Biodiversity Team

Te Tira Rerenga Rauropi

Annual Report 2024-2025

Northland Regional Council

Te Kaunihera ā rohe o Te Taitokerau

Foreword

Nau mai, haere mai

It is a privilege to present this year's Biodiversity Team 2024-2025 Annual Report. Biodiversity is a taonga – a treasured legacy – and its protection is a shared responsibility across Te Taitokerau. This report highlights the progress made by Northland Regional Council's Biodiversity team in safeguarding Northland's unique ecosystems and emphasises the vital role of collaboration and partnership in achieving lasting outcomes.

The protection of Te Taitokerau biodiversity depends on the collective efforts of our communities. From those who contribute through their rates to those involved in hands-on restoration mahi, every action strengthens a region-wide network of care. This shared commitment lays the foundation for our ongoing work to understand, protect, and restore the region's most threatened ecosystems.

Among Te Taitokerau's most distinctive natural features are its coastal active dunes. As a naturally uncommon and nationally endangered ecosystem, these dunes play a crucial role in supporting biodiversity and enhancing coastal resilience. Through long-term monitoring, our team tracks annual vegetation changes across dune sites, providing objective data on dune functioning, particularly in the wake of severe weather events, to support management decisions and aid advocacy on dune restoration and other nature based solutions to increase resilience.

This year, data from our monitoring programme contributed to Manaaki Whenua – Landcare Research's study on the ecological impacts of Cyclone Gabrielle (November 2024). Ongoing monitoring will provide data on the recovery of active dunes from severe weather events over time in Te Taitokerau and enable comparison between healthy dune sites and those dominated by exotic plant species.

Northland Regional Council remains committed to upholding our responsibilities under Te Tiriti o Waitangi. Central to this commitment is the development of enduring, meaningful relationships with tangata whenua across Te Taitokerau. Throughout this report, you will see examples of partnership-led mahi that reflects and supports kaitiakitanga. We acknowledge and deeply appreciate the contributions of iwi, hapū, marae, and whānau who have generously shared their time, knowledge, and expertise.

Looking ahead, our region's biodiversity continues to faces significant challenges – climate change, habitat degradation, invasive species, and increasing human pressures all threaten the delicate balance of our remaining ecosystems. Addressing these issues requires a sustained and collective response. Northland Regional Council will continue to strengthen and build on relationships with tangata whenua and work alongside local communities and landowners to collectively respond to biodiversity challenges.

Tiakina te taiao, tuia te here tangata |
Nurture the environment, bring together the people

Ruben Wylie
Pou Tiaki Taiao – GM Environmental Services

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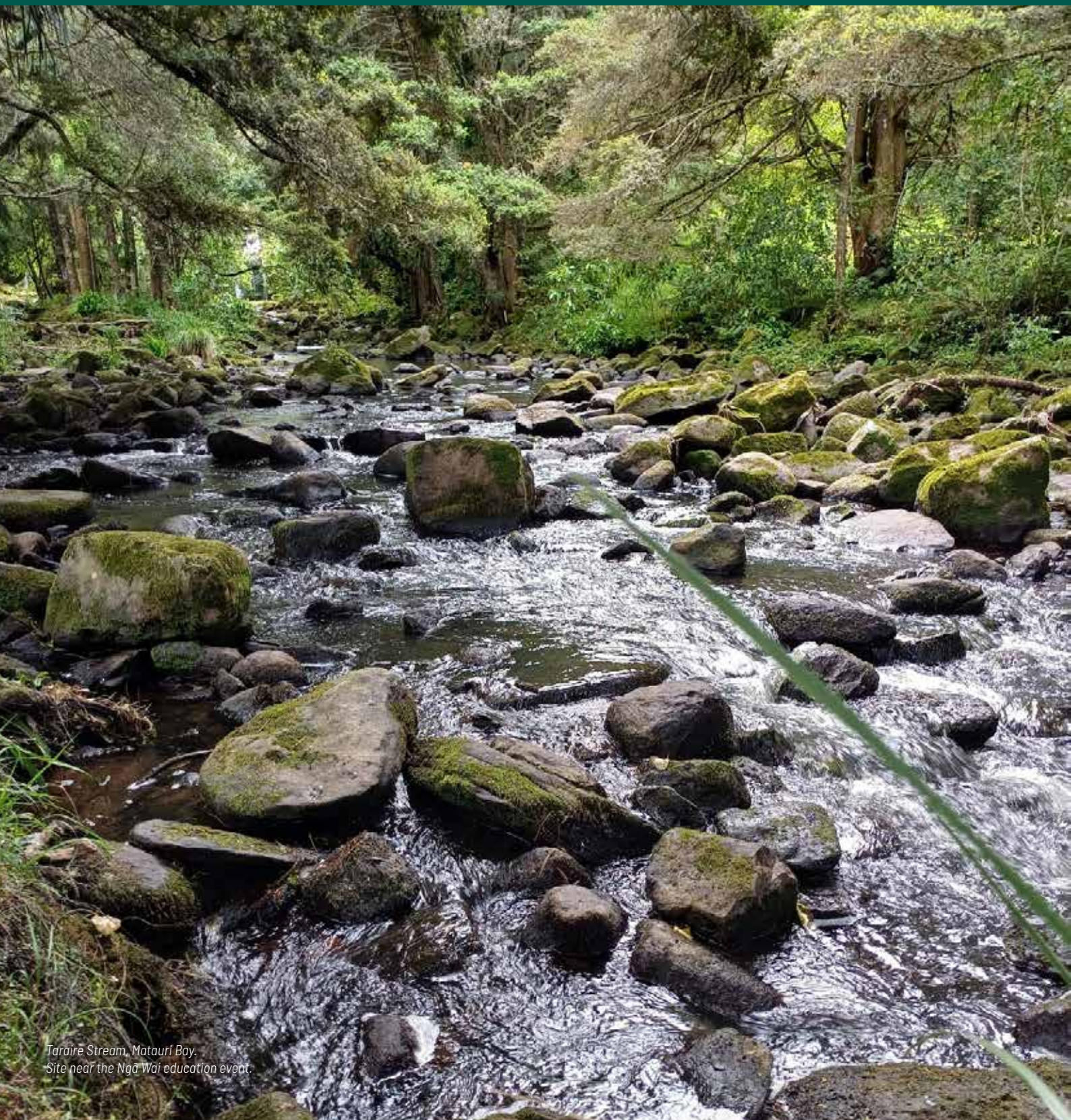


Taraire Stream, Matauri Bay.
Site near the Ngā Wai education event.

Vision

"Northlanders value and care for the region's biodiversity and work together to ensure it is sustained now and into the future."

Background

Te Taitokerau (Northland) is a biodiversity hotspot, home to rare and unique species and ecosystems found nowhere else on Earth. This richness stems from our mild climate, coastal influence, diverse soils and landforms, and long geological isolation from the rest of Aotearoa New Zealand.

Natural ecosystems on land, cover around 33% of Northland's 1.25 million hectares. About half of this is public conservation land, with many high-value areas also located on private and Māori land. However, much of the region's lowland forests and wetlands have been impacted by development.

Northland's coastline—where two major ocean systems meet—is the most biodiverse in New Zealand. It includes offshore islands, beaches, bays, estuaries, and dunes. While a large portion of original duneland has been converted to forestry and pasture, remaining dunes face threats from invasive species and human activities such as vehicle use on beaches and back dunes.

Northland Regional Council (NRC) plays a key role in supporting biodiversity through environmental and habitat management across coastal, terrestrial, and freshwater environments.

This includes restoring habitats and species and managing adverse effects.

Biodiversity management for regional councils is guided by several key statutes, including:

- Resource Management Act 1991
- Biosecurity Act 1993
- Local Government Act 2002
- Environmental Reporting Act 2015

At the national level, the National Policy Statement for Indigenous Biodiversity (NPS-IB) 2023 provides direction for protecting and restoring indigenous biodiversity. It complements the National Policy Statement for Freshwater Management (2020) and the New Zealand Coastal Policy Statement (2010), aligning with global commitments and Te Mana o te Taiao—New Zealand's Biodiversity Strategy 2020. These frameworks also support stronger relationships with Māori.

Northland Regional Council's work is also shaped by regional policies and plans, such as the Regional Plan for Northland and Regional Policy Statement (developed under the Resource Management Act 1991) Northland Regional Pest and Marine Pathway Plan 2017–2027 (under the Biosecurity Act 1993).

Each year, the Biodiversity team develops a work plan outlining deliverables and performance targets. Strategic documents and projects include:

- Northland Lakes Strategy
- Review of Northland Lakes Strategy and Future Recommendations (2021)
- Top Wetlands Project
- Northland Biodiversity Actions and Ambitions (Draft 2018–2028)

Team Expertise

Lisa Forester
Biodiversity Manager
Team lead, botany, threatened plants, weeds, lakes and wetland management, native forests.

Jacki Byrd
Freshwater Specialist (Team Deputy)
Lake management, aquatic pest plant control, land management

Laura Shaft
Coastal Biodiversity Manager
Coastal workstream lead. Coastcare programme co-ordinator, dune restoration, dune monitoring, nature-based solutions for coastal hazards, community engagement, support for oiled wildlife response

Katrina Hansen
Biodiversity Specialist
Native birds and wildlife, wetland programme co-ordinator, freshwater ecology, wetland monitoring, oiled wildlife response lead Northland and Maritime NZ National Response Team, data management.

Stevie (Stephanie) Tong
Biodiversity Advisor - Terrestrial
Botany, bird, bat and lizard survey and monitoring, terrestrial ecology, terrestrial and wetland monitoring, community engagement, iwi/hapū relationships.

Brooke Gray
Biodiversity Advisor - Coastcare (returned from Parental Leave, February 2025)
Freshwater biodiversity, fish passage, biodiversity education, data management, Coastcare programme, dune restoration and monitoring, and community engagement.

Stephanie Membery
Biodiversity Advisor
Native birds and fish, freshwater biodiversity, biodiversity education and communications.

Maria Seeker
Biodiversity Advisor - Coastcare (fixed term until March 2025)
Coastcare programme, dune restoration, dune monitoring, coastal education and engagement.

Biodiversity Support staff
Sandra Harris – *Biodiversity Administrator*
Charly-Jade Cairns – *Biodiversity Casual – Coastal / Coastal Intern (until February 2025)*
Marley Ford – *Biodiversity Casual – Botanist*
Winiwini Kingi – *Biodiversity Casual – Cultural Advisor*

Biodiversity Team from left: Jacki Byrd, Brooke Gray, Lisa Forester, Stephanie Membery, Katrina Hansen, Stevie (Stephanie) Tong, and Laura Shaft (not in photo).

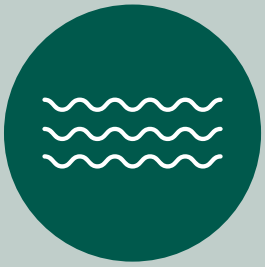
Target	Result	Details
Team building and development Team to undertake in-house development and team building exercise.	**Achieved**	Team dynamics are never static, and staff changes highlighted a need for the team to explore ways of working more effectively together. We looked at our personality types and new ways to communicate when friction occurs in our lives.

Practical Biodiversity Management

Biodiversity delivery actions are undertaken by Council in the following areas:

Freshwater

- Lake ecological monitoring and pest surveillance including LakeSPI
- Iwi/hapū partnerships for freshwater management
- Dune Lakes Kaitiaki Partnerships Project
- Coordination of wetland programme
- Wetland advice and restoration plans
- Wetland monitoring
- Freshwater partnerships and community capability building
- Threatened species monitoring and management



Coastal

- Dune restoration and protection advice and implementation
- Support network of Coastcare Groups
- Iwi/hapū partnerships for dune protection and restoration
- Vehicles on beaches working groups and advocacy
- Dune health assessments and monitoring
- Coastal education and awareness events and communications
- Support Kaitiaki Takutai Ranger programmes

Terrestrial

- Terrestrial monitoring and surveys
- Bioblitz and biodiversity surveys
- Terrestrial education and awareness events and communications
- Terrestrial iwi/hapū partnerships
- Supporting building community capability
- Threatened species monitoring, prioritisation and management

2 Whakarāpopoto ā pūtea
Financial Summary

Tātarāmoa (Rubus cissoides) - a climbing sprawling endemic shrub of Aotearoa whose orange to red berries are a seasonal food source for birds.

