Ministry for the Environment
Manatū Mō Te Taiao

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19-D-02205

11 November 2019
s 9(2)(a)

Dear s 9(2)(a)

Thank you for your email of 29 September 2019 requesting the following under the Official Information Act 1982:

A. Please can you provide me with a copy of these draft cabinet papers:

Water Reform Paper 1 - Governance - proposals for public discussion document
Water Reform Paper 2 - Objective and limit setting and Regulatory Impact Statement
Water Reform Paper 3 - Managing within water quality limits

and these Briefings:

Water Reform: Quality - Managing discharges within water quality limits
Water Reform: Quality - Different approaches to managing water quality in different types of catchments
provided to Cabinet for review. These papers were referred to in document 12-B-01864 and 12-B-01923

B. Please can you advise who is/are the principal author/s of these draft cabinet papers.

The Ministry for the Environment has identified six documents in scope of your request, as listed in the attached table. These documents are being released in full. The principal authors of the draft cabinet papers are Dan Brown (paper 1), Anya Pollock (paper 2) and Irene Parminter (paper 3).

Please note that due to the public interest in our work the Ministry for the Environment publishes responses to requests for official information on our website on our OIA responses page shortly after the response has been sent.

If you have any queries about this, please feel free to contact our Executive Relations team.

Yours sincerely

Wes Patrick
Director, Water (acting)

List of documents

No.	Date	Content	Decision	Notes
1	16/11/2012	Draft Water reform Paper 1: Governance - proposals for public discussion paper	Release in full	This draft cabinet paper may have changed before it was considered by cabinet
2	16/11/2012	Draft Water Reform Paper 2: Objective and Limit Setting	Release in full	This draft cabinet paper may have changed before it was considered by cabinet
3	17/11/2012	Draft Water Reform Paper 3: Managing within water quality limits	Release in full	This draft cabinet paper may have changed before it was considered by cabinet This is the same document as item 8
4	October 2012	12-B-01380 Water Reform: Quality - Different approaches to managing water quality in different types of catchments	Release in full	
5	November 2012	12-B-01870 Water Reform Paper 3: Managing Within Water Quality Objectives and Limits	Release in full	This is the same document as item 7
6 Attachment to item 5	Not dated	Attachment A to 12-B-01870 12-B-01339 Water Reform: Quality - Managing discharges within water quality limits	Release in full	
7 Attachment to item 5	October 2012	Attachment B to 12-B-01870 12-B-01380 Water Reform: Different approaches to managing water quality in different types of catchments		This is the same document as item 5
8 Attachment to item 5	17/11/2012	Attachment C to 12-B-01870 Draft Water Reform Paper 3: Managing within water quality limits		This is the same document as item 3

In Confidence

Office of the Minister for Primary Industries

Office of the Minister for the Environment

Chair

Cabinet Economic Growth and Infrastructure Committee

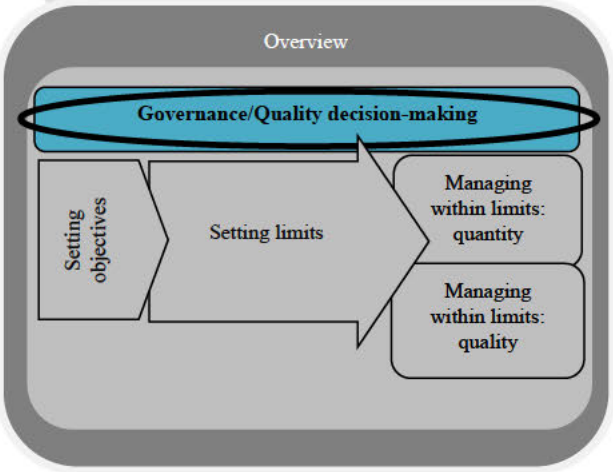
Water Reform Paper 1: Governance – proposals for public discussion document

Proposal

1. This paper seeks agreement to an approach to freshwater governance for inclusion in a water reform discussion document in early 2013 that sets out proposals for implementing a water reform strategy. For freshwater governance this would include:
   a. setting out a vision for effective freshwater governance
   b. proposals for improving governance in the near term, including strong central government leadership, an improved water planning model as an alternative to the status quo and a clear role for iwi/Māori in governance
   c. signalling a longer term review of governance frameworks, informed by review and evaluation of the approach above.

Executive summary

2. This paper is the first paper (of four) on the core policy elements of an overall package for a water reform strategy (see Annex 1). Improving water management systems will require solutions that start now and adapt over the long term. We recommend introducing changes over the next year and signalling that we will build on these progressively over time.



3. We propose the discussion document in early 2013 focus on three key elements of an improved governance system:
   - strong central government leadership including clear expression of national values and expectations for decision making, assistance to regional councils and effective reserve powers for intervention in local government processes
   - an improved planning process for water as an alternative to the existing Resource Management Act 1991 (RMA) process
   - effective provision for iwi/Māori involvement in freshwater governance.

Leadership role for central government

4. We do not consider a fundamental shift in the functions of central and local government is necessary. We propose instead a re-balancing of the role and

influence of central and local government within the existing framework. We propose a more active leadership role for central government for setting national policy and objectives for water management, setting clear expectations on councils, ensuring a full and effective management toolkit is available, and an active and adaptive approach for assisting or intervening in local government processes as required.

Improved planning process for water

5. The freshwater planning system is slow, litigious, expensive and uncertain, and some planning decisions lack rigour, e.g. some councils are not adequately assessing the impacts of their plans on regional economies. We propose the discussion document in early 2013 set out a new planning process for water as an alternative to the existing RMA process, with the following features:

   - a statutory model for plan development requiring enhanced collaboration between councils, iwi/Māori and communities
   - an expert independent hearing panel to consider public submissions and test the rigour of the analysis in the notified plan
   - clear decision-making accountability for councils
   - some restrictions on merit appeal rights.

Effective provision for iwi/Māori involvement in freshwater governance

6. There are a number of areas within the proposed governance framework where iwi/Māori input could be enhanced, including a role on collaborative stakeholder groups, and a role in the final council decision. Cabinet will receive further advice in December 2012 on how to provide across the programme for iwi/Māori rights and interests.

Proposals for discussion document

7. We propose the discussion document include all the measures above for implementation in 2013, as part of the foundation components of a water reform strategy.

8. We propose the discussion document also signal longer term measures to monitor and review this approach over time. This will enable assessment of whether more significant changes to governance are justified, or whether some of the foundation measures need adjustment. Key issues to monitor include the effectiveness of central government leadership in improving the quality of decision making, and the uptake and effectiveness of the alternate planning process, including the effects of changes to appeal rights.

Background

9. This is one of four papers on the core policy elements for water reform being considered by the Economic Growth and Infrastructure Committee (EGI) as part of implementing a water reform strategy.

10. [ref to Cabinet Minute from overview paper when confirmed]

11. The second report of the Land and Water Forum (the Forum) in April 2012 recommended a detailed process for freshwater plan and policy-making. Cabinet on 2 July 2012 noted that the Ministry for the Environment and the Ministry for Primary Industries would undertake further design and analysis on a collaborative planning

model, including analysis of provisions for iwi participation in the freshwater planning process [CBC Min (12) 5/5].

Alignment with other government reforms

12. Freshwater reform is linked closely to Phase Two of the resource management reforms and Local Government reforms. The key overlaps are:

- Resource management reforms are focusing on improvement of the RMA planning system. Water-related planning will need to mesh with, for example, proposals for a single resource management plan per district and enhanced requirements for section 32 analysis (consideration of alternatives, benefits and costs).
- The Better Local Government reforms include proposals to:
  - improve local government planning processes (the Local Government Efficiency Taskforce is due to report by 30 November 2012)
  - expand the powers of central government to assist or intervene in situations where local authorities are significantly failing to perform their roles and functions
  - investigate options for a local government performance monitoring and improvement regime (as part of the cross-agency Housing Affordability work programme).

[placeholder – also note linkages to MFE / Ministry of Justice review of the Environment Court]

Comment

What is the problem?

13. Water management has lacked central government direction and guidance to support good decision-making at the regional level. The RMA is an enabling law without clear expectations for robust decision making, and regional councils have struggled to deal with politically contentious and technically complicated issues in the absence of central government leadership or support.

14. These challenges are exacerbated by a planning system that is slow, litigious, expensive and uncertain. Some of these problems stem from the design of the legislation e.g. wide appeal rights to the Environment Court. This incentivises a litigious approach to planning, with parties reluctant to engage fully until the end of the process.

15. There also are problems with the quality of decision making, e.g. some councils have not engaged effectively with communities to work through the implications of their plans, or lack the resources and expertise for robust scientific and economic analysis.

16. These problems have manifested in poor quality planning for water, which can have significant impacts:

- Inadequate analysis of impacts of plan provisions can have serious economic regional effects, e.g. concerns with the impacts on the farming sector of provisions in the Horizons One Plan and Otago proposed Plan Change 6A.

- Water quality in many parts of New Zealand is declining across a number of indicators. Levels of nutrients (e.g. nitrogen and phosphorus) in rivers have increased over the past two decades, reflecting the impact of pollution from urban storm water, run-off from roads and paved surfaces, and intensification of agriculture.
- A lack of robust management provisions in plans (e.g. clear objectives and limits) adds significant uncertainty and costs to the resource consent stage, where issues are re-litigated consent-by-consent. This creates significant investment uncertainty and compliance costs, e.g. the cost of resource consent application for the Central Plains Water Scheme was estimated at $15 million and it took 11 years from lodging the consent application to final approval.
- Excessive delays in plans create significant compliance costs for councils and participants, and can result in plans that are out of date by the time they are finished. For example, Variation 6 to the Waikato Regional Plan took six years from notification to being operative, and the costs to Horizons Regional Council of the One Plan process are approximately $9.4 million (excluding costs to the Courts, submitters and appellants).

Key elements of an improved governance system

17. An improved freshwater governance system should enable economically efficient water use within limits that provide for economic, environmental, social and cultural values. This requires a system that:
    - enables central government to set clear national outcomes and expectations and intervene quickly and effectively in local government processes if required
    - enables communities to participate early in the planning process and discuss trade-offs between competing values
    - enables understanding of the implications of different options and associated trade-offs e.g. the economic impacts on communities of adjusting to higher water quality standards
    - ensures councils have the capacity and capability to make robust and timely decisions
    - delivers an efficient, timely and robust process and transparent decision-making based on good evidence
    - enables effective involvement of iwi/Māori in management of water across a region or rohe.
18. We propose the discussion paper in early 2013 focus on three elements of an improved governance system:
    - strong central government leadership including clear expression of national values and expectations for decision making, assistance to regional councils and effective reserve powers for intervention in local government processes
    - an improved planning process for water as an alternative to the existing RMA process
    - effective provision for iwi/Māori involvement in freshwater governance.

Land and Water Forum's recommendations

19. This proposal builds on the recommendations of the Forum but differs in some detail. We propose a more specific programme of central government leadership, and a planning model that, while based heavily on the recommendations of the Forum, is less prescriptive in design, as we need a model that suits the circumstances of different communities. Our proposal has clearer decision-making accountability for regional councils, as the Forum's proposals had councils as active observers rather than full partners in the plan development process.

Strong leadership from central government

20. We do not consider a fundamental shift in the functions of central and local government is necessary. Large changes to freshwater governance structures e.g. wholesale transfer of functions to central government, would not alone fix the underlying problems. Large changes may also create new problems e.g. the lack of accountability of a technocratic and/or more distant decision maker to communities affected by decisions. We propose instead a re-balancing of the role and influence of central and local government within the existing framework.

21. *Central government* should be responsible for

- clear articulation of national values
- ensuring that the national interest, and statements of central government policy, are articulated and provided for in local government decision-making
- specification of good practice processes, tools, methodologies, and decision-making considerations
- guidance and support for implementation
- a commitment to monitor, evaluate and review the effectiveness of the governance system.

22. **[Note more detail required across the papers on mechanisms of providing for / expressing national interest]**

23. *Local government* should remain responsible for regional and catchment scale management of water, with their discretion guided or restrained by a stronger national framework, and assistance from central government.

24. Central government also needs an effective toolkit for intervention in regional planning process that are not adequately providing for nationally set expectations. A large number of intervention tools exist already under the RMA and Local Government Act, such as the power to call in plans to a Board of Inquiry, or direct a council to prepare a change to an operative or notified plan. There are poor incentives to use some of these tools because:

- there are not clear criteria for their exercise – the powers are very open ended without clear triggers for when central government should become involved
- central government has not clearly set expectations about national values and good decision making processes, which means there are limited "hooks" to justify when central government intervention is warranted.

25. We consider that improvements are required to the tools enabling the Minister for the Environment to direct changes or variations to a notified or operative plan, or direct a review of a plan. More flexible and targeted intervention tools mean central

government has effective 'reserve' powers to ensure effective implementation of national policy.

26. We propose the powers to direct changes or variations to a notified or operative plan, or direct a review of a plan, be amended to:

    - Clarify the criteria for their use: the Minister in deciding to exercise the power must consider whether the plan in question is adequately providing for central government direction and expectations (e.g. matters contained in statements of government policy, or decision-making processes in RMA National Environmental Standards or Regulations) **[note – more detail needed on exactly how this direction and expectations are expressed]**
    - Enable the Minister to specify the matters the regional council must consider when developing the plan change or variation. These matters would be tagged directly to central government direction and expectations, e.g. a council could be directed to prepare a plan change that specifically provides for matters in a National Policy Statement.

27. The water reform strategy as a whole will provide much clearer expectations to guide use of these powers, e.g. through clear direction on good practice for setting and managing to limits.

Alternate planning process

28. We propose councils would have a choice to use either the existing planning process (existing Schedule 1 of the RMA), or a new statutory model under the RMA when preparing, changing or reviewing freshwater policy statements and plans. The council would be required to give reasons for their choice. If the new model was used, all the steps below from paragraphs 31 to 40 would apply (i.e. this is not a "pick and mix" model).

29. We propose for the discussion paper that this alternate planning process be available just for regional council plan changes in relation to water (including those considering effects of land use on water quality). The wider resource management reforms will provide an opportunity to consider whether this alternate planning process should have wider application beyond freshwater.

Plan development

30. When using the alternate planning process, councils would be required to take a collaborative approach to developing a plan through to notification. This would include clear principles, including statutory requirements that councils take a collaborative approach (defined as a requirement to partner with communities from the start of the process to jointly develop options and solutions), engage early with communities, and that persons significantly affected by a plan change have clear rights to be involved in the process. We do not propose a high level of prescription in how councils provide for these principles, as this may constrain the ability of councils and communities to design a process that best suits their needs.

31. Collaborative processes on their own are not a solution to all problems or a guarantee of better governance and decision-making. Even when unsuccessful in reaching consensus or agreeing solutions, a collaborative process will still provide good information to the final decision-maker and increase confidence in the transparency of decisions.

32. Councils would be required to appoint at least one stakeholder group(s) to give advice to council in development of the plan change. Multi-stakeholder groups enable the opportunity for early dialogue and development of win-win options directly between stakeholders. There would be a statutory requirement that the stakeholder group(s) be required to represent the broad range of interests affected by the plan change.

33. Councils would be required to set a terms of reference for the process including as a minimum the process for how the council and stakeholder group(s) work together to engage with the wider community, the nature of the advice from the stakeholder groups, clear timeframes and deadlines for processes, and safety nets to deal with a dysfunctional process, e.g. the council should be able to "close down" a dysfunctional collaborative group or change the membership if required.

34. The council would have a statutory obligation to have regard to the advice of stakeholder group(s). The council would retain responsibility for finalising and approving a plan for notification. The council would be required to demonstrate a high level of transparency and rigour on the analysis underpinning the plan.

Hearings panel

35. We propose the alternate planning process include an expert hearings panel with a majority of non-council commissioners, to bring unbiased and independent expertise to the process. The hearings panel would have an independent chair, with the council responsible for appointing qualified commissioners with a mix of knowledge and experience relating to the subject matter of the plan.

36. The hearings panel would consider public submissions against the evidence and analysis underpinning the notified plan, run mediation processes if required and hold a hearing with Environment Court rigour (including cross-examination).

37. The focus of the hearings panel will be on the robustness of the notified plan, e.g. the evidence and justifications sitting behind the plan provisions. The hearings panel will not be a forum to relitigate the entire substance of the plan as can currently happen in the Environment Court, otherwise parties may not have incentives to participate fully in the earlier collaborative process.

38. The hearings panel would make recommendations to the council on whether the evidence and arguments raised in submissions, or outcomes of mediation, justify any changes to the notified plan. There would be a statutory presumption that the council's notified plan is sound, and that strong evidence is required to recommend changes.

Council decision

39. We propose in the alternate planning process that councils remain responsible for notifying and making final decisions on plans while being required to have regard to the recommendations of the hearings panel and collaborative group(s). The council would be required to give the reasons for its decisions, including any reasons for deviating from the notified plan and/or the recommendations of the hearings panel.

Appeal rights

40. We also propose merit appeal rights in the alternate planning process be available only where the decision of the council differs from that of the recommendations of the hearings panel. This will incentivise full participation early in plan development, as parties cannot guarantee there will be an Environment Court process to re-litigate the issues, but also provides an important safety net if the council's decision

does not adequately consider the evidence and recommendations from the collaborative process and hearings panel. Appeal rights on points of law would be available where merit appeal rights are not.

41. **[placeholder – refer to MFE / Ministry Justice review of the Environment Court and need to coordinate policy decisions on appeal rights under the RMA]**

Implications of alternate planning process

42. We expect this proposal would result in:

- higher quality decision making, with the costs and benefits of different options well considered through close engagement with communities and the hearings panel process
- significant cost and time savings to councils and participants if wide appeals are avoided (although participation in collaborative stakeholder groups is likely to be very time intensive for those involved).

43. The success of an alternate planning process will also be influenced by other aspects of water reform. For example, a clear national objectives framework, or improved tools for setting and managing to limits, will reduce the scope for conflict in individual planning processes.

Iwi/Māori involvement in freshwater governance and decision-making

[this section is placeholder text – issues under discussion with iwi advisers]

44. There is dissatisfaction from iwi/Māori that their rights, interests and values in fresh water are not adequately addressed and recognised. Preliminary conversations with Iwi Advisers have included discussion of iwi having direct involvement in decision-making in the regions and at a national level, and inclusion in collaborative stakeholder processes.

45. Concerns with fresh water reflect wider concerns with resource management as expressed, for example, in the reports of the Waitangi Tribunal on the Wai 262 (Māori culture and identity) and Wai 796 (petroleum management) claims. Improvements to freshwater governance structures are one means by which the Government is able to address rights and interests in water.

46. There are a number of areas within the proposed planning process framework where iwi input could be enhanced:

- the decision on whether to use the alternative planning process and assisting the council in design of the process e.g. to help ensure the planning process fits with their governance structures and any Treaty settlements
- a guaranteed place in collaborative plan development processes – ensuring iwi values and interests are brought to the table early
- ability to nominate person(s) to the hearings panel
- some role in the final council decision.

47. There are different options for the degree of influence at these steps, ranging from a right to be consulted, a formal advisory role, or formal co-governance decision making powers. Any proposals for improved freshwater governance system also need to be designed and implemented so they do not detract from any Treaty

settlements. There is a tension between clear bottom lines for iwi/Māori involvement versus the need for flexibility to design processes that best suit individual iwi.

48. Cabinet will receive further advice in December 2012 on how freshwater reform can provide for some aspects of iwi/Māori rights and interests.

Content of discussion document and longer-term evaluation and review

49. We propose the discussion document include all the measures above for implementation in 2013, as part of the foundation components of a water reform strategy. Proposals relating to central government leadership will sit across the wider programme, e.g. the national objectives framework.

50. We propose the discussion document also signal longer term measures to monitor and review this approach over time. This will enable assessment of whether more significant changes to governance are justified, or whether some of the foundation measures need adjustment. Key issues to monitor include the effectiveness of central government leadership in improving the quality of decision making and the uptake and effectiveness of the alternate planning process, including the effects of changes to appeal rights.

Risks and Mitigations

51. Appeal rights are a contentious feature of the RMA and any consideration of change from the status quo will generate considerable interest and publicity. The Forum were unable to reach consensus on appeal rights reform.

52. Options for iwi/Māori involvement in an improved freshwater planning and decision-making process remain under active discussion between Ministers and the Freshwater Iwi Leaders, in the context of wider discussions on iwi rights and interests. Outcomes of the discussions will need to be factored in development of options for the February discussion document.

Consultation

53. The following departments and agencies have been consulted on this paper and their views are reflected: Ministry of Justice, Department of Internal Affairs, Te Puni Kōkiri, Department of Conservation, the Treasury, Ministry of Business, Innovation and Employment, State Services Commission and Ministry of Health. The Department of the Prime Minister and Cabinet were notified of this paper.

