Resilient River Communities Built By Te Uru Kahika Regional and Unitary Councils Aotearoa Kānoa Regional Economic Development & Investment Unit

Quarterly Update **November 2024**

Nau mai and welcome

The last few months have seen heavy rains testing the resilience of our flood schemes and communities. We share how flood schemes in Otago performed when they received a heavy deluge in early October. We also share stories of celebrations and official openings of completed flood resilience works all contributing to build resilient river communities around the motu.

PROJECT SPOTLIGHTS

Completion of Stage 1 of Waipaoa project celebrated

Gisborne District Council

In April, Regional Development Minister Shane Jones attended the celebration of the opening of the first stage of the Waipaoa Flood Control Scheme Upgrade, where 25km of stopbanks have been widened by between 4-6m, and the stopbank height being increased by up to 2m. The ceremony included Mayor Rehette Stoltz, members of Gisborne District Council, contractors, and members of Rongowhakaata Iwi Trust.

The project works completed thus far have proven instrumental in safeguarding hundreds of residences in Gisborne and preserving vast expanses of fertile land during the onslaught of Cyclone Gabrielle in February 2023. Reports indicate that 10,000 people and $7 billion of assets, including major transport links, were protected by the works. It has been estimated that between 50cm and 1m-deep water would have flowed towards the city if the works hadn't been in place before the cyclone hit.

The Waipaoa project improves on the Waipaoa Flood Control Scheme, which is 64km of stopbanks, protection works and river control structures along the Waipaoa River, improving the community's resilience to floods. The scheme protects Gisborne City and the Poverty Bay floodplains and was built between 1953 and 1967. The focus of the project is now on the western side, where 20km of stopbanks by the Patutahi township have already been completed.

Since the start of September, 2km of stopbank upgrades have been successfully completed, with construction set to continue for an additional 8km near the Patutahi Township on the western side of the Waipaoa River. This phase of the project is scheduled for completion in May 2025.

The upgrade of all 64km of the Waipaoa River Stopbanks is on-track to be completed by June 2027.

Read more about the project here

Resilient River Communities is a joint initiative between Kānoa - the Regional Economic Development & Investment Unit, regional councils, and local authorities focused on developing and upgrading vital river management and flood protection schemes in Aotearoa, New Zealand.

By having resilient river communities, we hope to minimise environmental, economic, and social damage caused by flooding – making Aotearoa, New Zealand safer for everyone.

Te Kupeka o Waimātaitai Officially Opened

Environment Southland

A critical piece of Southland's regional infrastructure, 'Te Kupeka o Waimātaitai,' the Stead Street pump station, was officially opened on 16 August in Waihōpai Invercargill. The new station replaces the ageing pump house and equipment, which had reached the end of their operational life and faced an increased risk of failure.

Te Kupeka o Waimātaitai is a cornerstone of Invercargill's recently upgraded flood protection scheme. It provides crucial protection for 116 properties in the immediate vicinity and is a vital link for Invercargill Airport, the region's gateway for 320,000 passengers and freight annually.

Associate Minister for Regional Development, the Honourable Mark Patterson, joined Environment Southland Chairman Nicol Horrell, Ngāi Tahu ki Murihiku representative and Kaupapa Taiao Manager of Te Ao Marama, Dean Whaanga, and Justin McDowell, Chief Operating Officer for Fulton Hogan NZ Construction, to mark the official opening.

Originally announced in 2020 as part of the Government's "shovel-ready" funding for six climate resilience projects in Murihiku Southland, all part of the Resilient River Communities initiative, construction of the pump station began in October 2022. The project reached completion with the commissioning of the new facility in July 2024.

This work was complemented by an Environment Southland-led project to upgrade the Waihōpai River stopbank (true left), along with the replacement of the Stead Street stopbank with a sheet pile wall and upgrades to the adjoining Cobbe Road stopbank, led by Invercargill City Council. Together, these three projects significantly enhance flood resilience for the community and Invercargill's critical infrastructure.

The name Te Kupeka o Waimātaitai, gifted by the Waihōpai Rūnaka Cultural Narratives Committee, reflects both the functional and cultural significance of the site. It includes the pump house with its two impressive fish-friendly pumps, the outlet pipes running beneath Stead Street to the estuary, a viewing platform with interpretive panels, and the artistic elements (mahi toi) adorning the structure. Waimātaitai refers to the mix of coastal sea and freshwater that creates the brackish waters of an estuary, while Kupeka represents a long fishing net.

The pump station's 22-tonne twin Archimedes screw pumps provide safe passage for valued mahika kai species, in line with the National Environmental Standards for Freshwater introduced in 2020. This aligns with Ngāi Tahu ki Murihiku's aspirations to restore the health of Kōreti New River Estuary, supporting the protection and sustainability of important fish species.

For more information about projects in Southland, take a look here

Initial assessment indicates ORC Flood Schemes performed well in recent deluge

Otago Regional Council

The deluge of rainfall which struck Otago between 3-6 October put parts of ORC's 200km of stopbanks to the test, with an estimated 60mm-210mm of rain falling in some places over 48 hours. The effects were widespread across Otago, including substantial flooding around the Pomahaka and Manuherikia Rivers, Kyeburn and Ranfurly and coastal Otago; Clutha district, Balclutha and Dunedin.

An initial assessment by Otago Regional Council indicates that its flood schemes performed well, highlighting the importance of flood resilience measures such as stopbanks, and their role in protecting lives and livelihoods. Otago Regional Council has acknowledged that there are still struggles and distress for some people in the community who were affected by the substantive rainfall, and staff were in contact with those communities post-event. There were some reports of damage to some stopbanks which will be assessed by staff over the coming weeks.

The Riverbank Road Stopbank Stabilisation project in Lower Clutha was amongst the infrastructure that was put to the test. The project stabilised critical flood protection at four locations along Riverbank Road in the Lower Clutha delta, near Balclutha. Without these improvements, the stopbank could have been at risk, while protecting 9300 ha of valuable agricultural land.

Find out more about the project here

Asset Rationalisation: Piako River mouth project celebrates completion with official opening

Waikato Regional Council

The Piako River mouth asset rationalisation project was officially completed in September 2024. Three floodgates on the true right bank near the mouth of the Piako River and the Firth of Thames, which provided protection to 829 hectares of agricultural land, were nearing the end of their useful life. This project rationalised these floodgate assets into one to reduce replacement and operation/maintenance costs, ensure the level of service will be met over the 100-year life of the asset, and provide options for longevity of flood protection in this area.

The project had many complexities to navigate at the site, including river movement of approximately 50-75cm per year towards the project site, as well as riverbank erosion. Sediment had been blocking the floodgates and preventing them from opening. The old stopbanks were in need of repair and protection from the tide, and a breach in a private stopbank had caused inundation on the project site, resulting in the area becoming covered in sediment and mangroves. The drainage network was also too small to deliver water from the catchment to a single floodgate.

The new floodgate protects the land from the incoming tide and conveys floodwaters to the river from the land. It is part of the Piako River flood protection scheme, which ensures long term flood protection for productive land, the people who live in this area, and major infrastructure such as roads and state highways.

A deep floodgate inlet pond was designed to remove more than 90 per cent of sediment from catchment floodwaters prior to discharge into the river, providing refuge for fish (particularly tuna/eels) year-round, even during droughts. The pond and a new high-capacity drainage network can clear floodwaters from the wider catchment within 24 hours – previously it would have taken three days to completely remove rainfall runoff.

The project also provides a safe foraging and roosting area for shorebirds, which is particularly important for the migratory species that are declining due to land reclamation and habitat loss along their flyways. The council worked with Pūkorokoro Miranda Shorebird Centre to enhance 10ha of the land for shorebirds. Raised island roosts large enough to support the entire shorebird population of the Firth of Thames were created using sediment excavated from the site.

The habitat area also provides refuge for aquatic life. A fish-friendly tidal control structure was engineered to allow tidal inflows into the area and prevent stagnation of water. This structure includes a screen to help prevent mangrove seeds from entering and reinfesting the habitat area. Nearly 3,000 native plants (mostly low growing) have been planted adjacent to the river and within the habitat area.

An official opening to celebrate the completion of the project was held on Monday 21 October.

Find out more about the project, here

Resilient River Communities — Built By Te Uru Kahika Regional and Unitary Councils Aotearoa — Kānoa Regional Economic Development & Investment Unit

About Resilient River Communities

In 2020, Kānoa released $217m to co-fund 55 climate resilience projects, with a total cost of $312m, they are collectively known as the Resilient River Communities projects. Resilient River Communities is a joint initiative between Kānoa - the Regional Economic Development & Investment Unit, regional councils and local authorities focused on developing and upgrading vital river management and flood protection schemes in Aotearoa.

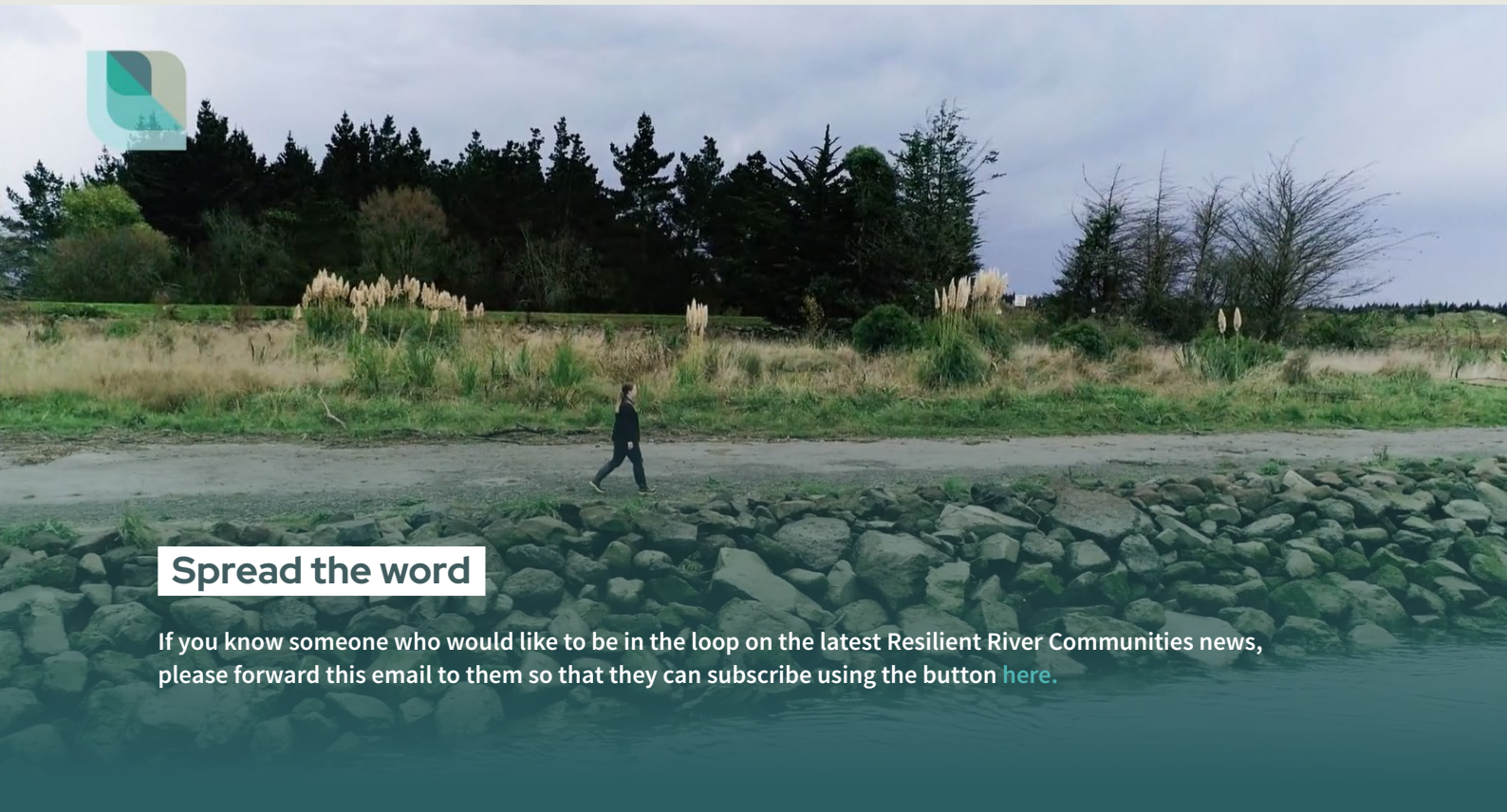
More information about these projects can be found online at **www.resilientrivers.nz**

Resilient River Communities

Video

This short clip looks at the projects that are taking place around Aotearoa, why the Resilient River Communities programme was established and the people who are passionate about its success. Hear more about the effects of flooding on communities, as well as insurance implications and social outcomes from those directly impacted around New Zealand.

Watch the clip here.



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