Overall, the Biodiversity budget had a favourable variance of $10,238 (0.64% expenditure) at the end of June 2025. Over and under-expenditure across the workstreams balanced out to a very small underspend.

Biodiversity Activities 2024- 2025	Budget (revised)	Actual	Variance
Expenditure	$1,597,786	$1,588,023	$9,763
Revenue	$0	$475	$475
Operational surplus	-$1,597,786	-$1,587,548	-$10,238

Overall, the budget has enabled the team to raise community awareness and understanding of biodiversity values and the threats posed to Northland's biodiversity, and remove barriers to community action, though advice and support.

Target	Result	Details
Biodiversity budget <5% favourable/ unfavourable variance. Monthly explanations on variances.	**Achieved**	Work planning, correct phasing and monitoring the team financial budget as required is key to being able to achieve our work targets throughout the year.

In 2024-25 a budget of $40,000 was set aside for Coastcare dune restoration projects and fully allocated. See section 4 Coastal | Takutai for details.

Langs Dune restoration project.

Biodiversity Levels of Service

The Levels of Service listed in the Northland Regional Council's Long-Term Plan 2024 to 2034 for Biodiversity state that "Indigenous biodiversity and ecosystems are maintained and enhanced, particularly around our rivers, lakes, wetlands and coastal margins".

Performance Measures	Expected targets and detail	2024/25 Result
Number of plants provided through the Coastcare programme	**LTP LOS Target plant numbers: 2024/25FY: 15,000** Plant numbers are recorded in a spreadsheet broken down to species and site for each planting season. The total numbers of plants each financial year are collated and added into a separate spreadsheet showing plant numbers per financial year.	**Achieved** 15,926 plants
Number of top-ranked lakes identified in the Northland Lakes Strategy that are under active management[1] with stock excluded	**Target number of lakes: 20** LTP LOS target is 95% of the 20 lakes. The lakes are listed and ranked in the Northland Lakes Strategy. Monitoring records and recommendations for "active management" are recorded as part of annual lakes ecological monitoring reports provided this year by NIWA.	**Achieved** Seven Outstanding lakes, two High Value lakes and seven other lakes had ecological surveys in 2025. Active management was undertaken at another eight lakes.
Natural wetlands to be monitored and conditions improved in accordance with wetland and climate programmes.	Target number of natural wetlands: 15 per year, with a total of 60[2] over a five-year period are monitored for condition and improvement in accordance with the five yearly wetland programme and climate programme.	**Achieved** The 32 wetlands identified in the existing monitoring programme are currently up to date with their five yearly monitoring. The current programme is being updated to a State of the Environment Wetland programme.

[1]Active management includes basic care standards for lakes: nutrient management, ecological monitoring, submerged weed surveillance, and weed and pest control if necessary.
[2]Envirolink Landcare Research have identified 60 wetlands, 32 of which are currently monitored with national protocols and wetland conditioning index.

3 Mahi tahi
Collaboration and engagement

Five-minute bird counts in Taheke with kaimahi from Te Korowai Ārihi

BIODIVERSITY'S COMMUNITY ENGAGEMENT IN 2024/25

1 FIELD DAYS MARCH 2025

SCHOOL EDUCATION EVENTS **11**

61 MEDIA STORIES

10 PRINT MEDIA ARTICLES
8 NRC WEBSITE STORIES
43 SOCIAL MEDIA POSTS

BIODIVERSITY VALUES ASSESSMENTS **26**

31 COASTCARE EVENTS

3 CAMPAIGNS FOR INTERNATIONAL & NATIONAL CONSERVATION DAYS

Conservation Week
World Wetlands Day
Int Biodiversity Day

THREATENED SPECIES WEB PAGES **9**

Partnerships

NRC is committed to working with Māori and has recognised this as an area of focus. The Biodiversity team works extensively to develop more meaningful and enduring relationships with Māori, support capacity building, kaitiakitanga (guardianship) by iwi/hapū and are committed to working towards a genuine Tiriti based partnership. Building knowledge together and sharing decision making are some important components of this.

The following targets demonstrate our commitment to continuous improvement in collaboration and relationships with Māori. These targets were set by our team and align with Tāiki ē: NRC Te Tiriti Strategy and Implementation Plan.

Target	Result	Details
Biocultural partnerships 1. The number of successful collaborative projects with iwi/hapū increases by a minimum of 5% annually	**Achieved**	At the end of 2024-2025, the Biodiversity team had worked with 20 iwi/hapū organisations, increasing the number of collaborative relationships by 25%. At least 66 distinct events or projects were completed with tangata whenua of Te Taitokerau, including (but not limited to): • Working with Te Uri o Hau iwi to remove hornwort from Lakes Karaka and Tutaki on the Poutō Peninsula. • Working with Te Aupōuri to remove hornwort from Roto Waikanae in the Far North. • Assisting Ngāti Kuri to fence a wetland that feeds into Te Ketekete Lagoon. • Working with Te Uri O Hau and Ngā Manga Atawhai (Te Roroa) to fell pine trees at Rototuna. • Supporting a wānanga run by Te Aupōuri at Roto Wahakari. • Attending a wānanga run by Te Uri O Hau, Korero Tuku Iho, on Poutō Lakes. • Coastal Biodiversity staff continued to work closely with iwi and hapū around the region on coastal restoration, monitoring, and with collaborative events including working bees, planting days, seed collection, and information sharing workshops. • Collaboration on weed control at Paradise Shores and other Bream Bay sites with Te Pou Taiao o Patuharakeke, Weed Action and Bream Bay Coastal Care Trust. • Weed control working bees at Ocean Beach with Aki Tai Here, Weed Action, Bream Head Trust, and Ocean Beach Habitat Restoration. • Monitoring dune fauna in Bream Bay with Te Pou Taiao o Patuharakeke. • Organising and attending wānanga on coastal mokomoko (lizard) identification and monitoring with Te Pou Taiao o Patuharakeke and Aki Tai Here. • Ongoing biodiversity work in Tāika Forest. • A pekapeka (bat) survey with Ngāti Rua, Te Pou Taiao o Patuharakeke, Ngāti Kahu o Torongāre, and Te Korowai Arihi Trust. • A Motukiore vegetation survey with Ngāti Tū, Ngāti Kahu o Torongāre and others. • Producing a wetland monitoring plan for Ngāti Manu, and conducting a Wairakei Inlet pilot pirita (green mistletoe) survey.

2. Seek feedback internally and externally with hapū/iwi partners to identify successes and opportunities for growth. Demonstrate continuous improvement by implementing recommendations.	**Partially achieved**	The Biodiversity team co-designed and participated in a Te Tiriti o Waitangi workshop to revise and reflect on the quality of partnership we provide at an operational level at NRC. This supported the team to identify success, gaps and commit to goals for continual improvement. An external survey is planned for the 2025-2026 year
Bicultural capability		
a. All staff achieved competency in NRC Te Whāriki workshops	**a. Achieved**	a. All permanent staff have achieved competency in council's Te Whāriki Level 2 workshops
b. All staff attend 75% of kotahitanga training.	**b. Achieved**	b. Team members contribute regularly to and attend weekly Kotahitanga training where we build our skills and knowledge to become a more culturally responsive team. We learn karakia, tikanga, mihimihi, pronunciation, and basic conversational reo together. All staff have individual goals to build on this knowledge.
c. Staff confident in personal mihimihi, one waiata, traditional karakia/ karakia mutunga and karakia mō te kai.	**c. Partially achieved**	c. Staff continue to work on confidence to deliver mihimihi, karakia and waiata.

Te Pou Taiao o Patuharakeke, Aki Tai Here and NRC staff sharing dune fauna monitoring techniques on the dunes at Ruakākā.

Internal collaboration

In addition to collaboration with the public, the Biodiversity team collaborates with many internal teams at NRC.

Target	Result	Details
Internal requests and advice 1. Undertake an internal survey 2. Implement recommended improvements	**Achieved**	1. An anonymous internal staff survey was completed in June, with a 56% response rate (25 out of 45 staff surveyed). Questions covered response times, expectations, behaviour, field work and extra comments. 2.No specific actionable improvements were suggested.

> "The Biodiversity team members always work well as team NRC with humility, flexibility, problem solving, helpfulness and passion for mahi."
>
> Quote from a staff survey

Of the email requests received or passed to the Biodiversity team through the Biodiversity Manager, 83% were processed within one week and all but one were processed within 20 working days.

One major request led the Biodiversity team to provide support to the Rivers Team by delineating and mapping wetlands on the Kaeo Flood Plain for Phase 2 of the Kaeo River Flood Works Project. Despite the short timeframe, the team collaborated effectively with other departments to deliver the work promptly. The team's input was instrumental in the consent application process, helping the Council avoid substantial consultancy fees and saving both time and resources.

The table below summarizes some of the collaborations carried out this year.

Team	Collaboration
Biosecurity	• Taharoa Domain Operational Hui • Native fish investigations during ecological surveys • Support invasive royal fern (*Osmunda regalis)* management planning for dune lakes • Lake post-herbicide treatment by-kill surveys via kayak • Terrestrial weed control training for kaitiaki at Rototuna • Egeria control in Rotokawau with marine team divers • Weed surveillance in lakes with the marine team divers • Tāika forest biodiversity management • Tāheke bioblitz with Te Korowai Ārahi • HPAI – Highly Pathogenic Avian Influenza incursion response planning • More than 17 internal plant identification requests • Jack's bush survey and biosecurity management

Team	Collaboration
Predator Free 2050	• Advice for outcome monitoring programmes
Climate Action and Natural Hazards	• Beach profiles, coastal hazards and adaptation, guidelines for coastal works, holistic coastal management engagement • Climate Action and Natural Hazards and Coastal Biodiversity team day at Taipa – dune weeding and monitoring • Coastal Conversations' Seaweek events • Weed control in Bream Bay and Coastal Restoration Education video, funded via the Climate Resilient Communities Fund
Community Engagement & Enviroschools	• BestStart Pipiwai Road – freshwater stream investigations • Nga Wai Encounter in Whangārei & Far North Education days – multi-school events • Matarau School avian education day • Public and social media biodiversity posts, including World Biodiversity Day, Conservation week, plant of the year, lake surveys, slow for bitten signage, and wildlife response for Maritime oil spill exercise at Ruakākā • Created a biodiversity stand at Field Days • Coastcare e-newsletters and online stories • Coastcare and vehicles on beaches on-site and event signage • NZPCN – NRC co-hosting the event in Whangārei across teams • Events (e.g. Field days, Seaweek, education events, working bees) • Updating and adding information to NRC website on threatened species in Te Taitokerau • Supported Te Aupōuri wānanga at Roto Wahakari • Biodiversity Operational Report printed • Created signage and web content for Rototuna pine felling and community planting • Hātea Hīkoi with Mountains to Sea Conservation Trust, Department of Conservation, local iwi/hapū , multiple NRC teams • Provided botanical expertise for Tangihua Lions Lodge educational Nature Trail upgrade
Environmental Services Group	• Participation in a group aimed at supporting, promoting, and improving working in partnership with Māori
Hydrology	• Wetland soil and hydrology assessment presentation at Biodiversity-run wetland training course
Land Management	• Contribute biodiversity content to Hills to Harbour newsletters • Wetland training • Advice to Land Management staff around wetlands • High value lakes catchment restoration to improve water quality • Joint (with Land Management) operational level Tiriti workshop
Māori Engagement	• New Zealand Plant Conservation Network Conference biannual conference – Biodiversity and Māori Engagement team on organising committee and worked together on delivery • Advice and support during Kotahitanga sessions • Coastal Conversations events • Tūparehuia coastal erosion consultation and advice

Team	Collaboration
Maritime	• Oil spill response regional training exercises for National Wildlife Response team members • Boatmaster and diver support for dune lake monitoring
Multi-team	• Facilitate an informal coastal group for staff across council to share relevant work and events – information sharing across teams • Part of a cross-council lakes team to ensure we are working collaboratively to achieve lake outcomes • Facilitated a matuku-hūrepo (Australasian bittern; *Botaurus poiciloptilus*) workshop with Love Bittern to provide teams working in and around wetlands information and a chance to ask questions to support bittern and other threatened fauna in wetlands • Taharoa Domain Operational Group includes staff from biodiversity, biosecurity, science team and water quality monitoring teams
Natural Resources Science	• Coastal Science – dune monitoring, coastal research (working with universities and research organisations) • Contributed to Coastal SOE report • Data Management – KiEco – Biodiversity support project and implementation of biodiversity structure. Preparation of freshwater fish, bird, and dune plant taxonomic lists • Lake Scientist supports Taharoa Domain Operational Group hui • Lake/Freshwater scientist provide advice around interpretation of water quality, lakes functioning and hydrology.
Policy and Planning	• Developing a Biodiversity Strategy • Wetland mapping project • Advice and input to Policy and Plans (e.g. threatened freshwater-dependant species) • Plan implementation – vehicle exclusion zones • Plan implementation/CME horizontal working group – wetland advice
Regulatory Services	• Compliance Monitoring – advice and assessments for determination of wetland presence or delineation for enforcement and prosecutions, including a Compliance Enforcement assessment involving wetland and fauna survey for an Enforcement Order • Compliance Monitoring – Support with implementation of beach vehicle exclusion zones and provision of signage • Consents – advice on consents concerning wetlands, including for the Meridian Solar Farm application • Consents – advice and referral of applicants for nature-based options for coastal erosion mitigation – multiple sites • Wetland training • Fish Passage – before and after impact monitoring for Ruakākā weir removal • Marsden Point oiled gull incident investigation and compliance advice
Rivers	• Wetland and freshwater fish assessment in Kāeo at a proposed river realignment site. Follow-up support at a community feedback event • Wetland advice for River activities
Water Quality	• Supporting annual SOE fish surveys

Community relationships

The Biodiversity team raises community awareness and understanding of biodiversity values and the threats posed to Northland's biodiversity and encourages community action though advice, support and training.

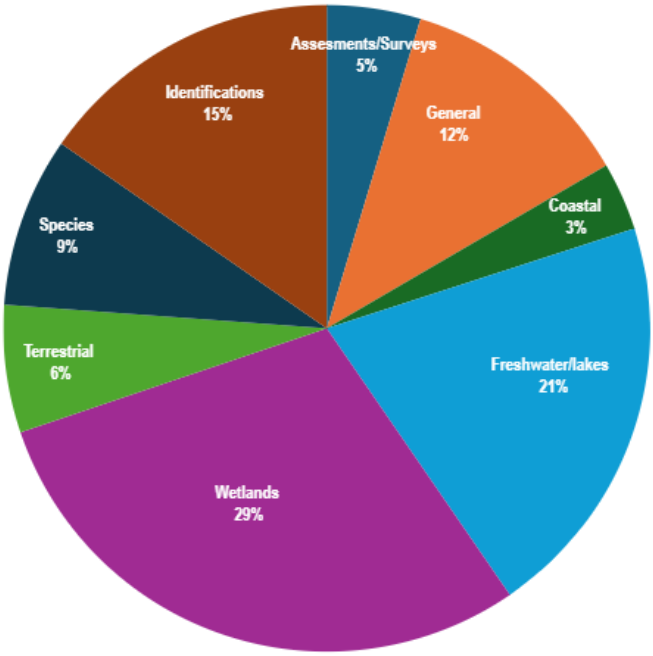
Target	Result	Details
External requests and advice Biodiversity staff will provide advice, support and training to Northland landowners and groups within 20 working days and report in Council database.	**Partially achieved**	All but one request logged were processed within 20 working days however only 91 were reported through the council's IRIS and Sharepoint databases. Unlogged enquiries generally required minor low-risk responses such as a simple email answer. 200 enquiries seen or referred to staff by the Biodiversity manager are analysed below.

Of the more than 200 enquiries analysed this year, 53% came directly from external sources such as community members, agencies, and iwi/hapū. An additional 8% were referred from other NRC teams. The remaining 39% were internal enquiries (from within NRC), including requests from other teams, councillors, and senior management.

While we have improved our recording of this data in IRIS, capturing the full scope of the team's effort remains a challenge.

The Biodiversity team continues to support the community and internal staff by providing plant identification services through email, social media, public events, site visits, and internal training.

Freshwater enquiries, especially those related to wetlands, make up the bulk of our requests and mostly come in through the Biodiversity Manager or directly to wetland staff. These include questions about wetland values, species, regulatory advice, restoration efforts, and funding support. More than half of the wetland queries are regulatory, involving mapping and identification for compliance, enforcement and consents. Coastal requests generally go directly to the Coastal Biodiversity Manager.



Percentage of 200 enquiries for the Biodiversity Team logged by Biodiversity Manager analysed by subject (Note: A significant number of coastal/ CoastCare enquiries also went directly to the Coastal Biodiversity Manager and were not part of the 200 analysed above.)

Data and software support

The Biodiversity team raises community awareness and understanding of biodiversity values and the threats posed to Northland's biodiversity and encourages community action though advice, support and training.

Target	Result	Details
Support Internal software delivery 1. Support council wide project. 2. Attend meetings and workshops as scheduled by Project Manager and provide feedback into development of Biodiversity layers	**Achieved**	1. Three workshops attended (2 online and 1 in-person roadshow). Biodiversity and grant funding feedback provided for platform development. 2. Meetings and discussion between NRC Science/Data and Biodiversity workstreams and RHSL to ensure consistency of data management across Council within the Datascape Software.
Environmental data 1. Introductory meeting with Biodiversity staff 2. Complete fauna species (freshwater fish and birds) and dune health monitoring taxonomy lists and programme structure within KiEco	**Partially achieved**	1. Several updates on progress given at Biodiversity team meetings. 2. Freshwater fish taxonomy lists have been completed and added to KiEco structure; avifauna and dune plant lists compiled and taxonomy structure drafted to be added to KiEco; Biodiversity monitoring programme structures not yet completed in KiEco due to capacity within Data team. Progress will continue in 2025-26 to complete Biodiversity Monitoring Programme structure within KiEco.

Oil spill response – NRC Maritime response

Target	Result	Details
Oil spill response and training 1. Two regional exercises per year (1 desktop & 1 field based) 2. Annual update of Regional Tier Two plan wildlife information 3. On call as needed	**Achieved**	One-week national training every 2 years, due in 2025/26. 1. Two regional exercises per year (1 desktop & 1 field based). Held October 2024 & March 2025. 2. Annual update of Regional Tier 2 plan and 3-yearly review for wildlife information, due 2026/27 3. No call outs during the past year.

Community engagement

Promoting biodiversity, our work and information on threatened species and habitats within the wider Te Taitokerau community.

Target	Result	Details
Community Engagement Events 1. Number of engagement events is maintained or greater than the previous year	**Achieved**	1. The Biodiversity team attended a total of 45 community events. Sixteen were led by Biodiversity or joined other community-led events and/or meetings. Of these, 31 events were coastal-related, attended by the Coastcare team. Event details listed below.
2. One staff member per day to attend Northland Field Days and other relevant events.		2. Biodiversity staff attended each day of the Northland Field Days, as well as three other regional events over summer.

Events are a big part of the community engagement and education work carried out by the Biodiversity team. Between July 2024 and June 2025, the Biodiversity team organised, assisted with, or attended many successful events, including:

- Co-hosting the NZPCN Biannual conference and conference workshops on the 6-9th October 2024 in Whangārei
- Whangārei A&P Show
- Kaikohe A&P Show
- Bay of Island Cruiser Festival
- Northland Field Days – one team member attended each day, with a dune lake display central to the site this year
- Hātea Hīkoi Spotlighting – led by Mountains to Sea, discovering freshwater species at night
- Waipū Spotlighting – led by Mountains to Sea, discovering freshwater species at night
- Hosted the annual Te Taitokerau matuku-hūrepo monitoring hui
- Piroa Education Trust monthly dinner – presentation on Hochstetter frogs
- Kohinui Catchment Bioblitz and Community Event – biodiversity surveys, presented findings, showcased an invertebrate equipment display
- Enviroschools Ngā Wai multi-school events – Far North and Whangārei
- Pātaka Kai Poutō lakes wānanga – support and advice
- Kāeo Community feedback session
- Freshwater education with BestStart Pipiwai Road
- Matarau School Avian Education and Garden Bird Survey education
- Coastcare staff attended 12 planting days and 5 other working bees with community, iwi, and schools at sites including Ruakākā, Pātaua South, Taipa and Ahipara.
- Coastcare staff, alongside Climate Action and Whangārei District Council, organised and attended four Coastal Conversations public advocacy events for Seaweek.
- Roto Wahakari wānanga – supported this Te Aupōuri lead event

Left: Shore skink (Oligosoma smithi) found during dune fauna monitoring with Patuharakeke Te Pou Taiao. Right: Kauri snail, pupurangi, (Paryphanta busbyi) found on Parihaka. Once widespread in Northland, many of these giant snails are now endangered or threatened, and inhabit a more restricted area of Northland and the islands offshore.

CASE STUDY

New Zealand Plant Conservation Network

The New Zealand Plant Conservation Network (NZPCN) biennial conference was co-hosted with NRC in Whangārei in October 2024. The role of NZPCN is to facilitate and advocate for plant conservation as well as provide information and support to plant conservation practitioners, landowners and managers. The four-day biennial conference was attended by 165 people from around the country giving a chance for plant conservation enthusiasts to network and collaborate on shared issues and challenges.

The overall theme at the conference was "Ka mua, ka muri – walking backwards into the future", as NZPCN celebrated its 21st birthday! Fully subscribed workshops were held the weekend before both at NRC office and in the field on a number of plant related topics including rongoā, iNaturalist, freshwater biosecurity and weeds. Participants were welcomed to the conference with a pōwhiri followed by presentations, poster events, workshops, field trips and a 21st celebration dinner. Over the course of the conference keynote speakers included NRC Biodiversity Manager Lisa Forester talking about some of the incredible work done in Te Taitokerau to protect its unique dune lake plant communities.

During the conference NRC received a national award for Local Authority Outstanding Contribution to Plant Conservation in New Zealand. In nominating the council for the award Rotorua ecological consultant Sarah Beadel said the council undertakes many work programmes which contribute to the conservation of native plants either directly or indirectly.

"The main role of NRC involves fostering enduring partnerships with mana whenua, community groups and landowners to give them the understanding and skills to take positive action and pass on their knowledge to others."

Plant conservationist Graeme Atkins sharing his rongoā knowledge (left). Networking between tangata whenua of Taitokerau and expert NZ botanist from Nelson, Shannel Courtney at Hikurangi repo during the Biodiversity-led field trip.

