at approx. \$990M. Asset value has provisionally increased by over \$200M since June 2023 to \$1.2B.
- Assets include approx. 510 km of stopbanks, 746 floodgates, 802 km of river channel, 604 km of river edge protection and 1,144 km of drains.
- Operational and capital programme budget of over \$35.3M in 2024-25, with external co-funding income of \$10.9M.
- 47 staff.

Schemes have been established over time from 1940's, with many in 1960's/1970's. Challenges of ageing infrastructure in an environment where regulatory requirements and expectations have changed significantly.

Schemes and scheme activities have continued to changed over time, with new schemes, mergers, changing levels of service etc.

Daily requests from multiple sources on where to focus effort & resourcing.



Delivery In 2023-24

Maintenance / repairs

- Most schemes tracked well; some schemes were behind due to Cyclone Gabrielle works, regulatory permissions, and staff capacity.
- Maintenance based programme were developed.
- Gabrielle works - 138 jobs delivered valued at \$4.5M as at end of June 2024.

Capital programme

- Capital spend was \$9.2M out of \$13.4M (69%).

Asset management

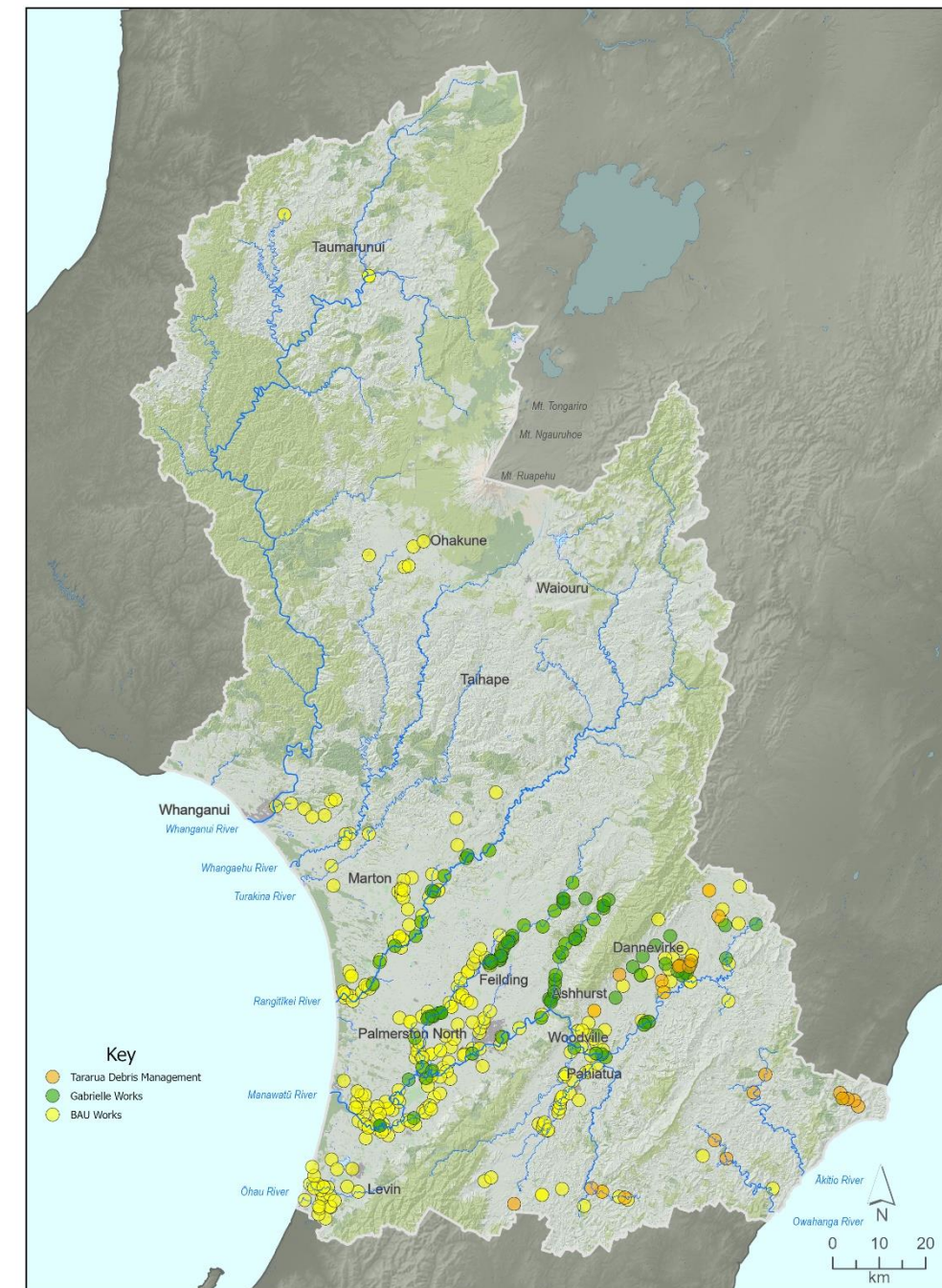
- All 1,220 (100%) high criticality assets have been inspected, 546 (21%) of the 2,616 low criticality assets inspected (target 20%).
- New Infrastructure Strategy and Long-term Plan process completed.

Regulatory, consents and other permissions

- Stock take completed. Over 200 consents & 4,000 consent conditions.
- Over 30 applications in prep. / process. Emergency works used 3 times.
- Over 300 jobs completed via code of practice. Improved reporting.

New government funding (approx. \$4.3M) – delivery by 30 June 2025

- Nature Based Solutions (Room for River). Local Government flood resilience fund co-investment fund: flood warning & mapping upgrades; flood vulnerability assessment; pump station power & communication upgrades; Pohangina works including Tōtara Reserve.