Financial implications

54. Development of an improved planning process can be funded within departmental baselines. Greater central government involvement in planning processes, support of councils and exercise of intervention powers are likely to require increased resources. These costs need to be assessed across the full water reform programme, and depend on Cabinet's preferred options around objective and limit-setting and managing to limits.

Human rights

55. The proposals contained in this Cabinet paper appear to be consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Legislative implications

56. There are no legislative implications arising directly from this paper. Implementation of some of the proposals in this paper would require amendments to the RMA.

Regulatory impact analysis

Regulatory Impact Analysis requirements

57. The RIA requirements apply to this proposal. A RIS is attached to this Cabinet paper.

Quality of the Impact Analysis

58. The Treasury's RIAT has reviewed the Regulatory Impact Statement (RIS) prepared by the Ministry for the Environment and associated supporting material, and [placeholder for RIAT assessment]

Consistency with Government Statement on Regulation

59. We have carefully considered the analysis and advice of our officials, as summarised in the attached Regulatory Impact Statement. We are satisfied that regulation is likely to be required in the public interest but, as further policy details and implementation issues still need to be considered, we cannot yet be certain that the regulatory proposals in this paper will deliver the highest net benefits of the practical options available or are fully consistent with our commitments to deliver better regulation and less regulation. Consequently, this paper seeks only agreement to proposals for public consultation, and agreement to further policy development work before final decisions.

Publicity

60. No publicity is proposed for this paper.

Recommendations

61. The Minister for Primary Industries and the Minister for the Environment recommend that the Committee:

1. **note** on 2 July 2012, Cabinet noted that the Ministry for the Environment and the Ministry for Primary Industries would undertake further design and analysis on a collaborative planning model, including analysis of provision for iwi participation in the freshwater planning process [CBC Min (12) 5/5]
2. **note** on 19 November 2012 Cabinet agreed in principle that Government consult, through a discussion document in early 2013, on proposals to implement a water reform strategy that includes reforms to governance, setting objectives and limits, and managing limits for both quality and quantity **[confirm Cab Min when available]**
3. **note** the Minister for Primary Industries and the Minister for the Environment indicated to Cabinet on 19 November 2012 that they would provide a set of papers covering the core policy elements of a water reform strategy
4. **note** this paper should be considered alongside parallel papers on setting objectives and limits and tools and processes for managing to limits for both water quality and quantity

5. **note** this paper has built on the platform provided by the Land and Water Forum's recommendations in their second and third report; discussions with the Iwi Leaders Group and Iwi Advisors; and further work undertaken by officials

6. **agree** improvement of the freshwater governance system requires:

   6.1. strong central government leadership including clear expression of national values and expectations for decision making, assistance to regional councils and effective reserve powers for intervention in local government processes

   6.2. an improved planning process for water as an alternative to the existing Resource Management Act 1991 (RMA) process

   6.3. effective provision for iwi/Māori involvement in freshwater governance. clear role for iwi/Maori

7. **agree** the discussion document in early 2013 include the following components in relation to freshwater governance:

Foundation components for implementation in 2013

   7.1. strong leadership from central government to set national expectations around values and methods for water management, and support local government implementation

   7.2. amendments to existing powers under the Resource Management Act 1991 for central government to direct changes or variations to a notified or operative plan, or direct a review of a plan:

      7.2.1. creating clearer criteria for the use of these powers

      7.2.2. enabling the Minister for the Environment to specify the matters the council must consider when developing the plan change or variation

   7.3. an improved freshwater planning process as an alternative to the default RMA planning process, featuring:

      7.3.1. a more collaborative approach to plan development, with councils required to work closely with communities from the start of the planning process to identify options and design solutions

      7.3.2. appointment of one or more stakeholder group(s) to give advice to the council

      7.3.3. an expert hearing panel with a majority of independent appointees to consider public submissions against the evidence and analysis underpinning the notified plan and make recommendations to the council on whether the evidence and arguments raised in submissions, or outcomes of mediation, justify any changes to the notified plan

      7.3.4. final decisions made by the regional council, having regard to the recommendations of stakeholder groups and hearing panel

      7.3.5. appeal rights generally available only on points of law, with merit appeal rights available only when the decision of the council differs from the recommendations of the hearing panel

7.4. a clear and effective role for iwi/Māori in freshwater management including involvement in the development of plans and in the final decision

8. **note** officials have considered, and will continue to consider, the work of the Land and Water Forum, and engagement with Iwi Leaders, in the preparation of the components outlined in recommendation 7
9. **note** in December 2012 the Ministers for Primary Industries and the Environment will report to Cabinet with an overview of the package of proposals to be included in the water reform strategy discussion document, as decided in this and the companion papers, and an overview of how iwi rights and interests may be considered
10. **note** the Ministers for Primary Industries and the Environment will report to Cabinet in early 2013 seeking approval for the release of the public discussion document on water reform in February 2013
11. **invite** the Ministers for Primary Industries and the Minister for the Environment to report to Cabinet in May 2013 with recommendations for the implementation of a water reform strategy.

Hon David Carter
Minister for Primary Industries
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Hon Amy Adams
Minister for the Environment
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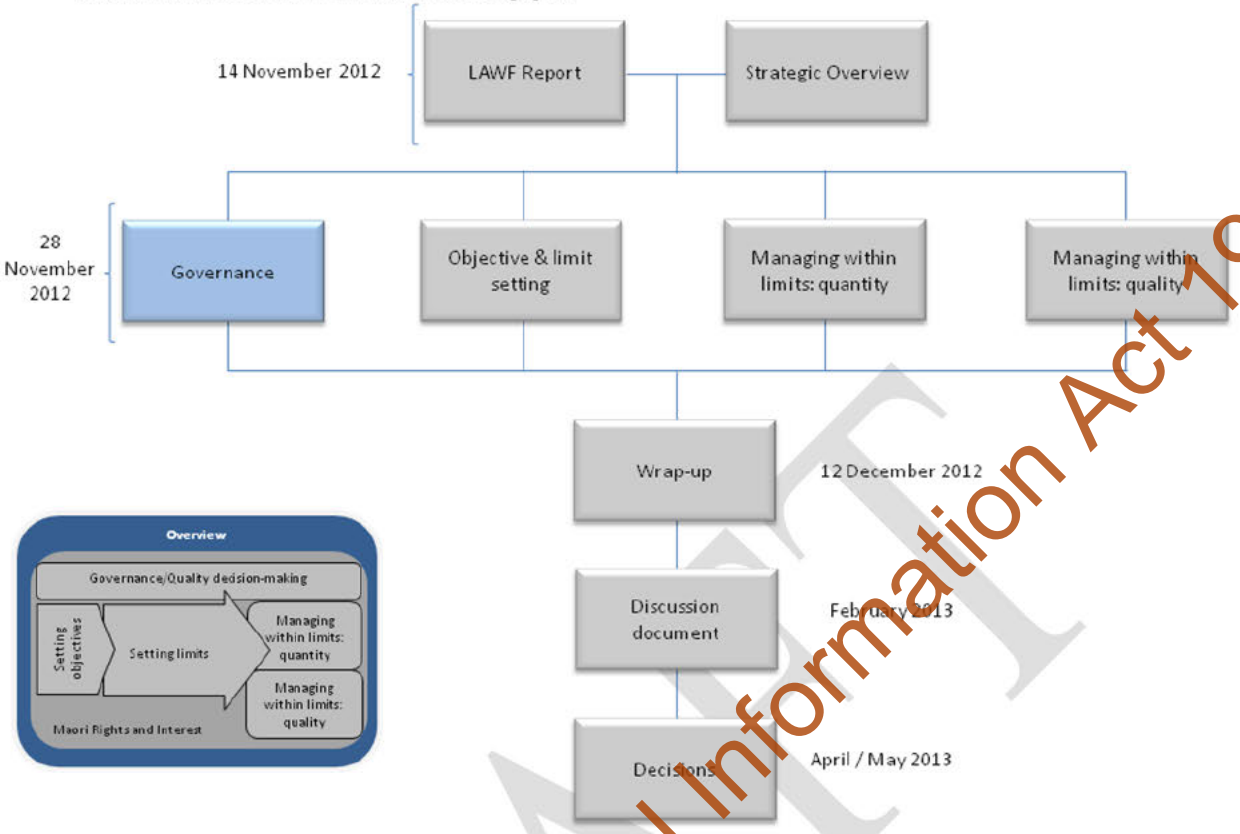
Annex A: WATER REFORM – Schedule of Cabinet papers



DRAFT – NOT GOVERNMENT POLICY

Version 1.15pm Friday 16 November 2012

In Confidence

Office of the Minister for Primary Industries
Office of the Minister for the Environment

Chair
Cabinet Economic Growth and Infrastructure Committee

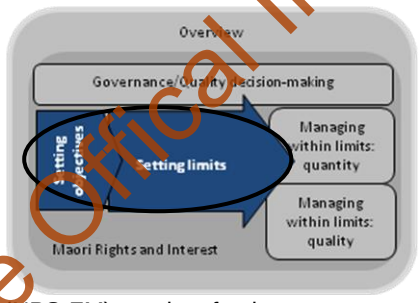
Water Reform Paper 2: Objective and Limit Setting

Proposal

1. This paper seeks Cabinet agreement to proposals for improving freshwater objective and limit setting, for inclusion in a public discussion document for consultation in early 2013.

Executive summary

2. This is the second of a suite of four papers on the core policy elements for water reform being considered by the Economic Growth and Infrastructure Committee (EGI) as part of implementing a water reform strategy (see Annex A). This paper outlines the proposed direction for objective and limit setting reform.



3. Implementation of the National Policy Statement for Freshwater Management 2011 (NPS-FM) requires freshwater objectives and limits to be set by the end of 2030. 'Freshwater objectives' describe the environmental outcomes the community wants from a water body. 'Freshwater limits' are constraints on resource use to ensure the objectives for the water body are achieved. Timeframes for adjustment must also be set where current resource use means the community's objectives are not being achieved, but adjustment timeframes can go beyond 2030.

4. When agreeing to the release of the National Policy Statement for Freshwater Management 2011 (NPS-FM), Cabinet also agreed to the development of further measures to achieve effective implementation of the NPS-FM [CAB Min (11) 18/8 refers].

5. There is potential for wide interpretation of some of the NPS-FM provisions, and a lack of clarity about some of central government's expectations. As a consequence, there are significant risks that implementation will be inefficient and inconsistent, as well as ineffective. We are particularly concerned that some regional councils are setting limits and adjustment timeframes without sufficient information, particularly economic analysis, or transparency of decision making. This means there may not be an appropriate balance between

environmental and economic outcomes, or that the desired outcomes will not be achieved.

6. Most regional councils are still in the early stages of implementing the NPS-FM (see Annex B) so there is an opportunity to address key risks if reform is progressed quickly. Proposals in Paper 1 on Governance explore some tools for intervention if local government is not meeting central government's expectations on NPS-FM implementation or other matters.

7. The Land and Water Forum (the Forum) has created a constituency for change, and officials' work with the National Objectives Framework Reference Group (the Reference Group) has demonstrated that iwi and stakeholders are willing to build on the Forum's consensus recommendations in this area and see them implemented.

8. Improving the freshwater management system will require solutions that start now and adapt over the long-term. Setting objectives and limits are a critical first step. To support the efficient transition to an effective limits-based regime for freshwater management, we propose the discussion document consult on the following components, which build on the recommendations of the Forum for possible implementation in the short-term:

   - a national objectives framework to support regional objective setting
   - a limited number of national bottom-line objectives to apply to all freshwater bodies
   - national processes, methods and toolkits for regional objective and limit setting
   - national expectations for monitoring and reporting against objectives and limits

9. We also propose the discussion document consult on these additional components, which the Forum did not make recommendations on, for possible implementation in the short-term:

   - national expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified
   - improvements to the Water Conservation Order mechanism as one of the tools to manage outstanding water bodies.

10. These proposals have built on the platform provided by the Forum's reports and generally align with the overall theme of the Forum's recommendations, which seek more central government direction and national consistency in relation to the NPS-FM objective and limit setting requirements.

11. Most of these proposals impact on the planning processes to set objectives and limits as we transition to a limits-based regime for freshwater management. They are expected to improve the efficiency, consistency and effectiveness of objective and limit setting by regional councils.

12. Progressing national bottom-line objectives could have an impact on the level of adjustment required both in terms of management of existing land use practices and a limited amount of change in land use. Officials have undertaken some initial testing of some potential bottom-line choices (see Annex C). There will be

adjustment costs associated with any approach that sets limits to achieve community objectives. Adopting a consistent approach to national bottom-lines will ensure there costs and benefits are well targeted and calibrated. Impacts can be managed through choices about timeframes and pathways for adjustment, which we propose to provide national direction on.

13. There are also some matters that we need to consider in the longer term and we propose that we signal in the discussion document that we will be giving consideration to:

    - how the national interest in specific water bodies is expressed in the freshwater management system
    - the protection of nationally important values held by specific water bodies, including the role of Water Conservation Orders.

Background

Fresh Start for Fresh Water – developing a freshwater management system

14. This paper is part of the overall package of a water reform strategy. It is the second of a suite of four papers on the core policy elements for water reform being considered by the Economic Growth and Infrastructure Committee (EGI) as part of a water reform strategy (refer Annex A).

15. This paper outlines a proposed direction for reform in relation to objective and limit setting. It responds to the July 2012 Cabinet Business Committee invitation to the Minister for Primary Industries and the Minister for the Environment to report back to EGI by 30 November 2012 on further analysis of tranche two of Fresh Start for Fresh Water (FSFW), covering Governance and Objective and Limit Setting [CAB Min (12) 25/2 refers].

16. As set out in the Overview paper considered on 19 November 2012, water reform is a key plank of the Business Growth Agenda for natural resources and is being considered in the context of ongoing engagement with Iwi Leaders, and of wider resource management and local government reforms. It also builds on the constituency for change created through the Forum's work.

Development of objective and limit setting proposals

17. When agreeing to the release of the NPS-FM in May 2011, Cabinet envisaged further water policy reform, agreeing to the development of further measures to achieve effective implementation of the NPS-FM, including processes for the setting of water quality and quantity limits and detailed work on the nature of limits through FSFW [CAB Min (11) 18/8 refers].

18. The Forum provided relevant recommendations in its three reports which the proposals in this paper have built on. The general direction sought by the Forum was for the provision of greater central government direction on the objective and limit setting requirements of the NPS-FM, including the establishment of a national objectives framework and the setting of some national bottom-lines.

19. As part of further analysis of the objective and limit setting components of FSFW tranche two, we asked officials to work with a reference group of stakeholder

representatives (including iwi and regional councils, resource users, scientists and NGOs) to test and further develop the Forum's recommendations. This further work has demonstrated that iwi and stakeholders are willing to build on the Forum's consensus recommendations to develop measures for improving objective and limit setting and see them implemented.

The current situation

20. The National Policy Statement Freshwater Management 2011 (NPS-FM) requires regional councils to set objectives and limits for all bodies of fresh water by the end of 2030 as an essential step toward improving the way we manage New Zealand's fresh water resources. 'Freshwater objectives' describe the environmental outcomes the community wants from a water body (e.g. swimability). They are set at a level that provides for both environmental and economic outcomes. 'Freshwater limits' are constraints on resource use to ensure the objectives for the water body are achieved (e.g. pathogen or nutrient load). They relate to both quantity and quality of water. Timeframes for adjustment must also be set where current resource use means the community's objectives are not being achieved, but adjustment timeframes can go beyond 2030.

21. Although not prescribed as a process in the NPS-FM, to achieve this regional councils will need to work with iwi, communities and resource users to:

- articulate what outcomes they expect different water bodies to provide for
- consider what environmental state is needed to provide for desired outcomes
- calculate the limits on resource use and identify other management methods required to achieve that state and where over-allocation is an issue, the timeframes and pathways for gradually adjusting existing resource use back within limits
- understand the impacts of those limits and whether expectations for environmental and/or economic outcomes (or the timeframes and pathways for addressing over-allocation) need to be adjusted – this will need to be an iterative process
- set limits at a level that will ensure the freshwater objectives are met, including setting timeframes for gradual adjustment if necessary.

22. There are signs that this type of process has not always been followed when setting existing objectives and limits, or that there has been insufficient information to support transparent decision-making. This means economic growth could be overly constrained due to the choices made about objectives, limits, adjustment timeframes and/or adjustment pathways, or that the desired outcomes will not be achieved.

23. Even with a good process, quality decision-making requires values-based judgements supported by a mix of science and technical information, including information on economic impacts. These are all matters that could become the subject of time-consuming and costly science, evidence and debate through regional council planning processes, with uncertain and potentially inconsistent outcomes. The costs of this fall to submitters and appellants, as well as regional

councils and the courts. For example, recent water plans have taken 5-10 years to finalise; the costs to the Horizons regional council of the One Plan are approximately $9.4 million – and this doesn't reflect costs to the courts, submitters and appellants, or council costs before the 2006/07 financial year (the proposed plan was notified May 2007).

A water reform strategy for objective and limit setting

24. A water reform strategy will need to implement changes that, over time, create headroom for economic growth and provide for environmental, social and cultural values. Effective implementation of the objective and limit setting requirements of the NPS-FM can contribute to this by ensuring:

- objectives are set for all water bodies that reflect the values of communities, iwi and resource users
- limits for achieving these objectives are also set
- adjustment timeframes and pathways are set where current resource use exceeds limits and objectives are not being achieved
- the impacts of the objectives, limits, adjustment timeframes and adjustment pathways are well understood and factored into decisions
- a clear and useful picture of progress against objectives and limits is available at national and local levels and informs wider evaluation of water reform.

25. To achieve these results we propose the discussion document consult on the following components, which build on the recommendations of the Forum, for possible implementation in the short-term:

- a national objectives framework to support regional objective setting
- a limited number of national bottom-line objectives to apply to all freshwater bodies
- national processes, methods and toolkits for regional objective and limit setting
- national expectations for monitoring and reporting against objectives and limits

26. We also propose the discussion document consult on these additional components, which the Forum did not make recommendations on, for possible implementation in the short-term:

- national expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified
- improvements to the process for considering applications for Water Conservation Orders and amendments.

27. We also propose to signal that in the longer term we will be considering the need for reform in relation to:

- how the national interest in specific water bodies is expressed in the freshwater management system

- the protection of nationally important values held by specific water bodies, including the role of Water Conservation Orders.

28. We will make recommendations on how these should be progressed in mid 2013.

National objectives framework to support regional objective setting

29. The idea of a national objectives framework formed a core part of the Forum's April 2012 report, and this concept has been developed by a government-led Reference Group. Following the design of the Reference Group, a high-level indication of what a framework could look like is provided in Annex D (this also shows those values being considered for national bottom-lines as discussed below). It would:

    - specify some common values and uses that water bodies could be managed for (e.g. as a drinking water source or for swimming)
    - for each of those values and uses, specify what quality and quantity aspects of the water body state will need to be managed (e.g. slime, bacterial contamination, flows)
    - provide a description of what it would mean for that value or use to be provided for at banded levels of poor, fair, good and excellent (e.g. a 1 to 5% infection risk may be considered 'fair' and a <1% infection risk considered 'good')
    - where possible, specify minimum numeric objectives for each band (e.g. *E. coli* concentrations could not be above 550/100mL to be considered 'fair' for swimming, and would need to be between 55/100mL and 260/100mL to be considered 'good')
    - where it is not possible to nationally specify numeric objectives, regional councils would be directed to do this for the identified quality and quantity aspects
    - integrate tāngata whenua values and mātauranga māori (traditional science which may use different indicators than western science, e.g. the health of the riparian margin rather than water chemistry) where appropriate.

30. The framework would then be used by regional councils when setting objectives with iwi and communities. They would consider which of the values and uses in the framework a particular water body should be managed for, and what band they wanted it to be in. The combination of values and uses desired would determine limits required, and the impacts of different choices would need to be tested before final decisions were made. This would need to involve robust economic analysis so that communities are aware of the costs and benefits of particular objectives.

Impacts of a national objectives framework

31. By providing a menu of values and uses, and related objectives, a national objectives framework would:

- improve the efficiency of objective setting by regional councils by reducing the need for local technical and scientific work
- enable greater national consistency in the stringency of objectives set to provide for different values and uses (i.e. the same standard for bacterial contamination would apply for all water bodies described as 'fair' for swimming or 'good' for secondary contact recreation, for example)
- support transparent, informed and focussed discussion about what values and uses communities want water bodies to provide for, and how compatible those different values and uses are
- reduce the scope for values-based choices to be hidden behind scientific and technical debate
- provide clarity that a variety of states of fresh water are acceptable – not all water bodies need to be 'excellent'.

32. These impacts affect the costs and processes for making changes to regional planning documents as councils implement the NPS-FM. In general, we expect an overall benefit, with savings to regional councils and participants in regional planning processes (multiplied across regions and plan changes) exceeding the cost to central government of establishing the framework, but this cannot be accurately quantified at this stage. More detailed advice on impacts will be provided when final decisions are sought for the implementation of a water reform strategy in mid 2013.

33. The level of objectives that regions finally set could also be different due to the framework facilitating more transparent discussion about different values and uses, which may be provided for at different levels. In some cases these objectives may be less stringent, in other cases they might be more stringent. The complexity of influences on decision-making means a quantifiable impact is difficult to predict.

Implementation of a national objectives framework

34. To maximise gains throughout both council and court processes, we recommend that we consult on a regulatory national objectives framework as the proposed direction for reform. If it was implemented as guidance, we would expect to see the potential gains weakened where the guidance is not accepted and becomes a matter of debate through hearing and court processes. If it was implemented through legislation, we would lose some flexibility to amend the framework as scientific and technical information evolves.

35. In the discussion document we propose to consult on our assessment of:

- the value of providing a national framework for objective setting
- the costs, benefits and risks of providing a framework through regulation
- the strengths and weaknesses of the Reference Group's approach to the detailed design of the framework.

36. If Cabinet decides to proceed with a regulated national objectives framework when making final decisions on the implementation of a water reform strategy in mid-2013, a detailed regulatory proposal and impact analysis will be prepared

for public consultation in 2013. We anticipate that it would take around 12 months for regulation to be in force following the release of detailed proposals.

37. Consequential amendments to the Resource Management Act (RMA) may also be required. Schedule 3 provides some elements similar to the proposed national objectives framework, but it has low statutory weight and has not been updated for scientific advances. There could be confusion if it sits alongside the proposed framework. There may also need to be amendments to regulation-making powers to enable implementation of the framework in the way intended.

38. The science panels inputting into the Reference Group identified that significantly more scientific work was needed for some water quality factors (in particular sediment, which is a major contaminant) in order to support effective objective and limit setting (whether through a national objectives framework or locally by regional councils). Our intention is that the framework will include what is possible in the short-term, and be added to over time as science evolves.

Limited number of national bottom-line objectives to apply to all freshwater bodies

39. The NPS-FM already includes a narrative objective that applies to all freshwater bodies – to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water. The Forum has recommended that numeric national bottom-lines be set in relation to this requirement. The Reference Group has developed this idea further and recommended that bottom-lines are set at a level of resilience above major tipping points that cause change which may be impossible or highly expensive to reverse.

40. The Forum also recommended setting a further narrative objective for all water bodies to be managed for the effects on human health, with associated numeric national bottom-lines. The Reference Group has recommended setting a numeric national bottom-lines which relate to an acceptable level of risk to human health during secondary contact activities (such as wading or boating). At what level a national bottom-line is set is inherently a values-based decision. The Reference Group has suggested 1% or 5% infection risk as possibilities.

41. The setting of national bottom lines was an important part of the Forum's consensus making process, but also critical to that consensus was having no national deadlines for meeting bottom-lines– the direction of travel is important, but so is balancing the costs of getting there.

Impacts of setting national bottom-lines

42. The expectation that the state of New Zealand's freshwater bodies will not pose an unacceptable level of risk to human health is likely to be one that resonates with all New Zealanders due to the strong role fresh water recreation plays in our identity. As a nationally held value that applies everywhere, setting that expectation nationally would reduce some debate in the planning process.

43. National bottom-lines would also:

- provide clarity that water bodies should not generally reach a state that they are in danger of going over major tipping points that cause change which may be impossible or highly expensive to reverse
- avoid more freshwater bodies going over major tipping points and the difficult and costly clean-ups involved if community values are to be restored (approximately $340 million in taxpayer dollars is already committed to clean-up of just eight lakes and rivers, and this does not reflect additional costs to ratepayers)
- reduce risks to human health from freshwater recreational activities
- provide clarity about the minimum level of clean-up acceptable if the state of a water body has already gone below bottom-lines.

44. National bottom-lines could have a direct impact on the level of adjustment required for objectives to be met in some water bodies. This is both in terms of management of existing discharges and land use practices, and a limited amount of change in land use. The level of potential impact will depend on the choices made about whether the level for bottom lines are set.

45. Officials have undertaken some initial testing of potential choices for bottom-line objectives (refer Annex C).There will be adjustment costs associated with any approach that sets limits to achieve community objectives. Adopting a consistent approach to national bottom-lines will ensure there costs and benefits are well targeted and calibrated. Impacts can be managed through choices about timeframes and pathways for adjustment to limits, which we propose to provide national direction or guidance on. We are not proposing that deadlines for achievement of national bottom-lines are set, leaving regions able to choose an adjustment timeframe that delivers the optimal outcomes to their communities over time.

46. We have directed officials to undertake a joint venture with councils to understand the economic impacts of different water policy choices in a significant sample of catchments. This will enable us to provide more detailed analysis of the potential impacts of setting national bottom-lines when final decisions are sought for the implementation of a water reform strategy in mid 2013.

Implementation of national bottom-lines

47. To maximise gains, we recommend that we consult on regulated national bottom-lines as the proposed direction for reform – this would mean making some values within the national objectives framework compulsory and not allowing objectives to be set below a certain level (i.e. 'fair') except in truly

exceptional circumstances. If guidance was instead provided on what parts of the framework should apply to all water bodies, we would expect to see the potential gains weakened where the guidance is not accepted and becomes a matter of debate through hearing and court processes. If bottom-lines were implemented through legislation, we would lose some flexibility to amend the bottom-lines as scientific and technical information evolves (for example, to add detailed narrative or numeric bottom-lines that relate to sediment in the future).

48. The regulatory approach would mean there is likely to be a need for exceptions from bottom-lines (for example, if there is historical contamination which cannot be cleaned up, or for an ongoing activity providing exceptional economic benefit and operating to best practice).

49. In the discussion document we propose to consult on our assessment of:

- the value of managing risks to human health in all water bodies
- what human-use activities all water bodies should provide for
- the value of setting national bottom-lines that all water bodies need to meet over time
- the level of acceptable risk to ecosystem and human health
- the strengths and weaknesses of the Reference Group's approach to setting bottom-lines
- the costs, benefits and risks of providing bottom-lines through regulation, including the impacts of possible choices for bottom-lines
- the strengths and weakness of the Reference Group's approach to exceptions
- who should decide that an exception applies (e.g. at regional or national level).

50. If Cabinet decides to proceed with regulated national bottom-lines when making final decisions on the implementation of a water reform strategy in mid-2013, detailed regulatory proposals and impacts analyses will be prepared for public consultation in 2013. We anticipate that it would take 12 months for regulation to be in force following the release of detailed proposals.

National processes, methods and toolkits for regional objective and limit setting

51. The Forum and Reference Group have also recommended development of standardised approaches and methodologies for objective setting. This would help ensure efficient and effective implementation of the NPS-FM and, in particular, a standardised process could make clear that objective and limit setting is an iterative process that can only be done well when there is a good understanding of all the implications of a possible objective, limit or adjustment timeframe.

52. Objective and limit setting requires a sound information base and tools to support good decision making. Although some scientific and technical information needs to be location specific, there is a significant opportunity increase the efficiency of objective and limit setting by standardising

methodologies and creating nationally an information base and toolkit for use by regional councils in their local decision-making. These can be developed jointly with regional councils, as with the current joint venture already underway to better understand the economic impacts of different water policy choices.

53. We recommend that we consult on a direction for reform that will see central government setting clear expectations for, and supporting, regional objective and limits setting. This should include:

- a methodological process for regional objective and limit setting (including: the need for iterative consideration of different choices and their impacts; ensuring objectives meet the NPS-FM requirement to maintain or improve overall water quality within a region; accounting for all takes and discharges; and, ensuring limits are binding without being unnecessarily constraining)
- methods for setting numeric objectives and limits for different parameters
- methods for setting the timeframes for adjusting to limits where objectives are not being achieved
- an information base and toolkit (including decision-support tools) for regional decisions on objectives, limits, adjustment timeframes and adjustment pathways
- a support package to assist regional councils with objective and limit setting.

Impacts of national processes, methods and toolkits

54. In general these proposals would affect the costs and processes for making changes to regional planning documents as councils transition to a limits-based regime for freshwater management, and also ensure more effective implementation of the NPS-FM. In general, we expect an overall benefit with savings to regional councils and participants in regional planning processes (multiplied across regions and plan changes) exceeding the costs to central government, but this cannot be accurately quantified at this stage. More detailed advice on impacts will be provided when final decisions are sought for the implementation of a water reform strategy in mid 2013.

Implementation of national processes, methods and toolkits

55. These are high-level proposals that require further design and analysis. To inform this work, officials are currently talking to regional councils about the capacity and capability issues they face.

56. Reform is likely to be a mix of regulation, guidance and support, and there could be some legislative elements, but we cannot make recommendations until further design and analysis is undertaken of the different components (including the desirability of consistency versus need for flexibility). We will make recommendations when final decisions for implementing a water reform strategy are sought in mid 2013.

57. We are still considering the specific elements that should be tested through public consultation and will make recommendations in early 2013. Examples include:

- what matters a process for regional objective and limit setting should cover
- what should be a priority for standardised objective and limit setting methodologies
- what needs to be considered when setting timeframes and pathways for adjusting to limits where current resource use means objectives are not being achieved
- what information bases and tools would support regional decisions on objectives, limits, adjustment timeframes and adjustment pathways
- capability and capacity issues regional councils face with objective and limit setting.

58. These will build on both the recommendations of the Forum and the Reference Group. In relation to the NPS-FM requirement for overall water quality to be maintained or improved across a region, the Reference Group has modified the approach recommended by the Forum in a manner that is more in-line with central government's intent. Consultation would be based on the Reference Group's approach.

59. If Cabinet decides to proceed with any components as regulation, detailed regulatory proposals and impacts analyses will be prepared for public consultation over 2013 to 2015. We anticipate that it would take around 12 months for regulation to be in force following the release of detailed proposals. Any legislative elements would be included in the Resource Management Bill 2013.

National expectations for monitoring and reporting against objectives and limits

60. Although a national objectives framework could include minimum monitoring requirements to ensure national consistency, we believe that clarity on central government monitoring and reporting expectations in relation to the NPS-FM more generally would also be desirable as there are risks that:

- monitoring is insufficient to understand if objectives and limits are being achieved and if so, what changes to limits (and/or other methods) may be necessary to better meet the community's desired outcomes
- inconsistent monitoring and reporting makes it difficult to draw conclusions at the national level about state and trends for fresh water or the effectiveness of NPS-FM implementation and water reform
- implementation of the NPS-FM increases the level of monitoring undertaken without sufficient return on investment.

Impacts of national expectations for monitoring and reporting

61. Under the RMA, regional councils are already required to monitor and report on the state of the environment and effectiveness of planning documents. We anticipate that national expectations would help target and prioritise that monitoring effort, and ensure that it is able to be readily used to form a national level picture of the effectiveness of NPS-FM implementation by councils and

water reform policy. More detailed advice will be provided when final decisions are sought for the implementation of a water reform strategy in mid 2013.

Implementation of national expectations for monitoring and reporting

62. To improve consistency in monitoring and reporting in relation to water and more generally, there are already joint local and central government projects underway. At this stage we recommend that we feed into this broader work by providing guidance on our monitoring and reporting expectations in relation to the NPS-FM. Cabinet has already agreed to provide for regulation making powers that can be used to require local authorities to monitor the environment according to specified priorities and methodologies [CAB Min (12) 33/11], should we wish to provide stronger direction in the future.

63. In the discussion document we propose to consult on our assessment of:

- the impact the NPS-FM is having on monitoring and reporting
- what matters guidance on monitoring and reporting should cover
- costs, benefits and risks of setting national expectations through guidance rather than regulation.

64. If Cabinet decides that guidance is sufficient, officials would start work on that in 2013/14.

National expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified

65. The NPS-FM requires outstanding water bodies (with outstanding values, including ecological, landscape, recreational and spiritual values) and significant values of wetlands to be protected. The potential for wide interpretation means it is likely to be an area of debate through regional planning processes and that there are risks that too many water bodies are considered outstanding (leading to missed development opportunities) or too few are considered outstanding to adequately protect regional and national interests.

66. The proposed national objectives framework could be used to help identify water bodies that are outstanding because of their 'excellent' state for ecological, landscape, recreational or spiritual values, but such water bodies should not automatically be classed as outstanding as other judgments would be necessary. Other mechanisms could be used to help identify water bodies that are outstanding for specific values. For example the threat classification system and the Department of Conservation's species optimisation tool could be used to identify the nationally important rare species habitats within water bodies.

Impacts of expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified

67. In general reform in this would affect the costs and processes for making changes to regional planning documents as councils transition to a limits based regime, with the expectation that an overall benefit would arise from reduced debate, but this cannot be quantified at this stage. More detailed advice on

impacts will be provided when final decisions are sought for the implementation of a water reform strategy in mid 2013.

Implementation of expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified

68. Reform could be a mix of regulation, guidance and support, and there could be some legislative elements, but we cannot make recommendations until further design and analysis is undertaken of the different components. We will make recommendations when final decisions for implementing a water reform strategy are sought in mid 2013.

69. To inform the development of more detailed proposals, we propose that the discussion document consult on our assessment of:

- what benefits could be provided by further national guidance or direction on outstanding water bodies and/or the significant values of wetlands
- what existing mechanisms (databases, evaluation tools, etc) could be used in identifying outstanding water bodies and/or the significant values of wetlands
- how the identification of protection or management responses could be made more efficient and effective
- the costs, benefits and risks of common criteria or processes for regional decisions to identify outstanding water bodies and/or significant values of wetlands

70. Following consultation in early 2013, we will make recommendations on detailed proposals when final decisions are sought for the implementation of a water reform strategy in mid 2013. Further work on any proposals recommended would be progressed in 2013/14.

Improvements to the process for considering applications for Water Conservation Orders and amendments

71. Water Conservation Orders (WCOs) are an existing mechanism for protecting outstanding water bodies, which elevates the objectives and limits setting for these water bodies to the national level. Although we are not yet sure of their ongoing role in the strengthened freshwater management system water reform will provide, we need to recognise that they will remain an available tool in the short-term until further analysis is completed.

72. As regional councils implement the NPS-FM, it is possible that they will identify a need for amendments to existing WCOs, or the creation of new WCOs. There are inefficiencies in the existing WCO process (for example: applications are considered by a special tribunal and then there may be further submissions to the Environment Court; the scope of proposals can be expanded during proceedings). There is also potential for applications to be used to bypass regional planning processes or to be used tactically to stop infrastructure proposals, coupled with a lack of clarity about the grounds on which the Minister for the Environment may decline an application.

Impacts of improvements to the process for considering WCO applications

73. The purpose of reform in this area would be to reduce costs to central government, applicants and submitters, and to reduce the timeframe for considering applications for new WCOs and amendments. For example:

    - The WCO on the Rangitata River cost Fish & Game New Zealand (as the applicant) $543,000 and there would have been further significant costs to submitters, as well as the costs of establishing and running the special tribunal.
    - In the case of the ongoing hearing for the proposed amendment to the Kawarau WCO (in respect of the Nevis), additional preferences emerged through the course of the hearing, which resulted in supplementary submissions and a second round of hearings some months after all other evidence had been heard. This application, notified in 2008, is now the subject of an inquiry by the Environment Court.

Implementation of improvements to the process for considering WCO applications

74. It is possible that some matters may be able to be addressed through guidance, but some amendment to the existing provisions in the RMA may be beneficial and could be incorporated into the Resource Management Bill 2013.

75. In the discussion document we propose to consult on our assessment of:

    - what areas of inefficiency or uncertainty exist in the existing provisions and how these should be addressed
    - the importance of applications for new or amended WCOs coming at the end of a regional planning process
    - how WCOs can be aligned with the broader freshwater management system, in particular the need to involve iwi and hapū and ensure that tāngata whenua values and interests are identified and reflected
    - whether WCOs should be subject to the general balancing test of the RMA or remain with a stand-alone test of 'outstanding-ness' and 'protection'

76. The discussion document would emphasise that feedback is sought only on opportunities for stream-lining or clarifying the process for making WCOs and amendments, not changing their purpose or scope.

Commented [ARP1]: Ministers – this was a time-limited change made for Canterbury It has been viewed by NGOs as weakening WCOs and including this proposal in a discussion document is likely to be highly controversial The Forum did not provide any consensus recommendations on WCOs

Longer term considerations

77. Recent reports from the Parliamentary Commissioner for the Environment and New Zealand Conservation Authority have made recommendations to increase the effectiveness of WCOs. As signalled earlier, further consideration also needs to be given to the role of WCOs in the strengthened water management regime provided by implementation of the NPS-FM, and whether or not there is a need to enhance or replace them. For example:

    - WCOs cannot currently include land use rules and therefore cannot protect all the values recognised by the order

- the process does not ensure that the best candidates are considered for protection
- the types of values they can protect are limited
- WCOs are subject to an 'outstanding' and 'protection' test rather than the balancing approach of part 2 of the RMA.

Commented [ARP2]: Ministers - In relation to previous comment, this is the alternative approach

78. As reform in relation to WCOs is highly controversial and the Forum was unable to make any consensus recommendations, we have asked officials to undertake further analysis of this before we make any reform proposals. We will make recommendations when final decisions are sought for the implementation of a water reform strategy in mid 2013.

79. We do, however, propose to signal in the discussion document that, in the longer term, we will be considering the need for reform in relation to:

- how the national interest in specific water bodies is expressed in the freshwater management system
- the protection of nationally important values held by specific water bodies, including the role of Water Conservation Orders.

Māori/iwi rights and interests

80. For Māori/Iwi, water must be managed in a way that assesses and considers the interconnectedness, interactions and consequences of land use of fresh water over time. Māori/iwi consider that they have obligations as kaitiaki to protect and enhance the mauri of freshwater, for the benefit of current and future generations.

81. In addition, Māori/iwi expect water quality management to be linked to the cultural use of values associated with different water resources. For example, water bodies of high cultural values for ceremonial purposes should be managed more carefully than water bodies used for other purposes such as transport. Māori/iwi also have an expectation that their values will be adequately considered at all points of water management.

82. Implementation of the proposals in this paper would improve freshwater management, allowing Māori/iwi rights and interests to be more effectively and efficiently addressed. The *Mana atua mana tangata* framework included in the Forum's second report highlighted how tangata whenua relationships with fresh water are connected to the values in the preamble of the NPS-FM. This has informed proposals to integrate tāngata whenua values and mātauranga māori (traditional science) into the proposed national objectives framework, which would facilitate recognition of iwi values. For tāngata whenua the life-supporting capacity of water includes human well-being, and the addition of a national bottom-line in relation to human health would make this expectation clear.

83. Officials will continue to work with iwi advisors to understand the interests of Māori/iwi in water quality management. Views of Māori/iwi will also be canvassed as part of public consultation on the approach to water reform in February 2013. Officials' engagement with iwi advisors will inform matters being advanced through Ministers discussions with Iwi Leaders.

Risks and mitigations

84. There are risks that setting national bottom-lines could result in an increased level of adjustment being required over time for objectives to be met in some water bodies. This is both in terms of management of existing discharges and land use practices, and a limited amount of change in land use. Some initial analysis has been done, as described above. If our recommendation in mid-2013 is to implement national bottom-lines, this will be accompanied by more detailed analysis of the risks and impacts.

85. There is also a risk that setting bottom-lines could be perceived as allowing a wide spread drop to those bottom-lines. The NPS-FM requirement for overall water quality to be maintained or approved across a region prevents this, and guidance or direction on the objective and limit setting process would include expectations for how the 'maintain and improve' requirement is given effect.

86. The national objectives framework could create de facto bottom-lines if there is a reluctance to choose a 'poor' band for values that relate to the NPS-FM requirement to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water. If there is a decision to progress the national objectives framework without the national bottom-lines, the impacts of only having objectives set in the fair band or above will still need to be understood before final decisions are made.

87. Some of the proposals in this paper have not built on consensus recommendations from the Forum. This includes the proposals in relation to outstanding water bodies and significant values of wetlands, WCOs and the national interest in specific water bodies. The Forum had intended to consider the relationship between WCOs and other water policy and planning instruments, but was unable to reach consensus. Although change in this area is likely to be highly controversial, this is a question that central government needs to consider and [this will be signalled in the discussion document] OR [this will begin to be explored through the discussion document].

Commented [ARP3]: Depends on whether the approach will be to include changing the test for WCO as a proposal in the discussion document – see earlier comments

Next steps

88. As set out in the Overview paper, the paper we will bring to EGI on 12 December 2012 will bring together the package of proposals for the water reform strategy, provide an overview of how iwi rights and interests may be accommodated and guide the preparation of the discussion document. In early 2013 we will seek agreement to release a discussion document and to the process for consultation. We also propose to release the report of the National Objectives Framework Reference Group alongside the discussion document (see Annex E).

89. Ahead of this, we are considering releasing the Reference Group report to regional councils 'in confidence'. Although more work on the population of a national objectives framework is needed, we believe that the general framework design and overall approach to objective setting recommended by the Reference Group is sound. Regional council representatives on the Reference Group have indicated that their participation has helped inform thinking in their own regions about how to approach objective setting to balance environmental

and economic outcomes, and we would like to see other regions similarly benefiting from the work of the Reference Group.

Consultation

90. The proposals in this paper have been informed by the recommendations of the Land and Water Forum with subsequent stakeholder input from the National Objectives Framework Reference Group. The Reference Group included representatives from: regional councils, Iwi Advisers, National Institute of Water and Atmospheric Research, Mighty River Power, Fish & Game New Zealand, DairyNZ, Federated Farmers, Horticulture New Zealand, Straterra, and Scion.

91. The following agencies have been consulted in the development of this paper: The Treasury; State Services Commission; Ministry of Business, Innovation and Employment; Department of Conservation; Office of Treaty Settlements; Te Puni Kōkori; Department of Internal Affairs; Ministry of Health. The Department of Prime Minister and Cabinet was informed.

92. As set out in the Overview paper, we propose to take a package of proposals for implementing a water reform strategy out for public consultation early next year.

Financial implications

93. There are no financial implications arising directly from this paper. If proposals in this paper are progressed, financial implications are estimated as follows:

Proposal	Financial implications (estimate)
National objectives framework	$0.25-0.75m
National bottom-lines	$0.10-0.20m
National processes, methods and toolkits	$0.50-2.50m
Expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified	$0.10-0.20m
National expectations for monitoring and reporting	$0.10-0.20m
Improvements to the process for considering WCOs	<$0.10m

94. These estimates will be further refined in advance of final decisions on water reform and in concert with agencies' development of their Four-Year Budget Plans and associated reprioritisation processes. Officials' objective is to manage within baselines where possible, but there is insufficient information at present as to whether this will be feasible.

Human rights

95. The proposals are consistent with the Human Rights Act 1993.

Legislative implications

96. There are no direct legislative implications arising directly from this paper.

Regulatory impact analysis

97. A Regulatory Impact Statement had been prepared in relation to proposals for a regulated national objectives framework. No Regulatory Impact Statement has been prepared for other proposals as this paper does not seek any policy decisions at this time.

98. [RIS QA statement].

99. We have carefully considered the analysis and advice of my officials, as summarised in the attached Regulatory Impact Statement. We are satisfied that regulation is likely to be required in the public interest but, as further policy details and implementation issues still need to be considered, we cannot yet be certain that the regulatory proposals in this paper will deliver the highest net benefits of the practical options available or are fully consistent with our commitments to deliver better regulation and less regulation. Consequently, this paper seeks only in principle policy decisions, and agreement to further policy development work and consultation.

Publicity

100. No publicity is proposed.

Recommendations

101. The Minister for Primary Industries and the Minister for the Environment recommend that the Committee:

    1. **note** that on 19 November 2012 Cabinet agreed in principle that Government consult, through a discussion document in early 2013 that sets out proposals for implementing a water reform strategy

    2. **note** that the Minister for Primary Industries and the Minister for the Environment indicated to Cabinet on 19 November 2012 that they would provide a set of papers covering the core policy elements of a water reform strategy. This is one of those papers.

    3. **note** that this paper should be considered alongside parallel papers on: governance and decision-making arrangements for freshwater management; and tools and processes for managing to limits for both water quality and quantity

    4. **note** that this paper has built on the platform provided by the Land and Water Forum's recommendations in their three reports; discussions with the Iwi Leaders Group/Iwi Advisors; and further work undertaken by the National Objectives Framework Reference Group

5. **agree** that the following elements should be included in the discussion document as proposals for more effective and efficient objective and limit setting

   Measures that may be progressed in 2013-15

   5.1. a regulated national freshwater objectives framework to support regional objective setting

   5.2. setting a limited number of national bottom-line objectives to apply to all freshwater bodies

   5.3. national processes, methods and toolkits for regional objective and limit setting

   5.4. providing guidance on national expectations for monitoring and reporting against objectives and limits

   5.5. national expectations for how outstanding water bodies and/or significant values of wetlands are defined and identified

   5.6. improvements to the process for considering applications for Water Conservation Orders and amendments

   Measures signalled for further consideration in the longer term

   5.7. how the national interest in specific water bodies is expressed in the freshwater management system

   5.8. the protection of nationally important values held by specific water bodies, including the role of Water Conservation Orders

6. **note** that officials have considered, and will continue to consider, the work of the Land and Water Forum in the preparation of the components outlined in recommendation 5.

7. **note** that in December 2012 the Ministers for Primary Industries and the Environment will report to Cabinet with an overview of the package of proposals to be included in the water reform strategy discussion document, as decided in this and the companion papers, and an overview of how iwi rights and interests may be considered

8. **note** that the report of the National Objectives Framework Reference Group provides a sound approach to objective setting that regional councils should be considering

9. **agree** that the report of the National Objectives Framework Reference Group will be released alongside the public discussion document

10. **agree** that the Minister for Primary Industries and the Minister for the Environment can decide to release the report of the National Objectives Framework Reference Group to regional councils earlier to inform their thinking about how to approach objective and limit setting

11. **note** that the Ministers for Primary Industries and the Environment will report to Cabinet in early 2013 seeking approval for the release of the public discussion document on water reform in early 2013

12. **invite** the Ministers for Primary Industries and the Environment to report to Cabinet in April 2013 with recommendations for the implementation of a water reform strategy.

_____

Hon David Carter
Minister for Primary Industries
_____ /_____ /_____

_____

Hon Amy Adams
Minister for the Environment
_____ /_____ /_____

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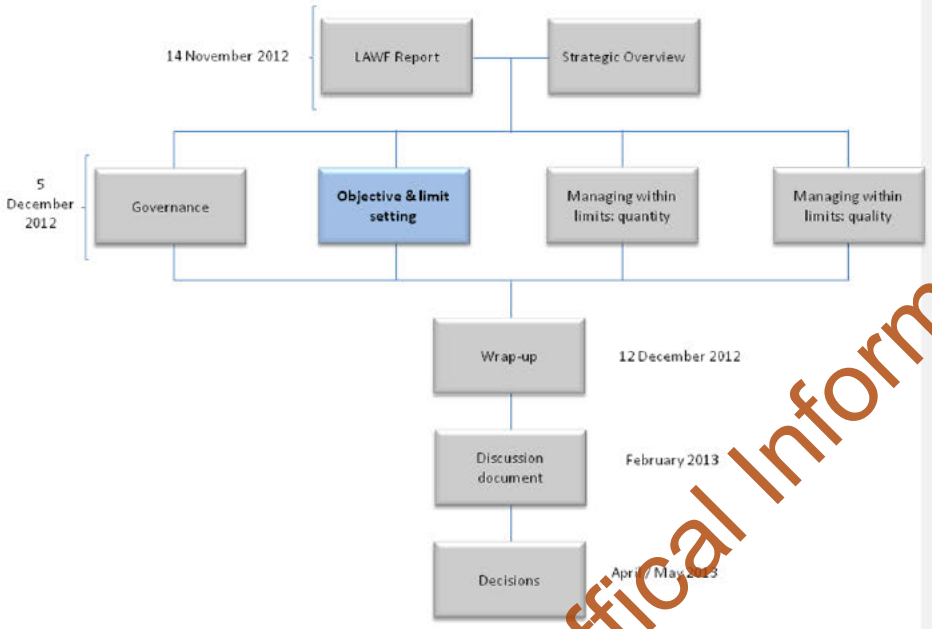
Annex A: Schedule of Cabinet papers



Annex B: Update on council timeframes for NPS-FM implementation

The NPS-FM came into effect on 1 July 2011. Regional councils can choose to complete compliance (i.e. change its plans to give effect to the NPS-FM):

- by 31 December 2014; or if this is 'impracticable'
- by no later than 2030. Where this option is chosen, Policy E1 of the NPS-FM required councils to develop implementation programmes by 12 November 2012 including timings and stages for completing steps necessary to comply.

Figure 1 below shows timeframes over which each council is looking to comply with the NPS-FM.[1] Note that many councils consider that 'completion' of compliance occurs when a proposed plan change is notified; but that it may be several more years before the statutory process for finalising that change is completed.

Figure 1: Council timeframes for completing compliance with the NPS[2]

Figure 1 shows that:

- Only three of the 16 regional councils (Otago, Taranaki and Horizons-Manawatu) consider its plans will fully reflect the NPS-FM by 2014.
    - Otago and Horizons-Manawatu consider plan change processes that are already underway will, once finished, provide the necessary updates to their existing regional plans to give effect to the NPS-FM.

[1] Information taken from implementation programmes and other council data sources.
[2] Dark blue means timetable confirmed. Light blue means an implementation programme has been drafted but has yet to be formally adopted by the council.

  - In Taranaki's case, its whole regional plan is now 10 years old meaning it is due for a review under the RMA [section 79(1)]. Taranaki sees this as an opportunity to complete NPS-FM implementation in one step.

- The other 13 regional councils are aiming to complete implementation after the end of 2014. Pending more detailed analysis, initial indications are that:
  - most of these councils will progress a number of separate plan changes, rather than one complete overhaul of their existing plan
  - councils are prioritising objectives and limit-setting in catchments under high pressure, to avoid existing problems getting worse, and will deal with less pressured water bodies later.

Annex C: Initial analysis of potential impacts of national bottom-lines

Indicative impact of potential national bottom-lines for rivers

The following tables summarise some initial analysis of the impact of potential bottom-lines for rivers in relation to proportion of rivers 'as likely as not' to fail the potential bottom-lines. This has been used to start to understand the potential economic impact by looking at the proportion of employment[3] and total value-add for the dairy farming, sheep and beef farming and horticultural sectors.

The percentage of impacted rivers is based on modelled information and does not take into account objectives already set by regional councils, or that are likely to be set under the status quo (which may be more stringent than the proposed national bottom-line objectives). Preliminary analysis indicates that where councils have set numeric objectives, they are generally as or more stringent than the proposed national bottom lines.[4] Because of this, the marginal impact of setting national bottom-lines is likely to be smaller than indicated here.

Proportion of total value-add and employment[5] add give an indication of the share of economic activity that might be impacted and is subject to the same constraints as the percentage of impacted rivers. Actual economic impact will also depend on other factors such as how much 'over allocation' can be addressed through best practice and other mitigation measures, and the adjustment timeframes and pathways chosen.

This analysis only considers the economic impacts on some of our primary production sectors. There is likely to also be impacts on territorial authorities if they decide to manage within limits by upgrading sewage treatment plants (a decision they may make to reduce the impact on the primary production sectors). We have not yet been able to analyse this, but anticipate that smaller councils with a small rating base are likely to be most affected as they are more likely to have a low level of existing treatment.

[3] Employment is defined as employees and working proprietors.

[4] For example, most councils that have set periphyton standards have chosen the equivalent of the 'good' band in the proposed national freshwater objectives framework, and where *E. coli* standards have been set it is based on at least the 'fair' band for primary contact recreation (which is more stringent than the 'fair' band for secondary contact recreation).

[5] Employment and value-add have been calculated using Statistics New Zealand's Longitudinal Business Database. They are highly correlated. Access to the data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975 and the Tax Administration Act 1994. The results in this paper have been confidentialised to protect individual persons and businesses from identification. The results presented in this study are the work of the author, not Statistics New Zealand.

Table 1 Ecosystem health – nitrate toxicity

Bottom-line choices	**Comparison to current state (modelled)**	**Proportion of employment for agricultural sectors in areas 'as likely as not' to fail bottom-line**	**Proportion of value-add for agricultural sectors in areas 'as likely as not' to fail bottom-line**
80% species protection level (median Nitrate-N does not exceed 6.3 mg /litre)	1% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	3% dairy farming 2% sheep and beef farming 2% horticulture	5% dairy farming 2% sheep and beef farming 3% horticulture
90% species protection level (median Nitrate-N does not exceed 3.6 mg /litre)	3% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	13% dairy farming 8% sheep and beef farming 9% horticulture	18% dairy farming 9% sheep and beef farming 10% horticulture

Table 2 Ecosystem health – slime (periphyton)

Bottom-line choices	**Comparison to current state (modelled)**	**Proportion of employment for agricultural sectors in areas 'as likely as not' to fail bottom-line**	**Proportion of value-add for agricultural sectors in areas 'as likely as not' to fail bottom-line**
Algal blooms in rivers are limited to periodic short-duration nuisance blooms (median periphyton cover does not exceed 55%)	15% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	49% dairy farming 31% sheep and beef farming 49% horticulture	46% dairy farming 23% sheep and beef farming 48% horticulture
Algal blooms in rivers are only occasional (median periphyton cover does not exceed 40%)	42% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	73% dairy farming 67% sheep and beef farming 69% horticulture	73% dairy farming 64% sheep and beef farming 69% horticulture

Table 3 Human health – infection risk (E. coli)

Bottom-line choices	**Comparison to current state (modelled)**	**Proportion of employment for agricultural sectors in areas 'as likely as not' to fail bottom-line**	**Proportion of value-add for agricultural sectors in areas 'as likely as not' to fail bottom-line**
Infection risk from secondary contact recreation does not exceed **5%** (median *E. coli* does not exceed 1000/100mL)	2% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	14% dairy farming 6% sheep and beef farming 8% horticulture	14% dairy farming 5% sheep and beef farming 8% horticulture
Infection risk from secondary contact recreation does not exceed **1%** (median *E. coli* does not exceed 540/100mL)	17% of rivers (measured by river length) are 'as likely as not' to fail the bottom-line	56% dairy farming 37% sheep and beef farming 50% horticulture	56% dairy farming 32% sheep and beef farming 49% horticulture

National scale extent of theoretical under and over allocation against potential national bottom-lines

The following table summarises at a national scale preliminary results for the extent of theoretical under and over allocation for the different bottom-line choices, expressed as the area of equivalent dairying land use.[6] This does not take into account the NPS-FM requirement for overall water quality to be maintained and improved, which may limit development in under allocated catchments (unless any degradation was offset by improvement elsewhere in the region).

Table 4 Net national load capacity (headroom) at each potential bottom-line

	Dairy-equivalent area (Million ha)	% of NZ total area	% increase over NZ current dairying	Theoretical allocation status
Nitrogen impacts on periphyton – considering rivers only				
40% cover	-0.4	-1.5%	-19.0%	Over-allocated
55% cover	2.4	9.0%	114.3%	Under-allocated
Nitrogen impacts on periphyton – considering rivers and lakes				
40% cover	-0.6	-2.2%	-28.6%	Over-allocated
55% cover	2.2	8.2%	104.8%	Under-allocated
***E. Coli* – considering rivers only**				
1% infection risk	1.4	5.2%	66.7%	Under-allocated
5% infection risk	1.6	6.0%	76.2%	Under-allocated
Nitrate Toxicity – considering rivers only				
90% species protection level	Not analysed			
80% species protection level	3.9	14.6%	185.7%	Under-allocated

NZ total area: 26.8 million hectares NZ current dairying area: 2.1 million hectares
Total high class (1-4) land nationally (suitable for dairying): 6.6 million hectares.

These results carry some important caveats:

- This is a national scale analysis – the level of under and over allocation will vary for different regions and different catchments.
- Periphyton N results are worst-case, as it presumes all rivers are N-limited. Further analysis is required to remove rivers that are P-limited.
- Results are expressed as the area of dairying based on typical total losses from that land use, without mitigation. Because mitigation potential for addressing over-allocation is not factored into this analysis, the extent of over-allocation does not indicate the extent of land use change that may be required.

[6] This is done by converting the contaminant load (e.g. total kg exceeding the bottom-line) into the area of dairying that would produce that load.

Annex D: Overview of a potential national objectives framework

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Annex E: Report of the National Objectives Framework Reference Group

Version as at 17 Nov In Confidence

Office of the Minister for Primary Industries

Office of the Minister for the Environment

Chair

Cabinet Economic Growth and Infrastructure Committee

Water Reform Paper 3: Managing within water quality limits

Proposal

1. This paper seeks agreement to an approach for managing within water quality limits in New Zealand that includes:

   a. Setting out a vision for the way efficient and effective water quality management can be achieved

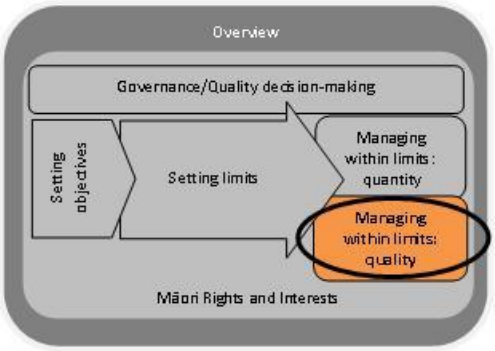
   b. Foundation measures that can be progressed immediately to improve and inform water quality management decisions and choices

   c. Signalling how issues will be addressed over the longer term, informed by robust information and an evaluation of the impacts of short term measures.

a. **Agreement** that this approach for managing within water quality objectives and limits be included in a water reform strategy discussion document for consultation in early 2013**.**

Executive Summary

2. This paper is the third of four papers that together form the overall package of a water reform strategy (annex A). Regional council decisions on managing within limits need to be made as part of the decision process to set limits, as each decision informs the other. This paper should therefore be read in the light of Paper 2: Objective and Limit Setting.



3. Improving water management systems will require solutions that start now and adapt over the long-term. We recommend introducing changes over the next year and signalling that we will build on these progressively over time.

4. Regional councils are required to set water quality limits but there is little direction on how to manage to, or achieve these limits. While having limits in

place is a necessary step for improving water quality management, it is not sufficient. An efficient and effective water quality management regime, informed by good information and supported by high quality tools and processes is also required to allow informed decisions on managing to water quality limits.

5. Currently a range of problems are emerging as regional councils and resource users respond to the need to manage within limits. New approaches are being tried, leading to variability in regional council approaches, uncertainty for resource users, and costly litigation. The effectiveness and efficiency of the approaches is also like variable.

6. We need to capitalise on the opportunity enabled by the setting of water quality limits, to now put water quality management on a sound footing for sustained economic growth. The foundations for decisions by regional councils and resource users must be strengthened.

7. We recommend that the following approach for managing within water quality objectives and limits be included in a water reform strategy discussion document for consultation in early 2013:

    a. Setting out a vision for the way efficient and effective water quality management can be achieved

    b. Foundation measures: development of best practice guidance for regional councils on policy methods and tools including accounting for all sources of contaminants, and the use of models for policy development and compliance monitoring; a review of the information and research system that underpins water quality management; and development of sector-based good management practice toolkits in partnership with regional councils and sectors

    c. Signalling of long term issues: improvements to the policy methods and tools available to regional councils so that they provide sufficient investment certainty, and enable innovation and economic growth.

8. The foundation measures outlined above will be implemented in 2013, with work commencing on the redesigned information and research system and development of priority sector GMP toolkits. Guidance to regional councils will be delivered on priority topics during 2013. Longer term reforms will need to be developed progressively, including improvements to existing policy methods and tools. Further advice on these longer term reforms will be reported back to EGI in June 2014.

Background

9. [standard text to be developed – cross reference to Overview paper etc]

10. The Government's Fresh Start for Fresh Water Clean-Up Fund provides financial assistance to regional councils for the remediation of historically contaminated freshwater bodies. A report back to the Economic Growth and Infrastructure committee is scheduled for December 2012, including aligning the funding with national priorities emerging from the current reforms.

Context

11. The National Policy Statement for Freshwater Management (NPS-FM) requires regional councils to set enforceable quality limits for freshwater bodies no later than December 2030. However there is little guidance and no direction on how those limits could or should be achieved.

12. Managing to quality limits requires a considerable change in how regional councils develop and implement policies. Only seven percent of catchments had well-specified water quality limits in place in May 2012, so there is little regional council experience in managing to such limits. It also requires a step-change in the day-to-day practices of resource users.

