Regional Council Practice for Setting and Meeting RMA-Based Limits for Freshwater Flows and Quality

NATIONAL SUMMARY REPORT

- Final – Version 1
- 31 January 2012

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1. Introduction

1.1. Background

The Ministry for the Environment (MfE) is seeking to ensure:

- Water quality, levels and flows that provide for healthy ecosystems and optimise New Zealand's social, cultural and economic well-being
- New Zealanders have credible decision-making processes for fresh water, having regard for all competing values of water

The two objectives noted above (MfE Statement of Intent 2009-2012) are to be delivered in part through the 'New Start for Fresh Water' officials' work programme. The Cabinet paper with more details on the programme can be accessed at: http://www.mfe.govt.nz/issues/water/freshwater/new-start-fresh-water.html

The MfE's "New Start for Fresh Water" officials' work programme comprises of 10 projects, and requires collaboration with Iwi, and engagement with the Land and Water Forum, regions and the broader community. The programme is led jointly by MfE and the Ministry for Agriculture and Forestry (MAF), with MfE leading 8 of the 10 projects. It is the MfE's second highest priority. The programmes are broken into the following ten project streams:

1) Environmental flows and water measuring
2) Water quality limits
3) Proposed National Policy Statement for Freshwater Management
4) Allocation of water to maximise value
5) Over-allocation baseline and possible interim interventions
6) Supporting measures
7) Rural water infrastructure
8) Dependable monitoring and reporting
9) Aligning investment and improving uptake of water research
10) Best practice water governance.

The purpose of this report is to inform the 'environmental flows and water measuring' and 'water quality limits' projects. This will be achieved by producing a report outlining Regional Council's approach and barriers to:

- Setting limits for the flow of freshwater resources;
- Setting limits for the quality of freshwater resources; and
- Putting in place mechanisms to ensure the limits are met.

1.2. Scope of the Project

This project is intended to gather information to assist with the problem definition phase for the 'environmental flows and water measuring' and 'water quality limits' projects. Data has been gathered by reviewing regional council planning and regulatory documents as well as through discussion with the regional councils.

Work has been undertaken by SKM to identify the plan provisions that set minimum flows in water resources and to identify what water quality limits already exist. A report by Hill Young Cooper (2008) produced a stocktake of existing planning provisions and provided a starting point for this project. The Auckland Regional Council was in the process of reviewing practises for setting water quality limits in seven NZ councils. Reference was made to information gathered in that project.

The scope of this project was to identify the methodologies by which the councils develop water quantity and water quality limits and the methods by which these limits are given effect to in Regional Plans or other statutory documents such as Water Conservation Orders. The review involved consideration of a number of key questions such as:

- How do councils identify which region-wide issues to address in terms of freshwater flows and quality?
- How values are assigned to these issues and how is the significance of competing values determined?
- What technical methods do councils use to inform these processes and help set limits?
- What council planning processes and technical methods do councils use to put these limits into effect and ensure they are being met?

These points relate to differing stages of the council plan development and implementation process. Therefore data has been gathered regarding all stages of the regional planning process. Initial questions for the review were developed by MfE and MAF in conjunction with SKM to address both water quantity and water quality issues and subsequently refined through the consultation process. A set of the question templates used are included in Appendix D, including guidance utilised by the researchers to ensure consistency of questioning.

1.3. Research Methods

The project was undertaken in three broad stages (see Figure 1):

- Stage 1 – Review of desktop information and identification of information gaps;
- Stage 2 – Conducting interviews with key regional council staff to refine information collated; and
- Stage 3 – Analysis and reporting of findings.

Stage 1 Desktop Review

Stage 1 consisted of the following steps and outputs:

- Identification of analytical questions to be answered by project. A list of key questions of interest to MfE was compiled in consultation with MfE staff. Consideration was also given to whether these questions were best sourced from desktop review or through interview.
- Development of a template for desktop collation of information. This template identified examples of the information sought and further guidance on questions.
- Completion of desktop reviews for two regional councils for review and checking by MfE. The purpose of this step was to check the level of detail useful to MfE on each of the questions and also to identify questions best answered through interview with regional council staff. The level of detail and reporting of desktop information was refined at this stage based on MfE feedback.
- Agreement on key questions and headings to be addressed by the national and regional summaries in the interim and final report agreed with MfE.
- Completion of all the desktop reviews and preparation of an interim report. This interim report was provided to MfE for comment. Positive feedback was provided by MfE on the level of detail provided by this report. The report contained the outputs from the desktop reviews which included gaps in data and the questions that required follow up by interview in stage 2.
- At this stage the plan review/interview questions were further refined by MfE. A template of the finalised set of questions is provided in Appendix D.
- A presentation was given on the interim findings to the Resource Managers Group (RMG). Regional council representatives at RMG were asked to identify both primary and secondary staff within each of the Councils for interview based on the key information gaps identified.