River Management 2024 Works Programme

INFRASTRUCTURE STRATEGY FOR NEXT 30 YEARS

Key Issues

1. Affordability
2. Climate Change
3. Capital programme delivery
4. Financial planning for events
5. Improved asset management
6. Regulatory & other permissions
7. Integrated Catchment Management

Responses

1. Maintenance based programme, loan review, less capitalisation of staff costs.
2. Complete a regional flood vulnerability assessment to prioritise future work.
3. Fewer projects: focus on Government co-funded work, Feilding, and Palm. North.
4. Same amount of insurance and reserves; plan to review insurance and reserves.
5. Increased capacity, prioritising inspections, plan to review asset renewals, and reduce from 27 Asset Management Plans to 1.
6. Reprioritised staff time (non-scheme funded) to support regulatory and other permissions. No funding provision for new dam compliance requirements.
7. Organisational Integrated Catchment Management programme; investigating “room for the river approaches”.

LONG-TERM PLAN – SCHEME RELATED DECISIONS

Review of Funding Policies

- Maintained drainage schemes at 80% targeted rate 20% general rate.

Insurance

- Considered increasing amount of insurance, maintained current cover.
- Additional budget of approx. \$430k for insurance to maintain current amount of cover.

Capital programme

- Year 1 \$17.1M, with significant government co-funding \$10.9M.
- Reduces over first few years to renewals only by year 8.

Scheme specific

- Ruapehu District wide scheme - Added new rate funding of \$150k per annum (\$200k in year 2) and approved use of reserves up to \$120k for removal of willows etc near Matiere.
- Funding Makirikiri Scheme via reserves for 3 years.

Infrastructure Strategy

- New maintenance based programme with increased budget for works by approx. \$250k in both year 1 and year 3.
- Added two new staff for asset management activity.
- Reprioritised staff for regulatory support.
- Commitment to flood vulnerability assessment.

Integrated Catchment Management

- Funded work on Integrated Catchment Management (separately funded from River and Drainage Schemes).
- Scheme Liaison Committees will be consulted on this.

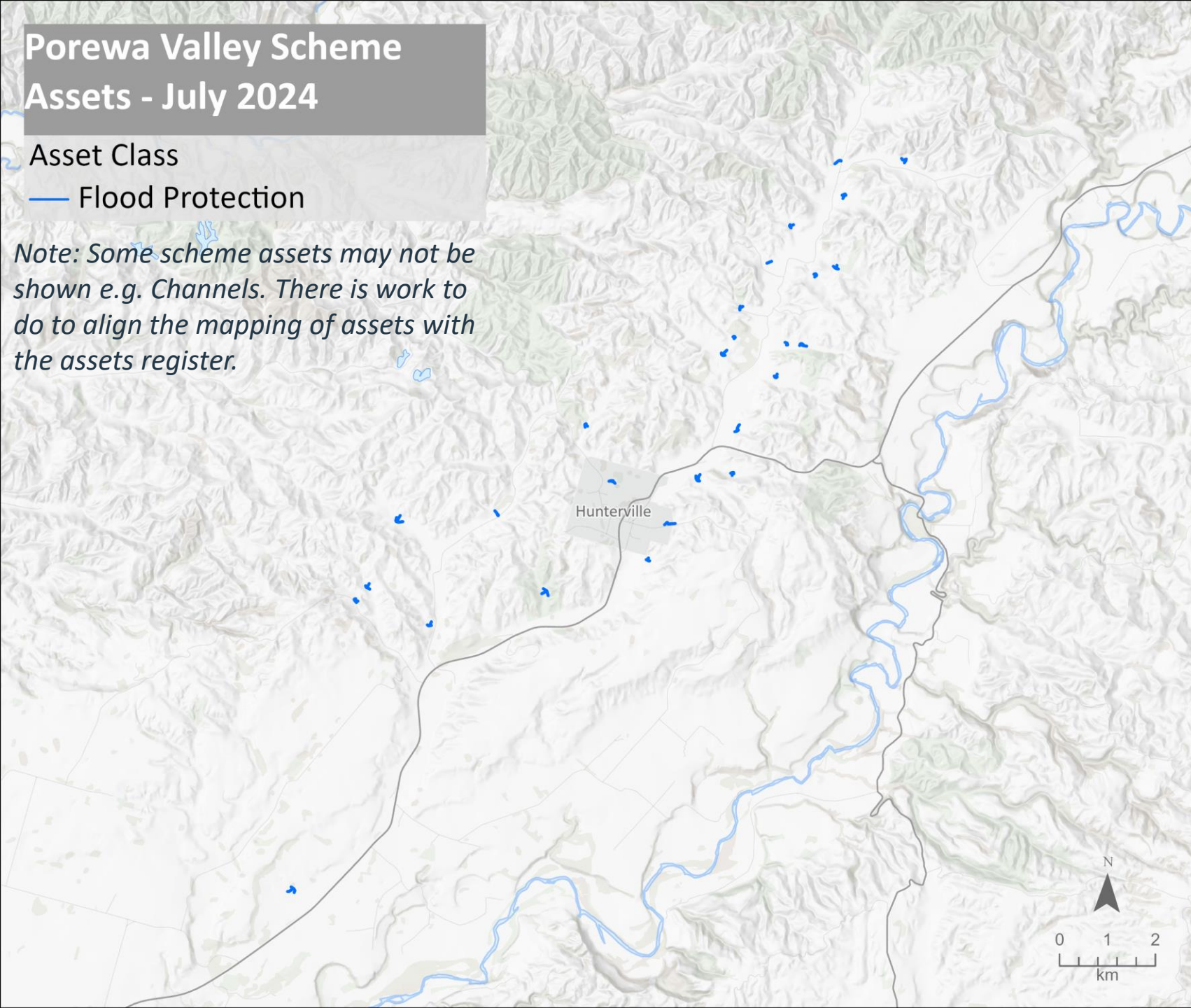


Porewa Valley Scheme Assets - July 2024

Asset Class

— Flood Protection

Note: Some scheme assets may not be shown e.g. Channels. There is work to do to align the mapping of assets with the assets register.



Primary Purpose

The primary objective of the Scheme is to protect the townships of Rata and Hunterville, together with approximately 800 ha of rural land in the valley floor, from flood events with return periods of up to 25 years. The Scheme assets also reduce the effects of flood events with a greater return period than 25 years.

Flood Protection Standard:

- Flood flows not exceeding 4% AEP will be detained behind the dam to protect adjoining developed areas and farmland.



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BUDGETS - OVERALL

| Budget | 2023-24 | 2024-25 | Difference | Difference (%) |
|---|---|-----------|------------|----------------|
| All Schemes | | | | |
| Assets | | | | |
| Number of assets | 3,794 | 3,872 | 78 | 2% |
| Assets value* | \$990.034M | \$1.198B | \$207.836M | 17% |
| Insurance | Max. claim HRC \$100M, pooled \$300M, Min. \$3M | | | |
| Number of insured assets* | 1,753 | 1,778 | 25 | 1% |
| Value of insured assets* | \$811.188M | \$1.048B | \$236.660M | 23% |
| % of assets insured* | 46% | 46% | | |
| % of asset value insured* | 82% | 87% | | |
| Loans | | | | |
| Value of loans | \$42.812M | \$44.635M | \$1.823M | 4% |
| Cost of loan servicing | \$4.352M | \$4.221M | -\$0.131M | -3% |
| Emergency reserves (ER) | Targeted Rate Component only | | | |
| Value of ER** | \$11.876M | \$12.406M | \$0.530M | 4% |
| Target for ER | \$22.209M set in July 2021*** | | | |
| % of target | 54% | 56% | | |
| Net change budgeted**** | \$0.530M | \$0.476M | -\$0.054M | -10% |
| Renewal reserves (RR) | Targeted Rate Component only | | | |
| Value of RR | \$0.901M | \$1.026M | \$0.125M | 14% |
| Net change budgeted**** | \$0.125M | \$0.036M | \$0.089M | -71% |
| Note: 2023-24 value of loans and reserves are actual closing balances from 2022-23. All other financial values are based on budgets. | | | | |
| *2024-25 asset valuation and insurance information is provisional. | | | | |
| **Some approvals not included above e.g. Cyclone Gabrielle and co-funding for Climate Resilience projects. Net change budgeted excl. interest. Emergency reserves interest: 2023-24 \$0.083M, 2024-25 \$0.083M. | | | | |
| *** Target is budget for 1 in 50 year event. | | | | |
| **** Excludes Interest: Interest from Emergency reserve: 2023-24 \$0.311M, 2024-25 \$0.311M. | | | | |
| **** Excludes Interest: Interest from Renewal reserve: 2023-24 \$0, 2024-25 \$0. | | | | |

Porewa Valley (Dam compliance costs not included)

| Budget | 2023-24 | 2024-25 | Difference | Difference (%) |
|--|---|-----------|------------|----------------|
| Porewa | | | | |
| Assets | | | | |
| Number of assets | 81 | 81 | 0 | 0% |
| Assets value | \$10.318M | \$10.583M | \$265.0k | 3% |
| Insurance | Max. claim HRC \$100M, pooled \$300M, Min. \$3M | | | |
| Number of insured assets* | 81 | 81 | 0 | 0% |
| Value of insured assets* | \$10.318M | \$10.583M | \$265.0k | 3% |
| % of assets insured* | 100% | 100% | | |
| % of asset value insured* | 100% | 100% | | |
| Loans | | | | |
| Value of loans | \$0 | \$0 | \$0 | NA |
| Cost of loan servicing | \$0 | \$0 | \$0 | NA |
| Emergency reserves (ER) | Targeted Rate Component only | | | |
| Value of ER** | \$19.6k | \$21.6k | \$2.0k | 9% |
| Target for ER | \$16.4k set in July 2021*** | | | |
| % of target | 119% | 132% | | |
| Net change budgeted**** | \$2.0k | \$2.0k | \$0 | 0% |
| Renewal reserves (RR) | Targeted Rate Component only | | | |
| Value of RR | \$22.7k | \$27.8k | \$5.1k | 18% |
| Net change budgeted**** | \$5.1k | \$5.1k | \$0 | 0 |
| Note: 2023-24 value of loans and reserves are actual closing balances from 2022-23. All other financial values are based on budgets. | | | | |
| *2024-25 asset valuation and insurance information is provisional. | | | | |
| **Some approvals not included above e.g. Cyclone Gabrielle and co-funding for Climate Resilience projects. Net change budgeted excl. interest. | | | | |
| *** Target is budget for 1 in 50 year event. | | | | |
| **** Excludes Interest: Interest from Emergency reserve: 2023-24 \$0.7k, 2024-25 \$0.7k. | | | | |
| **** Excludes Interest: Interest from Renewal reserve: 2023-24 \$0, 2024-25 \$0. | | | | |

