Northland Regional Council
Regional Policy Committee

Meeting Agenda

Regional Policy Committee
For meeting to be held in the Council Chambers,
36 Water Street, Whangarei, on
Monday, 15 December 2014,
commencing at 10.00am.

NORTHLAND REGIONAL COUNCIL
Regional Policy Committee

Agenda

For meeting to be held in the Council Chambers,
36 Water Street, Whangarei, on Monday, 15 December 2014,
commencing at 10.00am.

MEMBERSHIP OF THE REGIONAL POLICY COMMITTEE

Cr G Ramsey, Chairman

Cr D Sinclair	Cr J Carr	Cr C Brown
Cr B Shepherd (ex officio)	Cr J Bain	

OPEN MEETING

ISSUE: Confirmation of Minutes – 25 August 2014

ID: A709856

To: Regional Policy Committee, 15 December 2014

From: Evania Laybourn, Committee Secretary

Date: 08 December 2014

Report Type:	☑	Normal operations	☐	Information	☐	Decision
Purpose:	☐	Infrastructure	☐	Public service	☐	Regulatory function
	☑	Legislative function	☐	Annual\Long Term Plan	☐	Other
Significance:	☐	High	☐	Moderate	☑	Low

Executive Summary:

The minutes the meeting held on 25 August 2014 are attached as **Attachment 1.**

Legal compliance and significance assessment:

Councils are required to keep minutes of proceedings in accordance with the Local Government Act 2002.

Recommendation(s):

1. That the report "Confirmation of Minutes – 25 August 2014" by Evania Laybourn, Committee Secretary and dated 08 December 2014, be received.

2. That the **attached** minutes of the Regional Policy Committee Meeting held on 25 August 2014 be confirmed as a true and correct record.

NORTHLAND REGIONAL COUNCIL
REGIONAL POLICY COMMITTEE

Minutes of the Regional Policy Committee Meeting
held in the Council Chamber,
Northland Regional Council, 36 Water Street, Whāngārei, on
Monday 25 August 2014, commencing at 1.00 pm

Present:

Northland Regional Council
Cr Graeme Ramsey (Chairman)
Cr David Sinclair
Cr Joe Carr
Cr Bill Shepherd (ex officio)

In Attendance:

Chief Executive Officer – Malcolm Nicolson
Senior Programme Manager – Resource Management
Policy Specialist – Coastal
Programme Manager/Policy Specialist – Tangata Whenua
Committee Secretary

The Chairman opened the meeting at 1.03 pm.

Apologies (Item 1.0)

Moved (Cr Sinclair / Cr Carr)

That the apology from Cr Brown and Cr Bain for non-attendance be received.

Carried

Declaration of Conflict of Interest (Item 2.0)

The Chairman gave members the opportunity to declare an interest on any item of business on the agenda for the meeting.

There were no conflicts of interest declared at this point.

Confirmation of Minutes – 23 June 2014 (Item 3.1)

Report from Evania Laybourn, Committee Secretary dated 18 August 2014.
ID: A668966

Moved (Cr Carr / Cr Sinclair)

1. That the report "Confirmation of Minutes – 23 June 2014 by Evania Laybourn, Committee Secretary, and dated 18 August 2014, be received.

2. That the minutes of the Regional Policy Committee meeting held on 23 June 2014 be confirmed as a true and correct record.

Carried

The meeting was adjourned until 3.00 pm to allow for the Regional Policy Committee to workshop some items that are on the meeting agenda.

The meeting reconvened at 3.02 pm and was adjourned until 4.00 pm.

Meeting reconvened at 4.08 pm.

Review of the Regional Plans Update (Item 3.2)

Report from Ben Lee, **Policy Specialist – Coastal dated 12 August 2014.**
ID: A66624

Moved (Cr Ramsey / Cr Sinclair)

That the report "Review of the Regional Plans Update" by Ben Lee, Policy Specialist – Coastal, and dated 12 August 2014, be received.

Carried

In discussion the committee indicated that at least one member will attend each of the workshops and that their role would be to chair the workshop. The committee also indicated that they were comfortable with the amended timeframes as set out in the report.

Te Taitokerau Māori Advisory Committee and the Plan Review Process (Item 3.3)

Report from Ben Lee, Policy Specialist – Coastal dated 12 August 2014.
ID: A667030

Moved (Cr Carr / Cr Ramsey)

1. That the report "Te Taitokerau Māori Advisory Committee and the Plan Review Process" by Ben Lee, Policy Specialist – Coastal, and dated 12 August 2014, be received.

2. That the Regional Policy Committee approve presenting an agenda item to the Te Taitokerau Māori Advisory Committee outlining the regional plan review and where it fits into the broader process for developing new regional plans.

Carried

Conclusion

The meeting concluded at 4.20 pm.

ISSUE: Tāngata whenua engagement

ID: A708589

To: Regional Policy Committee, 15 December 2014

From: Ben Lee, Programme Manager – Policy Development

Date: 5 December 2014

Report Type:	☑	Normal operations	☐	Information	☐	Decision
Purpose:	☐	Infrastructure	☐	Public service	☑	Regulatory function
	☐	Legislative function	☐	Annual\Long Term Plan	☐	Other
Significance:	☐	Triggered	☑	Not Triggered		

Executive Summary:

The purpose of this report is to;

- Give an overview of the tāngata whenua targeted Environmental Hui held in November.
- Present the report council commissioned Keir Volkerling to prepare, to identify tāngata whenua issues and options as part of the review of the regional plans.

Keir will give a brief presentation of the key findings.

The intention was to present the final version of Keir's report to the committee. However the recommendation now is that tāngata whenua be given an opportunity to comment on the report's conclusions. The final report would then be presented to the committee early in the new year.

Please refer to the **attached report** for more information.

Legal compliance and significance assessment:

The activities detailed in this report are part of the council's day to day operations, are provided for in the council's 2012-2022 Long Term Plan, and are in accordance with the council's decision making process and sections 76-82 of the Local Government Act 2002. The matters are not significant under council policy.

Recommendation(s):

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1. That the report "Tāngata whenua engagement" by Ben Lee, Programme Manager – Policy Development and dated 5 December 2014, be received.

2. That the Regional Policy Committee approve the report by Keir Volkerling titled "Review of the NRC Regional Plans – Tāngata Whenua Issues and Options" be put on the councils website and tāngata whenua offered the opportunity to provide feedback on the report.

Report

The Committee will recall that the process for engaging with tāngata whenua for the review of the regional plans was[1]:

- Keir Volkerling to prepare a report to identify tāngata whenua issues and options as part of the review of the regional plans (funded by council).
- Invite known active tāngata whenua participants in resource management to the key stakeholder workshops.
- Host hui targeted at tāngata whenua held after the key stakeholder workshops.

Environmental hui
It was decided to have four hui – Kaitaia, Kaikohe, Whangarei and Maungaturoto – and that they be run as a joint effort with the district councils. The hui were pitched broadly as an opportunity for tāngata whenua to share their concerns and ideas about Northland's environment and the way it's managed.

Two emails were sent out to the approximately 160 tāngata whenua contacts the regional and district councils have on their databases. There were also public notices in all the main local newspapers.

Attendance at the hui was low. There were five attendees (not including council staff) at the Kaitaia hui and eight at each of the Kaikohe and Whangarei hui. There were no RSVP's for the Maungaturoto hui and so it was cancelled.

While the attendance was low, the feedback provided was good. A particularly positive aspect was having the councils working together. Attendees appreciated being able to speak with all the relevant councils at the same time. It was a model that attendees supported continuing with, and suggested developing further by bringing in other relevant agencies (e.g. Department of Conservation and Ministry of Primary Industries).

The notes from hui are on the councils website and an email has been sent out to the tāngata whenua contacts thanking those that attended and letting them know the notes are available.

Review of the NRC regional plans – Tāngata whenua issues and options
Keir Volkerling report is attached as **Attachment 2**

Preparing the report was a two stage process. The first stage was an initial scoping of the issues, largely informed by iwi/hapu environmental management plans lodged with the council. This first stage was released as a draft report on the council's website prior to the Environmental Hui.

The second stage was a refinement of the issues and to prepare proposed resource management responses to the issues. This was informed by the feedback from Environmental Hui (i.e. it was completed after the hui).

[1] August 2014 Regional Policy Committee meeting and endorsed by the Tai Tokerau Iwi Chief Executives.

The original intention was that the final report be presented to the committee at this meeting. However Keir and staff are of the view that we should release the report for final comment. This would 'close the loop' by providing tāngata whenua a final check on the identified issues and options.

The proposal is that the report be put on the website and an email sent to the tāngata whenua contacts with an offer to review and provide comment on the report. Assuming the email is sent before Christmas, we would allow until early February for feedback. Keir would then amend his report as necessary, and it would be presented to the committee at its March 2015 meeting

Keir will give a presentation outlining the key findings of his report.

Review of the Regional Plans – Tangata Whenua Issues and Options

Prepared by Keir Volkerling, December 2014

PART 1. PURPOSE OF THE REPORT

1.1. INTRODUCTION

This report was commissioned by the Northland Regional Council (NRC) as part of the review of the three regional plans – Air Quality, Water and Soil and Coastal. The objective was to identify tangata whenua resource management issues and options to address these issues. Iwi/hapū management plans, NRC hosted workshops on specific resource issues, and three regional hui (with the district councils) were key sources of information for this report.[1]

1.2. BACKGROUND

The Resource Management Act (1991) RMA requires that councils review their RMA plans every ten years.[2] Reviews will identify need for change, and scope and extent of that change. Although there is no RMA requirement for consultation at this preparation stage, the NRC series of workshops on specific resource issues, and the three hui with district councils have provided further information which has assisted the review process. The results of the review will need to be implemented through the formal RMA plan change process, including full consultation as set out in Schedule 1 of the RMA.

The current regional plans – Air Quality, Coastal, Land and Water – were developed following the enactment of the RMA in 1991. In the last ten years since they became operative there have been many changes to which the review must be responsive. These include amendments to the RMA, new or reviewed national policy statements, the preparation over the last two years of the NRC's proposed Regional Policy Statement (RPS), and development of new case law. These changes have implications for the recognition of and provision for tangata whenua values in formal RMA planning documents. The review of the old RPS was preceded by a report commissioned from

[1] See Appendix B for the process of the development of this report.
[2] In s79 of the RMA

tangata whenua[3] to identify resource management issues of significance to tangata whenua. Those issues have been included in the new RPS. Objectives, policies and methods to address the issues have been developed in the RPS.[4]

The RMA requires that higher order plans, i.e. national and regional policy statements, are given effect in lower order plans, i.e. regional and district plans[5]. "Give effect" means implement[6], which means that the tangata whenua provisions of the RPS must be implemented in the regional plan reviews. Included in this report is some analysis of those issues of significance and the policies, with suggestions for responses to them.

While there is a legal obligation to give effect to the RPS, other issues which lack regional significance but which have local or resource specific importance for tangata whenua can also be regulated through the regional plans. In part these issues can be found in the relevant "iwi planning documents"[7] lodged with the NRC. The RMA requires that these iwi planning documents are "taken into account" in the regional plan change process.[8] Taking into account requires that the iwi planning document is properly considered, and its proposals adopted unless a defensible reason for not doing so can be established. Reasons for rejection can include, for instance, that the RMA does not have the jurisdiction to address the matter.

This is the stage of early engagement on the need for changes in the regional plans. That will be followed by the normal RMA processes which provide for written submission, oral submission, further submission and appeal.

1.3. IDENTIFICATION AND ORIGIN OF ISSUES

Māori concerns with RMA planning can arise from a number of origins including:

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[3] Proposed 2nd Generation Regional Policy Statement for Northland – Resource Management Issues of Significance to Tangata Whenua – Final Report July 2011

[4] None of the RPS tangata whenua policies are the subject of appeal. While resolution of details of the appeals will delay the RPS becoming operative, the tangata whenua policies have effective force now. One of the issues of significance to iwi in the new RPS has been subject to an appeal. This is the identification of genetically modified organisms (GMOs) as being of significance to tangata whenua. No other issue of significance to tangata whenua has been appealed.

[5] In s65(6) of the RMA

[6] Confirmed in the decision of the Supreme Court on the King Salmon case.

[7] This is based on the language of the RMA ("any relevant planning document recognised by an iwi"), but it does not in practice preclude consideration of hapū, marae or other tangata whenua planning documents.

[8] In s66(2)(a) of the RMA.

- Issues based on tikanga, kaitiakitanga or mātauranga which do not have a direct mainstream equivalent, such as the maintenance of mauri.
- Impacts on a specific resource with cultural value for Māori, such as weaving materials.
- General issues which have more direct impact on the Māori community or sections of the Māori community, such as the road dust problems in Pipiwai.
- General issues for which Māori want to ensure they contribute to any relevant debate, such as large scale mining or climate change.
- Issues which relate to Māori specific legislation, such as for Treaty settlement land, aquaculture settlement space, or for Māori land subject Te Ture Whenua Māori Act.

The nature of the concern, as categorised above, can direct the way in which it should be addressed. Some will need to be addressed by provisions specifically for Māori; some will be able to be addressed by general provisions, but may need the wording adjusted to ensure that Māori needs are met; and others may not need specific Māori reference, but only require that their provisions in the plans are effective in addressing general concerns.

NRC has three regional plans, but it is recognised that there are overlapping issues which may be better managed by a single comprehensive regional plan. For example, an estuarine environment is affected by water quality in catchments, and estuary ecology can cross from the coastal environment to the terrestrial. There are examples in other regions of a single regional plan, such as the Horizons Regional Council One Plan[9], or the Auckland Unitary Plan[10].

Kaitiakitanga is often described as being a holistic and integrated discipline. The purpose of integrated management may be served better by a single regional plan, which addresses all resource issues in a single document, and hence may be more consistent with kaitiakitanga.

1.4. CONTENT AND STRUCTURE OF THIS REPORT

The purpose of this report is to identify tangata whenua issues relevant to the regional plan reviews, to identify the where within regional planning the issues should be addressed, and to then propose relevant planning provisions in response.

This report discusses the following:

[9] Horizons includes Tararua, Manawatu, Horowhenua, Rangitikei, Wanganui and Ruapehu districts; and Palmerston North City
[10] The Auckland Unitary Plan includes also the RPS and district planning.

- Giving effect to tangata whenua provisions in national policy statements
- Giving effect to the tangata whenua provisions of the RPS
- Issues to be taken into account in relevant iwi planning documents lodged with NRC
- Grouping of issues, with discussion of possible types of responses
- Provisions for regional plans
- Conclusions

PART 2. GIVING EFFECT TO NATIONAL POLICY STATEMENTS

2.1. NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT

The Freshwater Policy Statement has been given effect in the RPS. There are specific water issues of importance to Māori which can be addressed in the regional plans. These are identified in Part 3 below.

2.2. NEW ZEALAND COASTAL POLICY STATEMENT

Most provisions of the NZ Coastal Policy have been given effect in the RPS. There are some details of the NZCPS which may have insufficient response in the RPS. These include:

- NZCPS Policy 2(f)(iii) supporting taipure, mataitai and customary fishing.
- NZCPS Policy 2(g) recognising “the importance of cultural and heritage values. through such methods as historic heritage, landscape assessment”.
- NZCPS Policy 4(a)(iii) integrating management across hapū and iwi boundaries.
- NZCPS Policy 15 having regard to cultural landscapes.

2.3. NATIONAL POLICY STATEMENT FOR RENEWABLE ELECTRICITY GENERATION

This NPS has been given effect in the RPS, and there may be details of renewable generation of importance for Māori communities. This is discussed in Part 3 below.

2.4. PROPOSED NATIONAL POLICY STATEMENT ON INDIGENOUS BIODIVERSITY

This NPS has no legal status, but it has content which may be useful for guidance in developing specific provisions for regional plans. For instance, the NPS contains a definition of customary use which could be relevant to provisions for cultural harvest.

PART 3. GIVING EFFECT TO THE REGIONAL POLICY STATEMENT

3.1. TANGATA WHENUA ISSUES OF SIGNIFICANCE IN THE REGIONAL POLICY STATEMENT

There are two sets of issues of significance to tangata whenua in the proposed Regional Policy Statement (RPS).

Issues relating to participation in resource management are:

- There is inadequate provision for the early and effective participation of tangata whenua as partners in regional council resource management decision-making processes affecting natural and physical resources
- The lack of recognition and provision for the sustainable management of Māori land and returned Treaty settlement assets by tangata whenua
- Current use of Māori land may not provide for the sustainable social, cultural, economic and environmental wellbeing of tangata whenua. In particular, the importance and role of marae and papakāinga has not been acknowledged in the past by the regional and district councils
- Mātauranga Māori is not sufficiently recognised and used in the ongoing management and monitoring of natural and physical resources
- The inclusion of Māori concepts, values and practices within resource management processes is frequently limited and ineffective.

Issues relating to natural and physical resources are:

- The decline of the mauri of natural resources (in particular water and land)
- The decline of mahinga kai, particularly kai moana harvesting sites, is impacting on the ability of tangata whenua to feed their whanau and manāki manuhiri
- Some tangata whenua in rural areas are drinking untreated water from streams and rivers.
- Land use and development can lead to damage, destruction and loss of access to wāhi tapu, sites of customary value and other ancestral sites and taonga which Māori have a special relationship with.
- The loss of indigenous biodiversity, particularly where it negatively impacts on the ability of tangata whenua to carry out cultural and traditional activities.
- The impacts of climate change.
- The use of genetic engineering and the release of genetically modified organisms to the environment.

Giving effect to some of these RPS issues in regional planning will need further information. For instance, impacts on mahinga kai and problems of drinking untreated water need greater detail. This may be in terms of locations, scope of problems, details of impacts, etc. Provisions in regional plans can then be developed specific to those identified impacts.

Giving effect to the other issues listed above can be achieved through the implementation in regional plans of the relevant policies and methods of the RPS.

3.2. TANGATA WHENUA POLICIES AND METHODS IN THE RPS

These policies and methods in the RPS must be given effect in the regional plans. They are listed here for convenience to provide clarification of their use later in this report. For fuller information and detail (e.g. the explanations) refer to the RPS.

- Policy 8.1.1 promotes tangata whenua participation in planning and consent processes.
- Policy 8.1.2 essentially repeats the wording from sections 6 to 8 of the RMA.
- Policy 8.1.3 promotes the use of mātauranga Māori, and Policy 8.1.4 requires the development of understanding of Māori concepts, values and practices.
- Policy 8.2.1 supports development of iwi and hapū plans.
- Policy 8.3.1 supports the kaitiaki role.
- Policy 8.3.2 recognises the value of marae and papakāinga development.
- Method 8.1.5 requires the regional plans to provide for early engagement with tangata whenua, and for the inclusion of analysis of impacts on Māori values in consent processing.
- Method 8.1.6 requires NRC to develop a protocol with iwi authorities for a range of processes.
- Other Methods include: 8.1.7 and 8.2.3 for advocacy and education; 8.1.8 for funding and assistance; 8.2.2 for taking into account iwi and hapū planning documents; 8.3.3 and 8.4.4 for marae and papakāinga.

PART 4. TAKING INTO ACCOUNT IWI PLANNING DOCUMENTS

4.1. IWI PLANNING DOCUMENTS

Eleven iwi planning documents have been lodged with NRC, and the relevant content of them must be taken into account in the regional plan changes. These documents are

listed in Appendix 1. There is a lot of variation in the scope of these planning documents. Many have a common approach and identify similar issues and resources.

In this report the relevant content of the documents that needs to be taken into account is identified, but this will need to be repeatedly reviewed as the plan change process progresses. The iwi and hapū who have lodged these plans will need to check whether their documents have been appropriately taken into account. Some of the documents have high level provisions, and how they intend that they should be taken into account in RMA may need further clarification. The tangata whenua entities which developed the plans should check that their concerns have been included in the list in 4.2 below.

In the review of the RPS the iwi and hapū planning documents were taken into account. That process contributed to the tangata whenua issues of significance, policies and methods presented above. However the RPS does not address the resource specific issues of regional planning.

4.2. ISSUES TO BE CONSIDERED IN REGIONAL PLANNING

Following are issues which can be considered in regional planning. Many are sourced from the eleven iwi and hapū planning documents lodged with the council. Other matters were identified in the workshop and hui processes. With each of these items there are suggestions (*in italics*) of how regional planning may respond, alternatively if they are not regional planning issues. The names of the operative regional plans have been used here. It is assumed that in a single regional plan sections or chapters with similar names would be retained. (These are presented with no order of priority).

The list provides an initial identification of issues, and the type of solution that can be developed. Detailed proposed regional planning responses for relevant issues will follow in Part 6 of this report.

- Engagement / participation: *provided for in Method 8.1.5(a) of the RPS.*
- Use of mātauranga Māori: *provided for in Policy 8.1.3 of the RPS.*
- Impacts on the mauri of resources*: implementation of RPS protocols may result in definition of terms such as mauri. For regional planning mauri with respect to specific resources could be determined on a case by case basis (e.g. for fresh water, estuaries, etc). Alternatively the term mauri could be retained without further clarification, and could rely on the later RPS process for its definition. Also the elements of management of resources that would contribute to the maintenance or restoration of mauri could be addressed without specific definition or reference to the term.*

- Use of rahui: *use of rahui, as a temporary, long term, or permanent constraint on use of a resource or an area, can be considered in regional plans. Prohibition is a tool available in RMA planning, and this may be able to be used for some instances of permanent or long term rahui. Short term rahui are more difficult to provide for in RMA planning. No examples of the need for specific rahui were identified in the hui or through feedback.*
- Drainage of wetlands: *historically for Māori wetlands resources had high value, and several iwi plans confirm their current value. Specific wetlands may require provisions for their maintenance and enhancement. This can be considered in the Water and Soil Plan.*
- Impacts on tuna and other indigenous fresh water species and their habitats: *can be addressed in water quality management provisions in the Water and Soil Plan.*
- Disposal of waste water to land: *can be addressed in waste water management provisions in the Water and Soil Plan. This is an issue which can be addressed by general provisions, and no tangata whenua specific examples were identified in the hui.*
- Restrictions on disposal of cremation / human ashes: *this has been addressed by other councils, such as Auckland Council. It would appear that the RMA is not able to regulate this activity, but non-statutory responses have had some effect. This includes education and advocacy with funeral directors and crematoria. While most concern has been with scattering of ashes at sea, the concerns are not restricted to the marine environment.*
- Discharges from crematoria and mortuaries: *the discharges to land and water cannot be defined as "contaminants" under the RMA, hence regional planning cannot be used for their regulation.*
- Public access to wāhi tapu, mahinga kai etc: *is a subdivision issue to be regulated by district and not regional planning.*
- Renewable energy: *the RPS Policies 5.4.1 and 5.4.2 address renewable energy. Method 5.4.3 directs regional plans to contain rules for renewable energy. No tangata whenua specific examples were identified in the hui.*
- Vehicles on beaches: *this is principally a district council matter. District councils now have jurisdiction for bylaws to regulate vehicles on beaches to the low tide.*
- Moorings – concern with increased pressure on infrastructure and pollution: *can address through the Coastal Plan (a plan change recently has been dealing with these issues)*

- Climate change: *emerging issues and the need for a precautionary approach is in the RPS. This is a general issue, and no tangata whenua specific examples were identified in the hui.*
- Identification and management of cultural landscapes*: in the coastal environment can be addressed pursuant to Policy 15 of the NZCPS. Cultural landscapes in the coastal marine area can be addressed in the Coastal Plan. Cultural landscape identification outside the coastal marine areas is a district planning matter.*
- Impacts on archaeological / historic resources: *can be addressed in the earthworks provisions in the Water and Soil Plan. The RPS has provisions requiring identification and recording of historic heritage resources.*
- Water take consents, and period of consent when tangata whenua water rights may be affected: *tangata whenua property rights in fresh water is an emerging issue.*
- Mining in areas of significance to tangata whenua: *identification of areas and criteria for greater control can be addressed in the Water and Soil plan where they are related to discharges, landscape values, etc. More detailed regulation may be more appropriate in district plans.*
- Air quality, including dust from unsealed roads: *can in principle be addressed in the Air Quality Plan and / or the Water and Soil Plan, but practicable solutions are difficult to determine.*
- Genetically modified organisms: *largely a district planning issue, since genetic modification is not classified as a discharge.*
- Monitoring by tangata whenua: *provided for in Method 8.1.8 of the RPS.*
- Sedimentation impacts: *can be addressed in the Water and Soil plan; and to an extent in the Coastal Plan. This is a general issue, but one tangata whenua specific example was identified in the hui. This was increased sedimentation over traditional kaimoana from resulting from marina operation.*
- Transfers and joint management: *provisions under s33 or s34 of the RMA can be considered for specific resources, locations or processes in all regional plans. No tangata whenua specific examples were identified in the hui.*
- Use of traditional place names: *formal legal recognition of place names is the responsibility of the NZ Geographic Board. Councils can use traditional place names, including in RMA plans. Bilingual signage can be promoted.*
- Seasonal restriction on earthworks (eg in the summer months only): *could be considered in the Water and Soil Plan.*
- Discharge of ballast water: *this is regulated by the Resource Management (Marine Pollution) Regulations 1998.*

- Integrated catchment management: *is supported in the RPS and can be implemented in the Water and Soil Plan.*
- Aquaculture Space: *identification of aquaculture space can be addressed in the Coastal Plan. Plan Change 4 for aquaculture regulation is still in appeals to the Environment Court. New RMA provisions for aquaculture regulation enacted in 2011 can be considered. Some of these (such as zoning to manage high demand) may be helpful to determining settlement space pursuant to the Māori Commercial Aquaculture Claims Act 2004.*
- Swamp kauri: *impacts of the extraction of swamp kauri from existing wetlands is regulated by the Water and Soil plan. Extraction from former wetlands which have been drained would not generally be regulated. Councils cannot regulate the actual taking, selling etc. of swamp kauri as it is not within their statutory functions.*
- Able to swim in big rivers and drink from small rivers: *this was stated as an aspirational goal in one of the hui, and reflected in general tangata whenua feedback on fresh water management. This would require, at least for specified water bodies, standards above those in the National Objective Framework of the National Policy Statement on Fresh Water Management.*
- Provisions for Treaty Settlement land: *specific land use provisions are in district plans, but during negotiation and other processes the NRC can provide information to the Office of Treaty settlements and to the tangata whenua organisation in negotiation. This is required by Policy 8.3.3 of the RPS.*
- Notification: *provisions are needed to ensure the relevant tangata whenua are notified (or have interested party status) for consents in specific areas, or when there are potential impacts on specific resources.*
- Effect of sprays on honey bees: *provided for in principle by agrichemical regulations. May need provisions specific to honey bees.*
- Waitangi Tribunal Wai 1040 Stage 1 Report: *the Tribunal's report*[11] *has determined that in 1840 Māori did not cede sovereignty in signing the Treaty. In the hui the importance of this finding to tangata whenua in Northland was noted. There has been no government policy or statutory response to the report, but it is an emerging issue.*

[11] He Whakaputanga me te Tiriti The Declaration and the Treaty: The Report on Stage 1 of the Te Paparahi o Te Raki Inquiry Waitangi Tribunal 2014

- Wai 262: T*he Wai 262 claim was originally for indigenous flora and fauna, but was extended to include issues of intellectual property. The report*[12] *has not resulted in government policy or statutory response, but it contains important guidance on resource management and natural resource issues. This is an emerging issue.*
- Māori commissioners: *Method 8.1.6 develops a process for appointment and use of Māori commissioners.*
- Māori land: *only small remnants of Māori land remain, and negative impacts on that land and its development potential need to be avoided*.
- Containment of hull cleaning materials: *provisions for management exist and are being reviewed.*

PART 5. GROUPING OF ISSUES WITH POSSIBLE TYPES OF RESPONSE

In 1.3 above the five different origins of issues of concern to Māori are identified. In this section the issues identified in 4.2 above are grouped in these five categories.

5.1. ISSUES BASED ON TIKANGA, KAITIAKITANGA OR MĀTAURANGA WHICH DO NOT HAVE A DIRECT MAINSTREAM EQUIVALENT

- Usually terms and concepts of Māori environmental management do not have simple translations into English. These include, for instance, rahui, mātauranga, kaitiakitanga, and mauri. The RPS processes allow for development of descriptions or definitions of these terms, or for identifying the type of provisions in planning that are able to implement them. That process is yet to occur. Difficulties have arisen from limitations of the statutory definitions, such as that for "kaitiakitanga". What needs to be avoided is having an inadequate definition given status in a formal planning document. What may be preferable for the new regional plan is to identify provisions which will support Māori values, concepts and processes without directly using the terminology.
- Cultural landscape identification needs an accepted methodology, and resources for its implementation. This issue was identified in the development of the RPS. While a cultural landscape methodology was not included in the RPS, Method 8.1.5(b) provides for its development. Implementation of a methodology could follow through regional planning provisions where relevant. Without an accepted methodology the results would be open to challenge. A robust

[12] *Ko Aotearoa Tenei* Waitangi Tribunal 2011

methodology was required for identification of outstanding landscapes which have been included in the RPS. A similarly well-established methodology for cultural landscapes is required.

- Heritage resources are not limited to Māori heritage. However Māori heritage is by far the most extensive and most vulnerable of heritage resources. Heritage New Zealand Pouhere Taonga Act 2004[13] provisions are not on their own sufficient for protection and management of the resources and RMA planning is required. Historic heritage is a matter of national importance in the RMA (s6(f)). While much of the management of heritage resources is more relevant to district than to regional planning, provisions such as for earthworks in the Water and Soil Plan can be considered for regulation. Heritage resources in the coastal marine area can be managed through provisions in the Coastal Plan. Policy 4.5.3 of the RPS requires identification and recording of heritage resources. Method 4.5.4 requires a multi-agency process for developing maps or schedules of historic resources. The RMA s2 definition of historic heritage captures the concept of a heritage landscape, rather than the sole focus on individual sites as in earlier regulation. Therefore there is some synergy between identification of cultural landscapes and historic heritage.
- Monitoring by Māori, using tangata whenua indicators as well as those based on Western science, is an opportunity for greater engagement in environmental management. It will also potentially provide measures of responses to environmental issues of concern to Māori. All monitoring has a cost, and hence priority resources and processes will need to be identified.
- Transfers of power (s33 of the RMA) and joint management arrangements (s36B) are in principle able to be achieved, but have to date had almost no implementation. These provisions need not only apply to specific resources or areas, but could include delegated planning provisions (eg for Treaty settlement land or for papakāinga development). Policy 6.1.3 o the RPS says that council should delegate functions where it would result in increased efficiencies and effectiveness (this policy has general application i.er. not just transfers to iwi). Provisions relating specific to iwi[14] are needed.

5.2. IMPACTS ON A SPECIFIC RESOURCE WITH CULTURAL VALUE FOR MĀORI

- Māori consider tuna as a food source with high cultural value. A range of environmental factors are threatening the survival of tuna. The general water

[13] This statute replaces the former Historic Places Act.
[14] While the RMA refers to iwi authorities, in practice hapu, marae etc. can be considered.

quality and other provisions are relevant to reducing impacts on tuna, and could be sufficient. However a separate section in the Water and Soil Plan for tuna could be considered.

- While tuna stocks have been reduced significantly in recent times, other native fresh water species have been rare or absent from Northland waterways for many years. Water quality management provisions may be a sufficient response in regional planning, but more specific details may be able to be identified.
- The way in which human remains are disposed of can be of cultural concern to Māori. This includes scattering of human ashes in places like fishing grounds, or discharges from crematoria or mortuaries. These disposals to land and water cannot be defined as discharges under the RMA, and hence would not be able to be regulated by regional plans.

5.3. GENERAL ISSUES WITH SPECIFIC MĀORI CONCERNS

- Wetlands historically directly provided resources such as food and weaving materials, and supported a range of species through providing nursery areas. Consequently Māori frequently place greater value on wetlands than many others do, and may seek stronger provisions for protection and restoration than is often provided.
- Direct disposal of human waste to waterways and the marine area is culturally offensive to Māori. Māori will not accept the more flexible and less constraining provisions often sought by councils.
- While the general nature and extent of tangata whenua rights to fresh water have yet to be fully determined, specific water bodies have historic and unextinguished rights. An example is Poroti Springs where ownership of the waterbody was recognised by the Māori Land Court The management of water quality and quantity, and the allocation of rights to extraction, need to be sensitive to those extant rights and any consequent rights claimed.

5.4. GENERAL ISSUES

- Potential large scale mining activities have been of concern to Māori in the region, either for their direct impact on the land or for the flow on effect of toxic discharges on fresh and marine water. Areas of concern need to be identified so that provisions for them can be developed. Prohibition of mining may be appropriate in some cases. Prohibition is the greatest type of constraint available in the RMA, and establishing a prohibition status needs to follow best

practice and be consistent with relevant case law. Potential impacts can be managed through the Water and Soil provisions.

- Integrated management in general, and in particular integrated catchment (ICM), is often sought by Māori. The NPS on Freshwater provides the basis for ICM in RMA planning, and the RPS provisions strongly support ICM implementation. This can be addressed in the Water and Soil Plan.

5.5. ISSUES RELEVANT TO LEGISLATION AFFECTING MĀORI

- Land administered by Te Ture Whenua Māori Act 1993 is subject to many constraints. There are processes under that Act which are similar to those under the RMA, but are not aligned with it (such as partition and subdivision). Much of this land has not been able to be developed, and hence has mature native flora on it. Provisions to preserve such flora should be flexible with respect to the development needs of the Māori land owners. Māori land is frequently undeveloped because of the constraints of Māori land law, and not because past lack of development aspirations among owners. Much of this land has mature native re-growth cover, with consequent development constraints.
- Land provided as part of a Treaty settlement may have development potential. The proposed Auckland Unitary Plan has provisions for existing and future settlement land. Many of these are relevant to district planning. The RPS Policy 8.3.3 requires councils to work with iwi and the Crown during and following Treaty settlement. Impacts of infrastructure development may be relevant for regional planning.
- The 2011 amendments to aquaculture regulation in the RMA included provisions for planning and zoning in the event of high demand for space. The aquaculture settlement is based on a projection of future industry growth, and determined by a Regional Aquaculture Agreement (RAA). Unanticipated development for new species or technologies could follow an RAA being concluded and precede its review.. In general this would be difficult to provide for in an RAA review clause, but could be more easily included when the statutory provisions for high demand were used. Criteria for using the high demand provisions could be included in the Coastal Plan. These would assist NRC in determining if or when to use the high demand provisions.
- Mātaitai, taiapure and customary fishing are managed by fisheries regulations. The NZCPS in 2(f)(iii) requires, when taking into account the principles of the Treaty, requires measures including “having regard to regulations, rules or bylaws relating to ensuring sustainability of fisheries resources such as taipure, mahinga mātaitai, or other non-commercial Māori customary fishing”.

PART 6. PROPOSED PROVISONS FOR REGIONAL PLANS

In this section provisions are proposed for the issues identified by tangata whenua which are relevant for regional plans. Most of these provisions are drafted in an RMA planning format. The language is intended to guide formal planning, but is not proposed as final plan content.

6.1. PROPOSED GENERAL PLANNING PROVISIONS

These provisions are general in the sense that they apply across all or a number of resources. They are all derived from issues specifically identified by tangata whenua.

a. **Mauri**

Issue: Mauri for natural resources refers to their life force and vital essence. For many natural resources the mauri is degraded.

Objective: The maintenance or enhancement of the mauri of natural resources will be considered in management of natural resources.

Policy: Processes will be developed to maintain or enhance the mauri of natural resources.

Explanation: Mauri is a central concept of kaitiakitanga. In general maintained or enhanced mauri is achieved through sustainable environmental management. Method 8.1.6(b) of the RPS provides a process for determining operational meanings of terms such as mauri.

b. **s33 transfers of power, and s36B joint management agreements**

Issue: Māori seek independence of decision making over resources they own and resources which are of significance to them. Opportunities for greater autonomy can be provided through s33 transfers of powers and s36B joint management arrangements.

Objective: To enable relevant s33 transfer of powers to iwi authorities and s36B joint management agreements with iwi authorities to empower Māori decision making over Māori owned resources and resources of significance to Māori.

Policy: Transfers of powers and joint management agreements will be supported when the iwi authority can demonstrate an ancestral connection to the land or resource; the iwi authority has a formal mandate to represent the relevant iwi, hapū or whanau; and the iwi authority can demonstrate a capacity to meet the

relevant RMA requirements[15].

c. **Impacts on Māori historic heritage resources**

Issue: Much Māori historic heritage is only discovered accidently during earthworks Heritage resources which are unknown and hence not mapped or included in schedules need a precautionary effects based approach to their management. Unless effective management provisions protect these currently unknown resources significant modification or destruction can result.

Issue: Much Māori historic heritage is in or near the coastal environment.

Objective: Historic heritage resources of significance to Māori, including those which are not previously scheduled or known, are protected from impacts of earthworks activities.

Policy: Alert layers and / or criteria will be developed for guidance for determining probable location of heritage resources.

Policy: A precautionary approach which will require an assessment of effects on historic heritage will be required for consents for earthworks when they are in or near the coastal environment; when they are near a known historic heritage site; when they are within a known historic landscape; and when there is traditional knowledge of relevant historic heritage.

Policy: A protocol will be developed as a condition of earthwork consent (in relevant areas identified by criteria, alert layers or other means) with the relevant tangata whenua for managing the accidental discovery of heritage resources.

Explanation: In areas where a precautionary approach is needed standards for initial soil stripping can be developed. These could include the size and nature of the machinery, presence of observers etc.

d. **Māori Land / Treaty settlement land**

Issue: Remnant Māori land and Treaty settlement land is small in area, but provides an important opportunity for social, cultural and economic development for Māori. Its use and development should not be subject to constraints which can be avoided.

Objective: The occupation, use and development of Māori land and Treaty settlement land is not adversely affected by the location of new infrastructure.[16]

Policy: Alternative routes and locations will be sought for new infrastructure that could adversely affect the occupation, use and development of Māori land and

[15] This policy is based on a similar provision in the Auckland Unitary Plan.
[16] This policy is based on a similar provision in the Auckland Unitary Plan.

Treaty settlement land.

e. **Processing of consent applications**

Issue: A targeted process for engagement of tangata whenua in consent application process is needed.

Objective: To ensure tangata whenua have appropriate engagement in consent application processes.

Policy: Criteria and / or alert layers or other mechanisms are developed for specific types of locations (or specific resources) of significance to tangata whenua.

Policy: When criteria or alert layers determine tangata whenua significance for a consent application, a cultural impact assessment will be required as part of the assessment of environmental effects (pursuant to Schedule 4 of the RMA). If the cultural impact assessment is not adequate the application will be returned (pursuant to s88(3) of the RMA).

Explanation: Method 8.1.5(b) of the RPS requires councils to include an analysis of the effects of any resource consent application on tangata whenua and their taonga. For many applications there will be no effects to be managed, and a simple statement to that effect should be sufficient. However there will be circumstances in which it is unclear to those processing consents whether there are relevant issues, and if further information is required. The criteria and / or alert layers will help determine the need for a cultural impact assessment. RPS Method 8.1.6(a)(i) requires councils to determine when a cultural impact assessment is required, what it should include, and how it should be taken into account. The intent of these policies is to ensure that: appropriate measures are taken when required; neither council nor tangata whenua time is wasted when no response is needed; and decisions on responses are made within an informed context.

f. **Emerging issues, Waitangi Tribunal reports:**

Wai 262 report: The Waitangi Tribunal report on the Wai 262 flora and fauna claim, *Ko Aotearoa Tenei,* contains useful information for understanding tangata whenua natural resources values. There has not been a government policy or legislative response to the report.

A copy of *Ko Aotearoa Tenei* should be available for consent officers and planners for guidance and understanding working on matters of importance to Māori. In particular the sections on natural resources and the RMA should be considered. The Māori perspective on natural resources and associated property rights in the

report should provide guidance for those working on natural resources issues of significance to Māori.

Wai 2358: The Tribunal has issued an interim report on freshwater property rights.[17] The Tribunal has affirmed that Māori have extant property rights in freshwater. The prime focus of the interim report was the partial sale of hydroelectric generation companies. Other property rights are yet to be more fully investigated and reported on. There are water bodies in Northland for which Māori property rights have been established in law. Further findings of the Tribunal, and potentially government policy or legislation, will determine how those findings and any recommendations are implemented.

A copy of the Tribunal's report should be made available to consent officers and planners working on water management issues for water bodies identified as having existing Māori property rights. The nature of the Māori claims to further rights in Wai 2358 should be used as guidance on Māori response to water management issues. NRC should monitor further developments and reports on the Wai 2358 claim.

Wai 1040: The report on the first stage of this claim determined that by signing the Treaty Māori did not intend to cede sovereignty. This is a finding of significance nationally, and in Northland it is the highest importance to tangata whenua. There is no government policy or legislation in response to this finding.

A copy of the report should be made available to staff who interface with Māori. The findings reinforce former challenges to legitimacy of the Crown and its agencies, including councils. Irrespective of there being a policy or statutory response, staff should understand the nature of the claim and the report and hence the types of questions and challenges that arise.

6.2. PROPOSED COASTAL PLANNING PROVISIONS

a. **Cultural landscapes**

Issue: The NZCPS relies on identification of cultural landscapes in its policies. Giving effect to the NZCPS is assisted by identification of cultural landscapes and provisions for their management.

Objective: Cultural landscapes in the coastal marine area are identified.

[17] The Interim Report on the National Freshwater and Geothermal Resource Claim Waitangi Tribunal 2012

Policy: A methodology for identification of cultural landscapes will be developed by working with tangata whenua.
Policy: Cultural landscapes in the coastal environment will be identified.
Policy: Provisions are developed for the management of cultural landscapes.
Explanation: Policy 2(g) of the NZCPS requires that when taking into account the principles of the Treaty recognition of matters including cultural values using methods including landscape identification. Policy 15 of the NZCPS includes the requirement to have regard to cultural and spiritual values of tangata whenua in their expression as cultural landscapes and features (Policy 15(c)(viii). To be able to properly give effect to the NZCPS identification of and provisions for cultural landscapes is necessary.

b. **Aquaculture space**

Issue: Development of a new species for marine farming, or for new methods for existing species, can result in unanticipated high demand for aquaculture space. New species and methodologies may require new planning provisions and allocation decisions. Use of the s165ZB provisions for high demand for aquaculture space can enable more effective aquaculture settlement agreements to include new species and methodologies which become viable after finalising a regional aquaculture agreement.
Objective: High demand for aquaculture space for new species or methodologies will be effectively managed by use of s165ZB provisions where appropriate.
Policy: Criteria will be developed to determine when an application under s165ZB of the RMA for suspension of applications for aquaculture space is appropriate.
Explanation: The provisions of s165ZB were included in the RMA in the 2011 aquaculture reforms. At the same time a new method for determining the aquaculture settlement entitlement, based on projection of future space, was included in the RMA and in the Māori Commercial Aquaculture Settlement Act 2004. The settlement will be delivered to iwi on a regional basis, and a regional aquaculture agreement (RAA) will determine the regional terms of settlement. Since the settlement is based on future projected growth, it is more difficult to provide for new and unexpected development opportunities during the term of RAAs. The s165ZB provisions allow for allocations of aquaculture space which would have a 20% settlement requirement, and could be prospectively recognised in RAAs. For council the provisions of s165ZB enable a considered approach to regulating a new activity. For iwi they enable more effective review provisions in regional aquaculture agreements.

c. **Mahinga mataitai and taiapure**

Issue: Mahinga mataitai and taiapure provide opportunities for Māori to exercise kaitiakitanga over fisheries resources which may be affected by RMA planning provisions.

Objective: In taking into account the principles of the Treaty regard will be had to regulations of mahinga mataitai and taiapure.

Policy: NRC will liaise with mahinga mataitai and taiapure management entities to determine potential impacts of RMA planning.

Explanation: This gives effect to NZCPS in Policy 2(f)(iii)

d. **Integration**

Issue: Where iwi and hapū boundaries are not aligned with local body boundaries inconsistencies and lack of integration of planning can occur.

Objective: Integrated management in the coastal environment across iwi and hapū boundaries will be provided.

Policy: NRC will work with relevant iwi and hapū entities to achieve integration across relevant local body boundaries.

Explanation: This gives effect to NZCPS Policy 4(a)(iii). In Northland the significant example is the management of the Kaipara Harbour across the boundary with the Auckland Council. Ngati Whatua and Te Uri o Hau have interests across this boundary.

6.3. PROPOSED WATER AND SOIL PLANNING

In 1.3 of this report categories of Māori concerns with RMA planning are identified. , These include general issues for which Māori wish to contribute to the general debate. The Māori perspective may seek different degrees of response, but not Māori specific provisions. Proposals in this section are therefore less detailed in planning terms.

a. **Water quality management**

Tangata whenua have proposed that it should be possible to swim in all big rivers and drink from all small rivers. This would require a far higher standard than is sought through the National Objectives Framework of the National Policy Statement on Freshwater Management. Realistically achievement of such a goal would need to be staged over time. Monitoring of stock impacts of on water quality has been spearheaded by the Māori community through the work of Milan Ruka. The demonstrated concern of the Māori community in principle and practice

can be recognised by setting incrementally higher standards for freshwater over an achievable time frame.

b. **Mining**

Tangata whenua have been concerned about the potential impacts of large scale mining, and in particular the management of tailings which contain heavy metals. Recognition of the potential of impacts of tailings dams should inform Water and Soil provisions.

c. **Drainage of wetlands**

Indigenous wetlands have provisions for their protection. The definition of "indigenous wetland" is broad, and should capture all areas of concern. In the operative Water and Soil Plan 24.4 use of water from an indigenous wetland is a non-complying activity. In the same plan 27.4 allows for non-complying drainage. It appears that these provisions have either not been used or very rarely used. Deleting 27.4 from the plan and making such takes prohibited would therefore result in little or no change in practice, but would provide the extra protection that tangata whenua seek.

d. **Impacts on tuna (eel) and indigenous fish**

The Parliamentary Commission for the Environment has reported on the state of long fin eels.[18] The report includes proposals for protection of eel habitat and fish passage. Standards for activities which can impact on the habitat of inanga (whitebait) are being considered. Similar standards can be developed for tuna and indigenous fish.

PART 7. CONCLUSIONS

PART 8. This report presents a range of issues identified by tangata whenua of the region. Planning solutions for these issues are proposed.

The report will be used by NRC when developing their review of the regional plans. Tangata whenua can use the report as a starting point for their response to that review in consultation, submission and potentially appeals.