Stage 2 Regional Council Staff Interviews

- Regional council staff to be interviewed were first contacted to confirm their availability to be interviewed. An interview package was then sent out at least 24 hours prior to the interview containing summary information on the project, identification of interviewee rights and considerations, a draft copy of summary information collated from the desktop study for that region and a copy of the questions to be asked during interview.
- Interviews for both water quality and water quantity were undertaken for each of the regions. The number of interviews and staff spoken to as part of this interview process varied depending on the particular council and complexity of issues to be addressed. In general terms the number of interviews undertaken ranged from one to three and varied in time from one hour through to two and a half hours. When interviews went longer than an hour, interviewees were given the opportunity to take a break or to reschedule the interview finalisation.

- Following the interviews a draft of the final summary information (including both the desktop information and interview information) were sent out to interviewees for their checking and review.

Stage 3 Analysis and Reporting of Information

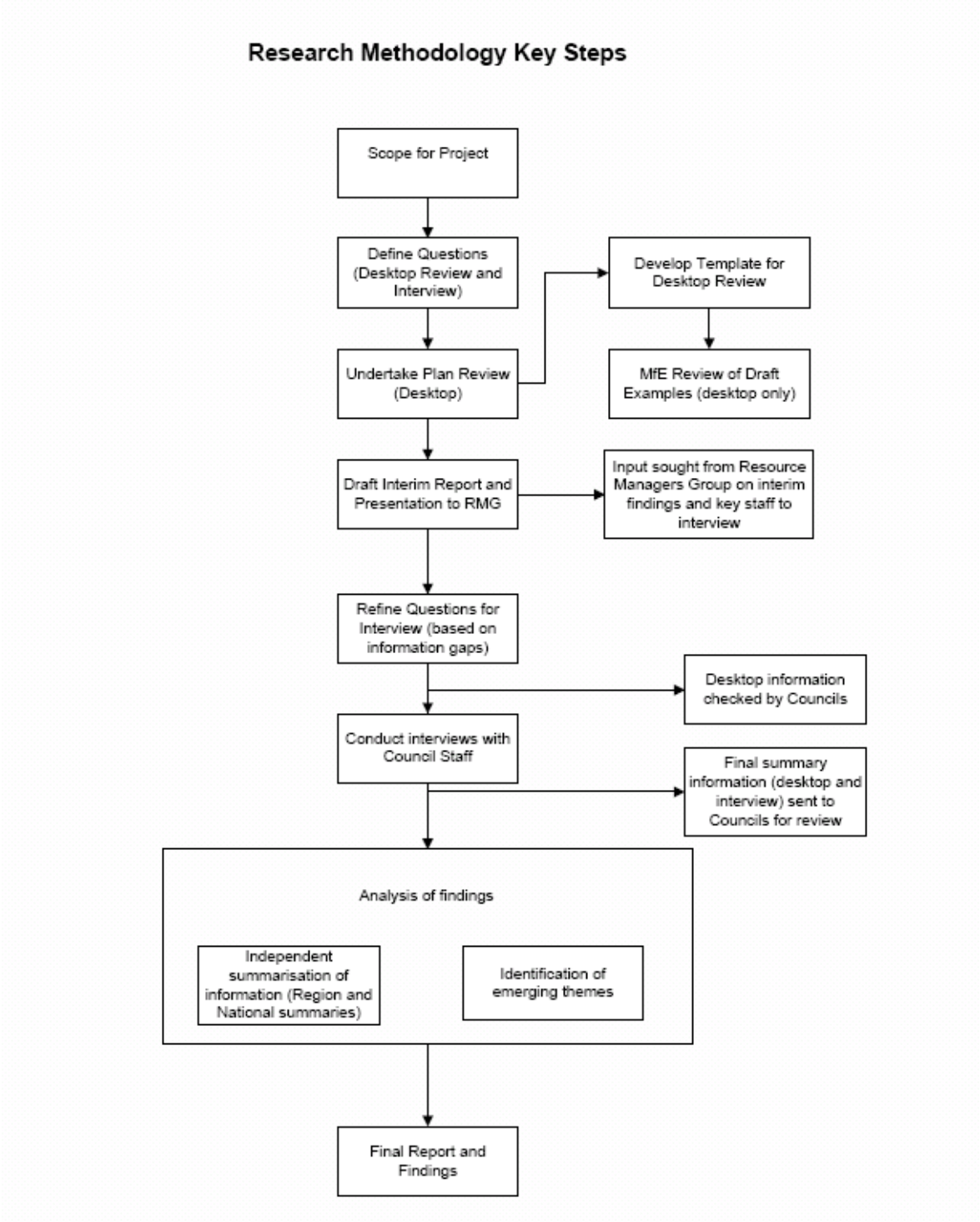
- Following completion of the data collation stages, two primary steps were undertaken to assist in analysis of information. The first step was the identification of emerging themes by interviewers, and the second was the independent preparation of regional summaries and the national summary by a different team member. These two steps were undertaken separately so that the results of the independent analysis could be compared to the 'emerging themes' to enable cross-checking of findings.
- Questions summarised at the national and regional levels were identified by MfE in stage 1. