

# Natural Resources Working Party

Wednesday 25 February 2026 at 9:00 am

# AGENDA

## Natural Resources Working Party Agenda

Meeting to be held in the Council Chamber  
36 Water Street, Whangārei  
on Wednesday 25 February 2026, commencing at 9:00 am

**Please note: working parties and working groups carry NO formal decision-making delegations from council. The purpose of the working party/group is to carry out preparatory work and discussions prior to taking matters to the full council for formal consideration and decision-making. Working party/group meetings are open to the public to attend (unless there are specific grounds under LGOIMA for the public to be excluded).**

### MEMBERSHIP OF THE NATURAL RESOURCES WORKING PARTY

Chairperson, Councillor Geoff Crawford  
Te Rūnanga-Ā-Iwi-O-Ngāpuhi Janelle Beazley  
Councillor John Blackwell  
Ngāti Tara Mahue Greaves  
Councillor, Amy Macdonald  
Councillor Arama Morunga  
Te Rūnanga o Ngāti Whātua Ihapera Paniora  
Te Rūnanga o Te Rarawa Abe Witana  
NRC Chair, Pita Tipene (Ex-Officio)

### KARAKIA

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*This report entitled ‘January Weather Event’ by Chantez Connor-Kingi, Kai Whiri Iwituna - Senior Catchment Advisor and Jason Donaghy, Natural Resources Monitoring Manager is to be tabled as a late item for information purposes. Staff will be available at the meeting to discuss the report.*

### **Opening Karakia**

Whakataka te hau ki te uru,  
Whakataka te hau ki te tonga.  
Kia mākinakina ki uta,  
Kia mātaratara ki tai.  
E hī ake ana te atākura he tio,  
he huka, he hauhunga.  
Tuturu whakamaua kia Tina (Tina)  
Haumi e! Hui e! Tāiki e!

### **Closing Karakia**

Unuhia, unuhia  
Unuhia ki te uru tapu nui  
Kia wātea, kia māmā, te ngākau, te tinana, te wairua i  
te ara tangata  
Koia rā e Rongo, whakairia ake ki runga  
Kia tina! TINA! Hui e! TĀIKI E!



**TITLE:** **Record of Actions – 6 August 2025**

**From:** Sandra Harris, Personal Assistant - Pou Tiakai Taiao

**Authorised by** Ruben Wylie, Pou Tiaki Taiao, on 19 February 2026  
**Group Manager/s:**

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### **Whakarāpopototanga / Executive summary**

The purpose of this report is to present the Record of Actions of the last meeting (attached) held on 6 August 2025 for review by the meeting.

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### **Attachments/Ngā tapirihanga**

Attachment 1: Record of Actions - 6 August 2025 [↓](#) 

Natural Resources Working Party  
6 August 2025

## Natural Resources Working Party Record of Actions

Meeting held in the Council Chamber  
36 Water Street, Whangārei  
on Wednesday 6 August 2025, commencing at 10am

### Tuhinga/Present:

Chairperson, NRC Deputy Chair Tui Shortland  
Ex-Officio Geoff Crawford (Ex-Officio)  
Councillor Marty Robinson  
Councillor Rick Stolwerk

### I Tae Mai/In Attendance:

#### Full Meeting

Tāhūhū Rangapū - Chief Executive Officer  
Pou Tiaki Taiao | GM Environmental Services  
Kipa Munro, Te Ruarangi Representative  
Cr Blackwell  
Personal Assistant Pou Tiaki Taiao

#### Part Meeting

Hon Andrew Manager (telephone)

The meeting commenced at 10.03am with karakia by Kipa Munro.

### Ngā Mahi Whakapai/Housekeeping (Item 1.0)

### Ngā Whakapahā/Apologies (Item 2.0)

Te Ruarangi Geraldine Baker, Te Ruarangi Representative Mira Norris, Councillor Amy Macdonald, Te Ruarangi representative Lynette Wharerau,

### Record of Actions – 21 May 2025 (Item 4.1)

**Presented by:** Ruben Wylie, Pou Tiaki Taiao | GM Environmental Services

#### Agreed action points:

- Working Party members agreed that the record of actions was an accurate reflection of the meeting

Natural Resources Working Party  
6 August 2025

### **Receipt of Action Sheet (Item 4.2)**

**Presented by:** Ruben Wylie, Pou Tiaki Taiao | GM Environmental Services

**Agreed action points:**

- Outstanding actions to be presented as part of agenda today.

### **Natural Resources Mahi Highlights (Item 4.3)**

**Presented by:** Jason Donaghy Monitoring Manager, Lisa Forester Biodiversity Manager, Ellen Williamson Land Programme Manager, Tami Woods Policy and Planning Manager

**Discussion and agreed action points:**

- The presentation on Natural Resources Mahi Highlights was given at the working party. Presentation material was provided to working party members prior to the meeting.
- Action: Develop and present a written survey to councillors capturing feedback from all Primary Sector Liaison Group and Tangata Whenua representatives involved in the Freshwater Plan development process.
- Noted: Taumarere Business Case is scheduled to be presented to Council at the September meeting.
- Noted: Working Party acknowledged and expressed appreciation for the significant mahi undertaken by the teams and community partners, and recognised the ongoing efforts contributing to this work.

### **Freshwater Farm Plans Update (Item 4.4)**

**Presented by:** Tami Woods, Policy and Planning Manager

**Discussion and agreed action points:**

- Action: Deliver an update once there is greater clarity regarding the proposed framework changes to the Freshwater Farm Plan Regulations.

*Direction to continue as per report and agreed actions*

1. Changes to the Freshwater Farm Plan Regulations to date and that more changes are still to come later in 2025.
2. On-going work by NRC, while we await the full suite of changes, to ensure Te Taitokerau is well placed to commence roll out of Freshwater Farm Plans from mid-2026.

Natural Resources Working Party  
6 August 2025

### **Resource Management Reform (Item 4.5)**

**Presented by:** Tami Woods Policy and Planning Manager and Justin Murfitt Strategic Policy Specialist

#### **Discussion points::**

- The team discussed challenges with limited transition time, unclear legislative direction, and the need to prioritise workloads and share expertise. A programme team has been introduced, with 2026 flagged as a key milestone amid ongoing uncertainty and change fatigue.

#### *Direction to continue as per report and agreed actions*

1. The governments progress around the resource management reforms.
2. Key implications of the changes.

### **Future strategic focus areas (Item 4.6)**

**Presented by:** Justin Murfitt Strategic Policy Specialist

#### **Agreed action points:**

- **Noted:** The team emphasised focusing on current Regional Plan provisions and regulatory services, with clearer legislative direction expected in the coming years. Spatial planning and data readiness were flagged as priorities for the next council term. Positive feedback was shared on collaboration and strong working relationships

#### *Direction to continue as per report and agreed actions*

1. That the Working Party receive the report
2. That the Natural Resources Working Party endorse the potential areas of focus outlined in the report.
3. That staff report back to the Natural Resources Working Party on this topic at its next meeting following the 2025 local government elections.

### **Whakamutunga (Conclusion)**

The meeting concluded at 12.20pm with karakia from Kipa Munro and closing by Chairperson Shortland.

**TITLE:** Receipt of Action Sheet

**From:** Sandra Harris, Personal Assistant - Pou Tiakai Taiao

**Authorised by** Ruben Wylie, Pou Tiaki Taiao, on 19 February 2026  
**Group Manager/s:**

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### **Whakarāpopototanga / Executive summary**

The purpose of this report is to enable the meeting to receive the current action sheet.

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### **Nga mahi tutohutia / Recommendation**

That the action sheet be received.

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### **Attachments/Ngā tapirihanga**

Attachment 1: Action sheet [↓](#) 

Natural Resources Working Party  
Schedule of Actions 25 February 2026

Meeting date	Item	NRWP action	Responsible staff	Status	Notes
12 March 2025	Coastal State of the Environment Report (Item 4.5)	To report back to the Working Party at future date and how engagement with communities is shared around data	Jason Donaghy	In progress	The campaign plan is currently in progress, with partners contributing to the collation of materials intended to support forthcoming engagement activities.
21 May 2025	Northland's Dusty Roads (Item 4.4)	Report on current compliance monitoring outcomes based on existing budget and activities. This initial reporting will establish a baseline of what is currently being delivered.	Colin Dall		
6 August 2025	Natural Resources Mahi Highlights (Item 4.3)	Develop and present a written survey to councillors capturing feedback from all Primary Sector Liaison Group and Tangata Whenua representatives involved in the Freshwater Plan development process.	Tami Woods	In progress	The survey is to be sent out in March. Results available from April.
6 August 2025	Freshwater Farm Plans Update (Item 4.4)	Deliver an update once there is greater clarity regarding the proposed framework changes to the Freshwater Farm Plan Regulations.	Tami Woods	In progress	We are still awaiting the revised regulations to be released.

**TITLE:** Taumārere Business Case - next steps  
**From:** Justin Murfitt, Strategic Policy Specialist  
**Authorised by** Ruben Wylie, Pou Tiaki Taiao, on 19 February 2026  
**Group Manager/s:**

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### Whakarāpopototanga / Executive summary

At the September 2025 meeting a business case developed in partnership between council and Ngāti Hine was presented to council: 'Taumārere: Giving effect to te Mana me te Mauri o te Wai'. The business case was developed in partnership between council and Ngāti Hine given much of the catchment is within their rohe and their role as kaitiaki. It identifies a range of targeted remedial actions and scenarios to improve the water quality and ecosystem health of the fresh and coastal receiving waters of the catchment over time – it also sets out associated costs and benefits of the actions/scenarios and a potential approach to implementation.

The business case sets out a 'blueprint' for Māori-led regeneration of the catchment and provides a strong platform to work with Ngāti Hine to seek co-investment / funding. It is recommended that council continue to partner with Ngāti Hine on the next steps, including identifying potential investment / funding and developing options for implementation of remedial actions in the Taumārere catchment.

This report provides an indication of potential next steps for consideration and endorsement by the Working Party before being presented to council and being discussed and confirmed with Ngāti Hine. If progressed, updates on progress and any proposals / recommendations would be reported back to this Working Party for consideration and endorsement before being presented to council.

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### Ngā mahi tūtohutia / Recommended actions

1. That the report Taumārere Business Case - next steps by Justin Murfitt, Principal Advisor, Environmental Services be received
2. That the Working Party endorse the next steps (with any amendments) for implementing the business case set out in the report are progressed.
3. Updates on progress and any proposals/recommendations are reported back to this Working Party for consideration and endorsement.

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### Background/Tuhinga

At the September 2025 meeting a business case developed in partnership between council and Ngāti Hine was presented to council: 'Taumārere: Giving effect to te Mana me te Mauri o te Wai'. The business case was developed in partnership between council and Ngāti Hine as much of the catchment is within their rohe.

The business case identifies a range of targeted remedial actions (and their costs and likely benefits) to improve the water quality and ecosystem health of the fresh and coastal receiving waters of the catchment over time. It provides a 'blueprint' for Māori-led regeneration of the catchment and a strong platform to work with Ngāti Hine to seek co-investment / funding for implementation.

Central government has signalled support for locally developed catchment remediation initiatives and the use of freshwater farm plans as a key tool for improving freshwater. The business case is therefore very timely in that it can support both these initiatives. It is therefore recommended that

council continue to partner with Ngāti Hine on the next steps, including identifying potential investment / funding and developing options for implementation of remedial actions in the Taumārere catchment. It is proposed that the Working Party be the governance forum for overseeing these next steps in the interim – until such time as staff have engage with Ngāti Hine to agree on how best to partner to leverage funding to support the business case.

Proposed next steps are set out below (subject to consideration by council and Ngāti Hine):

That staff partner with Ngāti Hine to develop a strategic approach to engaging with potential investors, including the Crown and NGOs. Note that council is also a potential investor and options to support the business case either through existing resources and/or funding allocated via the next LTP will also be explored and reported on.

It is anticipated that this work will include:

- a. Development of communications and engagement approaches to engage with potential investors
- b. Identification of options to seek third party investment (E.g. central government or 'green investors', including the potential for carbon returns and /or biodiversity credits to support outcomes).
- c. Initial design of long term environmental / cultural health monitoring in the catchment (to track improvements in state)
- d. The design of medium - longer term council / Ngāti Hine investment options (E.g. a new initiative for the next NRC Long-Term Plan)

It should also be noted that being a non-regulatory programme, the implementation of such catchment remediation initiatives are unlikely to be materially affected by central government's resource management reforms – implementation is also expected to complement government intentions relating to catchment remediation and delivery of freshwater farm plans. Given the similarities with the Kaipara Moana Remediation project, it is also anticipated that lessons learnt from that programme could be applied to implementation in the Taumārere catchment.

Working Party guidance on the next steps outlined above would be appreciated. Once endorsed by the Working Party (subject to any guidance / direction), staff will commence progress the above and provide an update work to the Working Party at its next meeting.

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### **Ngā tapirihanga / Attachments**

Nil

**TITLE:** **Strategic review of Northland Regional Council's Natural Resources Unit**

**From:** Ruben Wylie, Pou Tiaki Taiao and Jason Donaghy, Natural Resources Monitoring Manager

**Authorised by Group Manager/s:** Ruben Wylie, Pou Tiaki Taiao, on 19 February 2026

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### **Whakarāpopototanga / Executive summary**

State of the environment (SOE) monitoring is a mandatory requirement under the Resource Management Act 1991 (RMA). Northland Regional Council (NRC) has undergone an expansion in monitoring activity, primarily driven by central government directives such as the National Policy Statement for Freshwater Management (NPS-FM).

The purpose of this report is to present the findings of an external strategic review of the Natural Resources Unit (NRU) undertaken by Mātaki Environmental; and to recommend next steps with respect to actioning and reporting on its recommendations. The strategic review is attached as Attachment 1.

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### **Ngā mahi tūtohutia / Recommended actions**

1. That the report Strategic review of Northland Regional Council's Natural Resources Unit by Ruben Wylie, Pou Tiaki Taiao and Jason Donaghy, Natural Resources Monitoring Manager be received.
2. That the Natural Resources Working Party provide feedback

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### **Background/Tuhinga**

The Natural Resources Unit monitors the state of the environment by tracking water quality and quantity, air quality, ecological health, and coastal, lake, groundwater, and river conditions. This monitoring provides essential data to detect environmental changes, assess the effectiveness of council plans and strategies, and support national and regional environmental reporting. The unit's Science, Data, Hydrology, and Water Quality Field Operations teams work together to collect, manage, and quality-check environmental information. Their work underpins a wide range of council activities – from regional policy development to flood protection engineering – and plays a critical role in supporting Civil Defence Emergency Management during flood and drought events.

The review found that while NRC invests in a considerable amount of high-quality environmental data and staff are highly engaged, the programme would benefit from aligning investment to better fit council's strategic priorities, investigating better cost recovery mechanisms and increasing the focus on the data value chain (i.e. how data is used to inform policy and its ultimate impact).

The review recommends shifting focus towards optimisation. This involves developing a structured decision-making framework to review current investments and exploring alternative funding models to reduce the burden on general rates. Implementing these recommendations will ensure the programme is fit for purpose, meets statutory obligations, and delivers better returns on investment.

The role and function of the Natural Resources Working Party (as per the Terms of Reference) includes monitoring and reviewing progress towards council's objectives, the achievement of the performance targets and the delivery of work programmes in, amongst other things, operational

strategies associated with council's natural resource management activities in addition. Direction is therefore sought from the Working party in respect of the next steps following the completion of the strategic review.