Social Media and Media Engagement

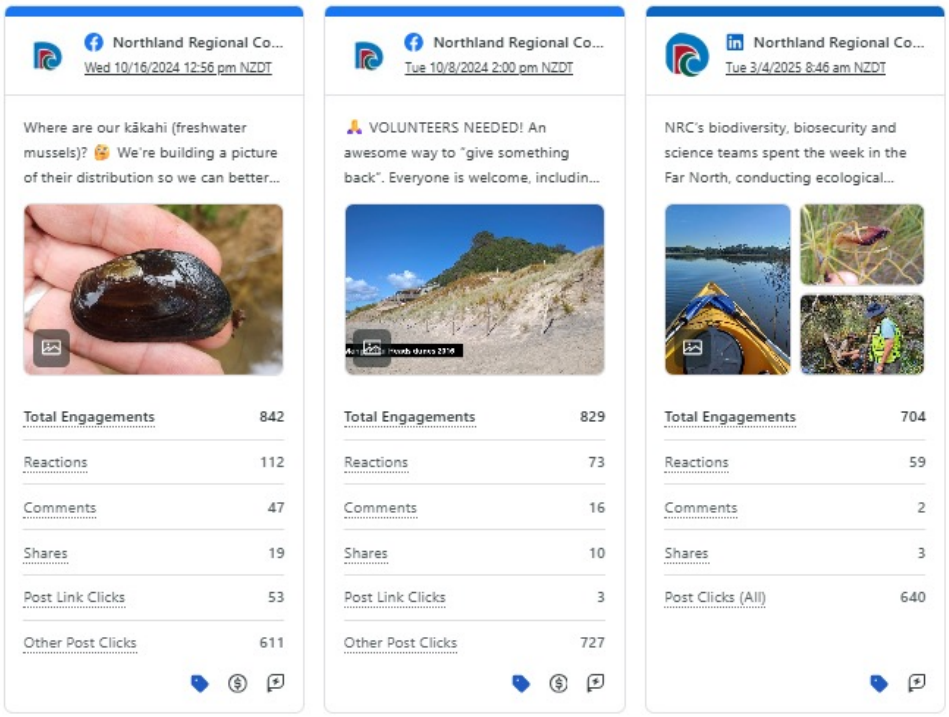
Shining a light on the unique biodiversity of Te Taitokerau and why it's vital we all play a role in protecting our natural taonga is a key focus for the Biodiversity team.

Through platforms including Facebook, LinkedIn, Instagram, our website, and media releases, we share stories about the special species of Te Taitokerau, the team's mahi, and how we support communities to care for the environment.

Target	Result	Details
Community Engagement Number of social and media interactions is maintained or greater than the previous year of 39.	**Achieved**	A total of 47 social media posts were made this year, and the level of interaction on Facebook—such as likes, comments, and shares—increased by 53.5%, showing that more people are engaging with our content than before. This year, we shared 32 social media posts about general biodiversity topics, along with 15 more focused on Coastcare. These posts covered a wide variety of subjects, showing the diverse and important work the Biodiversity team is doing across the region.

As traditional media channels decline, particularly local newspapers and national TV news, our focus remains on digital platforms to reach our communities effectively. Social media, web stories, and e-newsletters continue to provide strong engagement with audiences.

This year, we released 10 web stories and nine e-newsletter features, spotlighting our staff and their work in the community. Several stories highlighted threatened species and actions to protect biodiversity and ecosystems, with over half focused on Coastcare and the coastal environment.



Top three social media posts: spotlight on kākahi (freshwater mussel), volunteers needed, and NRC ecological lake survey.

Three Coastcare eNewsletters were distributed:

- August 2024 - Coastcare Northland | Issue 35
- December 2024 Coastcare Northland | Issue 36
- April 2025 Coastcare Northland | Issue 37

Biodiversity Web Content

In 2022 the Biodiversity team, supported by Community Engagement, released a new Threatened Species web page; https://www.nrc.govt.nz/environment/land/biodiversity/threatened-species/. This webpage has proven to be popular with local communities who are keen to report sightings of some of the rarer species found in Te Taitokerau.

During the 2024-25 year, tūturiwhatu (northern New Zealand dotterel; *Anarhynchus obscurus aquilonius*) and piharau (pouched lamprey; *Geotria australis*) were added to the page.

The highly anticipated and refined GIS reporting forms were enabled for the matuku-hūrepo and kākahi pages, allowing pin-drop location map reporting, which will lead to an improved data resource, understanding and support for these species.

The Coastcare area of the NRC website has continued to be updated to keep it relevant and useful, https://www.nrc.govt.nz/Coastcare. New additions include an online reporting form for shorebird observations and information on dune monitoring.

Carmine rata (Metrosideros carminea).

The carnivorous forked sundew (Drosera binata) at Kai Iwi lakes.

Training

It is important that team members are capable and qualified to undertake their work programmes. Staff need technical training to support specific project work as well as ensuring qualifications are kept up to date and skills developed as technology and projects change.

Target	Result	Details
Training to increase capability of team 1. All staff to have necessary training to undertake their jobs competently and safely 2. All staff to have personal goals and set training needs	**Achieved**	1. The team's training for the year is listed below and refresher courses completed within timeframes. 2. All goals and training set before the deadline. Training requests sent through early to be organised. When training was required for all staff, we arranged team training sessions to ensure it was tailored to our needs.

Individual team members completed 29 training courses which contributed to individual career development and their ability to undertake varied roles:

- Field-based training: coastal weed control workshop, coastal mokomoko ID training, dune weed workshop, NRC wetland training series, NIWA electric fishing operator certificate.
- Skills, including courses on unconscious bias, psychological safety, timesheet training and managers course on neurodiversity.
- Communication and engagement training: making documents accessible, contract management, climate induction.
- Te Ao Māori: Te Whāriki 2, Operational Te Tiriti o Waitangi workshop, a managers wānanga marae based and regular kotahitanga training.
- Health and safety training: comprehensive and outdoor first aid, four-wheel driving, LUV driving, wader safety training, kayak training, de-escalation skills and awareness, defensive driving, aggressive dog awareness, Garmin InReach training, working at Union East – staff, Health and Safety Management Growsafe aquatic strand.

Photoblique

Photoblique is a software that displays high quality, oblique aerial images that users can annotate with text and shapes, as well as other useful functions. Every year the number of users and downloads increases. The Photoblique budget is managed through the Biodiversity Team. This year the Photoblique contract was renewed and the value increased in response to greater demand for licences across the council. Over the 2024/25 year, 70 users of Photoblique (up from 68 the previous year) requested 13,459 oblique aerial images. Overall, 21 staff in the Environmental Services Group used the software accounting for 26.57% of the image requests. The Biodiversity team generated 10.67% of these image requests with 29 users in Regulatory Services generating 47.27% of the image requests and 16 users in Biosecurity requesting 21.13 % of the images.
Photoblique has proven extremely useful for outputs like determining the location of fence lines, viewing the best access to sites, mapping and tracking changes in vegetation, and determining wetlands.

Biodiversity found on mangroves at Te Kowhai wetland during matuku-hūrepo acoustic monitoring.

Left: Machaerina rubiginosa, a common wetland sedge flower panicle with male flower parts or stamens evident. Top right: Katipo spider (Latrodectus katipo) found during dune fauna monitoring. Bottom right: Wolf spider with spiderlings on back, near Pukenui, Far North.

4 Takutai Coastal

Coastcare signage and dune planting at Langs Beach.

Northland's coastal ecosystems – from estuaries to open coast dunes – are among the region's most unique and vulnerable natural assets. Much of the original dune landscape has been lost to land use change, such as conversion to forestry and pasture. Natural dunes that remain face increasing pressure from invasive weeds and animal pests, as well as direct human impacts including development, vehicles, and recreational use.

These ecosystems play a vital role in buffering coastal communities from natural hazards and the effects of climate change, including storm surge and sea-level rise. To do this, these dynamic ecosystems need space, but they are increasingly threatened by coastal squeeze, where built infrastructure and development restrict the landward migration of habitats under pressure from rising seas.

The Coastcare Te Taitokerau programme, delivered through the Biodiversity team, continues to support local communities to protect and restore their coastal environments. Restoration efforts in 2024/25 remained largely focused on dune and beach systems, including back dune areas, working in partnership with communities, iwi, hapū, schools, private landowners, district councils, and the Department of Conservation (DOC).

Volunteers, Te Pou Taiao o Patuharakeke, DOC, and NRC staff collected rubbish and weeded the dunes at Ruakākā Beach as part of a Seaweek event hosted by Bream Bay Coastal Care Trust.

Dune restoration works

Coastcare groups and hapū across Northland were supported to protect and restore dune systems and coastal environments. A total of 15,926 plants were planted at 20 sites in the 2024-25 financial year. Dune weed control efforts were strengthened through volunteer training, funding contractor weed control, and supporting or attending weeding working bees.

In recent years, restoration efforts by private landowners and hapū have increased, contributing to the viability of local nurseries that specialise in coastal dune plant species.

Many Coastcare groups also carry out animal pest control, particularly targeting rabbits and rodents. These pests pose a significant threat to native dune plants, such as pīngao (*Ficinia spiralis*), which are highly vulnerable to browsing and seed predation. With assistance from the NRC Biosecurity team, Coastcare provides advice, traps, and poison to support these efforts.

Target	Result	Details
Coastcare dune restoration sites - through Coastcare groups, iwi and hapū. 1. Maintain and build on dune restoration work (2022-2023 planting restoration occurred at 17 sites). 2. Record and report actions	**Achieved**	1. Work continued to maintain and expand dune restoration work including weed control, fencing and planting. In total, 27 sites received direct support from Coastcare for active dune management, including contractor time for weed control, provision of plants and fencing materials, advice and recommendations and direct support with working bees. 2. The above work is reported through updates in the monthly CEOs report, through LTP KPI reporting and annual reporting.

Volunteers fencing and planting the dunes at Mangawhai Heads.

Weeding and planting at Mapere block, Ahipara, with Ahipara School.

Coastal education, advocacy and advice

Education and advocacy are core components of the Coastcare programme, which relies heavily on the involvement of volunteers, kaitiaki, hapū, and schools. The programme aims to reduce human impacts on coastal ecosystems and encourage greater participation in nature-based solutions.

In the 2024-25 financial year, Coastcare staff attended 32 events, including planting days, weeding working bees, collaborative training workshops, beach clean-ups, public advocacy events, and dune monitoring sessions.

Staff also provided advice to other NRC teams, external agencies, and members of the public on topics such as dune restoration, nature-based approaches to managing coastal hazards, and monitoring methods. This included participation in cross-agency working groups and leading workshops – such as a dune monitoring session at the Coastal Restoration Trust conference in Ūawa – Tolaga Bay.

Weeding and planting day with Ngunguru School in the Te Wairoa dunes, Matapōuri.

Dune monitoring in Waipū Reserve with Renew School.

Pre-planting briefing at Mangawhai Heads with Mangawhai Trackies volunteer group.

The Compliance team now leads the implementation of vehicle exclusion zones as outlined in the new Regional Plan. The Coastal Biodiversity team continues to support this work by providing signage and assisting with advocacy events.

Target	Result	Details
Vehicles on beaches and dunes 1. Attend meetings and field visits. 2. Work with partners to improve beach driving behaviour.	**Achieved**	The Compliance team now lead implementation of the Regional Plan rules around Vehicles on Beaches, including enforcement of Vehicle Exclusion Zones (VEZ). The Coastal Biodiversity team provided support and funding for VEZ signage. Signs were put up and maintained at Bream Bay sites including Uretiti. Development of the signage was undertaken in collaboration with partners including the Department of Conservation (DOC), Whangārei District Council (WDC) and iwi. Safe Beach driving advocacy also included organising and attending an event to promote the new rules with Te Pou Taiao o Patuharakeke, DOC and WDC.

VEZ No vehicles past this point sign south of Tip road.

Rama Road - Signage Audit.

Partnerships

Coastcare projects involve partnerships with iwi and hapū around the coast of Te Taitokerau and this is integral to our work. During the 2024-2025 Financial Year we worked with 18 separate partner organisations, mostly marae and hapū. Examples included: dune restoration weeding and planting at Matapōuri with Te Whānau a Rangiwhakaahu Hapū; mokomoko (lizard) monitoring, weed control and advocacy events with Te Pou Taiao o Patuharakeke; an educational event with Te Rāwhiti kaitiaki; and dune restoration planting and mokomoko identification with Aki Tai Here.

Matariki Planting Day at Papuni Dunes, Pātaua South, June 2025.

Taipa working bee with Parapara Marae volunteers and Kaitiaki o Tokerau rangers, August 2024.

Dune Health Assessments and Monitoring

Dune monitoring provides a record of vegetation cover, native plant abundance, the proportion of native to invasive plant species, and dune species diversity as indicators of ecosystem health and resilience, informing ongoing dune management and helping hapū, iwi, community and volunteer groups, schools and the wider community, together with NRC, to deepen their understanding of local dune ecosystems and guide adaptive management.

Over the 2024-25 summer, NRC and local kaitiaki surveyed 12 dune sites across Te Taitokerau, from Ninety Mile Beach to Bream Bay. This included 61 vegetation transects, dune health assessments, and five-minute bird counts.

Bream Bay served as the pilot site for coastal fauna monitoring. The pilot phase concluded during the 2024-25 monitoring season. Tracking tunnels and artificial shelters detected a mix of coastal skinks, rodents, and other pest mammals such as hedgehogs (*Erinaceus europaeus*).

The Bream Bay trial demonstrated that tracking tunnels are a simple and effective method for detecting native lizard species, as well as rodents and other pests. A key benefit of these methods is that they do not require permits or specialist wildlife handling skills, making them well suited to community groups and hapū. This year, tracking tunnels were also used at Taipa, Puheke, and Ahipara alongside vegetation monitoring at these sites.

In partnership with NRC's Resource Science team, we worked with Manaaki Whenua – Landcare Research to support a study into the ecological impacts of Cyclone Gabrielle. Ongoing monitoring will provide valuable data on the recovery of active dunes following severe weather events and enable comparisons between healthy dune systems and those dominated by exotic vegetation.

Biodiversity staff recording field data.

Shore skink (Oligosoma smithi) seen during Bream Bay fauna monitoring.

Target	Result	Details
Dune Monitoring 1. Maintain or increase 12 sites monitored including data management and storage. 2. Add ONE fauna monitoring site. 3. Project includes working with mana whenua, school visits and training workshops.	**Achieved**	1. Maintained vegetation monitoring at 12 sites 2. Basic fauna monitoring undertaken at three new sites 3. Worked with mana whenua on monitoring, visited schools and led school groups on site to discuss and practice monitoring methods. One coastal mokomoko (lizards) identification and monitoring workshop held with NRC staff and hapū kaitiaki.

CASE STUDY

Seaweek Coastal Conversations

Our coastlines are changing—what does this mean for your community?

This guiding question shaped a series of Coastal Conversations events hosted during Seaweek 2025 by Coastcare staff, in partnership with Whangārei District Council and NRC's Climate Action and Natural Hazards team. Events were held in Ruakākā, Waipū, Whananaki, and Ngunguru, engaging iwi, hapū, Coastcare groups, community organisations, schools, and local residents in discussions on coastal change and resilience.

Renowned coastal scientist Jim Dahm presented on the impacts of natural processes and climate change—particularly erosion and sea level rise—and discussed nature-based approaches to managing open coast beaches. His sessions clarified the distinction between temporary and long-term erosion and outlined scientific methods for assessing coastal change. His presentation also highlighted the ecological importance of dune systems, with a focus on native sand-binding species such as spinifex (kōwhangatara/tihetihe; *Spinifex sericeus*) and pīngao, and the threats posed by introduced grasses and invasive weeds.

feature of the events, with several community-led initiatives showcased. Te Pou Taiao o Patuharakeke shared their weed eradication efforts on land and sea, including community snorkel events targeting Mediterranean fanworm (*Sabella spallanzanii*). Coastcare groups, including Bream Bay Coastal Care Trust, presented on restoration work and weed control programmes—such as the NRC-funded initiative at Bream Bay—and provided updates from Langs Beach, Waipū Cove, and Pareparea Bay. Waipū and Ngunguru Schools shared examples of coastal-based learning that foster kaitiakitanga among students. Dr Emma Ryan (University of Auckland) also presented on the New Zealand Coastal Change project at the Ngunguru event.

These inaugural events successfully strengthened community engagement, showcased local coastal mahi, and provided a platform for knowledge-sharing and future planning. NRC is currently preparing for a second round of Coastal Conversations in May 2026.

Left: Jim Dahm discusses coastal processes with NRC staff at Otamure Bay, WhananakiRight: Coastcare sign outside the Whananaki Hall during a Coastal Conversation event.

CASE STUDY *cont...*

Rose Wellington of Ngāti Taka speaks at the Ngunguru event.

Coastal Conversations infographic.

5 Wai Māori Freshwater

Lake Parawanui 2025.

a. Ngā Roto | Lakes

The Dune Lake Kaitiaki Partnerships programme aims to improve the water quality and ecological health of lakes through active management and support for lake owners. Active management includes basic care standards for lakes through nutrient management, stock proof fencing, ecological monitoring, submerged weed surveillance and pest plant and animal control.

Target	Result	Details
Aquatic weed surveillance Four public lakes surveyed annually	**Achieved**	As recommended by the Northland Lakes Strategy four lakes are surveyed annually at high-risk areas like public entry points for aquatic weeds. These lakes are Taharoa, Waikare, Kai Iwi and Ngātu.

Biodiversity staff provide advice and support to iwi/hapū, and landowners interested in protecting and enhancing lake biodiversity. This has included fencing supplies, animal pest control tools, pest plant control, pine removal, monitoring and educational tools.

Māori partnerships

The Dune Lake Kaitiaki Partnerships programme works in partnership with six iwi or hapū to support their own dune lake management. NRC support mana whenua to achieve rangatiratanga for ngā roto (lakes) in their rohe. Actions we have undertaken in the last year include:

- Attended and ran educational activities for 80 tamariki during a Wai Mauri wānanga at Lake Wahakari with Te Rūnanga Nui o Te Aupōuri.
- Controlled hornwort at four lakes with the support of mana whenua. There were no adverse effects on the lakes and good control of hornwort was achieved.
- Pines were felled at Rototuna by Ngā Manga Atawhai (Te Roroa) with the support of Te Uri o Hau.
- Kaimahi from Te Uri o Hau Environs Poipoia te Mauri team carried out weed control at Rototuna as part of the pine removal and replanting plan for Rototuna.
- Signage produced and installed for latest hornwort (*C. demersum*) find at Lake Waikanae in the far north.
- Ran the Taharoa Domain Operational Working Group, which includes iwi representation from Te Roroa and Te Kuihi.
- Site visit held at Te Ketekete Lagoon with Ngāti Kuri to look at options for gypsywort control or containment and fencing of a large wetland that feeds into the lagoon.
- Removed around 35kg of *Egeria densa* from Rotokawau on the Poutō Peninsula by staff from the NRC Biosecurity Marine team and dive contractors in two days.
- Lake monitoring kits gifted to iwi to support their own lake health monitoring aspirations.
- Meeting held with Te Pou Taiao o Patuharakeke to discuss the findings of the Pukekauri dam report and how we can work together on biodiversity outcomes in their rohe.
- Site visit held at Shag Lake with Te Roroa to look at options for lake restoration.
- Pest control devices installed to control rats and possums at Roto Humuhumu.
- Supported the NRC Biosecurity team and kaimahi from Te Roroa and Te Kuihi at the Check Clean Dry station at Lake Taharoa over summer as they checked all watercraft for invasive gold clam (*Corbicula fluminea*).

Lake ecological surveys and monitoring

The Biodiversity team conducts annual ecological surveys and monitoring of lakes and has done so since 2001. Approximately 100 lakes are monitored every 5 years on a rotating basis. This programme complements NRC's regular lake water quality monitoring of 15 lakes and aligns with the National Policy Statement for Freshwater 2020.

Field assessments involve landowners, iwi/hapū representatives and a team of expert divers and botanists assessing submerged plants in lakes, endangered species and marginal wetland vegetation. Lake report cards are produced after each survey, identifying values, threats, and management recommendations and include LakeSPI measures which assesses submerged plant health in lakes.

Target	Result	Details
Lake Ecological Monitoring 1. Minimum of all Outstanding and High Value Lakes to have lakes ecological monitoring every 5 years. 2. Latest lake report cards on NRC public website. 3. Coordinate programme with freshwater monitoring team and progress how our reporting can align for public visibility.	**Achieved**	1. All Outstanding and High Value lakes are up to date with ecological monitoring. 2. Lake report cards on NRC website. 3 . Working with Science Team on SOE reporting and regular meeting attended to progress more aligned reporting.
Lake threatened freshwater dependant species monitoring 1. Develop a programme for monitoring threatened species in lakes. 2. Recommend protection actions for 10 lakes per year incorporated into the plan.	**1. Achieved** **2. Not achieved**	1. Threatened and At Risk freshwater dependant species list for lakes has been established and peer reviewed. 12 threatened freshwater dependant species were monitored this year -*Trithuria inconspicua, Myriophyllum robustum, Isolepis lenticularis, Utricularia australis, Todea barbara, Centrolepis strigosa, Paspalum orbiculare, Archidium elatum , Spiranthes australis,* Caspian tern, Australasian bittern and grey duck. Fish surveys were undertaken at 5 lakes during the ecological lake surveys. 2. Seven lakes with recommendations and actions co-created with landowners are – Lake Humuhumu (animal pest control), Rotokawau (Poutō)(egeria control), Te Ketekete Lagoon (fencing), Lake Karaka (hornwort) Tutaki (hornwort) Waikanae (hornwort) Mt Camel North (hornwort).

In February and March 2025, fifteen lakes were surveyed over two weeks. Highlights included an improvement in submerged vegetation at Taharoa, which had a vegetation collapse after Cyclone Gabrielle and torewai (freshwater mussels) recorded for the first time in Morehurehu. A *Trithuria inconspicua* survey was conducted at Lakes Ngātu and Rotokawau and healthy populations of this Threatened – Nationally Critical plant was found at both lakes. The low light resulted in a loss of vegetation in Lake Waiparera, most likely due to the impact of invasive weeds.

Weed surveillance surveys are conducted annually in four public high-value lakes at high-risk areas, such as public entry points, with divers searching for submerged aquatic weeds like hornwort and oxygen weeds. Weed surveillance is part of the lake ecological monitoring programme and has led to recent weed eradication efforts in Lake Waikanae, after hornwort was found during the lake ecological survey. Detecting incursions early is crucial for achieving eradication success.

Target	Result	Details
Lake Restoration 1. A minimum of FOUR Outstanding or High Value lakes per year have basic restoration plans in place or updated. 2. ONE restoration action agreed with mana whenua/landowner/ community undertaken.	**Not achieved**	Staff supported Te Aupōuri who are writing their own lake restoration plan for Wahakari, and Te Uri o Hau who are writing their own lake restoration plans for Poutō lakes. There was not the staff resource to produce lake restoration plans. However, actions as recommended in Lakes Report cards these have been included in the 2025/2026 annual work programme and will be implemented if funds and staff resource allow. Staff have worked with Te Uri o Hau, Waikaretu Marae and DOC to continue restoration work at Rototuna.

Left: Isolepis lenticularis, Conservation status - At Risk-Declining. Right: Lake Ngatu, ecological lake survey from the kayak.

Left: Lake Wahakari Freshwater Wai Mauri Wānanga, NIWA divers explain their survey work as part of the NRC lake ecological surveys to the local Te Kao kura, Te Aupōuri whanau & kaimahi. Right: Dune lakes often support large numbers of native and sometimes introduced wildfowl, Lake Kapoa.

CASE STUDY

New Zealand's Plant of the year – *Trithuria inconspicua*

Trithuria inconspicua (photo credit: Dennis Gordon – NIWA)

The tiny and very rare Northland lake plant, *Trithuria inconspicua*, was been voted 'New Zealand's Favourite Plant' 2024 in a national poll. The online vote was run by the New Zealand Plant Conservation Network (NZPCN) to find the native plant best loved by New Zealanders.

Trithuria inconspicua only grows in Te Taitokerau's dune lakes and is found nowhere else in the world.

Tiny in stature, *Trithuria inconspicua* packs a mighty punch in age – the latest scientific research has revealed this little plant to be in the oldest flowering plant lineage. *Trithuria inconspicua* is in a plant family that has been around for over a hundred million years, so it is a 'living fossil'.

The plant certainly lives up to its name of 'inconspicua'. At only 55 millimetres tall, it grows partially buried in the sands of the lake floor, so you are more likely to feel it beneath your feet than see it. It has fans of fine, hair-like leaves in which it hides tiny flowers that look like miniature waterlilies.