13. Developing objectives and enforceable limits is a *necessary* step for maintaining or improving water quality. Limits provide a clear and common goal for catchment management decisions. However, it is not *sufficient*. Further reform is needed to enable councils and land users to manage effectively (i.e. to meet the environmental objective) and efficiently (i.e. at least cost overall); and to maximise "headroom"[1] for economic growth within limits.

14. There are significant challenges in managing to water quality limits, as multiple contaminants may need to be managed, and point and diffuse discharges must be accounted for, often through the use of models[2] to estimate contributions and impacts. The policy instruments chosen by regional councils need to be matched to the contaminants to be managed, and their sources e.g. while diffuse source nitrates from farming activities can be regulated by setting a cap on the level of discharge from a farm (using a model such as OVERSEER® to estimate the discharge level), this is not possible for pathogens and sediment as discharges cannot be modelled with sufficient accuracy. Therefore decisions on the choice and application of appropriate models, methods and tools are critical.

Comment

Problems associated with managing within water quality limits

15. Currently a range of problems are emerging as regional councils and resource users respond to the need to manage within limits. In some cases, decisions are being made with insufficient scientific and economic information, or understanding of the tools and practices needed. New regional policy approaches being tried are leading to variability in regional council approaches, uncertainty for resource users, and costly litigation.

16. The policy tools and methods currently available to regional councils provide a wide range of potential approaches (voluntary, regulatory or market-based), but are likely to need improvement, in order to meet the increased demands of managing within well-specified quality limits, while providing for economic growth and innovation.

[1] Where current discharges are lower than the limit, the gap is referred to as "headroom" in this paper. Where headroom exists, new higher-returning activities can establish in the catchment, even if they increase the overall level of discharges. In catchments that are already at the limit, improved water quality management by existing resource users can reduce discharge levels and create headroom for new activities.

[2] For example, models such as CLUES can be used at the catchment scale to estimate discharges; and at the farm or paddock-scale, models such as OVERSEER® and SPASMO can be used.

17. For example, experience with methods that require a consent for diffuse nutrient discharges from agricultural activity is limited but growing, and has generated some adverse reactions from the farming sector. Such approaches allocate a discharge allowance or cap to individual farms. Discharge consents need to be of sufficient duration to provide investor certainty. Similarly, economic growth in catchments that are at or over limits would be enabled by improved consent transfer and/or offsetting mechanisms that enable new higher-value activities to establish while maintaining or reducing catchment-wide discharges. Improved tools may also be needed to increase incentives for efficient resource use, so that headroom is created in catchments that are close to or at limits e.g. good practice standards, pricing of discharges.

Vision for managing within water quality limits

18. A water quality management reform strategy will need to implement changes that, over time, result in economically efficient resource use, and provide headroom for economic growth, while remaining within limits. This requires that:

    a. All levels of decision making (central government, regional councils, sector organisations, and land and water users) have access to good quality information to allow informed decisions. This requires a common pool of scientific research information and economic data that is well-targeted, and of the required standard to underpin good decision-making on water quality management

    b. Regional councils are clear on their roles and responsibilities; and understand the actions, methods and tools, required to manage water quality efficiently and effectively

    c. Resource users know the on-the-ground practices they can adopt to meet their water quality management responsibilities at least cost

    d. The policy methods and tools used by regional councils generate sufficient investment certainty for resource users, and enable economic growth and development within water quality limits.

19. To achieve these results we propose to consult on the following components of reform in early 2013:

    a. a research and information system that will underpin good water quality management

    b. best practice guidance for regional councils on approaches, methods and tools for effective and efficient water quality management

    c. sector-specific good management practice toolkits.

20. We also propose to signal that we will be considering the need for reform in relation to the policy methods and tools available to regional councils for water quality management, so that they provide:

    a. sufficient investment certainty to resource users to enable business growth

    b. incentives for efficient resource use, so that head room for growth is created, even in catchments that are close to or at limits

c. opportunities to establish new higher-valued activities in catchments that are over limits, while still achieving target catchment-wide discharge reductions.

Proposed components of a water quality management reform strategy

Research and information systems for water quality decision making

21. High quality scientific research and economic information is essential for sound decision making on both limit setting and managing to limits. The current science funding arrangements are spread across a number of funds including the Ministry of Business, Innovation and Employment's (MBIE) contestable funds, Envirolink funding for regional council research, and the Primary Growth Partnership for primary sector research. Co-ordination across providers and funders is inconsistent. Future water research needs to be aligned with the changed requirements of regional councils and resource users as they seek to set and manage to limits.

22. We propose that officials lead a review of the wider research and information system for water quality in partnership with key stakeholders, including the sectors, regional councils and researchers. This will identify priorities for:

    a. scientific research, economic data and modelling tools for water quality

    b. an investment programme for delivering on the identified priorities

    c. improving both coordination across research providers and extension services to end users.

23. The existing Water Research Strategy[3] will be reviewed in 2013. We propose to adopt a similar approach to that used for the development of the water National Objectives Framework in 2012. This involved central government leading a multi-party stakeholder group, with membership from central government, science providers, sector organisations and regional councils. The results of the review will be reported to the Economic Growth and Infrastructure Committee in June 2014, seeking approval to progress subsequent stages.

24. This approach will identify information and research gaps, and may have funding implications. The current level of MBIE funding in the freshwater research pool is $18 million per year. Most of this is already committed to existing freshwater research projects, with $1,000,000 available for new freshwater projects in 2013-14. In comparison, Environment Canterbury's budget for scientific investigations (and monitoring work) in the 2011/12 year is $7.6 million. There is significant opportunity to align freshwater research in New Zealand and maximise the return on research investment.

25. The approach goes beyond the findings of the Forum which recommended that a refreshed Water Research Strategy be implemented. However Forum members strongly emphasised the importance of sound science and

[3] The Water Research Strategy was developed by officials in the Ministry for the Environment and the former Foundation for Research, Science and Technology in 2009

information to underpin decision making for managing to water quality objectives and limits and are likely to be supportive of broader reform in this area.

Best practice guidance for regional councils

26. Individual councils are currently evaluating a range of new approaches to improve their management of water quality. Some of these are likely to be more efficient and effective than others. Some are also better targeted than others in terms of the contaminant to be managed, and the sources from which they flow. Commencing in 2013, we propose to direct officials to work with regional councils, iwi, and sector organisations to identify best practice on the key water quality management decision areas. This will be developed into guidance material by officials and actively disseminated to all regional councils. Priority areas for guidance are:

    a. Using a single integrated process to make decisions on the objectives and limits to be set, and how to manage to them, including scenario testing of the environmental, social and economic consequences of potential limits and methods for managing to them, underpinned by robust cost-benefit analysis

    b. Identifying and accounting for all sources of the contaminants to be managed

    c. Evaluating and selecting the methods and tools to achieve efficient and effective water quality management, including approaches that allocate a discharge allowance where appropriate

    d. The use of models to guide decision making on the management regime, and how models should be applied in regulatory frameworks e.g. for compliance monitoring of nutrient discharge levels.

27. Initial reform of this nature has a number of benefits. These include improving the quality of decision making by councils, the consistency of approaches between regions and nationally, the selection and targeting of methods and tools to the contaminants of concern, and the sharing of information and experiences. It is also likely to reduce conflict between parties on the approaches that should be used. Buy-in to the guidance material will be achieved through working collaboratively,

28. The approach for reform in this area is consistent with the findings of the Forum in their third report, and would allow central government to capitalise on the platform for reform established by the Forum.

29. The limitation of guidance is that councils and others are not compelled to use it. We propose to assess and report back on the uptake and use of guidance material and identify areas where further reform i.e. direction, should be considered to achieve the benefits outlined above.

30. The guidance material prepared would be used to underpin any future regulations, if stronger direction from central government proves to be needed.

Sector-specific good management practices

31. *[Section to be included on the role of GMPs in incentivising good practice and how demonstration of good practice can reduce regulation and compliance costs and increase choices for good performers, i.e. regulate poor performance and incentivise good practice through increases in freedoms and flexibilities for others.]*

32. Decisions on setting and managing within water quality limits need to be informed by good information on how the limits will be achieved and the methods resource users can realistically use to manage the effects of their activities on water quality.

33. Good management practices (GMPs) [4] are critical tools for managing water quality to objectives and limits, and are an important foundation for all policy approaches (e.g. voluntary, regulatory or market-based instruments).

34. They include the practices, technologies and tools that individuals can use to manage the impacts of their business activities on water quality e.g. fencing off streams from livestock or management of waste treatment facilities. These may be supported or policed by industry bodies or council may use them in regulatory frameworks to establish minimum standards for environmental performance (e.g. forest harvest management plans).

35. High quality GMPs provides the opportunity to tailor water quality management methods to address the specific needs of a location or business. For example the management methods required to address high nitrogen levels can be significantly different to the management methods required to address high phosphorus levels in fresh water.

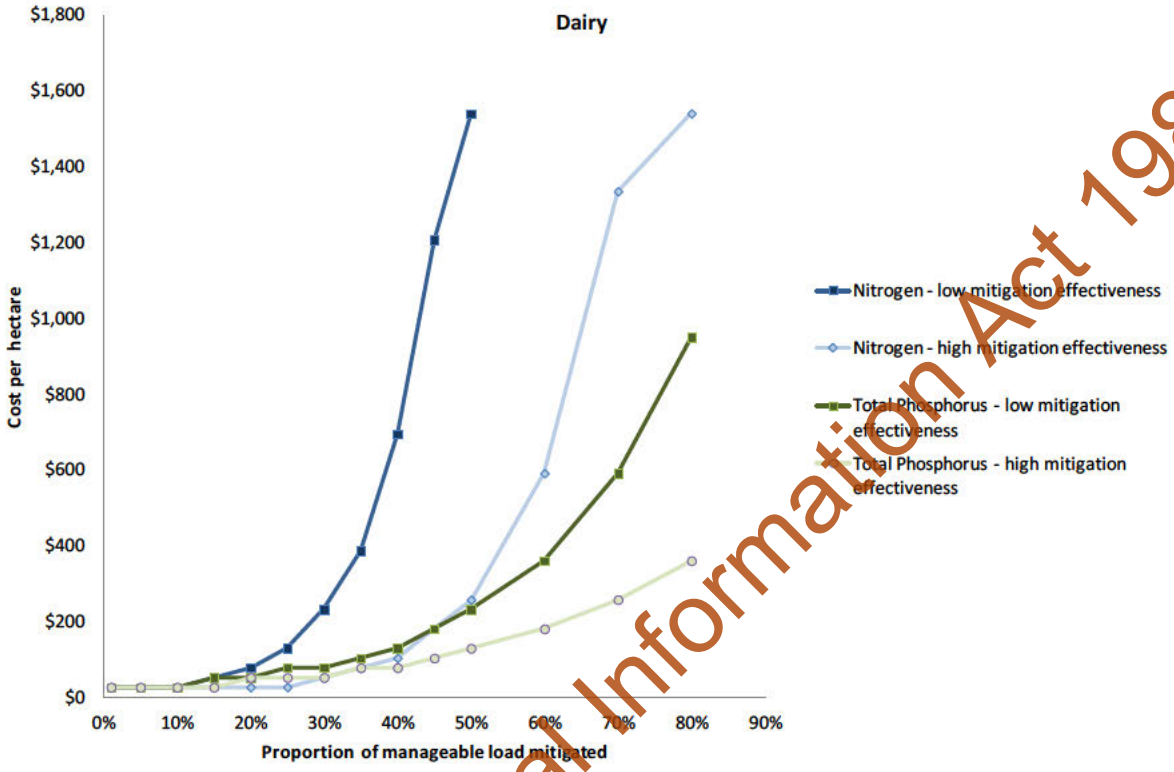
36. However, there is significant variation both in the usefulness of existing GMPs, and in the application of them to water quality management. These issues are not confined to individual sectors or regions [5] and reflect historic and ongoing challenges with the development of quality GMPs.

37. We propose to direct officials to work with key stakeholders over the next three years (2013-16) to prepare sector-specific GMP toolboxes that are based on sound science, are credible and effective, and have wide acceptability. These toolboxes would outline the costs and effectiveness of practices, allowing users to assess the tradeoffs associated with different options for managing water quality. Good management practices can provide cost-effective methods for reducing nutrient discharges to improve water quality in degraded catchments, and create headroom for intensification and growth. The information on the application of GMPs to dairy farming in figure one, illustrates modelled impacts on farm costs and nutrient discharges of a range of GMPs. The modelling results suggest that use of the most cost-effective GMPs can reduce nitrogen discharges by up to 25% at relatively low cost on dairy farms.

[4] GMPs are the practices, technologies and tools that individuals can use to manage the impacts of their business activities on water quality e.g. fencing off streams from livestock or management of waste treatment facilities. GMPs are adapted as circumstances require such as climate, soil type or management practice. Different contaminants require different management regime

[5] Their development and use has been patchy across sectors and regions, with inconsistent approaches, application, content, audit, effectiveness and awareness. Some GMP's may not be fit-for-purpose to inform decisions on managing within water quality limits.

Figure 1: Nitrogen and phosphorus mitigation costs for dairy farms



38. The toolboxes will need to be developed with the relevant sector, regional councils, and science institutions so that they are sound, credible and useful for decision-making across all the stakeholder groups. To achieve buy-in stakeholder "ownership" of the toolboxes is important. Stakeholders and industry groups will also have the primary role in dissemination of the toolboxes to resource users. In light of the number of sectors and GMPs available, prioritisation will be necessary to ensure maximum benefit of investment by central government in this area.

39. The role of officials will be to facilitate the development of the toolboxes so that they draw on the knowledge held by a range of stakeholders, and are consistent in quality, fit-for-purpose across the range of users, and delivered in a timely manner. Without this, stakeholder-led development would be slower, and deliver variable outputs, making them less suitable for regional council and national use. Central government leadership is needed to ensure that GMP toolboxes are developed in a timely way in priority sectors, and provide consistency in approach and quality, while accounting for local variation.

40. The Ministry for Primary Industries estimates that they will require additional funding of $1.3 million in 2014-15 and 2015-16 to resource the proposed process.

41. The toolboxes are not proposed as the basis for national regulation. Most GMPs are not nationally applicable e.g. good practices for wintering dairy cows differ depending on climate and soil type. Toolboxes could be issued as guidance material by the sectors, regional councils or central government. However, where GMPs are nationally applicable they can be codified in standards or codes of practice e.g. the Spreadmark code of practice for fertiliser spreading. These improve management in a nationally consistent way.

42. At the regional level, particular GMPs are used at various levels within the regional planning framework. They may be specified in regional plans as conditions for permitted activity status (e.g. silage pits), or they may be included as conditions to meet a consent (e.g. forest harvest management plans). In some regional plans, a management plan approach is proposed e.g. farm plans that outline the GMPs that will be adopted to manage discharges. GMPs can be incentivised in the regulatory framework. Those enterprises meeting the required outcome (i.e. adopting particular practices) could be incentivised by obtaining an easier regulatory course (e.g. permitted activity), and those not achieving it could have a stiffer regulatory path (e.g. discretionary consent).

43. The GMP toolboxes will provide a resource for regional councils to draw on for determining which (if any) of the GMPs are suited to use in the various levels of the regional planning framework, including their effectiveness and cost.

44. At the individual level, the toolboxes can be used as a decision support tool by resource users. For example the toolbox would provide a pick-list for a farmer to decide on the combination of practices that meet voluntary or regulated reductions in discharges, at least-cost and that fit best with the farm system.

45. The approach is also likely to identify gaps and issues where research is required, and help inform the concurrent review of research and information systems (outlined in paragraphs 19-25).

46. The approach is likely to have wide-spread support although sector organisations will need to be convinced that the toolboxes will not be used as ready-made rules for regional or central government regulation. The approach would also ensure that risks associated with ongoing commitments for central government are avoided. However there is potentially an ongoing central government role in periodically refreshing the GMP toolboxes as new GMPs are developed. This will be evaluated as part of the longer term measures included in the reform package.

Longer term measures

47. Reforms built on this foundation will need to be developed progressively in the longer term, informed by robust information and an evaluation of the impacts of short term measures. Aspects of the guidance provided may need to be developed as direction, based on uptake.

48. In addition, longer term measures will be needed to improving the policy methods and tools available to regional councils for water quality management, so that they provide:

    a. sufficient investment certainty to resource users to enable business growth

    b. incentives for efficient resource use, so that head room for growth is created, even in catchments that are close to or at limits

    c. opportunities to establish new higher-valued activities in catchments that are over limits, while still achieving target catchment-wide discharge reductions.

49. This longer term work will include evaluation of similar issues to those outlined in paper 4: Managing to Quantity Limits, including facilitating transfer and trade

of nutrients and/or discharge allowances, standards and pricing tools and consenting and regulation as a method for managing water quality. Further advice on these longer term issues will be reported back to EGI in June 2014.

Impacts of the proposed approach

50. This approach will enable immediate progress to be made on developing the foundations of an efficient and effective water quality management regime. At the same time, it signals the direction of reform over time, so that progress is made on the more complex and challenging elements of water quality management that will deliver the desired economic and environmental gains in the longer term.

Māori/iwi and water quality management

51. Preliminary conversations with iwi advisers on the management of water quality include taking an integrated catchment approach (*ki uta ki tai* – mountains to the sea) to improving and maintaining water quality. For Māori/Iwi, water must be managed in a way that assesses and considers the interconnectedness, interactions and consequences of land use on fresh water over time. Māori/iwi consider that they have obligation as *kaitiaki* to protect and enhance the *mauri* of freshwater, for the benefit of current and future generations.

52. In addition, water quality management should be linked to the cultural use values associated with different water resources. For example, water bodies of high cultural values for ceremonial purposes must be managed more carefully than water bodies used for other purposes such as transport.

53. Officials will continue to work with iwi advisors to understand the interests of Māori/iwi in water quality management and how they relate to other aspects of water management. Views of Māori/iwi will also be canvassed as part of public consultation on the approach to water reform in February 2013. Officials' engagement with iwi advisors will inform matters being advanced through Ministers' discussions with Iwi Leaders.

Risks and mitigations

54. Officials have not yet fully assessed the implications of the proposals for Iwi/Maori rights and interests in water. Officials intend to progress this work through ongoing discussions with Iwi Leaders/Advisors, and through the public consultation in February 2013.

55. There is a risk that the proposed staged approach is too slow, and inconsistent and inefficient regional policies are developed in the interim. This risk is mitigated by the development of guidance in 2013, which is relatively quick to prepare, and can respond to new problems as they occur. Delivering guidance and evaluating its effectiveness before making decisions on possible regulation minimises the risk of ineffective or inefficient central government regulation that may not be able to account for the significant local variations inherent in water quality management decisions.

56. Some stakeholders may consider that the Government's proposed approach is insufficient to enable effective management of water quality. This risk can be best mitigated by illustrating how the proposals contained in this paper build on the Forum's recommendations, to which the major stakeholders have agreed.

Consultation

57. The following departments and agencies have been consulted on this paper and their views are reflected: Ministry of Justice, Department of Internal Affairs, Te Puni Kōkiri, Department of Conservation, the Treasury, Ministry of Business, Innovation and Employment, and Land Information New Zealand. The Department of the Prime Minister and Cabinet was notified of this paper.

Financial implications

58. There are no immediate financial implications associated with this paper. If a decision is made to proceed with the proposals contained in this paper following public consultation, financial implications are likely to arise.

59. The proposed review of fresh water research funding and the development of best practice guidance are estimated to cost in the order of $1m spread over three years. The Ministry for Primary Industries estimates that partnering with sectors to develop good management practices will cost $1.3 million per year for two years (2014-15 and 2015-16). These estimates will be further refined in advance of final decisions on water reform and in concert with agencies' development of their Four-Year Budget Plans and associated reprioritisation processes. Officials' objective is to manage within baselines where possible.

60. Any expansion of the current level of funding that is provided for freshwater research would require additional non-departmental funding. Proposals for additional funding would be the subject of future advice to Cabinet should future analysis identify this as a possible option.

Human rights

61. The proposals contained in this Cabinet paper are consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Gender implications

62. The proposals contained in this Cabinet paper have no gender implications.

Disability perspective

63. The proposals contained in this Cabinet paper have no implications from a disability perspective.

Legislative implications

64. There are no legislative implications arising directly from this paper. Some of the elements of a future reform package are likely to have legislative implications.

Regulatory impact analysis

65. The regulatory impact analysis requirements do not apply to this paper as no regulatory options are proposed. A regulatory impact statement will be prepared to support any future Cabinet consideration of options.

Publicity

66. No publicity is proposed.

Recommendations

67. The Minister for Primary Industries and the Minister for the Environment recommend that the Committee:

1. **note** that on 19 November 2012 Cabinet agreed in principle that Government consult, through a discussion document in early 2013, on proposals to implement a water reform strategy that includes reforms to governance, setting objectives and limits, and managing limits for both quality and quantity
2. **note** that the Minister for Primary Industries and the Minister for the Environment indicated to Cabinet on 19 November 2012 that they would provide a set of papers covering the core policy elements of a water reform strategy. This is one of those papers
3. **note** that this paper should be considered alongside parallel papers on: setting objectives and limits; governance and decision-making arrangements for freshwater management; and tools and processes for managing to limits for water quantity
4. **note** that this paper has built on the platform provided by the Land and Water Forum's recommendations in their third report; and further work undertaken by officials
5. **agree** that the vision for a water reform strategy in relation to managing to quality limits is:

5.1 Water quality is managed effectively, efficiently and equitably within limits, and catchment objectives are achieved

5.2 All levels of decision making (central government, regional councils, sector organisations, and land and water users) have access to good quality information to allow informed decisions on water quality management, with a common pool of scientific research information and economic data that is well-targeted, and of the required standard to underpin good decision-making

5.3 Regional councils are clear on their roles and responsibilities and understand the actions, methods and tools required to manage water quality efficiently and effectively

5.4 Resource users know the on-the-ground practices they can adopt to meet their water quality management responsibilities at least cost

5.5 The policy methods and tools used by regional councils generate sufficient investment certainty for resource users, and enable

opportunities for economic growth and development within water quality limits.

and agree that these be reflected in the discussion document referred to in recommendation 6

6. **agree** that the discussion document include proposals for the following foundation measures in relation to managing to quality limits

Phase one: foundational components of a water reform strategy we recommend for implementation in 2013

6.1. Review of the research and information system for water quality management in 2013. The review will focus on improving the development and dissemination of scientific and economic information and analysis, to underpin good water quality management decisions at central government, regional council and resource use levels.

6.2. Clear national best practice guidance on priority components of the water management regime, including the specifications for well-informed integrated decision-making processes, identifying all sources of contaminants, choice of methods and tools, decision-making processes, and policy use of models e.g. model use to guide choice of policy methods, and for compliance monitoring of discharge levels

6.3. Fast tracking consolidation and dissemination of good management practice toolboxes for priority sectors. The toolboxes will provide information to resource users, businesses, sector organisations and regional councils on the least-cost ways to meet water quality management responsibilities.

Phase three: medium and longer term measures for water reform for which we wish to signal direction now rather than implementation options.

6.4. Options for improving the policy methods and tools available to regional councils for water quality management, so that they provide

6.4.1. sufficient investment certainty to resource users to enable business growth

6.4.2. incentives for efficient resource use, so that head room for growth is created, even in catchments that are close to or at limits

6.4.3. opportunities to establish new higher-valued activities in catchments that are over limits, while still achieving target catchment-wide discharge reductions

6.5. Central government direction to regional councils if guidance on particular aspects is insufficiently effective.

.

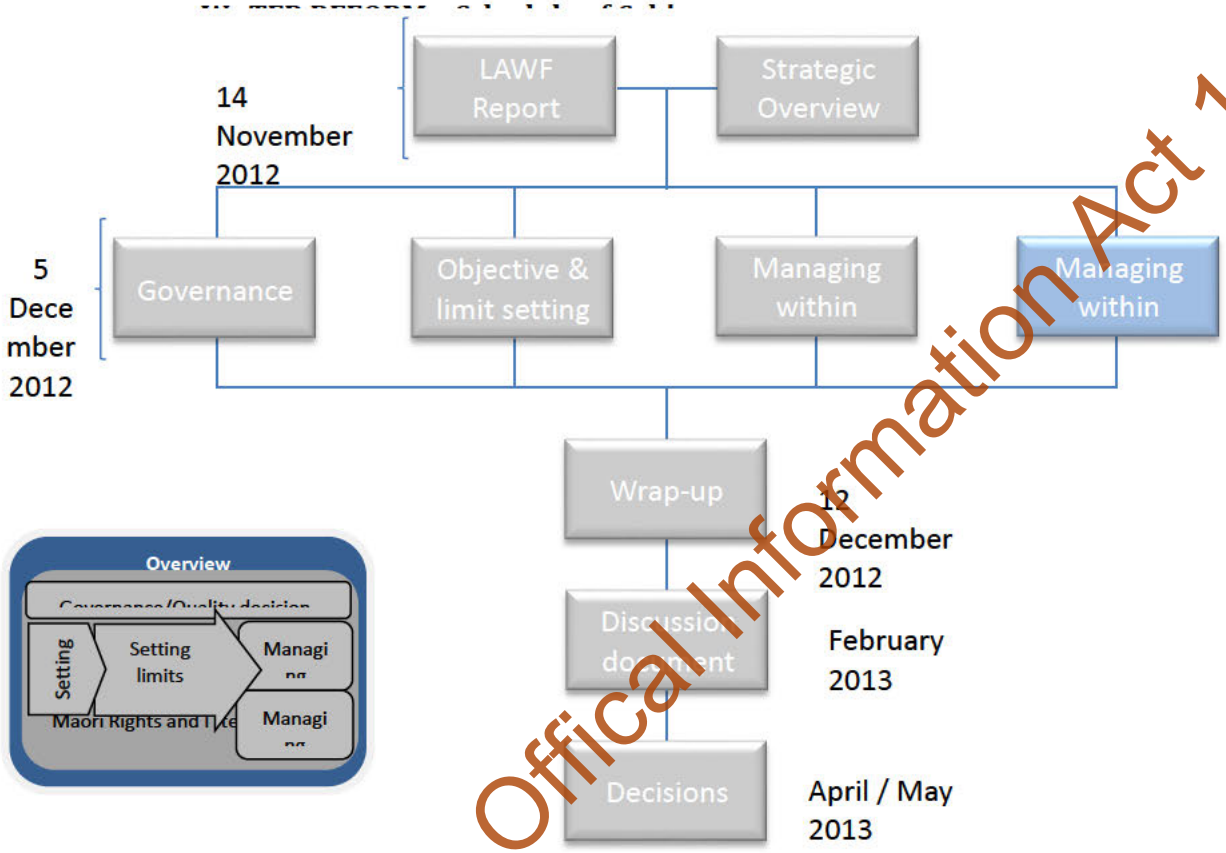
7. agree that officials will report to Cabinet in June 2014 with further advice on improving the research and information system for water quality management as a result of the review in 2013, and the phase 3 measures.
8. note that officials will include the Land and Water Forum's recommendations within the work undertaken as part of recommendation 6 above
9. invite the Minister for Primary Industries and the Minister for the Environment to report back to the Cabinet Economic Growth and Infrastructure Committee by XX December with the scope for a discussion document for the foundation measures [or note recs in overview paper].

_____

Hon David Carter
Minister for Primary Industries
_____ /_____ /_____

_____

Hon Amy Adams
Minister for the Environment
_____ /_____ /_____



Ministry for the Environment
Manatū Mō Te Taiao

Ministry for Primary Industries
Manatū Ahu Matua

To: Hon Amy Adams, Minister for the Environment
Hon David Carter, Minister for Primary Industries

Water Reform: Quality - Different approaches to managing water quality in different types of catchments

Other Dept Tracking Number:	B12-203	**MfE Tracking Number:**	12-B-01380
Date Submitted:		**MfE Priority:**	Non-urgent
Security Level:	IN CONFIDENCE	**Number of Attachments:**	Nil
Action Sought:	Note and forward to other Ministers	**Response/Signature Needed by:**	Circulate by 12 October 2012

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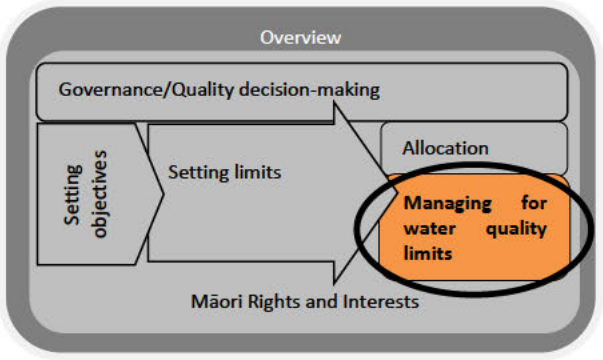
Executive Summary

1. This briefing provides you with information on the policy toolbox for managing to water quality limits.



2. Managing to water quality limits will only be successful and cost-effective if the policy tools selected:
   - are well-matched to the catchment
   - provide incentives for the development and adoption of innovative mitigation practices
   - are designed to enable economic growth and development.

3. Targeted central government intervention could enhance the usefulness of existing policy tools, develop new tools and improve their implementation at regional council level. For example, guidance or direction could be provided on the policy use of models (such as the nutrient management model Overseer®), water quality allocation methods that minimise economic disruption, and policy approaches that enable innovation and economic development even in catchments that are over limits.

Situation Analysis

4. This is the second in a series of four briefing notes on managing to water quality limits. In the previous brief we outlined the policy approaches currently being used by councils to manage water quality, and the particular difficulties associated with managing diffuse discharges (12-B-01339 or B12-184 refers). This briefing provides you with further information that will help inform decisions to be made by Cabinet in December 2012:

    - the policy toolbox
    - matching the policy tool to the catchment
    - policy tools to enable economic growth in catchments approaching or over their limits
    - potential central government roles in enabling and choosing the best policy approaches and tools for managing to water quality limits.

5. The National Policy Statement on Freshwater Management (NPS-FM) directs local government to set freshwater objectives and quantity and quality limits, and to manage water in an integrated way, whilst providing for economic growth and environmental integrity[1]. Managing to water quality limits represents a significant challenge for Regional Councils[2]. The policy approach and tools employed will be critical to successfully managing within limits, and minimising the cost to land users and ratepayers.

6. There is a wide range of policy tools available and already in use by regional councils, but not all are successful in achieving the objective for the waterbody, and their cost-effectiveness also varies. While the setting of NPS-FM compliant limits will assist in managing to limits[3], improved policy tools, and better implementation of them will be required, particularly in catchments where water quality limits are significantly breached.

Advice

The Policy Toolbox

7. The Land and Water Forum (the Forum) is likely to recommend that the full set of policy tools should be available to, and used by regional councils. This is expected to include a clear role for the use of good management practice (GMP) and audited self management (ASM) to integrate regulatory requirements with industry practice. They are also likely to recommend that central government guidance be provided on allocation methods to manage water quality. The matrix below illustrates the policy "toolbox", including examples (where possible drawn from water quality management practice in New Zealand). Case studies of some approaches are included in Appendix 1.

[1] Addressed in BN 12-B-1323 – Setting objectives and limits on water availability and quality
[2] *Managing freshwater quality: challenges for regional councils* (2011) Controller and Auditor General
[3] A 2011 review of Regional Council plans found that 4% of significant catchments had water quality limits that reflect the NPS-FM definition of a limit. NPS-FM compliant limits are expressed as numeric annual "load limits" where possible, providing a measureable focus for management action. As more NPS-FM compliant limits are set, some of the current difficulties associated with managing discharges may be less of a problem.

Table 1: The Water Quality Policy Tool Box

Approaches	Basis or target of each approach		
	Inputs, infrastructure and/or technologies	**Practices**	**Outputs (estimated or measured discharges)**
Non-regulatory, voluntary, and Sector-led Good Management Practice (GMP) and Audited Self Management (ASM)	• Voluntary adoption of riparian fencing and planting • Sector driven requirements e.g. Supply Fonterra[4] • Design guidelines for oxidation ponds	• Environmental Farm Plans e.g. Beef and Lamb's Land and Environment Plans • Codes of Practice e.g. for nutrient management	• DairyNZ benchmarking of discharges
Regulatory	• Rules governing fertiliser and effluent application rates, and point source discharges • Rules requiring the use of sediment dams in urban subdivisions • RMA water metering regulations (which set the specifications for meters) • Zoning[5]	• Winter grazing rules e.g. Environment Southland • Rules governing land based effluent disposal	• Caps on estimated nutrient discharges e.g. Otago Proposed Plan Change 6A, Rotorua Lakes (Rule 11) • Caps on measured pathogen levels in treated sewage discharges
Economic instruments	• Not currently used in water quality management in New Zealand[6]	• Not currently used in water quality management in New Zealand[7]	• Capping and trading nutrients e.g. Taupo catchment nutrient trading system[8]

Notes to the Table:

- Many initiatives such as Environmental Farm Plans use two or three approaches i.e. controlling inputs, practices and/or outputs.
- Market drivers help to underpin some of the initiatives outlined in the Table, and act as a further incentive for improved environmental management, including water quality management, in some sectors e.g. Supply Fonterra, the horticulture sector's NZGAP, Forest Stewardship Council certification, organic certification.

8. In general, output based policies (including policies that use models such as Overseer to estimate discharges) have strong advantages over policies based on controlling inputs, technologies or practices:

    - They are better targeted at the water quality outcome sought, as they are based *directly* on estimated or measured discharge levels. Trying to regulate discharges *indirectly* through inputs and practices is likely to require more rules, as there are often many inputs and practices that contribute to the level of discharges. In addition, controlling some inputs and not others may distort decision making e.g. if stock numbers and fertiliser inputs are controlled, more feed may be bought in to

[4] The "Supply Fonterra" initiative for Fonterra suppliers includes some aspects of environmental performance

[5] Zoning could make particular types of land use non-complying or prohibited activities, a potential approach in very sensitive catchments

[6] However taxes on fertiliser and pesticides is a potential economic instrument, and has been used in Denmark. Such taxes are not currently enabled under the RMA.

[7] However, some Councils require consents for less desirable practices which provides a weak economic incentive to adopt preferred practices that are permitted activities

[8] A further potential economic instrument, pricing of discharges, is not currently enabled under the RMA.

maintain production, increasing farm costs, but with no effect on discharges, as total nutrient inputs remain at similar levels.

- They increase flexibility for land users and other dischargers to tailor the way they respond to the requirements, choosing the inputs, technologies and practices best suited to their situation, while remaining at or below the required output level.

9. However, there are also some advantages for input and practice based policies, and they have a useful role to play in managing to water quality limits:
   - Some inputs and practices are relatively easy to monitor and enforce e.g. riparian fencing, use of certified equipment for treating waste water before discharge.
   - Decision making for the land user or discharger may be simpler than with an output based tool, especially if there are few rules or requirements, and they are straightforward to comply with.
   - Increased visibility for the wider community that "something has been done" to address water quality concerns – for example, regulations requiring riparian fencing and planting provide visible evidence of action[9].

10. In general, where one or two inputs or practices can be easily monitored and enforced, and are tightly linked to discharge levels, targeting them for voluntary change or regulation may be a useful approach. Similarly some contaminant outputs cannot currently be adequately and cheaply modelled or measured. For these contaminants, input, technology and practice based policies form the basis of current approaches e.g. for sediment and pathogens.

11. In all cases, policies that recognise and provide incentives for innovative approaches to mitigating discharges are critical to minimising the cost of managing to limits. The use of models such as Overseer to estimate discharges generates a particular challenge in this regard, as robust data is required on the impact of new mitigation practices and technologies, before the practices are incorporated in the model. Ongoing improvement of such models is important. In addition, central government guidance or direction could be used to guide the use of policy approaches that encourage positive innovation, while minimising the risks to water quality from failure of new mitigation practices.

Matching the Policy Tool to the Catchment

12. Successfully managing within limits requires that policy tools be carefully matched to the catchment, and the Forum is likely to recommend some useful catchment planning approaches to achieve this:

    - Integrating decisions on the tools for managing to water quality limits into the overall catchment planning process i.e. a single integrated process for deciding limits for quality and quantity, *and* the policy tools for managing to them. This ensures that limit setting would be informed by the methods necessary to achieve them in a particular catchment, and the potential interactions between quality and quantity management[10]

[9] However, better grazing management in winter may be more effective in reducing nitrate discharges .
[10] Draft recommendation 5 in the version of the report prepared for Forum's Small Group meeting 2-3 October 2012.

- Identifying as accurately as possible the total load of contaminants of concern in the catchment, and their sources; and assigning responsibilities for implementation[11]. The current draft text of the Forum's report indicates that participants should be identified based on their contribution to discharge loads[12].

13. Matching policy tools to the catchment requires consideration of a range of factors including the particular contaminant(s) being managed for, the hydrology and land use in the catchment, the social and economic context, and whether or not limits have been breached. More complex combinations of policy tools will be required in catchments that are at or over the limits, compared with those under limits:

- **Catchments that are under limits** – existing non-regulatory and regulatory methods focusing on good management practice, education and social marketing will continue to be useful tools for managing diffuse discharges in these catchments. Improved regional council funding of, and expertise in, non-regulatory methods would improve their performance. Targeted regional regulation may also be useful, for example a rule requiring fencing of all streams above a particular size on intensively farmed land could "mop up" remaining waterways not fenced under the Dairying and Clean Streams Accord. Monitoring of development pressures and discharge levels relative to the limit, along with identification of a trigger point for change in the management regime will be required. As diffuse discharges cannot be directly monitored, the use of models such as Overseer by individual farmers is likely to be required, with reporting of results to the regional council.
- **Catchments that are approaching and over limits** – while non-regulatory approaches will continue to be important additional policy tools are likely to be required to maintain or improve water quality, including stronger regulatory instruments. For example, the Forum's second report recommended *prohibited activity status* for changes that would result in increased discharges, in catchments that are over limits. ECan has proposed *non-complying activity status* for "red zones" in the transition period to 1 July 2017, in their Proposed Land and Water Plan. Further discussion on prohibited activity status (and alternative approaches) will be provided in an upcoming briefing note on Objective and Limit Setting options. Economic instruments such as cap and trade systems may be useful in some types of catchment e.g. where there are diverse land uses. Many regulatory and market-based instruments rely on an initial allocation of a cap on discharges e.g. limiting annual permitted discharges of nitrogen to 20 kg/ha/year (Canterbury) or 10 and 30 kg/ha/year (Otago)[13]. Allocation based approaches are controversial because the initial allocation method used has significant impact on the distribution of wealth amongst dischargers. Central government guidance or direction on allocation approaches (as recommended by the Forum[14]) may be useful, although every method creates winners and losers.

[11] Ibid, draft recommendation 8.
[12] Ibid, Figure 2 Integrated Catchment Planning.
[13] As outlined in Brief B12-184 / 12-B-01339, these trigger levels are proposed in ECan's proposed Land and water Plan, and Otago Regional Council's proposed Plan Variatiopn 6A. Over these trigger levels, both ECan and Otago propose that a consent be required.
[14] Draft recommendation 16 in the version of the report prepared for the Small Group meeting 2-3 October 2012.

Allowing for economic growth and development in catchments approaching and over their limits

14. A particular challenge in catchments that are approaching or over their limits will be enabling economic development and growth, while maintaining or improving water quality. There is a range of possible mechanisms that could be effective in creating "head-room," allowing for new activities (whether new entrants, or intensification by existing land users) as outlined below:
    - **Voluntary adoption or regulatory requirements for improved management practice** - communities may agree, or be required by regulation, to create "head-room" for new entrants, using improved management practices i.e. beyond the set of GMPs already adopted or required.
    - **Funding** - funding the retirement or afforestation of land and/or particular sensitive areas would enable other parts of the catchment to intensify e.g. the Lake Taupo Protection Trust purchases land and afforests it before reselling it. The East Coast Forestry Project (ECFP) is another example, although it is not targeted directly at water quality[15]. Subsidising de-intensification of land use is common in overseas jurisdictions e.g. set-aside programmes in the US.
    - **Setting up an allocation regime** - new approaches being used in New Zealand include capping and allocating nutrient discharge allowances, and allowing for trading (Taupo) or offsetting (Rotorua). Land users may increase their discharges by purchasing allowances from others in the catchment (who must then reduce discharges to match their new cap); or offset the increase e.g. by purchasing and retiring land elsewhere in the catchment. While offsetting is used overseas (mainly for biodiversity), cap and trade systems for diffuse discharges are rare world-wide. Those involving diffuse nutrients tend to be "benchmark and credit" schemes, where a regulated point source discharger pays farmers in the catchment to reduce diffuse discharges.
    - **Re-negotiating catchment objectives or limits** - communities may choose to revisit and re-set their objectives and limits to allow for growth e.g. the development of a new irrigation scheme in a dryland area, which is likely to increase discharges of nutrients.

What role can central government play to enable efficient and effective approaches to managing water quality?

15. We agree with the Forum's likely position, that managing to water quality limits will only be successful if a package of approaches and tools is used. There is some evidence that central government intervention could improve existing tools, reduce barriers to their use, and improve implementation at regional council level; as noted in the preceding sections of this brief. Central government involvement could include guidance, support, direction and/or direct involvement in regional decisions:
    - **Guidance** - for example on the appropriate use of policy tools such as allocation, and models such as Overseer or CLUES[16], so that planning decisions are cost-

[15] The ECFP funds afforestation on erosion prone land in the Gisborne District
[16] CLUES is a whole catchment model (Catchment Land Use for Environmental Sustainability)

effective and defensible. Guidance on appropriate timeframes for achieving targets in catchments that are significantly over limits may also be useful.

- **Support** - for example capacity and capability support for local government to deliver more robust decisions e.g. cost-benefit analysis, and part-funding underpinning research and modelling[17]. More broadly, stakeholder support could be provided during the adjustment period, including support for industry self-regulation, and technology transfer for land users to improve understanding of least-cost methods to reduce discharges.
- **Removing legislative or regulatory barriers** - for example removing any impediments to the use of audited self-management as part of a regional council compliance regime.
- **Central government direction** - for example a National Environmental Standard could be used to regulate the use of technical tools such as Overseer, or create the regulatory framework within which regional councils could use GMP and ASM as the default management option, with consents to be used where circumstances require them.
- **Central government involvement** - for example in decisions on policy tools to be used in priority catchments in particular regions. This may require new policy tools at the national level.

16. Further information on these options will be provided in a subsequent briefing.

Risks and Mitigations

17. There is a risk that regional councils will not be able to manage to water quality limits in a cost-effective manner if: the policy toolbox is inadequate for the task, tools chosen are not well-matched to the catchment, and/or there is insufficient capability and capacity at regional council and stakeholder level to implement the tools and respond to the new policy environment.

18. This briefing does not provide any advice on preferred options or require Ministerial decisions, so there are no significant risks associated with this briefing.

Next steps

19. Options for improving the management of water quality, including the Forum's recommended approach, and their impacts, will be provided in a further briefing in October, 2012, in preparation for the Fresh Start for Fresh Water Cabinet paper scheduled for early December.

20. We will be preparing a paper on managing within water quantity and quality limits, to support your discussion at the BGA meeting on 17 October 2012.

[17] For example, the Envirolink funded Farm Dairy Effluent Storage Calculator, which was originally developed for use in the Horizons Region to assist dairy farmers transitioning from discharging treated effluent to water to discharging effluent to land.The software was modified via an Envirolink funded project and is now being used by eight other regional councils.

Recommended Action

We recommend that you:

a) **Note** that careful selection and matching of policy tools to the catchment will be needed to achieve the dual goals of successfully managing to water quality limits, and doing so in the most cost effective way

b) **Note** that the design of national and regional council policies is important to provide the business environment within which innovation and economic development can continue to occur, especially in catchments that are over limits

c) **Note** that targeted central government intervention could provide guidance or direction on policy approaches and design, including enhancing the policy toolbox, and improving regional council selection and implementation of tools

d) **Forward** this briefing to Hon Bill English, Hon Steven Joyce and Hon Kate Wilkinson for their information.

Yes / No

Kay Harrison **Date**
Director, Water Reform

Hon Amy Adams **Date**
Minister for the Environment

Hon David Carter **Date**
Minister for Primary industries

Minister's feedback on quality of briefing note:	**1**	**2**	**3**	**4**	**5**
1 = Was not satisfactory **2** = Fell short of my expectations in some respects **3** = Met my expectations **4** = Met and sometimes exceeded my expectations **5** = Greatly exceeded my expectations					

Appendix 1: Case studies illustrating the use of a range of policy tools

Voluntary practice change: Aorere catchment (Golden Bay)

The Aorere catchment highlights farmer leadership in improving water quality for their community. In 2004, water quality issues were having a drastic impact on the ability to harvest shellfish in the adjacent mussel farms, putting the future of the shellfish industries at risk. The farmers in the catchment commissioned scientific analysis on the nature of the water quality issues, with the support of the NZ Landcare Trust and MPI's Sustainable Farming Fund (SFF). The research showed that the issue was E. coli (faecal bacteria) not nutrient enrichment. This information was shared with the aquaculture industry and the regional council. Farmers committed their own funds into improving effluent management on-farm, including upgrading effluent infrastructure, riparian planting and fencing, new bridges and culverts. By 2009, the local aquaculture industry was harvesting 79% of the time – a significant increase from 28% only five years earlier. The dairy and shellfish farmers have also come together through this project, strengthening the community.

Voluntary good management practice: The Dairying and Clean Streams Accord

The Dairying and Clean Streams Accord (the Accord) is a voluntary agreement between Fonterra, MfE, MPI and local government. In 2003, the parties agreed to work together to achieve clean healthy water in areas where Fonterra's suppliers operate. The Accord set five good management practice targets for farmers. Progress against targets is measured annually by Fonterra and regional councils and is reported in an annual Snapshot of Progress report. The last reporting season is 2011/12. The final progress report is expected at the end of 2012. Although, it has achieved only two of its targets, it was a successful tool in raising awareness of impacts of dairying among farmers and the general public. Many industry initiatives have emerged as a result of greater awareness e.g. Fonterra's 'Every Farm Every Year'. Whilst the Accord was a useful tool to raise awareness and lift the bar for the industry, an independent audit process would have improved its effectiveness[18]

Social marketing to encourage behaviour change: Auckland Regional Council's 'Big Clean Up' campaign

In 2002, the Auckland Regional Council (ARC) introduced a series of "Big Clean Up" campaigns. The social research before the campaign indicated that although Aucklander's valued their beaches and harbours, they appeared to place less importance on the quality of urban streams. Stormwater was a concern because unlike sewerage which is treated, stormwater is piped directly to surface waterways. In urban waterways stormwater has been a source of many heavy metals and hydro-carbons. To change people's waste disposal practices and improve water quality, the ARC led a three month campaign in the summers of 2003 to 2005. The social marketing campaigns featured mass communication approaches (i.e. media stories and advertising), personalized communication (i.e. industry newsletters, web-site, letters and emails) and direct contact with people at schools and field days. Following the campaign 50% of public interviewed said that they were aware of the campaign and almost all of them could recall the key campaign messages. One of the findings was that

[18] In 2011, MPI commissioned a nation-wide stock exclusion survey. There was a significant discrepancy between the survey results and data provided by Fonterra and reported in the Accord's progress report

people are washing their cars more often on their lawns or at car-washes because they wanted to avoid creating more pollution[19].

Incorporation of Good Management Practice within regulatory frameworks: Greater Wellington Regional Council (GWRC)

GWRC's Regional Soil Plan Rule 3 is an example of incorporating sector good management practice guidance within regional plan rules. One of the conditions in Rule 3 (large scale vegetation disturbance on erosion prone land) refers to the activity being permitted – "*Where ground-based methods are used, best management practices as described in the New Zealand Forest Code of Practice (LIRO 1990, revised 1993) are adopted".* The forestry sector's Forest Environmental Code of Practice is a reference tool for parties involved in managing forests and is based around 18 best environmental management practices which are structured as practical decision-making and audit tools.

Audited self management: forestry sector

Currently, over 1 million of 1.8 million of New Zealand's plantation forestry are eco-certified under the Forestry Stewardship Council (FSC) international scheme for endorsing good forestry management for sustainable land use. Participation in the FSC is entirely voluntary but the scheme is important to international markets. Participating forestry owners are audited annually against a set of internationally agreed principles and criteria. The auditors are empowered to issue Minor or Major Corrective Action Requests (CARs) with certification revoked if corrective actions not implemented. Audit summary reports and details of CARs are available on the internet. City Forests was the first major forest owner in the South Island to achieve Forest Stewardship Council certification. City Forests has worked with the Otago Regional Council to set up an appropriate water and water course monitoring system for key waterways in the company's forests. Currently, nine semi-permanent sample points are established in waterways adjacent to impending, current or post-harvesting operations, and are intended to monitor for changes in water or water course quality due to harvesting operations.

Audited self management in a regulatory framework: Bay of Plenty Regional Council (BOPRC) Accredited Operator Standard

The Bay of Plenty Regional Council (BOPRC) has developed the Forestry Operators Accreditation System (FOAS) system to recognise operators who undertake forestry harvesting and earthworks activities and have adopted good environmental management practices. The BOPRC through its FOAS has a permitted activity rule for forest harvesting and forestry earthworks by accredited forestry operators (Rule 3 Regional Water and Lakes Plan). The rule specifies threshold limits for forestry earthworks within which no consent is required. If accreditation is approved by the BOPRC, the accredited operator can undertake permitted activities under Rule 3 (harvesting and earthworks) and Rule 78B (minor vegetation disturbance in wetlands associated with cable logging). Operators are audited to check compliance with rule conditions and FOAS requirements. Demerit points are allocated by the Bay of Plenty Regional Council where non-compliance is evident.

[19] Source: http://www.regional.org.au/au/apen/2006/refereed/4/3034_parminter.htm

Economic Instruments: Nitrogen trading in the Taupo catchment

The Waikato Regional Council's Plan Variation 5 (operative from July 2011) aims to reduce and cap the amount of nitrogen entering Lake Taupo. Dairy and drystock farms in the catchment have been allocated annual nitrogen discharge allowances (NDAs) which they are able to sell, purchase or lease to each other. The Lake Taupo Protection Trust (funded by central and local government) also purchases NDAs and removes them from the system, to achieve a 20 percent reduction in discharges by 2020. The Trust has also funded supporting measures such as advice for farmers. The market provides the option for farmers to intensify within the reducing nitrogen cap, provided they can buy NDAs at an affordable price. To date, the Trust has been the major buyer. Some drystock farmers have sold NDAs and converted part or all of their farms to forestry, encouraged by the incentives for afforestation provided by the introduction of the Emissions Trading Scheme in 2008. It is not clear whether the limited amount of farmer-to-farmer trades to date is the result of the immaturity of the market, or other factors such as transaction costs, or the relative homogeneity of enterprises in the catchment.

Ministry for the Environment
Manatū Mō Te Taiao

To: Hon David Carter, Minister for Primary Industries
Hon Amy Adams, Minister for the Environment

Water Reform Paper 3: Managing Within Water Quality Objectives and Limits

Other Dept Tracking Number:	Sub12-052	**MfE Tracking Number:**	12-B-01870
Date Submitted:		**MfE Priority:**	Urgent
Security Level:	IN CONFIDENCE	**Number of Attachments:**	Three
Action Sought:	Sign attachment	**Response/Signature Needed by:**	Monday 19 November 2012

Water Reform Directorate Contacts

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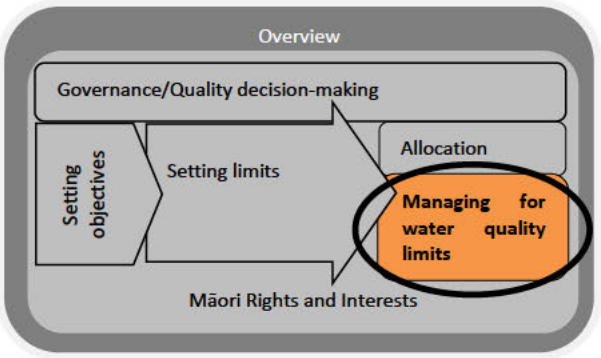
Director	Kay Harrison	027 230 2130	(04) 439 7579	

Executive Summary

1. This briefing note accompanies a draft Cabinet paper relating to your water reform implementation strategy. This is one of four in a set of papers for consideration at EGI on Wednesday 28 November 2012 covering the core policy elements of water reform implementation.
2. We seek your feedback on this draft Cabinet paper by Monday 19 November 2012.



Water Reform Paper 3 – Managing within Water Quality Objectives and Limits Cabinet Paper

3. This paper addresses the core policy element for water quality management of water reform implementation.

4. You have previously considered briefings on this area. Copies of these briefings are attached:
   a. Managing discharges within water quality limits (MfE 12-B-01339; MPI B12-184)
   b. Different approaches to managing water quality in different types of catchments (MfE 12-B-01380; MPI B12-203)

5. The paper contains draft recommendations to cabinet for reforming the management of water quality including:
    a. Setting out a vision for how effective water quality management can be achieved
    b. Short term measures/options for enhanced information and research, central government guidance, and partnering with stakeholders to consolidate and disseminate good management practices
    c. Signalling how issues will be addressed over the longer term.

Next steps

6. We acknowledge that the draft Cabinet papers currently have inconsistencies particularly referencing to:

    a. The wider water reform strategy

    b. the Land and Water Forum

    c. iwi/Maori rights and interests.

    We are continuing to work on consistency elements for the final Cabinet papers.

7. Following your feedback officials will finalise the Cabinet papers for your final approval on Wednesday 21 November 2012.

8. We recommend that the set of four papers on water reform implementation are lodged with the Cabinet Office on Thursday 22 November 2012.

Recommended Action

We recommend that you:

a) **Provide** feedback on this draft Cabinet paper by Monday 19 November

Yes / No

b) **Note** that your final approval of the set of four Cabinet papers covering the core policy elements of water reform implementation on will be sought on Wednesday 21 November 2012

Yes / No

c) **Agree** that the set of four Cabinet papers covering water reform implementation are lodged with the Cabinet Office on Thursday 22 November 2012

Yes / No

Kay Harrison
Director
Water Reform Directorate

Date

Hon David Carter
Minister for Primary Industries
Date

Hon Amy Adams
Minister for the Environment
Date

Minister's feedback on quality of briefing note:	**1**	**2**	**3**	**4**	**5**
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Ministry for the Environment
Manatū Mō Te Taiao

Ministry for Primary Industries
Manatū Ahu Matua

To: Hon Amy Adams, Minister for the Environment
Hon David Carter, Minister for Primary Industries

Water Reform: Quality - Managing discharges within water quality limits

MPI Tracking Number:	B12-184	**MfE Tracking Number:**	12-B-01339
Date Submitted:		**MfE Priority:**	Non-urgent
Security Level:	IN CONFIDENCE	**Number of Attachments:**	Nil
Action Sought:	Forward to other Ministers	**Response/Signature Needed by:**	Circulate by 28 September 2012

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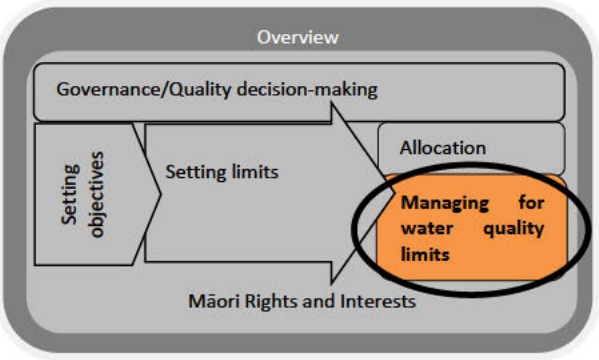
Executive Summary

1. This briefing note provides an overview of the issues, challenges and broad options for managing to water quality limits. It also outlines the types of discharges (diffuse, point, urban and rural) that need to be included in a water management regime, and approaches currently taken to managing within quality limits by Regional Councils.



2. It does not provide any advice on preferred options, or require any Ministerial decisions.

3. The National Policy Statement for Freshwater Management requires regional councils to set freshwater quality objectives and limits for water bodies. But simply *setting* water quality limits is not sufficient. Councils and land users need a system and tools to manage within limits cost-effectively, once they are set. The current system and methods used by regional councils to date have not been sufficiently effective to manage water quality in many catchments, and emerging methods are contentious. Improvements are needed in the systems and methods used by both regional councils and land users.

4. Officials will provide you with further advice on issues and options in a series of briefs, prior to preparation of the December 2012 Cabinet Paper. This series will cover options for approaches to better manage within water quality limits encompassing:

    a. Reflecting the national interest in decisions on how to manage to limits

    b. Improvements to the system for deciding how to manage to water quality limits (including the Land and Water Forum option, amongst others)

    c. Enabling and improving the policy and technical tool box available for regional councils to manage to limits

    d. Improving management of diffuse discharges, potentially through clarifying whether authorisations are required.

Situation Analysis

Context

1. This is the first in a series of briefing notes Ministers will receive on managing to *water quality* limits. This paper provides an overview of the issues, challenges and broad options for managing to water quality limits. It does not provide any advice on preferred options, or require any Ministerial decisions.
2. Future water quality briefings will cover:

    a. How the different policy approaches and tools for managing to water quality limits might vary depending on the state of the catchment (i.e. under, at or over the quality limit), and how central government could guide or direct the choice of instruments

    b. A summary of the Land and Water Forum's recommendations following their final report, due in late September

    c. Options for improving the management of water quality, and their impacts

3. This brief builds on the advice already provided to Ministers on setting water quality objectives and limits, including: briefing 12-B-01323 on the objective and limit setting process, and the A3 on limit setting to support a discussion at the Business Growth Agenda forum held on 12 September 2012. Water *quantity* issues are being addressed in a separate briefing, which you will receive concurrently with this one (12-B-01330).

Managing discharges to achieve water quality objectives

4. The National Policy Statement for Freshwater Management (the NPS) requires regional councils to set freshwater quality objectives and limits for waterbodies, but does not dictate how the limits are to be achieved. The NPS requires regional councils to implement methods to assist the improvement of water quality in waterbodies where limits are breached, and to impose conditions on discharge permits to ensure limits can be met.
5. Setting water quality limits is necessary but not, in isolation, sufficient to ensure the achievement of the objectives for the waterbody. A management system, and appropriate tools and instruments are also needed that:

a. Enable Councils and land users to manage successfully and cost-effectively within the limit, or to a target (where the catchment water quality levels breach the limit), in an acceptable timeframe

b. Minimise the economic and social costs of managing to limits

c. Provide investment certainty and clarity for land users and dischargers

d. Enable innovative approaches to reducing discharges.

All types of discharge need to be considered

6. An efficient and effective regime for managing to water quality limits must identify and account for all sources of the critical contaminants[1]: urban and rural, point and diffuse source (illustrated in Figure 1 and described in paragraphs 7 to 12). However the regime cannot manage all sources, as some are unavoidable (as outlined in paragraphs 13 and 14).

Figure 1: Manageable Sources of Discharges[2]

7. There are two main ways contaminants enter waterbodies: as point source discharges, or diffuse discharges. Point source discharges have a distinct source and outlet, diffuse discharges arise from a wide area (i.e. catchment) and typically enter water bodies via overland runoff or seepage to groundwater.

8. Point source discharges have been the focus of water management since the 1970s because they are easily identifiable, amenable to regulation and were a significant contributor to the country's water quality problems. Point source discharges are no longer the main cause of water quality problems at a national scale; indicators of point source discharges such as biological oxygen demand have fallen over the past two decades[3]. However, localised point source problems still exist. These are mainly from

[1] In this briefing the word contaminant is used to descr be any substance or organism discharged to water that is considered undesirable in terms of meeting the objective for the water body. Contaminants could include nutrients, pathogens, heavy metals, organic matter, and/or sediment, depending on the objective.
[2] Source: Ministry for the Environment
[3] Ministry for the Environment 2007. Environment New Zealand 2007

municipal sewage discharges to inland waterways, stormwater discharges to urban streams and poorly performing septic tanks. Further improvements are mostly constrained by the ability of local authorities to invest in upgrading old infrastructure.

9. As the freshwater impacts of contaminants from point source discharges have diminished over recent decades, the pressure from diffuse discharges has increased. For example, point source discharges of organic waste to the Mataura River fell from15.5 tonnes/day in 1975, to 3 tonnes/day in 2000, reducing surface scums and foams. However, the river still has elevated nutrient and bacteria levels from non-point-sources[4].

10. Diffuse discharges can originate from either agricultural or urban areas, and each source has distinctive characteristics.

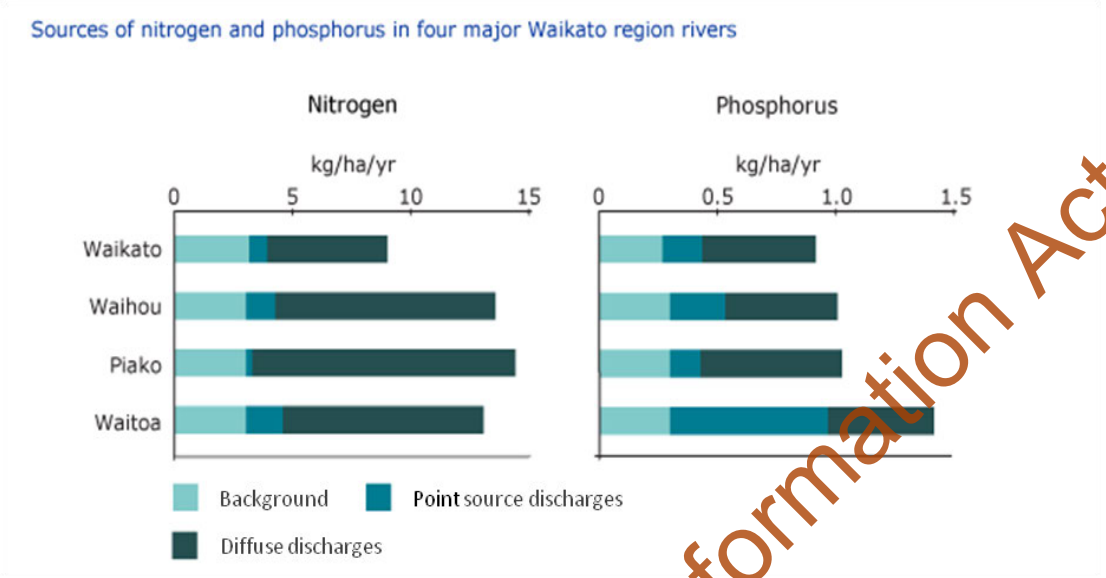
11. Agricultural diffuse discharges contain sediment, nutrients (nitrogen and phosphorus) and pathogens. The quantity of these contaminants entering water has increased over the past forty years due to intensification of agricultural land, including increased fertiliser use and stocking rates.

12. Urban land use produces similar contaminants to agriculture, plus additional contaminants like heavy metals and hydrocarbons which emanate from roads and other surfaces such as new zincalume roofing. Urban diffuse discharges can actually have a higher concentration of contaminants than those from rural areas but have less impact at the national scale because of the smaller proportion of waterways affected (1% of the country's river length compared with almost half in pastoral areas). Many urban catchments are short and discharge directly to the coastal marine area.

13. Additionally all catchments have a level of background diffuse flows. These are derived from the geology, soil, climate, plant cover and historic land use impacts. Most of these background sources cannot be managed or regulated. However, recent research has highlighted the nitrogen contribution from gorse (a nitrogen-fixing plant) in Rotorua catchments. The high contribution from this source may indicate that in some catchments reducing the amount of gorse cover may significantly reduce the total nitrogen load[5].

14. The case study from Waikato, shown below[6], illustrates the significant proportion of nutrient input that can be attributed to diffuse discharges[7]. Nationally, it is estimated that 75% of nitrogen and phosphorus runoff originates from modified, mostly pastoral, land use[8].

[4] Environment Southland. 2000. *State of Environment Report for Water*. Invercargill: Environment Southland
[5] Environment Bay of Plenty (2010) Quantification of Gorse leaching Nitrogen in the Rotorua Catchment. Environmental publication 2010/03 ISSN : 1175 9372
[6]The data were collected from 1998-2007 in the Waikato River and 2000-09 for the Hauraki rivers (Waihou, Piako and Waitoa). http://www.wa katoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/River-and-streams/riv-7b-report-card/
[7] Elliott, A.H. et al. (2005) Estimation of nutrient sources and transport for New Zealand using the hybrid mechanistic-statistical model SPARROW. *Journal of Hydrology (NZ)* 44(1): 1-27.
[8] Howard-Williams et al (2011) Diffuse pollution and freshwater degradation: New Zealand perspectives. NIWA Diffuse Pollution Specialist Group



Challenges in Managing to Water Quality Limits

15. The most significant challenge for improving water quality management lies in better managing diffuse discharges, both urban and rural. In most catchments, only some manageable diffuse sources are currently managed and/or regulated, whereas it is the total cumulative impact of all sources that is important for achieving the objective for the waterbody. For example, discharge permits are required for point sources such as treated sewage or farm dairy effluent, rules govern effluent application to land, but urine from cattle is largely unregulated and unmanaged.

16. Diffuse discharges are more difficult to manage and/or regulate than point sources because:

    a. They often can't be seen, so pinpointing and attributing the source is difficult

    b. There can be substantial time lags before the effects of changes in land use are observed in surface water quality, as contaminants make their way through ground water to surface waterways

    c. Managing diffuse discharges requires the integration of land and water management, but different levels of local government manage these two components of the environment[9] e.g. territorial authorities manage most rules governing urban subdivisions, whereas regional councils are responsible for managing the impacts of sediment on water quality

[9] Territorial authorities are primarily responsible for managing land and any activities with effects on it, while regional councils are primarily respons ble for the management of fresh water bodies and any activities that affect fresh water. District plans must give effect to regional policy statements, this provides some consistency in how territorial and regional authorities work together. Unitary authorities generally consider that they have good integration of council functions and plan provisions around land use and water management due to their joint functions and size.

d. Land users tend to view diffuse discharges as part and parcel of their land use, rather than a discharge which should be actively managed.

17. With a point source discharge, the amount of contaminant can be directly measured and regulated. To do the same with diffuse discharges requires technology that is neither practical nor affordable for on-farm use. Direct measurement involves the use of lysimeters,[10] more commonly used for research purposes.

18. Because measuring the contribution made by an individual is difficult and expensive, nutrient budgeting models such as OVERSEER® are increasingly being used by regional councils and farmers to estimate farm nutrient discharges to estimate nitrogen and phosphorus discharges, as part of their water quality management regime. MPI is planning to brief Minister Carter on OVERSEER® shortly. MPI will recommend that the brief be forwarded to Minister Adams.

19. There is a lack of legal clarity as to whether diffuse discharges need to be expressly authorised in Regional Plans or consents. In *Carter Holt Harvey v Waikato Regional Council* (the appeal to the Environment Court on the Council's Plan Variation 5 to control the cumulative effects of diffuse discharges from pastoral grazing in the Lake Taupo catchment), the Court declined to make a finding on whether animal emissions were discharges, stating that this would require more legal and factual analysis. If a declaration by the Court were to be sought in the future, there is a risk that all unauthorised diffuse discharges may be found to be unlawful, including most primary sector discharges.

Regional council approaches to managing discharges

20. The RMA devolves primary responsibility for managing water quality issues, including discharges to water and land, and land use activities that may affect water quality, to regional councils.

21. Regional councils currently manage diffuse discharges in a variety of ways, usually with a combination of the following[11]:

a. regulation: rules in regional plans, resource consents and bylaws. Rules and/or consents may regulate inputs (e.g. fertiliser), practices, technologies to be used (e.g. treatment methods), or outputs (e.g. leached nitrates from a farm system, bacteria levels in sewage outfalls)

b. non-regulatory methods: education, funding assistance e.g. for riparian fencing

c. good management practice (GMP) and audited self management requirements: regional rules incorporating or referring to sector, irrigation scheme or catchment-based codes of practice, accreditation / certification and management plans. Currently management plans are being used for nutrient, effluent, earthworks, sediment and stormwater management in various councils

[10] A Lysimeter is an instrument that can measure the amount and components of water percolating through a fixed column of soil. A recent Landcare Research project found that "impractical numbers" of lysimeters are required to accurately estimate average leaching from a paddock (http://www.landcareresearch.co.nz/publications/newsletters/mpi/issue-2

[11] This list is not exhaustive.

d. economic instruments: allocation of nutrient discharge allowances and allowing trading, and cost recovery charging[12]

e. cross catchment mitigation: storm water management, infrastructure (including irrigation infrastructure to increase flows), artificial wetlands.

22. Regulatory and non-regulatory methods are often used in conjunction with each other. For instance, a rule in a regional plan may require a developer to obtain a resource consent for earthworks and vegetation removal, and the consent conditions may require GMP in the form of a sediment control plan. In the plan, the approach for managing discharges is described, which may include measures like silt fencing, covering exposed soil, and re-vegetation.

Emerging Council Approaches to Managing Diffuse Discharges

23. In the past, regional councils have predominantly used non-regulatory methods to manage diffuse discharges, including education and assistance for landowners to adopt mitigation practices. However in response to a range of drivers, including the continuing decline in water quality in many catchments, rising levels of public concern, and the requirements of the NPS, regional councils are changing the methods used. The recent Environment Court decision on the Horizons Proposed One Plan stated that "history suggests plainly enough that [voluntary programmes such as the Dairying and Clean Streams Accord] alone do not suffice to effectively deal with the problem"[13]. A list of some recent approaches taken is included as **Appendices 1 and 2**.

24. Many regions now specify the use of OVERSEER® to estimate the nutrients discharged from each property, with a range of approaches taken to subsequently regulate the discharges including:

- requiring a resource consent if a benchmark level of discharge is exceeded (e.g. the proposed Environment Canterbury Land and Water Plan and the proposed Otago Plan Change 6A);
- requiring farmers to obtain a consent with conditions that cap allowable nutrient discharges (the proposed Horizons One Plan); and in some cases allowing for trading of discharge allowances between landowners (e.g. in the Lake Taupo catchment);
- requiring proposed new intensive farms to apply for a consent which includes good management practice conditions (e.g. Southland proposed Plan Change 13).

25. The use of OVERSEER® allows councils to manage nutrient discharges to achieve the load limit, while enabling farmers to choose the way they meet the regulatory benchmark or cap. However the farming sector has not always supported approaches using OVERSEER®. Submissions on proposed Plans and appeals to the Environment Court have included arguments about the use of OVERSEER®, the approach to "allocating" nutrient caps, the cost to farmers, and the time allowed for transition. We outlined some of these issues in our recent memos on the Horizons Proposed One Plan (PD_WP_482 (MfE), AM12-046 (MPI)).

[12] Pricing of discharges beyond cost-recovery is not currently possible under the Resource Management Act.
[13] Horizons Proposed One Plan Environment Court decision: Part 5 – Surface Water Quality – Non-Point Source Discharges, August 30 2012.

Broad Options for Improving Water Quality Management

26. In order to manage to water quality limits, all discharges (including diffuse discharges) need to be accounted for, decisions made on which are able to be effectively managed, and an efficient management regime developed.

27. The Land and Water Forum (the Forum) Water Quality Working Group made a number of recommendations on how this should be achieved, and the Small Group of the Forum is currently discussing the recommendations. It is likely that a system-based approach will be outlined in the Forum's final report, which devolves decision-making on managing to limits to the same collaborative stakeholder group that the Forum has proposed for making the decision on limits. This broader decision making framework was covered in the recent brief on freshwater governance[14]. The Forum is likely to recommend that all tools for managing to quality limits need to be better enabled by the legislative and regulatory framework, potentially including economic instruments.

28. A Forum recommendation may suggest that diffuse discharges need to be more clearly defined in law, to address the issue noted in paragraph 19. The risk associated with the current lack of legal clarity is potentially significant, and influences the policy framework and options for managing to quality limits. We propose to brief you separately on this issue.

29. The broad scope of the areas and options likely to be covered in the December advice to Cabinet will be covered in the three briefing notes outlined in paragraph 2, and will encompass:

    a. Reflecting the national interest in decisions on how to manage to limits

    b. Improvements to the system for deciding how to manage to water quality limits (including the Forum's option, amongst others)

    c. Enabling and improving the policy and technical tool box available for Regional Councils to manage to limits

    d. Improving management of diffuse discharges, potentially through clarifying whether authorisations are required.

Risks and Mitigations

30. Setting limits in a catchment is not sufficient for achieving water quality objectives. Improvements are needed in the systems and tools used for managing water quality as well, in order to achieve the objectives of the NPS.

31. This briefing does not provide any advice on preferred options or require any Ministerial decisions, so there are no significant risks associated with this briefing.

Next steps

32. We will be providing you with further briefings on different aspects of managing to quality limits:

[14] MfE brief number 12-B-01305, MPI brief number B-12-171: *Water reform: improving plan development and decision-making*

a. How the different policy approaches and tools for managing to water quality might vary depending on the state of the catchment (i.e. under, at or over the quality limit), and how central government could guide or direct the choice of instruments

b. A summary of the Land and Water Forum's recommendations following their final report, due in late September

c. Options for improving the management of water quality, and their impacts.

33. We will also be preparing a briefing to support your discussion at the BGA meeting on 17 October 2012. The BGA paper and the supporting briefing will cover managing to both quality and quantity limits.

Recommended Action

We recommend that you:

a) **Note** that setting water quality limits is necessary but not sufficient to ensure the achievement of the objectives for the waterbody. A management system, and appropriate tools and instruments are also needed

b) **Note** that diffuse discharges represent the most significant and difficult challenge in managing within water quality limits

c) **Note** that options for improving water quality management include legislative change, regulations, guidance and clarifying the legal issues associated with diffuse discharges

d) **Note** that you will be receiving further advice and briefings that will outline the different policy options and tools for managing to water quality, a summary of the Land and Water Forum's recommendations following their final report (due in late September), and an outline of the options for improving the management of water quality, and their impacts

e) **Note** that we will provide a separate briefing on the authorisation of diffuse discharges

f) **Forward** this to Hon Bill English, Hon Steven Joyce and Hon Kate Wilkinson for their information

Yes / No

Kay Harrison **Date**
Water Reform Directorate

Hon Amy Adams **Date**
Minister for the Environment

Hon David Carter **Date**
Minister for Primary Industries

Minister's feedback on quality of briefing note:	**1**	**2**	**3**	**4**	**5**
1 = Was not satisfactory **2** = Fell short of my expectations in some respects **3** = Met my expectations **4** = Met and sometimes exceeded my expectations **5** = Greatly exceeded my expectations					

Appendix 1: A sample of current regional council approaches to managing diffuse discharges

Bay of Plenty (Rotorua lakes)	• Proposed Regional Policy Statement (notified[15] Mar 2012). Defines 12 lakes as "at risk" for which limits are set and a consent would be required to increase discharges. Proposes to allocate assimilative capacity for the Rotorua-Te Arawa lakes, and other water bodies at risk (based on limits), using a set of principles, and in consultation with the affected community especially landowners. Managed reduction of nutrient losses when over limits by GMP. • Regional Land and Water Plan (operative Dec 2008) – Rotorua lakes provisions. Sets target trophic level indices (TLIs) for the Rotorua Lakes. Caps discharges from land holdings at a benchmark level. Intensification that increases N or P loss in 5 of the lake catchments must be fully offset either on the same property or in the same catchment.
Waikato	• Variation 5 for Lake Taupo catchment (operative Jul 2011). This caps nitrogen outputs from land in the catchment. Low nitrogen leaching activities (rural residential lots, forestry or very low stock numbers) are permitted. Other land uses require a consent. A Nitrogen Discharge Allowance (NDA) was allocated to all properties in the catchment using OVERSEER®. Trading in allowances is enabled. Target is 20% reduction in the manageable N discharge to the lake. The Lake Taupo Protection Trust purchases and retire NDAs. • Regional plan change announced (Aug 2012). Will set limits and manage activities to achieve them by a set time frame. Diffuse discharges management methods proposed include making information on GMPs available, introducing controls, and providing for offsetting. Planning to notify in 2015.
Horizons[16]	• One Plan (combined RPS and Regional Plan. Notified Aug 2010). Land Use Capability (LUC) based nutrient caps apply to all intensive farming within targeted catchments, i.e., dairy farming, commercial vegetable growing, cropping and intensive (i.e. irrigated) sheep and beef farming; with a controlled activity status (requires consent). There will be a staged approach to reductions in the cap (i.e. reductions in years 1, 5, 10 and 20). The consent conditions include a set of GMPs including a nutrient management plan, cattle exclusion from streams, stream crossings bridged.
Canterbury	• Land and Water Plan (notified Aug 2012). Sets region-wide rules for *existing land uses* to 1 July 2017: farming is a permitted activity subject to recording nutrient losses estimated using OVERSEER®. From July 2017, in order to remain a permitted activity, must be at or below discharge levels in look-up tables (to be developed by sectors, based on good practice, varying by soil type, climate and land use); also must have an environmental farm plan and an audited farm plan if over 20 kg N discharged/ha/year. • Sets region-wide rules for *changes in land use*[17], prior to 1 July 2017, land use change would be a permitted activity provided the water permit has nutrient discharge conditions attached to it and the property is outside the alpine lake zone; with a requirement to record nutrient losses and have an environmental farm plan. In designated "red zones" where the catchment is over-allocated, land use change would be non-complying. After 1 July 2017, land use change is permitted (outside the lake zone) if discharges are at or lower than those in the look-up tables, with the same farm plan requirements as existing activities. If land is in the lake zone, or the sector has no look-up table, or the user estimates they would discharge more than specified in the look-up tables, then a consent would be required. • Once sub-regional plans are in place, none of the above applies. Load limits would be set in the sub-regional plan and allocated to individual land users as an NDA, with transfer/trading enabled.

[15] Notifying a proposed plan or regional policy statement change means it has legal effect under s86B of the RMA. Submissions and hearings usually result in changes that need to be made before it becomes fully operative.
[16] This discussion covers the notified version of the Proposed One Plan, rather than the later decisions version. The recent Environment Court decision is similar to the notified version.
[17] Defined as change that triggers the need for an irrigation water take consent or an increase of more that 10% in N discharges (benchmarked against the average of 2009-2013).

Otago	• Proposed Plan Change 6A (Water Quality) (notified March 2012). Purpose is to address effects of diffuse discharges on water quality. • This plan change sets individual diffuse discharge limits for nitrate at 10 or 30 kg/ha depending on location. Landowners use OVERSEER® to estimate discharges. Farming is a permitted activity (no resource consent required) if can meet this cap. Where farms are not able to meet contaminant discharge limits, farmers will be required to apply for consents. These consents will provide opportunities for them to implement farming practices over a prescribed period of time, which will reduce the level of contaminants discharges and meet the limits.
Southland	• Current plan encourages best environmental practice to achieve a 10% improvement in some water quality parameters from 2010 to 2020. • Notified Proposed Plan Change 13 – New Dairy Conversions. Conversions will require resource consents. Applications must include a nutrient management plan and a winter grazing plan. Expansion/intensification of existing dairy farms not included unless they need an additional dairy shed. • Work by the Council on other agricultural activities and on NPS compliant water quality load limits and their allocation expected to be publicly notified by December 2012.

Appendix 2: Case studies of best practice water quality management by councils[18]

	What does the programme entail?	How is it working?
Taranaki Riparian Plant Scheme	• Long- running voluntary programme involving farmers, with the support of Taranaki Regional Council, fencing and replanting riparian margins on the ring plain. • Plans are prepared following a property inspection and consultation with the landholder. The plans are supplied at no cost and no obligation to landholders. The plans list recommended plant species and the estimated costs of fencing, planting and weed spraying. • To make riparian planting more affordable the Council contracts plant nurseries to supply, in bulk, suitable indigenous plants, and then sells the plants to land holders at cost. Since 1996, the Council's plant supply scheme has provided over 2 million plants.	• These numbers mean that 71 per cent of stream banks needing to be fenced are now protected by existing or new fences, and 58 per cent of stream banks are now vegetated by existing or newly planted vegetation. • The programme is very much a partnership whereby the Council, industry, community, and land owners share the problem and contribute to the agreed solutions. • Water quality in Taranaki has been maintained and in some cases improved during times of increased intensification of dairying on the ring plain. • The improvement in environmental performance has not been at the expense of economic performance.
Auckland Urban Stormwater Management	• Adopted the Stormwater Action Plan in 2004, which allocated additional funding to achieve stormwater outcomes. The Plan recognised that both statutory and non-statutory initiatives were required to achieve improved stormwater outcomes • The Auckland Council publishes stormwater and sediment best practice guidelines, which are non-statutory documents. • A number of education and outreach activities are undertaken • A statutory requirement of 75 per cent total suspended solids removal for land development	• A unique aspect about the stormwater programme in the Auckland region is the recognition and strong coupling of non-statutory and statutory approaches. • Improved understanding of contaminant sources and prevalence in the environment. • Observed decrease in stormwater quality discharges to streams and estuaries/coast in some locations.
Wairarapa Hill Country Erosion Management Programme	• The Wairarapa hill country is underlain by soft sedimentary rocks. Soils formed from these parent rocks are susceptible to widespread erosion particularly following significant rainfall events. Sheep and beef farming is the predominant land use across much of the landscape. • Programme began in 1953. It is a voluntary programme involving farmers and rural communities with the support of Greater Wellington. • based around the preparation of property-specific soil conservation plans, and the provision of ongoing advice and assistance to support the fencing, planting and assisted reversion of erosion prone land. It also has provided financial incentives to encourage landowners to effect land use change.	• Have developed enduring partnerships over a long period of time. Innovative in its time, these partnerships have been built on trust, service delivery, and uninterrupted support. • Operative for nearly sixty years many of the present day participants are second generation farmers. This longevity has developed a strong culture of soil conservation across Wairarapa. • Monitoring of performance, especially with the establishment of poplar and willow plantings and conservation woodlots is also a key part of the operation. • At present 74 per cent of the erosion prone pasture land within the region is covered by a farm plan.

[18] Information taken from: Office of the Auditor General, 2011. Managing freshwater quality: Challenges for Regional Councils Land and Water NZ (undated). Focus on Freshwater: Best Practice Water Quality Management from Regional Councils,