The recommended tasks and activities are set out below. These have been developed to be considered with the following strategic objectives – which are contained in the 2024-43 Long Term Plan:

- **Providing efficient, progressive and transparent council systems.** This is about ensuring councils investment into the monitoring and reporting of our SOE programme is efficient
- **Resilient communities in a changing climate.** This is about ensuring the work delivered by the NRU services, the *Ngā Taumata o te Moana*/Climate Change Strategy
- **Meaningful partnership with Tangata whenua.** This ensures the review process is not just fiscal, but meets the *Tāiki ē* by recognising the work programme of the NRU has a role in respect of support iwi/hapū aspirations
- **Healthy waters land and air.** This is about ensuring data collection is linked to implementation outcomes and that these are balanced to meet council's strategic priorities

Based on the recommendations contained in the report, and the above objectives, the below workstreams are intended to be undertaken. Feedback is sought both in respect of the objectives and work plan.

#### Work plan:

1. Confirm high level strategic objectives required to underpin the review process (this meeting).
2. Develop and confirm the process of how the review will be undertaken including the scope and decision-making framework (4x weeks), aim to complete by March 2026.
3. Undertake the review (6x months), aim to complete by end of August 2026. Key outcomes to for this work are to include:
  - a. Recommendations on resourcing optimisations/reprioritisations that reflect best value for communities whilst achieving council's strategic objectives and reflect the changing legislative climate;
  - b. Recommendations on cost recovery changes that reflect a greater focus on user pays for activities, including administrative and data management tasks, linked with resource consent implementation.
  - c. Recommendations on key shifts needed to create a better balance between data collection and policy outcomes.
4. Provide a progress update to Natural Resources Working Party May/ June 2026
5. Present finding recommendation back to the working party for direction last quarter of 2026

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## Ngā tapirihanga / Attachments

Attachment 1: Strategic review of Northland Regional Council's Natural Resources Unit [↓](#) 

Mātaki Environmental



## Towards optimisation

A strategic review of  
Northland Regional Council's  
Natural Resources Unit

Prepared by  
Dr Marie Doole

FINAL 13 January 2026

## Executive Summary and Recommendations

State of the environment monitoring and reporting is a critical role for regional councils, and a mandatory requirement under the Resource Management Act 1991. While the role is mandatory, many aspects of it have limited guidance or clear expectations, meaning each council devises its own way of meeting the obligation, and benchmarking is thus challenging.

Northland Regional Council (NRC) has had a rapid increase in activity in state of the environment monitoring and reporting, mainly in response to central government freshwater directives. The programme expansion has occurred, focused on meeting increasing need for information, but has lacked some elements of a strong strategic approach to deciding what to monitor and how to then use that information.

This report describes a review undertaken of the activities of the Natural Resources Unit (NRU) in relation to state of the environment monitoring and reporting. The trigger for the review was the recognition that the rapid programme expansion and then need to carefully prioritise resource expenditure as budgets generally level out or decrease.

The review found that NRC invests in a considerable amount of environmental data and information, staff experience high workloads and prioritisation is difficult. A careful and systematic review would detect opportunities to reduce expenditure and create resource headroom for collaboration and novel synthesis. To enable these outcomes, the review recommends the following

**Recommendation 1** - NRC develops a structured framework to collectively review its state of the environment monitoring and reporting

**Recommendation 2** - NRC uses the review process to refine and implement an ongoing stewardship programme

**Recommendation 3** - NRC seeks to optimising funding models to reduce ratepayer burden and distribute resources more fairly

Implementing a review and building a framework for ongoing stewardship will enable NRC to continually optimise its approach to SOE monitoring and reporting and ensure good returns on the investment. Sharing the costs more fairly within and outside of council will also maximise the value of available funding.



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## Section 1 - Overview and Report Purpose

State of the environment monitoring is a statutory obligation of councils and central government, set out under the Resource Management Act 1991. Further responsibilities exist under a range of other legislation (Biosecurity Act 1993, Local Government Act 2002 and the Environmental Reporting Act 2015). Councils must monitor the 'state of the whole or any part of the environment of its region or district to the extent that is appropriate to enable the local authority to effectively carry out its functions under this Act' (RMA, s35(2)(a)). The scope is broad and outside of freshwater, guidance and direction are limited.

Over the past seven years, NRC has undergone a significant expansion in its monitoring and reporting work, partly provoked by the repeat iterations and new requirements of the National Policy Statement – Freshwater Management (NPS-FM). Water related monitoring obligations now dominate the programme. Given recent rapid expansion, burgeoning responsibilities and challenging financial conditions this review has been requested to provide an external perspective on the programme and what it delivers. The method for the review comprises interviews, a stocktake of existing efforts, a brief literature review and targeted expert engagement (e.g., with NEMS).

This project seeks to do a ground up review of SOE monitoring and reporting by the Natural Resources Unit of the Northland Regional Council. The aim of this analysis is to:

- Review existing responsibilities and obligations of NRC for monitoring and reporting on the state of the environment including special projects
- Stocktake existing investment, the balance of that investment and explore the benefits that it yields
- Evaluate the existing investment from a range of perspectives and explore potential improvements and calibrations
- Review and evaluate the feedback loops that do or do not exist to ensure activities inform policy, consenting and other functions
- Provide robust and actionable recommendations on those potential improvements

The purpose of this project is to support NRC to make future investment decisions around their monitoring functions so that they can make sure resources are balanced between data gathering, data management and reporting; and are being adapted to account for changes in statutory direction and other drivers.



## Purpose and method

The purpose of this report was to undertake a deep dive into SOE monitoring and reporting in scope of the project (NRU only). The key elements are

- A stocktake of existing SOE monitoring and reporting
- A review of the existing work against statutory and other drivers
- A consideration of the value for money and return on investment

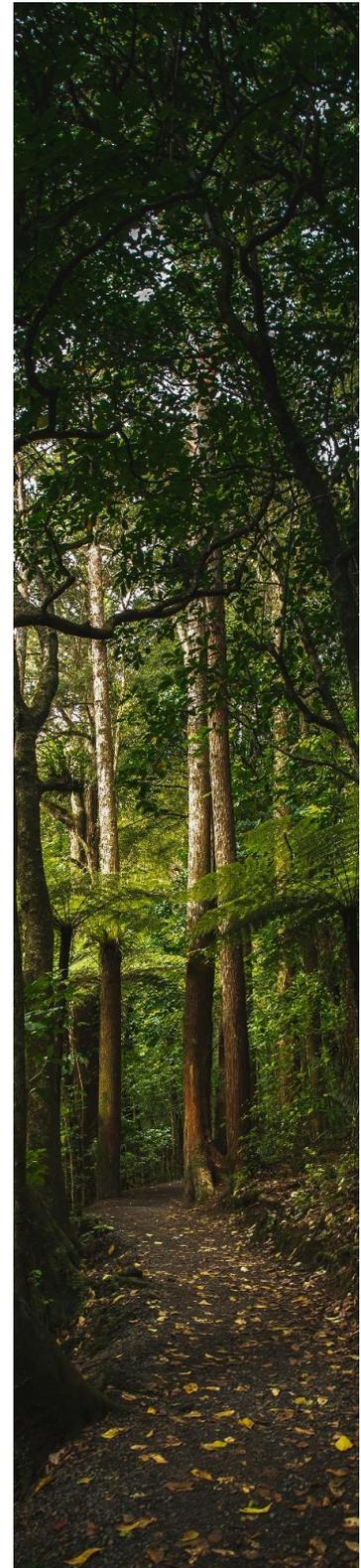
The basis for this analysis will comprise staff interviews and engagement, engagement with executive, systematic review of existing SOE monitoring and reporting supported by a literature review and benchmarking. Three key data collection phases were

- Familiarisation with work to date on SOE monitoring by NRC including internal and external evaluation at a council and at a sector level in addition to determining key obligations and expectations of the council in SOE monitoring.
- Stocktaking all existing efforts to procure or collect data and information in addition to staff engagement via interviews and informal discussions on and off site. The development of a comprehensive spreadsheet that defined and delimited the scope of the review.
- Explore data value chain management in-house, how are data and information stewarded currently (ensure specific to each dataset where differences are evident) and what is the spread of effort across that chain?

A series of semi structured interviews were conducted with key staff and management over the course of the project. While many interactions were bespoke and related to specific inquiries to support the deep dive, an initial programme of interviews asked a standard suite of questions. While they may not be representative of the all the views of management and staff, they provide useful insights which are aggregated and briefly summarised.

A wide range of internal and external council documents were reviewed alongside the interviews. NRC maintains good records of the scale and nature of the work programme; there is a positive culture of continuous improvement and management has recently started to code all work against different work areas (providing valuable information in due course on proportional expenditure).

Notwithstanding the obvious strengths, this review will explore how to strengthen the approach to programme stewardship, backfill some critical analysis and consider how the costs of the programme can be met in more diverse ways.



## Section 2 - Key Background Information

Effective monitoring tracks human impacts on the environment and increases the reportability of the outcomes achieved by regulatory and non-regulatory<sup>1</sup> interventions. Capturing key data and information that informs an understanding of the state and trends in the environment helps determine the impact of management interventions and prioritise new ones against common environmental issues such as water quality, impacts of extreme weather events and biodiversity loss. However, the scope and scale of the role make prioritisation across so many different work areas and in response to so many drivers naturally challenging. What does success look like?

### Unlocking the benefits of investment

Some data is collected on a short term and reactive basis, but most environmental data is long term, often reflecting slow moving trends and chronic impacts. The value of long-term datasets requires particular consideration: the benefits of the information they yield must initially and continuously be determined to be worthwhile (Caughlan and Oakley, 2001). Benefits can be very challenging to quantify as they may be contested and are commonly non-monetary in nature. In addition, costs are often underestimated, especially when data processing and other later stages of data stewardship are fully costed. Monitoring programmes benefit from being clearly planned for and well-designed at the outset, ensuring they survive later analysis.

Exploring best practice in the design of environmental monitoring programmes exposes some common themes where failings occur and investment returns little. Lindenmayer et al provided a consolidated list of the 'do nots' when designing an environmental monitoring programme, which was then presented as a checklist of components of an effective monitoring programme. The 'nevers' are set out in Box 1. The 'nevers' represent common failings of environmental monitoring programmes and strategic and operational dilemmas for decision makers. Budgets, staffing, organisational foci and capability vary over time, so making concrete plans for distant analysis is understandably challenging, but long-term stewardship is vital to the integrity of a programme.

#### **Box 1 The 'nevers' of environmental monitoring programmes**

- (1) Never commence a new environmental management initiative without also committing to a monitoring program.
- (2) Never start a monitoring program without clear questions.
- (3) Never implement a monitoring program without first doing a proper experimental design.
- (4) Never ignore the importance of matching the purpose and objectives of a monitoring program to the design of that program.
- (5) Never change the way you monitor something without ensuring new methods can be calibrated with the old ones.
- (6) Never try to monitor everything.
- (7) Never collect data without planning to curate and report on it.
- (8) If possible, avoid starting a monitoring program without the necessary resources secured.

<sup>1</sup> 'Non-regulatory interventions' refer to investment in catchment restoration, support to increase water efficiency in dairy operations and other community support not required by statute or a consent. The nature of council's role is regulatory however, so it is not a binary grouping necessarily.

## Managing the data value chain

Stewardship of environmental data and information management is a vital piece of the puzzle and there are a range of frameworks designed to support programme design. To guide this analysis, the concept of the data value chain was drawn on. This stepwise and systematic framework has broad uptake and helps data managers and users to manage the end-to-end process of identifying data to be collected through to measuring its impact and revising approaches based on the lessons learned.

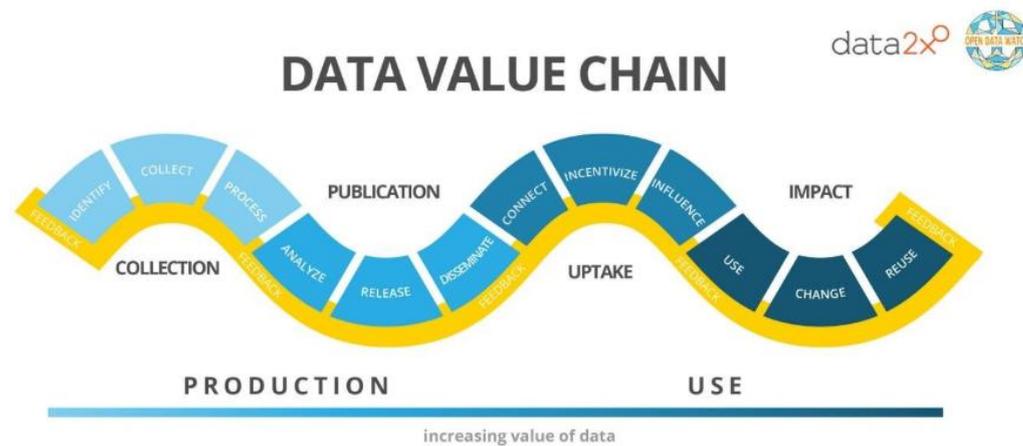


Figure 1 Data value chain, a widely understood framework for stewarding data and measuring impact

The framework also highlights the increasing value and thus return on investment of data as more of the 12 embedded steps are taken. Mapping data through this cycle can help make clear the demand for information, how it is best treated and what onward storage and utilisation may best look like. Appendix 2 addresses this further in relation to NRC.

## Funding environmental monitoring

Funding a long-term endeavour like describing the state of the environment and the impact of different management actions is challenging, as the outputs and outcomes can be taken for granted and funding may be easier to source for some aspects of programmes compared with others. Budgets for environmental monitoring programmes usually underestimate the costs, and emphasise the collection stage of monitoring, tacitly downplaying the cost and burden of other critical aspects (Caughlan and Oakley, 2001).

These additional costs might include retaining scientific expertise, laboratory costs, quality assurance, data management and reporting. If budgets are set encapsulating only part of the steps in data stewardship, budget restrictions will likely see any headroom consumed, eroding the potential for 'value-add' actions like collaboration and novel synthesis to occur. Ensuring the true cost of programmes are properly funded to ensure the data's use case can be met is critical to maintaining an appropriate return on investment.

Costs and benefits of environmental monitoring and reporting can fall unevenly. Data and information collected and managed by agencies may accrue significant benefit for commercial interests, and as such opportunities to fund activities through approaches such as user or polluter pays are an important consideration. A key driver of this project is ensuring optimal use of funds, thus how activities can be resourced other than by general rates is a useful exploration.

## SOE monitoring in New Zealand

The scope of the SOE function is broad, covering land, air, water and water bodies (e.g. lakes), biodiversity (including threatened species), contaminated land, biosecurity, coastal, climate change and other important areas of overlapping analysis such as consenting and compliance data, policy effectiveness monitoring and identifying emergent risks. The provision is both wide-ranging and greatly lacking in specificity. Thus, councils discharge their obligations to monitor the state of the environment with considerable discretion, and subject to other constraints such as financial position and inhouse capacity and capability.

A 2016 review of the implementation of the RMA noted that 'rigorous evaluation and monitoring of outcomes has been limited, eroding the potential for adaptive governance and robust implementation' (Brown et al, 2016). Research commissioned by the regional sector from Sapere also highlighted the significant expectations already in place for councils but pointed to several meta trends that councils needed to take heed of, which included

- Increasing legislative obligations to provide a broad range of data
- Increasing demand for information on resources including quality issues
- Increasing demand for information on natural resource protection
- Growing demand for open access and transparency
- Growing complexity and volume of data, including requirements for analytical tools
- Growth of new digital technologies to support all aspects (Sapere 2016).