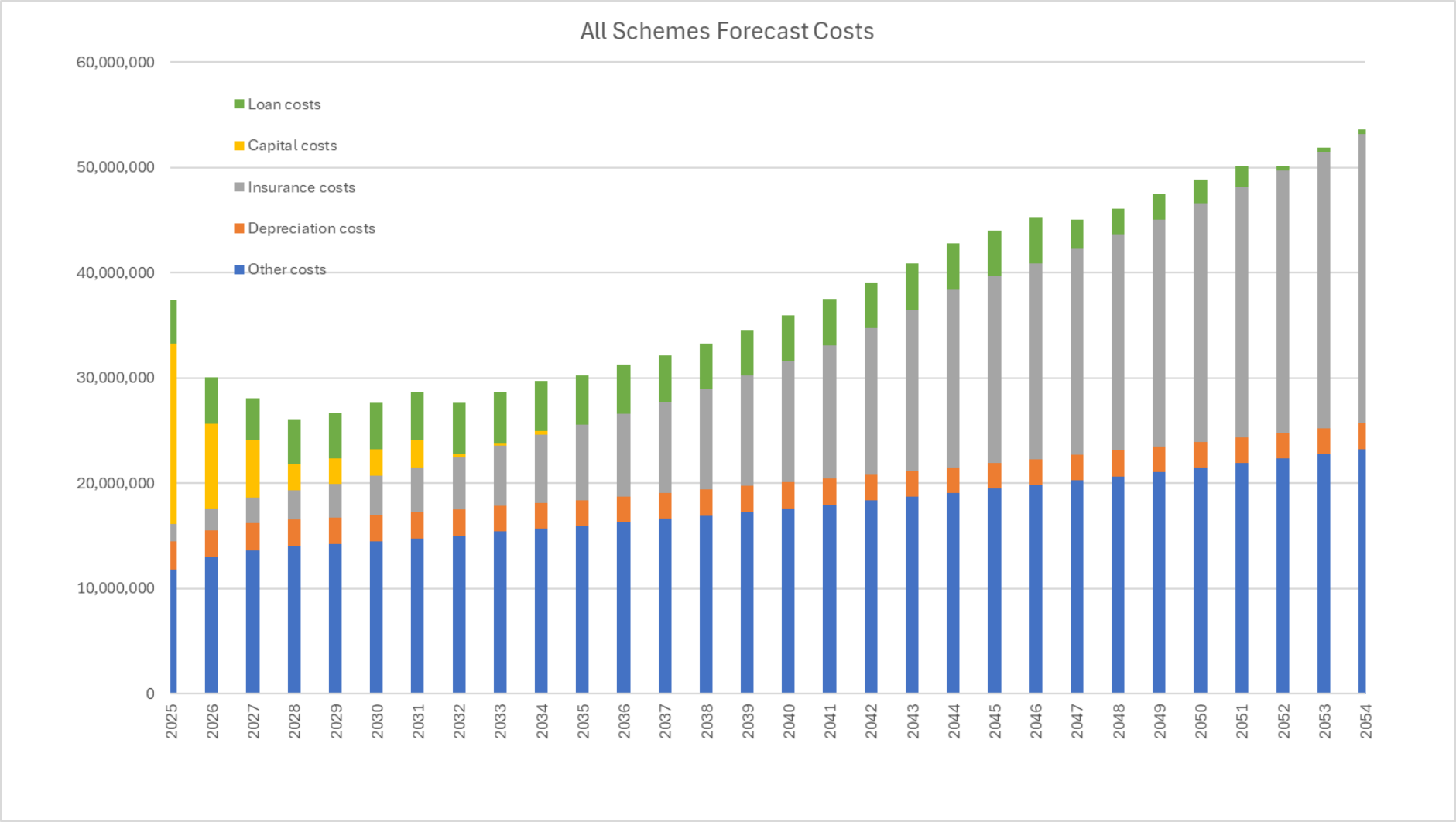
BUDGETS - OVERALL

| All Schemes | 2023-24 | 2024-25 | Difference | Difference (%) |
|--|-------------------------|------------------|-----------------|----------------|
| Operational | Expenditure(\$M) | | | |
| Loan servicing | \$4.352M | \$4.221M | -\$0.131M | -3% |
| Insurance | \$1.270M | \$1.700M | \$0.430M | 34% |
| Standing charges | \$0.550M | \$0.491M | -\$0.059M | -11% |
| Personnel | \$3.730M | \$3.891M | \$0.161M | 4% |
| Operational | \$4.795M | \$5.663M | \$0.868M | 18% |
| Internal costs | \$1.429M | \$1.758M | \$0.329M | 23% |
| Emergency Reserves**** | \$0.530M | \$0.476M | \$0.054M | -10% |
| Renewal Reserves**** | \$0.125M | \$0.036M | -\$0.089M | -71% |
| Operational Costs | \$16.782M | \$18.236M | \$1.454M | 9% |
| Capital Costs | \$13.477M | \$17.092M | \$3.615M | 27% |
| Total Costs | \$30.259M | \$35.328M | \$5.069M | 17% |
| Depreciation | \$1.829M | \$2.628M | \$0.799M | 44% |
| Total cost in 2024-2025 for maintenance = \$5.117M, repairs = \$2.269M | | | | |
| Funding | Funding | | | |
| Rates | \$15.102M | \$16.575M | \$1.473M | 10% |
| Loans | \$5.189M | \$5.974M | \$0.785M | 15% |
| Other Capital works funding (incl. Govt.) | \$8.232M | \$10.887M | \$2.655M | 32% |
| Other Rev | \$1.736M | \$1.772M | \$0.036M | 2% |
| Reserves | \$0 | \$0.120M | \$0.120M | 100% |
| Total Funding | \$30.259M | \$35.328M | \$5.069M | 17% |
| **** Excludes Interest: Interest from Emergency reserve: 2023-24 \$0.311M, 2024-25 \$0.311M. | | | | |
| **** Excludes Interest: Interest from Renewal reserve: 2023-24 \$0, 2024-25 \$0. | | | | |

This Scheme – Porewa Valley

| Porewa | 2023-24 | 2024-25 | Difference | Difference (%) |
|--|--------------------|-----------------|---------------|----------------|
| Operational | Expenditure | | | |
| Loan servicing | \$0 | \$0 | \$0 | NA |
| Insurance | \$17.4k | \$21.3k | \$3.9k | 18% |
| Standing charges | \$6.6k | \$1.2k | -\$5.4k | -452% |
| Personnel | \$26.4k | \$34.7k | \$8.3k | 24% |
| Operational | \$57.2k | \$49.3k | -\$7.9k | -16% |
| Internal costs | \$11.3k | \$15.3k | \$4.0k | 26% |
| Emergency Reserves**** | \$2.0k | \$2.0k | \$0 | 0% |
| Renewal Reserves**** | \$5.1k | \$5.1k | \$0 | 0% |
| Operational Costs | \$126.0k | \$128.8k | \$2.9k | 2% |
| Capital Costs | \$0 | \$0 | \$0 | NA |
| Total Costs | \$126.0k | \$128.8k | \$2.9k | 2% |
| Depreciation | \$62.7k | \$78.8k | \$16.1k | 20% |
| Total cost in 2024-2025 for maintenance = \$49.3k, repairs = \$19.9k. | | | | |
| Funding | Funding | | | |
| Rates | \$120.1k | \$126.5k | \$6.4k | 5% |
| Loans | \$0 | \$0 | \$0 | NA |
| Other Capital works funding (incl. Govt.) | \$0 | \$0 | \$0 | NA |
| Other Rev | \$5.8k | \$2.4k | -\$3.5k | -148% |
| Reserves | \$0 | \$0 | \$0 | NA |
| Total Funding | \$126.0k | \$128.8k | \$2.9k | 2% |
| **** Excludes Interest: Interest from Emergency reserve: 2023-24 \$0.7k, 2024-25 \$0.7k. | | | | |
| **** Excludes Interest: Interest from Renewal reserve: 2023-24 \$0, 2024-25 \$0. | | | | |

LONG-TERM PLAN – ALL SCHEMES BUDGET FORECAST



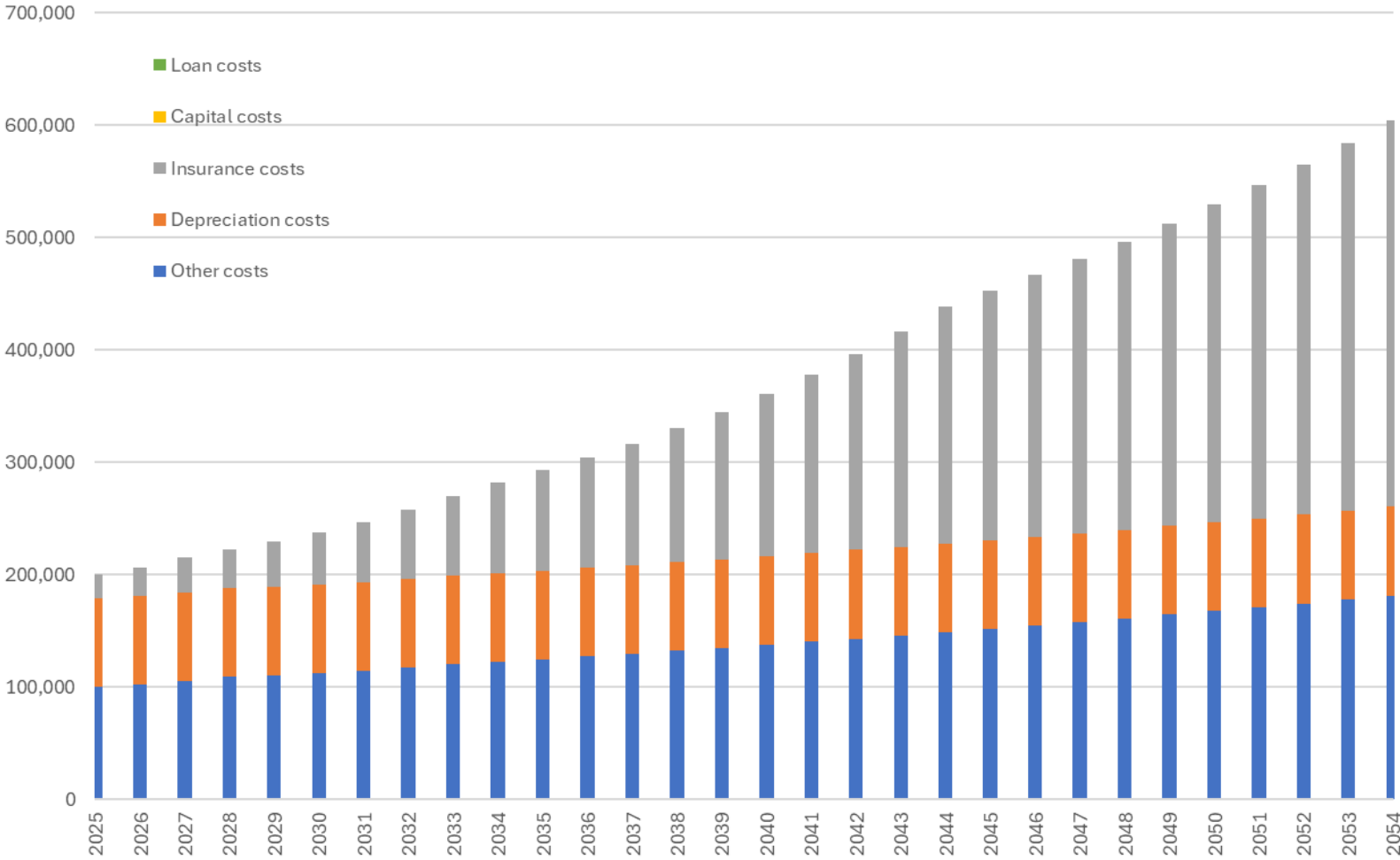
The main driver of changes over 30 years is insurance costs.

In summary:

- 5% of scheme costs in 2024-25.
- 51% of scheme costs in 2053-54.

LONG-TERM PLAN – THIS SCHEME BUDGET FORECAST

Porewa Scheme Forecast Costs



The main driver of changes.

Insurance:

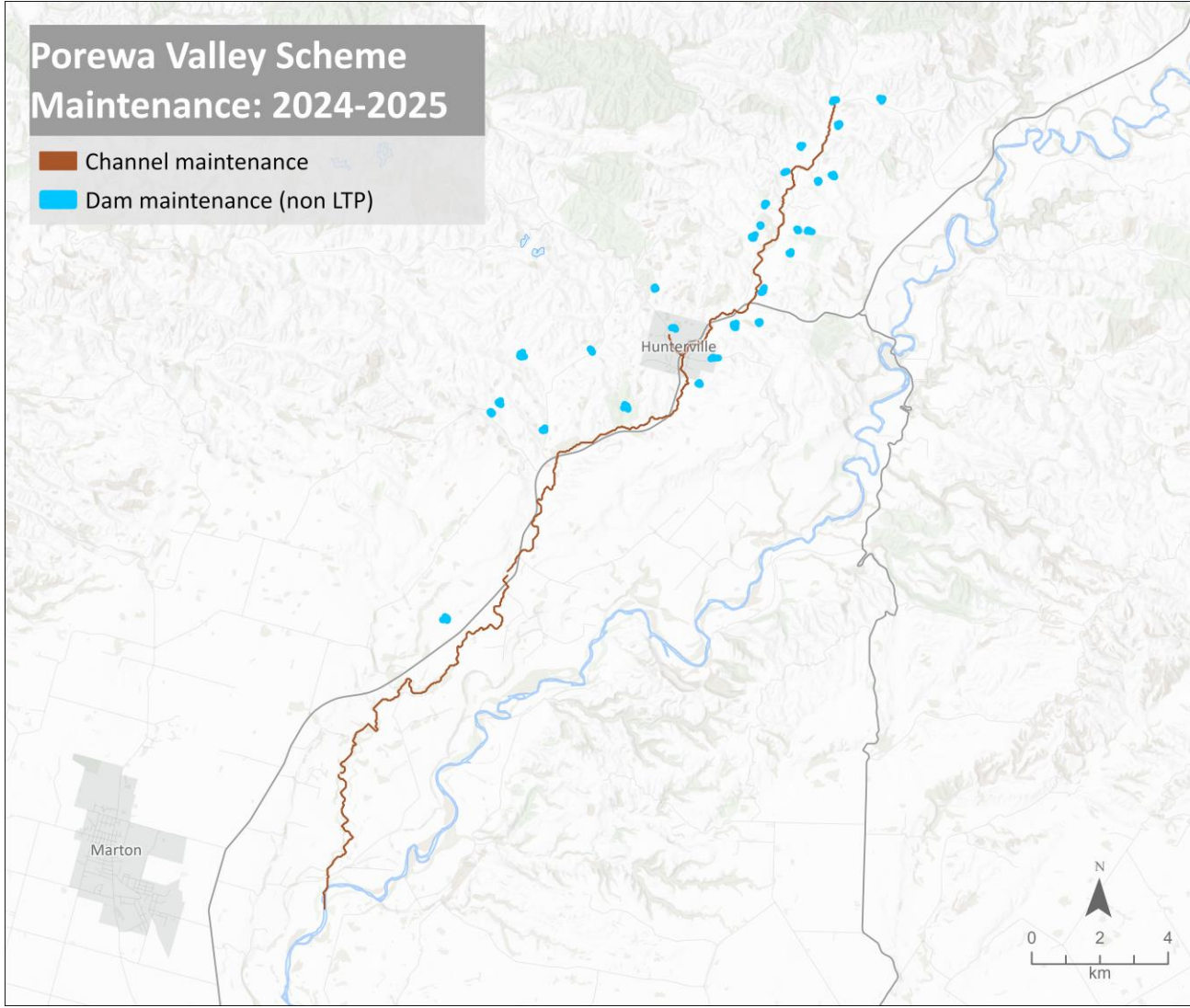
- 11% of scheme costs in 2024-25.
- 57% of scheme costs in 2053-54.

MAINTENANCE BASED PROGRAMME

| Regional (all schemes) | | | | |
|----------------------------|---------------------|----------|------------------|-----------------|
| Maintenance Activity | Quantity of assets* | Target** | Year 1 planned** | % of LTP target |
| Drain (km) | 1,144 | 521.0 | 2,208.4 | 424% |
| Floodgate (No.) | 746 | 97.0 | 1,182.0 | 1219% |
| Stop bank (km) | 510 | 64.0 | 487.34 | 761% |
| River edge protection (km) | 604 | 75.0 | 134.6 | 179% |
| Channel (km) | 802 | 18.0 | 492.4 | 2735% |
| Amenity (No.) | 52 | 1.0 | 0.0 | 0% |
| Weir (No.)*** | 63 | NA | 3.0 | NA |
| Pump station (No.)*** | 117 | NA | 345.0 | NA |
| Flood barrier (No.)*** | 73 | NA | 0.0 | NA |
| Dam (No.)*** | 171 | NA | 345.7 | NA |

| Porewa | | | | |
|----------------------------|---------------------|----------|------------------|-----------------|
| Maintenance Activity | Quantity of assets* | Target** | Year 1 planned** | % of LTP target |
| Drain (km) | 0 | 0.0 | 0.0 | NA |
| Floodgate (No.) | 0 | 0.0 | 0.0 | NA |
| Stop bank (km) | 0 | 0.0 | 0.0 | NA |
| River edge protection (km) | 0 | 0.0 | 0.0 | NA |
| Channel (km) | 0 | 27.0 | 3.0 | 11% |
| Amenity (No.) | 0 | 0.0 | 0.0 | NA |
| Weir (No.)*** | 0 | NA | 0.0 | NA |
| Pump station (No.)*** | 0 | NA | 0.0 | NA |
| Flood barrier (No.)*** | 0 | NA | 0.0 | NA |
| Dam (No.)*** | 81 | NA | 188.0 | NA |

*Individual components of assets are counted towards the quantity for pump stations, floodgates, weirs, and dams. This is done for valuation purposes.
 **Assets can have multiple maintenance treatments during the year, with each treatment counting towards the target e.g. a drain being chemically cleaned twice per year; in spring and then in autumn.
 *** Not an LTP target.