[18] On a Pathway to Extinction? An investigation into the status and management of the longfin eel PCE 2013

APPENDIX A – IWI PLANNING DOCUMENTS

The following iwi planning documents have been lodged with NRC and must be taken into account in plan changes to implement the review of the regional plans:

Kia matau, kia mohio e ora ana Te U Kai Po – Nga Hapu o Whaingaroa
Environmental Plan – Patuharakeke Te Iwi Trust
Nga Tikanga me te Taiao o Ngati Hine – Ngati Hine
Environmental management plan 2007 – Ngati Rehia
Te Iwi o Ngatiwai Iwi Environmental Policy Document – Ngatiwai
Ngatiwai Aquaculture Management Plan – Ngatiwai
Te Uri o Hau Kaitiakitanga o te Taioa – Te Uri o Hau
Nga Hapu o Mangakahia Plan – Mangakahia Maori Komiti
Working Draft Hapu Environmental Management Plan – Kororareka Marae Society
Hapu Environmental Management Plan – Nga Hapu o Te Wahapu o Te Hokianga Nui a Kupe
Whakatakoto Kaupapa mo te Hapu o Ngati Kuta – Ngati Kuta ki Te Rawhiti

APPENDIX B – PROCESS OF REPORT DEVELOPMENT

This report has being developed in two stages. The first stage was an initial scoping of tangata whenua issues that needed to be addressed in the review of the Northland Regional Council's (NRC's) regional plans. This first stage also proposed an outline of how to address those concerns in the regional plans.

The first stage of the report was made public so tangata whenua had the opportunity to respond by identifying omissions, errors and any other changes needed. NRC then held workshops on specific resource issues, and held three hui in the region (with the district councils). These processes have provided father issues, and guidance on how management responses can be developed.

In this second stage of the report additional sections propose RMA planning provisions to address the issues. The second stage of the report will also be open for comment from iwi. The final version of the report incorporating these responses will then inform the relevant sections of the plan changes needed for implementation in the plan review process.

ISSUE: Adoption of regional plans review reports

ID: A708300

To: Regional Policy Committee, 15 December 2014

From: Ben Lee, Programme Manager – Policy Development

Date: 5 December 2014

Report Type:	☑	Normal operations	☐	Information	☐	Decision
Purpose:	☐	Infrastructure	☐	Public service	☑	Regulatory function
	☐	Legislative function	☐	Annual\Long Term Plan	☐	Other
Significance:	☐	Triggered	☑	Not Triggered		

Executive Summary:

This report presents the regional plan review reports to the Committee for adoption.

These reports satisfy the council's legal requirement to review the regional plans every 10 years in accordance with Section 79 of the Resource Management Act 1991.

Please refer to the **attached reports** for more information.

Legal compliance and significance assessment:

The activities detailed in this report are part of the council's day to day operations, are provided for in the council's 2012-2022 Long Term Plan, and are in accordance with the council's decision making process and sections 76-82 of the Local Government Act 2002. The matters are not significant under council policy.

Recommendation(s):

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1. That the report "Adoption of regional plans review reports" by Ben Lee, Programme Manager – Policy Development and dated 5 December 2014, be received.

2. That the Regional Policy Committee adopts the reports attached as **Attachment 3-12** to this paper as the summary of the review of the Regional Air Quality Plan, Regional Water and Soil Plan, and Regional Coastal Plan in accordance with Section 79 of the Resource Management Act 1991

Report

The council administers three Resource Management Act (RMA) regional plans:

- Regional Air Quality Plan for Northland – operative March 2003
- Regional Coastal Plan for Northland – operative 1 July 2004
- Regional Water and Soil Plan for Northland – operative 28 August 2004

Section 79 of the RMA requires all provisions in a regional plan to be reviewed every 10 years. After the review, the plan(s) must go through the full Schedule 1 process (submissions, hearings etc.) regardless of whether there are changes or not.

The committee approved the commencement of the review of all the regional plans in December 2013. In February 2014 the committee approved the process for undertaking the review, which included:

- Breaking the review into 10 topics.
- Staff preparing draft reports and releasing them to the public.
- A series of key stakeholder workshops for each topic.
- Series of tāngata whenua hui.

There are 10 reports covering each of the topics. Staff have now completed the reports and present them to the committee for adoption – refer to **Attachments 3-12.**

Assuming the committee adopts the reports, this will signal the completion of the review (with the potential exception of the tāngata whenua issues and options report - see other item referred to as **Attachment 2** in this agenda). This is the first milestone in the development of a new regional plan – refer separate item in this agenda for the recommended next steps.

Regional Plan Review Summary Attachments Index

Regional plans review – topic summary

Water quantity

How can we improve the management of water quantity in our regional plans? This is a summary of our initial ideas.

What is water quantity?

Water quantity means the amount of water that is present in a river, lake, wetland or aquifer at a particular point in time. Water quantity varies naturally in water bodies due to climate, land cover, and underlying geology. Natural variability in water flows and levels is important for the health of aquatic ecosystems and many of the services that they provide (for example, fisheries).

However, water quantity is also influenced by human activities, such as water takes, diversions, dams, bores and some uses of land. These activities, which are covered in this report, need to be balanced against the need to ensure ecological flows and water levels are suitable to safeguard the health and mauri (life force, or essence) of aquatic ecosystems.

Simply put, water quantity management involves defining the amount of water that is required to remain in a water body to provide for ecosystem health and other in-stream values, and the available water that can be used. It also involves effectively and efficiently managing activities that affect water quantity.

Overview of regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

(For more information about the plans visit www.nrc.govt.nz/newregionalplan)

We are required to review the regional plans every 10 years.

The review is the first step in developing a new regional plan and is a stocktake of:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans;
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with recommendations or options for the new regional plans.

Rather than reviewing them separately, we will review all the plans at the same time. We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

Contents

Key terms:

"Water quantity objective" = the desired environmental outcome to be achieved by managing activities that affect water quantity.

"Attribute" = physical, chemical and biological characteristic of water.

"Water quantity limit" = an upper or lower level beyond which an activity is unlawful or subject to additional restrictions.

"Environmental flows and levels" = a type of limit which describes the amount of water in a water body required to meet water quantity objectives.

1 What are the issues with Northland's water quantity?

Monitoring and research has identified the following significant issues with Northland's water quantity:

1.1 High levels of allocation in some catchments

While rainfall can be high and water is generally abundant in most areas of Northland, a number of catchments are assessed as potentially having high levels of allocation for consumptive uses[1], this being water takes that are permitted[2], consented and/or unauthorised[3] (e.g. drinking water supplies, irrigation, stock drinking and dairy shed uses). During dry periods and in catchments with low flows, this may put pressure on aquatic ecosystems and reduce reliability of supply for consumptive water users. We need to improve our understanding of authorised and unauthorised takes and what effects on the environment they may be having.

1.2 Climate change

The most recent predictions on the effects of climate change include a rise in temperature and a decrease in annual rainfall, but an increase in extreme rainfall events and more frequent droughts. This will likely put additional pressures on aquatic ecosystems and the reliability of water supply[4].

1.3 Water storage and security of supply

Primary production is the back bone of Northland's economy. The sector is dependent on access to and the use of water, which means that security of supply is very important. An increased frequency of droughts and less annual rainfall is likely to drive water storage. While dams can have significant negative effects, they can also have considerable positive effects and we need to weigh these up in any future management proposals for water storage options. Greater security of supply will allow for more future planning and investments, which in turn will lead to increased productivity. It is important that any future management options carefully balance economic values with environmental, social and cultural values such that Northland may still thrive and grow without undue restrictions.

1.4 Wetlands

As a result of historic activities, the vast majority of Northlands wetlands have been lost, therefore those remaining are of significant value. Despite strong regional plan controls on drainage and diversion, wetlands continue to be modified and lost. In addition, the current rules around indigenous wetlands can be counterproductive and current definitions are problematic and confusing and we need to clarify these. There is opportunity to better encourage beneficial activities, such as creating, maintaining and restoring wetlands and we need to balance the protection of wetlands while not inhibiting these beneficial activities.

[1] Based on regional council estimates.
[2] For the purpose of this report, permitted takes means both those permitted under s14(3)(b) of the RMA and by rules in the Regional Water and Soil Plan.
[3] Estimated water takes based on 70 litres per cow per day ($0.07m^3$) for dairy shed wash down. During times of the year, the maximum permitted volume is $10m^3$ per day, therefore any dairy operation with a heard of 143 cows or more would breach this.
[4] Predictions are taken from the 5th report from the Intergovernmental Panel on Climate Change and although they have not been refined specifically for Northland, they are the best information we currently have for future planning. The report does however refer specially to New Zealand and general areas within New Zealand.

2 What are the issues with the management of Northland's water quantity?

The Regional Water and Soil Plan contains policies and rules for managing activities that affect fresh water quantity in Northland. The plan was drafted in the second half of the 1990's and was made operative in 2004. Some aspects of the rules for managing water quantity were amended in 2007. Overall, the Regional Water and Soil Plan is a reasonably sound regulatory framework for managing freshwater quantity. However through our review we have identified four key issues with the management of Northland's water quantity:

- The Regional Water and Soil Plan does not adequately address the significant issues with Northland's water quantity;
- Some shortcomings with the way that the Regional Water and Soil Plan is currently administered;
- The Regional Water and Soil Plan does not fully give effect to recent national and regional policy direction; and
- Gaps and uncertainties in our information about the values associated with water quantity and the activities that affect it.

These issues and the options to address them are described in the remainder of this report.

2.1 Water quantity and the Resource Management Act (RMA) – an overview

The RMA is the principle statute governing the management of New Zealand's water resources. Under the RMA, regional councils are tasked with managing water quantity. This is done through regional plans, which contain water quantity objectives, and policies and rules that control activities affecting water quantity.

The RMA provides regional councils with a number of functions for regulating activities that affect water quantity, including controlling the taking, use, damming and diversion of water and the use of land.

Under the RMA, water quantity is normally allocated on a 'first-in-first-served' basis. However, regional councils also have the ability to allocate water to different uses. But this is seldom done because it means that councils are required to make judgement calls about the appropriate (most effective and efficient) use of water, which is challenging.

Central government can promulgate national policy statements that direct the RMA functions of regional councils. They state objectives and policies that regional councils must give effect to through their plans and have regard to when considering applications for resource consents. Currently, there is only one national policy statement that directs the management of water quantity.

The National Policy Statement for Freshwater Management 2014 (freshwater policy statement) sets out a nationally consistent approach to managing freshwater quantity (and quality). The approach involves:

1. Defining freshwater quantity management units, for example, grouping freshwater bodies by type such as ecological sensitivity;
2. Identifying the values of water quantity in each management unit, for example, healthy aquatic ecosystems, drinking water supplies, irrigation;

3. Identifying the important attributes of each value, for example, native fish species, security of water supplies;
4. Determining an acceptable state for each attribute, for example, good quality of habitat for native fish, and high reliability of supply for users (expressed as the likelihood that water will be available for extraction at a point in time);
5. Establishing water quantity objectives, which are numeric and/ or narrative statements of desired environmental outcomes, that reference the selected attribute states;
6. Setting associated water quantity limits, which are comprised of minimum flows (for rivers) or water level (for lakes and groundwater) and an allocation limit (the amount of water that can be extracted above the minimum flow); and
7. Establishing methods (including rules) to avoid and phase out over-allocation[5].

Water quantity objectives, limits and rules must be included in regional plans for all freshwater quantity management units in a region. The freshwater policy statement also requires that the significant values of outstanding freshwater bodies and wetlands are protected.

The regional council has a Proposed Regional Policy Statement that also provides direction on water quantity management in regional plans. It reinforces the aims of the freshwater policy statement and provides additional direction on managing the efficient allocation and use of water and avoiding and phasing out over-allocation. It also recognises and promotes the benefits of water harvesting, storage and conservation methods.

2.2 Water quantity management units

The first step in implementing the National Policy Statement for Freshwater Management (freshwater policy statement) is establishing water quantity management units. These units enable a diverse region to be divided up so common water quantity objectives and limits can be applied to each unit. Management units can be a water body, multiple water bodies, or any part of a water body. The management unit approach is essential because Northland has thousands of freshwater bodies and developing specific water quantity objectives and water quantity limits would be a huge undertaking. It is also unnecessarily because in many cases it is more practical to group water bodies by type and manage them accordingly.

2.2.1 Issues with the current management units

The Regional Water and Soil Plan currently groups Northland's rivers into three water quantity management units:[6]

- Outstanding water bodies (water flows and levels to be preserved and protected in natural state);
- Flow sensitive rivers of high ecological value (minimum flows not to be reduced below mean annual low flow); and
- Other rivers (minimum flows not to be reduced below the seven day, one in five year return interval, which generally corresponds to between 70-84% of the mean annual low flow, depending on the size of the river).

The region's wetlands and lakes are all managed as single management units, although the Regional Water and Soil Plan rules afford a higher level of protection (through non-

[5] The situation where a water quantity objective is not being met or where water has been allocated through existing rules and consents to users beyond a limit.
[6] Rivers are managed under one water quantity objective but there are three different minimum flow (limits) regimes.

complying activity rules) for significant indigenous wetlands and a number of listed dune lakes.

Similarly, aquifers are managed under one water quantity objective and a set of narrative minimum water levels. The plan gives higher level protection through the rules to aquifers with high actual or potential demand, aquifers at risk of seawater intrusion, and geothermal aquifers. Many of these aquifers are mapped.

We think that the management units in the Regional Water and Soil Plan are generally appropriate but could be refined to better reflect the environmental variability between water bodies and their sensitivity to hydrological modification.

2.2.2 Possible changes to the regional plan

We are considering defining freshwater quantity management units for lakes, rivers, aquifers and wetlands based on ecological sensitivity as this is a fundamental requirement of the freshwater policy statement. Sections 3 through 6 set out our current ideas about future water quantity management units.

It is important to note that we are currently undertaking collaborative catchment management in five catchments. Collaborative stakeholder groups are likely to make recommendations to the council on water quantity objectives, limits and rules relating to these catchments.

2.3 Water quantity objectives

Water quantity objectives state desired environmental outcomes that are to be achieved by managing activities that affect water quantity.

Water quantity objectives can be expressed in a number of ways, including in broad narrative, tight narrative, or numeric terms. Broad narrative water quantity objectives express desired environmental outcomes in abstract and non-quantified terms, for example, “water quantity safeguards the life-supporting capacity and is available for use”. Such objectives are open to wide interpretation. Tight narrative objectives state desired environmental outcomes in more specific terms but remain difficult to quantify, for example, “flows in rivers provide suitable habitat for native fish and invertebrate species and help prevent the growth of nuisance plant and algal.”

Numeric water quantity objectives on the other hand express the intended outcome (environmental state) in numeric terms, for example, “water flows in river X are managed so that there is no more than a 10% reduction or increase in longfin eel habitat and there is a 90% reliability of water supply for users during summer.”

The National Policy Statement for Freshwater Management (freshwater policy statement) requires the council to follow the following process when setting water quantity objectives and limits:

1. Identify the values that the water quantity management unit should be managed for. Only one value (ecosystem health) is compulsory under the national policy statement. However, the use of water for consumptive and non-consumptive purposes is also a fundamental value.
2. Identify the attributes of the values. Fish habitat is usually the best attribute for ecosystem health. Security of supply is normally used for consumptive uses.

3. Select the desired state for each attribute, for example, no more than 5 % loss of in-stream habitat (flow and depth) for longfin eels or banded kōkopu, and 95% reliability of supply for water users; and
4. Set water quantity objectives in regional plans for the water management unit in numeric terms where practicable, otherwise in narrative terms, by reference to the selected attribute state (examples are provided later).

The Proposed Regional Policy Statement for Northland provides additional direction on the nature of new water quantity objectives by requiring that the following is provided for:

> *Maintain flows, flow variability and water levels necessary to safeguard the life-supporting capacity, ecosystem processes, indigenous species and the associated ecosystems of freshwater.*

2.3.1 Issues with the current objectives

The Regional Water and Soil Plan currently contains broad narrative water quantity objectives that apply generally to all freshwater quantity management units. These are set out below for context.

Surface water:[7]

> *The maintenance and enhancement of water flows and levels in rivers, lakes and indigenous wetlands that are sufficient to provide for the preservation of their natural character, safeguard the life-supporting capacity, and has particular regard to protecting their intrinsic ecosystem, amenity and cultural values.*

Groundwater:[8]

> *The sustainable use and development of Northland's groundwater resources while avoiding, remedying and mitigating actual and potential adverse effects on groundwater quantity and quality.*

It is unlikely that many people would disagree with the outcomes that these objectives seek. However, they lack specificity and therefore certainty. They are expressed in such broad terms that it is difficult for the council, or indeed resource users, to measure or assess whether the outcomes are being, or can be, achieved.

2.3.2 Possible changes to the regional plan

Generally we think that by managing flows and levels for aquatic ecosystem health (as required by the national policy statement), other in-stream values will be provided for, such as natural character, mahinga kai (traditional food gathering places) and fishing. This is because these values are very closely related to ecological health. The protection of these will be dependant on the level of ecosystem health that we manage to and we are yet to determine how we will go about establishing this, although fish habitat is a good indicator. Feedback from stakeholders suggested that we use the Macroinvertebrate Community Composition (MCI) as a means of establishing ecological health.

We recognise that this will not always be the case and in some instances there will be other values that will require higher water flows/levels than that required to protect ecosystem health. An example of this is recreation, where minimum flows/levels might need to be set higher in order to provide for activities such as swimming.

[7] Objective 9.4.1, Regional Water and Soil Plan
[8] Objective 10.4.1 Regional Water and Soil Plan

Use values of water, such as irrigation and food production, animal drinking water, water supplies, commercial and industrial uses, and hydro-electric power generation are a key consideration when setting allocation limits, that is, the volume of water available for allocation over and above the minimum flows/levels. While these use values are not directly relevant to the purpose of minimum flows/levels, they need to be considered as the water available for allocation will depend on how high or low the minimum flows/levels are set.

2.4 Water quantity limits

The freshwater policy statement directs the council to set environmental flows and levels (water quantity limits) for all water quantity management units in the region (except ponds and naturally ephemeral water bodies). Environmental flows and levels are a type of limit that describes the amount of water in a water body required to meet water quantity objectives. Environmental flows for rivers and streams must include an allocation limit and a minimum flow. Environmental levels for other water quantity management units (lakes, wetlands, aquifers) must include an allocation limit and a minimum water level (or other level/s). It is important that the impacts on water quality are considered when determining flows and levels.

As discussed above, minimum flows and levels are set to protect aquatic ecosystems but in some cases may need to be set higher to maintain other values. They are based on the assumption that the less water there is in a water body, the less habitat there is available for aquatic species, for example, plants, invertebrates, and fish, and the more stressed the ecosystem is.

Minimum flows and levels only maintain the quantity of water left in a water body. They do not regulate the natural fluctuations above the minimum flows and levels that are important for ecosystem health, for example, flushing out nuisance plant and algae growths and the special conditions required for the migration and breeding of native fish like white bait species.

Allocation limits are set to cap the amount of water that can be taken from a water body above a minimum flow or level. They provide two roles: they ensure that water bodies have natural fluctuations in flows and levels and they provide a degree of security of supply for water users. Generally speaking, the larger the allocation limit, the larger the amount of water available for extraction, but this reduces the reliability of the water supply (because more people are trying to take a finite amount) and increases the likelihood that a water body will be at a minimum flow or level. This is illustrated in Figure 1 below.

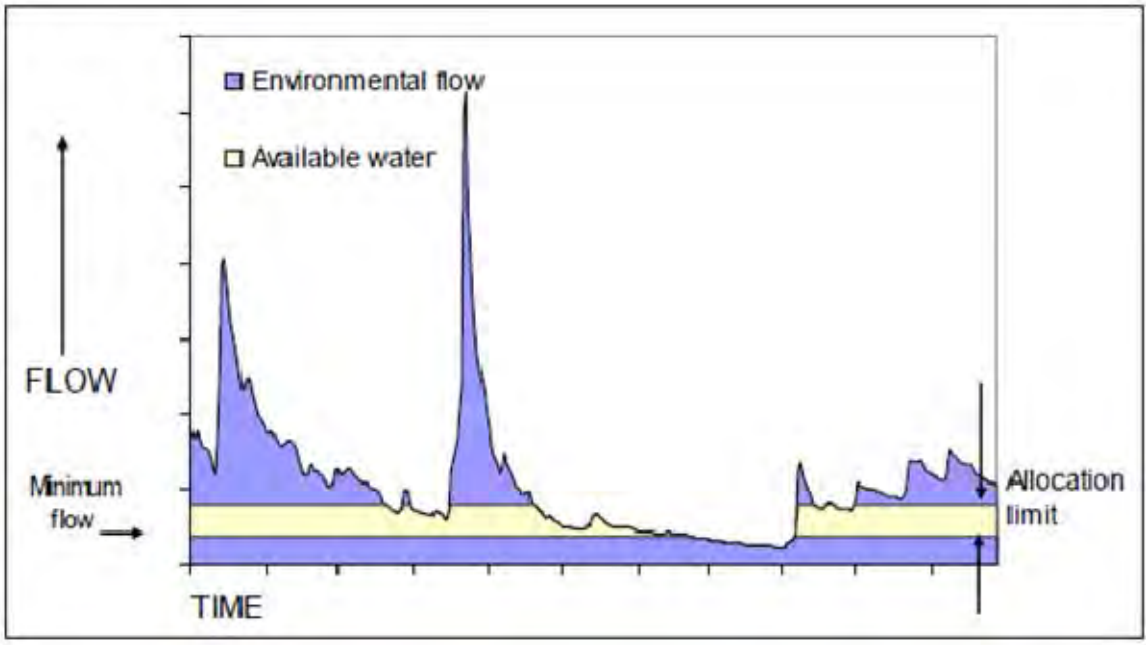


Figure 1 Illustration of a simple environmental flow for a river

The degree of rigour required in setting minimum flows/levels and allocation limits is proportionate to level of demand for water in a particular water body – where there is low demand for water (that is, low levels of allocation) a default or interim approach may be appropriate.

The Proposed National Environmental Standard on Ecological Flows and Water Levels 2008[9] contains default minimum flows and allocation limits for rivers, aquifers and wetlands. The intent of the proposed national standard is to establish a consistent approach to setting both minimum ecological flows/levels and allocation limits in the absence of catchment-specific data.

2.4.1 Rivers and streams

For rivers and streams, the proposed ecological flows and allocation limits are expressed as a percentage of the mean annual low flow of a river or stream. For rivers with mean flows of 5m^3 per second or less, the proposed national standard sets out a default minimum ecological flow of 90% of the mean annual low flow and an allocation limit of, whichever is the greater of:

- 30% of mean annual low flow, or
- the total allocation from the catchment on the date that the national environmental standard comes into force less any resource consents surrendered, lapsed, cancelled or not replaced.

For rivers and streams with mean flows greater than 5m^3 per second, the proposed national standard sets out a lower minimum flow of 80% mean annual low flow and an allocation limit or, whichever is the greater of:

- 50% of mean annual low flow, or
- The total allocation from the catchment on the date that the national environmental standard comes into force less any resource consents surrendered, lapsed, cancelled or not replaced.

[9] Proposed National Environmental Standard on Ecological Flows and Water Levels: Ministry for the Environment Discussion Document; March 2008.

Larger rivers have less stringent limits because their instream ecology is normally less sensitive to water takes.

We have assessed the levels of allocation in Northland's river catchments using the approach of the proposed national standard, in terms of the default 30% and 50% mean annual flow allocation limits. Levels of assessed allocation are shown in figure 2 below.

It is important to note that this map is a work in progress and it will change over time as we gather more information. The allocation calculations assume that all permitted activity takes are from surface water bodies and that the level of allocation is based on all users (being permitted, consented and unauthorised) taking water at the same time and taking to the maximum amount of water available (by conditions in rules or consents), which in reality is not the case. Additionally, the dam allocations assume that water users take inflows to the dams rather than using stored water.

Notwithstanding the above, on the basis of this map it is likely that we are able to use a default approach for the majority of rivers in Northland, i.e. where high allocation is not identified as being an issue. In the limited areas where high allocation is identified as an issue, we will likely look at setting specific flows/levels and limits.

It is further noted that we need to be sure we have the best information available to make these assumptions around allocation levels and ensure that moving into the future water is used more efficiently where it can be. Also the interaction between surface water and ground water has not yet been incorporated into the allocation calculations and this is something that we are currently working on as it is an integral part of setting minimum flows and levels.

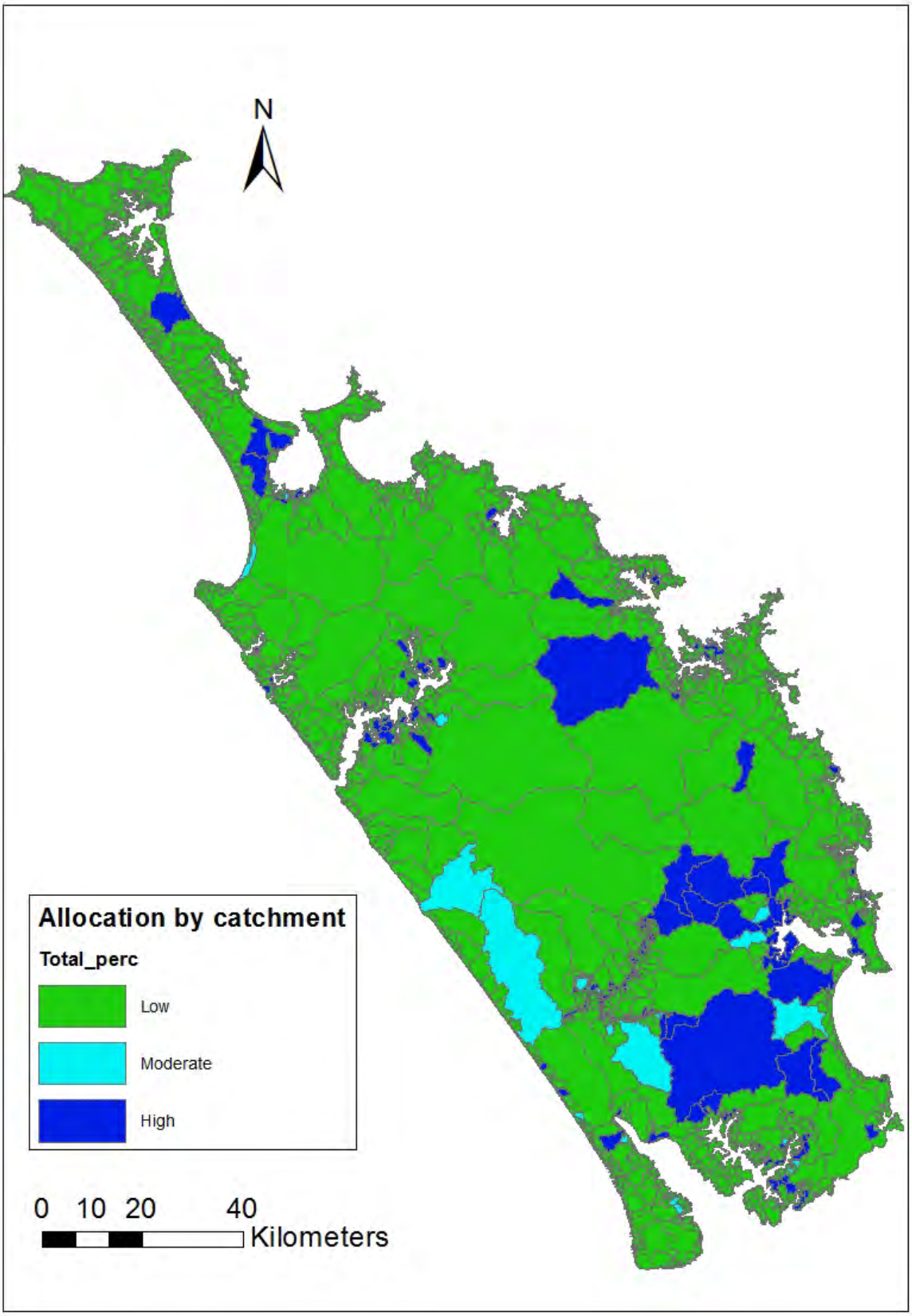


Figure 2: Levels of assessed water allocation for consumptive uses (permitted, consented and unauthorised) in surface water catchments based on default methodology in the Proposed National Environmental Standard on Ecological Flows and Water Levels. Note: Low Allocation = 0 to 75%; Moderate = 76 to 100% and High = >100%.

2.4.2 Lakes and wetlands

For most of Northland's lakes and wetlands, limits can only practicably be expressed in narrative terms due to environmental variability and a lack of good information on their natural levels.

The proposed national environmental standard contains default minimum levels and allocation limits for wetlands only, but not for lakes. With regard to wetlands, the default limit is: "No change in water levels, beyond the water level variation that has already been provided for by existing resource consents on the date that the Standard comes into force."

2.4.3 Aquifers

The proposed national standard contains default allocation limits for aquifers. For shallow, coastal aquifers (predominantly sand) the allocation limit is, whichever is the greater of:

- 15% of the average annual recharge as calculated by the regional council; or
- The total allocation from the groundwater resource on the date that the standard comes into force.

For all other aquifers the allocation limit is, whichever is the greater of:

- 35% of the average annual recharge as calculated by the regional council; or
- The total allocation from the groundwater resource on the date that the standard comes into force.

2.4.4 Issues with the current water quantity limits

The Regional Water and Soil Plan includes minimum flows for rivers: Minimum flow for flow-sensitive rivers is mean annual low flow, and for larger rivers over 300 litres per second the seven day, one in five year low flow is used (typically 70-84% of mean annual low flow). However, these are not absolute and policy allows exceptions to be made, which is likely to be inconsistent with the freshwater policy statement.

The Regional Water and Soil Plan also needs to be amended to give effect to the national policy statement because it does not contain:

- Minimum levels for lakes and wetlands;
- Minimum levels for some aquifers;
- Allocation limits for rivers, lakes, aquifers and wetlands; and
- Absolute minimum flows for rivers.

The absence of the above creates two problems:

1. The potential for the ecosystem health of water bodies to be adversely affected by water takes, drainage and diversions; and
2. The amount of water available for use is not clearly defined and this means there is no known security of supply for existing and future users.

2.4.5 Possible changes to the regional plan

Options for new water quantity limits are set out in sections 3 through 6 of this report. It is acknowledged that water quality will need to be considered when setting water quantity flows/levels and limits.

2.5 Lakes

Northland has nationally and internationally important dune lakes, with many being outstanding for their ecological values. The region also has a number of other natural lakes. Northland's natural lakes do not appear to be a major water source for consumptive uses. However, monitoring suggests that water levels in some dune lakes are being impacted by surrounding land uses (for example, plantation forestry).

2.5.1 Possible changes to the regional plan

Based on our initial research, we think that Northland lakes could be divided into three water quantity management units for the purposes of applying water quantity objectives and limits.

Water Quantity Management Unit	Objectives	Limits
Outstanding lakes	Narrative of numeric objective that seeks to protect the significant values of outstanding lakes while allowing some water for consumptive and non-consumptive uses. Consumptive and non-consumptive uses.	Stringent narrative limits that allow some level of hydrological modification provided that the outstanding or significant values are protected.
Dune lakes (not outstanding or significant)	A narrative objective that seeks water levels are managed so that the ecological health of lakes is maintained or enhanced.	Narrative limits that allow water to be taken, used, and diverted, provided that the activities cause no more than minor changes to natural lake level fluctuations.
Other lakes	A narrative objective that seeks water levels are managed so that the ecological health of lakes is maintained.	Narrative limits that enable water to be taken, used and diverted, provided that the activities cause no significant changes to natural lake level fluctuations.

2.6 Rivers

We think that the best way to develop water quantity management units for rivers is by grouping water bodies by river size and risk of hydrological modification.

The risk of adverse effects on aquatic ecosystems from hydrological modification (water takes, dams and diversions) is typically highest in smaller streams close to the coast, where natural flows are generally low. We suggest these streams be treated as a separate management unit (high value rivers and rivers sensitive to changes in flows).

The National Policy Statement for Freshwater Management (freshwater policy statement) directs the council to protect the significant values of outstanding freshwater bodies. For this reason, we also think all of Northland's outstanding rivers could be managed as one unit, in other words, under one water quantity objective and set of associated limits.

2.6.1 Possible changes to the regional plan

Northland's rivers (including streams) are used for a variety of consumptive purposes. As discussed above, we have identified some catchments as likely being 'highly allocated'. That is, based on the current water allocation estimates, these rivers have high levels of allocation compared to the proposed default allocation limits in the proposed national environmental standard.

For highly allocated catchments, catchment-specific minimum flows and allocation limits may need to be set to reflect the values and uses within these catchments. This work includes:

- Assessing the actual takes, that is, conditions of consents, frequency of takes, security of supply requirements;
- Understanding the effects of takes on flow throughout the catchment;
- Identifying the values specific to these catchments;
- Assessing the sensitivity of the ecological values and the flow requirements within the catchments; and

Catchment-specific limits could then be established based on this work for our highly allocated catchments.

However in the interim, the most appropriate course of action may be to set an interim allocation limit for the highly allocated catchments based on existing use. This will involve capping at existing maximum allocation and includes permitted use (including stock drinking water) and the current consented takes. It will also include existing unauthorised activities (estimates based on land use). Future activities within these catchments that require a water supply, including expansion of existing activities reliant on increased water supplies, would likely become non-complying or prohibited activities at least in the interim.

Outside of highly allocated catchments we consider a default minimum flow and allocation limit can be applied given the low allocation levels. We suggest using the default limits in the proposed national environmental standard for such areas.

The exception to this could be where the regional council has established collaborative catchment groups (Waitangi, Whāngārei Harbour, Doubtless Bay, Mangere and Poutō) to assist in the development of water policy – in these areas a different approach may be justified given the more detailed assessment and another freshwater quantity management unit may be appropriate to distinguish such areas from the ‘default’ flow/allocation regime.

Based on our analysis we consider that Northland’s rivers could be divided into the following management units (these are similar to the current river water quantity management units in the Regional Water and Soil Plan):

Water quantity management unit	Objectives	Limits
Outstanding rivers	Narrative objective that seeks to protect the significant values of outstanding rivers while allowing some consumptive and non-consumptive uses.	High minimum flow (for example, 100% mean annual low flow). Small allocation limit (for example, 10% of mean annual low flow.
High value rivers and rivers sensitive to changes in flows	Numeric objective that seeks a level of protection for the habitat of important fish species (the attribute of ecosystem health) and a good security of supply for consumptive takes.	High minimum flow (for example, 90% mean annual low flow). Moderate allocation limit (for example, 30% mean annual low flow).
Other rivers	A numeric objective that seeks a moderate level of protection for the habitat of important fish species (the attribute of ecosystem health) and good security of supply for consumptive takes.	High to moderate minimum flow (for example, 80% mean annual low flow). Moderate allocation limit (for example, 30-40% of mean annual low flow). Based on defaults in the proposed national environmental standard.
Highly allocated catchments	To be developed.	Cap allocation at current level (where necessary incorporating lower levels set by consent) until the catchment is reviewed and specific objectives and limits set (policy sets out approach).

2.7 Wetlands

There are many remnant wetlands in Northland, including some relatively large inland wetlands, such as Hikurangi Swap and the Motatau Wetlands. A number of wetlands associated with dune and gumland areas and adjoining the coast are considered habitats of international significance. Similar to lakes, Northland's indigenous wetlands are not understood to be a major source of water for consumptive purposes (e.g. irrigation). However, the original area of wetlands has been greatly reduced due to drainage and conversion to agricultural uses. This is further discussed in section 7.7 below.

2.7.1 Possible changes to the regional plan

We think wetlands should be grouped into the following four water quantity management units for the purposes of setting water quantity objectives and limits. These management units will include different wetland types (for example, bogs, fens, marshes, swamps, etc.).

Water Quantity Management Unit	Objectives	Limits
Significant to outstanding indigenous wetlands	Narrative objective that seeks to protect the significant values of indigenous wetlands.	Stringent narrative water quantity limits that protect natural water levels.
Indigenous wetlands	Narrative objective that seeks to maintain aquatic ecosystem health.	Reasonably stringent limits that main water levels while allowing some degree of hydrological modification.
Non-indigenous, degraded and constructed wetlands	Enable management of water levels for treatment/storage, buffering or restoration.	Narrative water quantity limits that allow flexibility in the use of these wetlands.

2.8 Groundwater

Many of Northland's aquifers are important sources of water and in general, groundwater quality is high enough so as to allow the water to be consumed without treatment. The main aquifers are the Aupouri sands, Kaikohe basalts and Whangarei basalts. There are a number of smaller sand and gravel coastal aquifers, such as those located at Russell, Matapouri and Taipa, and less productive groundwater zones situated throughout the region in varying geology. In the areas where groundwater is in high demand, we have mapped the aquifers and have a fairly good understanding of the resource. However in other groundwater zones where there is little groundwater use, we have limited information on the groundwater resource.

2.8.1 Possible changes to the regional plan

Based on our research, we think that Northland's aquifers can be grouped into four water quantity management units for the purposes of setting water quantity objectives and limits:

Water quantity management unit	Objectives	Limits
Coastal aquifers (at risk of salt intrusion)	Narrative objective that seeks to enable the sustainable use of groundwater and provide good security of supply.	Allocation limit based on sustainable yield: Calculated via appropriate method based on available information. Where limited data, use appropriate proposed national environmental standard default allocation limit (15% of the average annual recharge). Where hydraulically linked to surface water, river minimum flows and allocation limits may also apply.
High demand and potential high demand (Ngāwhā geothermal aquifer will be managed separately)	Narrative objective that seeks to enable the sustainable use of groundwater and provide good security of supply.	Allocation limit based on sustainable limit: Calculated via appropriate method based on available information. Where limited data, adoption of appropriate proposed national environmental standard default limit (35% of the average annual recharge). Where hydraulically linked to surface water, river minimum flows and allocation limits may also apply.
Other mapped aquifers	Narrative objective that seeks to enable the sustainable use of groundwater and provide security of supply.	Sustainable yield allocation limit: Calculated via appropriate method based on available information. Where limited data, adoption of appropriate proposed national environmental standard default limit (35% of the average annual recharge). Where hydraulically linked to surface water, river minimum flows and allocation limits may also apply.
Other groundwater	Narrative objective that seeks to enable the sustainable use of groundwater and provide good security of supply.	35% of the receiving stream surface water base flows.

3 Managing activities that affect water quantity

The council has a legal obligation to identify a range of practicable options (policies, rules, and non-regulatory methods) for achieving water quantity objectives and meeting limits. The best options are those that are the most effective and efficient.

It is important to note that the council is not starting with a blank piece of paper. T he operative Regional Water and Soil Plan contains policies and rules for managing a number of activities that affect water quantity. These are briefly evaluated below. As part of this, the main issues with the current rules and the way that they are implemented, are highlighted with possible alternative options identified.

The Regional Water and Soil Plan was drafted in the mid-to-late 1990s and was made operative in 2004. We now have more knowledge about the effects of activities on water quantity and the effectiveness of various management approaches. There are a number of areas where we think some adjustment is required to the operational aspects of the plan in order to better manage effects, or assist in meeting national/regional policy.

3.1 General

The council will need to amend some of the existing rules and potentially include new rules in the Regional Water and Soil Plan to ensure that water quantity objectives are achieved and limits met. Importantly, the National Policy Statement for Freshwater Management (freshwater policy statement) directs the council to avoid (prevent) future over-allocation and where necessary phase out existing over-allocation.

As with rules for managing water quality, the council will need to be confident that permitted activities can cumulatively occur while still ensuring that water quantity objectives will be achieved and limits met. Some types of activities may need to be non-complying or prohibited if they will likely compromise objectives or not meet limits. It is important to note that prohibiting activities is a last resort and we think in most cases a non-complying activity status is probably an appropriate ‘backstop’. This will allow people who are proposing high-risk activities to demonstrate that while the activity might exceed an allocation limit it may not compromise a water quantity objective. This may be appropriate for water bodies that have default limits, but is less likely to be appropriate for water bodies that have specific (tailored) limits in place.

For other types of activities, resource consents will be required where a case-by-case assessment is needed to determine whether objectives and limits will be met.

3.2 Water takes

The Regional Water and Soil Plan regulates the taking of water from surface water and ground water. The plan permits most surface water takes subject to a number of conditions including maximum daily volumes and that water users provide the council with information on their water takes on request. However, it is important to note that the council has seldom asked for this information and our knowledge on actual permitted takes is limited.

Water takes that are not permitted are discretionary activities (require resource consent). Takes from dune lakes, significant indigenous wetlands, and water bodies with outstanding values are non-complying activities. The plan does not prohibit any water takes.

The rules for groundwater takes are similar to the surface water rules. Permitted activity rules for groundwater takes also contain conditions including maximum daily volumes and the requirement that water users must provide information on their takes to the council on

request. Like surface water, this has seldom been done and our understanding of permitted groundwater takes is limited.

The taking of groundwater which does not comply with permitted activity rules or is from aquifers that are under high demand, at risk of saltwater intrusion, or from a geothermal aquifer is a discretionary activity. Taking groundwater from significant indigenous wetlands is a non-complying activity. The plan does not contain any prohibited rules for groundwater takes.

The current provisions have generally worked well, but will need revision in some areas to reflect water quantity objectives and limits required by the National Policy Statement for Freshwater Management. We have also identified some other concerns:

- Section 14(3) of the RMA allows people to take fresh water for their reasonable domestic needs and the reasonable needs of their animals for drinking water as long as the take does not have an adverse effect on the environment. The Regional Water and Soil Plan does not contain any rules that regulate such takes given that they are 'as-of-right' provided that they have no adverse effects on the environment. It is important to note that the council has fairly limited data on the location, volume or impact of these takes;
- For other uses, the plan permits surface water takes of $10m^3$ per day during December – May and up to $30m^3$ and during June – November. Recent research indicates that the in-stream ecology of small coastal streams is sensitive to reduction in flows and as such the permitted $30m^3$ per day may not be appropriate;
- The $10m^3$ rule may also be inappropriate in areas of very high allocation or may be overly restrictive where water is shown to be plentiful (very low allocation levels);
- Metering of consented water takes is not always required (it is mandatory for takes of 5 litres per second or more), but it is important to ensure objectives and limits are met particularly where allocation levels are high;
- Consents for water takes expire and must be renewed periodically. Ideally all such consents would be considered catchment by catchment to ensure objectives and limits are met. While common expiry dates may not be practical, common review dates may well be.

Potential options to address these issues are discussed below.

3.2.1 Future management options

Taking of water for reasonable domestic needs and animal drinking water needs

Section 14(3) of the RMA allows people to take fresh water for their reasonable domestic needs and the reasonable needs of their animals for drinking water as long as the take does not have an adverse effect on the environment. Under the National Policy Statement for Freshwater Management, adverse effects are when a limit is exceeded and/or a water quantity objective is not being met.

The Regional Water and Soil Plan contains rules that regulate such takes in some scheduled aquifers. To help the council assess if section 14(3) takes are having adverse effects, the plan currently states that water users must provide information on their takes to the council on request. This has not happened to date.

The current permitted activity rules[10] require design minimum flows to be maintained, and set daily volume limits. During drought conditions it is likely that design minimum flows are not being maintained (and therefore the takes are not 'permitted').

In some of the catchments that are assessed to be highly allocated (mainly small coastal stream catchments), 'as-of-right' and permitted activity takes are thought to account for the majority of the allocation. However, it is important to point out that we have limited knowledge about actual permitted uses and rely on estimations based on land use (dairy and dry stock). These estimates indicate there is likely to be significant non-compliance with the permitted daily volumes and in some areas the design minimum flows are not being maintained.

In setting water quantity limits the council may have to establish a rule that sets out the maximum take per day for water use for reasonable needs, in some catchments, in order to prevent or phase out over-allocation and to protect the in-stream ecology. This is a significant change from the current approach.

While all water users for 'as-of-right' and permitted takes are required to provide the council with information on the location, volume and purpose of their takes on request, we thinking that this is something council needs to act more strongly on (see *metering* below for further information). This would enable us to meet the freshwater policy statement quantity accounting requirements.

Other permitted takes

As reported above, we do not have accurate information on whether users are meeting the requirements of permitted activity takes. In particular, we do not have a good understanding of water used in dairy sheds. Our assessment methodology for estimating is based on an annual average of 70 litres (0.07m^3) per cow per day for dairy shed use, in addition to 70 litres per cow per day for drinking water.

If this water use is accurate, it would mean that dairy farms with more than 143 cows (most dairy farms) would exceed the maximum permitted surface water take volume of 10m^3 per day during December through to 31 May[11]. This means that most dairy farms require water permits if they are taking from one source during this period. Currently, only a very small number of dairy farms have water permits for dairy shed use.

It is important to acknowledge that the actual takes are likely to vary significantly across the range of conditions/farm operations. For example we know a herringbone system uses substantially less water than some modern rotary milking systems, meaning the figure per cow per day for dairy shed use could be at least halved (many herringbones manage 30-35 litres per cow per day) in some instances but increased in others. Additionally, we know that stock drinking increases with warmer, drier weather, and with the feeding of additional supplements such as palm kernel extract.

The plan permits surface water takes up to 30m^3 in some areas provided specific criteria is met. Recent research indicates that the in-stream ecology of small coastal streams[12] is sensitive to reduction in flows and as such the permitted 30m^3 per day may not be appropriate.

Based on levels of assessed allocation, most of the region's water bodies are unlikely to be under pressure (that is, have low to moderate levels of allocation). However, a small

[10] See permitted activity rules 24.1.1 and 25.1.1
[11] See permitted activity rules 24.1 and 25.1.
[12] For example: West Coast draining rivers and streams from Maunganui Bluff to Shipwreck Bay.

number of catchments appear to be highly allocated. Depending on the limits set for these catchments, we may need to revise the maximum permitted daily volumes (up or down) and add potential guidance/policy around the timing (staggering) and rate of takes as this will be critical. This would also need to be considered for flow sensitive rivers and rivers with high ecological values (a proposed water quantity management unit).

Finally, feedback from stakeholders suggested that the permitted activity rule for taking water is unclear about how to apply it, for example is it per take, per property, can these takes be aggregated etc.

Metering

We need to improve our information on the use of water in Northland so that the resource can be sustainably managed into the future.

Water takes can be accounted for in a catchment by way of direct measurements (water metering) or estimation through computer modelling. The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 requires that all takes of equal to or greater than five litres per second are metered. The Government has stated that it intends to provide guidance on accounting for water takes.[13]

The majority of Northland's rivers are small and takes less than 5 litres per second can abstract a large portion of flow and potentially result in significant adverse effects. We are therefore considering options for requiring water meters on smaller takes (less than five litres per second, potentially including permitted takes), which is a significant change from the current approach.

It is important to note that we are at the beginning of this process and have not come to any definitive solutions in terms of water metres. Any future management options will need to be well tested and be open to public debate. Many factors will need to be taken into consideration, including the practicalities and costs of metering, how many meters might be required per property (for multiple takes), how the data will be collected and what type of meters might be required, and how the data will be valuably used.

Efficient allocation and use of water

While the first-in first-served approach to managing water quantity will never be completely efficient it can be improved. Methods include:

- Requiring, through permitted activity rules and conditions of resource consent, that intended rate and quantity of water taken is reasonable and justified for the proposed use;
- Providing for the efficient transfer of water permits between water users; and
- Promoting water user groups within a catchment.

Currently, the permitted activity rules define a maximum volume that is deemed appropriate and require that reticulation systems and components are maintained in good working order to minimise leakage. For takes that require resource consent, applicants are required to demonstrate that, among other things, the amount of water applied for is justified for the proposed use, alternative sources have been considered, and measures will be used to avoid wastage. We think that these requirements are appropriate and do not need to be changed.

Levels of allocation can be high on paper, but generally only a proportion is used at any point in time. This means that while water may be available, new users can be excluded

[13] See: Ministry for the Environment. 2013. *Freshwater reform 2013 and beyond.* Wellington: Ministry for the Environment

from gaining access to it. Ensuring that water can be easily transferred between users through formal mechanisms (transferring water permits) and less formal means (water user groups) is a key way of addressing this issue. The council has a role to play in this by providing for water to be transferred with minimal administrative costs.

The freshwater policy statement directs the council to include criteria in the Regional Water and Soil Plan by which applications for water permit transfers can be assessed, including improving and maximising the efficient use of water. The operative Regional Water and Soil Plan currently contains criteria, however these will need to be reviewed to ensure consistency with the National Policy Statement. These criteria must also be consistent with section 136 of the RMA[14].

Feedback from stakeholders suggested concern over the way transferring of water permits would be handled and to avoid the potential for a user being able to make a capital gain, i.e. a user being able to sell a portion their water rights either to another user or back to council. An example raised was that of an inefficient user becoming efficient and then selling their excess water on to another user. Another example raised was that of a user 'banking' water, i.e. applying for more than necessary and banking/storing this water so that they can sell the excess on at a later date. It is noted that currently, and in any future regime, any application to use water must justify the amount they have applied for being necessary for the proposed use.

Consent duration

Determining consent durations is currently done on a case-by-case basis. We consider that this approach is appropriate and is consistent with other councils and the recommendations of the Land and Water Forum[15] and the Government.[16] For this reason we do not think that the Regional Water and Soil Plan needs to be amended to specify shorter timeframes.

Reviewing conditions of water permits

To ensure objectives and limits can be met the council may need to put in place common review dates for consents. Common review dates can enable concurrent consent processing and review of conditions for comprehensive and integrated assessment of water quantity issues in catchments and/or aquifer systems, and potentially reduce administrative costs.

Section 128(1)(a) of the RMA provides the council with the ability to review conditions of water permits to deal with any adverse effect on the environment which may arise from the exercise of the consent. Specifying common consent review dates on water permits in catchments that are assessed as highly allocated could be a way to address the cumulative effects of multiple takes.

Section 128(1)(b) of the RMA allows the council to review conditions of water permits when a regional plan has been amended to include water quantity limits and the council believes that it is appropriate to review conditions of water permits to ensure minimum flows/levels and allocation limits are met.

3.3 Dams

The collection and storage of water in dams can both provide valuable security of supply for water users and reduce water takes from rivers during low flow conditions. Other benefits of

[14] s.136 Transferability of water permits.
[15] Land and Water Forum, 2012. *Third Report of the Land and Water Forum: Managing Water Quality and Allocating Water.*
[16] Ministry for the Environment. 2013. *Freshwater reform 2013 and beyond.* Wellington: Ministry for the Environment.

dams include easing peak storm flows, improving low flows, sediment capture, groundwater recharge and increased aquatic habitat. Feedback from stakeholders suggested water storage as a significant issue, which will inevitably increase into the future with farming intensification and predicted climate change effects. Conversely, there are known issues with dams such as:

- In-stream dams can prevent fish passage;
- Dams and storage reservoirs that recharge at any time from rivers or overland flow can extend low flow conditions in streams and reduce supply for downstream water users. The cumulative effects of these dams on in-stream ecology are potentially significant;
- The existing rules relating to dams could be more straight forward; and
- The size-trigger for dams needing a building consent has changed.

3.3.1 Future management options

Longer drought periods and reduced annual rainfall predicted with climate change, intensification of pastoral/horticultural farming and demand for greater security of supply are likely to increase demand for new water storage options and dams in the future.

Regional plan provisions for dams aim to avoid significant adverse effects on the flows and aquatic ecology (including indigenous wetlands and allowance for fish passage). The effects of the largest dams are generally well understood and managed, however the regional council only has information on around 300 dams and there are likely to be 10 to 20 times that number in total. Currently there is no requirement to notify council when constructing permitted dams. We do not have good information on the degree to which smaller dams are affecting flows and ecology, however, for most catchments with low allocation, there does not appear to be a problem.

Dams that intercept rainfall runoff that would naturally flow into streams during dry periods can prolong drought conditions and adversely affect stream ecology at a time when it is most vulnerable. To address this, most large-scale in-stream dams provide what is known as continuation flow. This is not the case for some smaller in-stream dams or off-stream storage dams.

The council is currently commissioning work to better understand the cumulative effects of such dams. The National Institute for Water and Atmospheric Research has also developed a model[17] that can be used to simulate changes in flows within a catchment, taking the effects of dams into account. These effects are likely to be of most significance in catchments that are highly allocated, flow sensitive, or where there are high numbers of dams. This work may result in the review of the permitted thresholds for dams.

Other future options could include:

- Allowing permitted takes to fill storage dams during periods of medium to high flows;
- Notification to council when constructing permitted dams;
- Encouraging damming of intermittently flowing watercourses where there is: ecological benefit (such as wetland creation) and maintenance or enhanced stream flow during extended low flow periods;

  And particularly in highly allocated and flow sensitive catchments:

- Review permitted threshold for off-stream dams; and

[17] CHES (Cumulative Hydrological Effects Simulator)

- A greater control on water takes from permitted or consented dams.

3.4 Diversions and drainage

Most diversion activities are associated with earthworks and involve temporary stormwater diversion; however they also included stream channel and coastal water diversions. With the exception of drainage an diversion affecting wetlands (see Section 6.7 below), current controls on these activities are generally sound.

3.4.1 Future management options

Despite strong controls in the Regional Water and Soil Plan, illegal activities do occur, particularly activities that affect water levels in wetlands. This means that the council may need to increase its monitoring and compliance efforts to better address illegal activities, particularly where they are having a significant effect.

We are also looking at whether the plan adequately controls stormwater diversions and drainage in urban areas for the purposes of mitigating the effects of flooding. Please refer to the summary document on Natural Hazards for this information.

3.5 Structures in the beds of lakes and rivers

The Regional Water and Soil Plan takes a relatively permissive approach to most structures (culverts, weirs, fords, bridges etc.) in water bodies that do not involve a listed dune lake, outstanding water body, or indigenous wetland. However, issues are evident in the following areas:

- Without appropriate design and installation long-term effects can occur including obstructing fish and invertebrate passage, increased flooding on neighbouring property, and erosion; and
- Currently there is no requirement to notify council when installing permitted in-stream structures and as a result comparatively large-scale works are permitted with no checks on the appropriateness of culvert capacity and other design details, such as allowing for fish passage.

3.5.1 Future management options

We are considering options to address these issues including:

- Requiring that the council is notified prior to some in-stream works;
- Placing greater emphasis on the design of structures that that makes appropriate allowance for rainfall events given the size, steepness and land cover within contributing catchments;
- Improving the level of guidance over how to provide for fish and invertebrate passage including sensitive periods for some species during migration and/or spawning;
- Specifying catchment area thresholds for permitted culverts (such as 150 hectares) to increase the council's control over the design of structures (particularly in urban environments or when structures are close to a neighbouring property);
- Making the retrofitting of fish passages in existing structures a permitted activity; and
- Encouraging stock crossings by providing guidance on farm culvert design and installation, for example Ministry for the Environment Culvert Guidelines.[18]

[18] https://www.mfe.govt.nz/publications/land/culvert-bridge-oct04/html/page2.html

3.6 Land uses

Changes in land use can affect the recharge of an aquifer and base flows to surface water. For example, the development of a paved urban environment over part of an aquifer recharge area, which diverts and discharges the stormwater to a surface water body and prevents the natural recharge to the aquifer.

The development of plantation forests over an aquifer recharge area may not have a significant effect on recharge in the first few years but when the canopy is closed, a large proportion of the rainfall recharge is intercepted and this can reduce groundwater levels and water available for allocation. Therefore this cyclic nature of plantation forestry needs to be considered.

3.6.1 Future management options

Further Northland research needs to be carried out to identify recharge areas and land uses where there is a likelihood of significant adverse effect on aquifer recharge and consequently significant effect on identified values. The effects of any major land use changes that impact on flows/levels and limits need to be considered prior to land use change occurring.

3.7 Land use affecting wetlands

We think that in some respects some Regional Water and Soil Plan controls on activities that affect wetlands:

- Act as a disincentive to retention and/or creation of indigenous wetlands;
- Add unwarranted consenting/enforcement costs;
- Impede beneficial management for water quality/storage or buffering purposes; and
- Do not adequately prevent stock access to indigenous wetlands.

It is necessary to protect outstanding and significant values of wetlands and safeguard Northland's indigenous wetlands as a whole. However, often regardless of the proportion of indigenous vegetation, wetlands can provide valuable habitat, benefits to water quality through nutrient and sediment reduction, maintaining stream flows during dry periods, recharging groundwater, and mitigating high flows. Wetlands can also be valued for cultural reasons, natural character and amenity, recreation and sport (e.g. game bird habitat). These values are identified in the Proposed Regional Policy Statement for Northland and therefore need to be reflected in regional plans.

Grazed indigenous wetlands can quickly become degraded to an extent that exotic plants establish and they no longer qualify as 'indigenous'. These degraded wetlands are no longer covered by rules preventing drainage and diversion of indigenous wetlands and as a consequence are currently being permanently lost as a result of these activities. To address this issue and reflect the values wetlands provide to buffering effects of storm and low flows, biodiversity and water quality, we are considering provisions that improve stock exclusion from wetlands.

Despite wetlands wide range of values, activities involving wetlands in the Regional Water and Soil Plan tend to be non-complying and beneficial activities such as wetland maintenance (including water level management), restoration, creation, and works to improve public access (such as boardwalk construction where appropriate) are not recognised or positively encouraged.

The Regional Water and Soil Plan defines "indigenous wetlands" and "significant indigenous wetlands" and rules relate to either of these as opposed to simply "wetlands". The definitions for indigenous wetlands and significant indigenous wetlands distinguish between

natural wetlands and non-natural wetlands in that they state “naturally occurring” and “natural areas” respectively.

There are some concerns with the definitions of both indigenous wetlands and significant indigenous wetlands as problems have arisen over what is naturally occurring and/or natural and what isn’t, for example wetlands forming in forestry blocks and on farm land by virtue of circumstance of the land use, not through being purpose built. These particular types of wetlands can satisfy (and in some cases “more than” satisfy) the criteria that determine significant indigenous wetlands and therefore become subject to those particular rules.

While we are obliged to follow the definition of “wetland” provided for within the Act, we have considered and concluded that the clarification of definitions (indigenous/significant indigenous), to provide more certainty and to differentiate between natural and non-natural wetlands, is desirable. Feedback from stakeholders also suggested that we need to set wetland boundaries in the wet season and that we need to recognise compatible/ incompatible land uses and wetlands resilience.

We are looking at ways to improve the balance of a high level of protection for wetlands while better encouraging beneficial activities through improved wetland definitions and guidance, and clearer more encouraging provisions. We are also looking to potentially schedule some wetlands within the plan; however we acknowledge that this will require close work with potentially affected land owners.

Regional plans review – topic summary

Water quality

How can we improve the management of water quantity in our regional plans? This is a summary of our initial ideas.

What is water quality?

Water quality means the physical, chemical and biological characteristics (attributes) of water that sustain or support desired values, for example, aquatic ecosystems and swimming.

Water quality management involves defining the types and amounts of contaminants that fresh and coastal waters can assimilate without compromising values. The sources of contaminants are then managed in the most effective and efficient way.

Contaminants enter water from point source and non-point source (diffuse) discharges. Point source discharges are a single or clearly defined source at a known location (for example, a wastewater treatment plan). Diffuse source contamination does not come from a single end-of-pipe source but from many small sources or from a wide area.

The types of contaminant sources that are covered in the report are:

- Stormwater infrastructure
- Domestic and municipal wastewater infrastructure
- Industrial and trade premises
- Animal effluent, other agricultural wastes, and fertilisers, and
- Land disturbance activities (for example, earthworks).

This report does not address hazardous substances, agrichemicals and contaminants associated with solid wastes – these are covered in a separate report ("Hazardous Substances and Contaminated Land").

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

Contents

Key Terms

“Values” are the reasons why we manage water resources, and include uses by people (e.g. drinking water, irrigation, swimming) and intrinsic values (e.g. ecology, natural character, spiritual values).

“Attribute” is a measurable characteristic of fresh or coastal water, including physical, chemical and biological properties, which supports particular values.

“Attribute state” is the level to which an attribute is to be managed.

“Environmental outcome” is the environmental state that occurs after some management action. Intended environmental outcomes are described in water quality objectives. The environmental state is directly related to the suitability of attributes to support values.

“Water quality objective” describes an intended environmental outcome in a water management unit.

“Water management unit” is the water body, multiple water bodies or any part of a water body determined by the regional council as the appropriate scale for setting water quality or quantity objectives and limits. This applies to fresh and coastal waters.

“Water quality limit” is the maximum amount of resource use available, which allows a water quality objective to be met.

“Over-allocation” is the situation where the resource:

a) has been allocated to users beyond a limits; or
b) is being used to a point where a freshwater objective is no longer being met.

1 Introduction

1.1 Purpose of this report

This report presents the key findings from our review of the water quality management provisions in the Regional Water and Soil Plan and Regional Coastal Plan.

It does this by identifying the key issues or problems with the state and management of Northland's fresh and coastal water quality and then presents a range of options to address them.

This report should be considered a starting point for discussion with stakeholders, tangata whenua and the wider community about how Northland's water resources should be managed into the future. Therefore, we expect that the issues and options will be tested, added to and refined.

1.2 Structure of this report

This report is structured as follows:

- Section 2 provides an overview of how water quality is managed under the RMA
- Section 3 sets out the issues with the state of Northland's water quality
- Section 4 summarises the issues with the management of Northland's water quality
- Section 5 looks at options to address the issues. This is done in two parts. The first discusses the overarching framework for managing fresh and coastal waters, namely management units and water quality objectives. Options for managing point source and diffuse discharges to achieve the objectives are then identified and discussed.

2 Water quality and the Resource Management Act 1991 – an overview

The Resource Management Act 1991 (RMA) is the principal statute governing the management of New Zealand's water resources. Under the RMA, regional councils are tasked with managing water quality and quantity. This is done through regional plans, which contain water management objectives and policies and rules for controlling activities that affect water quality to achieve objectives.

The RMA provides regional councils with strong regulatory functions for maintaining and enhancing water quality, including the ability to control discharges and the use of land.[1]

Importantly, regional plans have an enabling role because under the RMA discharges are not allowed unless authorised by a rule in a regional plan or resource consent issued by a council.[2] In other words, regional plans can permit activities that would otherwise require resource consent under the RMA. On the other hand, uses of land that affect water quality (diffuse discharges) are generally permitted under the RMA unless controlled by a rule in a regional plan.[3]

Northland Regional Council has two regional plans for managing water quality. The Regional Water and Soil Plan controls discharges and some land use activities that affect

[1] Section 30, RMA
[2] Section 15(1), RMA
[3] Section 9(2), RMA

freshwater quality, but not downstream coastal water quality. The Regional Coastal Plan controls discharges to the coastal marine area.

National policy statements, which are issued by central government, can direct the RMA functions of regional councils. They state objectives and policies that regional councils must give effect to through their plans and have regard to when considering applications for resource consents.

Currently there are two national policy statements that direct the water quality management functions of regional councils. They were both issued after the Regional Water and Soil Plan and Regional Coastal Plan were made operative. The National Policy Statement for Freshwater Management 2014, sets out a nationally consistent approach for managing freshwater quality, which involves:

1. Defining freshwater management units, for example, similar lake and river types
2. Identifying the values of water in each management unit, for example, healthy aquatic ecosystems and swimming
3. Identifying the attributes that are applicable to each value, for example, nutrients for aquatic ecosystems and faecal bacteria for swimming.
4. Determining an acceptable state for each attribute, for example, maximum concentrations of nitrate and ammonia that provide a certain level of protection to aquatic ecosystems and bacteria counts that correspond to a tolerable human health risk. Different attribute states support values at different levels.
5. Establishing water quality objectives. These describe desired intended environmental outcomes by identifying the values that water quality is to be managed for and the numeric and / or narrative attribute states that provide for or protect the values.
6. Setting associated water quality limits. These set out the maximum amount of resource use that allows a water quality objective to be met, and
7. Establishing methods, including rules to avoid or phase out over-allocation. This is where water quality objectives are not being met or where the maximum allowable amount of dischargeable contaminants has been allocated to users beyond a limit.

Water quality objectives, limits and rules must be included in regional plans. The National Policy Statement for Freshwater Management also directs regional councils to protect the significant values of outstanding freshwater bodies and wetlands in managing water quality.[4]

The New Zealand Coastal Policy Statement 2010 contains three policies that direct regional councils in their management of water quality in the coastal environment, as follows:[5]

- Identify and put in place actions (rules and/or non-regulatory initiatives) to improve coastal waters that have been contaminated to the point that they are having significant adverse effects on values, for example, aquatic ecosystems, swimming, and cultural activities.
- Monitor sedimentation and its effects on the coastal environment and control land uses and discharges that cause it.
- Carry out and put in place specific actions to manage point source discharges to the coastal environment, including sewage, stormwater, and discharges from ports and marine facilities.

[4] See http://www.mfe.govt.nz/publications/rma/nps-freshwater-management-2014/index.html
[5] Policies 21-23, New Zealand Coastal Policy Statement

Northland has a Proposed Regional Policy Statement that also provides direction to the content of the regional plans. Importantly, it contains an objective that seeks that the overall quality of the region's fresh and coastal water is improved with a particular focus on:[6]

(a) Reducing the overall Trophic Level Index status of the region's lakes

(b) Increasing the overall Macroinvertebrate Community Index status of the region's rivers and streams

(c) Reducing sedimentation rates in the region's estuaries and harbours

(d) Improving microbiological water quality at popular contact recreation sites, recreational and cultural shellfish gathering sites, and commercial shellfish growing areas to minimise risk to human health, and

(e) Protecting the quality of registered drinking water supplies and the potable quality of other drinking water sources.

This objective must be given effect to through water quality objectives in regional plans.

3 What are the issues with Northland's water quality?

Monitoring and research has identified three significant issues with Northland's water quality:

3.1 Elevated levels of nutrients in the majority of Northland's lakes and in some rivers

The majority of Northland's natural lakes have elevated levels of nutrients (nitrogen and/or phosphorus). This is promoting the growth of nuisance algae and aquatic plants. High levels of algae (phytoplankton) reduce water clarity and in turn the amount of light that can penetrate through the water column to sensitive native plants and algae. Nuisance aquatic plants (macrophytes) can out-compete native species. The enrichment of Northland's nationally and internationally significant dune lakes is a big concern.

Elevated levels of nutrients are promoting the growth of nuisance algae (periphyton) and macrophytes in some of Northland's rivers. However, other factors include a lack of riparian vegetation and consequently increased light for photosynthesis, warmer water temperatures and altered flows.

3.2 Elevated levels of fine sediment in many of Northland's rivers and estuaries

Water clarity is poor in many of Northland's lowland rivers and sediment accumulation rates are high in a number of estuaries and harbours.

Fine sediment is a major contaminant this is mainly generated from diffuse sources. Fine sediment has a range of adverse effects in rivers and receiving water bodies such as lakes and estuaries. In rivers, it can smother benthic organisms and reduce the clarity of water. Reduced water clarity can affect the visual range of fish and aquatic bird and interfere with fish migration.

Many of Northland's estuaries and harbours, such as the Kaipara, Whāngārei and Hokianga harbours and the Bay of Islands are accumulating sediment at rates that are in the upper range of sedimentation accumulation rates measured in North Island estuaries – typically an

[6] Objective 3.2, Proposed Regional Policy Statement for Northland

order of magnitude higher than pre-human times. This accelerated infilling is creating more muddy environments, causing the spread of mangroves, and changing the composition of benthic invertebrate communities. Fine sediment also changes the natural character of estuaries and harbours, impacts on navigation, and causes the loss and degradation of important habitats of fish species such as seagrass and shellfish beds.

Northland's estuaries and harbours, and the habitats within them, are major nursery areas for many fish species such as snapper, trevally and mullet. Evidence suggests that accelerated sedimentation from land uses in contributing catchments is adversely affecting fish populations.[7]

Our evidence suggests that the current main sources of fine sediment are stream bank erosion, pasture, plantation forests, and other land disturbance activities (for example, earthworks associated with construction and subdivision). However, it is important to note that the effects of current land management on water quality are exacerbated by historical land management, which included wide-scale deforestation and the drainage of wetlands. For example, the majority of sediment that is now in the region's estuaries and harbours is from historic land uses.

3.3 Elevated levels of faecal microbes in the region's rivers and estuaries

Faecal indictor bacteria levels in most of the region's popular coastal swimming sites are normally low and at levels that are acceptable for swimming. On the other hand, our monitoring results suggest that many of the region's popular freshwater swimming sites and all of the river water quality monitoring sites fail the "national bottom line"[8] for primary contact recreation. However, all of the region's fresh water quality monitoring sites are suitable for secondary contact recreation (wading and boating).

Monitoring results show that Northland's freshwater quality is suitable for stock drinking and irrigation. We are not aware of any evidence that suggests that the region's agricultural productivity is being adversely affected by water quality.

On the other hand, the effects of poor microbiological water quality on the region's commercial shellfish farmers are well documented. In some estuarine areas, shellfish farmers are prevented from harvesting for short periods following heavy rainfall. However, there have been longer closures. A prominent example was the decade long closure of oyster farms in the Waikere Inlet of the Bay of Islands. This was caused by the presence of a pathogenic virus from sewage (wastewater).

It is important to note that the council monitors faecal bacteria that are indicative, but not definitive, of the presence of pathogens (e.g. campylobacter, giardia, and norovirus). The faecal source tracking done by the council has shown that the main sources of faecal indicator bacteria are ruminants (livestock), birds, and in some localised areas poorly treated or untreated wastewater from municipal reticulation systems, septic tanks and boats. We have limited information on the prevalence of people getting sick in Northland from swimming in rivers or coastal waters and consuming shellfish.

Please see the following reports for more information on these issues:

- Northland lakes water quality and ecology: State and trends 2007-2011

[7] Morrison, M.A., et.al. (2009). A review of land-based effects on coastal fisheries and supporting biodiversity in New Zealand. New Zealand Aquatic Environment and Biodiversity Report No. 37.
[8] See Appendix 2 of the National Policy Statement for Freshwater Management 2014.

- River water quality and ecology in Northland: State and trends 2007-2011
- Recreational Swimming Water Quality in Northland: Summer 2013-2014
- State of the Environment Report 2012

3.4 Other issues

Feedback from key stakeholders and tangata whenua has also identified a number of additional issues. These are briefly listed and discussed as follows:

- *Mauri of water bodies* – Concerns have been expressed about the reduction of the mauri of water bodies. Mauri refers to the life force or essence of all things. Mauri is not static and can be affected by the environment in which it exists, including contaminants and other substances like cremated remains of people. The maintenance and enhancement of mauri is very important to ensure the wellbeing of the environment as a whole.[9]
- *Heavy metals* – Our monitoring and research suggests that levels of heavy metals in Northland waters are generally low and within technical guidelines. The exception is in the Hatea River arm of the Upper Whangarei Harbour where some heavy metals in benthic sediment are elevated above low-trigger value guideline levels.
- *Climate change* – The predicted effects of climate change in Northland include longer and more frequent droughts and heavy rainfall events. This may result in larger sediment loadings to water bodies, warmer water temperatures and reduced dissolved oxygen levels. However it is important to note that we are not aware of any research on the likely effects of climate change on Northland's water quality.
- *Loss of wetlands* – Wetlands capture and treat sediment and nutrients. The extensive loss of wetlands due to historical land use changes is a key factor in increased contaminant loads to rivers, lakes, estuaries and harbours.
- *Loss of riparian vegetation* – Riparian vegetation shades water bodies and helps capture and treat some contaminants. The widespread loss of riparian vegetation due to past and present land use activities is also a key reason for water quality impairment.
- *Groundwater contamination* – Groundwater quality can be impacted by the use of land and discharges. However, our evidence suggests that groundwater quality is generally good in Northland.
- *Altered flows and water levels* – The taking, damming and diversion of water can impact on water quality by reducing its assimilative capacity[10]. This is particularly relevant in water bodies that are dominated by point source discharges. However, the majority of Northland's water bodies are dominated by diffuse sources. In such systems, their water quality generally worsens with increased flows due to run-off and leaching of contaminants.

Lastly, it is important to note that our information on the pressures on and the state of Northland's fresh and coastal waters is far from complete. There are a number of key information gaps that we need to address in order to develop effective and efficient management interventions.

[9] Ministry for the Environment. 2010. *Maori Values and World Views Supplement*. Part D from Making Good Decisions Workbook ME 679.
[10] Assimilative capacity refers to the capacity for water to dilute contaminants and is directly a function of the amount of water relative to the amount of contaminants.

4 What are the issues with the management of Northland's water quality?

Through our review we have identified four significant issues with the management of Northland's water quality:

4.1 Managing diffuse discharges of the "big three" contaminants

The Regional Water and Soil Plan is largely focussed on managing point source discharges, with the exception of controls on some land disturbance activities. For example, the plan does not contain any controls on nutrient inputs or losses and the access of livestock to the beds of water bodies. Despite good progress in the management of point source discharges, the quality of many of Northland's fresh and coastal waters is impaired. Research suggests that diffuse discharges are the main source of the impairment.

Managing diffuse discharges is challenging because of the difficulties around measuring them, proving causality, and regulating the use of land.

It is important to note though that the National Policy Statement for Freshwater Management requires councils to account for and manage both point source and diffuse discharges of contaminants.

4.2 Fresh and coastal water quality managed in isolation

Northland's fresh and coastal water quality is largely managed in isolation. The Regional Water and Soil Plan controls discharges to land and fresh water and some land disturbance activities but contains no explicit policy or rule requirements to consider the impacts of discharges and use of land in catchments on coastal water quality. This is an issue because almost all of Northland's rivers drain to and influence the quality of water in estuaries and harbours.

Similarly, the Regional Coastal Plan regulates point source discharges to the coastal marine area. Coastal water quality classifications and standards are used for managing such discharges. However, they do not apply to point source and diffuse discharges in contributing catchments. This compromises the effectiveness of the coastal water quality classifications and standards and has proved contentious in some resource consent applications.

4.3 Administrative issues with current policies and rules

The term "administrative issues" refers to shortcomings or problems with the way that current rules are interpreted, monitored and enforced. We have identified four types of administrative issues associated with the Regional Water and Soil Plan and Regional Coastal Plan, as follows:

- *Lack of clarity and certainty in some permitted activity rules* – Some permitted activities rules in the Regional Water and Soil Plan contain vague and subjective conditions. This makes it difficult for people operating under them and introduces discretion to council when monitoring and enforcing them. Key examples include the permitted activity standards for land disturbance.[11]
- *Incomplete knowledge about the location, timing, and nature of some activities* – There are not requirements in the permitted activity rules to notify the council in

[11] See Section 32 "Environmental Standards for Land Disturbance Activities", Regional Water and Soil Plan.

advance of an activity taking place. This means that the council is often not aware of some activities until they have happened.

- *Lack of consistency in enforcing rules* – The council does a good job managing most activities but concerns have been raised about inconsistencies in our approach. For example, it has been pointed out than we generally take a much softer approach in regulating overflows and stormwater discharges from municipal networks than we do with discharges from businesses, for example, farm dairy effluent. Concerns have also been raised about inconsistencies in our monitoring and enforcement of land disturbance activities.

4.4 Implementing recent national and regional policy direction

As mentioned earlier, the National Policy Statement for Freshwater Management and the New Zealand Coastal Policy Statement set out a national framework for managing fresh and coastal water quality. The Proposed Regional Policy Statement for Northland provides additional direction on the content of our regional plans.

The policy statements were promulgated after the Regional Water and Soil Plan and Regional Coastal Plan were made operative, and in a number of respects the plans do not give effect to them. Therefore the plans need to be updated as required by the RMA.

These issues and options to address them are covered in section 5 below.

5 What needs to change in the regional plans?

5.1 Background

5.1.1 Water quality management units

Water quality management units enable a diverse region to be divided up so common water quality objectives and limits (in the case of freshwater) can be applied to each unit. Water management units can be a water body, multiple water bodies, or any part of a water body.

The National Policy Statement for Freshwater Management requires management units to be defined that include all freshwater bodies within a region. The New Zealand Coastal Policy Statement does not contain a similar directive for coastal waters. Rather, it directs regional councils to only identify significantly degraded coastal waters in plans and include provisions in plans to improve water quality in such areas.

The way that water quality management units are defined depends on the purposes for which water bodies, or parts of water bodies, are valued. Consequently, there is a level of interdependence between defining water quality management units and determining the values and attributes for which they are managed (discussed later in this report).

There are several of approaches for determining water quality management units and regional councils around the country are currently considering and using different approaches.

Issues with the current regional plans

Currently the Regional Water and Soil Plan treats all of the region's rivers as a single water quality management unit, in other words, to be managed to one common water quality objective. The region's lakes are also treated as a single management unit, although controls afford a higher level of protection to a number of dune lakes.[12] The plan

[12] Schedule E, Regional Water and Soil Plan.

differentiates between wetlands (wetlands, indigenous wetlands, and significant indigenous wetlands) but this is more for the purposes of managing drainage, diversion and land disturbance activities than their water quality. Aquifers are also generally treated as a single management unit.

The Regional Coastal Plan on the other hand classifies Northland's coastal waters into three broad water quality management units (estuaries and harbours, near shore areas, and open coastal waters) for the purposes of applying default coastal water quality objectives (called standards in the plan). It also contains specific (tailored) classifications and associated water quality objectives for the Bay of Islands and Whangarei Harbour.

Options for new management units

The starting point is identifying the values that water quality needs to be managed for and where they apply. The National Policy Statement for Freshwater Management identifies two compulsory values that must apply to all water quality management units:

- Ecosystem health (Te Hauora o te Wai),[13] and
- Secondary contact recreation (wading and boating).

It is important to note that ecosystems health and other instream values such as recreational and commercial fisheries, natural character, and visual amenity are closely related. This means that by managing water quality for ecosystem health other values will likely be provided for.

However, we think that it is not appropriate to apply one freshwater quality objective and associated limits for ecosystem health to all rivers because there is natural variation in habitats, species and water quality in different river types (for example, lowland muddy rivers versus small stony coastal streams). This is generally accepted by stakeholders.

In addition, while the policy statement only requires water quality to be managed for secondary contact recreation we think that fresh and coastal waters that are popular for swimming, shellfish gathering and growing areas, and drinking water supplies should be identified and managed.

Some parts of the community would like all fresh and coastal waters to be suitable for swimming. This is unlikely to be achievable though without widespread changes in land use, at potentially significant costs.

Options for future water quality management units are discussed in sections 5.2 through 5.6 below.

5.1.2 Water quality objectives

Water quality objectives state desired environmental outcomes to be achieved by managing activities that affect water quality.

A water quality objective can be expressed in a number of ways, including in broad narrative, tight narrative, or in numeric terms.

Broad narrative water quality objectives express desired environmental outcomes in abstract and non-quantified terms, for example, "water quality safeguards the life-supporting capacity and mauri of rivers and is suitable for recreation." Such objectives are open to wide interpretation. Tight narrative objectives state desired environmental outcomes in more

[13] Te Hauora o te Wai: "the health and mauri of water".

specific terms but remain difficult to quantify, for example, “water quality is suitable for native fish species and swimming”.

Numeric objectives, on the other hand, express the actual minimum or maximum environmental states that support values of water, for example, “*E.coli* concentrations do not exceed 260 per 100 mL so that people are exposed to no more than a low risk of getting sick from swimming”, or “nitrate concentrations do not exceed 1.0 mg per litre so that there is not adverse effects on the growth of aquatic fish species”.

However, not all desired environmental outcomes can be expressed in numeric terms. For example, some cultural and spiritual values cannot be easily quantified, such as “Mauri”[14]. Expressing water quality objectives in numeric terms can also be challenging because our understanding of the relationships between different contaminants, their concentrations in water, and their effects on values such as fisheries can be difficult to understand and quantify.

In establishing water quality objectives for water quality management units, the National Policy Statement for Freshwater Management directs the council to:[15]

1. Identify the values that the freshwater management unit should be managed for. Ecosystem health and human health (secondary contact recreation, for example, wading and boating) are the two compulsory values and must apply to all water bodies.
2. Identify the attributes (for example, *E.coli,* nutrients and sediment) that need to be managed for the selected values.

   It is important to note that the National Policy Statement for Freshwater Management attribute tables are only partly populated at this stage and will be added to overtime as the science is developed and agreed on (expected to be in 2016 and 2019).[16] However, the government has stated that it expects regional councils to set water quality objectives for attributes that are not currently in the National Policy Statement for Freshwater Management, for example, sediment, nutrients (for managing the growth of nuisance plants and algae), temperature, pH, macroinvertebrates, and heavy metals. In this regard, regional councils have the discretion to determine the appropriate additional attributes and attribute states for their regions.
3. Select the appropriate state for each attribute. The National Policy Statement for Freshwater Management identifies four states (“A”, “B”, “C” and “D”) for the compulsory attributes. The “A”, “B” and “C” states represent “excellent”, “good” and “fair” conditions of ecosystem health. The boundary between the “C” and “D” states is the minimum acceptable state (in other words, national bottom line). Determining the appropriate state for each attribute ultimately comes down to a choice whether to maintain or improve water quality in each management unit.[17]
4. Establish water quality objectives in numeric terms where practical, otherwise in narrative terms, by reference to the selected attribute state.

It is important to note that new fresh and coastal water quality objectives must also give effect to Objective 3.2 of the Proposed Regional Policy Statement.

[14] “Life force, or essence of living things.”
[15] Policy CA2, National Policy Statement for Freshwater Management 2014
[16] Ministry for the Environment. 2013. *Proposed amendments to the National Policy Statement for Freshwater Management 2011: A discussion document.* Wellington: Ministry for the Environment.
[17] For further details on the compulsory attributes please refer to the attribute tables in Appendix 2 of the National Policy Statement for Freshwater Management 2014

Issues with the current regional plans

Freshwater quality objectives

The Regional Water and Soil Plan currently contains a single broad narrative water quality objective for the region's freshwater bodies, as follows:[18]

> *The maintenance or enhancement of the quality of natural water bodies in the Northland region to be suitable, in the long-term, and after reasonable mixing of any contaminant with the receiving water and disregarding the effect of any natural events, for such of the purposes listed below as may be appropriate:*
>
> - *Lakes, rivers, streams – aquatic ecosystems, contact recreation, water supplies, aesthetic and cultural purposes;*
> - *Freshwater wetlands – aquatic ecosystems, cultural purposes;*
> - *Groundwater, potentially usable – water supply, protection of uses of receiving water body; and*
> - *Other groundwater – protection of the uses of receiving water body.*

While very few people would disagree with the outcomes that it seeks, it lacks specificity and therefore certainty. Furthermore, because it is expressed in such broad terms it is difficult to measure or assess whether the outcomes are actually being met. Also, it is not consistent with the requirements of the National Policy Statement for Freshwater Management and the Proposed Regional Policy Statement. For these reasons the objective needs to be updated.

Coastal water quality objectives

The Regional Coastal Plan currently contains default coastal water quality objectives that apply to three management units (estuaries and harbours, near shore areas, and open coastal waters).[19] These water quality objectives are based on the standards in Schedule 3 of the RMA.

The Regional Coastal Plan also contains specific coastal water quality objectives for the Whāngārei Harbour and the Bay of Islands.[20] Some of the objectives are based on technical guidelines that are now considered out of date.[21]

Over the last ten years, the council has gathered a lot of information on the quality of water in Northland's estuaries and harbours. This information will allow us to set new water quality objectives that are more applicable to Northland's coastal waters.

Options for new water quality objectives

Under the National Policy Statement for Freshwater Management we are required to set freshwater quality objectives for some compulsory attributes of ecosystem and human health. However, we are also considering setting water quality objectives for additional attributes. Table 1 below lists the compulsory attributes that the National Policy Statement for Freshwater Management directs the council to set freshwater water quality objectives for. It also identifies other attributes that the council is considering including as the basis for new fresh and coastal water quality objectives, to be expressed in numeric or tight narrative terms.

We also think that we would set coastal water quality objectives in a similar way to freshwater quality objectives. This is in the interests of consistency and because of the close relationships between fresh and coastal water quality in Northland.

[18] Objective 7.4.1, Regional Water and Soil Plan
[19] Method 13.5.3(b), Regional Coastal Plan
[20] Method 13.2.1 and 13.2.3, Regional Coastal Plan
[21] For example, the Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC 1992)

There are advantages and disadvantages with setting numeric water quality objectives for attributes that are not currently in Appendix 2 of the National Policy Statement for Freshwater Management. Some of these are listed below.

- Advantages:
    - There are attributes of ecosystem health that are relevant to Northland's freshwater bodies that are not currently provided in Appendix 2 of the national policy statement, e.g. sediment and invertebrates.
    - Numeric water quality objectives provide certainty and drive more robust (effective and efficient) interventions.
    - We have fairly good information on a number of attributes that are not currently in the national policy statement, so why wait?
- Disadvantages:
    - The national policy statement directs councils to "avoid" over-allocation. Where over-allocation is defined as the situation where a freshwater quality objective is not being met. Numeric objectives are less flexible when it comes to assessing the likely and actual effects of discharges. This means that current and future resource users can be impeded if the information on which the numeric objectives are based is not robust.
    - While we have good information on most attributes there are some uncertainties around the relationships between some water physical and chemical attributes and biological attributes. For example, relationships between different levels of suspended and deposited sediment and aquatic ecosystems can be difficult to quantify.
    - The Government has signalled that it intends to populate Appendix 2 over time for a number but not all attributes (e.g. nutrients in rivers). This means that the regional council could potentially duplicate this work or set objectives for attributes that may become out of date at a later date.

Sections 5.4 through 5.8 of this report looks at options for new water quality objectives for lakes, rivers, wetlands, aquifers, and coastal waters..

Table 1 – Compulsory and potential attributes for fresh and coastal water quality objectives

Values	Attributes		Water body type				
			Lakes	Rivers	Estuaries & harbours	Groundwater	Wetlands
Ecosystem health / Te Hauora o te Wai / mauri	Biological	Phytoplankton (chlorophyll a)	√		#		
		Periphyton		√			
		Macrophytes	#	#	#		
		Invertebrates	#	#	#		
		Fish	#	#	#		
	Physical / chemical	Nitrate toxicity		√			
		Ammonia toxicity	√	√	#		
		Total nitrogen	√				
		Total phosphorus	√				
		Dissolved inorganic nitrogen		#			
		Dissolved reactive phosphorus		#			
		Dissolved oxygen (below point sources)	#	√	#		
		pH (below point sources)		#			
		Temperature (below point sources)		#			
		Suspended sediment (visual clarity and/or turbidity)		#	#		
		Deposited sediment (accumulation rates)			#*****		
		Heavy metals (in water and sediment)	#	#	#		
		Organic compounds	#	#	#		
Human health / Te Hauora o te Tangata	Biological	*E.coli* (contact recreation)	√	√			
		E.coli (drinking water)				#	
		Enterococci (contact recreation)			#		
		Faecal coliforms (shellfish consumption)			#		
		Planktonic cyanobacteria	√	√			
	Chemical	Nitrate (drinking water)				#	

Key

√	Compulsory attributes with numeric states (Appendix 2, National Policy Statement for Freshwater Management 2014).
#	Other attributes (with narrative and/or numeric states) that are being considered by the council for inclusion in new water quality objectives.
	Attributes not available or not applicable in the near term.

*****The council is investigating approaches for managing sediment accumulation rates in the Kaipara Harbour, Whāngārei Harbour and Bay of Islands

5.1.3 Water quality limits

The National Policy Statement for Freshwater Management also directs the regional council to set water quality limits for all freshwater management units in the region.[22]

The term "water quality limit" is broadly defined in the National Policy Statement for Freshwater Management to mean "the maximum amount of resource use available, which allows a water quality objective to be met."

Limits are not referred to in the RMA, but the term is commonly understood to be an upper or lower bound level beyond which an activity is unlawful or subject to additional restrictions or hurdles.[23] In water quality management, limits are intended to restrict discharges or land use activities so as to protect environmental values (in other words, meet water quality objectives). Because the term "water quality limits" is so broadly defined in the National Policy Statement for Freshwater Management it can mean any provision that directly or indirectly defines the capacity for resource use that allows an objective to be met.[24]

In effect, limits do two things:

1. Ensure that water quality objectives are met
2. Show the amount of available resource for use, in other words, the assimilative capacity of a water body.

Issues with the current regional plans

The Regional Water and Soil Plan does not contain any water quality limits of the type that is envisaged by the National Policy Statement for Freshwater Management. Water quality limits will need to be put in place when setting new freshwater quality objectives.

Options for new water quality limits

Water quality limits can be set at a number of scales and in a different ways. Some of the types are discussed below.

Numeric water quality objectives as limits

We think that it is possible to use numeric water quality objectives as limits. While this may sound confusing, numeric water quality objectives for attributes such as sediment, nutrients, and faecal bacteria specify maximum contaminant concentrations. In doing so, they define the assimilative capacity for discharges and therefore the maximum amount of resource use available for use.

In using this approach, numeric water quality objectives would be met be preventing and minimising discharges of contaminants from point source and diffuse discharges. However, the council would need to demonstrate that the regulatory and non-regulatory interventions would adequately address the cumulative effects of multiple sources.

Controls could include discharge quality standards on point sources, restrictions on the amount of land available for particular activity, for example stock grazing in riparian areas of a river, and limits on contaminant inputs or losses.

The main weakness of using numeric water quality objectives as limits is because they are expressed as concentrations it would not be easy to allocate the concentrations among

[22] Policy A1, National Policy Statement for Freshwater Management 2014
[23] Norton N., Snelder T., Rouse H. (2010) Technical and Scientific Considerations When Setting Measurable Objectives and Limits for Water Management. NIWA Client Report: CHC2010-060. Prepared for Ministry for the Environment.
[24] Ibid

resource users.[25] Similarly, it is also difficult to link the instream contaminant concentrations to diffuse discharges from the use of land.

However, they would be appropriate for water bodies where there is sufficient "room" between a current contaminant concentration and a maximum contaminant concentration specified in a water quality objective and where there is a low risk of the maximum concentration being exceeded.

Contaminant load limits (applied at the catchment/sub-catchment scale)

Contaminant load limits define the maximum load of a contaminant that a water body can receive and still meet its water quality objectives. Load limits are typically expressed in terms of a mass (for example, tonnes of nitrogen) per unit of time (that is, years or days). They are normally derived by multiplying the maximum contaminant concentration set out in a water quality objective by the volume of water that enters a lake or estuary or passes by a particular point in a river over a period of time (typically a year).

Contaminant load limits can be useful for addressing situations where water quality objectives are not being met or are under pressure from multiple discharges, particularly diffuse discharges. Their advantage is that they transparently link water quality objectives and contaminant sources, and can be allocated or apportioned among the sources.

While theoretically appealing, the development, implementation and administration of contaminant load limits can be resource-intensive, even for a single contaminant (for example, nitrogen). Developing contaminant load limits for all of Northland's catchments (>1,400) and lakes (>200) would likely be very expensive and time-consuming.

Contaminant input and loss limits (applied to discharges and at the property scale for diffuse sources)

Water quality limits can be set for discharges as maximum discharge quality standards and at the property scale by regulating contaminant application of loss rates. The latter is typically done by linking application or loss rates to a contaminant load limit rather than directly to a numeric water quality objective. Contaminant input or loss limits can be practicably set for some types of contaminants such as nitrogen and phosphorus. However it is difficult to quantity losses of sediment and faecal microbes at the property scale.

Other forms of limits include restrictions on the use of land as a proxy for regulating contaminant losses.

5.2 Lakes

Northland has a large number of small to medium-sized lakes, 200 of which are greater than one hectare and most are coastal dune lakes. It is thought that Northland has the greatest number of New Zealand's dune lakes and a large proportion of the country's warm lowland lakes with relatively good water quality.

Most of Northland's dune lakes are situated along the west coast, having been formed between stabilised sand dunes. The dune lakes are in four main groups situated on the Aupōuri Peninsula, Karikari Peninsula, north of Dargaville (Kai Iwi lakes) and Poutō Peninsula. They generally range in size between one and 35 hectares and are usually less than 15 metres deep. Many of them are considered to be nationally and internationally significant.

[25] Note: The preamble to the National Policy Statement for Freshwater Management states: "Once limits are set, freshwater resources need to be allocated to users, while providing the ability to transfer entitlements between users so that we maximise the value we get from water." However, there is no corresponding policy requirement to allocate resources.

The lakes and their surrounding wetland margins support a range of endemic endangered species. They also provide the only known habitats, or national strongholds, for a range of other plants and animals.

Dune lakes usually have little or no continuous surface inflows or outflows, being fed primarily by direct rainfall, surrounding wetlands, or from larger groundwater catchments. As a result, water levels can fluctuate considerably with climatic patterns and they have limited capacity to assimilate any contaminants, because most of these lakes are relatively small and shallow.

Despite their high ecological values, the status of dune lakes is not secure. They are prone to nutrient enrichment, particularly where lakeside vegetation has been grazed or removed and where there is direct stock access to the lake.

5.2.1 Aquatic ecosystem health (Te Hauora o te Wai[26])

Management units

Options for lake water quality management units are being developed. Based on our initial research we think that a number of Northland's high value lakes should be treated as individual management units. These lakes have yet to be selected, but it is likely that they will be the majority of Northland's monitored lakes, which include lakes that have been identified as outstanding freshwater bodies.