Concerns about the strategy, efficiency and coherency behind environmental monitoring and reporting at all levels have been repeatedly raised throughout a comprehensive and long running programme of research led by the Parliamentary Commissioner for the Environment (2019 and 2020).

A recent analysis by the Tadaki (2022) noted that councils are constrained in carrying out their roles (especially by funding) and that more central government support is needed. The report made a series of recommendations, including for boosted central government financial and in-kind support, that regional councils continue to pool their resources and that individually, councils should ensure their monitoring, policy and compliance functions are aligned and effective, in addition to other improvements. The report also explored the potential role of citizen science to contribute to data and information availability.

Recent unpublished work by the author of this report also reinforced that many of the challenges sheet back to weak central government support couple with unfunded mandates, challenges in achieving standardisation, gaps in capability and limited resourcing (including because regional ratepayers bear most costs to produce data widely used nationally, including by commercial interests).

Efforts at Northland RC occur within this complex space, with an ever-evolving suite of expectations and obligations, with few structural and strategic fixes in sight at a national level. Recent jurisprudence has shone new light on the importance of meeting these responsibilities (see Box 2 case study of ELI v Southland), further provoking careful review of existing approaches.

## Box 2 ELI v Southland

The obligations on councils to monitor under section 35 were drawn into sharp focus by recent litigation by the Environmental Law Initiative. The Court found that the

“...Council failed to exercise its discretion in a way that promoted the RMA’s purpose and objectives, and derogated from its statutory duties” [201]

It is unlikely that the deficiencies pointed to are an isolated case. In the wake of this litigation, it is highly likely that councils will come under more pressure to monitor the changes in behaviour and in the environment that arise (or do not arise) as a result of their policy programme and implementation functions.<sup>1</sup> The Court made several important observations, including that:

*The High Court commented that “it seems that the Council has been diverted by the promulgation of the proposed plan and the Essential Freshwater package introduced by the Government in 2020. While this is, to a degree, understandable, the Council cannot derogate from the duties imposed on it by Parliament in s 35(2) (a)” (Decision, at [95]).*

Further, resource constraints are not considered sufficient justification for not carrying out requisite monitoring. Engagement activities, while useful, are also no substitute. The concerns raised in this case are neither exclusive to Environment Southland nor surprising given the raft of concerns and predictions related to SOE monitoring and reporting over many years. Such expectations set down by the court give a clear signal to councils to have greater focus on this area, including following up with enforcement action where wrongdoing is discovered.

Northland sought legal advice following the above case. The advice included that it was advisable for council to

- (a) prepare and implement a monitoring plan or framework, that identifies how it will meet its section 35(2) obligations.
- (b) review the efficiency and effectiveness of its regional plans (including the Partly-operative Regional Plan for Northland) and publish results as soon as practicable as it is currently not meeting its section 35(2) obligations in this regard.

The advice also clarified that while the council had an obligation to compile and publish data on the results of its monitoring of the efficiency and effectiveness of its regional policy statement and regional plans every five years, that did not need to be in the form of a state of the environment monitoring report.

## Tracking policy effectiveness

Policy effectiveness monitoring has been brought into the spotlight by recent litigation. There is a real need for councils to understand the link between what they do and what changes on the ground occur, to understand attribution. There appears limited attention to social/behavioural change analysis at NRC, meaning the benefit arising from policy interventions is very hard to determine and thus the value of the monitoring is naturally questioned.

A review of the efficiency and effectiveness of the RPS released in 2024 provides some very useful insights and demonstrates the benefit of a stronger focus on this area. The review demonstrated the uptake of river and coastal hazard data into territorial authority plan changes, consolidated the findings of other reviews and described their relevance (e.g. the review by Tonkin and Taylor of climate change provisions and associated gaps) and set out how the council would manage its implementation of the National Policy Statement Indigenous Biodiversity among other things. A range of actions in response to mostly national direction were recommended.

The review was anchored in the anticipated environmental outcomes articulated in the RPS (i.e. linked to outcomes) and yielded a range of relevant insights to this review (NRC, 2024). While changes in the environment, including improvements were noted, in several places in the document. the extent to which that was attributable to the RPS was unknown. The same analysis has not been undertaken for other planning instruments, and only a nascent approach is in place for non-regulatory interventions like catchment funding elsewhere in council.

Regulatory functions are always one step removed from the action that results in environmental change, a way to link the steps in achieving that change would support attribution. In Sparrow (2002) a results monitoring framework was developed to link activities like consenting and enforcement to broader scale environmental outcomes by articulating the intermediary steps between policy intervention and changes in the environment. Each tier had a type or types of metrics associated with it, providing valuable insights on the different types of data needed to answer important questions. Figure 2 shows the tiers.

Type of result	Examples
Tier 1 Effects, impacts and outcomes	Environmental results (for example, improvement in water quality)
Tier 2 Behavioural outcomes	Compliance rates, adoption of best practice
Tier 3 Agency activities and outputs	Consent, inspection numbers, collection data
Tier 4 Resource efficiency	Cost effectiveness of agency response

*Figure 2 Sparrow (2002) Framework Tiers of Regulatory Outcomes*

Examining the approach of the agency to measurement of the above aspects provides valuable insights into how easily outcomes and actions within and outside the agencies can be linked. To provide assurance for attribution purposes the different tiers need to be linked and the relevant monitoring carefully planned according to the underlying intervention logic. For this to be most successful, robust links between policy, planning, consenting, compliance and monitoring are essential.

### Standardising data management in the regional sector

A strong driver for change in the regional sector for the past 14 years has been the desire of the sector and other stakeholders to progressively standardise and federate data collection. This means collecting similar things in similar ways nationally, to enable data to be aggregated for national purposes. The National Environmental Monitoring Standards (NEMS) are a series of environmental monitoring standards, prepared by the NEMS steering group on authority from the Regional Chief Executive Officers (RCEOs) and the Ministry for the Environment (MfE). NEMS is the technical underpinning of the Environmental Monitoring and Reporting (EMAR) framework.

NEMS was established in 2011 with the aim to “ensure consistency in the way environmental monitoring data is collected and handled throughout New Zealand”. The work is co-produced by MfE

and the NEMS Steering Group, although the overarching strategy has a disclaimer noting ‘The Ministry for the Environment does not necessarily endorse or support the content of the publication in any way’. The NEMS initiative is led and supported by the Environmental Data special interest group (formerly known as LAEMG) to assist in ensuring consistency in the application of work practices specific to environmental monitoring and data acquisition throughout New Zealand.

NEMS is a key framework designed to achieve standardisation of regional council data collection methods. To date, NEMS has released 27 operational standards, with a further 10 under development and 20 more proposed. Recent uptake surveys (Box 3) of regional government do indicate that there are barriers to the uptake of NEMS, including cost. It is likely that moves to standardise and federate regional data will continue to dominate, and this imperative should be considered by NRC in decisions about alignment.

### Box 3 NEMS 2024 uptake survey

In August 2024, Regional Sector Holdings Limited carried out a survey of councils to measure the uptake of NEMS standards (how councils were finding aligning with the standards, or why they might not be) (RSHL, 2024). Anonymised results were sourced as part of this project. The survey provided an opportunity for participants in NEMS to identify challenges and possible improvements in addition to providing general feedback about how the system interacts with their work.

Feedback indicated that further work is needed for the NEMS document framework to support standardisation. For example, feedback noted there are inconsistencies between the overall data processing guideline and the specific guidance on individual work areas (e.g. data processing v dissolved oxygen). Other relevant issues include concern about the time needed to digest NEMS obligations (large documents with a high level of technical detail), and technical and practical issues with implementation.

It is possible that focused resourcing or support is needed especially for councils to get across the requirements and then to implement them (e.g. equivalency/co-location obligations were highlighted as onerous and expensive). The NEMS programme is likely operating with constrained funding, but uptake might be improved if more effort was to go into clear communication of requirements, ensuring consistency between different documents and perhaps some outreach support. This may not however resolve other issues identified such as the cost of alignment and gaps in guidance.



## Section 3 - A Review of the NRU

### Key takeaways

- The NRU has partial ownership of SOE monitoring
- A rich array of drivers for data and information collection exists
- Objectives and outcomes are numerous and branched across different strategies and other planning instruments – reconciliation is needed to focus decision making
- Funding for science and data activities is funded predominantly through rates, with some cost recovery (which may or may not be redistributed to the relevant operational budget)
- Gaps exist in soil, sediment, climate change and other areas that are likely to need to be accommodated, in addition to needing more time for collaboration.
- Policy effectiveness monitoring appears limited, making it difficult to link interventions and outcomes
- Focus is strongly on collection and processing, with much less effort down the value chain to usage and impact

Reviewing the complex and ever-changing work of busy local government professionals is challenging and there is no clear and accepted framework against which to do so. State of the environment monitoring and reporting is only partly within the control of the Natural Resources Unit, and the absence of a clear framework to support its development and optimisation is currently being built by Regional Sector Holdings Limited.

This section gathers the information base for looking at the ways of working in NRU. It first explores the varied drivers of the programme, and the interviews provide further insight. The variety of drivers illustrates that councils are answerable to their communities for much more than minimum statutory obligations and choosing what to do is always fraught. This section briefly explores how the programme is administered and funded, before providing a brief overview of the interview outcomes. Finally, an introduction to the data value chain and some initial reflections are included.

### Natural Resources Unit

NRC divides its State of the Environment monitoring and reporting across several teams. Full accountability for the work programme is therefore divided. This project focused on the activities of the Natural Resources Unit (NRU). The NR Unit consists of four teams, highlighted green in Figure X. Other subsets include biodiversity, Policy and Planning and Land Programmes. A diagram of the team structure is below, with green boxes signifying that they are in scope of this review.

Specific areas of data collection and management out of scope include SOE soil data which is collected by the Land Management team and many aspects of biodiversity data collection. Biodiversity data is collected by the Policy team (for mapping purposes), the biodiversity team and the natural resources team. Only the latter data is clearly in scope. Interviews have been conducted with the other parts of the organisation, but their work areas are not within scope. However, the connections between the teams, the feedback loops that do or do not exist and the visibility of SOE data to other teams are a consideration that is reported on.

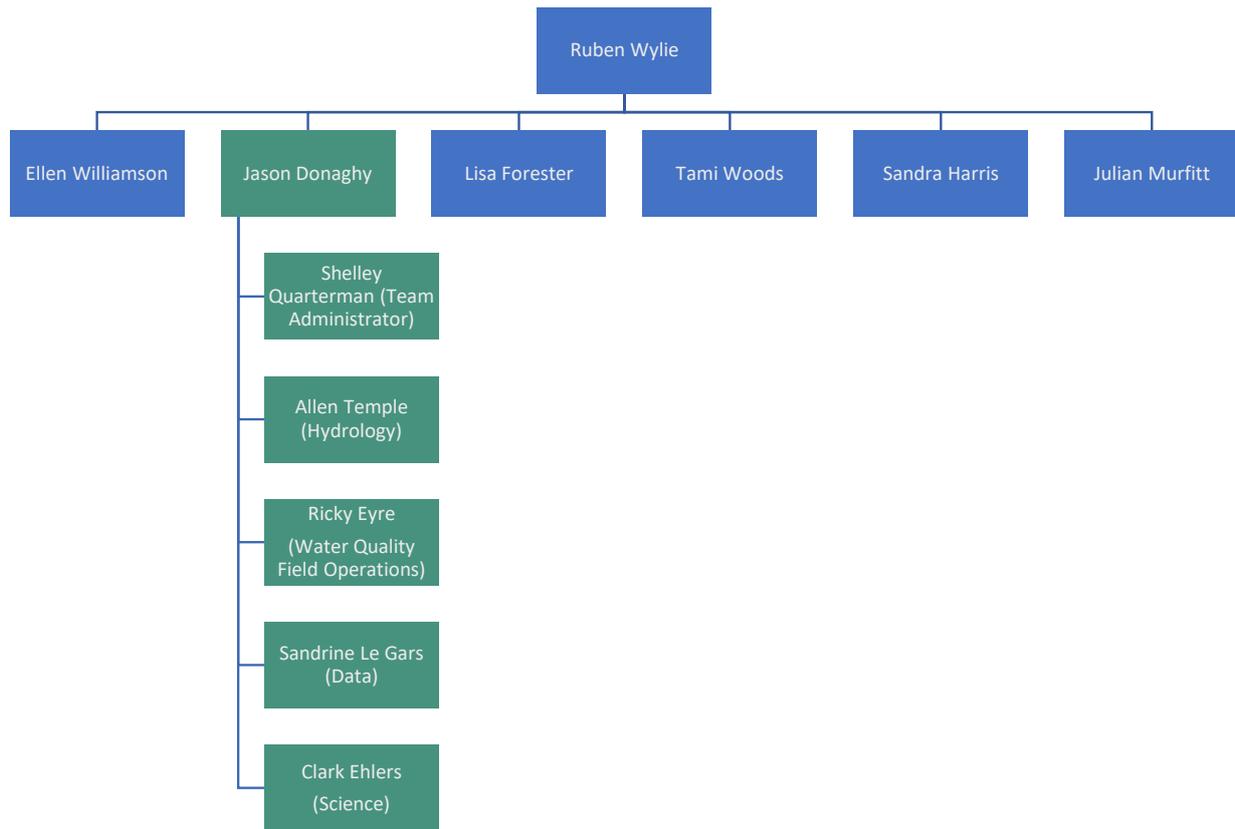


Figure 3 Diagram signifying the scope of the review in context

### Programme drivers

In determining focus areas, NRC considers and responds to a wide range of drivers for information and data collection. Statutory and non-statutory requirements are spread across a variety of legislation and other sources, such as:

- community priorities
- Council's operational obligations including annual and quarterly reporting obligations and metrics such as Key Performance Indicators (KPIs) and levels of service
- Early warning systems for natural hazards and associated civil defence (e.g. floods)
- Giving effect to partnership commitment with iwi and hapū
- Availability of resources for economic activities (e.g. water abstraction)
- The need to monitor public investment and outcomes of specific projects
- National direction under the Resource Management Act 1991 e.g. NPS-FM and associated requirements (CCCV consolidation of inform)
- a desire to measure the impact of specific interventions and projects (policy effectiveness monitoring)

Northland's regional planning documents also contain specific limits and targets which should be reflected in decision making and in policy effectiveness monitoring. Specific documents designed to support decisions in this area include

- Vision documents include Te Pae Tawhiti 2018-2028
- Bespoke action plans and strategies including the Tāiki ē: Te Tiriti strategy and implementation plan
- Previous drivers have included the Freshwater 10-year action plan<sup>2</sup> (intended to cover 2021-2031 but recently dropped due to government changes to the NPS-FM)

A rich array of obligations, undertakings and aspirations codified in these documents is positive, but likely makes strategic and operational prioritisation challenging.<sup>2</sup> Prioritisation relies on being able to rank and compare different undertakings with each other, and the lack of structured decision making observed confounds this. The rapid expansion of the water related work programme is illustrative (see case study Box 4). The stewardship of the programme is currently confounded by a lack of a rigorous underlying rationale for the choices made.

#### **Box 4 Expansion of freshwater monitoring in response to the NPS-FM**

A useful illustration of programme expansion without a rigorous analysis of costs and relative benefit lies in the response to the NPS-FM 2020. A Water Steering Group was convened and led the following initiatives:

- approved the scale of response to the NPSFM.
- approved new initiatives to go to Council.
- approved the Freshwater action plan/ strategy to go to Council for endorsement.

The process was guided by a project plan and new expenditure considered through the Long-Term Plan process which followed (25 new initiatives, none of which had a formal business case).

The programme implementation has taken 4 years, and all actions have been implemented. While executive and elected member support was high, it does not substitute structured planning and analysis over the long term.

### Administering the programme

Oversight and stewardship of environmental data and information is undertaken alongside a people management role for relevant leads. Several guiding documents and a suite of KPIs create incentives to emphasise certain aspects of the programme. A Steering Group provides strategic oversight, but the work programme is largely managed at team level.

Short 'new initiatives' forms are prepared to support new investment, which are then considered as part of the Long-Term Plan process. Coverage can be patchy, with some data being concentrated in its collection, meaning there are considerable spatial data gaps (e.g. North Hokianga) and a potential imbalance in the relative focus on different parts of the environment.

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<sup>2</sup> The Activity Management Plan for Science (Te Kete Mārika) has blended the work programme together according to the different objectives and provides a solid basis for prioritisation to guide review.

Northland has a well-established (2016) methodology for regular internal audit of systems, and most functions appear to have been subject to a review in recent history (e.g., 2023 Service Delivery Review Hydrology). External audit and analysis have also been undertaken at times (e.g. review of coastal water quality monitoring by NIWA 2022). This project builds on these efforts.

NRC report and publish data on the state of the environment regularly. This occurs through the website data portal, LAWA and through regular themed state of the environment reports (e.g., coastal) and project-based reports following investigations. Whether or not reporting occurs on a particular issue or investigation is discretionary and reliant on resourcing and capacity at the level of the individual staff or managers. For example, the Te Kete Mārika notes that several catchment level investigations undertaken in the past have never been reported on. Finding ways to more effectively steward data through the value chain will boost return on investment providing the right choices are made about what gets collected and why.

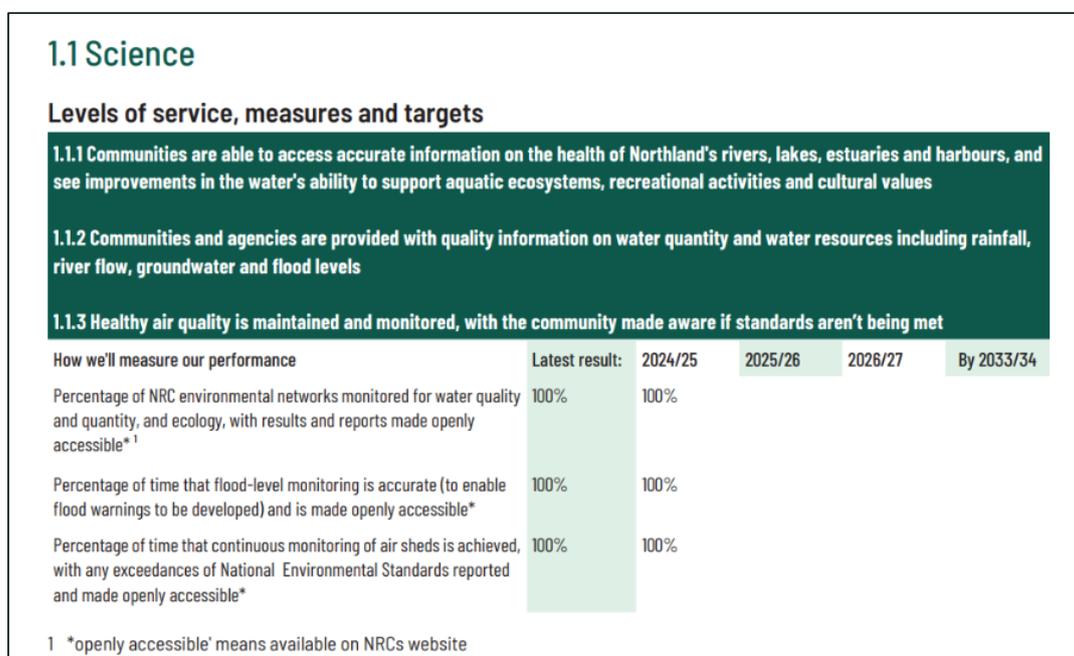


Figure 4 Science related KPIs



## Funding the programme

Funding a critical role like state of the environment monitoring and reporting is primarily achieved through general rates. A range of other project funding and some limited cost recovery also contribute. The Natural Resources Unit has a share of the Tiaki Taiao Rōpū budget, the next three years budget is set out below for the teams in scope of this review.

Team	Budget (2024/2025)	Budget (2025/2026)	Budget (est) 2026/2027
Hydrology	\$2.3m	\$1.8m	\$1.9m
Data	\$1.6m	\$1.8m	\$1.8m
Science	\$2.2m	\$1.8m	\$1.9m
Water Quality Field Operations	\$2.8m	\$3.0m	\$3.1m
<b>Total</b>	<b>\$8.9m</b>	<b>\$8.4m</b>	<b>\$8.7m</b>

Table 1 Tiaki Taiao Rōpū Triennial Summary 2024 and additional data direct sourced

A considerable proportion of the above budget is consumed with corporate overheads which must be accounted for.

Corporate Overheads (\$)	24/25	25/26	26/27
Hydrology	805,208	791,070	811,638
Natural Resources Data	489,804	522,106	535,681
Natural Resources Science	707,247	753,890	773,491
Water Quality Field Operations	890,552	1,028,391	1,055,129
<b>Total</b>	<b>2,892,811</b>	<b>3,095,457</b>	<b>3,175,939</b>

Table 2 Corporate overheads applying to each work area (direct sourced from staff)

Deployment of resources across different workstreams has been unknown, confounding assessments of efficiency (including relative efficiency). Cost codes have recently been put in place that will help to track FTE effort against different work areas set out in the stocktake, which will have considerable value in coming years and should be incorporated into the stewardship approach to SOE monitoring recommended. Determining the drivers of effort might help council consider the funding model for each dataset.

The 2024/2025 User Fees and Charges Policy<sup>3</sup> enables collection of the actual and reasonable costs of some activities. For instance, actual and reasonable costs for the purposes of compliance monitoring of consents can be on-charged to consent holders. Where NRU staff contribute to this

<sup>3</sup> [User Fees and Charges 2024/25](#)

work, cost recovery is explicitly enabled by the RMA. It is not clear how often this occurs and how broad the scope of cost recovery is.

There is evidence that teams within NRU (especially the data team) are used by other teams to meet their operational requirements, but that cost recovery or internal transfer of funding does not occur. For example, the Data team identified that approximately 1.2FTE of their total resource serves teams outside the NRU. This makes for some inherent challenges with meeting costs and progressing core work. Core work can get marginalised in favour of reactive, urgent work.

Section 3.2.6 of the User Charges Policy also notes that 'Other State of the Environment' charges may be issued, but it is unclear how this implemented. The policy contains little explicit reference to how state of the environment monitoring is funded, although monitoring in relation to water takes appears to be on-charged to some degree. The assumption is that it is primarily funded by general rates, paid for by all property owners. There may be opportunities to reconsider this approach. There are examples of other regional councils who require consent holders to contribute to state of the environment monitoring to an increased degree compared to NRC.

**Greater Wellington Regional Council includes an SOE monitoring charge on the following types of consent**

- *Land use consents where there are ongoing environmental effects relating to our environmental science programme*
- *Water permits to take surface water or groundwater*
- *Discharge permits to discharge contaminants to land*
- *Discharge permits to discharge contaminants to fresh water*
- *Discharge permits to discharge contaminants to air*
- *Coastal permits to discharge contaminants to coastal water*
- *Coastal permits where there are ongoing environmental effects relating to our environmental science programme. (GWRC, 2024)*

Fees are scaled depending on level of adverse effect and can be waived in some circumstances. As a result of this charge, the council recovered 13.5% of the annual cost of its SOE monitoring programme. **Hawkes Bay Regional Council recovers 35% of the costs of its freshwater monitoring programme** through charges for consent holders, pertaining to water quality and water quantity. The 'freshwater science' charge is a part of annual consent monitoring fees that also include compliance monitoring and compliance administration.

**Bay of Plenty Regional Council includes a 'science charge' on all resource consents as a contribution to the general and specific environmental monitoring** throughout the region. The fixed annual fee must be paid regardless of the extent to which the consent is being given effect to (BOP-RC, undated).



## Staff and external interviews

A programme of interviews supported the analysis of the NRU, revealing many similar issues to those independently identified, and yielding additional insights. The following questions were asked in each general staff interview

1. What are your overall perspectives on NRC's focus on SOE monitoring?
2. What are the key drivers for SOE monitoring and reporting?
3. What are your thoughts on the current level of investment into SOE monitoring and reporting?
4. How do you think NRC benchmarks against other councils in a similar position?
5. What are three positive aspects of the current approach?
6. What are three potential areas for improvement?
7. If you were looking for duplication and overlap, what are some areas you think would be most useful to explore?
8. If you were considering what gaps existed, what things would stand out for you as areas the council potentially underinvests?

A fulsome discussion of the interview themes is set out in Appendix 1 question by question.

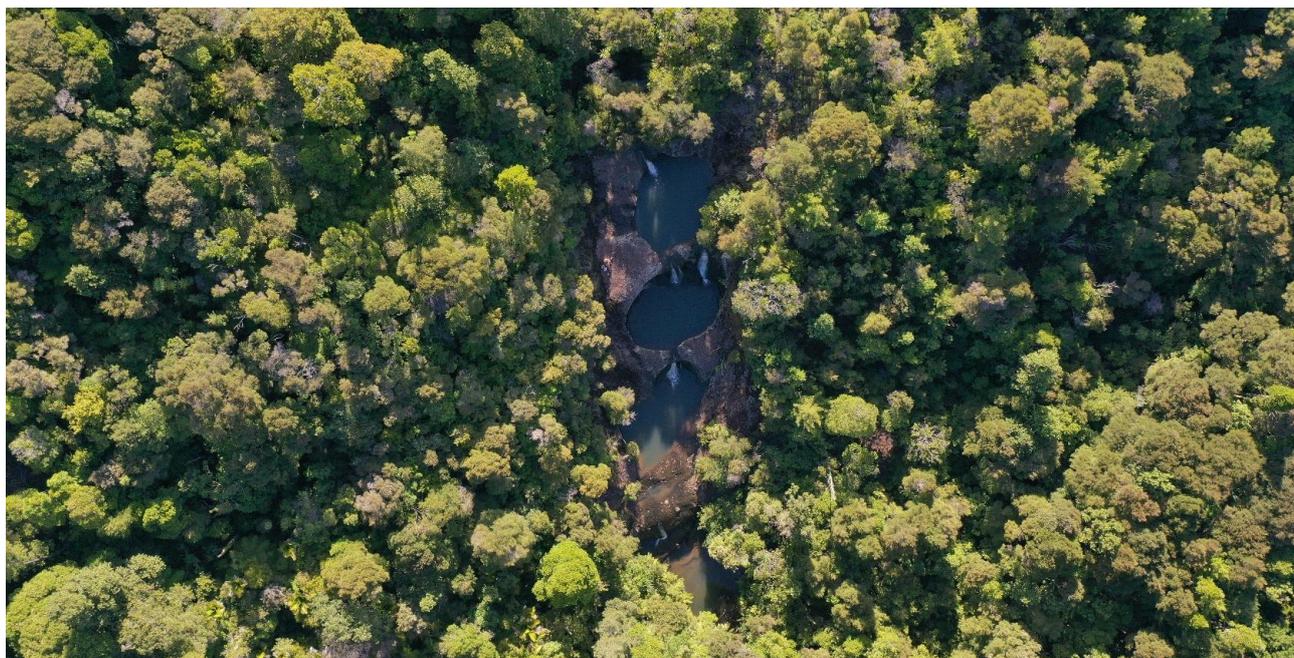
The key takeaways from the interviews were:

- There is a strong focus on continuous improvement and making the most of resources available
- Staff see many opportunities for improvement, but note resourcing constraints, risk appetite and capability can limit innovation and the addressing of gaps
- Policy effectiveness monitoring (including behaviour change) is noted as a clear gap that makes it challenging to link objectives and outcomes with a 'missing middle'
- Minor duplication and overlap occur day to day at a logistical level which could be addressed as appropriate by better connections between teams and their workload planning
- Collaboration and innovation are difficult to resource due to high workloads
- Gaps in the programme will need to be resourced, which is going to be challenging with a 'sinking lid' approach to the budget
- Based on recent litigation (ELI), NRC will need to sharpen its focus in several topic areas and across policy effectiveness monitoring to meet its obligations

Interviewees outside the NRU did appear to have relatively low awareness of information holdings and it was noted that the information is not necessarily drawn on for their work when it should or could be.

Recently, Land Management have been combining data from Water Quality, Biodiversity with national datasets such as the deprivation index to inform decisions about where their catchment support could be deployed. There is appetite for innovation like this to become more commonplace.

In summary, staff are open to improvement and change and have a range of creative ideas and novel approaches to explore. Finding ways to free up existing resources to undertake these value-add initiatives would likely be very positive.



### Managing the data value chain

The collection of data is the first step in a long process of delivering important information to decision makers and maintaining knowledge over time. The data value chain is a useful conceptual framework to track effort across the various tasks. Several observations can be made about the data value chain as it applies to NRC, based on both analysis and interviews.

Currently there is **no point of accountability driving uptake and impact** analysis meaning it is generally deprioritised, in addition to no KPIs reflecting the concepts.

The **splintered nature of management of datasets** within and outside of NRU leaves a gap in overall stewardship, that has neither process nor staff devoted to it. A more active stewardship focus would connect many dots relatively quickly.

**Efforts made in release and dissemination where they occur are reader-focused and useful** – when NRC distributes information to the community (including via channels such as LAWA) the data are communicated in user friendly ways. Technical reports are produced where time allows and appear generally robust. One example in particular was frequently noted by staff, that of a report comparing consent compliance data with marine heavy metal data. This novel synthesis represents the sort of value-add programme that improves the return on investment for data and supports prioritisation of interventions in a policy sphere.

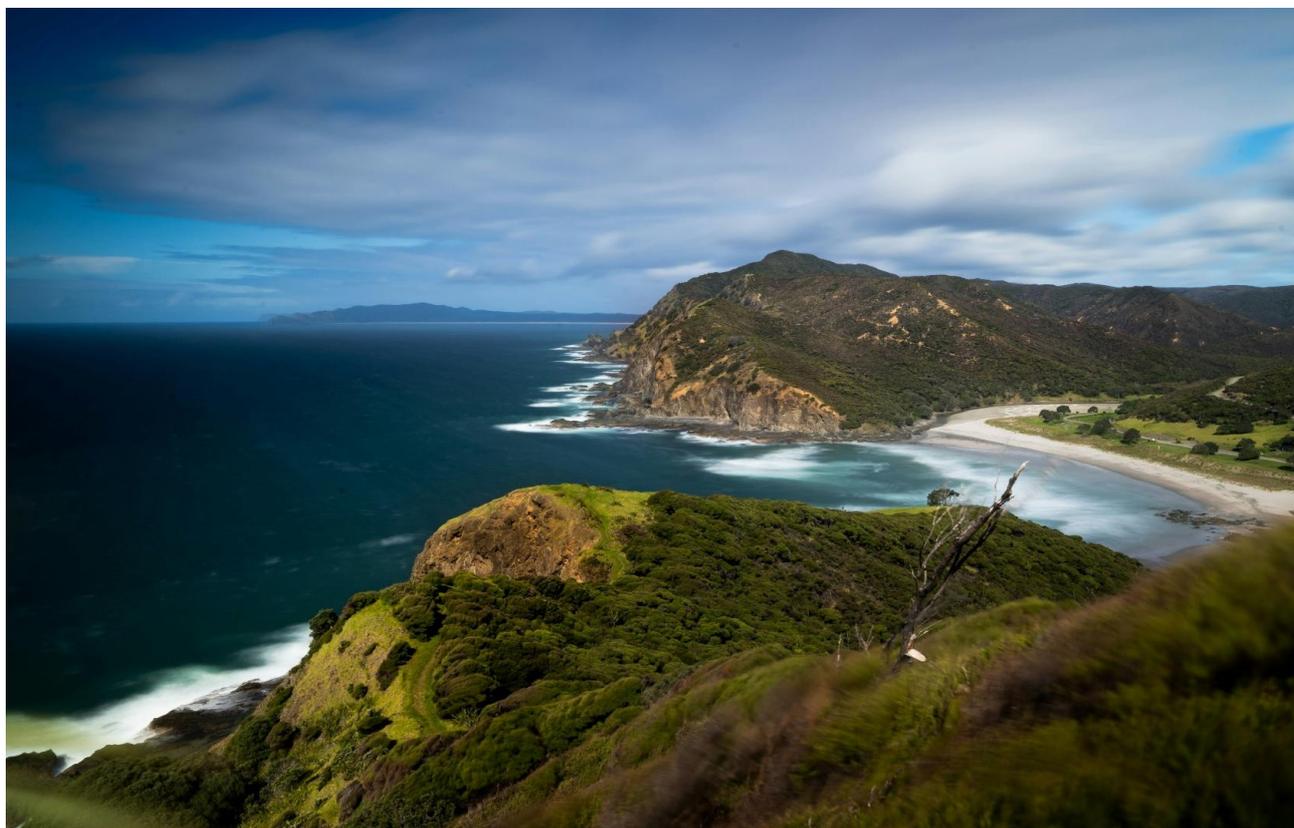
**Medium- and long-term views** of introductions to the work programme are rarely documented and may not be considered. An example is that the long-term implications of new kit on operational expenditure are not expressly considered, meaning existing budgets must continue to absorb larger burdens with relatively shrinking resourcing. A longer horizon and focus on stewardship would support improvements in this space.

These observations together with the interview outcomes will be drawn upon later in the synthesis and recommendations section.

## Section 4 - A Stocktake of Ecological Monitoring Effort

This section describes the work programmes within scope of the review – those administered by the Natural Resources Unit. Programmes are within scope of this review where members of the NRU play an active role in administering the programme, noting that for example some river monitoring (especially in relation to community-based monitoring) is generally administered outside of NRU. The purpose of a comprehensive stocktake is to define the scope of the review and support the analysis to be fulsome and relevant. The work areas include the following:

- Groundwater
- River
- Lake
- Coastal
- Soil
- Air quality
- Water allocation
- Climate
- Recreational bathing
- Litter



The below work refers briefly to project-based work in addition to regular data collection activities. Further irregular demands on team resources include responses to severe weather events, during which time there is a very high demand for information at frequent intervals. Teams may co-opt other staff to support them when resources are required to surge for a short time. Surprise demands on team time can be significant and must be resourced from existing budgets.

For example, the most recent Annual Report notes that the Hydrology team responded to 12 MetService Severe Weather Watches and Warnings for heavy rain, in addition to intensive responses needed to both drought events and water shortages. The teams also support other areas of council such as through consent monitoring and external parties with training (e.g. water monitoring).

### Groundwater

Groundwater monitoring is mostly administered by the Hydrology and Water Quality teams, comprising a mix of national and regional network monitoring, continuous and discrete monitoring and project-based investigations. Table 3 sets out the key activities.

Network monitoring is combined with catchment-based investigations that include targeted data collection in areas where risk is known to be higher of adverse environmental issues (e.g. Pataua, Matapōuri, Tutukaka). Focused attention is also paid to the Aupouri Aquifer on an ongoing basis due to risks arising from large, consented groundwater irrigation takes (e.g., avocado orchards).

Programme	Description	Extent	Purpose	Frequency
National Groundwater Monitoring Network (NGMP)	Quarterly sampling of core parameters	7 bores across Northland	Track national groundwater quality trends and contribute to national dataset	Quarterly
State of the Environment Network – Groundwater	Full suite of water quality parameters (nutrients, metals, microbes)	39 bores across mapped aquifers	Assess aquifer health, track trends, support plan effectiveness	Quarterly (some 6-monthly)
Catchment Investigations – Groundwater	Land use, recharge, isotope data, nitrogen spp.	Targeted aquifers (e.g. Pataua, Matapōuri, Tutukaka)	Understand recharge, land use impacts, investigate issues	Project-based
Drought Response Monitoring	Groundwater levels, rainfall, recharge indicators	High-risk aquifers and drought-prone areas	Support water supply resilience and drought risk assessment	Continuous and event-based
Continuous Conductivity	Telemetry data (electrical conductivity) (10 coastal bores)	Coastal aquifers at risk of saline intrusion	Track salinity changes and intrusion risk	Continuous
Continuous Water Levels	Telemetry data (groundwater levels) (13 bores)	High-demand and vulnerable aquifers	Monitor aquifer pressure and recharge trends	Continuous
Discrete Conductivity	Manual sampling (EC)	Coastal and inland bores	Assess salinity status and validate continuous data	Quarterly or 6-monthly

Discrete Water Levels	Manual dip readings	About 100 monitored bores throughout Northland	Validate telemetry, support recharge and pressure analysis	Monthly or quarterly
Aupouri Aquifer	Continuous - non telemetered groundwater level and conductivity	Aupouri Aquifer (12 bores)	Monitor Aupouri aquifer state, pressure and recharge trends and large consented groundwater irrigation takes (avocados)	Monthly

Table 3 Summary of groundwater programme

## Rivers

Northland's highly dissected natural environment confers a complex role in monitoring and reporting on state and trends of waterways. River related monitoring is primarily carried out by the Water Quality and Hydrology teams and some overlap with and input from Biodiversity.<sup>4</sup>

Programme	Description	Extent	Purpose	Frequency
Discrete WQ Monitoring	Monthly grab samples (nutrients, sediment, bacteria, phys-chem)	SOE sites	Track long-term trends, baseline conditions, current state	Monthly
Continuous WQ (Sondes)	Telemetry data (DO, water temp, turbidity, salinity, EC)	Priority SOE sites (with Hydro station)	High-frequency temporal variability and responses to extreme weather events (e.g., drought, heavy storm events), surrogate of sediment load	Continuous
Dissolved Oxygen	Non-telemetered Cont. DO loggers (DO and water temp.)	Targeted SOE sites	Assess ecosystem metabolism (indicator of ecosystem function); risk from anoxic conditions, and high-water temp (PRP attribute)	Continuous recording and monthly download of data
FW Fish	Fish surveys (electrofishing, trapping) and eDNA sampling	SOE sites with suitable sampling habitats and other sites representing FMUs	Track FW biodiversity, threatened species, Mahinga Kai	Annual
FW Macroinvertebrates and habitat surveys	Macroinvertebrates species count and calculated indices (i.e. taxa richness, EPT count, MCI, QMCI, and ASPM scoring at individual site level); Rapid habitat assessment survey (RHA)	SOE and priority catchments	Assess stream ecosystem health	Annual
Continuous River Levels	Continuous telemetered river level data (54 Stations)	Hydrometric stations across region	Supports river flow data, water allocation, compliance monitoring, drought/flood modelling, flood warning	Continuous

<sup>4</sup> Out of scope

Continuous River Flows	Continuous telemetered river level data (49 Stations) and Regional flow gauging programme	Hydrometric stations across region	Development of flow ratings which enable the development of flow data which supports water allocation, consent compliance, drought/flood modelling, flood warning	Continuous
Catchment low flow investigations	Flow investigations of specific catchments - intensive flow gauging runs	In any priority river catchment	Supports accurate flow statistics (MALFS etc), water allocation, river flow data, water allocation, compliance monitoring, drought modelling	One off gauging, (repeated as required) combined with hydrometric network station flow data
Continuous Tide Levels (river, estuary & coast)	Continuous telemetered tide levels (8 stations)	Northlands primary harbours and ports	Supports flood warning, Tsunami warning, coastal WQ monitoring, Shipping activities at Ports etc.	Continuous
Event-triggered Sediment sampling	Stormflow or event-triggered sediment sampling (ISCO Autosamplers)	Priority rivers	Estimate catchment sediment loads by developing empirical relationships between field measurements and lab results	Event-based (stormflow or event-triggered auto sampling)
Deposited Fine Sediment	Visual assessment of streambed substrate cover (%) by particle size	Periphyton and macroinvertebrate sites	Assess sedimentation impacts on aquatic life	Monthly
Periphyton & Cyanobacteria	% cover (of streambed), chlorophyll-a biomass	SOE and priority catchments	Monitor nuisance algal growth, and nutrient response	Monthly
Catchment Investigations	Integrated WQ, ecology, land use data	Targeted - based on political, poor WQ, opportunity, etc.	Assess baseline conditions, identify key contaminant source, and evaluate mitigation effectiveness	Project-based (multi-year) - 1-5 year depending on resource availability
Drought Response Monitoring	River flow, rainfall, water level telemetry, WQ (discrete, cont. DO/temp), macroinvertebrates, fish, periphyton	Drought-affected catchments and priority rivers	Support water supply resilience and drought risk assessment	Continuous and event-based
Threatened Species Monitoring – Rivers	Fish and macroinvertebrates surveys, habitat assessments, eDNA sampling	High-value Habitat	Identify and monitor habitats of rare and endangered aquatic species	TBD, currently coincides with annual fish surveys

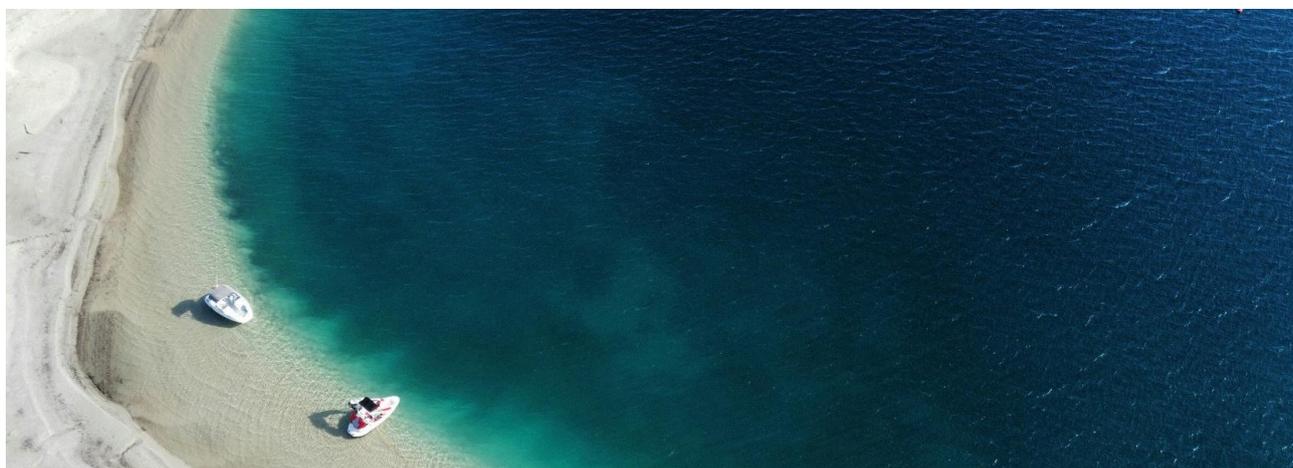
Table 4 Summary of rivers programme

## Lakes

Northland has thousands of lake ecosystems, some of which are nationally unique. NRC places considerable importance on lakes through both water quality and biodiversity initiatives. Monitoring is undertaken by a few teams for different purposes and there is a significant community interface through voluntary groups also. Lakes monitoring has expanded significantly in recent years, with a shift to monthly monitoring and the collection of continuous data, including two dedicated FTE.

Programme	Description	Extent	Purpose	Frequency
Discrete WQ Monitoring	Grab samples (nutrients, microbes, metals), data water column profiles (temp, DO, conductivity, chl <sub>a</sub> , phycocyanin, turbidity)	12 outstanding lakes + 3 investigation lakes	Track trophic status, nutrient enrichment, and ecological health	Monthly
Dissolved Oxygen	DO loggers at top/bottom	12 outstanding lakes + 3 investigation lakes	Assess stratification, hypoxia, diel, and internal nutrient cycling	Continuous
Continuous Water Levels	Continuous telemetered lake level data	13 Lakes	Support lake WQ and Ecological data, nutrient modelling, etc.	Continuous
Continuous WQ (Sondes)	Telemetry data (DO, temp, turbidity, conductivity, chl <sub>a</sub> , phycocyanin)	Focus lakes (Taharoa, Ngatu)	Capture diel and seasonal variability, support nutrient modelling, productivity (algae)	Continuous
Recreational Cyanobacteria Lakes	Cyanobacteria biovolume, species, toxins	4 bathing lakes + Lake Ōmāpere outlet	Assess human health risk and recreational safety	Weekly (summer), monthly (Ōmāpere)
Investigation Lakes	WQ	Lakes with degrading trends (e.g. Wainui, Rototuna, Waiparera)	Baseline, evaluate restoration effectiveness and nutrient sources	Monthly (3–5 years)
Lake SPI	Submerged plant index (Lake SPI)	12 outstanding lakes + selected high-value lakes	Assess ecological condition and submerged vegetation health	Rotational (5-year cycle)
Lake Ecology	Threatened species, birds, fish, mussels	High-value lakes (55 recommended)	Track biodiversity, threatened species, Mahinga Kai	Rotational (5-year cycle)

Table 5 Summary of Lakes programme (by NRU)



## Coastal

Coastal monitoring is administered by the Water Quality team (with coastal specialists). Monitoring also includes reactive monitoring and investigations into events such as algal blooms. Some work programmes include strong involvement by local communities include iwi and hapū. For example, estuary monitoring in the Kaipara, Ruakaka and Kerikeri Harbours involved members of Ngati Rehia, Patuharakeke and Te Uri O Hau (23/24 Annual Report).

Programme	Description	Extent	Purpose	Frequency
Discrete WQ Monitoring – Coastal	Monthly grab samples (Dissolved oxygen, Chl-a, sediment & clarity, nutrients, microbes, metals)	46 coastal sites across Northland	Identify environmental issues; track coastal water quality trends; assess compliance with coastal standards and Policy D.4.1 in PRP & NZCPS Policy 21. Data used in development of PRP and Coastal standards.	Monthly
Continuous WQ (Sondes) – Coastal	Telemetry data (DO, temp, salinity, turbidity, chlorophyll-a)	3 continuous sites (Outer BOI, Waitangi, Town Basin), also previous Tikiniui in Kaipara	Long term dataset, Capture short-term variability, seasonal dynamics, event responses (rainfall & algal blooms), climate	Quarterly deployments (1 month)
Shellfish Monitoring	Annual edible shellfish surveys (abundance, size)	5 sites (Mangawhai, Kelly’s Bay, Taipa, Houhora, Hokianga)	Assess shellfish health and habitat condition	Annual
Estuary Monitoring Programme (EMP)	Infauna, epifauna, sediment grain size, nutrients, metals, sedimentation rates	11 sentinel sites + broadscale surveys	Assess estuarine ecological health and plan effectiveness. Data used to identify significant Ecological Areas (SEAs) in PRP. Data used to assess compliance with Policy D.2.18 in PRP and NZCPS Policy 11.	Biennial (sentinel); 10-year (broadscale). Sediment plates sampled 6 monthly
Sediment metals	Sediment metal concentrations	59 sites	Measure sediment metal contamination. Identify environmental issues (problem areas) & track changes over time. Data used to identify significant Ecological Areas (SEAs) in PRP. Data used to assess compliance with Policy 11 and 21 in NZCPS and coastal standards in PRP.	Every two years
Other algal investigations, eg Waipu macroalgae investigation, phytoplankton blooms	Grab samples, GIS data collection, etc.	As required	Track algal blooms (macro and micro)	Monthly at Waipi, event based

Table 6 Summary of coastal programme



## Climate

NRC monitoring efforts on climate consists mainly of a small suite of monitoring data mostly collected within the hydrology team's work programme, in addition to project-based work. Several initiatives are part of broader national programmes where support for Northland's approach to monitoring and managing the impacts of climate change has received external funding and technical input (e.g. FutureCoast).

Further expectations are likely to arrive as the Council implements its climate change strategy. Different responsibilities will be allocated to different teams, and the resourcing of those activities will be separately determined and sought in line with those accountabilities.

Programme	Description	Extent	Purpose	Frequency
Continuous Rainfall data	Continuous telemetered rainfall data (54 Stations)	Hydrometric stations across region	Supports flood warning, climate information, drought monitoring, compliance monitoring, drought/flood modelling,	Continuous
Daily manual Rainfall data	Private landowners/volunteer - daily manual rainfall readers - send data into NRC	Multiple sites across the region	Supports continuous telemetered rainfall record	daily recordings, sent in monthly
Continuous Soil Moisture data	Continuous telemetered soil moisture data (9 Stations)	At 9 existing rainfall stations, with differing geology and soil types	Supports Water balance modelling, climate information, drought monitoring, drought/flood modelling, also flood warning (antecedent conditions)	Continuous
Continuous Evapotranspiration data	Continuous telemetered evapotranspiration data (2 Stations - in process of installing)	2 sites - Lake Ngatu and the Aupouri aquifer, in process of installing	Supports Water balance modelling, climate information, drought monitoring, drought modelling	Continuous

*Table 7 Summary of climate programme*

## Soil

Relatively limited effort is expended into monitoring soil by NRU as it is primarily within the responsibilities of the Land Management team. Sediment monitoring under River and Coastal programmes touch on it, however. Climate monitoring also includes a network of 9 soil moisture monitoring stations administered by the Hydrology team.

## Air quality

NRC monitors some airsheds continuously via telemetry, typically where risks of breaches of the National Environmental Standard Air Quality exist. The five main airsheds Whangārei, Ruakaka (Marsden Point), Kaitaia, Kerikeri, Dargaville, of which three are monitored. Air Quality risks typically arise around major industrial facilities such as timber mills. The current contract for air quality monitoring is held by Watercare, and the metrics are reviewed every five years. The data are held in the NRC Air Quality Data Management System and shared via LAWA.

### **Water allocation**

NRC maintains a hydrometric data array that supports water allocation decision-making. The specific monitoring activities do not have a dedicated topic lead, but are undertaken across the groundwater, river and climate work programmes. Specific datasets include river levels and flows, ground water levels, rainfall, etc. Data are also fed into the councils modelling programmes that helps determine quantum available for allocation, generating further outputs. Rainfall data is collected from telemetered sites owned by council, but there is also a programme by which landowners can volunteer their rainfall data.

### **Recreational bathing**

Monitoring sites at recreational bathing areas provide data that is made available on council's website, in addition to contributing to LAWA and Safeswim. Popular swimming sites also have faecal coliform monitoring.

### **Litter**

NRC monitors the accrual of litter (small quantities of discarded waste) at key sites as part of their environmental monitoring programmes. Collection and audit sites include

- two in central Whangārei (SOE Litter Intelligence)
- 16 coastal and estuarine bathing sites and
- ten gross pollutant traps in other areas (nets over stormwater drains which gather litter and divert it from entering the stormwater system onwards to receiving environments).

Litter audits help determine the source of litter and provide the basis for upstream interventions that reduce its prevalence. Litter monitoring is managed by the Water Quality team, but the audits themselves are contracted out to external providers. This programme has a clear link between behaviour change evidence and outcomes.



## Section 5 - Summary and Recommendations

NRC administer a comprehensive and thoughtful programme of state of the environment monitoring and reporting. Staff are enthusiastic and highly engaged, and open to new ideas and change. This is a significant strength and should help the recommendations that follow to be implemented. A key focus of this report was on helping to ensure value for money; that the existing investment into SOE monitoring and reporting was being used effectively. Overall, the budget is carefully deployed by teams focused on continuous improvement. However, as with many councils, the focus is on collection and processing, with much less focus down the value chain. Much greater emphasis on uptake and impact will secure better returns on investment, within a strengthened approach to programme stewardship.

Without a doubt, NRC's diligence in pivoting to central government expectations around freshwater monitoring was the primary catalyst. The changes in respect of the NPS-FM alone led to a 20% increase in programme costs. The fast-paced and reactive nature of this programme expansion did not appear to leave much room for disciplined analysis and active stewardship. It should be noted however, that a lack of said analysis does not imply the data collection occurring is not fit for purpose, but review and demonstration of that utility is now needed.

This report provides a stocktake of all (in scope) SOE monitoring and reporting via searchable spreadsheet database which sets out the different drivers and ways data and information are managed (interview questions provide additional insight). Drivers for data collection and onward management vary, with statutory obligations for freshwater being especially dominant in time and resource use. At this uncertain juncture politically, it is difficult to know what central government directives will look like.

This report focuses on a handful of high impact changes that would have positive and cascading impacts on the great many challenges and opportunities identified in this review. The most significant finding of this review is that the effort that is deployed into overall stewardship and management of monitoring and reporting is relatively scant and there is no single line of accountability for programme leadership. Examples include:

- The connections between the programme and what outcomes are achieved are unclear
- The reconciliation of many competing objectives is challenging operationally and requires executive guidance
- Structured decision-making focuses on the scale of the dataset, constraining comparison of different initiatives
- Relatively limited work is put into ensuring and measuring uptake of data and information and its impact and consequence inside or out of council

The consequences of this are

- Different parts of the work programme are subject to different levels and types of scrutiny
- It is difficult to establish a bird's eye view of the programme
- Tracking the data value chain is limited, meaning demonstrating the return on investment of funding is naturally compromised

The recommendations largely revolve around reviewing existing initiatives, developing a structured framework for future investment and subjecting the programme to regular cyclical review to ensure it remains fit for purpose, in addition to exploring funding opportunities. Taken together, a structured decision-making framework will support the council to prioritise focus areas, ensure resources are

being used to best effect and consider how the load can be spread differently (in terms of costs and participation) – captured in the suggested actions.

Of greatest concern is the apparent **lack of structured decision making as the programme has evolved**. Presently, decisions about monitoring are made at operational scales and generally in silos. The connection to objectives and outcomes can be limited, the intervention logic undeclared and forward planning for dissemination and ongoing management unclear. Further, there are many opportunities to explore novel synthesis of existing data and to establish more effective feedback loops across council – opportunities that are difficult to see or broker in the current splintered oversight model. There is a need for retrospective review to reset the programme and ensure it is fit for purpose. The process of doing so will support the refinement of a structured process to consider new initiatives and maintain overall stewardship of the programme. **See Recommendation 1.**

The second key observation is that the **effort is concentrated heavily in data collection and processing**, with less effort comparatively deployed down the data value chain. It does not seem that the latter stages (including the ‘use case’ or relative effectiveness) enjoy much documented consideration as new programmes are developed. To maintain programme integrity, this disproportionate focus requires remedy. Structuring decision making around exploring the steps in the data value chain could help draw effort down the chain and ensure its resourced explicitly. **See Recommendation 2.** Reports and data presentation that do occur are high quality and engaging.

The third key observation is that **NRU bears costs that could be passed on to other areas of council and the community** as an alternative to ratepayer funding. There are opportunities to share the load more effectively, explored in the suggested supporting actions. Recommendations are set out below with potential supporting action. The overall structure is reflected in Figure X. Supporting actions are non-mandatory, but represent useful considerations during the process of review, instituting stewardship and exploring different funding models. **See Recommendation 3.**

<p><b>Recommendation 1</b></p> <p>NRC develops a structured framework to collectively review its state of the environment monitoring</p>	<p><b>Recommendation 2</b></p> <p>NRC uses the review process to refine and implement an ongoing stewardship programme</p>	<p><b>Recommendation 3</b></p> <p>Optimise funding models to reduce ratepayer burden and distribute resources between teams more fairly</p>
<p><b>Supporting action 1</b></p> <p><i>Explore opportunities for collaborative working to reduce costs</i></p> <p><b>Supporting action 2</b></p> <p><i>Develop policy to guide systemic wind backs on programmes/mothballing</i></p>	<p><b>Supporting action 1</b></p> <p><i>Explore ways to alleviate council monitoring burden by sharing the load with other parts of the community</i></p> <p><b>Supporting action 2</b></p> <p><i>Consider the use and co-option of allied data collection to enable further collection</i></p> <p><b>Supporting action 3</b></p> <p><i>Technical programme leadership</i></p>	<p><b>Supporting action 1</b></p> <p><i>Develop and implement consistent internal cost recovery procedures that include data and science teams</i></p> <p><b>Supporting action 2</b></p> <p><i>Consider additional means of raising revenue through user and polluter pays approaches to funding SOE monitoring and reporting</i></p> <p><b>Supporting action 3</b></p> <p><i>Consider charging for commercial usage of council data where appropriate</i></p>

## Recommendation 1- NRC develops a structured framework to collectively review its state of the environment monitoring and reporting

The purpose of a systematic review is to retrofit intervention logic and establish accountability and oversight for the existing work programme. Through this process, opportunities can be explored to take various routes with aspects of the programme. The purpose is to provide a 'one stop shop' filter against which existing work can be evaluated and new work can be considered. Refining it through a programme review process would support its construction and agreement to then be used on an ongoing basis. A suggested framework for starters, requiring staff input and discussion, is contained in Appendix 2.

Decisions in the review should reflect what councils' future approach to the projects and datasets might be from the following possibilities.

1. Intensify/increase investment
2. Maintain investment
3. De-intensify programme/reduce investment (may include reducing collection or decreasing QA processes, or both)
4. Mothball (time limited cessation)
5. Permanently abandon

The decisions above carry risks that decision-makers must be made aware of. Risks of resiling from programme actions may include

- A failure to meet statutory obligations
- A failure to meet community expectations
- An inability to align with best practice
- Reputational risk of becoming an outlier in the sector

These need to be explored explicitly in relation to each dataset to ensure the ramifications of programme constriction is well understood. Restriction of collection could also be explored in response to use cases proving limited or those requesting data choosing not to use it.

### *Supporting action 1. Exploring opportunities for collaborative working to reduce costs*

The review provides an opportunity to consider synergies and opportunities for 'quick win' efficiencies. NRC's busy field teams often overlap in the community, visiting the same site on the same or similar days, some of which are at great distance from the office. Busy workloads, travel logistics and laboratory deadlines make working together challenging. However, an expectation that it is done, if possible, could support and provoke more forward planning and normalise a more joined up work programme in more places.

It is important to consider the implications of multiple visits and multiple interfaces with council from the perspective of the landowner or other stakeholder, who may not understand the different functions. Unifying the often-fragmented relationship management evident would be a natural byproduct of this process. An example of this approach is where Bay of Plenty RC launched a 'one ute up the driveway' initiative within council and with allied organisations like QEII and NZ Landcare Trust. Ensuring the burden of liaison and engagement with council is reasonable will be an important and useful outcome. Regulatory

functions, especially compliance and enforcement should be appropriately delineated from general SOE monitoring and community outreach.

*Supporting action 2. Developing policy to guide systemic wind backs on programmes/mothballing*

Staff were highly conscious of examples in the work programme where optimisation was needed but noted that they felt decisions on what not to do were much harder than what to start/do. Some identified that councils' expectations seemed unclear on how to weigh resiling from a monitoring programme against the value on long term and continuous data. Guidance would support some quick wins and long-term resource use refinements if a basis for decision making and a process was in place that everyone aligned with.

Building confidence on how to 'walk backwards' and on what terms would enable staff to make the difficult decisions that will come from the following drivers earlier noted

- Rising expectations of councils to deliver high quality data (including a general movement towards standardisation and federation over time)
- Recent jurisprudence that indicated low resourcing was no justification for gaps meaning decisions entail organisational and reputational risk
- Increasing costs of programme delivery and staffing overall

A structured and documented consideration process will provide the necessary framework and consistency to demonstrate why decisions were made in the future. Building this consideration into the stewardship framework would be the most effective means of addressing it.

## Recommendation 2- NRC uses the review process to refine and implement an ongoing stewardship programme

The review process would both create headroom to support other initiatives (further collaboration and novel synthesis but also provides the ability to 'build the plane as they fly it' and create an agreed stewardship framework for the programme on an ongoing basis. The framework, to support future gains, could

- use the data value chain as a guide to ensure good spread of effort
- Implementing clear processes to analyse new initiatives in the context of the wider programme and in respect of the long-term resource burden they entail
- Require regular cyclical reviews of existing programme initiatives to ensure they are fit for purpose
- Considers gaps address them or document risks of not addressing those gaps
- formally institute accountabilities to support the framework (e.g. obligations from policy teams to provide support in programme design).

It is noted that at a sector level, regional councils (through RSHL) are working towards a standardised optimisation framework. This will be available early in 2026. The objectives are very similar, and keeping a close eye on the development of the RSHL solution will avoid wasted effort.

*Supporting action 1. Exploring ways to alleviate council monitoring burden by sharing the load with other parts of the community*

NRC has a significant workload and many shared interests with different parts of the community. Initiatives such as partnerships in data collection with iwi and hapū, the use of private landowner weather data and many formal (e.g. s33 RMA) and informal relationships with community groups demonstrate a busy interface already, that could be leveraged further to support improved knowledge and its dissemination. Formal working relationships with the regions three territorial authorities may also have scope to share responsibilities. Incorporating express consideration of these opportunities in the stewardship framework would also support consistent consideration.

Key considerations for partnering in the community may include

- What risks (short, medium and long term) are encountered by passing over responsibilities to others?
- What are the benefits of passing on responsibility beyond reducing direct resource expenditure
- What risk management is required to uphold data integrity and availability?
- What support ongoing from council will be needed and how will that be resourced?
- Is the delegation temporary or permanent and what will the process be for council to assume responsibility again
- What legal or procedural requirements are needed to support success?

Some staff noted there was opportunity for formal transfer of functions, but these have not yet been progressed. Developing a plan of action within the stewardship framework may help with forecasting requirements and putting timelines on goals such as delegations in law.

*Supporting action 2. Consider the use and co-option of allied data collection to enable further collection*

Stewardship approaches are likely to identify gaps on an ongoing basis and identify other programmes in council that yield data that could improve councils' stock of information. With increasingly constrained resources, opportunities for improvement may be already possible but not acted upon as proponents are not aware of relationships. Where gaps are identified in the programme, it may be useful to first consider how they can be filled in novel ways. This could provide avenues to improve data coverage, introduce novel means of data collection and sharing, better manage impacts of councils and others impact on the environment.

Examples of possible opportunities include:

- Standardising collection methods for consent and compliance related data to support wider council data collection initiatives
- Ensuring that plan limits and targets are correctly reflected in consent consideration processes and demonstrable after the fact
- Put in place or enhance monitoring obligations related to council-funded projects in a form that has wider application and usability (e.g. through procurement processes)

### *Supporting action 3. Technical programme leadership*

Stewardship is a verb, so a supplementary suggestion is that the objectives of this recommendation could be supported by recruitment or identification of a technical programme lead. Supporting recommendation 1 is the prospect of recruiting programme leadership. Siloed approaches to management, high workloads and insufficient linkages between outputs and outcomes are challenging to navigate with existing resources. Much better returns on investment could be made by charging an individual with the role of connector. Ideal attributes include

- A natural science background, combined with policy, planning or compliance experience
- Monitoring expertise, specifically environmental and long-term datasets and associated management
- Strong organisation skills and experience in evaluation
- A generalist level of expertise that means they are conversant in all work
- Strong communication skills
- An ability to see connections between work areas and broker cooperation

Performance metrics should be linked to enhancing programme outcomes including supporting uptake and impact of data and information internally and externally.

## **Recommendation 3- Optimise funding models to reduce ratepayer burden and distribute resources between teams more fairly**

In discharging its statutory functions, the council has the authority to recover some costs from resource users or other users of information. This ensures that those that accrue benefit from the activities of the NRU are appropriately charged, including via other functions Council's monitoring teams can log hours against consents or other projects and recover their costs from other teams in the organisation. However, the council's approach to recovering time internally and externally appears underdeveloped.

Further, where funds are sourced from users they are often not attributed to the relevant budget and thus do not offset the costs incurred at a team level. There also appears to be disagreement on where one team's job ends and the other begins.

### *Supporting action 1. Develop and implement consistent internal cost recovery procedures that include data and science teams*

Internal cost recovery procedures appear limited based on interviews and observation, and convention appears to dictate that internal or external cost recovery is the exception not the rule. The Data team in particular spend considerable time processing data from other teams (particularly compliance). A strategic discussion is needed on how this is navigated as the present situation does not seem sustainable. Internal cost recovery systems would ensure true cost accounting where dependencies are present.

Reliance by other teams and units can act to cannibalise resources, meaning much less can be delivered than anticipated and putting pressure on other parts of the programme and staff wellbeing. A more comprehensive approach to internal and external cost recovery will demand

- A formal system by which resource transfers within council can be undertaken
- Training, support and guidance on the transfers internally
- Consistent application to ensure fairness

*Supporting action 2. Consider additional means of raising revenue through user and polluter pays approaches to funding SOE monitoring and reporting*

Based on the approaches of other members of the regional sector, NRC has further scope to seek contributions to its programme funding for SOE monitoring and reporting from resource users. Examples of other councils give confidence that such charges could better offset rates expenditure and could be considered for a range of consents. The success of this endeavour would rely on the incoming monies being directed to the relevant operational budget.

Examples of potential avenues include

- Consent monitoring and other charges where it draws on NRU resources or expertise
- Charging consent holders a standard integrated fee to recognise the reliance on underlying science and data assets in consenting and monitoring
- Requiring larger industrial sites to contribute to the increased SOE monitoring their activities make necessary (air quality etc)

*Supporting action 3. Consider charging for commercial usage of council data where appropriate*

Commercial usage of council data is not charged for. As part of the strategic review process, staff should consider the degree of usage for commercial purposes and explore ways to generate revenue as appropriate, alleviating the impact on ratepayers and potentially enabling further initiatives to communicate the data through public information channels.

Staff report that legal advice suggests it's not appropriate for council to charge for access to data. However, where there is a clear private benefit that such a perspective should be reconsidered, even if only to cover the staff time to respond to the request (common practice in other councils and CRIs).<sup>5</sup> Specific advice is available to agencies regarding charging for the access to commercially valuable information.

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<sup>5</sup> Several guidance documents are available for charging under the Local Government Official Information and Meetings Act 1987, noting particularly page 11 on charging for commercially valuable information [A guide to charging for official information under the OIA and LGOIMA](#)

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## Appendix 1 - Interview Theme Analysis

Interviewee	Role
Tami Woods	Manager, Policy and Planning
Clark Ehlers	Natural Resources Science Manager
Lisa Forester	Manager, Biodiversity
Jason Donaghy	Natural Resources Monitoring Manager
Sandrine Le Gars	Natural Resources Data Manager
Ricky Eyre	Water Quality Field Operations Manager
Allen Temple	Hydrology Manager
Gail Townsend	Senior Environmental Data Analyst
Richard Griffiths	Resource Scientist Coastal
Manas Chakraborty (and Suha Sarwar)	Resource Scientist - Freshwater
Suzanna Rosandich	Senior Water Quality Field Operations EMO
Ticha Gonah	Water Resources Scientist
Ellen Williamson	Manager, Land Management
Penny Hales	Water Resources Officer – Water Quality Operations
Justin Murfitt	Principal Policy
Susie Osbaldiston	Senior Resource Scientist - Water
External engagement (targeted discussions, questions not asked)	
Raelene Mercer	Regional Sector Holdings Limited (NEMS)
Glenn Ellery	Environmental Information Manager, Bay of Plenty Regional Council

### Question 1 What are your overall perspectives on NRC’s focus on SOE monitoring?

Interviewees generally recognised that Northland takes its SOE monitoring responsibilities seriously and that their efforts overall are relatively comprehensive for a small council in a diverse environmental context and have improved significantly over the past several years. Several staff identified that the end-to-end planning for environmental monitoring often wasn’t clearly stepped out or properly integrated, that there was potential to ‘join the dots’ more effectively. Some areas were identified as being relatively more disjointed than others such as climate change related data, that is presently collected and managed across multiple teams.

### Question 2 What are the key drivers for SOE monitoring and reporting?

Staff identified a range of drivers including statutory requirements (NPS-FM loomed large) in addition to consenting and compliance related drivers of both data collection and its receipt/cleaning. Interest areas of proponents, different priorities from the community, safety obligations (civil defence and flood engineering) in addition to projects arising from concerns among councillors.

Staff identified that many datasets were critically important for community safety in addition to describing the state of the environment. Flood and other warnings related to weather provides time and scope for communities to seek safety or prepare themselves for adverse conditions. Many of council’s network monitoring outputs play an important role in severe weather preparation and response.

The significant impact of national direction on freshwater was noted repeatedly. The monitoring and reporting requirements have consumed significant resources generally, aggravated by repeated changes with new iterations and shifting requirements that need to be resourced and embedded. The significant impact of these instruments has diverted attention from other areas and the exploration of gaps. This is consistent with the findings of Tadaki 2022.

Staff interviewed commonly recognised that drivers may be loosely referred to, but that the use case for data was not always clear, and that they did not necessarily have confidence that data being collected and maintained was being used effectively. This arose particularly in relation to links with consenting and policy effectiveness monitoring.

**Question 3 What are your thoughts on the current level of investment into SOE monitoring and reporting?**

Most staff interviewed felt that the level of investment was ‘about right’ for what they considered to be the responsibilities that Northland has for monitoring the environment and the size of the organisation. A small number of staff considered investment to be generous or much too low. Virtually all mentioned that the investment would be more effective if the data were used more. It was also highlighted that passionate staff were more productive, so there was a high output for the investment.

Staff highlighted that there were often *ad hoc* monitoring requirements which need to be funded from existing budgets, meaning people must do more with less or curtail efforts in other areas. The impact of this ‘frittering’ was hard to avoid and often mentioned. However, it could not be quantified from existing information. As it could be cumulatively significant, new cost coding should provide important insights in due course into this.

The value of collaboration and working together to improve the investment return was near universally acknowledged, but it was highlighted that this took time and resources that were consumed with day-to-day monitoring. Limited incentives were also in place due to a lack of clear direction and KPIs at a leadership level that promoted these endeavours.

The introduction of new sites and monitoring capabilities results in additional demands on operational staff to monitor and service that infrastructure and to process and manage the data that emerges. Several staff noted that there was potentially not enough consideration of the ongoing operational demands of new technology and that it was common that such work would be absorbed into existing (stretched) budgets. Further all of life monitoring for structures was often missing, with some legacy infrastructure remaining in place long after it had been decommissioned.

**Question 4 How do you think NRC benchmarks against other councils in a similar position?**

Absent clear requirements for councils, this question focused staff interviewed on how they thought NRC stacked up overall compared with councils in a similar financial position. Examples of where Northland has led the way include the drought map coding developed by the data team being rolled out at a national scale, supporting other councils and agencies to make decisions related to drought support.

Staff usually identified that Northland likely benchmarks well against councils with similar resourcing and challenges. Several senior staff noted that Northland may not seem as active as other councils, but that often those other councils ‘talked a better game’ and were more polished in demonstrating their actions. Staff that have joined Northland from elsewhere in the regional sector had different

perceptions of adequacy, informed by their previous roles. Several mentioned Northland's effort was spiky, with lots of effort and arguably leading in some areas, while trailing in others.

#### **Question 5 What are three positive aspects of the current approach?**

Staff readily acknowledged a range of strengths. It was positive to note that most had no difficulty identifying initiatives that they were proud of. Many staff provided more than three examples of strengths, and these are summarised below in no particular order. Staff often identified a strength with an accompanying weakness. Strength identified included:

- **Colocation of science and operational expertise** is a positive factor; however further work is needed to improve the connections between those teams and understanding of respective roles (some staff specifically said the integrated nature of the previous structure was better around themes/topics)
- NRC's size can mean it can **pivot quickly** to new things easily. Downside is that the common reliance on one or two experts means implementation can be slow or not occur at all.
- Staff open to change and keen to do a good job (focus on **continuous improvement**) was acknowledged by many.
- **Fragmented relationship management** (particularly with iwi and hapū) has efficiency implications on both sides, there is not enough synthesis, however the relational and slightly ad hoc nature of these connections was also acknowledged to be important.
- NRC have been **early adopters** of technology (eg Drones). But it takes time/bandwidth to consider better ways of doing things – opportunities in automation, AI that need time
- Northland has **readily adopted standardised approaches** where available, affordable and practical. For instance, Northland is one of a handful of councils that has adopted the standard approach of monitoring dunes developed by the Coastal Restoration Trust of New Zealand.
- **Clever collaborations** with other teams (e.g. maritime) have netted great results, but work needed with other teams to avoid duplication and leverage synergies. The relationships between some teams within and outside NRU are not good enough to support collaboration, and several staff identified that management needed to lead by example in building constructive working relationships and spotting connections.

#### **Question 6 What are three potential areas for improvement?**

Interviews revealed a wide range of areas for potential improvement. The most common issue raised was that data that are collected are not used enough or drawn on enough to inform decisions in or out of council. Overall, there was a clear appetite to implement these improvements, but a broad acknowledgement that changes requiring further resources would be unlikely to get support from leadership.

More systematic planning from determining information needs to eventual use is supported by most staff, who note the objectives, intervention logic and use case is sometimes fuzzy and doesn't get interrogated. Staff noted a high reliance on informal connections and institutional knowledge compared with structured and systematic decision making. The expenditure itself is usually subject

to a 'new initiatives' assessment<sup>6</sup>, but the ability to rigorously review the proposal in context appears limited. There needs to be more space available for

- Early conversations about why projects will be done
- A space to carefully consider new tech and operational requirements
- How new fixtures will be serviced and managed over their lifetime and how collection and calibration will be resourced day to day
- Supporting other teams to understand the structure and approach of the programme and what data
- could be or is available and in what form

A lot of data is collected and not analysed and if analysed may not go where it needs to. Staff recognised that information that is not taken up to inform decision making is pointless and undermines the return on investment. Other areas for improvement include exploring:

- Ways to attract **more experienced staff**, especially in high demand fields. Like many councils that are predominantly rural or remote, NRC can struggle to attract suitable specialists. Most commonly, keen but inexperienced staff are recruited and trained inhouse. Salary levels mean attracting and retaining highly experienced persons is inherently challenging
- More **synthesis of mana whenua relationships** was seen as desirable. Engagement with mana whenua is sometimes very fractured across operational teams with different relationships held in siloes. It is demanding for the receivers as well as NRC and efforts to join up discussions where appropriate could save time.
- Limited focus on social science methods such as **tracking behaviour changes** in monitoring means there is a missing link that makes it hard to draw conclusions about the reasons for changes in the environment that we do detect.
- NRC has a lot of **single person vulnerabilities** - the nature of a small organisation with critical roles is that single person reliance is a common vulnerability. There are several staff for which no substitutable expertise is available, and a number disclosed that this was a source of stress for them and others and made things like taking leave difficult
- Dependency risk of many teams on the data team in particular, **without clear systems to recover costs internally**.
- Several staff noted that reviews were common, but less common was time and bandwidth (and direction) **to implement change**. Bedding in recommended changes from this review was seen as desirable.
- Ways to improve **network representativeness**. Highly diverse, small and dissected catchments with many short flushing streams so the representativeness of some networks are questionable.
- Better focus on **synthesis of data collected in different areas**, especially to figure out causal relationships. Examples cited included links between freshwater and estuarine data, consenting and compliance information, lakes and water quality etc
- More **infield experience for technical people** so they can understand the context of the data they are managing

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<sup>6</sup> New Initiative forms are 'light touch' assessments of new expenditure that lack many of the key elements of a business case process, and do not provide for assessment of relative value against other parts of the programme.

- **Improving the logistics of field work.** Several staff noted that the council were poorly set up for field functions. The depot available is a long way from head office, washdowns and field hygiene was difficult to prepare for and storage was minimum. A shift to hotdesking likely aggravates this. In addition, lots of Northland is remote and hard to access so naturally has challenges in accessibility, making it back for the lab etc. These practical barriers compound.
- **Improving relationships between teams,** especially middle and upper management and with other councils/organisations
- **Integrating systems more effectively,** as all the systems and processes are unwieldy and it takes time to context switch a lot. Time sheeting does not reflect this burden.
- **Frameworks that help to decide what not to do.** Many staff identified that the teams are good at introducing new things and fixtures than deciding what not to do
- **Updating systems** as some take a long time just to keep afloat and this takes away resources (e.g. Hilltop)
- Data sovereignty – many data collection processes occur in partnership with mana whenua and as such there are restrictions on the onward use and sharing of that information.
- Several staff were sceptical of the **value and costs associated with alignment with NEMS**, although Northland's work programmes have generally worked to align with standards as they've become available. Their concerns included that it was being heavily pushed by central government, that the costs of alignment are not well understood for resource-constrained councils, and that some of the requirements were onerous and meant resource was not available for other clear gaps. Many of these themes are reflected in sector wide feedback summarised in a report as set out below. Whether or not NRC continues to pursue alignment with NEMS in some work areas is a live conversation, which may have important resource implications.

**Question 7 If you were looking for duplication and overlap, what are some areas you think would be most useful to explore?**

Staff did not readily have answers for duplication. Generally, the views shared indicated that looking for duplication and effort may miss the point, in that the issue is probably that data don't get used and therefore the benefit is virtually zero.