ASSET INSPECTION SUMMARY

Asset inspections are being used to inform the repair component of the programme.

High criticality assets

- Critical to providing the service level of the scheme and require regular inspections of their condition between flood events.
- Include: dams, pump stations, stopbanks, floodgates, and weirs.
- To be inspected at least once annually.

Low criticality assets

- Unlikely to alter between flood events and provide support to the high critical assets in providing the service level of the scheme.
- Include: drains, tied tree works, rock linings, and vegetation plantings.
- To be inspected at least once every five years i.e. 20% to be inspected each year.

In 2023-24:

- 100% of the high criticality assets were inspected.
- 45% of all assets were inspected Regionally.
- 100% of all assets inspected in the Porewa Scheme.

Table: Assets inspected in 2023-24 by criticality.

| Regional (all schemes) | | | | | |
|------------------------|--------------|---------------|---------------|-------------------|--------------|
| Criticality | Inspected | Inspected (%) | Not Inspected | Not Inspected (%) | Total |
| High | 1,211 | 100% | 0 | 0% | 1,211 |
| Low | 485 | 19% | 2,054 | 81% | 2,539 |
| Total | 1,696 | 45% | 2,054 | 55% | 3,750 |

| Porewa | | | | | |
|--------------|-----------|---------------|---------------|-------------------|-----------|
| Criticality | Inspected | Inspected (%) | Not Inspected | Not Inspected (%) | Total |
| High | 81 | 100% | 0 | 0% | 81 |
| Low | 0 | NA | 0 | NA | 0 |
| Total | 81 | 100% | 0 | 0% | 81 |

REGIONAL ASSET CONDITION SUMMARY

Regionally overall:

- 79% (2,975) of assets currently have an excellent/good condition.
- 15% (578) have an average condition.
- 3% (125) have a poor/very poor condition.
- 2% (72) of records have an admin issue.



POREWA VALLEY ASSET CONDITION SUMMARY

Porewa Valley condition:

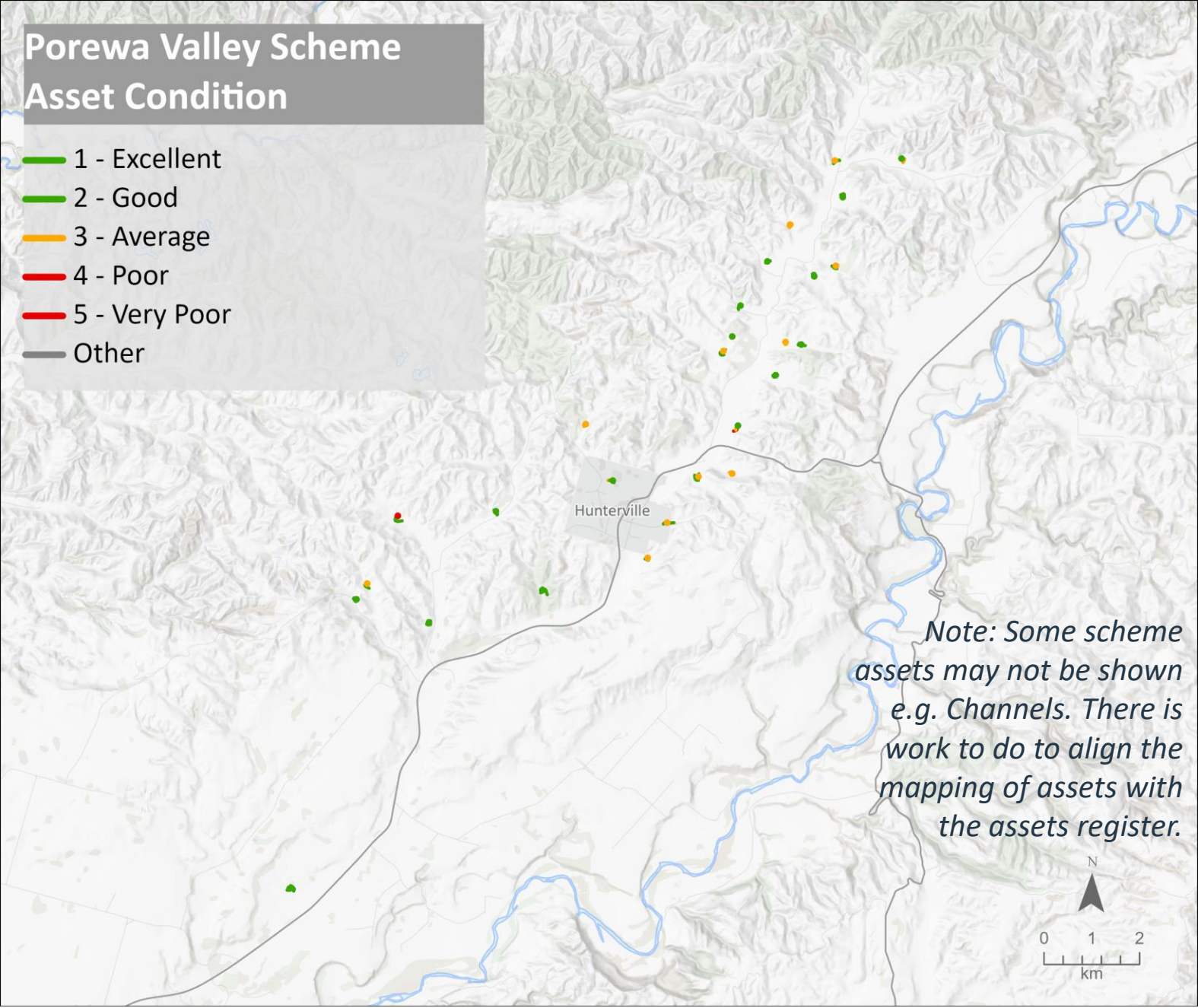
- 64% of assets currently have an excellent/good condition.
- 33% have an average condition.
- 2% have a poor/very poor condition.
- 0% of records have an admin issue.



Top photo: Dam 45 outlet area following erosion repairs.
Bottom photo: Blockage before channel clearance on Porewa Stream.

Porewa Valley Scheme Asset Condition

- 1 - Excellent
- 2 - Good
- 3 - Average
- 4 - Poor
- 5 - Very Poor
- Other



REPAIRS REQUIRED

Long-term, the intention is that the maintenance based programme will reduce the need to do reactionary repairs to existing assets.

The repair budget for the Porewa is \$19,911 in 2024-25.

The cost to complete all the repairs is yet to be determined.

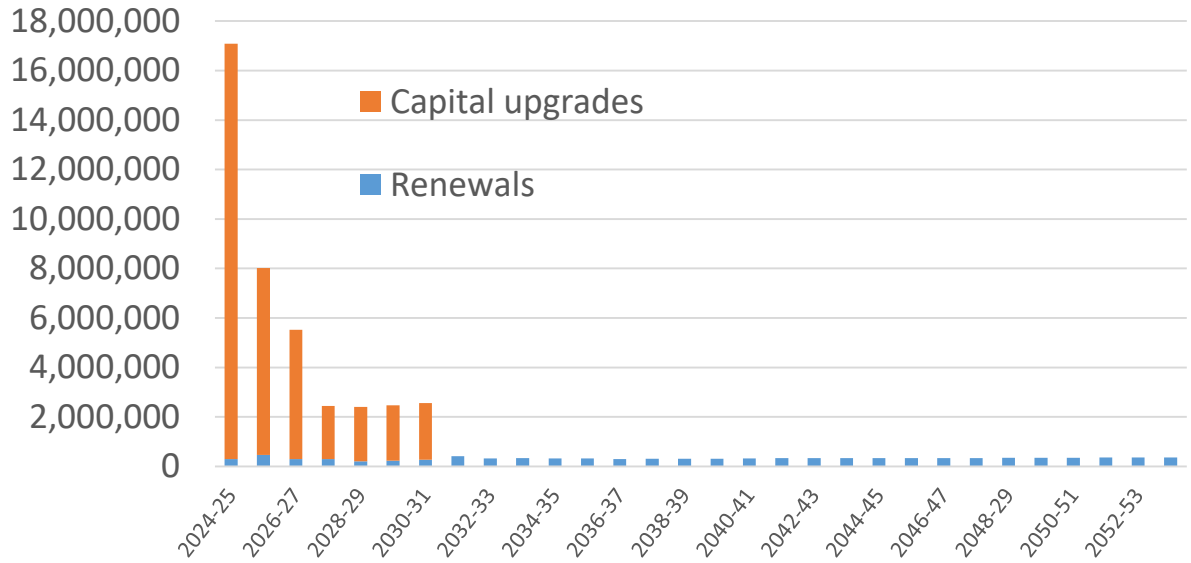
These repairs and any new repair tasks identified during the year may require use of reserves or need to be delayed.

Requests for new assets will be challenging to fund.

Note the map will over represent scale of repairs required. If there is a condition defect found anywhere on the asset, the condition score is applied to the whole of the asset.

CAPITAL PROGRAMME – ALL SCHEMES

- Climate resilience projects (Rangitīkei, Foxton, Lower Manawatū and Palmerston North).
- Provincial Growth Fund – Te Pūwaha (Whanganui River Training Structures component).
- Feilding flood resilience upgrades.
- Mangaone Stream (Palm. North) resilience upgrades.
- Koputoroa number 4 pump lowering.



EXAMPLES IN 2024-2025

- Lower Manawatū Climate resilience project:
 - Moutoa upstream gates upgrades.
 - Moutoa downstream gates upgrades.
 - Rangiotu gates upgrades.
- Palmerston North Climate resilience:
 - Mangaone at Tremaine Avenue.
 - Mangaone at Belvedere Crescent.
- Feilding flood resilience upgrades - planning:
 - Reid Line upgrades.
 - Makino Stream upgrades.
 - Te Arakura Road.
- Mangaone Stream (Palm. North) resilience upgrades – years 2 and 3.

FLOOD VULNERABILITY ASSESSMENT

1. To consolidate and document Horizons current flood modelling and mapping information.
2. To build on this to prepare regional flood hazard maps under various size events, including with consideration of climate change.
3. Assess Horizons current flood protection assets in relation to current and projected levels of service and also to make recommendations in relation to how to assess the condition of these over time.
4. Produce a regional flood vulnerability assessment for the Region, with a focus on (but not limited to) the approximately 50 towns and settlements within the region.
5. This will include individual summaries of flood vulnerability for towns and settlements, including consideration of stormwater management.
 - Co-funded via the Flood Resilience Co-investment Fund.
 - Required to be completed by 30 June 2025.



Two of the region's largest urban centres during the 2015 storm event.
Above: Palmerston North. Below: Whanganui.



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NEXT STEPS

- Scheme meetings 30 July to 22 August.
- Year end reporting.
- Maintenance based programme finalisation, documentation and implementation.
- Repairs assessment further investigation.
- Capital programme implementation: design, consents, procurement, construct etc.
- Asset management inspections.
- Finalisation of single Asset Management Plan.
- Governance Group establishment for Feilding and Foxton projects.
- Ongoing response to weather events.



Cross blading trial for gravel management – Photo April 2024. Manawatū River upstream of Palmerston North.

FURTHER INFORMATION

- Council reporting:
 - Monthly via the Chief Executives report to Council and Audit and Risk Committee.
 - Quarterly via the Integrated Catchment Committee report. May report available at: <https://www.horizons.govt.nz/calendar/integrated-catchment-committee-2024-28-05.aspx>
- Via Horizons website – some updates in process.
- River management enquiries rmenquiries@horizons.govt.nz



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For more information visit www.horizons.govt.nz
or freephone Horizons on **0508 800 800**