

Delivering catchment-scale improvements to river health through local government-led partnerships: Outcomes from Tweed Shire Council’s Waterways Program

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Key points

- Local government–led catchment programs can deliver measurable improvements to river and stream condition.
- River Health Grants support landholders to implement riparian management actions that reduce sediment and nutrient inputs.
- Strategic partnerships with agencies and landholders enable large-scale riverbank stabilisation and resilience building.
- Monitoring and adaptive management underpin long-term improvements in water quality and ecosystem health.
- Flood-impacted river systems benefit from targeted stabilisation works that reduce erosion and protect downstream assets.

Abstract

Tweed Shire Council’s Waterways Program plays a central role in improving river and stream condition by combining monitoring, strategic intervention, and targeted landholder support. The program addresses key pressures on the catchment through coordinated planning, on-ground works and partnerships with rural landowners and community groups. Council’s River Health Grants provide practical assistance to manage creek and riverbanks in ways that protect water quality and riparian ecosystem health, including fencing, stock-exclusion infrastructure, weed control, and revegetation.

Recent program outcomes highlight the value of this approach. In 2023, Council partnered with North Coast Local Land Services to deliver a \$620,000 riverbank stabilisation project on the mid-Tweed River, restoring 700 metres of riverbank severely damaged during the 2022 floods. The project included installing rock revetment and 1,700 hardwood logs designed to rebuild riverbed levels and reduce ongoing erosion. Topographic and bathymetric surveys in 2024 and 2025 reveals the project has been successful in capturing approximately 2,254 cubic meters (3,564 tonnes) of sediment.

River Health Grants have supported over 240 landholders across priority catchments to undertake riparian fencing, erosion control, and revegetation projects that improve bank stability and reduce sediment and nutrient inputs.

These efforts contribute to long-term catchment resilience through increased riparian cover, reduced stock access to waterways, enhanced aquatic habitat and reduced diffuse pollution risks. The program prioritises riparian protection and rehabilitation works in the Shires drinking water catchment which supplies potable water to more than 70,000 residents. The Tweed experience demonstrates how local government–led, grant-supported, catchment-scale partnerships can deliver substantial improvements to river and stream health.

Keywords

river health, riparian management, erosion control, catchment partnerships, water quality, local government, flood recovery, sediment reduction

Introduction

Healthy waterways underpin ecological integrity, agricultural productivity, and community wellbeing across regional Australia. However, many catchments face increasing pressures from land-use change, climate-driven flood events, bank erosion, and diffuse pollution (Woodhead et al., 2004). Local governments are uniquely positioned to coordinate on-ground action, engage landholders, and implement long-term monitoring programs that support catchment resilience.

Tweed Shire Council’s Waterways Program provides a structured approach to improving river and stream condition across the Tweed catchments. The program integrates water quality monitoring, geomorphic assessment, strategic planning, and targeted investment in riparian restoration. The River Health Grants program supports landholders to adopt best-practice riparian management. Following major flooding in 2017 and 2022, large-scale bank stabilisation projects have been undertaken in priority locations through major partnerships with State Government agencies and private landholders.

This paper outlines the program’s structure, recent outcomes, and lessons learned, demonstrating how local government–led initiatives can deliver measurable improvements to river health at a catchment scale.

Program framework and approach

The Waterways Program is built on three core pillars:

1. **Monitoring and assessment** to identify pressures, track trends, and prioritise interventions.
2. **Strategic planning** to guide investment and align actions with catchment-scale objectives.
3. **On-ground works** delivered through partnerships with landholders, community groups, and state agencies.

Monitoring and assessment

Council undertakes monthly water quality sampling, targeted riparian condition assessments and geomorphic surveys to identify erosion hotspots and track long-term trends. These data inform prioritisation of grant funding and major stabilisation projects.

Strategic planning

Council identifies priority sub-catchments for investment taking into account high-risk erosion sites and opportunities for collaborative investment. Planning is aligned with state and regional strategies to maximise co-funding opportunities.

On-ground works

Works include riparian fencing, stock exclusion and water troughs, weed control, revegetation, installation of large woody debris, rock armouring, and bed-level control structures. These interventions reduce sediment loads, improve habitat, and enhance bank stability.

Tweed River Bank Stabilisation Project

In 2023, Council and North Coast Local Land Services delivered a \$620,000 stabilisation project on the mid-Tweed River with funding from NSW Department of Primary Industries and Regional Development. The site had experienced severe erosion following the 2022 flood event, resulting in up to 45m bank retreat (estimated 22,000 m³ of sediment loss), loss of riparian vegetation and significant channel straightening and widening.

Key components included:

- Installation of 1,700 hardwood logs along a 700m reach to reduce erosion and encourage sediment deposition.
- Construction of a 270m rock revetment to stabilise vulnerable banks.
- Reshaping and revegetation of eroded riverbank and 700m of riparian weed control.

- Monitoring to assess sediment trapping and bank response.

Topographic and bathymetric surveys undertaken in late 2024 showed the structures have stopped the channel eroding further and helped capture approximately 1,915 cubic meters (3,255 tonnes) of sediment. Surveys following flood events in early 2025 found a further 339 cubic meters (576 tonnes) of sediment was captured at the site, helping to rebuild channel stability and supporting the broader ecological health of the Tweed River.

River Health Grants and landholder engagement

Since 2006, Council’s Health Grants program has supported more than 240 landholders to implement riparian management actions across priority catchments. The program assists rural landholders to manage creek and river banks in a manner that protects and enhances water quality, aquatic ecology and riparian ecosystem health.

Typical works include:

- fencing and stock exclusion
- off-stream watering points
- weed control and native revegetation
- minor erosion control structures
- bank reshaping and stabilisation.

Since inception, River Health Grants have funded works along over 100km of waterways on private land in the shire. This includes 60km riparian stock exclusion fencing, 20km revegetation planting, over 60km bush regeneration and vine weed control, plus 20 erosion control projects involving rock and log structures to stabilise 3.2km of stream bank.

These projects collectively improve riparian cover, reduce nutrient and sediment inputs, and enhance habitat connectivity. Landholder engagement is central to the program’s success, with Council providing technical advice, site assessments, contractor labour, materials and ongoing support. The River Health Grants program is voluntary, and landholder commitment to project outcomes by way of financial or in-kind assistance is required. Landholders are expected to maintain projects outcomes in the long term, however they are eligible for maintenance assistance in the first three years after completion of works.

“Since working with Council, we’ve been able to fence off all our riparian zone, excluding cattle from 2.5km of creek frontage. We are limiting erosion along the creeks and ensuring water quality is improved. The fencing has also enabled us to move our cattle around with rotational grazing, helping us to sequester 350 tonnes of soil organic carbon across our farm. Working with Council is enabling us to protect the land and waterways. It’s very hard to achieve that on your own” Testimonial from Jodie Viccaars, Woodland Valley Farm.



Figure 1 Example of riverbank stabilisation works on the mid-Tweed River (December 2023)

Conclusions

Tweed Shire Council’s Waterways Program demonstrates how local government can lead effective, catchment-scale river health initiatives. By combining monitoring, strategic planning, and targeted investment in riparian restoration, the program delivers improvements in water quality, bank stability and ecosystem resilience. Partnerships with landholders and agencies amplify the impact of Council’s investment and enable large-scale stabilisation works that protect community assets and environmental values. As climate-driven flood events become more frequent, such integrated, collaborative approaches will be essential for maintaining healthy and resilient river systems.

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References

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