NRC works in partnership with iwi/hapū, landowners and DOC to protect dune lakes and is delighted to celebrate *Trithuria inconspicuas* success.

"It's so exciting that a Northland aquatic plant has won, and that people know and love this remarkable little plant," the council's Biodiversity Manager Lisa Forester says.

Kaumātua Ric Pārore, speaking on behalf of Te Kuihi hapū, one of the mana whenua of Kai Iwi Lakes, says they're thrilled to see *Trithuria inconspicua* recognised, but also sad the plant has become so rare. "It's important that everyone who visits or uses our lakes is careful to look after them so this plant can thrive."

Unfortunately, the future for *Trithuria inconspicua* is uncertain. It is listed as 'Threatened – Nationally Critical', the highest threat category. Plant populations were previously found in 13 dune lakes north of Poutō, but since 1998 these have declined to viable populations in only five lakes.

Trithuria inconspicua needs clean sand and water to survive and is effectively a 'canary in the coalmine' as far as water quality is concerned. It is threatened by deteriorating water quality due to nutrient enrichment, pest weed and pest fish impacts, and recreational pressures.

Trithuria inconspicua is a wonderful example of why our dune lakes are so special and its recognition as plant of the year is a reminder to us all the importance of caring for our dune lakes.

Last year NRC assisted DOC with a full *Trithuria inconspicua* survey at the Kai Iwi Lakes to ascertain the current status of the plant at these lakes. NRC then undertook a *Trithuria inconspicua* survey using similar methodology at Lakes Ngatu and Rotokawau (Poutō), leaving one more stronghold; Lake Rotoroa at Te Hiku, left to assess in 2025-2026.

This is from a media release put out by the NRC after winning plant of the year.

b. Ngā Repo | Wetlands

Historically, wetlands covered approximately 453,251 hectares—around 35% of Northland's total land area of nearly 1.3 million hectares. Today, only 42,325 hectares remain, following extensive drainage and land development. Wetlands larger than 500m2 now account for just ~3.3% of the region's land area, with the majority located in the Far North (18%) and less than 4% south of Kaitaia.[2,3]

Approximately 75% of Northland's wetlands are under 10 hectares in size, and only three wetlands exceed 500 hectares. Many of the remaining wetlands are degraded, and facing ongoing threats from drainage, invasive species, fire and the impacts of climate change. This decline represents a critical loss—not only of habitat but also of the rare and specialised native species that depend on these ecosystems, such as the Australasian bittern/matuku hūrepo and the Northland mudfish (*Neochanna heleios*).

The Biodiversity team plays a key role in wetland conservation by providing expert guidance on wetland management and restoration to private landowners, iwi/hapū and community groups. Within council, the team coordinates wetland-related initiatives and offers technical advice across council teams including Compliance, Consent, Land Management and Policy and Planning teams.

Green mistletoe or pirita (Ileostylus micranthus) which is Regionally Threatened - Vulnerable seen fruiting in an estuarine wetland at Karetu.

[2] Clarkson B R, Price R J. 2022: A framework for monitoring Northland wetlands. Prepared for Northland Regional Council by Manaaki Whenua Landcare Research. Envirolink Grant: 2205-NLRC228

[3] MacDonald A. 2024: Development of a wetland mapping tool. Report to Northland Regional by Biospatial Ltd. Council.

Internal wetland advice

Throughout the year, Biodiversity staff provided technical wetland advice and ecological support to Compliance and Monitoring, Land Management, Consents, Rivers, and Planning Teams. This advice spanned a wide range of activities across Te Taitokerau, contributing to improved environmental outcomes and informed decision-making.

Key areas of involvement included:

- **Consent and Planning Support:** Biodiversity staff reviewed ecological effects assessments and monitoring plans for many proposed developments across the region. This included site visits to confirm wetland boundaries and providing input on potential ecological impacts of land use changes, such as subdivisions and infrastructure projects.
- **Monitoring and Compliance:** The team participated in peer review panels and assessed ecological monitoring reports submitted under consent conditions. Advice was provided on wetland classification and ecological values in response to compliance queries, including incidents involving vegetation clearance and stream modification.
- **Wetland Delineation and Assessment:** Wetland delineation was carried out in various locations to support flood protection planning, river realignment projects, and infrastructure development. Assessments included applying national wetland identification guidelines and evaluating ecological values to inform mitigation and restoration options.
- **Incident Response:** The team provided ecological assessments and delineation support following wetland-related incidents, including vegetation clearance, fish passage and stream barriers. Advice was used to guide enforcement actions, remediation and inform ongoing monitoring.
- **Regional and National Collaboration:** Input was provided into regional and national initiatives, including responses to environmental law queries regarding wetland compliance and monitoring practices in Te Taitokerau.

Kidney fern or Raurenga (Hymenophyllum nephrophyllum) sori at Waipu botanical ramble.

Landowner site visits and advice

Biodiversity staff carried out field visits and wetland surveys to provide advice to mana whenua and landowners on restoration, protection, and classification, including:

- Provided advice to a landowner at the Kerikeri Inlet regarding the likely presence of a wetland and the wetland regulations relating to a planned subdivision.
- Mātihetihe Marae, Mitimiti: Shared information on presence of wetlands and ecological values, as well as assistance options available from the biodiversity team to support local wetland enhancement.
- Te Puna Topu o Hokianga: Provided a report to a query about wetlands in their rohe, and options for surrounding land management. The report was based on a desktop assessment of aerial imagery, indicative wetland maps, and provided regulatory guidance and advice on protection.
- Tawapou wetland: Established WCI (wetland condition index) plots and discussed recommendations for wetland enhancement with the contractor.
- Nga Tangariki o Ngāti Hine Trust: Assisted the ecological consultant with a wetland and ecological assessment, carried out to delineate wetland areas for a proposed interpretative wetland boardwalk for the Kawakawa floodplain. The assessment was based on desktop and site assessments. Review of the survey and recommendation report was provided.
- Utakura-7 Incorporation: Participated in a site visit with incorporation representatives to assess the presence of wetland areas and discuss opportunities for enhancement and restoration, promoting growth of native species and rongoā plants in the Utakura Valley.
- Ngāti Manu, Kāretu: Discussed setting up a wetland monitoring programme, particularly for mānawa (mangrove; *Avicennia marina* subsp. *australasica*), saltmarsh, and other cultural keystone species. The monitoring will occur over the spring-summer months which is the best time for wetland plant identification. A trial of ground-based and drone surveys for pirita (green mistletoe; *Ileostylus micranthus*) presence within the saltmarsh and adjacent vegetation was carried out, to explore new monitoring techniques for inaccessible wetland areas and to obtain a map of the distribution of this unique species.
- Waipoua Forest Trust: Provided ecological advice for wetland enhancement and supported Trust staff development for future community-led wetland restoration projects as part of their broader restoration work.

Flowering Green mistletoe or pirita, (Ileostylus micranthus), Regionally significant.

Drosera pygmaea, At Risk – Naturally uncommon.

Wetland Monitoring

Target	Result	Details
Wetland monitoring 1. Refine monitoring framework and methodology based on advice gained from Envirolink 2. Develop a monitoring programme for the maximum 60 wetlands, staged for resourcing availability	**Partially achieved**	1. Methodology advice was not gained under an Envirolink project for NRC, due to lack of capacity with the provider (Manaaki Whenua-Landcare Research, MWLR). However, MWLR is leading a national wetland working group to develop a nationally standardised methodology for State of the Environment wetland monitoring. This will feed into NRC's monitoring methodology once up-dated 2. Initial development of the monitoring programme occurred towards the end of the 2024-25 year but had been on-hold awaiting up-dated methodology, which will be available in 2025-26. Monitoring will occur in 2025-26 WCI field season based on the existing methodology.

Wetland mapping

Target	Result	Details
Wetland mapping[4] Biodiversity collaboration with Planning and Policy's Wetland Mapping Project planning to incorporate verification and ground-truthing of mapped wetlands	**Partially achieved**	Verification of the gumland layer is in process. A methodology for establishing a confidence level for wetland significance has been developed and is underway. The new wetland map GIS layers have been made available internally for NRC staff, with a drop-in session with the developer provided with the roll-out. The maps are provided internally with the advisory that they are indicative of wetland location and extent but require field verification to confirm wetland presence or absence. The internal GIS viewer will be used to assist with map verification. The maps are not yet publicly available, but public release is planned in the coming year. Project deliverables managed and reported by Planning/ Policy.

Native turf sedge, (Fimbristylis velata).

[4] Summary from Planning and Policy TTMAC Working Party agenda item (Wetland Mapping Tool, 11 July 2024) and MacDonald A. 2024: Development of a wetland mapping tool. Report to Northland Regional Council by Biospatial Ltd.

Top Wetland Project

Target	Result	Details
Top wetland project 1. Minimum of FOUR Top Wetlands per year have a plan for basic restoration in place. 2. ONE restoration action agreed with mana whenua / landowner / community undertaken per wetland.	**Not achieved**	During the 2024-25 year, the Environment Grant fund scheme was on-hold due to changing priorities and criteria, resulting in no funding for Top Wetland protection (via fencing) or restoration. Land Management staff continued on-going Top Wetland fencing at three Far North properties (Mt Camel, Parengarenga, Te Paki) and three properties in the mid-north – West Coast area (Muriwai Stream Swamp, Manganui River Complex and Taikirau Wetland) The list of Top Wetlands still requiring protection was updated with latest fencing to the end of 2023-24. Discussions are on-going, working with Land Management to make connections with four or more landowners of Top Wetlands to work with for restoration.

Wetland training

A highlight for the year was the Biodiversity team successfully delivering another Wetland training series, continuing to strengthen internal capability across council. The programme combined theoretical, laboratory, and field-based learning, tailored to the needs of staff from Land Management, Compliance, Biodiversity, as well as Te Pou Taiao o Patuharakeke.

Renowned New Zealand wetland expert, Dr Beverley Clarkson, who was instrumental in developing the national wetland monitoring and delineation tools, joined the training to give a presentation on the delineation protocols and lead one of the practical field days.

Many participants had attended the inaugural course in 2023 and found that revisiting the material helped deepen their understanding and build on existing knowledge and skills.

Participants developed practical skills in identifying key wetland types across Te Taitokerau, recognising characteristic species, applying national wetland delineation methods, and interpreting the regulatory framework specific to Northland. This initiative continues to lay a strong foundation for enhancing mōhio (understanding) and capability within NRC for wetland-related mahi.

Target	Result	Details
Wetland delineation protocol training and refresher 1. Run ONE training workshop for council staff 2. Run ONE refresher per year 3. All relevant staff in the team will complete Wetland training and refreshers as needed	**Achieved**	1. ONE wetland training course was completed with 18 staff and Te Pou Taiao o Patuharakeke participants attending 2. ONE refresher day was offered but not completed due to insufficient interest 3. All Biodiversity staff have completed wetland delineation protocol training. In addition, a 1.5 day training with NorthTec students was delivered


Students dive into wetland plant identification and soil analysis in the lab learning how to identify wetland plants and soils.



Wetland delineation training in the field – NRC staff and Te Pou Taiao o Patuharakeke applying their training in a farm setting.

Biodiversity team staff were invited to run an introductory course on wetlands for the second year Environmental Management students at NorthTec, Whangārei as part of their Freshwater Ecology paper. Training was delivered over one and a half days incorporating both classroom, laboratory and field sessions. Classroom sessions covered the different wetland ecosystems in Northland, environmental pressures on wetlands, and national standards for wetland assessment, delineation and monitoring. The field site visit to the Wairua River Wildlife Management Reserve, allowed students to assess different wetland types and apply the delineation protocols. The final laboratory-based session gave students a hands-on introduction to wetland plant species and classification, using the council's extensive herbarium of wetland plants.


Left: NorthTec students carrying out wetland delineation, with a vegetation plot and soil assessment. Right: Soil assessment for the wetland soils delineation.