There are areas of work however where practical crossover occurs, and more than one team will attend a site for different but related purposes on the same day or close by. There are further opportunities to join up these efforts more effectively to reduce travel and logistical expenses and avoid critique from landowners and other stakeholders. Examples include work location overlap between Hydrology, Water Quality and Biodiversity, especially in relation to Lakes, in addition to site-based overlap with compliance and land management. Regulatory functions need to be carefully administered and may have additional restrictions to consider. Determining whether there is benefit in doing so should be made on a case-by-case basis as it could potentially create more challenges than it solves in practice.

**Question 8 If you were considering what gaps existed, what things would stand out for you as areas the council potentially underinvests?**

Many staff recognised that the skill, enthusiasm and ingenuity of the people of NRC were the main reasons the existing budgets could yield the data that they do – there were strong perspectives that everyone was working hard. High workloads were identified by most interviewees as being a strain on staff, limiting collaboration and meaning that known gaps in effort would be difficult to plug. Thematic gaps include climate change<sup>7</sup>, soil and sedimentation but the most obvious gap is the time to then ensure data is accessible for decision-making – most effort is concentrated in collection and processing. Staff appear very conscious of the lack of further budget/limited prospects of added resources, but gaps were quickly identified. Key ones identified included:

- **Policy effectiveness monitoring is limited** – staff commonly noted that NRC has a very limited understanding of the effectiveness of regulatory and non-regulatory interventions as so little attention is deployed in that direction. Consequences of this gap in knowledge is that models also lack empirical underpinnings that more judicious effectiveness monitoring could provide<sup>8</sup>
- Related to the above, **monitoring the uptake and usage of environmental data** is equally limited
- **Connecting data in novel ways** – staff identified the untapped potential of existing data which could be combined in novel ways to answer important questions. Where data comes into council and it is not looked at or prepared for use (e.g. much compliance data) staff noted it as missing a valuable opportunity. Examples of innovations include a report which compared heavy metal accumulation data with consented discharges, a strategy which could be expanded to explore drivers of environmental recovery and degradation and determine attribution
- **Coherent frameworks for reporting and sharing of data** – staff recognised that much effort goes into collection and cleaning, but much less into reporting and sharing and enabling uptake.
- **Implementation of new systems** – the merits of the likes of kiEco are difficult to unlock due to under-resourcing of implementation phases (like limited resources to implement reviews). Resources initially spread over more than one team and appear to have mostly disappeared.
- **Alignment of methods across teams** - consent monitoring requirements and compliance standards could align better with NRU monitoring but don't due to lack of communication.
- **Monitoring of flagships like KMR was noted as a gap.** However, some staff said the amount of funding provided to KMR was very significant and it was unclear why the responsibility to monitor the impacts fell to under resourced councils.

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<sup>7</sup> Opportunities to work more effectively with the climate change team and to connect work programmes more effectively. Reference was made to the development of a cross-council working group that is being developed.

<sup>8</sup> Sometimes NRU note they do not have sufficient information to feed a model, meaning the error of under or overestimate is compounded and models are less accurate. For instance, Auckland's Freshwater Management Tool is a great option, but weak underlying data means 'it won't help us'.

- **National scale datasets** are out of date, not updated frequently enough or haven't been helpfully consolidated, which is out of the control of the council but highly relevant for their work. Examples include large intervals in updates for the Land Cover Database (LCDB), the failure to prioritise ecosystems at a national level etc
- **Metrics that focus on quality and uptake** – staff identified that metrics/KPIs rarely focused on quality outcomes, meaning the wrong behaviours are celebrated (process and output over outcome).

Staff also acknowledged that there is potential for wise delegation – opportunities exist to delegate responsibilities to kaitiaki, something the council needs to explore. Some resistance was noted to transfers of functions (s33 RMA). Many staff felt most kaitiaki not ready yet but may be soon. The Annual Report acknowledges a recent example of the Data team working with Kaitiaki Whangaroa to integrate iwi/hapū data into the council public data portal. Such delegation will require ongoing liaison and support which must be resourced.



## Appendix 2 - Strawman Decision-making Framework

The purpose of this draft framework is to provide a 'strawman' for a structured decision-making process referred to in Recommendation 1 and 2. It is a combination of the following resources

- The data value chain as a concept
- Lindenmayer 2023 as discussed
- The Te Kete Mārika Action Plan

Significant focus is deployed in NRC to the early stages of the value chain, with ongoing enrichment compromised by a variety of factors including time and resources, choices about data collection that may constrain onward steps, lack of suitable systems and disconnects between teams. Routine and project-based monitoring would derive value from being considered in this way or for that consideration to be documented at the outset.

It is noted that the regional sector is exploring a standard optimisation project and it is not intended to cut across this work. However, it is the author's view that the aim of this stepwise consideration is likely to be similar and may give NRC a 'head start' with implementation. The recommendation is general, intended to avoid clashing objectives with sector-wide reform.

A consistent framework to make decisions about environmental data and its management (in this case SOE monitoring and reporting) would enable NRC to

- Reconcile and link objectives and outcomes (Te Kete Mārika has some useful aspects already in place but is not currently up to date)
- Develop and maintain an up to date and coherent overview of monitoring and reporting effort for communication and evaluation purposes
- Systematically record and test intervention logic of monitoring using the steps of the data value chain
- Maintain a clear and accessible description of programme meta-data and field survey protocols at all times
- Guide stewardship including monitoring and evaluation of programme effectiveness over time and how to document/track that stewardship
- Optimise resources by making it easy to continually review and to record programme achievements

The strawman is presented over five stages incorporating a process for reconciling and prioritising objectives (determining what to collect) and determining what to measure, followed by the 12 steps of the data value chain.

Key aspects of programme administration

- set aside a proportion of budget for programme monitoring and optimisation (c. 10%) including monitoring uptake and impact stages especially
- set aside a proportion of the budget to be available for later stages of value chain including maintenance of meta data and data storage (life cycle costing approach)
- earmark ownership of steps and funding for each stage (and validate/track funding predictions on an ongoing basis)
- recognise of the importance of measuring behaviour changes to support attribution of environmental change (see Sparrow framework)

- consistently seek to document and revise as necessary operational choices about aspects of the programme in a way that is discoverable and transparent
- KPIs and other behavioural drivers incentivise programme administration
- How to incentivise careful consideration by other areas of council about how to monitor objectives early in their work and prompt engagement with NRU

The data value chain as earlier discussed provides a useful framework for exploring the end-to-end stewardship of individual projects and datasets.

**Phase 1 Determining what to collect**

- What are the objectives for change in the community or the environment (e.g. for a new policy intervention, what is the behaviour we are wanting to encourage or stop and how will we know when it's happened)?
- What are the questions the monitoring must answer?
- What is the purpose of the monitoring (surveillance, targeted risk-based monitoring etc)
- Consult with future users around what is possible or feasible and how to best meet use case needs
- What are the resources available (costs, time, expertise both initial and ongoing)?
- Who else may wish to partner with council to collect the data or to contribute to its collection?

**Phase 2 Collection**

<b>Collection</b>	Identify	Make decisions on what to collect, granularity, frequency etc based on Phase 1 according to objectives. Consider what standards are available to align with (e.g. NEMS) to guide decisions.
	Collect	Logistics of collection in-field including resourcing/capability. How will it be carried out, by whom and with what equipment. Capital expenditure and ongoing operational expenditure to be considered.
	Process	How will the data be managed, in what system and by whom? How is it funded on an ongoing basis? Consider other aspects such as privacy/data sovereignty

**Phase 3 Publication**

<b>Publication</b>	Analyse	Extract insights and explore how to present/visualise these usefully for end users
	Release	Ensure levels of accessibility are fit for the intended use and explore ways to improve availability. Consider options (technical report, short report, web access, social media post etc)
	Disseminate	Publicise as appropriate through one or more channels or depending on the data and information concerned

**Phase 4 Uptake**

<b>Uptake</b>	Connect	Use technology to increase access to and use of data. Connect datasets with each other and other users to encourage novel insights.
	Incentivise	Encourage users and potential users to engage with data and improve accessibility where possible.
	Influence	Promote a culture of data usage and data driven decision-making including in other areas of council (e.g. policy)

**Phase 5 Impact**

<b>Impact</b>	Use	Monitor the use of the data by council and other stakeholders (information requests, evidence of reporting) and communicate it (celebrate and showcase novel synthesis and cross-Council collaboration). Provide an opportunity for feedback on the utility and accessibility of the data, especially if new.
	Change	Use an adaptive monitoring approach to track and make improvements while maintaining integrity. Make changes to programme to improve quality or relevance, reflect resources and enhance uptake (e.g. if no evidence of uptake, find ways to enhance that or consider limiting collection).
	Reuse	Find multiple uses for the same data

One of the most challenging aspects of data programme management is deciding what not to do. NRC has identified that this decision-making process is not codified and staff are reticent to cancel work as a result. The box below sets out key considerations for programme restriction, mothballing or cancellation.

**Key considerations for walking backwards**

From time to time, programmes introduce monitoring that may not be required over the long term, may lose resourcing or be otherwise lower in priority. Regular reviews of programme activities should arrive at periodic decisions into categories the same or similar as the below

1. Intensify/increase investment
2. Maintain investment
3. De-intensify programme/reduce investment (may include reducing collection or decreasing QA processes, or both)
4. Mothball (time limited cessation)
5. Permanently abandon

Stopping collection of data where the use case is limited is an important dimension of the discipline and rigour of project management. The following are key considerations to support wind-back of monitoring (including reducing scale, frequency or stopping altogether).

The value of long-term data should be weighed against the genuine value of the dataset itself, in recognition of the finite nature of funding and the opportunity cost of not doing other essential aspects. Initial considerations should include

- Options for reducing effort or designing in funding shortages from the outset (e.g. rotating sample approaches, reducing frequency of sampling etc)
- Consider whether wind back is temporary or permanent and what other steps may be required (e.g. removal of then legacy infrastructure)
- Ensure end users are engaged with as practicable and understand the data will not be available in the future in current form and consider impacts/alternatives
- Assess risks/benefits of the wind back

Once a decision has been made to 'wind back' a programme the following steps are important

- Communication of the decision to staff and end users
- Document methods, site locations and archive data in case further resources become available and the programme can be re-established
- Wind up planned reporting



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### **Whakarāpopototanga / Executive summary**

This paper provides an overview of the current land management work programme and outlines how regional council responsibilities are expected to continue under the Natural Environment Bill (NEB).

The existing programme remains centred on supporting landowners, farmers, and community partners to improve water quality, indigenous biodiversity, and soil conservation. Recent structural changes within the Land Management Team have strengthened advisory capacity and positioned the team to start looking at the support required to implement Freshwater Farm Plans (FWFPs) once roll out commences.

Under the NEB, the core functions that guide land management activities are largely unchanged. Regional councils' core responsibilities for water quality, soil conservation, and indigenous biodiversity that currently drive the land management work programme remain largely the same. Regional Council biodiversity function is however proposed to extend to both the wet and dry environments current dry environments are managed by district councils. The Bill maintains the existing requirement for councils to take regulatory or non-regulatory action where State of the Environment monitoring indicates that intervention is needed, mirroring current responsibilities under the Resource Management Act (RMA).

Freshwater Farm Plans are strengthened within the new framework and are expected to become a key tool for managing environmental risks and reducing the need for resource consents, particularly in high-pressure catchments. The Bill also introduces a future role for regional councils in developing and implementing Action Plans where environmental limits are reached or exceeded. The Action Plans will be required within defined management units and may include advisory services, targeted catchment interventions, and other land management responses necessary to restore or maintain environmental states. Together, these proposed changes suggest that some additional work could emerge as the new framework is implemented.

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### **Ngā mahi tūtohutia / Recommended actions**

That the Natural Resources Working Party note:

1. That the current Land Management Work Programme, including the team's strengthened structure to support farmers in understanding rules, and preparation for implementing Freshwater Farm Plans.
2. That the Natural Environment Bill largely maintains existing regional council functions that drive existing land-management activities. But includes expanded indigenous biodiversity responsibilities and new expectations around action-plans to achieve environmental limits which may additionally require support from land management staff.

## Background/Tuhinga

### Current Land Management Work Programme

In light of recent and impending regulatory changes, the Land Management Team has spent the last 18 months working to repositioned itself in a more proactive and future focussed way that supports the Councils’ regulatory functions. The refresh resulted in:

- Mid-late 2024: A review of the team’s service delivery model
- Early 2025: The creation of a sustainable work programme that utilises resourcing
- Mid 2025: Implementation of structural changes that complements the refreshed work programme.

While the Land Management Team continues to deliver its core advisory and support functions for land, water, soil, and biodiversity, the recent changes have strengthened the teams’ education/advisory capacity to support improved compliance, better utilised staff resourcing associated with funding delivery, and positions the team to better respond to future supporting requirements e.g. the implementation of the Taumarere business case, and the councils’ role in Freshwater Farm Plans.

The team is now structured in three functional units/teams; *the Technical team, the Partnerships team, and the Nursery*. Each team has associated work programmes and projects that it is responsible for the delivery of as outlined below.

### *The Land Management Teams’ new structure, work programme, and outcomes*

Team	Work programme	Outcomes
Technical team	Soil Conservation Programme	<p>Leads Implementation of the <b>NRC soil conservation strategy</b></p> <p>Increases ability to deliver <b>regulatory education/advice</b></p> <p>Supports councils' delivery of other regulatory functions e.g. SOE monitoring, Freshwater Farm Plan delivery</p>
	Internal/External Technical support	
	Project Effectiveness Monitoring	
Partnerships team	Hill Country Erosion Fund	<p>Delivers <b>Regional Plan freshwater quality and Biodiversity outcomes</b></p> <p>Uses non-regulatory actions to increase <b>landowner compliance</b> with regional plan and national regulations.</p> <p>Contribution to NRC <b>climate change strategy</b>, building the region’s resilience to storms and climate change.</p> <p>Implements <b>Tāiki e</b></p>
	Environment Fund	
	Tāngata Whenua and Community Catchment Fund	
	Communication and engagement	
Nursery	Poplar and Willow supply	<p>Supports implementation of NRCs soil conservation and climate change strategies</p> <p>Enables the delivery of Ministry for Primary Industry's <b>Hill Country Erosion priorities</b></p>
	Nursery infrastructure improvement project	

### Future under the Natural Environment Bill

The Natural Environment Bill largely maintains the core functions and responsibilities that currently drive land management activities within Northland Regional Council. This includes ongoing responsibilities for water quality, soil conservation, and indigenous biodiversity.

Indigenous biodiversity responsibilities have however been expanded to include the dry environment, whereas previously the focus was primarily on the wet environment.

Regional councils retain responsibility for taking appropriate regulatory or non-regulatory action where State of the Environment monitoring identifies that intervention is needed. This is similar to the current RMA functions that underpin activities such as fencing support for the top 150 wetlands or providing guidance around stock exclusion and funding for fencing.

Freshwater Farm Plans become a core compliance and land-management tool within the Bill, intended to manage environmental risk and reduce reliance on resource consents.

The Bill also introduces a future role for regional councils in implementing action plans where environmental limits are reached or exceeded. Environmental limits apply across air, freshwater, soil, indigenous biodiversity, estuaries, and coastal waters. If a resource is at or above its limit, councils must develop and deliver practical action plans within defined management units. This may include targeted catchment interventions, advisory support, or other land-management responses, to restore or maintain environmental health.

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### **Ngā tapirihanga / Attachments**

Nil