The remainder of the lakes could be grouped by lake type. The following table provides an example of how the lakes would be grouped into management units.

[26] "The health and mauri of water"

Table 2 – Example of default lake water quality management units for Northland[27]

Management unit	Description	Example lakes
Dune lake unit 1 – Perched in leached dunes	Perched lakes found in leached dunes where organic material has sealed the basin floor and provides humic (tea-stained) water	Most abundant type of dune lake in Northland. Examples include Lake Rotokawau and Lake Waipara
Dune lake unit 2 – Un-perched in leached dunes	Similar to Dune lake unit 1 but close to the sea, not perched, and associated with extensive swamps	Examples include Lakes Morehurehu, Te Kahika, Te Arai, and Mokeno
Dune lake unit 3 – Water-table window lakes	Found in drowned valleys or interdune basin, fed by springs with clear water character.	Examples include northern Aupouri lakes near Te Kao, the Kai Iwia lake group, Sweetwater lakes, and some Pouto lakes.
Dune lake unit 4 – Dune contact lakes	At least one lake shore is in contact with a coastal dune, often but not exclusively humic.	Examples include the northern-most Aupouri lakes, and the Pouto lakes, Humuhumu, Kanono and Kahuparere.
Dune lake unit 5 – Dune lake with marine contact	Freshwater lakes with marine contact, where they may be intermittent connection with the sea.	Waitahora Lagoon is the only example of this lake type
Volcanic lakes	Formed initially in basins dammed by volcanic activity.	Examples include Lakes Omapere, Owhareiti, Tauanu, and Ora
Alluvial lakes	Formed by damming of a stream by alluvium.	Examples include Lake Kaiwai
Man-made lakes	Man-made dames and lakes	Examples include Lake Ngatuwhete (Aupouri), Jacks, and Waro

Water quality objectives

The council routinely monitors 28 lakes in Northland, 27 of which are dune lakes. These lakes are considered to be largely representative of most of Northland's natural lakes. This means that we are able to extrapolate the water quality monitoring results from the lakes to unmonitored lakes.

The National Policy Statement for Freshwater Management directs the council to establish water quality objectives for lake ecosystem health. At a minimum, these objectives need to specify annual median and maximum concentrations (attribute states) for phytoplankton and ammonia toxicity, and maximum concentrations for total nitrogen and total phosphorus. Phytoplankton and nutrients are measures of lake trophic level. Table 2 below shows how the quality of water in Northland's monitored lakes compares to the states for the compulsory attributes in the National Policy Statement for Freshwater Management.

All lake management units

The results in Table 3 show that almost all monitored lakes have ammonia levels that are in an "A" attribute state for ammonia toxicity. We think that it is appropriate to set a water quality objective for all lake management unit based on an "A" attribute state for toxicity.

[27] See Paul Champion and Mary de Winton (June 2012) Northland Lakes Strategy: Part 1. Prepared for Northland Regional Council. *NIWA Client Report No: HAM2012-121*

Specific lake management units

There is natural variability in nutrient levels across Northland's lake types. For example, volcanic lakes are generally have higher levels of nutrients compared to dune lakes. There is also variability between different types of dune lakes. Accordingly, it is not appropriate to set the same water quality objective for total nitrogen, total phosphorus, and phytoplankton for all lake management units.

We will be working with lake water quality scientists to determine a range of possible numeric water quality objectives for different lake management units

As stated earlier in this report, we are considering setting water quality objectives for attributes of lake ecosystem health that are not currently included in Appendix 2 of the National Policy Statement for Freshwater Management (see Table 1 below for further information).

With regard to macrophytes, invertebrates, and fish we do not have robust information on their relationships with physical and chemical attributes (such as nutrients) and their natural abundance and distributions to set numeric water quality objectives for them. Obtaining this information will take time. Therefore, we are likely to specify narrative outcomes.

Water quality limits

We are looking at options for lake water quality limits. Options include setting nutrient load limits and property scale output based limits for the individual lake management units and using more traditional controls such as stock exclusion, and setbacks for earthworks and vegetation clearance, for example. These options are discussed in more detail in section 5.9 below.

Table 3 Comparison of Lake Water Quality Monitoring Network data (2009-2013) with the compulsory attribute states in the National Policy Statement for Freshwater Management [28]

Value		**Ecosystem Health**						**Human Health (Secondary Contact Recreation)**	
Attribute		**Phytoplankton (mg chl-a/m^3)**		**Total Nitrogen (mg/m^3)**	**Total Phosphorous (mg/m3)**	**Ammonia Toxicity (mg NH_4 - N/L**		**Cyanobacteria (cells/mL)**	**E.coli/100 mL****
Compliance Statistic		Annual Median	Annual Maximum	Annual Median	Annual Median	Annual Median	Annual Maximum	80th Percentile	Annual Median
Aupouri lakes	Carrot*	8.4	14.4	545	21.0	0.012	0.040	No Data	No Data
	Heather*	4.4	5.8	308	10.5	0.003	0.004	No Data	No Data
	Morehurehu*	2.1	3.1	518	12.5	0.018	0.036	No Data	No Data
	Ngakapua North*	5.0	9.0	496	14.0	0.008	0.037	No Data	No Data
	Ngakapua South	6.5	9.7	553	16.0	0.007	0.014	No Data	No Data
	Ngatu*	3.3	6.7	806	9.5	0.080	0.144	No Data	No Data
	Rotokawau	4.3	6.6	583	13.0	0.018	0.006	No Data	No Data
	Rotoroa*	6.7	10.2	832	14.0	0.011	0.084	No Data	No Data
	Te Kahika*	1.0	1.9	329	3.5	0.036	0.052	No Data	No Data
	Waihopo*	3.4	6.9	590	15.5	0.012	0.023	No Data	No Data
	Waipara*	2.9	9.8	465	13.0	0.007	0.011	No Data	No Data
	Waiparera	11.9	21.1	793	25.0	0.007	0.015	No Data	No Data
Karikari/ Central lakes	Omapere (east)	3.8	6.0	515	43.0	0.012	0.027	No Data	No Data
	Omapere (west)	3.4	9.8	480	52.0	0.011	0.014	No Data	No Data
	Waiporohita	18.4	30.0	827	35.5	0.006	0.009	No Data	No Data
Kai iwi lakes	Kai Iwi*	1.8	3.2	351	6.5	0.005	0.007	No Data	No Data
	Taharoa*	1.0	1.5	130	2.0	0.002	0.002	No Data	No Data
	Waikare*	1.9	2.9	204	4.0	0.002	0.003	No Data	No Data
Pouto lakes	Humuhumu*	3.8	6.7	305	9.5	0.004	0.004	No Data	No Data
	Kahuparere*	8.5	15.1	400	14.5	0.002	0.014	No Data	No Data
	Kanono*	7.1	9.9	337	18.5	0.002	0.009	No Data	No Data
	Karaka	18.1	110.0	494	33.0	0.015	0.169	No Data	No Data
	Mokeno	4.2	13.6	1012	39.5	0.034	0.169	No Data	No Data
	Rotokawau*	2.0	3.7	337	8.0	0.006	0.053	No Data	No Data
	Rototuna	20.3	57.9	771	32.0	0.005	0.011	No Data	No Data
	Swan	21.4	24.4	912	57.0	0.009	0.024	No Data	No Data
	Wainui*	3.6	15.4	417	16.0	0.007	0.014	No Data	No Data

*Seasonally stratified lake (different numeric attribute states for Total Nitrogen)

** *E.coli* levels are monitored in some lakes but as part of the Recreational Swimming Water Quality Monitoring Programme

Key

- “A” attribute state
- “B” attribute state
- “C” attribute state
- “D” attribute state (exceeds “National Bottom Line”

[28] The results are the 5 year medians of the compliance statistics for each of the compulsory attributes.

5.2.2 Human health (Te Hauora o te Tangata)

Management units

Contact recreation

Some of Northland's natural lakes are highly valued for swimming and other forms of contact recreation. Prominent examples include the Kai Iwi Lakes, Lake Ngatu, and Lake Waro.

We think that there should be management unit for lakes that are used for swimming. For all other lakes, water quality would be managed for secondary contact recreation (wading and boating). This means that two water quality management units would be defined for the purposes of managing water quality for contact recreation. Please note that this applies to river and lakes.

Drinking water supplies

Most urban areas in Northland are serviced by public water supply systems, which capture, treat and supply potable water. These systems are usually very reliable, however during extreme rainfall events there is the potential for reduced treatment and disinfection capacity in some systems due to high levels of suspended sediment.

We think registered drinking water supplies and their contributing catchments should be identified as a separate management unit. Note that this also applies to all water body types.

Water quality objectives

Primary contact recreation (swimming)

Microbiological water quality in monitored popular swimming lakes is within the National Policy Statement for Freshwater Management "A" attribute state for *E.coli*.

We think that we should set a water quality objective for *E.coli* that would seek to maintain this high level of microbiological water quality at an "A" attribute state for primary contact recreation. This means that people would continue to be exposed to only a low risk of infection (up to a 1% risk) when swimming.

Secondary contact recreation (wading and boating)

For all other lakes, we think that an appropriate water quality objective would be based on an "A" attribute state for *E.coli* (secondary contact recreation), which means that people would be exposed to a very low risk of infection (less than 0.1% risk) from contact with water during activities such as wading and boating.

The council is also required to set a water quality objective for secondary contact recreation in lakes, which specifies maximum cyanobacteria levels. Cyanobacteria are photosynthetic bacteria that are an important component of many aquatic ecosystems. However, under certain conditions they can proliferate and be toxic. The toxins can present health risks to humans and other animals when consumed in drinking water or when in contact with skin.

The council only recently began to monitor cyanobacteria in lakes and rivers and therefore our information on cyanobacteria levels in limited. We are likely to be in a better position next year to determine an appropriate water quality objective for cyanobacteria in lakes and rivers.

Drinking water supplies

Based on monitoring and research there are likely to be few lakes **and** rivers in Northland (and indeed New Zealand), including rivers in native forested catchments, which have water quality that meets the Drinking-water Standards for New Zealand.[29] It is unrealistic to expect all lakes and rivers to be safe for drinking because domestic and wild animals in catchments can carry pathogens (for example, giardia and cryptosporidium), which can be washed into water during rainfall.

We think that a water quality objective should be included in the Regional Water and Soil Plan that provides for the protection of the quality of registered drinking water supplies. This could be done in narrative terms.

Water quality limits

It is very difficult to develop contaminant load limits for *E.coli*. Therefore, water quality limit options for achieving water quality objectives for human health are likely to include standards on point source discharges and controls on the access of livestock to water bodies, for example, in order to ensure that the water quality objectives are not compromised.

5.3 Rivers

Northland has a dense network of rivers and streams, many of which are relatively short with small catchments. The exception is the Northern Wairoa River, which drains the northern part of the Kaipara Harbour catchment (approximately 3,650 km^2 or 30% of Northland).

Flows in Northland's rivers vary considerably due to rainfall. High intensity storm events can cause flash floods and prolonged dry spells can cause low flows in small catchments. Northland's rivers are generally slow flowing and muddy due to the region's low gradient topography (mainly low altitude rolling hill country) and clay rich soils. The rivers with the highest ecological values are those whose catchments are the least modified. Most of the region's rivers drain to and influence the quality of water in estuaries and harbours.

Northland's rivers support a diverse range of aquatic species, including plants and algae, invertebrates, fish and birds.

5.3.1 Aquatic ecosystem health (Te Hauora o te Wai)

Management units

Our current thinking around defining river water quality management units involves classifying Northland's rivers and streams into similar types based on key environmental factors (such as topography, geology and ecological values). These 'primary' management units will have narrative and numeric water quality objectives applied to them.

These primary management units will then be linked with Northland's river catchments. The catchments will be the scale at which water quality accounting and limit setting is undertaken.

The two main river classification systems currently used in New Zealand are the River Environment Classification[30] and Freshwater Ecosystems of New Zealand[31].
The River Environment Classification groups rivers and streams according to a number of environmental factors that are thought to influence their ecological values. The factors are

[29] Ministry of Health. 2008. Drinking-water Standards for New Zealand 2005 (Revised 2008). Wellington: Ministry of Health
[30] See https://www.mfe.govt.nz/environmental-reporting/about-environmental-reporting/classification-systems/fresh-water.html
[31] See http://www.doc.govt.nz/conservation/land-and-freshwater/freshwater/freshwater-ecosystems-of-new-zealand/

climate, source of flow (topography), geology, land cover, network position and land form. The Freshwater Ecosystems of New Zealand classification system is similar to River Environment Classification but incorporates other information including biological data. The following figure shows how the River Environment Classification applies to Northland.

We will be working with the designers of these systems to define appropriate river classifications (primary management units) for Northland.

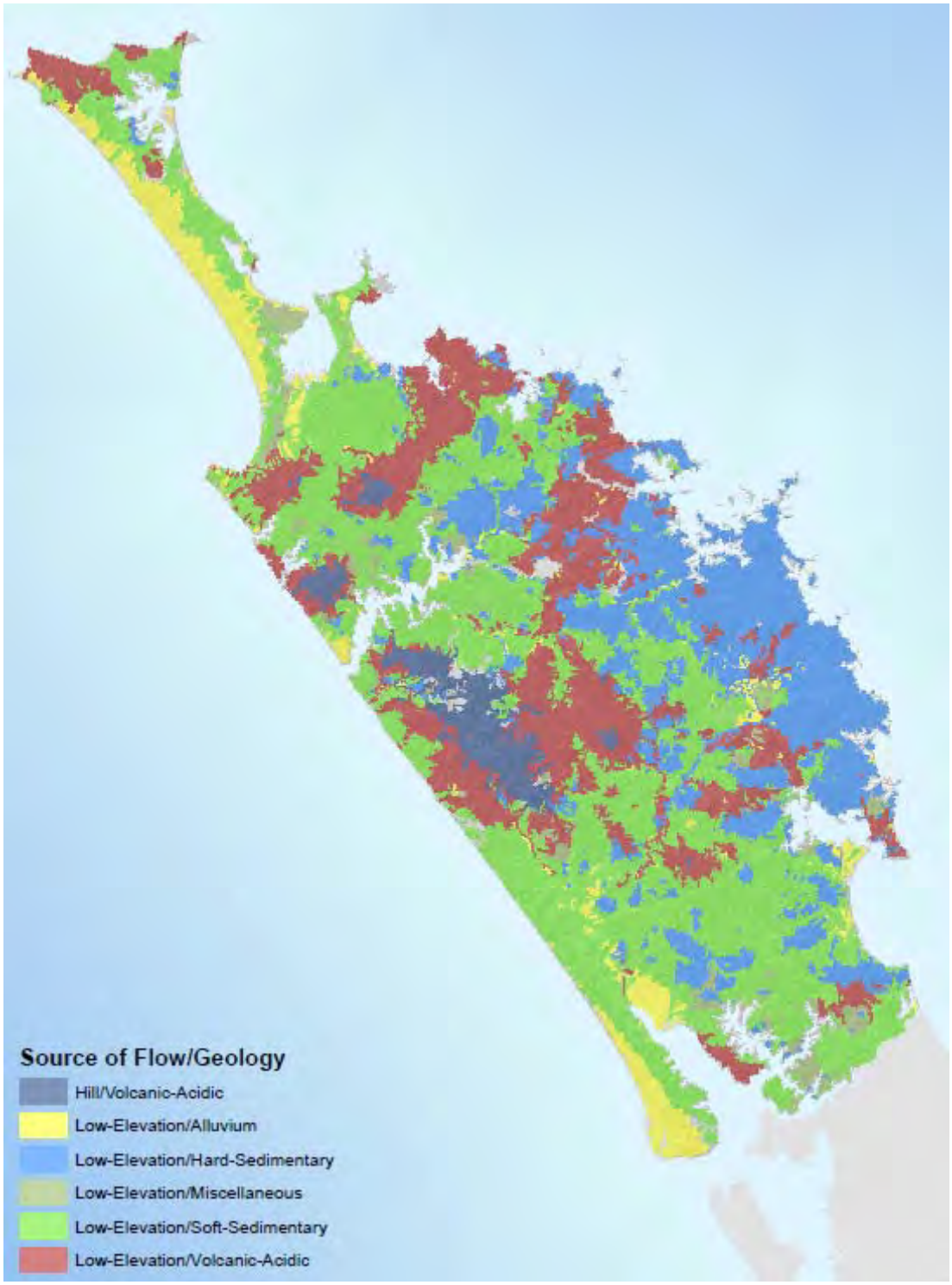


Figure 1 – River classifications for the Northland Region based on the River Environment Classification system.

Water quality objectives

The National Policy Statement for Freshwater Management directs the council to set water quality objectives for attributes of river ecosystem health. At a minimum, the objectives must specify attribute states for periphyton, dissolved oxygen, and nitrate and ammonia toxicity (compulsory attributes).

Table 4 below shows how the 36 river water quality monitoring network sites compare to the range of states for the compulsory attributes in the National Policy Statement for Freshwater Management.[32]

It is important to note that the maximum concentrations for nitrate and ammonia are solely concerned with toxic effects on aquatic animals. They do not take into account the adverse effects of high nitrate and ammonia concentrations on instream plant and algae growth, which is known as eutrophication.

The National Policy Statement for Freshwater Management does not currently include numeric attribute states for nutrients for controlling nuisance plant and algae growth in rivers, although it does for lakes. Furthermore, it does not contain numeric attribute states for other attributes of ecosystem health. This includes sediment, which is the main contaminant in Northland's rivers and downstream estuaries.

As discussed in section 5.1 above, we are considering setting river water quality objectives for attributes that are not currently in the National Policy Statement for Freshwater Management.

[32] The results are based on the 5 year medians of the compliance statistics for each attribute (with the exception of the results for periphyton).

Table 4 – Comparison of River Water Quality Monitoring Network data (2009-2013) with the compulsory attributes in the National Policy Statement for Freshwater Management.

Value	**Ecosystem Health**							**Human Health (Secondary contact recreation)**	
Compulsory Attribute	**Periphyton (mg chl-a/m^2)**	**Ammonia Toxicity (mg NH_4-N/L)**		**Nitrate Toxicity ($N0_3$-N/L)**		**Dissolved Oxygen (mg/L)**		**Cyanobacteria (cells/L)**	**E.coli/100 mL**
Compliance Statistic	Annual Maximum*	Annual Median	Annual Maximum.	Annual Median	Annual 95th Percentile	7-day mean min (1 Nov to 30 Apr)	1-day min (1 Nov to 30 Apr)	80th Percentile	Annual Median
Awanui @ FNDC watertake	90	0.010	0.042	0.035	0.210	No Data	6.64	No Data	276
Awanui @ Waihoe Channel	No Data	0.042	0.230	0.061	0.308	No Data	5.60	No Data	255
Hakaru @ Topuni Creek Farm	492	0.015	0.067	0.238	0.409	No Data	7.28	No Data	249
Hatea u/s Mair Park Bridge	57	0.014	0.054	0.351	0.559	No Data	7.90	No Data	309
Kaeo @ Dip Road	No Data	0.009	0.028	0.043	0.287	No Data	7.46	No Data	757
Kaihu @ gorge	60	0.008	0.036	0.277	0.598	No Data	7.48	No Data	177
Kerikeri @ Stone Store bridge	22	0.011	0.053	0.383	0.590	No Data	7.60	No Data	272
Mangahahuru @ Apotu Road	No Data	0.018	0.081	0.299	0.515	No Data	6.02	No Data	535
Mangahahuru @ Main Road	9	0.009	0.047	0.124	0.211	No Data	7.38	No Data	316
Mangakahia @ Titoki Bridge	No Data	0.011	0.035	0.081	0.240	No Data	8.06	No Data	223
Mangakahia @ Twin Bridges	172	0.007	0.022	0.074	0.199	No Data	8.54	No Data	146
Mangamuka @ Iwiatua Road	13	0.006	0.013	0.006	0.063	No Data	7.88	No Data	351
Manganui @ Mitaitai Road	No Data	0.015	0.080	0.185	0.497	No Data	5.42	No Data	148
Mangere @ Knight Road	No Data	0.028	0.155	0.480	0.895	No Data	5.06	No Data	523
Ngunguru @ Coalhill Lane	No Data	0.014	0.022	0.126	0.265	No Data	8.20	No Data	423
Opouteke @ suspension bridge	150	0.006	0.030	0.060	0.186	No Data	8.32	No Data	172
Oruru @ Oruru Road	No Data	0.008	0.032	0.011	0.222	No Data	5.48	No Data	249
Otaika @ Otaika Valley Road	5	0.020	0.232	1.187	1.613	No Data	7.13	No Data	607
Paparoa @ walking bridge	No Data	0.019	0.272	0.123	0.399	No Data	4.50	No Data	508
Punakitere @ Taheke Recorder	41	0.011	0.051	0.392	0.573	No Data	8.18	No Data	424
Ruakaka @ Flyger Road	55	0.034	0.142	0.338	0.642	No Data	5.38	No Data	705
Utakura @ Okaka Road Bridge	No Data	0.014	0.033	0.107	0.222	No Data	6.44	No Data	310
Victoria @ Thompsons Bridge	49	0.006	0.018	0.007	0.087	No Data	7.38	No Data	153
Waiarohia @ Whau Valley	47	0.010	0.058	0.342	0.552	No Data	7.06	No Data	474
Waiarohia @ Lovers Lane	43	0.009	0.042	0.331	0.552	No Data	6.66	No Data	460
Waiharakeke @ Stringers Road	79	0.016	0.124	0.105	0.246	No Data	6.32	No Data	379
Waimamaku @ SH12	No Data	0.007	0.022	0.004	0.094	No Data	7.86	No Data	382
Waiotu @ SH1	No Data	0.019	0.116	0.285	0.606	No Data	6.48	No Data	460
Waipao @ Draffin Road	3	0.008	0.122	2.683	3.065	No Data	7.64	No Data	604
Waipapa @ Forest Ranger	17	0.003	0.008	0.015	0.083	No Data	8.30	No Data	58
Waipapa @ Waipapa Landing	48	0.011	0.026	0.262	0.434	No Data	6.97	No Data	189
Waipoua @ SH12 Rest Area	6	0.006	0.014	0.020	0.060	No Data	8.74	No Data	88
Wairua @ Purua	No Data	0.017	0.115	0.403	0.631	No Data	6.90	No Data	99
Waitangi @ Watea	No Data	0.009	0.039	0.277	0.506	No Data	8.36	No Data	175
Waitangi @ Waimate Road	72	0.011	0.032	0.355	0.471	No Data	7.40	No Data	450
Whakapara @ cableway	No Data	0.009	0.077	0.273	0.571	No Data	6.86	No Data	258

***** Due to a limited data set we have used an “annual maximum” as a surrogate for the sampling statistic in the National Policy Statement for Freshwater Management (“exceeded on no more than 8% of monthly samples in a 3 year period”

Key

- “A” attribute state
- “B” attribute state
- “C” attribute state
- “D” attribute state (exceeds “National Bottom Line”)

All river management units

Currently, we do not have enough data on periphyton to be able to determine appropriate water quality objective(s) for it.

More than 90% of the region's river water quality monitoring sites have nitrate and ammonia concentrations that are within their "A" attribute states (see table 3 above). In order to prevent further degradation, we think that it is appropriate to apply the same water quality objective for nitrate and ammonia toxicity at "A" states to all primary management units (river classifications).

The majority of the region's river water quality monitoring sites have dissolved oxygen levels that fall into the 'A' and 'B' attribute states. We think that at a minimum a 'B' state would be appropriate for all river classifications.

Specific river management units

Ecological values vary between different river types due to natural environmental factors such as geology, climate, flow, and benthic substrate. This means that there is likely to be natural variability in certain attributes of ecosystem health, such as sediment, nutrients, periphyton (discussed earlier), macrophytes, fish, invertebrates, some heavy metals and other stressors, for example. Consequently, water quality objectives for these attributes may need to be specific to each river classification type.

In Northland, sediment is the major pressure on the health of river ecosystems and receiving estuaries and harbours. However, fine sediment is not currently identified as a compulsory attribute in the National Policy Statement for Freshwater Management.

High levels of fine sediment can have a wide range of adverse effects on aquatic ecosystems. It can interfere with feeding and migratory behaviour of some native fish species, and irritate the gills of some native fish and insect larvae. Poor water clarity can also inhibit the growth of native aquatic plants and algae which are important habitats and components of the food chain.

The National Policy Statement for Freshwater Management also does not currently contain numeric attribute states for nutrients for managing nuisance the growth of nuisance plants and algae.

Nutrients are important attributes of aquatic ecosystem health because they are necessary for the growth of aquatic plants (macrophytes) and algae (periphyton and phytoplankton). However, at elevated levels they can promote the growth of nuisance periphyton and macrophytes. High levels of periphyton and macrophytes can cause dissolved oxygen and pH levels to fall outside of their natural ranges and stress aquatic animals such as invertebrates and fish. They can also reduce the amount of sunlight that can penetrate through the water column, which in turn can affect photosynthesis in native submerged plants and algae.

We think that freshwater quality objectives for fine sediment and nutrients could be included in the new regional plan. However it is important to note that the relationships between concentrations of nitrogen and phosphorous and plant and algal growth in water is complex and varies spatially and temporally depending on a number of other environmental factors including light availability, flow variability, temperature, substrate type, geology, and invertebrate grazing. Similarly, information on the quantitative relationships between levels of fine sediment and aquatic ecosystems is also limited.

We are developing options for numeric water quality objectives for fine sediment and nutrients that can be set for different river classification types.

Our information on the natural community composition, diversity and abundance of macrophytes and fish in different river types is limited. Furthermore, we also do not have a good understanding on the preferences and tolerances of macrophytes and fish to nutrients and sediment. For this reason we think water quality objectives for macrophytes and fish should be expressed in narrative terms until our information improves.

Invertebrates are a very good measure of aquatic ecosystem health and include snails, worms, and larvae of flying insects such as flies, dragonflies, midges, mayflies and beetles. In fact, there are hundreds of invertebrate species that live in Northland's rivers and streams. These species have different tolerances to levels of contaminants and therefore rivers with 'good' water quality tend to have different invertebrate species present than rivers with poor water quality

We are also looking at options for numeric water quality objectives for invertebrates. This is consistent with the direction of the Proposed Regional Policy Statement. Water quality objectives for invertebrates would be based on the Macroinvertebrate Community Index (MCI). [33]

Numeric water quality objectives for heavy metals and other toxicants could also be included in the Regional Water and Soil Plan. They could be based on current technical guidelines (for example, the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000).

Temperature and pH can have a range of direct and indirect effects in aquatic ecosystems. Water temperature can be affected by point source discharges, reduced flows and a lack of riparian vegetation. pH is naturally driven by geology but can also be affected by point source discharges and aquatic plants and algae. We are considering setting river water quality objectives for temperature and pH by using national guidelines.[34]

Water quality limits

There are a range of options for water quality limits. The nature of the limits will depend on the attribute of concern and the current and likely future pressures on water quality. A number of options are identified in section 5.7 below.

5.3.2 Human health (Te Hauora o te Tangata)

Management units

Contact recreation

The region contains a number of popular freshwater swimming sites. However, not all of Northland's rivers and streams are used or indeed suitable for swimming. Examples include small shallow streams in pasture, deep naturally muddy rivers, and water bodies that cannot be accessed.

[33] See Stark JD. 2014. Macroinvertebrate biotic indices for the Northland region. Prepared for Northland Regional Council. Stark Environmental Report No. 2014-08.
[34] Rob Davies-Colley, et al. (2013) National Objectives Framework – Temperature, Dissolved Oxygen & pH: Proposed thresholds for discussion. Prepared for Ministry for the Environment. *NIWA Client Report No: HAM2013-056.*

As with lakes, we think that all popular swimming sites and contributing catchments should be treated as a single management unit for the purposes of applying a water quality objective for *E.coli* (primary contact recreation).

For all other rivers, water quality would be managed for secondary contact recreation (wading and boating). This means that two water quality management units would be defined for the purposes of managing water quality for contact recreation.

Drinking water supplies

As stated earlier, we think that registered drinking water supplies and their contributing catchments should be identified as a separate management unit. This is consistent with the National Environmental Standards for Sources of Human Drinking Water 2007.

Water quality objectives

Primary contact recreation (swimming)

We think that a water quality objective should be included in the Regional Water and Soil Plan that seeks that all popular swimming sites are suitable for swimming, except during and immediately after heavy rainfall events. Rivers are not typically used during such times and faecal run-off is difficult to mitigate. The objective would specify maximum *E.coli* concentrations based on either the "A" or "B" attribute states in the National Policy Statement for Freshwater Management.[35]

Secondary contact recreation (wading and boating)

For all other rivers and streams water quality would be managed for secondary contact recreation. This is consistent with the requirements of the National Policy Statement for Freshwater Management.

Table 3 above shows that over the 2009-2013 period the majority of Northland's river water quality monitoring network sites had *E.coli* levels that were within the "A" and "B" attribute states for secondary contact recreation. Only four sites had levels in the "C" attribute state. Changes in land management (e.g. excluding stock from rivers) and the use of mitigation methods (e.g. vegetated buffer strips) are likely to result in lower concentrations of faecal bacteria.

At a minimum we think that a water quality objective for secondary contact recreation in rivers should be based on a "B" attribute state for *E.coli.*

Drinking water supplies

As stated earlier, we think that a water quality objective should be included in the Regional Water and Soil Plan that provides for the protection of the quality of registered drinking water supplies. The objective would likely be expressed in narrative terms because most water takes for domestic uses are treated prior to use.

5.4 Wetlands

Northland has many wetlands, although it is thought that they represent only around 5% of their original (pre-human) extent. Drainage and diversions (mostly illegal) are the main pressures on Northland's wetlands. Contaminants are not known to be a major pressure on Northland's wetlands.

[35] Refer to the attribute tables in Appendix 2 of the National Policy Statement for Freshwater Management for further details on the compulsory attributes.

There are approximately nine types of natural (indigenous) wetlands in Northland: saltmarsh, swamps, marshes, seepages, fens, bogs, gumlands, ephemeral wetlands and wet heathlands. We are looking at whether more than one water quality management unit is required for setting water quality objectives and limits for Northland's natural wetlands

The National Policy Statement for Freshwater Management does not specify any compulsory water quality attributes for wetlands and our information on water quality in the different wetland types is limited. Therefore it may be necessary to develop specific water quality management units and associated numeric water quality objectives for wetlands once our information base improves.

In the interim, we think that all indigenous wetlands could be managed under one narrative water quality objective. Consistent with the direction of the National Policy Statement for Freshwater Management, the narrative objective could seek that the significant values of wetlands are protected. We think that the following values of wetland relating to water quality are significant:

- Providing habitat for rare, threatened and at risk species
- Sustaining populations of mahinga kai,[36] and
- Filtering water and assimilating contaminants.

5.5 Groundwater

Groundwater is water that runs through and is stored in soil and rocks. It is a valuable resource in Northland as it is used for domestic water supplies, irrigation, and stock water. It is also important for sustaining the flows and levels of some lakes, rivers and wetlands.

Currently, the National Policy Statement for Freshwater Management does not specify any compulsory water quality attributes for groundwater.

5.5.1 Aquatic ecosystem health (Te Hauora o te Wai)

There are two main types of groundwater systems: those directly connected to surface water bodies and groundwater that is not directly connected. With regard to the first, we are assessing if it necessary to set narrative or numeric water quality objectives for attributes (for example, nutrients) that can impact on hydraulically connected surface waters (lakes and rivers). Aquifers that are not in direct contact with surface water bodies do not need to be managed for aquatic ecosystem health.

5.5.2 Human health (Te Hauora o te Tangata)

Rural communities typically rely on rainwater and groundwater for their supplies. Groundwater quality is generally good in Northland with monitoring showing that most aquifers meet the drinking water standards for nitrate and *E.coli* in drinking water.[37]

We think that a numeric water quality objective could be included in the Regional Water and Soil Plan that specifies maximum levels of nitrate and *E.coli,* and potentially other attributes, in aquifers that are currently suitable for domestic use. These could be based on the Drinking-water Standards for New Zealand. It is important to note however that the Drinking-water Standards only apply in law to water that has been treated and therefore it may not be appropriate to use them as the basis for setting water quality objectives for untreated groundwater sources.

[36] "Traditional sources of food"
[37] Ministry of Health. 2008. Drinking-water Standards for New Zealand 2005 (Revised 2008). Wellington: Ministry of Health

In addition, maximum nitrate concentrations for aquifers that are in direct contact with surface water may need to be based on the more stringent level for ecosystem health.

5.6 Estuaries, harbours and open coastal waters

Northland's estuaries and harbours are a unique and defining characteristic of Northland. They are very productive ecosystems and support a diversity and abundance of aquatic species. They are also highly valued for their biodiversity, natural character, recreational and commercial fisheries, recreation, and mahinga kai.

Estuaries and harbours are at the bottom of most of Northland's river systems and are influenced by freshwater quality. Some are also important receiving environments for wastewater and stormwater discharges (for example, Whāngārei Harbour and Bay of Islands).

Fine sediment is the main pressure on Northland's estuaries and harbours. While nutrient levels are elevated in some areas they are not known to be causing any significant adverse effects on aquatic ecosystems.

Open coastal waters are of high quality and are not under pressure from contaminants.

5.6.1 Coastal water quality management units and objectives

The Regional Coastal Plan currently applies numeric and narrative water quality objectives (called water quality standards in the plan) to three coastal water quality management units: estuaries and harbours, near shore areas, and open coastal waters. For most waters, the water quality objectives are based on Schedule 3 of the RMA. However, the Whāngārei Harbour and the Bay of Islands have specific (numeric) water quality objectives including for nutrients, and heavy metals and other toxicants.

The current coastal water quality management units and objectives are used solely for managing point source discharges to the coastal marine area and do not apply to discharges to freshwater in contributing catchments.

We think that this approach is robust but needs refining. Specifically, the locations and boundaries of the coastal water quality management units should be reviewed for the Whāngārei Harbour and Bay of Islands, which are the two areas of the coastal marine area that are under the most pressure from point source discharges. Commercial shellfish growing areas and popular harvesting sites could also be identified as coastal water quality management units.

We are also considering amending the coastal water quality objectives by making them consistent with current technical guidelines and Northland-specific monitoring data.

We also think that that discharges and land uses in catchments should be managed for the purposes of meeting coastal water quality objectives. Currently, the objectives, policies and rules in the Regional Coastal Plan and Regional Water and Soil Plan are not integrated.

5.6.2 Addressing sediment accumulation rates in Northland's estuaries and harbours

Fine sediment causes a range of significant adverse effects and is the major contaminant in many of Northland's estuaries and harbours, for example, in the Bay of Islands and the Kaipara, Whāngārei, and Hokianga harbours.

We are investigating approaches for managing sediment in harbour catchments to achieve water quality objectives for sediment in receiving coastal waters. We intend to trial an

approach in the Whangarei Harbour Catchment and if it is successful we will look to roll it out to other harbour catchments.

5.7 Managing point source and diffuse discharges

The council has a legal responsibility to identify a range of practical options (policies, rules, and non-regulatory methods) for achieving the water quality objectives.[38] The best options are those that are the most effective and efficient.

It is important to note that the council is not starting with a blank piece of paper. The Regional Water and Soil Plan and Regional Coastal Plan contain policies and rules for managing a number of activities that affect fresh and coastal water quality. These provisions are briefly evaluated below in terms of their effectiveness and efficiency. As part of this we identify issues with the current rules and the way that they are implemented by the council, and put forward options for improving our management of point source and diffuse discharges.

5.7.1 General

The council will need to amend some of the existing rules and potentially establish new rules to ensure that water quality objectives are met. This applies to all activities that contribute to water quality contamination.

For permitted activities, the council will need to be confident that they can cumulatively occur while still ensuring that the water quality objectives will be met, in other words, avoid over-allocation. Some types of discharges or land disturbance activities may need to be controlled as non-complying or prohibited activities if they will cause water quality objectives to be compromised. For other types of activities, resource consents will be required where a case-by-case assessment is needed to evaluate whether the water quality objectives/limits will be met.

5.7.2 Discharges of domestic and municipal wastewater

Wastewater refers to liquid waste from domestic (sewage) and commercial sources (industrial and trade wastes). Most wastewater is piped to public wastewater treatment plants although in some areas where there is no access to wastewater treatment plants it is treated in septic (onsite) systems.

Wastewater treatment generally involves the removal of solids, including some associated contaminants such as phosphorus, heavy metals and oil and grease (primary treatment); the oxidation of organic compounds, for example, ammonia to nitrate (secondary treatment), and the disinfection of faecal pathogens (tertiary treatment).

In Northland, most wastewater treatment systems do not fully remove phosphorus and nitrogen (denitrification), and therefore they can be major source of nutrient loads in some receiving waters (for example, in Whāngārei Harbour). In addition, only a proportion of municipal wastewater treatment plants in Northland have tertiary treatment systems.

Untreated and partially treated wastewater can contain high levels of faecal pathogens, which have the potential to pose risks to human health, and solids, which can be visually unpleasant. Sources include failing or overloaded treatment systems and overflows from pump stations and manholes in wastewater reticulation networks. Notable examples of sources of wastewater overflows, which have now been addressed, are the Okara Park and Hatea pump stations in Whāngārei city.

[38] Section 32, RMA

Overflows are common to most networks and there is a range of potential causes of them, including pipe blockages, pump station failures, infiltration and inflow of stormwater into pipes, and poorly managed urban growth. Generally speaking, it is very difficult to prevent all overflows. However, monitoring and research indicates that in some areas they can be a significant source of faecal contaminants during heavy rain events. Wet weather overflows are normally caused by infiltration and inflow of water and poorly managed urban growth.

People also discharge sewage to the coastal marine area from boats, which can present health risks if not managed properly.

Direct discharges of wastewater to water are often controversial, and many Maori consider such discharges to be culturally unacceptable.

Future management options

Under the regional plans, discharges from wastewater treatment plants and contributing pipe networks are required to be authorised by resource consents. The discharge of untreated sewage into water, except from a pipe network, is prohibited. Discharges from septic systems are generally permitted subject to conditions.

There is no evidence that any major changes are required to these rules and the associated policy, although the rules for onsite septic systems may need to be fine-tuned so that they better recognise sensitive receiving environments (for example, dune lakes and shellfish harvesting areas).

Substantial changes however may be required to the controls on wastewater overflows. The regional plans currently require wastewater overflows to be authorised by resource consent. However, it is important to note that most wastewater overflows in Northland remain unauthorised under the RMA (not permitted by a rule in a regional plan or consent) – only a small number are authorised in Whangarei district and not one is authorised in the Kaipara and Far North districts. A prominent example of the issue is wastewater overflows from the Kaitaia Wastewater Network.

Set out below are a range of options to improve the management of wastewater overflows.

Option 1: Retain and enforce current rules

This involves enforcing existing controls on wastewater overflows, which means requiring network operators to apply for resource consent to authorise overflows that are currently unlawful.

As part of applications for resource consents, network operators will be required to demonstrate that they are adopting the best practicable option to prevent or minimise adverse effects on the environment from overflows.[39] They will also be required to demonstrate that overflows will not cause current water quality objectives to not be met or limits exceeded.

This option has been supported by some stakeholders but there is general recognition that the controls on wastewater discharges may need to be updated.

[39] The RMA defines "best practicable option" as "the best method for preventing or minimising the adverse effect on the environment having regard to, among other things, to –

(a) the nature of the discharge…and the sensitivity of the receiving environment to adverse effects; and
(b) the financial implications, and the effects on the environment, of that option when compared with other options; and
(c) the current state of technical knowledge and the likelihood that the option can be successfully applied."

Option 2: Permit wastewater overflows

Under section 15 of the RMA, discharges are prohibited unless permitted by a rule in a regional plan or authorised a resource consent. However, before the council can include a permitted activity rule in a regional plan it must be satisfied that none of the following effects will occur after reasonable mixing:[40]

- The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- Any conspicuous change in the colour or visual clarity;
- Any emission of objectionable odour;
- The rendering of freshwater unsuitable for consumption by farm animals; or
- Any significant adverse effects on aquatic life.

Under the National Policy Statement for Freshwater Management, the council must also be satisfied that the discharge will not cause a water quality objective to not be met or water quality limit to be exceeded.

Option 2 involves making wastewater overflows a permitted activity subject to the minimum RMA standards (above) and a requirement that overflows meet water quality objectives and limits.

A permitted activity rule could also include a condition that requires network operators to provide the council with information on the locations, frequencies, and volumes of wet weather overflows. It could also include a network containment standard (see option 4 below).

The permitted activity option would require extensive compliance monitoring, with the costs likely falling on the regional council. This is because under the RMA regional councils have to cover the costs of monitoring permitted activities, although the council does have charging policy for monitoring permitted activities that is in accordance with section 150 of the Local Government Act 2002.[41]

It would also mean that the council would have limited control over a wastewater overflow if it was proving contentious but still meeting the conditions of a permitted activity rule.

However, a permitted activity rule for dry weather wastewater overflows (caused by pipe blockages and failures) is probably an appropriate option for our new regional plan. The effects of dry weather overflows are considered minimal and it is not possible to predict when and where they occur.

Option 3: Wastewater network consents

This option would require network operators to apply for wastewater network consents (for example, a controlled or discretionary rule). This differs from the current rules that apply to individual overflow points. As part of this option, the rules in the Regional Water and Soil Plan and Regional Coastal Plan would need to be aligned.

The amended rule would require network operators to demonstrate through the resource consenting process that their network management is sufficient to ensure that wastewater

[40] RMA s70(1)
[41] Section 150 of the Local Government Act is used to charge dairy farmers for the costs of monitoring farm dairy effluent that is discharged under permitted activity rule 16.1 of the Regional Water and Soil Plan.

overflows meet water quality objectives and limits, and is the best practicable option generally.

This option will provide better transparency to communities and other stakeholders that network management is appropriate both now and in the future as network infrastructure ages. It would also prevent re-litigation of issues over time.

The administrative costs to network operators and the council associated with consenting networks would likely be cheaper than Option 1 because multiple overflows would be addressed through one resource consenting process.

This option has received a lot of stakeholder support.

Option 4: Option 3 plus a network containment standard

This option would involve specifying a network containment standard as a condition of a rule (controlled or discretionary) for wastewater overflows. Network containment standards set out the maximum number of wet weather overflow events that are permissible per year from an overflow point. They are typically expressed in terms of a rainfall intensity event (1 in 6 month storm). This is the approach used by Auckland Council in its proposed unitary plan.

This option would provide a relatively high level of certainty to communities and other stakeholders that networks are designed and operated to a reasonable standard.

However, it is important to point out that wastewater networks vary in type and condition across the region. This means that it may be inappropriate to specify the same minimum containment standard to all of them. For example, in some areas upgrading to the standard may be prohibitively expensive or not desired by local communities.

It is also useful to note that Whangarei District Council have committed to upgrading the Whangarei Wastewater Network in order to:[42]

- Reduce the volume of untreated overflows from the network by 80% for the 1 in 1 year rainfall event over a 10 year timeframe (baseline year 2010), and
- Reduce the frequency of untreated overflows to no more than 1 in every 5 years for each overflow point over a 50 year timeframe (baseline year 2010).

It may not be appropriate to apply such a level of service to other networks in the region.

While this approach may be appropriate for Auckland it is probably unsuitable for Northland because it does not recognise the range in the conditions of the region's wastewater networks and the ability of different communities to fund upgrades.

Option 5: Prohibit wet weather overflows

This option would involve a general prohibition on all wet weather overflows, although there would need to be an allowance for exceptional or unavoidable circumstances (for example, pump station failure, pipe blockages).

This option would involve huge costs to network operators and therefore is very unlikely to be practical. This has been recognised by most stakeholders.

Option 6: Prohibit discharges of untreated sewage from boats to the Whangaruru and Whangaroa harbours

[42] Whangarei District Council (2010) Waste & Drainage Wastewater Strategy

Lastly, the Regional Coastal Plan prohibits the discharge of untreated sewage from boats to water in most near shore areas. However, the plan permits the discharge of untreated sewage from boats to waters in the Whangaruru and Whangaroa harbours provided that it is 500 metres from the shore and it is during certain wind and tidal conditions. We consider that the rule is ambiguous, difficult to monitor, and is out of date. We are looking at options for a revised rule.

5.7.3 Discharges of stormwater from urban areas and roads

The main contaminants in urban stormwater are sediment, nutrients, faecal matter, and heavy metals. However, various other contaminants can be present. Sources include point sources (for example, wastewater overflows) and diffuse sources such as roads, roofs and parks. Contaminant concentrations in stormwater are typically the highest during the initial phase of discharge (generally at the start of a heavy rainfall event).

Urban areas and sealed roads normally have lower yields of the major contaminants (sediment, nutrients, and faecal pathogens) than rural areas but typically have higher yields of heavy metals.

Heavy metals such as zinc, copper, and lead can build up over time in the receiving environments such as estuaries, and at high levels have the potential to have toxic effects on aquatic ecosystems as well as humans if they enter the food chain. However, while monitoring shows that heavy metals appear to be elevated above natural levels in some estuarine areas next to significant urban areas in Northland, almost all areas have levels below recommended guidelines.[43] This indicates that there is only a low probability that heavy metals are causing adverse ecological effects. Monitoring of receiving environments also indicates that levels of heavy metals are not increasing at detectable rates.

Future management options

The Regional Water and Soil Plan and Regional Coastal Plan control stormwater discharges differently. The former permits discharges from urban areas and roads subject to a number of conditions, including numeric discharge quality standards for copper, lead, zinc and suspended solids. Stormwater discharges that are unable to meet the conditions of the permitted activity rules are either a controlled or discretionary activity (requiring resource consent).

The Regional Coastal Plan regulates point source discharges of stormwater to the coastal marine area. Most stormwater discharges are a controlled activity (compared to a permitted activity in the Regional Water and Soil Plan). However, discharges from the Whāngārei urban area to the upper Whāngārei Harbour and from new subdivisions are discretionary activities. The Regional Coastal Plan rules require that narrative and numeric receiving water quality standards (in water quality objectives) are complied with. These include receiving water quality standards for heavy metals.

Approximately half of Northland's urban stormwater networks are authorised by resource consents under the Regional Water and Soil Plan, and the remainder are purportedly operating under the permitted activity rules.[44] There are a large number of stormwater discharges to the coastal marine area that are not currently authorised (not permitted by a rule in the Regional Coastal Plan or by resource consent).[45]

[43] Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of New Zealand (2000) Australian and New Zealand Guidelines for fresh and marine water quality. Volume 1.
[44] They are purportedly authorised by permitted activity rules because we generally do not monitor them to determine if they comply with the permitted activity rules.
[45] There are a large number of stormwater outfalls to the coastal marine area that are not authorised by resource consents. These include a number of discharges to the Whāngārei Harbour.

The council has only undertaken limited monitoring of stormwater discharges. For this reason we do not have good information on the quality of most stormwater discharges and it is difficult to enforce rules.

However, monitoring of water quality and sediment in estuaries and rivers has shown that heavy metals do not appear to be a significant issue in most areas. The Hātea River arm of the Whāngārei Harbour is the only area where heavy metals (copper and zinc) in the river bed appear to be above recommended guideline levels.[46]

To date, there has been very little retrofitting of existing stormwater networks to incorporate stormwater treatment systems, mainly because heavy metals do not appear to be a significant issue and retrofitting is expensive. New subdivision and development is encouraged but not required to include such systems unless they are required for stormwater discharges to meet water quality standards.

Against this background, we have identified a range of options to improve our management of stormwater from urban areas and roads. We also think that the rules in the regional plans should be aligned. One or more of the following options could be pursued.

Option 1: Retain and enforce current rules (interim option)

This interim option (until plans are changed) would involve the council undertaking extensive compliance monitoring of all, or a representative selection of, stormwater discharges from urban areas and roads. Where the existing water quality standards in the rules are being breached the council would need to enforce them by requiring that stormwater quality is improved so that it meets existing standards or apply for resource consent to authorise the discharges.

It is important to note that we are investigating whether the existing discharge and receiving water quality standards for heavy metals are appropriate. It may be that they are too environmentally conservative (in other words, restrictive). Alternatively, it might be more appropriate to set numeric water quality objectives based on heavy metal concentrations in benthic sediment.

As stated earlier in this report, we are looking at options for numeric water quality objectives for heavy metals that could be included in the regional plans in the future. These would replace the existing standards in the rules. We will also need to review the sediment discharge quality standards.

Option 2: Permit stormwater discharges to the coastal marine area

This option involves changing the activity status of stormwater discharges to the coastal marine area from controlled and discretionary activities to a permitted activity subject to conditions including the minimum RMA standards[47] and the requirement that discharges meet water quality objectives.

Option 3: Regulate stormwater discharges to fresh and coastal water by controlled activity rules

This option involves making stormwater discharges from urban pipe networks and roads to fresh and coastal water a controlled activity. This would require network operators to apply for resource consents to authorise their discharges.

[46] Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of New Zealand (2000) Australian and New Zealand Guidelines for fresh and marine water quality. Volume 1.
[47] RMA section 70(1)

As part of this, network operators would need to demonstrate their stormwater discharges do not cause water quality objectives to not be met or limits to be exceeded.

Option 4: Stormwater network consents

This option involves requiring network operators to apply for stormwater network consents (for example, by a controlled activity rule).

The conditions of the rule would include the requirement to meet water quality objectives and limits and put in place the best practicable option to prevent and minimise the adverse effects of stormwater contaminants generally.

Option 4: Stronger controls on new development, redevelopment in existing networks, and high contaminant yielding sites

It may be prudent to require that new development or redevelopment in existing networks include measures to mitigate the amount of stormwater contaminants entering receiving waters.

Option 4 is additional to the previous options and involves stronger controls on stormwater discharges from high risk and contaminant generating activities (for example, large car parks). Conditions of the rule could include the requirement for low impact urban design techniques and stormwater treatment systems.

This option has received limited stakeholder support because the evidence does not seem to support it. We also need to look at how this option would work with current district plan requirements for low impact urban design and the requirements of the building regulations.

Lastly, conditions of stormwater rules and consents may need to include standards or conditions that require the discharge to observe numeric water quality objectives for nutrients, sediment, faecal microbes and other contaminants.

5.7.4 Discharges of industrial and trade wastes

Most industrial and trade facilities that produce liquid wastes discharge into municipal wastewater reticulation and treatment systems. However, in Northland there are a relatively small number of facilities that discharge treatment wastes to water and land. Examples include dairy processing, abattoirs, boat maintenance facilities, and timber treatment plants. The composition of industrial and trade wastes varies depending on the nature of the facilities from which it originates.

The majority of industrial and trade discharges are operating under resource consents although some smaller low-risk discharges are permitted by rules in the plans. Over the last few decades there has been a major improvement in the management of them. This is reinforced by monitoring results which show that industrial and trade discharges are generally well managed, as evidenced by good compliance with conditions of resource consents.

The council considers that the current regulatory framework for managing discharges of industrial and trade discharges to water is robust and is not proposing any major changes to it.

5.7.5 Discharges of animal effluent, other agricultural wastes and fertilisers

Agricultural wastes (mainly dung and urine from animals) are a major source of nutrients and faecal microbes in Northland's fresh and coastal waters. A level of contamination is to be expected given that Northland is primarily an agricultural region.

Fertilisers are used in primary sector industries such as horticulture, dairying and forestry, particularly for the reason that large areas of Northland have low fertility soils. The council does not have good information on whether fertilisers are a significant source of nutrients in water, mainly because we do not actively monitor and account for them.

The Regional Water and Soil Plan currently regulates discharges of animal effluent from contained areas, fertilisers, and contaminants associated with dead stock, dumped fruit and vegetables, and silage. The plan does not regulate discharges of dung and urine from grazing animals.

Overall the rules are robust. Noteworthy, is the progress made by dairy farmers in improving their farm dairy effluent treatment systems. This is due to a strongly worded rule, monitoring, technical support, and enforcement by the council and also the efforts of farmers. Today, approximately 75% of dairy farmers routinely discharge effluent to land and a number of farmers that are currently discharging to water (under resource consent) have committed to installing land application systems within the next two years.

Please note that for the purposes of this report options to address livestock access to be beds and margins of water bodies is discussed later in relation to land disturbance activities.

Future management options

While the rules for discharges of agricultural wastes and fertilisers are generally robust we have identified some issues with them and their implementation. The issues and options to address them are described below.

Option 1: Changing the activity status of animal effluent discharges from a permitted to a controlled or restricted discretionary activity

The Regional Water and Soil Plan currently permits discharges of animal effluent to land subject to a number of conditions, including requirements that discharges shall not directly enter water, they must be set-back from water bodies and contingency measures are put in place in the event of system failures. It is important to note that the plan does not regulate dung and urine deposited by individual animals put out to graze.

Despite good improvements in the way that animal effluent is managed there remains a noteworthy level of significant non-compliance on dairy farms, which is most pronounced on the minority (20%) of dairy farms which are operating under the permitted activity rule. Levels of non-compliance are lower on the majority (75%) of dairy farms that are authorised by resource consent to discharge animal effluent to land under certain conditions.

We are considering if it would be appropriate to change animal effluent discharges from a permitted activity to a controlled or restricted discretionary. This would provide the council with the ability to work with farmers who are currently discharging animal effluent under the permitted activity rule to put in place tailored best practicable options for minimising the adverse effects of their discharges, and to ensure that water quality objectives are met.

We are currently looking at how we could do this without impacting on the approximately 75% of dairy farmers that have already applied and been granted resource consents to discharge animal effluent to water under certain conditions.

This option has received mixed stakeholder support. The main arguments against a change in rule status are the permitted activity incentivises land disposal and the council could better address non-compliance by increasing its monitoring and enforcement efforts.

Option 2: Refine the rules for fertiliser discharges

The current Regional Water and Soil Plan rule for fertiliser discharges is subjective and vague.[48] This makes it difficult to comply with, and to monitor and enforce.

We think that it could be amended to provide greater clarity by specifying setback distances from lakes and rivers and expectations around good management practices.

Option 3: Control nutrient inputs/losses

The Regional Water and Soil Plan does not contain any rules that control nutrient application rates or losses. This means that the council is currently unable to control land use intensification in sensitive catchments. It also means that if water quality objectives and limits are put in place for nutrients the council would have very little ability to manage nutrient discharges so that water quality objectives can be met.

Option 3 would involve putting in place rules that control the use of nutrients. This is consistent with the Proposed Regional Policy Statement which directs the council to manage the effects of nutrient losses.[49]

The controls could specify in numeric terms maximum application or loss rates, and/or require compulsory nutrient management plans or budgets. However, we think that such controls may be only required in certain areas where water quality objectives or limits for nutrients are not being met or are close to being exceeded (for example, in dune lake catchments).

The primary production sector considers that any controls should be focusses on outputs rather than inputs.

Option 4: Incentivising and requiring good management practices to mitigate nutrient losses

Good management practices refer to the evolving suite of tools or practical measures that can be put in place at a land user, sector, or industry levels to assist in achieving water quality objectives. Nationally, it is accepted that good management practices are important for maintaining and improving water quality. There are also good business reasons to adopt them.

The Land and Water Forum have recommended that regional plans should incorporate and incentivise good management practices.[50] The Proposed Regional Policy Statement also directs the council to do this.[51] However, respective industries have an important role to play in developing and agreeing on good management practices, rather that the council.

A nationally-applicable suite of good management practices are currently being developed as part of an Environment Canterbury – industry initiative.[52] Relevant good management practices could be incentivised or required through the new regional plan as recommended by the Land and Water Forum. This could involve using different activity thresholds (permitted, controlled, or discretionary). People using accepted good management practices could be incentivised by obtaining any easier regulatory course (for example, permitted activity), and those not using good management practices could be faced with stronger controls (e.g. controlled or discretionary activity rules).

[48] Rule 23.1.1, Regional Water and Soil Plan
[49] Method 4.2.2, Proposed Regional Policy Statement
[50] Land and Water Forum, 2012. *Third Report of the Land and Water Forum: Managing Water Quality and Allocating Water.*
[51] Method 4.2.2, Proposed Regional Policy Statement
[52] See http://ecan.govt.nz/get-involved/mgmproject/Pages/Default.aspx

Generally, this option received a lot of support including from the primary production sector. However the sector would like the council to support and incentive the use of good management practices before regulating for them. It would also like the council to provide sufficient time for their uptake and recognise the industry guidelines and standards, rather than reinvent the wheel.

The challenge though will be imbedding good management practices within a new regional plan, because inevitably it will need to be monitored and enforced.

Incentivising and requiring good management practices also applies to the management of land disturbance activities (see section 7.6 below).

Option 5: Non-regulatory

As well as regulating discharges the council provides technical and financial support for the uptake of good management practices in primary production activities.

Other than improved management practices and controls on the use of land and discharges, an effective way of preventing and minimising the run-off of nutrients, sediment, and faecal microbes is the revegetation of riparian areas and the construction and restoration of wetlands.

The council could focus its non-regulatory support in the short-term by creating riparian buffer zones around Northland's high value dune lakes. This could be through subsidies or other means. Evidence suggests that the region's dune lakes are under the most pressure (and sensitive) of all water bodies from nutrient enrichment, but could also respond relatively quickly to interventions.

This option has received some stakeholder support, particularly if it is focussed around incentivising and supporting good management practices in primary production activities.

5.7.6 Land disturbance activities

Land disturbance activities expose earth that can become mobilised during rainfall and enter water bodies. This is exacerbated by Northland's geology and climate, which combine to make the region's land very susceptible to erosion. Elevated levels of fine sediment are causing water clarity and deposited sediment issues in many of Northland's rivers, estuaries and harbours. Because of this the Proposed Regional Policy Statement directs the regional council to include policies and rules in plans to reduce sedimentation rates in estuaries.

Future management options

The Regional Water and Soil Plan regulates most types of land disturbance activities including earthworks, vegetation clearance, land preparation, and quarrying.[53] It also contains a weak control on the grazing or access of livestock in riparian areas.[54] However it does not control the access of livestock to the beds of lakes and rivers. In effect, this means that the access of stock to the beds of lakes and rivers is permitted in Northland.

In general, the Regional Water and Soil Plan controls on land disturbance activities are relatively permissive compared to a number of other regional plans and, with regard to forestry, the Proposed National Environmental Standard for Plantation Forestry.[55] There are

[53] See sections 33 and 34 of the Regional Water and Soil Plan
[54] Rule 34.1.1, Regional Water and Soil Plan
[55] Ministry for the Environment. 2010. *Proposed National Environmental Standard for Plantation Forestry: Discuss Document.* Ministry for the Environment: Wellington, New Zealand

several issues with the controls and the way that they are currently implemented. The issues and possible options to address them are identified below.

Option 1: Require the council to be notified in advance of certain permitted activities being undertaken

Under the Regional Water and Soil Plan people undertaking most permitted activities are not required to inform the council in advance of the activities being undertaken. The only exception is vegetation clearance on erosion-prone land that is not in a riparian area.

The council is often never aware of many land disturbance activities. An example is the clearance of plantation forestry. The council has limited information on the timing, location and nature of many harvesting activities, particularly by small woodlot owners.

Like for most permitted activities, the council (in other words, ratepayers) fund the monitoring of permitted activities rather than the resource users. Although, as pointed out earlier, the council does have a charging policy for monitoring permitted activities that is based on section 150 of the Local Government Act 2002.

The council often only become involved after an incident has been reported to council, and it is often too late to take remedial action.

Option 1 involves changing the permitted activity rules for earthworks and vegetation clearance to require resource users to notify council in advance of them undertaking the activities. This will allow the council to better prioritise its monitoring resources by knowing what is to be undertaken, the timing and the location. This mean the council will be more efficient and effective in undertaking monitoring. It would also allow the council to work more closely with resource users in putting in place mitigation measures.

This option could also be extended to other activities such as the application of fertilisers around sensitive water bodies, to name one example.

We are looking at options for the threshold for where notification of the council would be required.

Option 2: Refine the rules to provide greater clarity and certainty for resource users and the council

Most of the current rules for land disturbance activities are subjective and vague. The environmental standards for land disturbance activities are particularly challenging to implement.

This creates difficulties for people operating under the rules and the council in monitoring and enforcing them. In a number of respects the permitted activity rules for land disturbance activities fail established legal principles[56].

Because of the unclear nature of many of the rules, the council, in collaboration with the forestry industry, has developed non-regulatory guidelines that essentially interpret a number of the rules and provide examples of good management practices.[57]

[56] Case law has established that permitted activities must:
1. Be comprehensive to a reasonably informed, but not necessary expert, persons;
2. Not reserve to the council discretion to decide by subjective formulation whether an activity is permitted or not; and
3. Be sufficiently certain to be capable of expert assessment.

[57] Forestry Earthworks & Harvesting Guidelines for Northland (2012)

Option 2 involves amending existing permitted activity rules and associated environmental standards and/or ensuring that new rules are easily understood, are certain, and do not reserve judgment to the council when monitoring and enforcing them. It could also include being more prescriptive and specific about required good management practices.

Option 3: Incentivise and require good management practices

As discussed in section 7.5 above, the council could incentivise and require agreed good management practices through the Regional Water and Soil Plan. We will be looking at options for how this approach could be used for managing certain land disturbance activities, for example, commercial forestry operations and activities undertaken by network operators.

Option 4: Stronger controls on the access of stock to the beds and margins of water bodies

The Regional Water and Soil Plan permits the access of livestock to the riparian management zone (a strip of land adjacent to the banks of lakes and rivers) provided that certain conditions can be met. These include that there are "no more than minor adverse effects on aquatic life" and that the access or grazing does not reduce the visual clarity of water bodies by more than 20% after reasonable mixing. In effect, the rule is difficult to monitor and enforce.

The Regional Water and Soil Plan does not regulate the access of livestock to the beds of lakes and rivers, and therefore permits stock access. On the other hand, the Regional Coastal Plan prohibits the access of livestock to the coastal marine area.

The disturbance of the beds and margins of lakes and rivers is a major source of sediment in water. This is evidenced by recent sediment source tracking in the Bay of Islands and Whāngārei Harbour which shows that stream bank erosion is a significant contributor of sediment to estuaries. Stock movements up and down stream banks can exacerbate this erosion. It is widely accepted that restricting the access of stock to the beds and margins of water bodies is also a very effective way to reduce faecal bacteria levels in water, as well as other contaminants like nutrients and organic matter. This is reflected in the dairy industry's Sustainable Dairying: Water Accord, [58] which commits dairy farmers to exclude dairy cattle from lakes, rivers, streams and drains that are greater than one metre in width and deeper than 30 cm in depth, and significant wetlands by 2017.

The Proposed Regional Policy Statement directs the regional council to put in place rules to control the access of livestock to the beds and margins of water bodies.

We are looking at options for new stock exclusion rules to be included in the Regional Water and Soil Plan. At a minimum, we think that the rules should be consistent with the Sustainable Dairying: Water Accord and prevent the access of all livestock to dune lakes.

Additional controls could include:

- Restricting the access of dairy cows to streams and rivers that are less than one metre in width and shallower than 30cm in depth (the Sustainable Dairying: Water Accord dimensions).
- Restricting the access of dry stock to water bodies in low sloping topography; and/or
- Permitting the access of dry stock to the beds and margins of rivers and non-dune lakes provided that they do not cause any gross pugging, slumping, erosion, or contamination of water; or
- Restricting all livestock from all water bodies.

[58] Sustainable Dairying: Water Accord (2013) Dairy Environment Leadership Group

Option 5: Stronger controls on earthworks

The Regional Water and Soil Plan permits earthworks that are not on erosion-prone land provided that the volume moved or disturbed is less than 5000 m^3 in any 12 month period and certain environmental standards[59] are complied with . The threshold is set lower at 1000 m^3 or 1000 m^2 on erosion-prone land. A lot of land disturbance in forestry, on farms and construction sites is carried out under the current permitted activity rule.

Option 5 involves reducing the current thresholds for earthworks and the period of time that they can be undertaken as a permitted activity. This would provide the council with more control over activities, such as being able to impose tailored consent conditions that are specific to the location and nature of the activity and the sensitivity of the receiving environment. We could also change the threshold from a volume to an area based measure as the latter is easier to assess.

The option could also involve greater setbacks for earthworks from sensitive or high value water bodies.

Option 6: Revise the definition of erosion prone land

The Regional Water and Soil Plan defines erosion prone land as class 7e, 8e, and 8s1 land use capability units, as shown in the New Zealand Resource Inventory, Northland Region, Second Edition.[60] These maps define what activity class (permitted, controlled, or discretionary) applies to certain vegetation clearance, earthworks, and land preparation activities.

We consider that the current definition does not adequately capture all erosion prone land. Our experts are looking at options for a revised definition.

Option 7: Stronger controls on vegetation clearance

The Regional Water and Soil Plan permits vegetation clearance subject to a number of conditions including requirements that areas of exposed soil are revegetated or covered within a period of time (12 months after the harvesting is completed for plantation forestry and 24 months for other activities). Another permitted activity condition is that the minimum setback for harvesting plantation forest planted after 28 August 2004 is 5 metres from a water body. The plan does not specify any harvesting setbacks for plantation forest planted prior to this date.

Reducing the length of time that areas of soil can be exposed for and increasing setback distances for harvesting from water bodies may be required to maintain and improve water quality so that water quality objectives are met, particularly for dune lakes.

Options include reducing time periods to 12 months or less and specifying larger vegetation setbacks from dune lakes and indigenous wetlands and some significant rivers.

Option 8: Stronger controls on land preparation

We are aware of increasing areas of land being cultivated in Northland for crops. A lot of this is on rolling contoured land and in flood plains. Much of it occurs twice per year in spring and late summer. The potential for sediment run-off from soil exposed by land preparation is significant. The Regional Water and Soil Plan currently permits land preparation subject to conditions including that it is undertaken outside of a 5 metre setback from water bodies.

[59] Section 32, Regional Water and Soil Plan
[60] Part VIII (Definitions), Regional Water and Soil Plan

Option 8 involves increasing the setback distances for land preparation. The size of the set-back could be related to the nature of the water quality objective for the water bodies.

Option 9: Permit all land disturbance activities subject only to meeting water quality objectives and limits

Option 9 involves permitting all land disturbance activities subject to the requirement that resulting discharges meet the minimum RMA section 70 standards and water quality objectives and limits. The controls would not specify any other conditions such as good management practices. This option would involve a major change to the current regulatory framework of the Regional Water and Soil Plan.

Discharges that would not meet the RMA section 70 standards would require resource consent.

Option 10: Amend the definition of the Riparian Management Zone

The Regional Water and Soil Plan contains specific controls of land disturbance activities within the Riparian Management Zone. The Riparian Management Zone is a zone of varying widths adjacent to the bed of a river, lake, indigenous wetland, of the coastal marine area which needs to be managed carefully to protect the water body form the adverse effects of land use.

The Regional Water and Soil Plan contains criteria by which the management zone is determined.[61] The criteria are difficult to apply and monitor because it is based on different slopes, which change constantly along a water body.

We think that the definition should be simplified so that it is easier for resource users and the council to apply.

Option 11: Eliminate regulatory overlaps between the regional and district plans

The council should consider working with district councils to eliminate and prevent regulatory overlaps around the management of land disturbance activities.

Option 12: Non-regulatory

Other than improved management practices and controls on land disturbance activities, the primary means of dealing with sediment runoff is the revegetation of riparian areas and the construction and restoration of wetlands.

As suggested earlier, the council could focus its non-regulatory support in the short-term on providing incentives or paying for the restoration of riparian buffer zones and the creation of wetlands on stream inflows around Northland's high value dune lakes. Evidence suggests that dune lakes are particularly sensitive to phosphorus which is normally associated with fine sediment. Non-regulatory support could also go into constructing wetlands at strategic sites on priority estuaries.

Such efforts could also be promoted as offset mitigation as part of resource consent processes.

[61] Figures 7A – 7C, Regional Water and Soil Plan

Regional plans review – topic summary

Air quality

How can we improve the management of air quality in our regional plans? This is a summary of our initial ideas.

What is air quality?

The term "air quality" means the state of the air around us. Good air quality refers to clean, clear, unpolluted air. Poor air quality is a result of a number of factors, including emissions from various sources, both natural and human-caused.

The air quality topic includes all human-caused discharges into air from within the region (including the coastal marine area) as they impact on human health, cause a nuisance or have an adverse environmental effect. In Northland the discharges to air that have the most significant impact on air quality are smoke, odour, dust and spraydrift.

The air quality topic does not include the use of dust suppressants – this is covered by the hazardous substances topic.

Northland's ambient air quality is generally good and we are compliant with national requirements[1].

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

[1] The National Environmental Standards Air Quality 2004 (amended 2011).

What needs to change in the regional plans?

1 Greater recognition in plan policies that air quality expectations vary depending on the location of the activity

The policies in the current plan do not distinguish very well between the differing expectations of air quality based on location. Policies are generic and therefore do not account for the fact that, for example, in an industrial zone, certain effects may well be accepted and there may be greater tolerance of those effects than if the same activity was to locate in a residential zone. Similarly, a rural zone is a working agricultural environment and there is often an acceptance that certain effects will take place there that will be less tolerable in higher amenity zones. Conversely, a more precautionary approach in high amenity areas, particularly residential areas, could be signalled through plan policies. This is important because policies guide the rules and influence decision-making for resource consents.

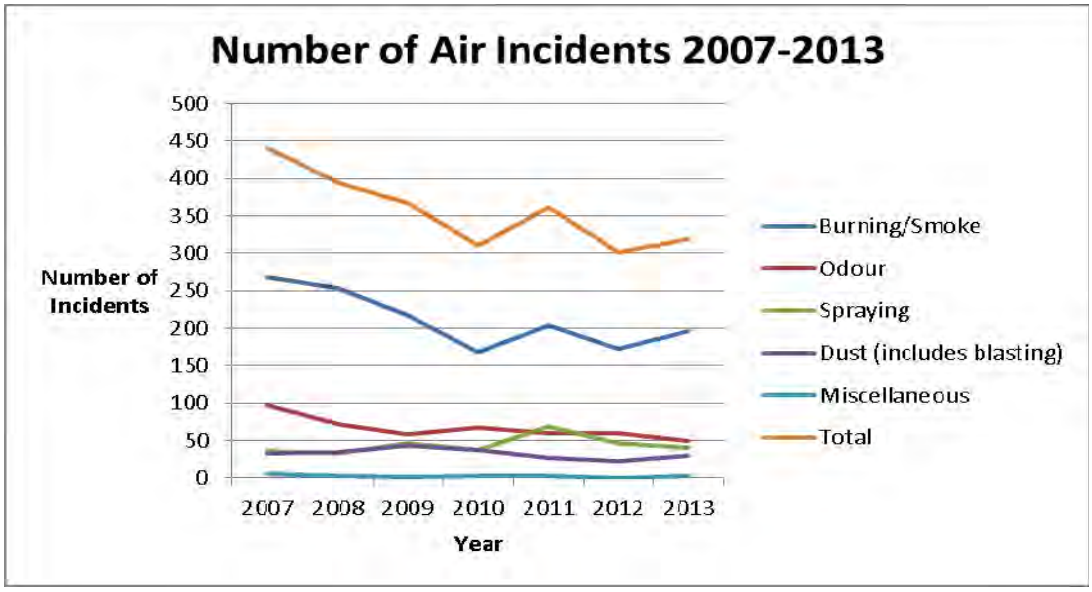
Discussion at the air quality stakeholder workshop covered this issue from the perspective of reverse sensitivity effects at the rural residential and rural boundary and urban-industrial boundary. There was recognition that the proposed Regional Policy Statement contained some direction on addressing this issue and this is starting to be felt through district plan reviews (e.g. Whangarei District Council Rural Plan Change 85). There was also some feeling that if district councils are allowing a land use to take place in a zone where the purpose of the zone is to accommodate that land use, we should also be permitting the discharge. The Proposed Auckland Unitary Plan) acknowledges this relationship by tying the permissiveness of the discharge to the underlying zoning.

1.1 Possible changes to the regional plans

The plan could benefit from clearer policy on distinguishing between new polluting activities seeking to locate or taking place in an industrial or rural environment versus locating or taking place in more sensitive environments (such as residential zones). For example, smoke from burn-off and animal odour are clearly more associated with a farming environment (and thus with rural areas) than what would normally be expected in town.

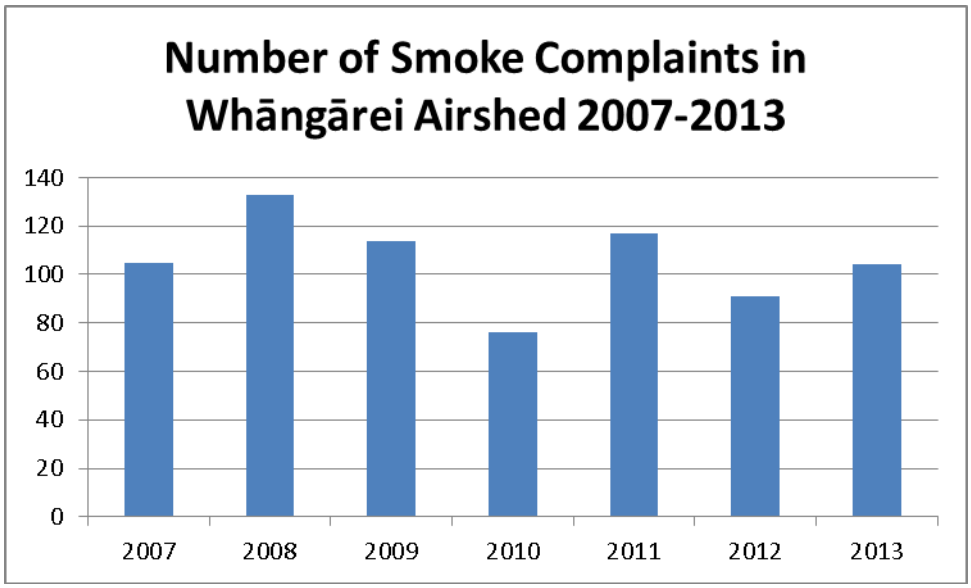
There was support at the stakeholder workshop for planning policy recognition that certain industries (for example ‘intensive farming’) produce effects (odour, noise etc…) that are typical to what is expected in rural areas. There was some feeling that a regional plan should quantify what constitutes intensive farming (for example poultry farming) and define it in terms that are separate from, on the one hand, small scale rearing of animals and on the other non-rural odorous activities such as wastewater discharges. In terms of adopting the Auckland approach of linking zoning to the discharge, this was considered to be difficult as district council zones are outside regional council control.

2 Reducing smoke nuisance complaints



(Includes only those incidents reported to or referred to the regional council.)

Smoke nuisance is the number one environmental complaint to the regional council. Sources of complaint are varied and include large rural fires, smaller domestic fires (backyard burning) and industry discharges. Complaints have fallen in recent years but now remain at the same level since 2010 (between 175-200 complaints a year). Complaints are also made and investigated by the district councils under the Health Act 1956 and local fire prevention bylaws.



(Includes only those incidents reported to or referred to the regional council.)

Typically around half the smoke nuisance complaints generated have been in Whāngārei. In 2008 new rules were introduced which meant domestic backyard burning in Whāngārei required a resource consent. This was because the airshed had the potential to breach ambient air quality standards for PM_{10} mandated in the National Environmental Standards Air Quality and there was concern about the health effects of backyard burning. A free kerbside recycling service is also available in Whāngārei (except for green waste). There is no compelling evidence for changing this rule.

Although complaints have trended downwards, they still remain high overall. The complaints are generally about open domestic fires (household rubbish or vegetation). Fewer complaints are received about domestic backyard burning where a waste incinerator[2] is used. Most people complain because of the nuisance factor, concern over perceived health effects and the fact they were not notified in advance.

Although the nuisance effects of smoke are widely known, more research is emerging that smoke, even from materials not considered toxic, has the potential to exacerbate health effects particularly in vulnerable population groups (for example, those with asthma or Chronic Obstructive Pulmonary Disease[3]). The combustion process from wood and vegetation is similar to that in tobacco and similar carcinogenic materials are released. The picture is more mixed as to whether this can cause adverse effects in healthy populations[4].

Backyard burning of most domestic waste occurs in an unselective manner, with little or no segregation of the waste streams. This complicates enforcement as it has to be established whether prohibited items are in the waste stream.

Currently open burning of certain types of rubbish and green waste is permitted in all main centres around Northland (except Whāngārei, as discussed above). Unlike Whāngārei, there are limitations on disposal with no free kerbside recycling service and these areas are not at risk of exceeding air quality standards in the National Environmental Standards Air Quality.

2.1 Possible changes to the regional plans

A new regional plan could include a 'hierarchical approach' to increase options to deal with smoke nuisance. This could include:

- Greater use of best practice and standards. A particular issue is the burning of wet vegetation which can cause greater smoke discharge. Requiring that in urban areas (not Whāngārei) the vegetation be dry when burnt will reduce smoke production and help enforcement.
- Require prior notification for large fires in rural areas or alternatively urban/rural interface. Large fires (for example, rural-burnoff) can be planned in advance. In this instance, where the fire is to take place near sensitive areas (for example, near houses), a requirement to notify may reinforce a simple courtesy without being onerous. This notification could also be time limited (for example, fire for more than one day beyond boundary).
- Requiring the use of incineration devices for open burning in urban areas (outside Whāngārei) and setting a design standard for the incineration device. Incineration devices can produce less smoke if designed properly. This might be appropriate if we continue to allow burning waste outside in urban areas.
- Another option is to include a rule requiring a resource consent for the burning of material in urban areas where a free recycling service is available for that material. This could include kerbside collection and/or a local transfer station.

[2] A waste incinerator is defined in the plan as a *device designed specifically for waste incineration.* Council monitoring records contain information on the source of complaints – typically they relate to open burning.
[3] Chronic Obstructive Pulmonary Disease is an umbrella term that includes conditions such as chronic bronchitis and emphysema.
[4] Evidence presented by Taranaki Regional Council – http://www.stuff.co.nz/taranaki-daily-news/news/4730648/Backyard-fires-extremely-toxic quoting research from the EPA in the US.

3 Reducing compliance costs for well-performing industrial and trade discharges

Getting a resource consent imposes costs on business and industry through having to obtain the initial resource consent, renewing the resource consent, uncertainty of resource consent being granted, and ongoing monitoring. Industries that are performing well are less 'risky' to the community than poorly performing industries that have been subject to enforcement proceedings.

3.1 Possible changes to the regional plans

- Dry abrasive blasting activities where they are contained in a blasting booth could be a permitted activity (they are currently controlled activities). This will be subject to performance standards including no objectionable effects beyond the boundary. Activities that cannot meet permitted standards could be subject to a restricted discretionary or discretionary consent, meaning consent may be refused in the future.
- One-off dry abrasive blasting activities of fixed structures taking place in the open air could be a controlled activity, provided there are appropriate setbacks away from sensitive activities. They are currently discretionary activities (or potentially prohibited activities). A discretionary activity status could be retained if the activity is proposed to take place close to sensitive activities, including ensuring that appropriate containment methods are used.
- Other consented activities, currently discretionary status, could be made controlled activities. There may only be a few activities where this would apply, for example industrial smoke discharges performing well without objectionable effects beyond the boundary but in excess of the heat release thresholds[5]. Specifying the requirement for notification of resource consents is another way of reducing compliance costs.

4 Agrichemical spraying rules are confusing and inconsistent

The main issues appear to be that:

- The Regional Air Quality Plan does not distinguish between the need for different notification requirements for ground and aerially based spraying.
- The Regional Air Quality Plan, Regional Water and Soil Plan and Regional Coastal Plan have rules on agrichemical spraying with different performance standards.
- Out of date references. The reference to the 8409:1999 New Zealand Standards Code of Practice for the Management of Agrichemicals is out of date. There are also new industry developed standards (Aircare) that have emerged that could be referenced as best practice.
- The handheld spraying definition is too loose and includes high pressure handguns as well as low pressure spot spraying. High pressure handheld spraying is more likely to overspray the boundary and thus requires greater recognition as a separate activity.
- Commercial or contractor spraying requires neighbour notification, record keeping, meeting New Zealand Standards and Growsafe certification for air and ground spraying. However, 'domestic' spraying is not subject to these requirements although the same effects can occur if undertaken close to a boundary.
- Aerial spraying needs more control if taking place in an urban environment - there have been occasions where this has occurred (as of right) as a permitted activity).

Participants at the air quality workshop agreed that notification of spraying is a key issue, stating that many complaints arose from the lack of notification from spraying activities. Some felt that notification should not be a blanket approach to notify all neighbours but only

[5] Rules 9.1.1 and 10.1.1 – Regional Air Quality Plan

those near the area being sprayed. Some also felt that current requirements were too onerous (mainly the requirement to notify at least 18hrs before). There was also a feeling that technology has also moved on since the original plan was drafted and old style 'drift spraying' has been replaced by more precise equipment (placement sprayers) that can place droplets more accurately on target and this had not been reflected in plan rules.

Other issues raised include the use of off label uses as the regional air plan rules limit the use of chemicals to label requirements. It is however fairly common for applicators to use some chemicals for uses other than what is on the label requirements. Industry representatives at the workshop felt that overall, the regional plan should have rules and standards that are more risk based.

4.1 Possible changes to the regional plans

There are a number of measures that could be considered:

- Distinguish between the need for different notification requirements for aerial spraying. Consider measuring notification distance from the spraying area rather than the site boundary.
- Consider only requiring notification in rural/urban interface area rather than purely rural.
- Update references to more recent New Zealand standards and other applicable industry certifications.
- Amend 'handheld' spraying to distinguish between high pressure and low pressure uses. High pressure handheld spraying should require notification if taking place close to sensitive areas at the site boundary.
- Ensure there is one consistent set of plan rules (could be achieved through a single regional plan).
- Require a resource consent for aerial spraying in urban areas.

Consider having one set of requirements for contractors/commercial users/domestic users for ground-based and aerial spraying, or some elements of these requirements, for example, a requirement to notify.
Industry representation at the workshop favoured a more risk based model using an approach that is in the Auckland Proposed Unitary Plan (PAUP). More research and discussion will be needed to see if this is the right approach for Northland but this is something that should certainly be considered as part of a Section 32 analysis of a new regional plan.

5 Odour from chicken manure application has been a problem in recent years

The council receives a small number of complaints each year as a result of the spreading of chicken manure on land. A Regional Water and Soil Plan rule addresses the application of animal effluent to land generally (including a 'no offensive effects beyond the boundary' with regard to odour) however there are short-term, high intensity odour issues with chicken manure which means that the 'no offensive effects beyond the boundary'[6] requirement cannot be met, particularly in situations where it is applied wet. Odour issues can also arise from the storage of the chicken effluent.

The council generally relies on the use of the FIDOL (Frequency, Intensity, Duration, Offensiveness, and Location)[7] to determine whether an effect is adverse. This issue was

[7] FIDOL is a quantitative and qualitative criteria used by enforcement officers to determine the offensiveness of odour.

discussed at the air quality workshop where was general support for the continued use of FIDOL.

5.1 Possible changes to the regional plans

Include a permitted rule which could include the following standards:

- Immediately cultivating the product into land if wet.
- Or, where this is not practicable, not spreading it in a wet form.
- Notification of neighbouring areas when applied close to sensitive areas (for example, residences), particularly in the rural/urban interface. In addition to the setback of 50m from the spreading of effluent under the current Regional Water and Soil Plan rules, it is recommended that in order to be a permitted activity, the spreading of poultry manure within 150m of residential buildings, public places and amenity areas where people congregate, and education facilities, requires notification.
- Regular monitoring of storage facilities is undertaken by the applicator to assess odour nuisance – compliance to be shown by providing written details at the request of council.

6 There is ongoing concern about dust from the public use of unsealed roads

There is a localised but high degree of public concern about dust emissions from public gravel roads. The issue is mainly a health issue, which may be better suited to intervention under the Health Act 1956 as the Resource Management Act is primarily set-up to deal with nuisance effects of dust. Nevertheless the management of dust is a Resource Management Act issue that can be influenced by a regional plan rule.

6.1 Possible changes to the regional plans

This is a very difficult matter to address in a regulatory plan. The regulatory options afforded by a rule in the plan could however see the activity be permitted subject to no objectionable or offensive cross-boundary effects (similar to other permitted rules). The reality is that many unsealed roads would require consent to operate under this rule. The council could require the use of the Best Practicable Option to minimise dust from unsealed roads. The Best Practicable Option requires the most cost-effective and efficient measure to be used to minimise emissions at source. A Section 32 process could look at whether this is a viable rule to put in a future regional plan.

7 The management of closed municipal landfills

Both the Regional Water and Soil Plan and Regional Air Quality Plan contain rules on the management of closed landfills. The Regional Water and Soil Plan requires a consent to be obtained for leachate if certain water quality standards are breached or if no leachateminimisation and containment measures such as lining or capping have been included in the construction. Consequently, many historic landfills are consented and monitored for leachate. The Regional Air Quality Plan requires a consent to be obtained for any landfill closed from 1995 (the date of notification of this plan) onwards to manage landfill gas emissions[1]. As a general rule of thumb however, landfills should be actively monitored for in excess of 30 years from their closure date, with the timeframes dependent upon the size of the landfill and if, and/or when, the landfill has been capped, which can occur significantly after their closure date. Best practice in fact states that it can take between 30-50 years for ongoing anaerobic processes that can lead to gas generation to diminish. The 1995 date is therefore arbitrary and not aligned with best practice.

[1] Under Rule 19 of the Regional Water and Soil Plan

7.1 Possible changes to the regional plans

We propose a holistic approach to managing closed landfills for landfill gas emissions using the 30 year closure date of the landfill as a guideline. All closed landfills that have been closed for less than 30 years not currently subject to a resource consent for landfill gas emissions will remain permitted but will be required to demonstrate that the emissions are managed through risk assessment against Ministry for Environment guidelines (A Guide for the Management of Closed and Closing Landfills – NZ, Tonkin and Taylor 2001) by a defined date in the plan. Where closed landfills are assessed as being in a higher risk category, according to these guidelines they will be subject to the resource consent process. Closed landfills that are currently in receipt of a resource consent after 1995 will become permitted 30 years after their closure date providing landfill gas emissions are not offensive and objectionable beyond the boundary, and also subject to the results of a similar risk assessment against the Ministry for Environment guidelines that identifies them as no longer being a risk.

8 List of prohibited materials unclear

The current plan prohibits the burning of a range of substances including, 'hazardous substances'. The term 'hazardous substances' applies quite widely (the term used in the plan relates to the Health and Safety and New Organisms Act definition) – plans in other regions have more specific lists of prohibited items. This can make it difficult for plan users who may be unfamiliar with what a hazardous substance is.

Some material, such as asbestos-containing material, do not fall within the Health and Safety and New Organisms Act definition of a hazardous substance and can technically be burnt if a resource consent is applied for. There is also a list of other material in the plan that is also not specifically prohibited and where a consent can be applied for. Examples include plastics (other than halogenated plastics), chemical waste, medical waste, metals, chemically treated or artificial construction materials. Council has never received a resource consent application for the burning of these materials, and consent is unlikely to be granted as there are better alternatives to burning. As a final point the National Environmental Standards Air Quality mandatorily prohibits the burning of certain items (for example, bitumen). These are not listed in the current plan.

8.1 Possible changes to the regional plans

We could have a 'one stop shop' list of prohibited materials including those listed in the National Environmental Standards Air Quality and clearer examples of 'hazardous substances'. Items that can technically currently be burnt with a resource consent (for example, asbestos) could be moved to 'prohibited activity' status. There is a question mark over prohibiting the burning of all plastics, as for example polyethylene (used in silage wrap) is less harmful than halogenated plastics. Nationally however there is a move away from burning farm plastics such as these (recycling alternatives are available) and therefore the activity could also be made prohibited[8]. This approach will improve education and enforcement and simplify the plan structure. It may be appropriate to openly burn some of these materials in certain circumstances, such as in a biosecurity emergency or as part of fire training, however due to the toxicity of materials, neighbour and council notification should be required first.

[8] Burial of farm plastics is allowed under Regional Water and Soil Plan 19.1.3. This is being reviewed through the hazardous substances and waste disposal work-stream.

9 Other issues

- Enable the burning of ‘clean’ material such as paper, cardboard as well as bio-diesel and biogas by making them permitted activities for industrial heating purposes (currently the plan is silent on this thus a resource consent is technically required).
- Provide clearer guidance on where a consent is required for associated discharges from fuel burning processes (for example, volatile organic compounds emanating from wood kilns).
- Clarify that waste openly burnt on private land from a trade or industrial premise does not fall within the scope of a permitted rule.
- Improve consistency where consent is required for large-scale earthworks and when the need for a dust management plan arises.
- Structurally it is recommended that the plan has a single ‘rules’ section rather than separate rules for ‘other place or source’ and ‘industrial and trade’. There is some duplication with the current approach with repetition of the same rules in different sections. The current table in the plan summarising activities and their associated consent status is considered helpful but could be expanded to include more detail. Rules in the plan are generally not overly complex, although there are exceptions where greater explanation could be given. Some terms used in rules are also not well-understood and could be simplified and replaced with less technical terminology. The plan also needs to be updated to reference the National Environmental Standards Air Quality 2011.

Regional plans review – topic summary

Coastal water space

How can we improve the management of coastal space in our regional plans? This is a summary of our initial ideas.

What is coastal water space?

The Regional Coastal Plan sets out the way the coastal marine area[1] of Northland is managed[2] by dividing it up into six zones or marine management areas (which are managed for different purposes) and including rules within the respective zones to manage the potential adverse effects of activities. The six zones are as follows:

- Marine 1 (Protection)
- Marine 2 (Conservation)
- Marine 3 (Marine Farming)
- Marine 4 (Moorings)
- Marine 5 (Port Facilities)
- Marine 6 (Wharves)

This review looks at how the Regional Coastal Plan manages:

- Recreational activities (including public access and vehicle use along the foreshore/seabed)
- Dredging, extraction and depositing/disposal of material
- Disturbance of land in the coastal marine area (including use of heavy machinery)
- Aquaculture
- Moorings, marinas and vessel anchorage
- Placement and occupation of space for structures (excluding network utilities).

This review does not include:

- Reviewing the 'viability' of the Marine 1 (Protection) Management Area (see the significant natural heritage values topic).

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

[1] The area from mean high water springs to the 12 nautical mile (22.2 km) limit of New Zealand's territorial sea
[2] Excluding fishing and biosecurity controls on vessels moving around NZ (managed by Ministry of Primary Industries) and protection of marine mammals and marine protected areas (managed by the Department of Conservation)

- Network utilities and services in the coastal marine area (see infrastructure and mineral extraction topic).
- Discharges to water (see water quality topic)
- Removal and modification of indigenous vegetation (such as mangroves) (see marine ecosystems and biodiversity topic).
- Hard protection structures (covered by natural hazards topic.

What needs to change in the regional plans?

Overall, the management regime set up by the Regional Coastal Plan has been successful in sustainably managing use and development within the coastal marine area over the last 10 years. However, there are new legal requirements and national policy statements that need to be taken into account. Additionally, implementation of the policies and rules over the past 10 years has found that some rules are not working as well as intended and that some parts of the Regional Coastal Plan are now outdated or redundant.

The hierarchical nature of documents prepared under the Resource Management Act (RMA) means that regional plans have to 'give effect' to higher level planning documents. There have been various changes to the RMA, new legislation and new policy documents relevant to the management of the coast, including:

- New Part 7A RMA (Occupation of Common Marine and Coastal Area).
- Marine and Coastal Area Act 2011 (which introduced the concept of common marine and coastal area into the RMA).
- A 'new' New Zealand Coastal Policy Statement (see below)
- The development of a Proposed Regional Policy Statement for Northland

1 Taking a strategic approach to use and development of the coast

Under the RMA, the only mandatory national policy statement is the New Zealand Coastal Policy Statement (coastal policy statement)". Councils are required to amend their plans to give effect to provisions that affect their respective documents as soon as practicable and councils, when considering an application for a resource consent and any submissions received, must have regard to any relevant provisions of the coastal policy statement.

The current coastal policy statement contains 29 policies and took effect in December 2010. The previous one came into effect in 1994 and our operative Regional Policy Statement and operative regional coastal plan were prepared under this regime.

The 'new' coastal policy statement includes policies on topics that the previous one didn't address. Examples include:

- Surf breaks of national significance (policy 16)
- Harmful aquatic organisms (policy 12)
- Aquaculture (policy 8)
- Ports (policy 9)
- Strategic planning (policy 7)

It is more directive than the previous one and focuses on 'avoiding' adverse effects, particularly in relation to significant values (such as outstanding natural character and threatened species), in order to address cumulative effects. It provides strong direction on the need for strategic planning to identify where particular activities are inappropriate and has a greater focus of the effects of climate change, in particular sea-level rise.

Additionally, it directs councils to amend their regional coastal plans to remove the requirement to classify activities as restricted coastal activities (policy 29). We have already given effect to this policy and amended our coastal plan to delete all references to restricted coastal activities.

As mentioned above, the operative regional coastal plan divides the management of the coastal marine area up into six marine management zones. However, the coastal policy statement has placed a greater emphasis on the co-ordinated management of activities within the coastal environment, particularly in situations where use and development and its effects above or below the line of mean high water springs will require, or is likely to require, associated use or development that crosses the line of mean high water springs[3]. In practice, what this is likely to mean is the regional council working closely with the district councils during the development of the next coastal plan to identify if there are particular areas of the region that would benefit from being re-zoned and having site-specific policies and rules to encourage (or discourage) certain types of developments and activities.

1.1 Possible changes to the regional plan

Arguably, the existing coastal plan already takes a strategic approach to managing the coastal marine area by dividing it up into six marine management areas. However, the active implementation of policies 4 and 7 of the coastal policy statement means that some refinements should be made. In particular, the creation of new 'zones' (marine management areas) such as a waterfront development zone (for places like Paihia and the Whāngārei Town Basin/harbourside area) or the creation of map overlays, identifying the special 'values' of a particular area and how they need to be managed (see "Significant natural heritage values" topic for a detailed discussion) would be a way to assist with managing cumulative effects as well as providing positive policy support to encourage the types of activities/developments envisaged by the zone.

The development of a single regional plan or a regional coastal environment plan[4] would be a way to give effect to all provisions in the coastal policy statement in an integrated manner and have a degree of control on activities that originate on land but have the potential to adversely affect activities in the coastal marine area. An example includes ensuring that development in the coastal 'environment' does not make water quality unfit for aquaculture purposes in the coastal marine area.

It would also mean that mapped resource areas (for example, outstanding natural landscape, outstanding/high natural character areas, heritage or biodiversity) could be treated consistently across 'arbitrary' jurisdictional boundaries - i.e. provide policy guidance to protect/preserve natural character and natural features/landscapes in the coastal environment from inappropriate development, rather than requiring separate policy guidance for these resource areas both above and below the line of mean high water springs[5] (see the Significant natural heritage values topic for further discussion on this). Additionally, management of coastal hazard risk would likely be improved (see the Natural hazards topic for further discussion on this).

Overall, it is recognised that our operative regional coastal plan does not sufficiently give effect to the coastal policy statement and needs to be amended. The rest of this report

[3] See Policy 4 – Integration.
[4] Encompassing the landward extent of the coastal environment as 'mapped' through the proposed Regional Policy Statement for Northland as well as the coastal marine area.
[5] Regional councils have a requirement under s30(1)(a) of the RMA to establish policies to achieve integrated management of the natural and physical resources of the region.

covers some of the new policy requirements (such as aquaculture and surf breaks of national significance), whilst other new policy requirements are covered in other reports.

2 Coastal occupation charging

Regional councils are required by the RMA[6] to decide whether or not to impose a coastal occupation charging regime (essentially a fee for the use of public space in the common marine and coastal area). There is no obligation to impose a regime but the new regional coastal plan must either; state that council decided not to include a regime, or set out the basis for coastal occupation charges and their use (no coastal occupation charges can be applied unless specified in the coastal plan).

With regards to the imposition of coastal occupation charges, if the regional council considers that a coastal occupation charges regime should not be included, a statement to that effect must be included in the new regional coastal plan. If the council decides to implement a coastal occupation charges regime then the new regional plan will need to set out:

- the circumstances when a coastal occupation charge will be imposed; and
- the circumstances when the regional council will consider waiving (in whole or in part) a coastal occupation charge; and
- the level of charges to be paid or the manner in which the charge will be determined; and the way the money received will be used.

Currently, resource consent holders are charged an annual monitoring fee and mooring holders are charged an annual mooring licence fee (a portion of which goes towards administration). However, no consent holders in Northland are charged a fee for 'occupying' space in the coastal marine area.

An occupation charge would be an annual fee, to be paid by any person, business or organisation that occupies public space in the common marine and coastal area. Charges would not apply to privately owned coastal marine area[7], or to person carrying out a protected customary right, or to any person or group that holds customary marine title. It would be like a rental for occupying public space, similar to the concessions paid for occupying and using national parks and reserves. Charges would provide a form of compensation to the community for the loss of access to public space and its reduced amenity.

Any revenue from imposing coastal occupation charges has to be spent on the purpose of promoting the sustainable management for the coastal marine area. The potential income is significant as Northland currently has thousands of private structures in the common marine and coastal area (the most common being swing moorings). Revenue could therefore be used for such things as:

- Enhancement of marine water quality.
- Removal of derelict structures.
- Providing public facilities and improving public access to the marine area.
- Supporting groups involved in coastal restoration and enhancement

Importantly, there's very little legislative guidance on what occupation charges are (e.g. a rental or cost recovery) or how they should be set. Without a clear legal foundation for establishing the charges, development of a regime will be vulnerable to challenge.

[6] Section 64A of the RMA.
[7] There are small number of these e.g. Opua, Bay of Islands

Inconsistency across the country is also likely, with each region deciding how much to charge (if anything). The potential for differing levels of charging could mean that marine activities may be discouraged in a region with high occupation charges and relocate to a region with lower or no charges. Coupled with an inevitable high level of controversy, the plan change process will likely be costly and time consuming.

How charges would apply to any number of activities that occupy space is also problematic and quantifying loss of public good is extremely complex, meaning any regime is likely to be contentious and difficult to justify (for example, the same square metre charge for occupation of space in the Bay Of Islands or Sandy Bay is unlikely to be justified 5km offshore on the west coast). The relative costs and benefits of such a regime require careful analysis – it may be that the adverse economic impact and administrative cost outweigh any financial benefit/return. For these reasons, no council in New Zealand has implemented a coastal occupation charges regime to date[8].

There were mixed views at the coastal water space key stakeholder workshop[9] regarding whether the regional council should develop a COC regime, with roughly half the stakeholders supporting the concept and the other half considering that it would be pointless.

2.1 Possible changes to the regional plan

Our initial view is that whilst in principle we support the concept of a coastal occupation charging regime, until such time as there is a nationally acceptable methodology that is consistently applied throughout the country, the relative costs will probably outweigh the relative benefits for Northland.

3 Dredging, deposition and disturbance of the foreshore and seabed

Currently, the key management approaches (in the Regional Coastal Plan) towards dredging and related activities are to:

- Discourage capital dredging and spoil disposal unless associated with a marina, port or commercial wharf – generally a ‘discretionary’ activity.
- Promote land-based disposal of dredged spoil from both capital and maintenance dredging (coastal marine area based disposal is a ‘discretionary’ or ‘non-complying’ activity).
- Allow (via resource consent) maintenance dredging (generally ‘controlled’ activity).
- Generally allow clearance of artificial land drainage channels and tidal streams mouths by district councils (typically controlled activities) to avoid flooding or release natural impoundments that may cause a public health risk.

The following are identified problems and lessons learnt from the rules:

- Resource consent is required for clearing the stormwater pipe outlets (for example, when they get blocked up with sand). As there is no specific rule, this is a discretionary activity, however the environmental effects of this activity are generally minor and it avoids significant risks. This activity is akin to the clearing of tidal stream mouths, but which is currently a controlled activity in most instances.
- As mentioned above, the clearing of tidal stream mouths by district councils is a ‘controlled’ activity. However, often the blocking of stream mouths and the need to

[8] Southland has costal occupation charging but these were in existence prior to the RMA.
[9] This workshop was held on 21 October 2014. The workshop notes can be found at the following link - http://www.nrc.govt.nz/upload/18187/Coastal%20water%20space%20workshop%20notes%20(A695621).pdf

clear them happens quickly – quicker than the time its takes to process a coastal permit.

- There are no rules for clearing tidal stream mouths in Marine 4, 5 and 6 Management Areas (so automatically a discretionary activity) – again this appears to be over-regulating a generally benign activity which has controlled status in most other instances.
- The use of heavy machinery or equipment on the foreshore (for example, to either maintain and/or in association with the construction of structures) requires a consent in most instances. There are many instances where the adverse effects are minor or temporary[10], and requiring resource consent in these instances is overly onerous. This is particularly the case for maintenance – construction of new structures requires a resource consent anyway, however maintenance of structures is generally a permitted activity.

3.1 Possible changes to the Regional Coastal Plan

- District council clearing of tidal stream mouths could be a permitted activity, subject to compliance with standards and conditions. This could either be for just Marine Management 1 and 2 Areas (currently 'controlled') or all marine management areas. Alternatively, it could be permitted in Marine Management 1 and 2 areas and 'controlled' in the other areas. Whangarei District Council has given strong support for this suggestion to make it 'permitted' for councils.
- Include rules relating to clearing of stormwater pipe outlets. Potentially 'permitted' (subject to compliance with standards/terms) for councils and small-scale public clearing (for example, no heavy machinery) or 'controlled' activity for non-council clearing. This was supported at the coastal water space key stakeholder workshop where there was a view that if a consent had been acquired for the stormwater pipe then it should be 'permitted' to maintain/clear it.
- Disturbance of foreshore and seabed – amend the activity status for use of heavy vehicles and machinery in association with the upgrade, maintenance or removal of structures (possibly 'permitted' subject to compliance with standards and terms for councils or approved contractors and 'controlled' activity for others). Whangarei district council are supportive of developing a permitted rule for the maintenance of structures that require heavy machinery (subject to the development of appropriate standards and conditions).

4 Moorings, marinas and vessel anchoring

There is a long history to the way that moorings (particularly swing moorings) have been managed in Northland. The 'current' approach[11] seeks to limit the proliferation of moorings around the coast by facilitating the concentration of moorings into Marine 4 (Moorings including Marinas) Management Areas and by discouraging moorings outside these areas. However, there are currently around 600 moorings (primarily swing) located outside of Marine 4 Management Areas (primarily in Marine 2 Management Areas). Around 50 per cent of these are un-consented (and therefore are technically required to apply for a coastal permit). The majority of these moorings have been in place since before the RCP become operative (2004).

[10] For example, the passing of heavy machinery over a sandy beach away from shellfish beds and important bird habitat is generally unlikely to have undue adverse effects.
[11] Which was determined through Plan change 1 (Moorings and Marinas) to the RCP and was declared operative on 1 August 2014.

The current rules make existing moorings in Marine 2 Management Areas 'non-complying' unless they are located within certain bays[12] and the current policy direction is likely to lead to many of these existing moorings being declined consent when they apply (this would apply to both renewals and applications for new resource consent). In many cases, there are no mooring zones nearby or the mooring zones are full. Arguably, many of these unconsented moorings are only causing 'minimal' adverse effects.

Many existing mooring areas are at or near capacity (no space to accommodate additional moorings) and in many cases, also exceeding the capacity for the shore-based facilities and services to support them. Most of these mooring areas are located in and around the Bay of Islands, which illustrates the popularity of this area for moorings and recreational boating activities in general.

What this essentially means is that there is not enough space in existing Marine 4 Management Areas to accommodate all unconsented (swing) moorings located outside these areas, nor will there be enough space in the future to accommodate lots of 'new' moorings unless mooring use is intensified within mooring areas (by moving to a different mooring system) or additional Marine 4 Management Areas are created (see possible changes below).

In the Regional Coastal Plan, anchoring for more than 14 days in the same embayment, estuary or inlet is a discretionary activity (less than 14 days is permitted). The intention of this rule is to: a) allow recreational/commercial vessels to anchor (as a permitted activity) for a period of time where the activity is deemed to not be causing any adverse effects to other parties (including amenity and water quality effects) and b) ensuring that the activity is not occupying space in the coastal marine area (and consequently requiring a coastal permit to occupy 'space' in the common marine and coastal area) – RMA s12(2)(a).

The Regional Coastal Plan does not define embayment, estuary or inlet and therefore it is currently difficult to ascertain whether a vessel has been anchored for more than 14 days. In most parts of Northland's coast this is not a problem, but there are situations (such as within Whāngārei Harbour) where people have been flouting the 'permitted' rule and anchoring in the same location for extended periods of time, meaning they are 'occupying' public space within the common marine and coastal area (much as a structure does), therefore requiring a consent. The lack of appropriate definitions makes taking enforcement action difficult.

Additionally, yachts and other vessels are reliant on areas of safe anchorage during storms or in the event of vessel damage or gear failure. If not otherwise controlled, the expansion of mooring areas (or other structures) has the potential to inhibit the availability of safe/popular anchorage areas. Therefore, in the interests of safe navigation, some areas need to be set aside for recognised safe/popular anchorage[13]. These could be known as regionally significant anchorage areas.

4.1 Possible changes to the Regional Coastal Plan

Managing new moorings and existing moorings currently located outside of mooring zones will be a significant matter for the new coastal plan. There are some reasonably obvious changes, like creating new mooring zones in the Bay of Islands as identified in the Moorings and Marinas Strategy[14]. Additional options include:

[12] These moorings are classified as 'discretionary' activities.
[13] Plan Change 1 (Moorings and Marinas) to the regional coastal plan included boat anchorage policies that requires the council to recognise and provide for the use of recognised safe anchorages.
[14] Northland Regional Council Moorings and Marina Strategy, 2014

- Additional new or expanded mooring zones to accommodate the projected increase in demand for new moorings and accommodate existing moorings (some or all) outside Marine 4 Management Areas; and/or
- The development of a standalone marina zone in recognition that they tend to have different effects than moorings; and/or
- Identify certain mooring areas that can be 'intensified' (such as moving from swing moorings to more intensive forms like trot moorings); and/or
- Relax the policies and rules for existing moorings outside mooring areas. This could be everywhere or in particular areas, for example, away from outstanding natural landscape/character areas and significant anchorages; and/or
- Maintain the status quo approach (concentrate new moorings into existing Marine 4 Management Areas and discourage them outside these areas).

At the coastal space key stakeholder workshop, there was support for the concept of maintaining the existing concentration policy with regards to the placement of new moorings but there was support for council to consider amending the policies and rules for existing moorings. There was also a lot of support for the development of a separate marina zone. There is no of obvious 'solution' and more analysis is required (for example, assessing costs and benefits) before the council will be in a position to suggest a recommended approach.

Vessel anchorage – including definitions of 'embayment', 'inlet' and 'estuary' in order to provide certainty around the locations that vessels are allowed to anchor, will assist with restricting the ability for people to flout the 14 day permitted rule. Alternatively, re-anchoring could be required to be beyond a specified distance (for example, radius of 1000m).

The current 'rule' for permitted anchoring in Marine 4 Management Areas states that no one may stay overnight on their vessel while at anchor unless the vessel is equipped with a sewage treatment system, a sewage holding tank or portable toilet. Additionally, there is a five night limit unless:

- All sewage has either been disposed of at a sewage pump out facility; or
- Disposed of at an authorised disposal site; or
- The vessel has navigated into waters where the discharge of sewage from the vessel is permitted and has disposed of all its sewage into those waters.

This rule was added by Plan Change 1 and was specifically designed to avoid vessels discharging raw sewage into the coastal marine area. The new coastal plan could apply this rule to all vessels anchoring within Marine 1 and 2 Management Areas as well. This would also be useful for enforcement purposes if people are suspected of deliberately not complying with the 'permitted' rule with regards to staying in the same location for a period greater than 14 days.

Regionally significant anchorages - in consultation with appropriate parties, establish a register of recognised safe/popular anchorages (also known as regionally significant anchorages) around Northland's coast. Consultation to date with the yachting fraternity has indicated that there are some areas that are popular for day time anchoring, which might not necessarily be suitable for 'overnighting', while there are other areas that are suitable for both. These areas could be spatially mapped so as to be available on council's GIS system as well as the next coastal plan maps. Policies and rules can be drafted to ensure that use and development within or directly adjoining the regionally significant anchorage areas will not significantly inhibit the use of the area for anchorage.

5 Aquaculture

Over the last 15 years, there have been various changes to the way aquaculture is regulated in New Zealand. Plan Change 4 (notified October 2006) to the Regional Coastal Plan sets out the latest 'version' for how aquaculture is managed in Northland. It includes policies and rules for managing existing aquaculture and directing how and where new aquaculture is located. At the time of writing, council is awaiting an Environment Court decision on the most significant aspect, that being the location of areas where aquaculture will be prohibited (with some exceptions). The remaining aspects, the policies directing how and where new aquaculture is located outside prohibited areas and the rules for managing aquaculture within Marine 3 Management Areas (aquaculture areas), are still subject to unresolved appeals.

A key issue for the aquaculture industry is certainty around reconsenting of existing farms. Their preference is for reconsenting to be a controlled activity (within an aquaculture 'zone'). The argument being that the 'debate' about whether aquaculture is appropriate is had at the time of creating the Marine 3 Management Area, but recognising that there are some 'fine tuning' controls required for specific operations. This is the current approach in Plan Change 4.

A key challenge for the next coastal plan will be justifying the renewal of existing aquaculture (or consents for new space) in or close to 'outstanding' natural landscapes or natural character areas given the effect of the recent Supreme Court decision on King Salmon's proposals to establish salmon farms in the Marlborough Sounds (*Environmental Defence Society Inv v New Zealand King Salmon Company Ltd.)*. In practical terms, what the decision means for aquaculture is that once councils have identified areas as 'outstanding', very little development will likely be acceptable in those areas, especially if it would result in adverse effects on the characteristics that contribute to the outstanding values.

The NZ Coastal Policy Statement 2010 requires councils to recongise the potential contribution of aquaculture to social, economic and cultural wellbeing of communities and to provide for it in appropriate places. Additionally, central government sees Northland as one of the key regions in the country with potential to develop more space for aquaculture. Plan Change 4 identifies large areas where aquaculture is prohibited[15]. There is a risk that having large areas of the coast 'prohibited' for aquaculture could be discouraging potentially suitable/appropriate types of aquaculture from being established.

A key issue therefore for the next coastal plan (especially for the aquaculture industry) will be the ability to establish new farms in appropriate places, as well as exploring opportunities to utilise new technologies and methods in areas that may not currently be identified as being suitable for aquaculture.

Additionally, there are currently around 30 existing marine farms that are not located within aquaculture areas (most are located within Marine 2 Management Areas and some in Marine 1 Management Areas). They are all consented but their consents will expire in either 2020 or 2025. A decision is needed to determine if it is appropriate for these 'out of zone' marine farms to continue to remain where they are located (and therefore be 're-zoned' to a Marine 3 Management Area) – such decisions will be guided by policies in the coastal policy statement and Proposed Regional Policy Statement.

[15] While the Environment Court is yet to release its decision, it has released an interim decision.

5.1 Possible changes to the Regional Coastal Plan

- Look to strategically focus all aquaculture activities (including existing 'out of zone' aquaculture) into Marine 3 Management Areas. This could mean that if council/community deems that the adverse environmental effects of existing 'out of zone' aquaculture farms are appropriate, then the footprint of the marine farm could be re-zoned to a Marine 3 Management Area. This would be consistent with the coastal policy statement's requirement to provide for aquaculture activities in appropriate places.
- With regards to establishing new aquaculture areas within/adjacent to outstanding natural character areas or outstanding landscape areas, new policy direction and rules will likely make it very difficult for 'traditional' forms of marine farms to establish (such as mussel or oysters), however there could be opportunities for different or experimental types of marine farming to establish, especially if it can be demonstrated that adverse effects will be avoided[16].
- With regards to renewals of existing aquaculture located within/adjacent to outstanding areas, new policies and rules could be drafted that give a 'leg up' to these farms by saying that it may be acceptable to allow activities that have minor adverse effects to occur (whilst still giving effect to policies 13 and 15 of the New Zealand Coastal Policy Statement) and to recognise that the 'outstanding' areas have been identified with the existing marine farms in or near them.
- Assuming that 'controlled' activity status is generally acceptable for new oyster and mussel farms in Marine 3 Management Areas (so long as the site is not within/adjacent to an 'outstanding' area), defining an appropriate activity status (likely to be either 'restricted-discretionary' or 'discretionary' activity) for experimental aquaculture and/or finfish farms in these areas will be required – this could be tested through the formal section 32 evaluation process. Either of these two types of activity status are considered appropriate because they can be viewed as a 'middle ground' between a controlled activity status (meaning that council can impose conditions but has to grant consent) and a non-complying activity status (which requires applicants to pass the RMA s104D 'gateway' test – adverse effects of activity will be minor or the activity will not be contrary to the objectives and policies of the plan – before the decision to grant/decline an application can be made).

6 Placement and occupation of space for structures

Under the RMA, the default is that resource consent (coastal permit) is required for the placement (construction) of any structure within the coastal marine area and an additional consent is required for the on-going occupation of space[17]. Currently in the Regional Coastal Plan, resource consent is generally required for the ongoing occupation of most structures (there are some exceptions for minor structures).

There are circumstances when the on-going occupation of space could be a 'permitted' activity (subject to compliance with standards/terms) because the effects have already been accepted as appropriate and the requirement to repeatedly renew the consent to occupy space achieves very little but imposes costs.

The New Zealand Coastal Policy Statement (coastal policy statement) now requires councils to identify in coastal plans, resources or values that are under threat or at significant risk from adverse cumulative effects – too many structures in a single bay or area have the

[16] It could be possible for some types of aquaculture - such as geoduck (salt water clam) – to establish without causing adverse visual effects. Further investigation will obviously be required.
[17] Within the common marine and coastal area as defined in the Marine and Coastal Area Act 2011.

potential to lead to adverse cumulative visual effects and the new plan will need to take this into account through new policies and rules.

The coastal policy statement also discourages activities in the coastal marine area that do not have a functional need to be located there (also mirrored in the Proposed Regional Policy Statement), which will also need to be reflected in the new Regional Coastal Plan policies.

6.1 Possible changes to the Regional Coastal Plan

The next Regional Coastal Plan could include new policies/criteria/rules to determine when the on-going occupation of space for structures is permitted (subject to compliance with standards and terms). This would likely be for smaller structures with minor environmental impacts and/or public good structures (for example, retaining walls under "x metres long, boat ramps less than x metres, footbridges, navigation aids or infrastructure structures). This approach has recently been adopted for existing moorings within Marine 4 Management Areas. This would reduce compliance costs and the need for 'renewal' consents but the requisite standards/terms would obviously need to be drafted to avoid the potential for undue adverse environmental effects to occur. There was considerable 'in principle' support for this concept at the coastal water space key stakeholder workshop but it was agreed that there would likely need to be tight parameters and/or criteria to determine which structures this could apply to.

To give effect to the coastal policy statement, new policies and rules to ensure that a proliferation of structures does not lead to adverse cumulative effects on special values, resources or coastal processes is required. This is likely to only be required where such structures are in high demand or the 'values' of a specific location are very sensitive to additional development. The new regional plan will therefore need to identify coastal processes, resources or values that are under threat or at significant risk from cumulative effects of structures and include provisions to manage these effects. This could include the creation of new zones that promote/discourage certain structures or new rules to 'prohibit' certain activities/structures from establishing in specific locations. Policy direction on functional need of structures and encouraging multiple use(s) will assist in managing cumulative effects.

To give effect to the coastal policy statement and Proposed Regional Policy Statement, the new plan will need to provide policy guidance and prescriptive rules to ensure that only those structures that have a functional need to locate in the coastal marine are located there unless it can be demonstrated that significant benefits will occur (such as the creation of jobs for local residents or regionally significant infrastructure).

7 Recreational activities

There are currently no regional rules to control vehicle use on sand dunes and coastal margins above the line of mean high water springs but there are some beaches where recreational vehicles on dunes are potentially an environmental problem (for example, Baylys beach and Tokerau). The coastal plan 'permits' vehicle use on foreshore areas within Marine 1 and 2 Management Areas so long as indigenous vegetation is not destroyed and bird roosting sites are not disturbed, but the jurisdiction of this plan starts/ends at the line of mean high water springs. The Regional Water and Soil Plan manages activities (such as earthworks and vegetation clearance) within the Riparian Management Zone, which includes land adjacent to the coastal marine area but vehicle usage on sand dunes is not covered in this plan.

The New Zealand Coastal Policy Statement has introduced new policies regarding recreational activities. These include policies on public open space (Policy 18), vehicle access (Policy 20) and protection of surf breaks of national significance (Policy 16). These 'breaks' are listed in Schedule 1 to the New Zealand Coastal Policy Statement and some are in Northland (Ahipara). The new regional plan needs to recognise and provide for these policies, the most significant change being the policy on surfbreak protection. The debate will likely be around:

- Whether we only address the surfbreaks listed in the New Zealand Coastal Policy Statement or include other regionally significant breaks (the Proposed Regional Policy Statement says the regional council will consider identifying surf breaks of regional significance in the relevant regional plan);
- Whether the surfbreaks require further protection than that currently provided in the Regional Coastal Plan (most activities that would affect such areas are subject to controls and typically such areas are high energy so only suited to activities that tolerate exposure to extreme wave climate) and if so;
- Whether the surfbreaks and associated land/water space are to be mapped and if so, on what basis;
- The type of activities to be controlled (for example, dredging) and the level of control required (what distance around the 'break' could/should be protected, if any);
- The extent to which this would constrain/limit other uses and the relative cost/benefits of doing so.

Regionally significant surf breaks - surf breaks are a finite natural resource and the source of recreation for a diverse and increasingly large range of participants. It is estimated that approximately 7% [310,000] of New Zealanders "surf" on a regular basis[18].

The region has a variety of break types, including some that produce world class waves. There is mounting evidence from New Zealand and internationally that suggests inappropriate development can adversely affect or in severe cases destroy surf breaks. The quality of a break can be affected by:

- seawalls (e.g. St Clair, Dunedin),
- jetties (e.g. Mission Bay, San Diego, California),
- boat ramps (e.g. Manu Bay, Raglan),
- piers (e.g. Oil Piers, Ventura, California), and
- beach nourishment (e.g. The Cove, Sandy Hook, New Jersey)
- dredging and dumping (it was significant concern with the Whangamata marina proposal)

The breaks likely to be regionally significant and most at risk are on sandbars at the mouth of estuaries e.g. Pataua Bar, Whananaki Bar and Houhora Bar. These sandbars are generally sensitive to change in flow and sedimentary regimes (e.g. from dredging, beach nourishment or hard protection works). The operative Regional Coastal Plan does not provide for the consideration of impacts on surfing and under the New Zealand Coastal Policy Statement, councils only are required to 'protect' the surf breaks of national significance.

7.1 Possible changes to the Regional Coastal Plan

The creation of a regional coastal environment plan or single regional plan would likely be an efficient and effective tool to improve the integrated management of the coastal marine area

[18] B Perryman for Bay of Plenty Regional Council, *Bay of Plenty Surf Break Study*, April 2011

and adjacent land with regards to managing recreational activities such as vehicle use (as well as managing coastal hazard risk and structures/developments that straddle the line of mean high water springs). This is because it would enable the council to control use above and below the line of mean high water springs.

The new regional plan could 'prohibit' vehicles from using/accessing beaches is situations where they may cause:

- damage to dunes or other geological systems,
- damage to the habitats of fisheries resources, or
- harm ecological systems or indigenous flora and fauna (such as shellfish beds).

In reality, this would likely be very difficult to enforce and it is unsure if this option would pass the section 32 evaluation test. Another option could be merely to 'roll over' the current provisions in the Regional Coastal Plan and leave the remaining management of vehicles on beaches to a combination of district council bylaws (such as Whangarei District Council's Vehicles on Beaches Bylaw 2009) and existing non-regulatory approaches - such as working in collaboration with other parties (such as Northland Policy and the New Zealand Transport Agency) on a multi-agency safe beach driving education programme to promote safer and more environmentally conscious beach driving practices.

Given the small number of regionally significant surf breaks (estimated to be around 10 breaks) and their importance to the surfing public, it is recommended that the regionally significant surf breaks are mapped and policy put in place that recognise their value. It is anticipated that the process can be completed within 3 months and will cost less than $5000 excluding staff time. It would be done in conjunction with board riders (surfing) clubs in the region.

It is anticipated that this will be a three step process:

- determine the criteria,
- apply the criteria which will rank the surf breaks
- determine appropriate threshold for "regionally significant"

Once the breaks are identified and mapped, it is likely that a two tier level of 'protection' will apply to surf breaks. A requirement to avoid 'adverse' effects of activities on access to and use of nationally significant surf breaks and to avoid 'significant' adverse effects of activities on use and enjoyment of regionally significant surf breaks.

Management measures could include controls on:

- Structures that could impede/affect the swell corridor or the break itself;
- Dredging related activities;
- Discharges/activities that affect water quality and recreational use of coastal waters; and
- Activities in the coastal environment that have the potential to adversely affect access to the surf breaks.

Tāngata whenua participation in resource management

How can we improve Tāngata whenua participation in resource management in our regional plans? This is a summary of our initial ideas.

What is Tāngata whenua participation in resource management?

This review looks at Tāngata whenua participation in resource management processes. In particular:

- The aspirations of Tāngata whenua for their active participation in decision-making, management, and monitoring of their lands, seas and taonga.
- How these aspirations have been provided for in the regional plans.
- Practical issues for Tāngata whenua and the regional council.
- The extent to which council commitments in the current regional plans have been implemented, and if not why.
- Looking to the future, what it is council could/should be doing.

This review does not look at the issues Tāngata whenua have with particular resources. These are covered in the other topic reviews.

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

What do Tāngata whenua want?

All natural and physical resources and the management of them are of significance to Tāngata whenua and while this may vary from iwi to iwi and within iwi, there are a number of generic cultural issues that can be considered across the region. The following have been derived from iwi and hapū management plans held by council:

- Involvement of Tāngata whenua in decision-making not as a stakeholder holder, interested party or other; but as a joint partner in making the decision on all activities, proposals and consents within their areas of interests.
- Consultation with Tāngata whenua at all levels of Māoridom including all hapū and iwi authorities. In particular all resource consents, plans, policies and strategies that affect their relationship with their values and taonga.
- Iwi and hapū management plans are recognised and provided for in all regional plans.
- Tāngata whenua are involved in monitoring resource consents and their involvement is resourced by resource consent holders. Of particular interest to Tāngata whenua is any discharge to, development in or near, waterways, water bodies and the coastal marine area.
- Relationships are important to Tāngata whenua who view any council relationship to be a partnership under Te Tiriti[1].

What's the relevant law and policy?

There are a range of laws and policy dodduments that regional plans must implement. The most relevant are:

- Resource Management Act 1991
- Treaty settlement legislation
- New Zealand Coastal Policy Statement
- National Policy Statement on Freshwater Management 2014
- Development of the Proposed Regional Policy Statement

1 Resource Management Act 1991

There are many references to Maori interests the RMA including:

- 'The relationship of Maori and their culture and traditions with their ancestral land, water, sites, wāhi tapu, and other taonga' is a matter of national importance which must be recognised and provided for by decision makers (section 6(e))
- ''The protection of historic heritage' which includes 'sites of significance to Māori, including wāhi tapu' from inappropriate subdivision, use, and development is a matter of national importance which must be recognised and provided for by decision makers (section 6(f))
- The protection of recognized customary activities is a matter of national importance which must be recognised and provided for by decision makers (section 6(g))
- 'Kaitiakitanga' is a matter which decision makers must have particular regard to (section 7(a)). It is defined in section 2 as meaning 'the exercise of guardianship by the Tāngata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship'.

[1] The Treaty of Waitangi

- All persons exercising functions and powers under the Act must 'take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)' (section 8)
- Local authorities are required to keep and maintain for each iwi and hapu within their area, a record of their contact details, the planning documents recognised by each iwi authority and lodged with the local authority, and any area over which one or more iwi or hapu exercise kaitiakitanga (section 35A)
- If the Minister for the Environment is considering preparing a national policy statement he or she must seek and consider comments from relevant iwi authorities (section 46(a))
- During the preparation of a proposed policy statement or plan, the local authority is required to consult with 'the Tāngata whenua of the area who may be so affected, through iwi authorities' and any customary marine title group in the area (First Schedule, clause 3(1)(d)-(e)). Such consultation is not required where the matter has been the subject of consultation with the same party under another statute within the 36 months preceding the public notification of the proposed policy statement or plan (First Schedule, clause 3C). Clause 3B of the First Schedule sets out the requirements for consultation with iwi authorities. These include considering ways in which the local authority may foster increased capacity of iwi authorities to respond to an invitation to consult, the establishment and maintenance of processes to provide opportunities for iwi authorities to consult, enabling iwi authorities to identify resource management issues of concern to them and indicating how those issues have been or are to be addressed.
- When preparing a regional policy statement, regional plan or district plan, regional councils and territorial authorities are required to take into account any relevant planning document recognised by an iwi authority and lodged with the council, to the extent that its content has a bearing on resource management issues of the region (sections 61(2A), 66(2A) and 74 (2A)
- In relation to a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, the council must when preparing or changing a regional policy statement or regional plan recognise and provide for the matters in that document, to the extent that they relate to the relevant customary marine title area and take into account other matters in that document
- A local authority or applicant does not have a duty to consult with any person, including tangata whenua, about a resource consent application unless this is required by other legislation (section 36A)
- Where a protected customary right is likely to be adversely affected by a proposed activity, the assessment of effects accompanying the resource consent application must include a description of possible alternative locations or methods (First Schedule, clause 1A)

2 Treaty settlement legislation

Settlement legislation is needed to implement any treaty settlement. For example, legislation is needed to ensure the finality of the settlement by removing the ability of the courts and Waitangi Tribunal to re-open the historical claims. Once the Bill is passed through parliament and signed by the Governor-General. The legislation then allows the negotiated mechanisms within settlements to be implemented.

Statutory acknowledgements are statements in Treaty of Waitangi settlements between Crown and iwi that are intended to recognise the mana of Tāngata whenua groups in relation to identified sites and areas they are also an acknowledgement by the Crown of the particular cultural, spiritual, historic, and traditional association of an iwi with each statutory

site and area. Text for statutory acknowledgements is generally included in the schedules to each relevant Claims Settlement Act.

The locations for statutory acknowledgement areas are shown on Survey Office (SO) plans. While these plans do not indicate the precise boundaries of the statutory acknowledgement area, they do indicate the location as clearly as possible as set out in Schedules to the Claims Settlement Act that establishes them.

Council must consider statutory acknowledgements when making decisions on whom to involve in resource consents and hearings. While a statutory acknowledgement may vary for each settlement, in essence, a statutory acknowledgement requires councils to:

- forward summaries of all relevant resource consent applications to the relevant claimant group governance entity - and to provide the governance entity with the opportunity to waive its right to receive summaries

- have regard to a statutory acknowledgement in forming an opinion as to whether the relevant claimant group may be adversely affected in relation to resource consent applications concerning the relevant statutory area

- within the claim areas, attach for public information a record to all regional policy statements, district plans, and regional plans of all areas affected by statutory acknowledgements.

The Te Hiku Settlement Bill has passed its first reading by parliament is now preparing for the next stage which is the select committee process, the submission process will close on the 30th January 2015. It is the view of Te Hiku Iwi that legislation will pass through parliament sometime between May and July 2015. Once royal ascent is given the Te Hiku Settlement legislation will create the Te Oneroa A Tohe Beach Management Board – a new permanent joint committee between iwi, Northland Regional Council and Far North District Council. The composition of the Board will have 50 percent iwi members and 50 percent local authority members. It will be chaired by iwi and make decisions by a 70 percent majority2.

The Board will provide governance and direction in order to promote the use, development and protection of the Te Oneroa-a-Tohe-/Ninety Mile Beach management area and its resources in a manner which ensures the environmental, economic, social, spiritual and cultural wellbeing for present and future generations.

The Kaipara Harbour Joint Political Working Group has been involved in discussions regarding this framework agreement. The Joint Political Working Group includes Auckland Council, Kaipara District council; council is represented on this working group. Te Uri o Hau, Ngāti Whātua, and Te Roroa are also represented have already signed a framework agreement for co-governance over Kaipara.

[2] OTS (2014) Te Hiku Settlement Bill

3 National Policy Statement Freshwater Management 2014

Objective D1 of the NPS for freshwater management states that:

"To provide for the involvement of iwi and hapū, and to ensure that Tāngata whenua values and interests are identified and reflected in the management of fresh water including associated ecosystems, and decision-making regarding freshwater planning, including on how all other objectives of this national policy statement are given effect to".

4 New Zealand Coastal Policy Statement 2010

Policy 2 of the New Zealand Coastal Policy statement 2010 concerns the Treaty of Waitangi and the connection and relationships that Tāngata whenua have with the coastal environment, promotes Tāngata whenua involvement in coastal decision-making, and recognises the importance of Māori cultural and heritage values.

Māori have strong traditional and continuing cultural associations with the coast. Policy 2 focuses on ways in which local authorities can actively involve Tāngata whenua in their planning processes and decision-making to enable Tāngata whenua to be active participants in coastal planning and management.

5 The Proposed Regional Policy Statement for Northland

The Proposed Regional Policy Statement provides for a protocol to be developed between regional council and Iwi Authorities to determine when the council will[3]:

- Require an assessment of environmental effects and what it should include, and how council will use and take into account any cultural impact assessment.
- Appoint and use independent commissioners for resource consent applications and plans.
- Hold hearings on a marae and provide translation services.
- Notify Tāngata whenua of resource consent applications and confer affected party status; and
- Determine common meanings and methodologies for key Māori concepts, values and practises and a process for updating them.

[3] NRC (2014) Proposed Regional Policy Statement Section 8.1.6

What we said we would do

This section outlines the provisions in the current regional plans in respect to Tāngata whenua participation in resource management processes.

1 Regional Air Quality Plan

The Regional Air Quality Plan has little in the way of policies or methods guiding processes for Tāngata whenua participation for air quality management. This is partly a reflection of air quality not being a significant issue for Tāngata whenua generally[4]. Specific provisions are:

- A method committing to the setting up of an air quality liaison group for the Marsden Point airshed and for it to include local iwi[5].
- Information requirements for air discharge permit applications include a report of any consultation undertaken with local iwi[6].
- Acknowledgment of the ability to transfer powers to iwi and others (though no commitment to)[7].

2 Regional Coastal Plan

The Regional Coastal Plan makes a range of commitments to include iwi and/or Tāngata whenua in resource management processes[8]:

2.1 Consultation

The Regional Coastal Plan requires consultation with:

- Tāngata whenua over development proposals within the coastal marine area which may affect resources of significance to Tāngata whenua[9].
- Iwi authorities over the traditional and cultural relationships of Māori with natural and physical resources within the coastal marine area of their rohe[10].
- Iwi authorities on the type and extent of available information on heritage value within the coastal marine area[11].
- Tāngata whenua regarding possible means of protecting wāhi tapu and other sites of cultural significance[12].
- Māori to identify areas where restriction of public access to and along the coastal marine area is sought to protect areas of traditional, spiritual or cultural significance[13].

The Regional Coastal Plan encourages applicants to consult with Tāngata whenua over development proposals within the coastal marine area which include a discharge of contaminants to coastal waters[14].

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[4] See for example the proposed Regional Policy Statement Issue 2.6 which does not identify air quality as regionally significant. Within some iwi and hapu management plans there is a general reference to air quality. The most prominent air quality issue Tāngata whenua appears to be dust from unsealed roads – see the "Air quality" topic review for a discussion on this.
[5] Method 6.18(2)
[6] Section 11.1(m)
[7] Section 14.3
[8] These are mainly dealt with in Section 11 – "Recognition of and Provision for Māori and Their Culture and Traditions".
[9] Method 11.5.1
[10] Method 11.5.2
[11] Method 12.5.1
[12] Method 12.5.6
[13] Method 10.5.10

2.2 Decision-making

The Regional Coastal Plan states that a Tāngata whenua representative will be included on hearing committees (where appropriate) for resource consents in taiapure and maataitai reserves and waters classified for cultural purposes[15].

2.3 Advice and information sharing

The plan states that the council will provide information/advice to:

- Iwi authorities, on coastal resource management structures[16,] and land and water information generally[17].
- Tāngata whenua regarding possible means of protecting wāhi tapu and other sites of cultural significance.
- Tāngata whenua for their applications for taiapure or maataitai reserves[18.]

2.4 Monitoring

The Regional Coastal Plan commits to investigating options for Tāngata whenua involvement in monitoring use, development and protection of resources within the coastal marine area[19].

2.5 Management plans

The Regional Coastal Plan says that the council will assist iwi authorities in the development of iwi management plans for resources within the coastal marine area of their rohe[20].

3 Regional Water and Soil Plan[21]

The Regional Water and Soil Plan makes a range of commitments to include iwi and/or Tāngata whenua in resource management processes[22]:

3.1 Consultation

The Regional Water and Soil Plan encourages applicants for resource consents for activities that may have an adverse effect on the taonga of Tāngata whenua to consult with Tāngata whenua prior to their application being processed[23].

In consultation with Tāngata whenua, council will[24]:

- Assess the most efficient and effective means of monitoring any adverse effects of resource use and developments, with particular reference involving Tāngata whenua.
- Subject to Section 33 of the Resource Management Act 1991, consider transfer of power where iwi represents the appropriate community of interest[25].

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[14] Method 11.5.6
[15] Policy 11.4.4 and Method 11.5.6
[16] Method 10.5.8
[17] Method 12.5.9
[18] Policy 37.3.1 and Methods 37.4
[19] Policy 11.4.4
[20] Policy 11.4.5
[21] RWSP Section 6
[22] These are mainly dealt with in Section 6 – “Recognition of and Provision for Māori and Their Culture and Traditions”.
[23] Section 6.5
[24] Section 6.5.4
[25] Section 6.5.4 (b)

3.2 Advice and information sharing

Council will:

- Where requested by an iwi authority, provide appropriate land and water resource information held by the council[26].
- Develop guidelines for when and how resource consent applicants should ask Tāngata whenua about the cultural effects of certain activities[27].
- Facilitate a land management working group (to include iwi) who will review best land management practices[28].
- Liaise with community agencies and groups (including iwi), and hold public meetings to collect and disseminate information about the results of monitoring within catchments[29].

Practical issues

The following is a brief description of the main practical issues that affect and/or constrain Tāngata whenua participation:

- A lack of understanding by Tāngata whenua of council's RMA planning documents and how to use them effectively.
- A lack of understanding by Tāngata whenua of what the limits and parameters of council staff are regarding cultural impacts for consent applications.
- Popular belief by Tāngata whenua that Tāngata whenua consultation under the RMA is mandatory.
- A lack of detail provided by Tāngata whenua on what exactly their cultural issues are when they provide comments or submissions on applications, for example, wāhi tapu.
- The resource consent decision does not provide for effective kaitiakitanga.
- Tāngata whenua views of kaitiakitanga differ to the legal description in the RMA.
- Lack of clear guidance to, and understanding by, council staff of what are considered to be "cultural issues".
- Large amount of effort required by staff in dealing with matters raised by some Tāngata whenua which cannot be dealt with through a consent process.
- Overlapping interests of Tāngata whenua often leads to confusion on who is the appropriate Tāngata whenua group or grouping to talk to.

[26] Section 6.5.5
[27] Section 6.5.6
[28] Section 12.7 (12-7)
[29] Section 13.5 (13-4)

What have we done well?

The three following matters below relate specifically to the policies and methods of the regional plans.

1 Consultation

The RMA no longer requires that resource consent applicants consult with Tāngata whenua. However, council actively encourages resource consent applicants to consult with Tāngata whenua and to do this earlier for the more major applications at least, if the applicant has contacted us before they make an application.

For the more minor applications, if council is aware of an application and knows there are Tāngata whenua specific interests or council sees some other matter that suggests this, council encourages the applicant to consult with Tāngata whenua. Otherwise the council relies on the circulation of all applications to Tāngata whenua and are ready to take the appropriate action if council gets a response.

2 Information sharing

Council retains its policy of circulating all resource consent applications to interested marae, hapū and iwi on its database. This is over and above the requirement to circulate all notified applications to the two groups with treaty settlement legislation.

Further information is provided to iwi authorities and hapū groups in respect to resource consent applications, upon request.

3 Monitoring

A Joint Iwi Monitoring Fund was established in 1996/1997 to provide Māori with the opportunity to undertake monitoring projects within Northland. This fund is outside the scope of the regional plans and is an annual contestable fund of $10,000. Previously funded projects included studies on freshwater macroinvertebrates, eel and water quality monitoring, kokako monitoring and shellfish surveys.

4 Iwi/hapū management plans

The council supports the preparation of iwi/hapū management plans by providing advice and an annual contestable fund of $20,000 that iwi groups can apply to for the development of the environmental component of iwi/hapū management plans. Previously funded projects and advice have been provided to Ngati Wai, Ngati Hau, Te Uri O Hau, Te Runanga O Whaingaroa, Patuharakeke Māori Trust Board and Ngati Rehia.

What we have not done well?

1 Decision-making

Council has only had one resource consent hearing on a marae in the last 10 years (Crest Energy application in the Kaipara harbour). The reason for this is that applicants may feel unsafe in this type of environment including having to pay for the costs, and requests by Tāngata whenua to hold hearings on marae have been limited.

2 Information sharing

Council has not developed the guidelines for “information on the cultural effects” on certain resource consent activities as additional information for applicants. Nor have guidelines

been developed for consent activities that may or may not impact on the cultural relationship Tāngata whenua have with their environment.

There was no proposed process within council to achieve the outcome. Iwi authorities over the past years have been focussed on their Treaty settlement processes and have not had the capacity to engage in the development of these guidelines.

3 Monitoring

Council has enabled iwi involvement onsite during consent monitoring an example is bore testing for Te Mahi o Pohe, council has on request from iwi provided opportunities for iwi to participate in site visits for monitoring consent conditions. Overall Council remains responsible for all consent compliance monitoring that is carried.

What needs to change in the regional plans?

The simple answer is we don't know.

Tāngata whenua participation in council resource management processes was analysed and addressed in some detail in the Proposed Regional Policy Statement. At this time, we do not think that the plans could say anything significantly more than what the Proposed Regional Policy Statement already commits to. We think that these commitments need to be tested and implemented before we start thinking about whether the regional plans could add any value.

At the Tāngata whenua workshops[30] there was a sentiment that the proposed Regional Policy Statement sets out a good set of actions for promoting Tāngata whenua participation, and priority should be given to their implementation.
Another aspect to think about is whether regional plans are the right place to set out how council will involve Tāngata whenua in resource management processes. Other options include the Long Term Plan or a stand-alone council policy.

[30] A series of workshops were held at Kaitaia, Kaikohe and Whangarei in November 2014 which focussed on identifying environmental issues of concern for Tāngata whenua.

Regional plans review – topic summary

Hazardous substances

How can we improve the management of hazardous substances in our regional plans? This is a summary of our initial ideas.

What are hazardous substances?

Hazardous substances are substances which present a danger to people and the environment due to their chemically reactive, explosive, flammable, corrosive, toxic, ecotoxic or disease causing nature. A variety of substances fall into this category including fuels, pesticides, metallic products (e.g. copper used in timber treatment) and liquid waste produced in landfills (leachate).

Hazardous substances are commonly used throughout the region and are an important contributor to our economic and social wellbeing. However, when they are poorly managed hazardous substances can contaminate land and water, which has the potential to affect human and ecological health.

This topic encompasses two key components:

- Activities that have the potential to contaminate land or water (solid waste disposal to land and the use or disposal of hazardous substances); and
- Management of land contaminated by historic activities.

This topic does not include:

- Subdivision or change of use on contaminated land (addressed by district plans);
- The use, storage, and transport of hazardous substances on land (addressed by district plans);
- Burning hazardous substances (covered by air quality topic); and
- The discharge of effluent (covered by water quality topic).

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

What needs to change in the regional plans?

1 Discharges from contaminated land

The Regional Water and Soil Plan has controls in place for the discharge of hazardous substances to land and water. These controls focus on trade and industrial activities (sections 20 and 21) with other activities being addressed through a general catch-all rule (section 23.3). Both rules require resource consent to be obtained to discharge hazardous substances to land or water. They apply to new and historic hazardous substance discharges. The intention is that the resource consent process is used to ensure controls are in place to protect the environment from the potentially negative impacts hazardous substances can have on water quality and ecosystems..

Feedback from council staff and other stakeholders indicates that these rules work well for activities that involve on-going or anticipated hazardous substance discharges and that there is support to maintain the existing discretionary status. The existing regime is seen as an appropriate mechanism to discourage hazardous substance discharges while providing an opportunity to discharge where environmental effects can be managed to an acceptable level.

Other key point made by stakeholders are that that industry specific education is crucial to improving environmental performance / compliance and council needs to be able to exercise discretion around when it enforces these rules.. Accidents do happen from time to time and council officers need to have the ability to exercise discretion in instances where a discharge is likely to have less than minor effects. It is generally accepted that there is some discretion in the application of s84 of the Resource Management Act and some discretion can be exercised when enforcing plans with the Environment Court generally accepting there are often better courses of action than enforcement. In the past council has used its discretion and has not taken enforcement action where small discharges have resulted in less than minor environmental effects (i.e. where a lawn mower fuel container has been knocked over). If these rules are carried through to a new regional plan it is expected that discretion will be exercised in similar circumstances.

While the existing rules are working well in some situations the review has highlighted that they do not work as well for accidental, historic and passive discharges. In practice the rules are infrequently applied to historic and passive discharges of hazardous substances which has lead to inconsistent application of the rules. For example resource consent was required for a passive discharge of fuel in Kaikohe but the requirement to apply for resource consent for an equivalent discharge at Mangawhai was not enforced. This is an issue in terms of equity for applicants and increases the risk of negative environmental effects and legal implications for council.

Also, while council is aware of many potentially contaminated sites, the current rule requires council to monitor and demonstrate non-compliance. A lack of resources to proactively undertake this work means that the majority of these sites have not been confirmed as being contaminated and remediation has not taken place.

While this review has identified some administration issues water quality monitoring has not signalled that the presence of hazardous substances in our water ways is a significant issue at this time (with the exception of a handful of sites that are being managed to improve water quality).

Lastly, the Regional Water and Soil Plan provides no guidance for how contaminated sites should be managed[2], and therefore there is a risk of inconsistent and inappropriate controls being applied.

1.1 Possible changes to the regional plans

- Introduce policy articulating council's expectations for hazardous substance discharges and for monitoring and remediating contaminated land. It is anticipated that councils expectation will be for new hazardous substances discharges to be avoided and that contaminated sites are to be remediated unless it can be demonstrated that there is no risk to water quality
- Retain rules discouraging the discharge of hazardous substances to land and water to avoid contamination of land[3] or water.
- Introduce provisions specifically relating to discharges from contaminated land.
    - Contaminated sites should be managed to avoid migration of contaminants from the site and ensure contamination does not have adverse effects on surface water or groundwater.
    - This will be done by setting limits for acceptable concentrations of contaminants in soil (onsite) and/or water at the boundary (groundwater and surface water). Acceptable levels of contamination will reflect ANZECC and Ministry for the Environment Guidance except where natural background levels of contaminants exceed these guideline values.
    - Where these standards cannot be met resource consent will be required and will be used to assess the nature of contamination on the site, the impacts on the environment, and methods for remedying or mitigating those effects.
    - This solution however will not deal with the issue of resourcing the 'proving' of non-compliance. This will require further consideration.

2 Use of waste oil for dust suppression on unsealed roads

A high percentage of roads in Northland remain unsealed. During periods of dry weather, dust from unsealed roads can be a nuisance for nearby residents and in some instances may exacerbate existing respiratory illnesses , particularly when dry weather coincides with increases in traffic. Increases in traffic on the region's unsealed roads is typically sudden and of limited duration, resulting from temporary activities (for example, harvesting plantation forestry), in which case sealing of these roads may not be practicable.

One option to manage the dust is to use dust suppressants.

The Regional Water and Soil Plan currently states that:

- the use of lignin-based products for dust suppression on unsealed roads is a permitted activity[4];
- The use of bituminous emulsions[5] and unused or un-contaminated oil for dust suppression are discretionary activities; and
- The use of waste oil[6] as a dust suppressant is currently prohibited.

Since the Regional Water and Soil Plan was developed the use of dust suppressants has evolved. Lignin based dust suppressants are now rarely used because of poor performance and unused oil is rarely used because of its cost. Refined oils products such as 'dustlock'

[4] Rule 23.1 of the Northland Regional Water and Soil Plan
[5] An emulsion can be defined as a dispersion of small droplets of one liquid in another. Bitumen emulsions are generally bitumen dispersed in water with the aid of a small quantity of emulsifying agent.
[6] During use, oil becomes contaminated with substances that are hazardous to human health and the environment, including heavy metals and polyaromatic hydrocarbons, some of which are potential carcinogens

are used from time to time over short stretches of road and other products such as light bituminous coatings are being tested. However dust from roads continues to be an issue.

Over recent years there has been a call from some district councils and some members of the public to allow the use of waste oil as a low-cost dust suppresant. Waste oil is used as a dust suppressant in Gisborne, Hawkes Bay, Otago and Southland.

The key concern with the use of waste oil on roads are that waste oil has the potential to reduce water quality and effect the healthy functioning of aquatic organisms and that waste oil can have carcinogenic and non-carcinogenic effects on the health of people who come into contact with treated dust. Woodward-Clyde investigated these effects for the Ministry for the Environment in 2000[7]. The key findings were:

- Road oiling is likely to have an impact on sediment quality and water quality where it is applied within seven metres of a watercourse.
- Human health impacts are a concern particularly where exposure is over decades.
- Health risk can be decreased by, for example, washing fruit and vegetables before consumption, not allowing dairy cows to graze roadside verges and increasing the setback of vegetable gardens from the road.

Feedback on the use of waste oil to date has been mixed. Some district councils and ratepayers are supportive of the regional council allowing the use of waste oil on unsealed roads. Other stakeholders, including Northland District Health Board and Whangarei District Council staff would not support reducing the controls on waste oil as a dust suppressant. Whangarei District Council roading staff do not see waste oil as a practical solution to their districts dust issues. They stated that using waste oil on unsealed roads is no longer economically viable. The product needs regular application to be effective, the price of waste oil has increased and the volume of waste oil available has significantly reduced over recent years.

2.1 Possible changes to the regional plans

The prohibited status of using waste oil as a dust suppressant should be reviewed. A non-complying activity class may be more appropriate than the current prohibited status. It would provide the option for an applicant to demonstrate the environmental and health effects can be managed to an acceptable level (i.e. ANZECC and Ministry of Health guidelines).

3 Impacts of small landfills on farms is not well understood

Many of Northland's rural areas do not have easy access to recycling or municipal land fills to dispose of their waste. While there are some waste collection programmes in place, for example, Plasback8, the majority of rural waste needs to be disposed of in other ways.

The Regional Water and Soil Plan provides for small-scale landfills (fewer than 12 m^3per annum) as a permitted activity. The rules focus on internalising the effects of a landfill within the property and protecting water quality. A key assumption is that small volumes of waste produce small volumes of leachate which can be managed through setbacks from watercourses and groundwater. This is a similar approach to other regions.

Studies from the Canterbury region indicate that traditional practises of burning and burying waste account for the majority of rural waste disposal. The study also indicated that the volume of waste produced was higher than initially thought with an average of 9.2 tonnes of

[7]Woodard-Clyde for Ministry for the Environment, Assessment of the effects of combustion of waste oil and health effects associated with the use of waste oil as a dust suppressant, August 2000.
[8] Plasback is a product stewardship scheme to recover used farm plastics for recycling.

non-natural waste (scrap metal, hazardous waste, construction and demolition waste, agricultural plastics, waste agrichemicals and their containers, feed and seed bags, and animal health products) and 0.5 tonnes of domestic waste[9]. There is very limited information available on the composition and volume of rural waste in Northland. Assuming that the characteristics of rural waste in Northland are similar to that produced in Canterbury, then the volume of waste produced on average per farm is likely to be greater than 12 m^3. Assuming that most of it is buried, it means that many farm landfills do not meet the permitted activity rule in the RWSP. Only four resource consents have been granted since 2004 for non-municipal landfills over 12 m^3.

There are a number of potential issues that result from current rural waste practises:

- In theory, increasing the volume of waste to landfill increases the risk of leachate contaminating groundwater and surface water;
- Legacy of contamination – landfills are hazardous facilities and as such regional councils should include them on their contaminated sites registers. Currently there is no requirement for small-scale landfill operators to notify council on the location of their landfill.
- Council does not know what waste is being disposed of or how much waste is being disposed of. Therefore it is difficult to determine the appropriateness of the existing permitted activity rule or gauge environmental effects.

3.1 Possible changes to the regional plans

Council does not currently have information on the volume of waste being disposed of through small-scale landfills in Northland. In addition, discharges from permitted small-scale landfills have not been monitored (volume and composition of leachate and if it is migrating to groundwater or surface water). Therefore it is difficult to assess the effectiveness of the current rules or determine if changes are required until this information is available. Several regional councils are looking at this issue and national guidance is expected mid to late 2015.

4 Clean fill and managed fill

Clean fills[10] are low-cost alternatives to landfills for “inert” waste that will have potentially no adverse environmental effect, or only minor effects. There is no need for the construction of liners, leachate collection systems or gas control systems, and the required environmental monitoring can be reduced.

The Regional Waster and Soil Plan states that clean filing is a permitted activity if less than 1000m^3 are deposited within any 12 month period, subject to certain standards. Operations depositing a greater volume require resource consent (discretionary)

Key issues identified by stakeholders and the review to date include;

- Disparity between permitted activity thresholds for earthworks (5000 m^3) and clean fill (1000 m^3)
- Difficult to determine volumes of fill once it has been deposited.
- There is no requirement to have sediment controls for clean fill sites.
- There is no middle ground between clean fill and land fill. Therefore any fill that does not meet the strict clean fill criteria must be disposed of at a landfill at a much higher cost that may not reflect the environmental risk. For

[9] Environment Canterbury, Non-natural Rural Wastes Site Survey Data Analysis Report: Full Report R13/52 , June 2013.
[10] Clean fill is soil, rock, concrete or other material that is not combustible, organic and is not subject of biological or chemical breakdown.

example road side slips often contain small amounts of vegetation. Under the current regime it does not meet the clean fill criteria and must be disposed of at landfill.

- Key controls for clean fill are to control the material deposited and the sediment discharged.

4.1 Possible changes to the regional plans

Council's proposal is to retain clean fill and land fill activities in the new plan and to roll over the existing controls for land fills to a large extent. It is also proposed to introduce a new category called managed fill to cater for lightly contaminated fill i.e. clean fill that contaminated with some biodegradable material or minor chemical contamination.

Land fill, clean fill and managed fill activities will be required to have sediment controls in place (TP901 or similar). Another change suggested is to move away form volume based thresholds to thresholds based on area exposed / area without vegetative cover. It is expected that this this will make it easier for the public to determine when they are complying with the permitted activity rule and also make it easer for council to enforce the rules.

Regional plans review – topic summary

Infrastructure and minerals

How can we improve the management of infrastructure and minerals in our regional plans? This is a summary of our initial ideas.

What is infrastructure and mineral extraction?

The focus of this topic is on regionally significant infrastructure and large-scale mineral extraction activities on land, and all types of infrastructure and mineral extraction in the coastal marine area.

On land, infrastructure and mineral extraction are managed under regional and district plans. However, regional plans tend not to manage small-scale infrastructure and mineral extraction activities (for example, farm quarries) therefore these are not included in this topic.

In the coastal marine area, the regional coastal plan operates like a 'district plan' – hence the topic's inclusion of all types of infrastructure and mineral extraction in this area.

Regionally significant infrastructure is defined in the Proposed Regional Policy Statement and includes electricity generation/transmission, municipal waters (water, wastewater, stormwater), solid waste, roads, and rail. Infrastructure in the coastal marine area includes pipelines, wastewater outfalls, electricity transmission lines, and road bridges.

Large-scale mineral extraction activities can include both mining and quarrying, which in Northland is dominated by aggregates, limestone and china clay. Mineral extraction in the coastal marine area can include sand mining, gas and petroleum extraction.

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What needs to change in the regional plans?

1 Current regional plans do not adequately recognise the benefits of infrastructure

Since the development of the regional plans there have been a number of national policy documents and national environmental standards that have become operative concerning infrastructure. These changes have generally resulted in a need to better recognise and provide for the benefits of infrastructure. These include the following:

- National Policy Statement Electricity Transmission 2008 – plans and policy statements required to recognise and provide for the benefits of electricity transmission.
- National Environmental Standards Electricity Transmission 2010 – includes standards that provide for electricity transmission, including discharges to air and water.
- New Zealand Coastal Policy Statement 2010 – plans and policy statements required to recognise that the provision of infrastructure/energy is an important socio-economic activity, recognise the functional need of activities to locate in the coastal marine area, recognise renewable energy resource potential, and provide for the effective operation of ports.
- National Policy Statement Renewable Electricity Generation 2011 – plans and policy statements required to recognise and provide for the benefits of renewable electricity generation.
- National Policy Statement Freshwater Management 2014 – exceptions to be developed for nationally important infrastructure in meeting freshwater bottom lines, use of water for hydroelectricity is an identified national value.

To reconcile national policy direction, the Proposed Regional Policy Statement includes policy direction on regionally significant infrastructure and renewable electricity development. It attempts to balance the need to develop, operate and maintain regionally significant infrastructure against the protection criteria, including the strict avoidance regime, of the New Zealand Coastal Policy Statement (for more detail on this see the Significant Natural and Historic Heritage topic and the Marine Biodiversity topic).

The Regional Coastal Plan performs the function of a ‘district plan’ as well as that of a regional plan. Therefore, matters normally subject to district council jurisdiction, such as location, are considered alongside other matters such as water quality. The current Regional Coastal Plan has a policy on network utilities which provides some direction for decision-making, however it is silent on renewable electricity/energy development. There is no policy guidance to address instances where there is a conflict between providing and operating infrastructure against the requirement to protect significant natural and historic heritage resources (those matters of national importance in Section 6 of the Resource Management Act). This is important in the light of the New Zealand Coastal Policy Statement which requires us to provide for activities such as infrastructure, whilst at the same time protecting matters of national importance in Section 6 (including by avoiding adverse effects on ‘outstanding’ values).

The Regional Water and Soil Plan and the Regional Air Quality Plan do not have any policy on infrastructure or renewable energy in a general sense, although they do have policy on particular activities which concern infrastructure, for example, managing the effects of municipal wastewater discharges. The documents are of less overall importance than the Regional Coastal Plan due to the fact that they do not function as a ‘district plan’; however the use of resources by infrastructure is of relevance. Both documents could benefit from

more policy direction in this regard, to better recognise the benefits of infrastructure and to provide guidance as to how to manage conflict with Section 6 matters where it arises.

1.1 Possible changes to the regional plans

- We could include in a new regional plan a consistent 'overarching' policy framework to guide decision-making for regionally significant infrastructure proposals. Such an approach should include consideration of the benefits of regionally significant infrastructure along with recognition of the constraints on location and design, any positive effects offered by the proposal (for example, a net gain from offsetting) and use of tools such as adaptive management to address unknown effects. This is particularly relevant for proposals with more significant adverse effects, especially where these effects may impact on sensitive natural resources. Although this approach is a part of the Proposed Regional Policy Statement, the regional plan could refine this to a greater level of detail – for example by providing guidance on how to make the trade-offs between the benefits of infrastructure with key adverse environmental effects, and how infrastructure can/should work within environmental bottom lines. At the infrastructure and minerals stakeholder workshop there was general support for this approach, noting there needs to be a hook that gives regionally significant infrastructure a chance to locate in an area. There was also support for clearly identifying, through mapping, where restrictive policy in the NZCPS applies – reducing conflict and debate at the resource consent stage.
- We could recognise in plans the renewable resource potential of the region including discussion as to where there are areas of particular significance – for example geothermal energy at Ngāwhā, tidal energy at Kaipara Harbour, and integrating the findings of the Northland Renewable Energy Assessment (produced by the Energy Efficiency and Conservation Authority, 2009).
- We could direct decision-makers by providing specific policy on the benefits and constraints associated with the development and renewable electricity generation, including large and small-scale uses.

2 Reducing compliance costs and improving consistency for infrastructure development.

Infrastructure confers a particular benefit on society as a whole. Where infrastructure has been working well with minor effects, new regional plans should look at ways of reducing compliance costs by taking more of a risk-based approach. The Proposed Regional Policy Statement provides direction to this effect requiring us to examine opportunities to reduce compliance costs by utilising agreed performance standards, reducing notification and information requirements or using a less strict consent activity status where appropriate. It is also important for our plans to recognise that technology has moved on since our plans were originally drafted 20 years ago. Therefore specific rules governing the establishment and operation of infrastructure should be closely examined to see if new construction methods can control the level of risk and reduce the possibility of adverse effects.

2.1 Possible changes to the regional plans

- We could recognise that there is a 'cost' to the community in requiring continuous upgrading to existing infrastructure and minor effects can generally be discounted to avoid excessive community cost.
- We could outline circumstances where re-consenting proposals can be progressed on a non-notified basis. Other methods could include reducing information

requirements by using a more relaxed consent activity status for activities that are working well, have minor adverse effects and comply with objectives and policies in the new Proposed Regional Policy Statement.

- We could give effect to the National Policy Statement Renewable Electricity Generation by recognising the importance of resources, such as water, for the ongoing operation of renewable electricity generation. Participants at the workshop felt that in general, policy and rules governing renewable electricity generation need to be flexible enough to enable the assessment and approval of future technologies and responsive to changes in energy demand.
- We could consider policy direction that recognises that short-term effects from maintenance or upgrading activities associated with infrastructure, where effects are not significant, can generally be tolerated. This gives effect to Policy 5.3.3 of the Proposed Regional Policy Statement. Workshop participants generally agreed with this approach, noting that from an infrastructure provider's point of view, it is better to maximise value from existing networks than build anew. Established infrastructure should also be seen as part of the existing environment – especially where it exists in a mapped significant area.
- We could re-examine rules for the placement, maintenance and upgrading of network utilities crossing (over, under and through) freshwater bodies and coastal waters. In respect of coastal activities, attention was drawn at the workshop to the difference in effects between temporary and permanent occupation of space – current coastal plan rules do not make this distinction and it would be useful if they did at least for the purposes of maintaining and upgrading infrastructure. Additionally it was felt that rules need to recognise that often, the short term effects that arise from construction (from the use of heavy machinery for instance) can be well managed by infrastructure providers. In respect of network utilities crossing freshwater, technological advances mean that network activity where there is currently a high degree of precaution in rules (e.g. construction and maintenance of sewer lines) may now have much less of an impact.
- We could consider incorporating any acceptable performance standards or developing our own with infrastructure providers where appropriate, in order to streamline consenting. This gives effect to Policy 5.3.4 of the Proposed Regional Policy Statement. Performance standards could be incorporated into, for example, a controlled activity rather than requiring a full discretionary activity.
- For established infrastructure, we could consider 'spot zoning' to enable certain activities to continue to take place without requiring a consent (or to be processed as a controlled activity) subject to performance standards (see above). This provides more certainty if rules are otherwise tightened (for example, land disturbance rules in flood plains – see the Natural Hazard topic for more detail).

3 Community concern about mineral extraction activities

Mining is a big issue for many people in Northland as it brings jobs and opportunities but can also be subject to high impact but low probability environmental effects. It is therefore important to have an effective regulatory regime in place, taking a precautionary approach where this is appropriate. The type of 'mining' that is the subject of community concern relates to crown minerals (e.g. oil, gold, silver), not 'quarrying' which is typically understood to involve the extraction of aggregates, limestone and china clay.

Mining of crown minerals is managed in a variety of ways in the current regional plans through existing rules on, for example, discharges and land disturbance. In general there is no evidence that these rules are inadequate to manage mining activities that take place on

land, should they arise in future. However, there is a high degree of community concern about this issue and there are New Zealand examples of legacy issues involving high clean-up costs and on-going management problems, long after certain types of mining activity have ceased. The debate on mining of crown minerals is therefore centred on the extent to which a prohibited approach is appropriate in plans, noting the approach that has been taken in the Coromandel District where a prohibited approach was seen as a management tool in itself (*Coromandel Watchdog of Hauraki Inc v Chief Executive of the Ministry of Economic Development, 2007)*. The Court of Appeal ruling suggested that councils can use the prohibited approach where they have insufficient information while developing a plan to determine how an activity should be provided for; where it seeks to take a deliberate staged approach; and/or where it wants to direct in a strategic way the sustainable management of resources and where it represented an expression of social or cultural outcomes or expectations (for example prohibition of nuclear energy generation).

There are no major issues with the rules for quarrying activities. The main issue identified at the stakeholder workshop was that there are a number of rogue operators (i.e. those without a Health and Safety licence or certificate of competence) operating in the region although addressing this is best achieved from an enforcement standpoint rather than any rule changes. There was a desire by workshop participants to re-examine land disturbance thresholds to recognise that quarrying is a distinct activity (from other land disturbance activities) where the effects are known and concentrated in a particular area. It was also recognised however that there might be a tension between a more permissive regime for quarrying if it 'lowered the bar' for rogue operators as well.

In the coastal marine area, the current Regional Coastal Plan mainly focusses on sand mining rather than wider mineral extraction activities – there is no specific policy or rules on gas and oil extraction for example. The New Zealand Coastal Policy Statement Policy 6 however requires regional plans to recognise the benefits of mineral extraction in the Coastal Marine Area (and this includes oil and gas extraction). This consideration however also needs to be balanced against other policies in the New Zealand Coastal Policy Statement that require us to protect sensitive areas such as outstanding natural character and significant indigenous biodiversity by 'avoiding' adverse effects (for more detail on this, see the Significant Natural and Historic Heritage topic and the Marine Ecosystems and Biodiversity topic).

3.1 Possible changes to the regional plans

We could include a general overarching policy or series of policies on mineral extraction covering land and marine activities. The policy could provide guidance where activities are likely to be inappropriate (for example, where there is a clear conflict with Section 6 matters of national importance and direction in the New Zealand Coastal Policy Statement to 'avoid adverse effects'). In terms of specifically using a prohibited approach for crown mineral extraction activities, a Section 32 assessment could determine whether this is an appropriate tool in a new regional plan. The Coromandel example however was specifically related to a district plan change, not a regional plan and associated with the protection of outstanding natural landscapes.

Some specific changes to plan rules that could be considered include:

Regional Coastal Plan

- Referencing the '*code of conduct for minimising acoustic disturbance to marine mammals from seismic survey operations'* produced by the Department of Conservation. This is relevant for noise producing marine seismic surveying activities.
- Making small-scale sampling for minerals in the Coastal Marine Area a permitted activity – currently it is a controlled activity in the Regional Coastal Plan but the effects are typically minor.

- Large-scale mineral extraction involving disturbance to the foreshore and seabed potentially could be made a non-complying or prohibited activity in ‘outstanding’ areas. Currently all disturbance to the foreshore and seabed associated with mineral extraction (other than small-scale sampling), even in Marine 1 Management Areas, is a discretionary activity (by default). Tightening the rules would also implement any protection policies in the plan thus giving full effect to the New Zealand Coastal Policy Statement.

Regional Water and Soil Plan

Although there are rules for bore construction activities in the plan, these rules are primarily concerned with bore drilling for the purposes of groundwater extraction. In fact the definition of a ‘bore’ in the plan does not incorporate exploration activities for the purpose of investigating rock types and collecting core samples. Although drilling fluids associated with the drilling activity require consent if they contain hazardous substances, the act of drilling the bore does not. These exploration activities however run the risk however of intercepting a groundwater resource but, as a permitted activity, the Council cannot act until after this has happened (by requiring retrospective consent). To clear this up, a change to the definition of a ‘bore’ could be considered to capture the full range of bore drilling activities – this would result in this activity requiring consent.

Regional plans review – topic summary

Marine ecosystems and biodiversity

How can we improve marine ecosystems and biodiversity management in our regional plans? This is a summary of our initial ideas.

What are marine ecosystems and biodiversity?

With its exposure to warm ocean currents, an impressive array of islands and long complex coastline, Northland is recognised as a national and an international hot spot of biodiversity. The region's marine environment is scattered with sites that are home to threatened and endangered species and areas important to migratory species.

Indigenous ecosystems and species and the continued availability to a plentiful, diverse and healthy marine environment is highly cherished by Northlander's and visitors alike for recreation, food, amenity, and spiritual values.

This review deals with:

- Identification and management of indigenous biodiversity in the coastal marine area;
- Measures to improve the way we deal with aquatic pests;
- Ability to control the spread of unwanted mangroves; and
- Biodiversity offsetting – what it is and isn't, and how can it be best used to achieve desirable outcomes when managing the effects of development.

Not included in this review are:

- Terrestrial (non-aquatic) ecosystems (dealt with by district councils);
- Freshwater ecosystems, except for biodiversity offsetting (see water quality topic); and
- The harvest or allocation of fisheries (not a regional council function).

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

What needs to change in the regional plans?

1 The regional plans do not accurately identify significant ecological areas or give effect to the New Zealand Coastal Policy Statement

Section 6(c) of the Resource Management Act 1991 (RMA) identifies the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna as a matter of national importance. The New Zealand Coastal Policy Statement 2010[1] (coastal policy statement) expands on this requirement in the coastal environment. Policy 11 of the coastal policy statement requires a two tiered to biodiversity protection as follows:

- Policy 11(a): Avoid adverse effects of activities on significant indigenous biodiversity. Clauses (a)(i-vi) list the values to subject to this high level of protection.; and
- Policy 11(b): Avoid significant adverse effects (and minimising other effects) on other biodiversity values (such as indigenous vegetation and habitats with important recreational, commercial, traditional or cultural values – again these values are listed in clauses (b)(i-vi))).

Provisions in the Proposed Regional Policy Statement for Northland give effect to these statement requirements through:

- Policy 4.4.1 that reflects the two tiered approach in Policy 11 of the coastal policy statement;
- Providing assessment criteria (Appendix 5) for determining significant biodiversity[2]; and
- Commitment to identification of significant biodiversity (the areas / values set out in Policy 11(a) and subject to the highest protection).

Regional plans must have regard to the Proposed Regional Policy Statement (and must give effect to an operative regional policy statement). Identification of significant biodiversity must be consistent with these criteria and the protection applied to biodiversity must also meet the requirements of the coastal policy statement. The current Regional Coastal Plan does not fully reflect the policy direction of either of these higher order documents.

The Regional Coastal Plan uses the Marine 1 (Protection) Management Area (Marine 1 Management Area) to identify significant conservation areas and applies a protection regime to such sites. However, the Marine 1 Management Area identifies and manages multiple values (biodiversity, cultural, historic, scientific, scenic landscape and amenity values). The Regional Coastal Plan lists nine criteria that are used to define Marine 1 Management Areas, four of which are biodiversity related (see Regional Coastal Plan Appendix 9[3]). This adds uncertainty for plan users as to the actual values sought to be protected.

Given the multi-value scope of the Marine 1 Management Area, the policy and rules also tend to be generic and do not apply a values-specific management regime (that is, they tend to be 'catch-all' in nature rather than targeted at specific values).

[1] Coastal policy statement: http://www.doc.govt.nz/documents/conservation/marine-and-coastal/coastal-management/nz-coastal-policy-statement-2010.pdf
[2] Proposed Regional Policy Statement Appendix 5 (Pages 176-177):- http://www.nrc.govt.nz/Resource-Library-Summary/Plans-and-Policies/New-Regional-Policy-Statement/Proposed-Regional-Policy-Statement---Council-Decisions---Appeals-Version/
[3] Regional Coastal Plan Appendix 9 http://www.nrc.govt.nz/Resource-Library-Summary/Plans-and-Policies/Regional-plans/Regional-Coastal-Plan/

In many cases Marine 1 Management Area applies over extensive areas (for example, the outer Kaipara Harbour) and it is often not clear what the biodiversity values are that are intended to be protected. While there are significant biodiversity areas included in Marine 1 Management Areas, it is unlikely the entire extent of every Marine 1 Management Area is significant on biodiversity grounds. There is also a risk that some significant biodiversity areas are not identified in Marine 1 Management Areas.

In other words, the approach to biodiversity management in the Regional Coastal Plan is 'blunt' both in terms of the manner of identification and the provisions that apply. While the Marine 1 Management Area appears to have been reasonably effective in protecting subject areas, there is a lack of certainty over what the actual values of concern are – hence, assessment and identification of actual biodiversity values at stake (or in some cases absence of) tend to emerge through the consent process rather than being identified clearly from the outset.

The coastal policy statement biodiversity provisions apply to the 'coastal environment' which extends inland beyond the foreshore to varying extents. The coastal environment has been mapped as part of the Proposed Regional Policy Statement. Responsibility for biodiversity provisions in the coastal environment is split between regional and district councils. The regional council is responsible for water bodies (including wetlands); in, on, or under the beds of rivers and lakes, and in the coastal marine area (below mean high water springs). The district council's are responsible for biodiversity on all other land.

1.1 Possible changes to the regional plans

To achieve the levels of protection required for biodiversity as set out in the coastal policy statement and Proposed Regional Policy Statement, we consider the identification of significant ecological areas in the coastal marine area is logical. This can be achieved through applying robust criteria based on Appendix 5 of the Proposed Regional Policy Statement to map significant biodiversity values (where practical). This process will need to be heavily informed by experts in marine ecology and pooling current scientific data. There may still be some areas where a broad zone/risk based approach may be preferable where values are high and pressures low.

Identifying significant marine biodiversity will also be of benefit to community groups interested in establishing marine protected areas. However, it is not realistic to map the complete range of values set out in Policy 11(a) and (b) of the coastal policy statement. To ensure areas that have not been mapped are appropriately protected, policy and robust assessment criteria are also likely to be required. This policy / assessment approach also appears to be the more practical option for the Policy 11(b) areas, as these are not likely to be mapped for practical reasons (e.g. cost, data deficiency and resourcing).

As noted above, significant biodiversity (Policy 11(a) areas) require a very high level of protection. Arguably the current Marine 1 Management Area rules generally achieve this level of protection - most activities require consent and those with known potential for significant impacts are non-complying or prohibited. Defining the scale of adverse effects that are acceptable (or not), will be particularly important in light of the recent interpretation of the coastal policy statement and the meaning of 'avoid adverse effects' (the Supreme Court 'King Salmon' decision'[4]).

[4] The decision of the Supreme Court in Environmental Defence Society Inc v New Zealand King Salmon Company Limited 2014 NZSC38: https://www.google.co.nz/#q=decision+of+the+Supreme+Court+in+Environmental+Defence+Society+Inc+v+New+Zealand+King+Salmon+Company+Limited+2014+NZSC38

We believe the plan review process provides an opportunity to clarify what is meant by 'avoid' adverse effects in the context of biodiversity protection and this point has been reinforced through discussions with key stakeholders. This may include setting out the circumstances where effects are acceptable (e.g. where they are minor and / or temporary) and the extent to which beneficial effects can be taken into account (also see 'Biodiversity Offsetting' Section 3 below). This would then set the 'thresholds' (in plan rules and policy) for protection for areas of biodiversity value. These thresholds would also reflect the two-tier approach directed in both the coastal policy statement and Proposed Regional Policy Statement.

The above would mean more accurate identification of significant biodiversity values and a more targeted rule / policy regime designed specifically to manage biodiversity (as opposed to the more generic approach in the current Marine 1 Management Area provisions). This may also mean tighter rules around activities with known adverse effects within areas identified as having significant biodiversity value, and more assessment criteria and policy designed to ensure other values are identified and managed in decision making.

2 Marine pest management is a gap in the Regional Coastal Plan

Marine pests are a major threat to Northland's coastal environment and typically the obligation for pest management lies with those parties causing or adding to risks. The introduction and spread of marine pests is most likely to be associated with the movement and cleaning of contaminated vessels (and ballast water), equipment and stock, especially those originating from outside the region. Fishing equipment and marine farming equipment and stock also pose a risk for the introduction and spread of marine pests.

The New Zealand Coastal Policy Statement (coastal policy statement)[5] and Proposed Regional Policy Statement[6] call for pest management provisions in regional plans. Predicted climate change involving warming waters and increased storm intensity is also only likely to increase the risk of pest incursions.

Marine pests can be managed under the Resource Management Act (through regional plans) and under the Biosecurity Act 1993 through regional 'pest' and regional 'pathway' management plans. Information on the current Regional Pest Management Strategies review can be found on council's website[7]. Whilst there is some overlap between these two legal frameworks, they manage pests in different ways – see following table.

[5] New Zealand Coastal Policy Statement Policy 12

[6] Proposed Regional Policy Statement Policy 4.4.3(1)(e) and 4.4.3(3)(a)

[7] http://www.nrc.govt.nz/Resource-Library-Summary/Plans-and-Policies/Pest-management-strategy-review/

Legislation	Main ways marine pests can be managed	Control measures available
RMA	Regional Coastal Plan provisions managing discharge and disposal activities, construction and maintenance of coastal structures and aquaculture.	Conditions in resource consents to assist with managing the risk of adverse effects caused by marine pests and can therefore take a preventative approach. Rules prohibiting or requiring resource consent for high risk activities.
Bio-security Act 1993	Regional Pest Management plans (known as pest management strategies prior to recent changes to the Biosecurity Act 1993).	Measures require presence of ranked pest organisms, and are therefore by nature responsive not pro-active. Pest species are identified that threaten cultural, environmental, social or economic values. These species are ranked into response categories ranging from total exclusion/eradication to action aimed at lessening some of the impacts.
Bio-security Act 1993	Pathway Management Plans.	These are able target ways to reduce the spread of pest species (including across regional boundaries) by identifying and managing risks and parties involved. They may include rules to achieve identified objectives.

Marine pest management is currently a weakness in the Regional Coastal Plan. While there are some references to invasive species/exotic organisms (such as rules preventing deliberate release of exotic organisms), these tend to be reactive and mimic measures available under the Biosecurity Act. The exception is in the MM5 area (ports), where ballast water is recognised in a policy as a vector for the spread of marine pests[8]. Feedback from key stakeholders confirmed that more should be done to better safeguard Northland from marine pests including making better use of RMA provisions.

2.1 Possible changes to the regional plans

More explicitly provide for pest management and in particular better manage high risk activities/high value sites. This should include:

- Policies and/or assessment criteria that identify potential risks;
- Policy support for consent conditions or rule standards to manage risks, for example:
  - requirement for surveillance of high-risk structures/activities; and
  - measures to prevent transport of pests such as controls on movement of and discharges from fouled vessels.

[8] Policy 29.4.4(f)

3 No guidance on biodiversity offsetting

Note: the following considers biodiversity offsetting for the coastal marine area and freshwater bodies.

Biodiversity offsets are measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity. For example, a quarry proposal to extend operations involving loss of an area of indigenous wetland may propose restoration of a degraded wetland to offset the area of lost wetland. Whilst council has to take this into account when assessing the application, there is little guidance as to how to judge what is acceptable.

In reality, we think that indigenous wetlands have the greatest potential for biodiversity offsetting proposals[9]. This is because development pressure often involves wetlands, their values are well recognised and there are many opportunities to enhance and restore degraded sites.

Environmental compensation is a similar concept. However it involves measures to counterbalance the adverse effects of an activity on identified values for those elements of biodiversity where either 'no net loss' is not achievable or where the exchange is distant from the site or not 'like for like', that is, involving values other than those identified as affected.

The Proposed Regional Policy Statement provides for biodiversity offsets to be considered in appropriate circumstances[10] and gives a glossary definition that outlines principles to consider when assessing applications. There is no specific provision in the Proposed Regional Policy Statement for environmental compensation.
Offsetting is particularly valuable in relation to large projects (for example, infrastructure) with limited options for alternative sites/routes and where there are practical limits on the ability to completely avoid, remedy or mitigate adverse effects. In such circumstances, appropriately designed offsets can ensure that any biodiversity loss is adequately 'compensated' by positive effects.

Biodiversity offsetting and environmental compensation are relatively new concepts to regional planning and with the exception of a biodiversity enhancement fund associated with the Marsden Point Port development, they have not been used. However, the recent King Salmon[11] Supreme Court cases have increased the likelihood of biodiversity offsetting proposals due to a greater emphasis on avoiding adverse effects of development.

There are no mechanisms in any regional plan to provide for, or control the use of offsetting. There is a risk that without a framework biodiversity offsetting could:

- Be used in an ad hoc manner (different expectations, considerations and/or results).
- Be used in inappropriate circumstances (without assessing alternatives or where impacts are not appropriate for offsetting).
- Fail to achieve the outcomes sought.

[9] Does not include indigenous biodiversity managed by district councils.
[10] Policy 4.4.3(3)(b)
[11] Supreme Court in Environmental Defence Society Inc v New Zealand King Salmon Company Limited [2014] NZSC 38

3.1 Possible changes to the regional plans

Key stakeholders were generally supportive of us providing methods outlining the circumstances where and how biodiversity offsetting can be used or environmental compensation considered in the regional plans.

The factors that require resolution in any offset mechanisms are identified in the Table below.

Key issue	Explanation
Equivalence	Equivalence and similarity of compensatory action with the impact being addressed (that is, in-kind or out-of-kind).
Spatial proximity	Location of compensation in relation to the site of impact, with an assumption that closer is better.
Additionality	The compensation action must be a new contribution to conservation that would not have otherwise occurred.
Timing	Timing of demonstrating the compensation, relative to the timing of the impact.
Duration and compliance	The required longevity of the compensation action and security of delivery.
Currency and ratios	Metrics used to determine exchanges including mitigation replacement ratios.

(Key implementation issues identified by McKenney and Keisecker (2010)[12].)

4 Mangroves

Land-use changes, deforestation, and structural modifications in the estuarine environment (for example, causeways) have caused significant changes in sediment dynamics and input in some estuaries leading to increased mangrove growth and spread. Mangrove expansion is generally a symptom of these wider issues.

Mangroves can have both positive and negative effects on the social, economic and cultural wellbeing of communities. Communities are often polarised in their views about mangroves and the extent to which they should (or should not) be removed or managed. This reflects the debate between public use and enjoyment of the coastal marine area and the ecological value of mangroves and their role in the wider marine ecosystem.

The Regional Coastal Plan underwent a plan change (operative 2008) to relax the rules for pruning and removing mangroves in specific circumstances. Mangrove removal is only permitted (that is, no resource consent required) for keeping artificial land drainage channels clear. The only mangrove removal as a controlled activity is for maintaining sight lines on roads; otherwise all other mangrove removal is a restricted discretionary or non-complying activity.

[12] McKenney BA, Kiesecker JM 2010. Policy development for biodiversity offsets: a review of offset frameworks. Environmental Management 45: 165–176.

4.1 Possible change to the regional plans

As discussed, the community often has differing views on mangrove removal, and therefore in principle will want the ability to participate in the resource consent process for proposals for large-scale removal. There are however situations where the rules for smaller scale mangrove removal many be more relaxed (for example, permitted or requiring no public notification). Key stakeholders generally support this position, and that applications to remove mangroves for amenity reasons need to be clear about the:

- rationale for removal, scale & methods, and
- outcome sought and achievability (i.e. being based on sound science).

We will also have the benefit of identifying high value areas of mangrove (significant ecological areas). Within these areas it's expected that the rules will be quite restrictive, however outside these areas we can probably be more relaxed.

Consequently, a new policy and rule structure may look something like this for mangrove clearance and trimming activities:

- Permitted:
    - hand pulling seedling removal outside significant ecological areas;
    - keeping artificial land drainage channels where adjacent land is likely to become flooded;
    - road sight line trimming; and
    - mangrove removal interfering with the operation of port and wharf facilities.
- Controlled removal or pruning where mangrove growth has led to:
    - obstruction of existing lawful public access to and along the coastal marine area;
    - interference with the reasonable or safe use or operation of authorised structures or facilities on adjoining land or in the coastal marine area; or
    - the blockage of channels and stream mouths where adjacent land is likely to become flooded;
    - Mangrove invasion into areas with high ecological values that would be adversely affected by mangroves such as significant saltmarsh and wading bird habitat.
- Discretionary:
    - removal or pruning of mangroves which is not otherwise a permitted, controlled or non-complying activity.
- Non-complying:
    - Mangrove removal, pruning or grazing within significant ecological areas identified for mangrove protection.

Regional plans review – topic summary

Natural hazards

How can we improve the management of natural hazards in our regional plans? This is summary of our initial ideas.

What are natural hazards?

Natural processes become known as natural hazards when they adversely affect sites that people value (structures and/or land). Under the Resource Management Act 1991 (RMA), the term 'natural hazard' is defined as:

> *Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment'.*

This review looks at the way the regional plans avoid or mitigate natural hazards, with a specific focus on flooding and coastal hazards. This includes the control of the use of land (including development on floodplains and flood protection measures such as spillways and stopbanks). It also covers managing natural hazard risk in the coastal marine area (for example, coastal protection structures) and the role natural features play in mitigating hazard risk (such as wetlands, floodplains and dunes).

This topic does not include a review of:

- The council's emergency management responsibilities under the Civil Defence Emergency Management Act;
- The regional council's river management work under the Land Drainage Act or the Soil Conservation and River Control Act; and
- How district councils manage natural hazard risk under the RMA or the Building Act 2004.

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- Water quantity
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- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

What needs to change in the regional plans?

A lot has changed since we prepared the current regional plans in the early/mid 1990s. Some key points are:

- Our knowledge of natural hazard risk and how climate change might exacerbate natural hazard risk has increased.
- Amendments have occurred to the RMA (such as a requirement for councils to have 'particular regard' to the effects of climate change – s7(i)) and there are new national policy statements.
- Our knowledge of which areas of Northland are most susceptible to natural hazards has increased (such as through new flood hazard and coastal hazard modelling and mapping).
- Nationally, there is increasing recognition that councils need to adopt a planning horizon of a term no less than 100 years with regards to design standards for flood protection measures as well as managing natural hazard risk generally.

With this in mind, the following section provides a summary of the key problems identified to date with regards to managing natural hazards through regional plans in Northland and suggests some possible changes.

1 The regional plans do not give effect to higher level policy documents

Regional plans are required to 'give effect' to relevant provisions in the New Zealand Coastal Policy Statement 2010 (coastal policy statement) and the Proposed Regional Policy Statement for Northland. The coastal policy statement has introduced increased requirements for councils to manage coastal hazard risk. This includes a requirement to identify areas of the coastal environment potentially affected by coastal hazards (including tsunami) over a 100 year period and to avoid increasing the risk of harm from coastal hazards within these areas[1].

Other national level guidance specifically relevant to managing natural hazards includes the Ministry for the Environment's *Coastal hazards and climate change: A guidance manual for local government in New Zealand*. Although produced in 2008, it sets out the most recent guidance on 'factoring in' an allowance for sea-level rise into the planning and decision-making process in resource consent applications. The Intergovernmental Panel on Climate Change (IPCC) has just released its Fifth Assessment Report on climate change and consequently, it is likely that the Ministry for the Environment will amend national guidance on sea-level rise later this year or early next year.

The Proposed Regional Policy Statement sets out a framework for managing natural hazard risk in Northland, with a key focus on avoiding inappropriate new development in 10 year and 100 year flood hazard areas and coastal hazard areas. It also sets out a new approach to managing natural hazard risk in 'high risk' hazard areas (10 year flood hazard areas and high risk coastal hazard areas – mapped coastal hazard 1 areas). It states that when buildings are materially damaged or destroyed, the regional council (through the relevant regional plan) will require land use consent for the repair or reconstruction of the building. This is a method to avoid any potential issues associated with 'existing use rights' because these do not apply to regional plans – only district plans (see section 9 of the RMA).

The current regional plans do not give effect to these new higher level policy and government guidance documents and therefore need to be amended.

[1] Policies 24-25

1.1 Possible changes to the regional plans

From a natural hazard management perspective, key changes flowing down from central government level (coastal policy statement) and the Proposed Regional Policy Statement are likely to mean that the new regional plan(s) will include:

- New design guidelines and standards/controls for potentially affected structures to allow for sea-level rise.
- New rules to control activities that will divert the natural flow of floodwaters across floodplains (such as filling of land or siting of structures).
- New regional rules to require land use consent for the repair or reconstruction of certain buildings if they are materially damaged or destroyed. This could mean that applications to rebuild damaged structures might be subject to new conditions to mitigate risk (such as greater setbacks, raised floor heights) or in extreme cases be declined.
- Requirements to recognise and protect, restore or enhance natural systems and features that contribute to reducing the impacts of natural hazard events.
- Requirements to avoid impediments to accessing established structural mitigation assets (such as flood gates or sea walls).
- Guidance on determining when hard protection structures can be considered an appropriate option for mitigating natural hazard risk.
- A strong policy preference for use of soft protection and/or enhancement of natural defences over hard protection structures.
- Policy/criteria to ensure that where hard protection structures are proposed, alternatives have been considered and hard protection is the best practical option.

These potential changes are discussed further in the following two sections.

2 Management of flood hazard risk

The Regional Water and Soil Plan[2] has no section devoted to the management of natural hazards (or more specifically flood hazard risk). The broad range of natural hazard issues and risks is therefore not presented in a coherent and integrated manner. Provisions which relate to flood hazard management are scattered across a number of sections, which also deal with other aspects of resource management. For example, in many cases (especially for activities such as earthworks) the driving issue behind the formulation of policy appears to be soil conservation and erosion control.

We now have detailed flood hazard maps (illustrating areas susceptible to inundation in 10 year and 100 year return period floods) for 24 priority river catchments in Northland[3]. We therefore have clear and robust information regarding flood hazard risk (for selected catchments) and this sets the platform for a more sophisticated approach to managing this risk.

2.1 Earthworks

The current Regional Water and Soil Plan rules for earthworks and vegetation clearance do not take into account the potential effect (including cumulative effect) of earthworks on increasing flood risk. This is a real risk as earthworks can, either in combination or isolation:

- Alter/divert flood paths and overland flows (thereby relocating adverse effects elsewhere);
- Impede drainage;
- Reduce floodplain capacity.

[2] Declared operative on 28 August 2004
[3] Refer to the Priority Rivers Flood Risk Reduction Project for more information – www.nrc.govt.nz/priorityrivers

There is currently a lack of clear direction (both policy guidance and rules) over when 'permitted' earthworks on floodplains can increase/exacerbate flood hazard risk. This is partly because the environmental standards for land disturbance activities in the Regional Water and Soil Plan[4] (section 32) do not refer to the activity 'increasing flood hazard risk' or there being no 'adverse flooding effects on any property owned or occupied by another person' – this is considered a gap that needs to be addressed.

Additionally, although the riparian management zone has relatively restrictive rules for earthworks (volume of earth disturbed can be up to 50m^2 and there are no adverse flooding effects on any property owned or occupied by another person), this 'zone' only extends for a maximum of 20 metres from the bank full edge of a river. Outside the riparian management zone, the 'permitted' threshold for earthworks is 5,000m^3 in any 12 month period[5] – this is a substantial amount to 'permit' on floodplains.

There was widespread support and agreement with the concept of reducing the 'permitted' volume of earthworks on floodplains at the natural hazards key stakeholder workshop[6]. An interesting point to note is that under s68(2A) of the RMA, regional councils have a specific ability to create rules for the protection of other property (as defined in section 7 of the Building Act 2004) from the effects of surface water, which require persons undertaking building work to achieve performance criteria additional to, or more restrictive than, those specified in the building code. This enables regional councils to restrict activities on floodplains for the purpose of avoiding or mitigating natural hazards.

2.1 Vegetation removal

The current Regional Water and Soil Plan does not contain policy guidance or rules for vegetation clearance (from river beds) as a permitted activity where it has the potential to avoid or mitigate the adverse effects of flooding. There is a permitted rule in section 27 (rules for drainage and river control activities) relating to the maintenance of the free flow of water in rivers but this only relates back to ensuring that any vegetation clearance is limited to maintaining the free flow of water, including the removal of blockages. This is potentially a problem because it does not allow landowners to proactively remove vegetation that could increase flood hazard risk.

2.1 Gravel extraction

Extracting gravel from rivers can be a good way of managing flood risk and can be undertaken with minimal adverse effects if done right. Currently it is 'permitted' to extract up to 100 cubic metres of material (such as gravel) within any 12 month period from rivers as long as it is for private use[7]. Extraction over and above this rate is treated as a 'discretionary' activity. The 100 cubic metres per year limit is conservative and was due to the lack of information on the yields of Northland's rivers at the time the plan was prepared. The regional council now has a much better understanding of which rivers in Northland have capacity for larger volumes of gravel/shingle to be safely extracted.

2.1 Stormwater

Stormwater run-off has the potential to cause flooding and inundation. This is more of a concern in urban areas compared with rural areas because urban areas contain greater amounts of 'hard' impermeable surfaces (such as roads and footpaths) and therefore there is less opportunity for land to 'soak up' stormwater. Currently the 'permitted' stormwater rule

[4] The section 32 environmetal standards are referred to in the rules set out in sections 33 and 34.
[5] The permitted volume is 1,000m^3 where the activity is undertaken on erosion prone land.
[6] This workshop occured on 21 October 2014. The workshop notes can be accessed on the council's website: http://www.nrc.govt.nz/Download/?file=/upload/18187/Natural%20hazards%20workshop%20notes%20(A699144).pdf
[7] Section 31 of the RWSP (Rules for other uses of River and Lake Beds).

in the Regional Water and Soil Plan requires stormwater systems to cater for 1 in 5 year flows (primary) and provide stabilised overland flow path for 1 in 50 year storm flows (secondary). This is inconsistent with New Zealand Standard 2204:2010 (Land Development and Subdivision Engineering), which recommends that primary stormwater systems in residential and commercial/industrial areas shall be designed to cater for stormwater flows resulting from 1 in 10 year return period storm events and secondary systems shall cater for 1 in 100 year events.

The diversion of stormwater caused by obstructions in overland flow paths is a significant concern for the regional council as well as the district councils. Our permitted rule currently does not require overland flow paths to be kept clear of obstructions (such as fences or buildings). Blocking overland flow paths has the potential to increase flood hazard risk for neighbouring properties because flood water can be diverted onto these properties. However, unless property owners know where overland flow paths are, it is difficult to require them to be kept clear of obstructions – they are not currently mapped by the regional council. In the Whangarei district, stormwater diversion is currently being managed in new subdivisions and developments through a requirement for easements in favour of Whangarei District Council for the purpose of stormwater management.

2.1 Possible changes to the regional plans

Possible changes include:

- New rules to manage materially damaged or destroyed buildings in 10 year flood hazard areas and 'high risk' coastal hazard areas (existing coastal hazard 1 mapped areas). This could include policy and rule guidance on 'managed retreat[8]' (which could include raising floor levels of buildings, relocation within property boundaries or relocation to another site altogether). As mentioned on page 2 above, this is one way to circumvent potential problems associated with 'existing use rights' in hazard prone areas. Theoretically, so long as any rule(s) are included in the new regional plan, the processing of any resource consent application could be transferred back to the relevant district council under s33 of the RMA.

- New environmental standards for land disturbance activities (earthworks and vegetation clearance) that require the activity to either avoid any increase in flood hazard risk or demonstrate that the activity will not result in any adverse flooding effects on any property owned or occupied by another person.

- New policy guidance and rules around limiting the cumulative effects of earthworks in floodplains, including limiting the diversion of flood flow across floodplains and recognising the on-going diversion activity (to avoid the need for consent renewals). This will likely mean a reduction in the current 5000 cubic metre threshold for earthworks in floodplains.

- New controls on the clearance of vegetation in or on the bed of a river for managing flooding and stream-bank erosion. A 'permitted' activity rule to enable the clearance of certain vegetation (such as willows or plants listed in the Regional Pest Management Strategy) and fallen or dead vegetation is considered sensible in order to maintain the free flow of water in water bodies, including the removal of any blockages that would exacerbate flooding.

- Gravel extraction from riverbeds for natural hazard mitigation purposes could be enabled when it can be demonstrated that the rate of gravel extraction does not

[8] 'Managed retreat' is defined as any strategic decision to withdraw, relocate or abandon private or public assets that are at risk of being impacted by natural hazards.

exceed the rate of recharge and the activity is undertaken in a way that does not induce erosion. The creation of a new 'permitted' rule regarding gravel extraction being undertaken by the regional council or on behalf of the regional council (such as by approved contractors or by landowners in consultation with the regional council) is considered a pragmatic response to the current threshold of 100 cubic metres.

- Amending the 'permitted' stormwater rule so that overland flow paths are required to be kept clear of obstructions and buildings. Additionally, requiring that primary stormwater collection systems are designed to cater for stormwater flows resulting from no less than a 1 in 10 year return period storm event and secondary systems shall cater for 1 in 100 year events. Any potential changes to stormwater management will be developed in collaboration with district councils because they also manage stormwater diversion and there is a need to avoid unnecessary duplication of consenting requirements and/or potentially conflicting policies and rules.

3 Coastal hazards are not well managed

Natural coastal processes (such as erosion and inundation) become coastal hazards when they adversely affect things people value (such as buildings, property, and infrastructure) and threaten lives. Even though coastal hazards tend to cause most damage on land, the Regional Water and Soil Plan does not actively manage coastal hazard risk. For example, it does not regulate the placement of hard coastal protection structures such as seawalls. Typically, control over hard coastal protection structures above mean high water springs[9] is left to district councils.

The Regional Water and Soil Plan currently regulates land above the mean high water springs through a 'coastal riparian management zone'[10]. Specific provisions relating to land adjacent to the coastal marine area were not initially included in the Regional Water and Soil Plan as coastal development did not exist at its current rate during the early-mid 1990s. The existing coastal riparian management zone was created as a 'quick' solution to regulate land disturbance activities (primarily earthworks and vegetation clearance) at the land-sea interface until specific provisions were developed (none have yet been developed).

Consequently, this 'zone' has limited regard to the spatial and temporal variability of coastal landforms and processes in Northland and in many locations, the landward extent of this zone is insufficient to manage coastal hazard risk. Under the Regional Water and Soil Plan, a coastal riparian management zone exists in locations where:

- A foredune exists (such as Matapouri and Tauranga Bay) - this riparian management zone occurs between mean high water springs and the toe of the foredune on the landward facing slope. This applies to vegetated or unvegetated sand dunes).
- At the top of a bank sloping landward from the coastal marine area boundary – this riparian management zone occurs between mean high water springs and the distance (up to 20m) from the top of the first landward bank dependant on the dominant slope as used for the riparian management zone. This definition captures rocky coastlines, estuarine coasts and sand beaches with a modified foredune. In locations where there is no dominant slope (land adjacent to the coastal marine area is flat) there is no coastal riparian management zone.

This means that earthworks and vegetation clearance are currently permitted within the reach of wave run-up, as effects on coastal processes are not controlled through the section

[9] Mean High Water Springs – the administrative line that differentiates the coast marine area from terrestrial land.
[10] Sections 32 and 34.

32 environmental standards in the regional water and soil plan (they primarily exist to manage soil conservation and water quality). The key point to note is that coastlines are dynamic environments that require a specific management approach to ensure the safety of people and property from physical processes (coastal hazards). The coastal riparian management zone was not created to manage coastal hazard risk and therefore the existing rules are inappropriate with respect to physical processes that control coastal landform morphology.

With regards to 'hard' protection structures in the coastal marine area, although the Regional Coastal Plan regulates the placement and on-going occupation of space for structures (including seawalls, groynes and other 'hard' protection structures), there are no specific policies or rules for determining the appropriateness of hard protection structures (i.e. the plan does not differentiate between 'hazard' protection structures and other structures such as jetties). The New Zealand Coastal Policy Statement now requires councils to discourage hard protection structures and promote alternatives to them, while the Proposed Regional Policy Statement sets out policy to determine when hard protection structures can be considered an appropriate option to manage coastal hazards. The new coastal plan needs to implement these documents.

3.1 Possible changes to the regional plans

The creation of either a regional coastal environment plan or single regional plan would be an efficient and effective tool to improve the integrated management of coastal hazard risk across the artificial jurisdictional boundary of mean high water springs. This plan should achieve better management of cumulative effects of activities/processes that occur on land but have the potential to increase coastal hazard risk (such as land disturbance activities on sand dunes) as well as control hard protection structures above and below the line of mean high water springs. This plan would avoid the need for debate around where the line of mean high water springs begins, which is an important determinant in consent applications for hard protection structures and determining if they are an appropriate response to manage coastal hazard risk.

Another option is to create a 'coastal margins' zone in the new plan (whatever form it takes), which could either encompass the zone of active coastal processes landward of mean high water springs (the extent of this 'zone' would probably vary depending on the type of coastline e.g. sandy, rocky or estuarine) or be the landward extent of the 'coastal environment' as mapped through the Proposed Regional Policy Statement or merely a 'one size fits all' setback distance from mean high water springs (such as 20 metres).

Specific policies and rules could therefore be created to give effect to the coastal hazard provisions in the coastal policy statement and Proposed Regional Policy Statement and to help ensure the natural functions of coastal landforms/natural features that contribute towards mitigating the impacts of coastal hazard events are retained.

These provisions could include:

- Policies/rules to discourage the modification or destruction of natural defences (such as dunes) that protect coastal land uses from coastal hazards. This will likely mean limiting earthworks and vegetation clearance on active dune systems.

- Policies/rules to enable the protection/restoration of natural features (such as dunes or coastal vegetation) that provide protection from coastal hazard events. This could mean rules permitting (subject to compliance with standards and terms) earthworks or vegetation clearance if undertaken for the purposes of coast care works or environmental enhancement (such as dune reshaping) by recognised coast care groups or community groups.

- Policies/rules relating to the appropriateness of new hard protection structures on land. This will likely be more restrictive rules if the land has been identified as outstanding natural character/landscape area or a significant biodiversity area.
- Rules permitting the removal/demolition or maintenance/repair of existing hard protection structures (subject to compliance with standards and terms).

Linked to the above, there is also a need to include new criteria in the section 32 environmental standards for land disturbance activities in the Regional Water and Soil Plan with regards to coastal margin/coastal hazard management. This could include things like ensuring that activities:

- Shall not impede wave run-up or tidal processes; and/or
- Do not induce or have the potential to induce erosion of any land within the coastal margin, exacerbate the potential for coastal flooding or cause any land instability; and/or
- Shall not occur in a manner where it has the potential to destabilise a foredune system.

There was widespread support for the regional council taking a greater leadership role in managing coastal hazard risk at the natural hazards key stakeholder workshop in October. There was also a lot of support for moving towards a single regional planning document, especially from a natural hazards management perspective because the impacts of hazard events cross jurisdictional boundaries.

If implemented, these new provisions will likely lead to public benefits but conversely could lead to greater costs for landowners. The full costs and benefits of any new provisions will naturally need to be properly tested through a robust evaluation report,[11] which will need to assess the efficiency and effectiveness of the provisions and determine whether overall they are the best option.

To give effect to the New Zealand Coastal Policy Statement, the next regional plan (regardless of whatever form it may take) will need to contain policies and rules to discourage hard protection structures and set out criteria/thresholds as to when they can be considered an appropriate option (within the coastal marine area) to manage coastal hazard risk (such as to protect existing infrastructure of regional or national importance). It will also need to contain policies/rules to protect, restore or enhance natural defences (such as coastal vegetation) that protect coastal land uses from coastal hazards.

[11] Section 32 of the Resource Management Act 1991

Regional plans review – topic summary

Significant natural heritage values

How can we improve the management of significant natural and historic heritage in our regional plans? This is a summary of our initial ideas.

What are significant natural and historic heritage values?

This topic focusses on managing activities within water bodies (in the coastal marine area and in freshwater bodies) that impact on:

- Outstanding and high natural character.
- Outstanding natural features and landscapes.
- Historic heritage.
- Significant indigenous biodiversity (coastal marine area only).

These resources are included in the list of matters of national importance in Section 6 of the Resource Management Act 1991 (RMA) and are managed by regional plans.

Matters not included in this topic:

- Section 6 RMA matters on 'land' – covered by district plans;
- Significant indigenous biodiversity in freshwater bodies – covered in the water quality and water quantity topics;
- The *identification* of significant indigenous biodiversity in the coastal marine area, which is covered in the marine ecosystems and biodiversity topic;
- Public access within the coastal marine area – covered by the coastal water space topic; and
- Public access to and along freshwater bodies – managed by district plans.

The below diagram illustrates how regional and district council functions assist with managing the effects of activities on significant natural and historic values (please note although the diagram uses mapping from the Proposed Regional Policy Statement it does not represent any particular place or area).

Overview of the regional plans review

This is one of 10 summary reports for the review of Northland's regional plans.

Northland has three regional plans:

- Regional Air Quality
- Regional Coastal Plan
- Regional Water and Soil Plan

We are required to review the regional plans every 10 years. We have reviewed all three regional plans at the same time.

The review is the first step to prepare a new regional plan. The review looks at:

- What we know about our resources and their use;
- Lessons learnt from administering the regional plans
- Current legal and policy drivers; and
- Feedback from key stakeholders and tangata whenua

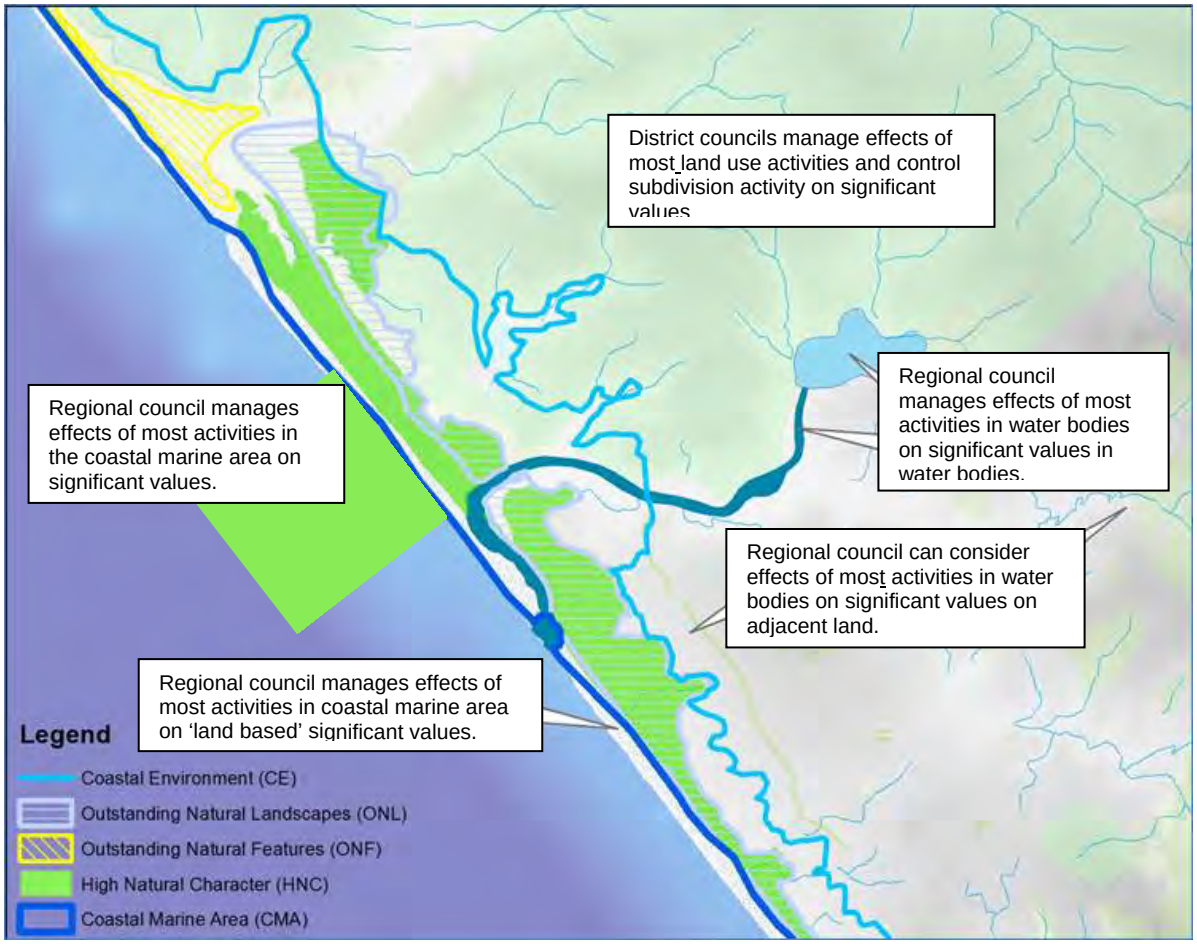
The review concludes with options or recommendations for the new regional plan.

We've split the review up into 10 topics:

- Water quality
- Water quantity
- Marine ecosystems and biodiversity
- Coastal water space
- Air quality
- Significant natural heritage values
- Māori participation in resource management
- Natural hazards
- Infrastructure and mineral extraction
- Hazardous substances

For more information go to - nrc.govt.nz/newregionalplan

Diagram showing district and regional council functions and how they assist in managing effects of activities on significant values.



With this in mind, this topic will look at:

- How significant natural and historic heritage values are identified;
- Impacts of use and development on significant natural and historic heritage in the coastal marine area and freshwater bodies; and
- The management of significant natural and historic heritage values across planning/administrative boundaries.

What needs to change in the regional plans?

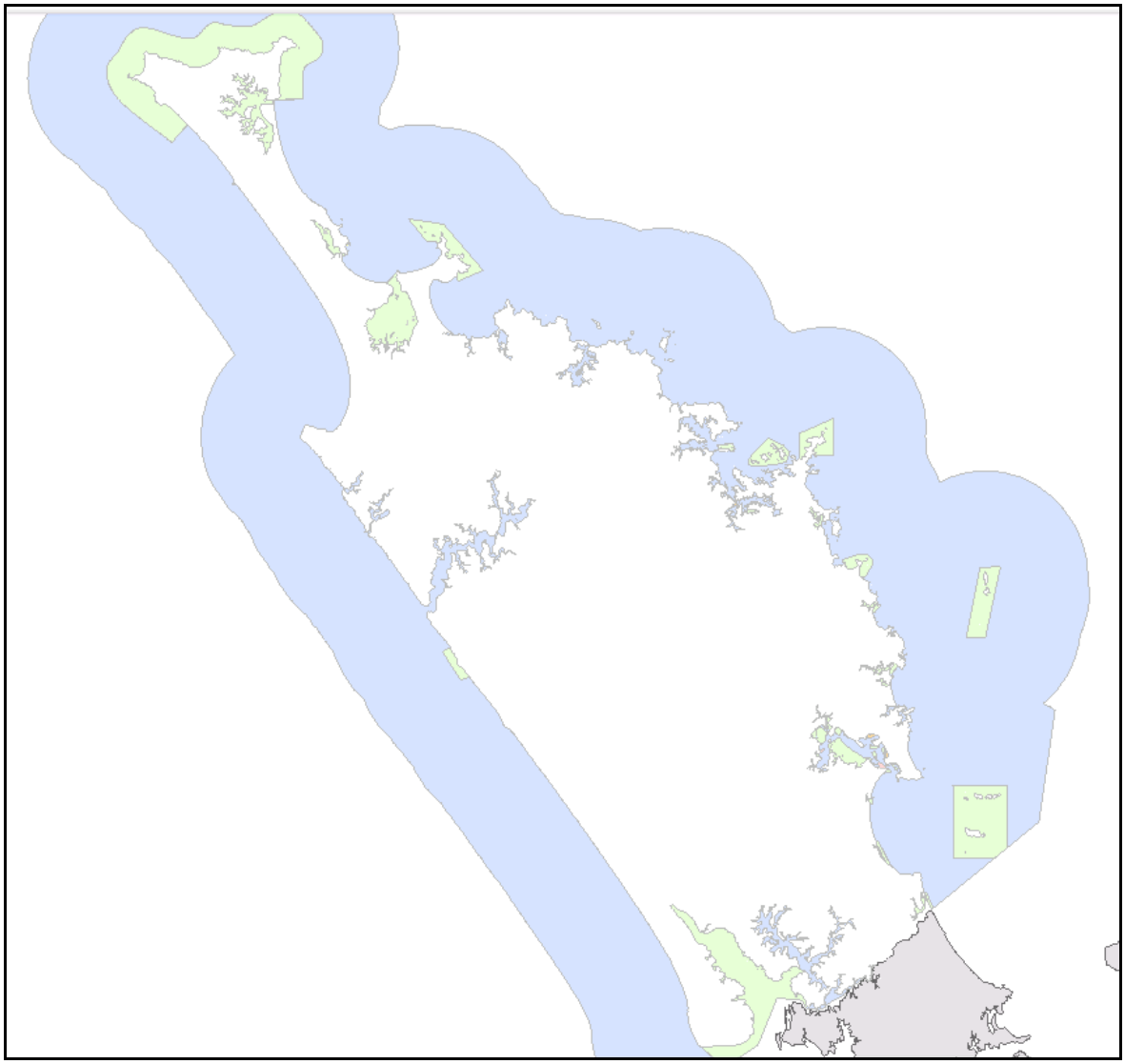
1 Identification and protection of significant natural and historic heritage from activities within the coastal marine area

The current approach to managing significant values in the coastal marine area is through the use of Marine 1 (Protection) Management Areas. Marine 1 Management Areas are a 'catch-all' way to identify and protect cultural values/customary rights, ecological values, natural features/landscape values and historic heritage. These are all matters of national importance outlined in Section 6 of the RMA.

In total there are 24 Marine 1 Management Areas listed in the Regional Coastal Plan (coastal plan) and these are included in regional coastal plan maps (shown on the overview map below). The total extent of Marine 1 Management Areas equates to approximately 137,909 hectares or 1379 kilometers square. This is about 7.9% of the total coastal marine

area in Northland. Many of these zones are in harbours, estuaries and surrounding island groups.

Overview of current extent of Marine 1 Management Areas zones in Northland (light green shading)



Marine 1 Management Areas have been identified using a set of nine criteria contained in Appendix 9 of the Regional Coastal Plan. The criteria are based on the Areas of Significant Conservation Value criteria taken from the Draft New Zealand Coastal Policy Statement 1992 (the criteria were not included in the finalised document however in spite of it being widely used by regional councils). The criteria include:

- Tangata whenua customary rights.
- Māori cultural values (areas of significance identified by the tangata whenua in accordance with tikanga Māori).
- Areas protected around the coast (for example, marine parks or marine reserves).
- Wetlands, estuaries and coastal lagoons (of national or international importance).
- Habitat for marine mammals and birds.
- Areas containing significant endangered species or ecosystems.
- Outstanding natural landscapes and features.
- Historic places (including archaeological sites).

- Outstanding or significant coastal landforms.

Each Marine 1 Management Areas is described in Appendix 6 of the Regional Coastal Plan and a brief summary of its values is provided.

1.1 Issues

1.1.1. Implementation issues with MM1 areas

Since Marine 1 Management Areas were identified it has become apparent that the application of creating a broad-brush 'catch-all' zone has been problematic:

- Typically, the values identified in each Marine 1 Management Areas are fairly generic and repetitive with little detail on the features themselves. A number of Marine 1 Management Areas are also just reflective of existing ecological protection (for example, overlaying marine reserves created by the Marine Reserves Act 1971). In these instances it is difficult to determine whether other values have been assessed rigorously.

- As the rules for Marine 1 Management Areas are particularly strict (for example, a number of activities are prohibited) large areas are subject to a blanket presumption against development. Where an assessment of effects is required as part of a resource consent application, extra cost may be incurred as the assessment will need to consider effects on all the values within the Marine 1 Management Areas. This is not helped by the fact that values are not well defined or explained within the areas.

- Also, no Marine 1 Management Areas has been identified exclusively on the grounds of natural feature/landscape, cultural or historic heritage values – only in association with ecological values. These other values are only considered in consenting through policy (as opposed to being mapped and subject to activity specific rules).

1.1.2. Legislative changes

There have been some significant legislative changes since the Marine 1 Management Areas came into being:

- The New Zealand Coastal Policy Statement (coastal policy statement), made operative in 2010, now applies to what is termed 'the coastal environment'. This is the coastal marine area plus the landward extent of the sea's influence on the land. Councils must map or otherwise identify Outstanding Natural Landscapes and Features[1] in the coastal environment as well as what is called 'Outstanding' Natural Character and High Natural Character[2] [3]. To date, the landward extent of the coastal environment where the coastal policy statement applies, Outstanding Natural Landscapes and Features, Outstanding' Natural Character and High Natural Character have not been identified in any regional planning maps. They have however been mapped at a regional level in the Proposed Regional Policy Statement for Northland.

- The coastal policy statement also provides stronger direction than previous national policy[4] to 'avoid adverse effects' on Outstanding Natural Landscapes and Features and Outstanding' Natural Character (without the option of 'remedy' or 'mitigate'). This

[1] New Zealand Coastal Policy Statement – Policy 15.
[2] New Zealand Coastal Policy Statement – Policy 13. The New Zealand Coastal Policy Statement 1994 generically referred to this as 'natural character' with no distinguishing of the degree of 'naturalness'.
[3] New Zealand Coastal Policy Statement – Policy 1
[4] The New Zealand Coastal Policy Statement 1994 did not require the 'avoidance' of effects.

strong level of direction means that we have to be clear about where the protection elements of the coastal policy statement apply and the particular values being protected. What adverse effects are acceptable, and not, is particularly important in the light of changing in legal interpretation over how adverse effects can be avoided (Supreme Court 'King Salmon' decision'[5]).

- Significant indigenous biodiversity is also subject to the same strong level of protection in the coastal policy statement (although there is no explicit requirement to identify it[6]). There has however been a change to what now constitutes significant indigenous biodiversity for the purposes of protection under Section 6 RMA that differs from the Areas of Significant Conservation Value criteria included in the draft coastal policy statement (see the Marine Ecosystems and Biodiversity topic summary for more detail on this).

1.1.3. Integrated management of significant natural and historic heritage between the coastal marine area and landward extent of the coastal environment

- Cross-boundary issues are also apparent given the jurisdictional boundary of the Regional Coastal Plan being mean high water springs. This can be problematic as natural physical resources do not necessarily follow such 'arbitrary' legal boundaries. For example, a historic heritage feature or area that overlaps mean high water springs should ideally be mapped in both the district plan and Regional Coastal Plan and a similar management regime applied. A similar situation can arise in relation to outstanding landscapes on land, although the extent of such areas can be extremely difficult to define in the coastal marine area.

- Providing consistent resource management across boundaries is a weakness in the Regional Water and Soil Plan and Regional Coastal Plan, which can be quite 'divorced' or disparate (for example, a Marine 1 Management Areas in the coastal plan is not recognised in the provisions of the water and soil plan or district plan applying to immediately adjacent land/freshwater).

- Additionally, the rules in the water and soil plan are typically less restrictive than the corresponding rules in the coastal plan and tend to focus primarily on water quality, water quantity and soil conservation – with natural character/ Outstanding Natural Landscapes and Features not explicit considerations. As such, there is the danger of an inconsistency in how the national coastal policy statement would be applied in the 'coastal environment' in water bodies immediately outside the coastal marine area versus within the area itself[7].

1.2 Possible changes to the regional plans

The mapping of outstanding natural features, high and outstanding natural character in the Proposed Regional Policy Statement and potentially the mapping of heritage and significant indigenous biodiversity presents an opportunity to refine our mapping of significant values in the coastal marine area. These could replace the current Marine 1 Management Areas. A more targeted approach to where protection should apply will also give more certainty and

[5] The decision of the Supreme Court in Environmental Defence Society Inc v New Zealand King Salmon Company Limited 2014 NZSC38: https://www.google.co.nz/#q=decision+of+the+Supreme+Court+in+Environmental+Defence+Society+Inc+v+New+Zealand+King+Salmon+Company+Limited+2014+NZSC38

[6] NZCPS – Policy 11

[7] Note: with waterbodies outside the Coastal Marine Area, regional councils have a reduced range of functions – for example managing activities on the surface of freshwater bodies is a district council function.

clarity to resource users. For example, it may be that we don't need to have a blanket approach to protection in some areas where a Marine 1 Management Areas designation currently applies.

At the stakeholder workshops this idea was tested with participants, and overall there was broad acceptance of the approach of moving to overlays. It was also agreed that it would improve clarity and reduce uncertainty. It was felt however that there should be sound science in place before any new mapping takes place as well as robust criteria (used in the methodology of drawing the maps) to make sure special attributes were properly captured. A risk based approach could be used to focus mapping efforts, e.g. estuaries and harbours are more vulnerable to the effects of development than the open coastline. In addition the status quo of retaining Marine Management 1 zones will need to be robustly 'tested' against any proposed changes (i.e. through the Section 32 process). Finally policy/ criteria on significance should still exist as a backstop for unmapped Marine Management 2 zones as there was a feeling that despite best efforts, not all significant areas will be captured. *(Note: at the workshop there was a good deal of discussion on mapping marine biodiversity in particular – refer to the marine ecosystems topic for more details).*

The stakeholder workshop also discussed issues around identification of heritage. It was felt that, although most known built and archaeological heritage (i.e. 'physical sites') are located in the terrestrial environment, there are still known sites of value in the CMA and these are currently unrecognised in our coastal plan. Mapping physical sites would afford them a greater level of protection under the RMA (there is statutory protection for archaeological sites under Heritage legislation). Not all physical sites will be equally significant (there are 14,000 known archaeological sites in Northland alone) however the value of sites can change overtime and a large portion of a site can be hidden and buried. The context or 'story' of sites or series of sites can also be important (forming a cultural or heritage landscape).

Undertaking a precise mapping exercise and replacing Marine Management 1 zones means we can refine our existing policies and rules to ensure that we 'capture' the right qualities and use the plan review process to clarify what is and is not 'avoidance' of adverse effects for the purpose of meeting the strict avoidance regime of the coastal policy statement. The feeling from the stakeholder workshop was that we should be clear and specific with what is not an adverse effect and policy and rules should be directly tailored to the sensitivity of the receiving environment. This will include considering circumstances when minor or temporary effects can be acceptable and how beneficial effects can be taken into account. Some activities for example may actually limit other effects, e.g. providing moorings can help avoid anchor damage.

It is also important to recognise that the coastal policy statement introduces an implied 'two tiered' approach to protection – the 'outstanding' values ('tier 1') are to be afforded the highest level of protection where effects are to be avoided. Other values such as 'high' natural character are not considered to be as significant (and may not require rules to protect from activities) but the coastal policy statement still requires some level of protection to ensure these areas maintain their overall integrity ('tier 2'). The two-tiered approach needs to be articulated through policies, methods and rules in the regional plan.

Workshop participants felt that the current Marine Management 1 rules are a good starting point to protect outstanding areas and generally catch activities with known significant effects. The rules will need to be refined for different values however, e.g. a discharge to water is unlikely to affect an Outstanding Natural Landscape or Outstanding Natural Feature but may affect an area of Outstanding Natural Character or significant biodiversity. A structure, on the other hand, may not affect biodiversity values but may affect an

Outstanding Natural Landscapes, Outstanding Natural Feature or an Outstanding Natural Character area.

The workshop discussed whether offsetting would be an appropriate tool to use to manage adverse effects. It was felt that it might not be possible to offset effects against all values (for example significant biodiversity values for extremely threatened or rare species) but offsetting could be used in other instances, for example to replace natural character values that will be lost. Offsetting was also seen as a balancing act, not a silver bullet but part of a hierarchy (avoid, remedy, mitigate, offset, compensate), although it is difficult to see how anything else other than 'avoid' applies where there is a strict avoidance regime like the NZCPS.

A particular challenge will be to develop policy and rules for activities that are adjacent to (not within) identified high value areas, but have an impact on the identified areas. One option is to use an approach similar to the Auckland Council which has drawn a buffer in the coastal marine area around land-based high value areas to capture the primary area of influence. Another option is to use policy to assess the impact of activities on any adjacent high value areas.

Aside from the natural character mapped in the coastal marine area, there is a relatively small amount of Outstanding' Natural Character and High Natural Character areas mapped in the Proposed Regional Policy Statement in the coastal environment, within freshwater bodies. The Proposed Regional Policy Statement also identifies some freshwater bodies as Outstanding Natural Landscapes and Features in the coastal environment (for example, Poutō Peninsula Dune Lakes). These could also be mapped in a regional plan. Under the current regional plan framework, protection of these would not fall within the ambit of the Regional Coastal Plan and would therefore be subject to rules in the Regional Water and Soil Plan. As discussed above, the rules between plans are currently quite different but could be aligned where this is possible (for example, rules on disturbances to beds of water bodies). This would implement direction in the coastal policy statement, which is to afford these values the highest level of protection in the whole of the coastal environment.

2 Identification and protection of significant natural and historic heritage from activities within freshwater bodies

The Regional Water and Soil Plan does not have any explicit rules for natural character or Outstanding Natural Landscapes and Features management and relies on policy and assessment criteria applied during the consent process. There are rules protecting Outstanding Value Waterbodies which are identified on the basis of ecological, cultural and/or landscape value (Policy 9.5.2 of the water and soil plan), but not natural character. Rules relate primarily to water quality and quantity and structures.

The issue is the extent to which explicit protection is required in the Regional Water and Soil Plan to manage outstanding landscapes and features where this applies to freshwater bodies (for example, Kai Iwi Lakes are identified as being an outstanding natural landscape and feature) and how natural character is to be managed beyond the coastal environment given it is not mapped[8].

[8] Note: the focus is managing activities located in waterbodies and their effects on values immediately adjacent to the waterbody. It is expected that effects from activities located immediately adjacent to waterbodies (i.e. their margins) will be managed by district councils.

Historic heritage is not identified in water bodies in the Regional Water and Soil Plan. Although regional councils can place controls on the disturbance to beds of lakes and rivers which may contain historic and archaeological sites, it must first be identified if rules are to be applied in plans. If not mapped or scheduled, management relies on assessment criteria applied via the consent process or the controls of the Heritage New Zealand Pouhere Taonga Act 2014.

2.1 Possible changes to the regional plans

Freshwater bodies that lie in larger areas of outstanding natural landscapes mapped in the Proposed Regional Policy Statement could be shown in a new regional plan as having a significant landscape value. A note of caution needs to be struck for two reasons:

- Firstly district councils have the ability to remap an area (under Policy 4.5.1 of the Proposed Regional Policy Statement). This makes it potentially problematic to map landscapes within smaller freshwater areas, for example rivers, as the surrounding land designation may change in district plan maps. The mapping of a river on the basis of landscape importance becomes an anomaly if the surrounding landscape is declassified in a district plan. This risk can't be mitigated but is likely to be low risk as any future changes are likely to be minor.

- Secondly, a bigger risk is that the freshwater body itself is not a quality or characteristic that make up the outstanding landscape.

There are however some examples in the Proposed Regional Policy Statement where an outstanding landscape has been mapped wholly within freshwater bodies. This is because they are integral or dominant to the overall outstanding landscape unit (as stated above Kai Iwi Lakes is one such example). It is relatively easy therefore to transfer this mapping into a regional plan.

Outstanding features are less problematic than landscapes as they are more tightly defined (for example around a dune lake) and again it is relatively easy to transfer this mapping layer into a regional plan. Additionally there are some outstanding natural features yet to be spatially identified but otherwise included in Appendix 4 of the Proposed Regional Policy Statement as meriting consideration. These include waterfalls, hot springs and the geothermal field at Ngāwhā – again wholly or largely in water.

Protection of Outstanding Natural Landscapes and Features are likely to be partially captured under existing rules for outstanding value waterbodies and dune lakes. New rules may be needed for features that are not otherwise captured under the 'umbrella' of these two designations, for example, waterfalls or hot springs. Policies could guide resource consenting for activities in freshwater bodies and their effects on outstanding features on land.

It is not recommended that natural character is mapped outside what is already mapped in the coastal environment through the Proposed Regional Policy Statement – this is likely to be an onerous and expensive exercise. An alternative method is to capture (and thus protect) natural character through existing designations including by making natural character a specific driver for the designation of outstanding natural value waterbodies, dune lakes and significant indigenous wetlands. Outside of these high value areas, effects on natural character can be assessed on a case by case basis using policy.

We could identify historic heritage in freshwater bodies and manage the effects from activities within the water body using policies and rules. We could also use policies to protect historic heritage adjacent to freshwater bodies.

3 Summary tables – Significant natural and historic heritage in waterbodies

The tables below present an overall guide on the possible approach that could be taken for protecting significant natural and historic heritage.

3.1 Outstanding natural character, outstanding natural landscapes, and outstanding natural features

Coastal marine area and freshwater bodies in coastal environment	Freshwater bodies outside coastal environment	Land adjacent to freshwater bodies outside coastal environment
Map in the coastal marine area and freshwater bodies in coastal environment in regional plan as overlays with associated policies and rules. Consider including mapping 'buffers' in coastal marine area around mapped areas on adjacent land. Don't map natural character in the open coast beyond what has been already mapped in the Proposed Regional Policy Statement. Policy reflecting the 'avoid adverse effect' requirements of New Zealand Coastal Policy Statement. Policy to also outline how adverse effects are avoided and/or what types of adverse effects are appropriate. Will only have rules where the underlying zone rules are not appropriate. Rules to focus on the impacts on activities on the values of the overlay area.	Map outstanding natural landscapes and outstanding natural features in certain water bodies in regional plan where the feature/landscape is dominant/integral to the water body, for example, dune lakes. Don't map natural character in its own right however could use 'natural character' as a new criterion for designating outstanding water bodies (and possibly dune lakes and significant wetlands). Policy applied to resource consents for natural character and policy and rules for outstanding natural landscapes and outstanding natural features.	Don't map natural character, outstanding natural landscapes and outstanding natural features but include policy to manage effects of activities within water bodies on these values.

3.2 High natural character

Coastal marine area and freshwater bodies in coastal environment	Freshwater bodies outside coastal environment	Land adjacent to freshwater bodies outside coastal environment
Map in the coastal marine area and freshwater bodies in coastal environment in regional plan as overlays. Policy reflecting the 'avoid significant adverse effect' requirements of New Zealand Coastal Policy Statement. Likely to be policy driven rather than have specific rules.	Don't map natural character in its own right however could use 'natural character' as a new criterion to be used in designating outstanding water bodies (and possibly dune lakes and significant wetlands). Policy applied to resource consents for the purposes of managing effects on natural character.	Don't map natural character but include policy to manage effects of activities within water bodies on natural character.

3.3 Significant biodiversity and ecosystems

Coastal marine area and freshwater bodies in coastal environment	Freshwater bodies outside coastal environment	Land adjacent to freshwater bodies outside coastal environment
(Refer also to 'Marine Ecosystems and Biodiversity' topic) Map in the coastal marine area and freshwater bodies in coastal environment in regional plan as overlays with associated policies and rules. Consider including mapping 'buffers' in coastal marine area around mapped areas on adjacent land. Policy reflecting the 'avoid adverse effect' requirements of New Zealand Coastal Policy Statement. Policy to also outline how adverse effects are avoided and/or what types of adverse effects are appropriate. Will only have rules where the underlying zone rules are not appropriate. Rules to focus on the impacts on activities on the values of the overlay area.	Not addressed by this topic (refer to 'Water Quality')	Not addressed by this topic. (refer to 'Water Quality')

3.4 Historic heritage

Coastal marine area and freshwater bodies in coastal environment	Freshwater bodies outside coastal environment	Land adjacent to freshwater bodies outside coastal environment
Map in regional plan. Include policy and rules to avoid significant adverse effects on this resource	Map in regional plan. Include policy and rules to avoid significant adverse effects on this resource	Do not map in regional plan. Include policy to avoid significant adverse effects on this resource from activities taking place within freshwater bodies.

ITEM: 3.4

ISSUE: The new regional plan

ID: A708316

To: Regional Policy Committee, 15 December 2014

From: Ben Lee, Programme Manager – Policy Development

Date: 5 December 2014

Report Type:	☑	Normal operations	☐	Information	☐	Decision
Purpose:	☐	Infrastructure	☐	Public service	☑	Regulatory function
	☐	Legislative function	☐	Annual\Long Term Plan	☐	Other
Significance:	☐	Triggered	☑	Not Triggered		

Executive Summary:

The purpose of this report is to seek approval from the Regional Policy Committee to:

- commence the preparation of a single draft new regional plan, and
- undertake projects to map regionally significant surfbreaks and anchorages.

Please refer to the **attached report** for more information.

Legal compliance and significance assessment:

The activities detailed in this report are part of the council's day to day operations, are provided for in the council's 2012-2022 Long Term Plan, and are in accordance with the council's decision making process and sections 76-82 of the Local Government Act 2002. The matters are not significant under council policy.

Recommendation(s):

1. That the report "The new regional plan" by Ben Lee, Programme Manager – Policy Development and dated 5 December 2014, be received.

2. That the Regional Policy Committee approves the commencement of the preparation of the draft new regional plan.

3. That the Regional Policy Committee approves that the draft new regional plan be a single regional plan.

4. That the Regional Policy Committee approves the commencement of a project to identify regionally significant surf breaks.

5. That the Regional Policy Committee approves the commencement of a project to identify regionally significant anchorages.

Report

Once the review of the regional plans is complete (see other item in this agenda), the regional plans must go through the full Schedule 1 process (submissions, hearings etc.) regardless of whether there are any changes or not.

Assuming the committee adopts the review reports, it must then decide the process for preparing and notifying the new regional plan. The Committee has already signalled its preference to prepare a draft regional plan for public feedback (an informal process) prior to notifying the proposed regional plan.

The process
We estimate that it will be mid-2016 by the time a fully worked up draft new regional plan will be ready to release for wider public feedback because:

- There is a lot of science / information gathering happening now or planned necessary for informing new policy, particularly for water.
- A lesson from developing the new Regional Policy Statement (RPS) is that working with the committee to develop provisions can take some time (it took 1 year to prepare the draft RPS and it has less detail than the new regional plan will).

Through the process of preparing the draft staff will 'test' elements with stakeholders, tangata whenua and other interest groups as necessary prior to releasing the full draft plan.

The timeframe for developing the new regional plan must take into account requirements to give effect to our Regional Policy Statement (a number of RPS methods require changes to regional plans to be notified within two years of the RPS becoming operative) – we expect the Proposed RPS to become operative around mid-2015. This means to the new regional plan will need to be notified by mid-2017.

The following are the proposed key milestones and timeframes for preparing the draft new regional plan

Milestone	Timeframe
1. Confirm project plan	February/March 2015
2. Confirm structure of regional plan and section 32 report[1]	March/April 2015
3. Committee workshops seeking approval / direction for plan content and section 32	June 2015 – May 2016
4. Committee approves draft regional plan and section 32 report for public feedback	July/August 2016

Following the public feedback on the daft regional plan, it's anticipated it will take another year to prepare the new regional plan for notification i.e. the new regional plan will be notified mid-2017.

Single regional plan

[1] Section 32 refers to the section of the RMA that sets out how the provisions of a plan must be analysed and justified.

The recommendation is that we go for a single regional plan rather than two or more plans.

Staff undertook an analysis of the resource management planning documents in Northland in 2009[2] prior to deciding to proceed with the new Regional Policy Statement. The conclusion of that analysis was that a single planning document for the whole region (including districts) is the best option. However this relied on having all the councils agreeing, and at the time this was unlikely. The second best option was to start with the new Regional Policy Statement and the have a single regional plan. There's no new evidence to suggest that a single regional plan is still not the (second) best approach. Since this report, central government has signalled its preference for single planning documents.

Regionally significant surf breaks and anchorages

In preparing the draft plan, various environmental features will be mapped as directed / required by the proposed Regional Policy Statement or national policy statements, including:

- Significant marine biodiversity
- Significant historic heritage in fresh and coastal waters
- Outstanding natural character and high natural character
- Outstanding natural features
- Outstanding water bodies

Mapping provides certainty about where the related plan provisions apply and is necessary in order to apply rules specific to the environmental features in question.

In addition to the 'compulsory' mapped environmental features, staff recommend that regionally significant surf breaks and anchorages are mapped (and specific management provisions applied). The "Coastal water space" plan review report (included in this agenda) supports this recommendation.

It's proposed that the identification of regionally significant surf breaks and anchorages be done in conjunction with relevant board riders clubs and boating clubs / associations.

[2] Northland Regional Council, 2009, *Resource Management Planning Documents in Northland – An Analysis of Possible Future Options.*