Matuku-hūrepo | Australasian bittern

The Biodiversity team continues to support conservation efforts for matuku-hūrepo through acoustic monitoring, community engagement, and inter-agency collaboration. Each year, new wetland sites are surveyed in response to public and organisational requests, using acoustic recorders to detect male booming calls (an indicator of potential breeding activity).

Acoustic monitoring was completed for the September 2024 to February 2025 breeding season at 13 sites, with only 3 sites recording males booming. Notably, two sites with previously released, tagged males by DOC, showed no booming during the monitoring period. No other threatened bird species were detected.

Staff also participated in the national Great Matuku Muster – a national survey coordinated through Love Bittern and supported by DOC. The muster calls on people to head to a wetland and listen at sunset for males booming during a full moon weekend over September, October and November.

NRC hosted the 2024 Regional Matuku-hūrepo Hui, bringing together organisations involved in monitoring this threatened species regionally to share knowledge and coordinate efforts.

"Slow for Bittern" signage was installed at two more sites (Karikari and Ngunguru) across the region to raise public awareness and reduce vehicle-related threats.

Council provided thermal drone survey support to DOC Kauri Coast. Although no nests, eggs, or chicks were found during the survey, shared knowledge around this new survey technique was gained for the region.

An internal workshop facilitated by Wendy Ambury from The Love Bittern Project was attended by staff from 11 NRC teams, enhancing understanding of matuku-hūrepo and other threatened wetland fauna. A dedicated Enviroschools workshop was also held, focussing on wetland species education through schools. In this session facilitators heard about current research, national initiatives, and upcoming resources to support wetlands through a matuku-hūrepo lens.

Community engagement, education, and advocacy remain central to the team's approach to supporting threatened species like matuku-hūrepo.

Target	Result	Details
Wetland threatened species – Fauna **Matuku-hūrepo/ Australasian bittern monitoring** 1. Project plan produced 2. Repeat acoustic survey locations from 2023 as per DOC protocols	**Achieved**	1. Project plan was completed and evolved over the year. 2. Only one of the 2023 sites was repeated after assessing the habitat for breeding and feedback from hapū. Acoustic recordings for 2023/24 and 2024/25 years were analysed and reported.

Left: Thermal drone (aqua light by tree) at dawn survey for bittern nests. Right: Matuku-hūrepo at Pawarenga. Photo: Stephen Collins.

Staff listening for booms during The Great Matuku-hūrepo Muster.

Mudfish

Target	Result	Details
Wetland threatened species – Fauna **Mudfish monitoring** 1. Produce a Northland mudfish monitoring plan in conjunction with DOC and the Water Quality team 2. Resurvey TWO current and THREE historic Northland mudfish sites. 3. Complete a black mudfish survey at Akerama wetland	**Partially achieved**	1. A Northland mudfish monitoring plan has been developed in conjunction with DOC and the Mountains to Sea Trust (MTS), following allocation in March 2025, of a grant from DOC's Community Conservation Fund to MTS for Northland mudfish survey and management 2. This plan has determined the priority of current and historic sites for survey, which will be carried out over winter/spring of 2025 3. Black mudfish survey at Akerama wetland is scheduled for winter of 2025 with Ngā Kaitiaki o Ngā Wai Māori

CASE STUDY

Kapehu Marae kahikatea swamp forest restoration

The Kapehu kahikatea swamp forest holds great ecological and cultural significance for the people of Kapehu Marae. Biodiversity staff were invited by mana whenua to visit the repo in June 2024 to kōrero about the condition of the repo, identify threats to its wellbeing and to provide recommendations for restoration planning. Kahikatea swamp forests are an acutely threatened ecosystem in Te Taitokerau and are one of the most reduced and least protected ecosystems in Aotearoa.

The initial hīkoi focused on whakawhanaungatanga, sharing knowledges and evaluating the biodiversity and ecological values of the kahikatea swamp forest and surrounding repo. Plant and fauna lists were compiled, along with restoration recommendations for this special wetland, which holds significant ecological potential. Key findings included improved protection with stock removal, managing pest plants, pest animal control, restoration planting and maintaining hydrology. The kahikatea fragments are under the sustainable size threshold (<7ha), with invasive species like alligator weed and Japanese honeysuckle posing risks. Hydrology appeared degraded due to historic drainage, while the canopy and understory vary in health across fragments.

With full support from the marae trust, stock were excluded from the wetland, and a shared commitment was made to further develop restoration plans.

A second follow-up visit in March 2025 recorded a comprehensive plant diversity of 145 species, including 101 natives, 44 exotic/naturalised and 8 weeds of concern. Five species of national or regional threat status were identified. This informed further restoration advice and included: a site-specific restoration plant list and reconnecting the two largest kahikatea stands, separated by 3.2ha of restorable land, as a key priority. Native planting (kahikatea canopy, mataī, pukatea, swamp māhoe) between and within the understorey of the kahikatea fragments, improving the hydrology (guided by an assessment of drainage systems) to support wetland rehydration were recommended. Weed and pest animal control, and native plant regeneration on hillslopes were also encouraged, along with finding resourcing to assist with restoration tasks. Impressively, 8,000 native plants have already been secured to be planted in the priority area this winter, with the support of the Kaipara Moana Remediation Project and ongoing efforts of the marae Trust. This is the first stage in implementing their long-term restoration plan for the repo.

Biodiversity staff acknowledge and celebrate the valuable mātauranga Māori lens of Kapehu and are pleased the information provided has complemented the great mahi being carried out by the people of this place.



Left: Kapehu kahikatea swamp. Middle: Biodiversity team staff and tangata whenua during a visit to assess the Kapehu kahikatea swamp. Right: At Risk – Naturally Uncommon ***Doodia mollis****, Kapehu kahikatea swamp.*

c. Ngā Awa | Streams and rivers

Biodiversity staff support other NRC teams with their mahi that supports Biodiversity outcomes over the summer period when freshwater field work is at its peak.

Freshwater Plants

Target	Result	Details
Freshwater threatened species monitoring – Plants List finalised and published of freshwater dependant threatened and uncommon plants.	**Partially achieved**	A draft list of freshwater dependant nationally threatened and uncommon plants was produced using an expert external panel. A full regional conservation status assessment of Northland vascular plants including listing of freshwater/wetland dependant species was organised for 2025/26 with the results published in a report.

Fish Passage remediation support

The Biodiversity team supported a multi-agency project to improve a weir on the Ruakākā River, which is used for public water supply. The goal was to help migratory native fish move past the structure more easily, which prior to remediation, posed a barrier to fish migration. Initial survey results, combined with NIWA data, revealed that 30 times fewer juvenile īnanga were found above the weir than below it – clear evidence that the structure was significantly impacting fish migration.

The Biodiversity team helped with fish surveys, led by Compliance Team. In total, 24 fyke nets and 80 gee minnow traps were set over an 800-metre stretch to live-capture and release fish before and after the weir was remediated.

This large-scale effort was supported by several council teams, Te Pou Taiao o Patuharakeke, Mountains to Sea , and DOC, who assisted with trap retrieval and species identification.

Left: Staff and NIWA surveying for īnanga prior to remediation of the weir. Right: After remediation.

Left: Electric fishing. Right: Torrentfish, (Cheimarrichthys fosteri).

Piharau | lamprey

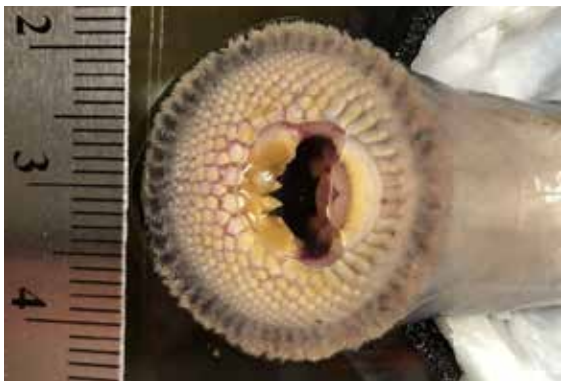
Target	Result	Details
Wetland threatened species – Fauna **Piharau/Lamprey** Develop a project plan for piharau/lamprey in collaboration with other NRC teams. Include surveys to identify current species sites. Develop waterway assessments around known sites.	**Partially achieved**	Knowledge gathering from DOC and NIWA as well as relationship building with hapū to develop a project to confirm presence in historical sites has begun. No surveys or assessments by the team have been undertaken.

This year, the Biodiversity team launched a dedicated web page to raise public awareness about the threatened and cryptic piharau (*Geotria australis*). The page provides key facts and guidance on how communities can support the conservation of this elusive species. In Te Taitokerau, piharau are considered regionally threatened, with no confirmed sightings since 2011.

Due to its conservation status, NIWA provided training to a multidisciplinary team from NRC on identifying suitable habitat and electric fishing methods last year. Following this, Biodiversity staff met with Northland DOC freshwater specialists to explore collaborative approaches for locating any remaining piharau populations in Te Taitokerau.

Initial efforts have focused on historical observation sites; the team is working alongside local hapū to collaborate on using eDNA to confirm the species' presence and assess the habitat conditions. If remnant populations are found, habitat restoration and protection recommendations will be made.

Currently, the project is on hold while the Cawthron Institute develops a species-specific eDNA assay and protocols. In the meantime, hapū are deepening their understanding of piharau and actively monitoring their local waterways for signs of this cryptic species.



Adult lamprey/piharau return from the ocean to the freshwater towards the end of their life cycle to breed. Once in freshwater they turn brown blending into their habitat. Piharau are jawless with rings of teeth and a circle of suckers to attach to ocean fish and help them navigate over freshwater fish barriers. Photo: Shared by NIWA.

Freshwater Education Events

The Biodiversity team collaborated with internal teams and external partners to support a range of freshwater education initiatives. These events provided engaging, place-based learning opportunities that fostered awareness and connection to freshwater ecosystems across Te Taitokerau.

At the Ngā Wai – Freshwater Enviroschools Whangārei and the Far North events, the Biodiversity team engaged over 120 students in hands-on learning about the importance of freshwater invertebrates and their role as indicators of stream health.

Through interactive sessions, tamariki learned how to identify freshwater invertebrates, understand their ecological significance, and explore how monitoring these species helps assess the condition of local waterways. Each child created an environmentally friendly 'bug bag', which they could deploy in their own local streams (awa) and retrieve after a week or more to observe and identify the aquatic life collected.

To enhance the learning experience, pre-deployed bug bags were opened during each session, allowing students to examine live specimens, identify different invertebrate species, and assess stream health based on the presence or absence of sensitive species.

These events fostered environmental awareness and empowered tamariki to become kaitiaki of their local freshwater ecosystems.

Ngā Wai - Freshwater Enviroschools Far North Event. The Biodiversity activity highlighted the role of freshwater invertebrates as indicators of stream health. Students learnt how to identify species and created eco-friendly "bug bags" to place in freshwater to capture invertebrates to assess water quality.

Over summer, the Biodiversity team joined other organisations supporting freshwater conservation, hosted by Mountains to Sea, to participate in two public night-time events: The Hātea Hīkoi in Whangārei and the Waipū Spotlighting Event. These unique experiences offered more than 150 attendees the opportunity to explore the river environment, its ecology, and cultural history after dark.

The team showcased electric fishing demonstrations, highlighting how to identify native and pest fish species and discussing ways to support native fish populations.

Other activities included a fern hunt, followed by a bat walk and talk after sunset, and invertebrate light trapping to observe nocturnal insect life.

Other NRC teams contributed with engaging activities focused on the life cycle of kākahi (freshwater mussels), predator control, and pest fish awareness, creating a rich and interactive learning experience for all ages.

Top left: Hātea River spotlighting the awa at night. Top right: NRC activities along the Hātea River. Bottom: Waipū spotlighting the awa at night.

Biodiversity staff, alongside the local Enviroschools facilitator, revisited BestStart Pipiwai Road to conduct a second fish survey of the Waitaua Stream, located just behind the daycare centre. The visit built on previous engagement, where tamariki aged 2–4 had begun showing greater care for their local environment—no longer discarding rubbish or toys into the stream—and were preparing to host a planting day with their whānau.

As part of the visit, gee-minnow traps were set overnight to help the children reconnect with the aquatic life in their local awa. The activity served as a gentle reminder of the living creatures that call the stream home, reinforcing the importance of kaitiakitanga from an early age.

6 Te Mata o Te Whenua
Terrestial

Field team members with giant Northern rātā (Metrosideros robusta), classified nationally as At Risk – Declining largely due to possum browse. This single threat has been directly responsible for the complete loss of Northern rātā in other regions.

Invertebrates caught on a carnivorous sundew.

Northland's terrestrial ecosystems are home to a rich diversity of native plants and fauna, many of which are unique to the region. The Biodiversity team's terrestrial work focuses on protecting, restoring, and enhancing these special ecosystems and species, and places a strong emphasis on building knowledge and capability within Taitokerau communities to achieve this.

Over the past year, our efforts have continued to be guided by strong partnerships with landowners, iwi and hapū, community groups, and other agencies. Together, we can achieve essential actions that are critical to halting biodiversity decline and building ecosystem resilience in the face of ongoing pressures such as land use change, invasive species, and climate change.

Projects that were led or supported by the Biodiversity team in 2024-2025 included:

- Te Korowai Ārahi Bioblitz (bat, bird and plant surveys and training)
- The Kohinui Bioblitz in Parua Bay (bat, bird, wetland, plants, invertebrate surveys and supporting a community day to share findings)
- Parihaka threatened plant assessment with mana whenua and Whangārei District Council
- Tūtāmoe DOC and Te Roroa botanical training
- Tangihua Lions Lodge nature trail upgrade (plant identification and labelling)
- Annual Taitokerau Bat Hui
- Te Wai Reo o te Pekapeka project with Ngāti Rua
- Te Haumihi pekapeka project with Ngāti Kuri and others
- Pukekauri bat search with Te Pou Taiao o Patuharakeke
- Follow up site assessment and bat survey at Jack's Bush with Ngāti Hine Forestry trust kaimahi
- The Bream Head Conservation Trust annual pōpōkōtea (whitehead) and toutouwai (North Island robin) survey
- Motukiore flora and management advice with mana whenua and DOC
- The Botanical Rambles with NRC staff and community
- Pukepoto Biodiversity and Cultural Assessment
- Biodiversity management of NRC owned Tāika Forest
- The Northland regional plant threat classification assessment

Regional conservation status of Northland plants

NRC Biodiversity team is leading a project to assess the conservation status of native plants in Northland, including offshore islands. This work follows the New Zealand Threat Classification System and builds on similar assessments completed nationally and by the Auckland, Wellington, and Otago Councils. (Note that non-vascular plants such as mosses and liverworts will be covered separately). The project supports broader biodiversity initiatives, complements efforts to identify wetlands and habitats for threatened species, and helps meet statutory obligations under current environmental legislation.

Target	Result	Details
Regionally significant species - Plants 1. Produce a draft list of species. 2. Analysis of status of listed species undertaken by expert panel.	**Partially achieved**	1. Draft list of 900 candidate species to review was produced. 2. An expert panel of six botanists was assembled to undertake the regional status assessments in early July 2025.

Left: Comb fern, (Microschizaea fistulosa). Right: Toropapa, *(Alseuosmia banksii* var. *banksia).*

Tāika Forest biodiversity management

In 2022 the Biodiversity team led a biodiversity values assessment for Tāika forest. The current programme of work is based on recommendations made in the 2022 report and is currently in a 3-year scoping period to enable the development of a 10-year biodiversity management plan.

The work programme is overseen by Biodiversity staff and divided into four key workstreams: Pest plant management, pest animal management, biodiversity monitoring and research, and partnerships with mana whenua. This year's work has been delivered primarily by Biodiversity, Biosecurity Partnerships, Compliance, Environmental Monitoring, hapū members of Ngāti Kahu o Torongare, Aki Tai Here and Ngā Kaitiaki o Ngā Wai Māori (NKONWM). It is supported and funded through the NRC Property and Investments team, who manage the Mt Tiger Forest property portfolio.

Target	Result	Details
Tāika Forest biodiversity management 1. Write a 3-year project plan in line with Long Term Plan funding. 2. Implement at least FOUR new recommendations from 2022 Biodiversity report. 3. Complete fish passage assessment and remediate at least ONE fish barrier. 4. Minimum of ONE objective defined and delivered with mana whenua.	**Partially achieved**	1. The project plan was not written due to uncertainty around ongoing ownership, however this is now clear and will be written by February 2026. 2. Four new recommendations were implemented - treatment of all pest plants off the western Wrack Road section of the forest, lizard monitoring equipment installed and one shelter check completed. NorthTec and Auckland University Masters students completed research at the site and a bat catch and transmitter survey was trialled. 3. All six fish passages have been reassessed, and remediation trials are underway for 2 barriers. 4. Five objectives have been defined by Ngā Mahinga o Ngāti Kahu o Torongare and one has been delivered.

This year, Aki Tai Here and Biosecurity Partnerships have made significant reductions to the weed burden of Tāika forest, and the entire western Wrack Road section has now been fully treated. Controlled plants include, Queen of the night, Elaeagnus, Privet, Wild ginger, and Taiwan cherry, some of which were a significant size, requiring multiple treatments. Biosecurity staff have greatly reduced the density of weeds around entrances, property and native forest fragment boundaries, and along bait station lines with a particular focus on elaeagnus, ginger, climbing asparagus and moth plant.

A one-year pest animal management plan was written and delivered with regular trapping yielding a total of 418 pests including 14 cats, 9 hedgehogs, 2 mice, 271 possums, 112 rats, 2 stoats and 8 weasels. Mustelids were targeted in Spring/Summer of 2024 using a secondary toxin program and a University of Auckland Masters Research Project trialled 12 different cat lures at six trail camera sites. Three cats were recorded on camera and three cats were caught in traps close to the camera sites within a week of the trial ending. Tāika forest is one site in this nationwide study.

A Pekapeka/bat trapping and tagging survey was trialled in late January, however due to the cryptic nature of pekapeka and their temporary absence that week, the project was shortened to 2 days. Acoustic recordings of activity have decreased over the last three years, and long-term bat loggers will be installed to help identify activity patterns over greater periods, to better inform future trapping and tagging surveys.

Unfortunately, one female kiwi known to be living in Tāika forest was found dead in the neighbouring Whangārei District Council Forest block. The body was very decomposed but had many broken ribs, indicating this mortality was likely to be caused by dog predation.

Ngā Mahinga o Ngāti Kahu o Torongare provided feedback for the annual work programme and have identified five objectives for progressing the partnerships work programme. An important relationship building hui was successfully delivered by Ngāti Kahu o Torongare and significant guidance and leadership was shared by hapū kaumātua for the Tāika bat catching and trapping project. This project followed and celebrated tikanga Māori throughout the survey, providing an opportunity for the field team to grow their awareness of tikanga practices, while also developing technical bat survey skills and knowledge. Ngā Kaitiaki o Ngā Wai Māori have been working alongside NRC on fish passage remediation, including leading the development of a mātauranga Māori based solution for fish passage remediation which will be trialled at 3 barriers in Tāika forest.

Pekapeka / Bat

A total of seven acoustic bat surveys were completed in Te Taitokerau last season targeting long-tailed pekapeka (*Chalinobus tuberculatus*), largely in response to community requests. This revealed three new known locations for this Threatened - Nationally Critical species and provided training and knowledge building experiences for five teams of kaimahi.

The Biodiversity team hosted another annual Te Taitokerau Bat Hui with the purpose of collaborating and supporting pekapeka mahi and recovery across the region, and delivered the first successful bat catch and transmitter survey of pekapeka tou-roa in Te Taitokerau. This was initiated in Tāika forest and partnered with Ngāti Kahu o Torongare, Te Parawhau, The Pukenui trust, KiwiCoast and Kiwi North. Two male long-tailed bats were captured in Pukenui Forest, tagged, and transmitters were attached with the goal of upskilling local bat workers, piloting bat catching in Northland and identifying critical roost habitat. This project garnered significant support from the community and will form a foundation for future bat catching projects in the region.

Left: International bat expert shows local kaumātua, NRC, Pukenui Trust and KiwiCoast staff how to set up a harp trap in Tāika Forest.
Right: Measuring wing length and age identification of a long-tailed bat during the catch and transmitter survey in January 2025.

Target	Result	Details
Threatened Fauna- **Regional pekapeka/bat conservation assessment and training** 1. Develop a pekapeka/bat regional conservation assessment report and publish on council website. 2. Update data from FOUR bat surveys on council in-house maps. 3. Deliver ONE community education day on bats and at least THREE social media posts.	Partially achieved	1. The regional bat conservation assessment was not achieved due to staff availability and inadequate resourcing. 2. Six acoustic bat surveys in new locations were completed. 3. A bat night walk with the public was delivered as well as five training experiences with local kaimahi. No social media posts were made.

Herpetofauna/reptiles & amphibians

Northland is currently home to 38 species of reptiles and four species of amphibians, and is one of the most species rich regions for lizards in Aotearoa. Due to budget constraints, the targets for herpetofauna were not achieved, however they are planned for Spring/Summer 2025. An educational presentation about the Hotchstetter's frog was delivered to the Piroa Trust at one of their monthly dinners and mokomoko lizard education and monitoring were run in conjunction with the Coastcare team.

Target	Result	Details
Threatened Fauna- **Regional herpetofauna conservation assessments and training** 1. Develop a herpetofauna regional conservation assessment report and publish on council website. 2. Workshop delivered to >15 council staff (Northland Regional and WDC).	Not achieved	1. The herpetofauna regional conservation assessment was not achieved due to staff availability and inadequate resourcing. 2. The workshop was not held due to staff availability and inadequate resourcing.

Terrestrial Education Events

This year Biodiversity staff went to Matarau school with Years 0 to 8, all 265 students rotated through a series of hands-on 30-minute sessions designed to deepen their understanding of our birdlife and the role they play in our ecosystems and culture. Tamariki learned how to identify birds by their calls, explored the link between beak shape and diet, and even took part in a mock garden bird survey. The day also tied in with the national Garden Bird Survey, run by Manaaki Whenua which the school encouraged whānau to take part in over the holidays. With support from Kaipara Moana the school plans to plant native trees around the school to bring more birds in and protect their school habitat.



Biodiversity staff avian activities with Matarau School students.

Botanical Rambles

Another successful year of weekend botanical rambles was held which took NRC staff and community members to six botanically rich locations in Te Taitokerau with some of the region's best experts. These events are an after-hours opportunity for people to explore the diversity of plants in Northland and improve their botanical literacy in the company of like-minded people.

Botanical Ramble's for the year included:

- The Waipū gorge reserve and neighbouring private block featuring unique gumland, fascinating local history and a significant stand of At Risk – Naturally Uncommon *Halocarpus kirkii*
- Kai Iwi Lakes featuring our unique dune lake and gumland vegetation.
- Tutukākā rimurimu (seaweed) day, learning about kelp restoration with Mountains to Sea Conservation Trust and Te Wairua o Te Moana Trust.
- Tangihua Forest overnight weekend ramble staying at the Tangihua Lions Lodge.
- Tūtāmoe Maunga botanical training for DOC and Te Roroa field staff, as well as a site search for Northland horopito (*Pseudowintera insperata*).
- Fantastic fungi at the William Upton Hewitt Memorial Reserve, with a focus on lichen and mushrooms.

Left: Halocarpus kirkii. Right: Looking at native orchids on the edge of Lake Kai Iwi.

Participants from the Tutukākā rimurimu (seaweed) day.


Left: A green wax cap (Gliophorus) fungi. Right: Orange poreconch (Favolascia calocera) fungi.


Left: Fungi sprouting beside sundew's. Right: Urnula campylospora fungi.


Left: Birds nest fungi. Right: Tāmingi (Epacris pauciflora).

Biodiversity team on the way to Limestone Island.

Northland
REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau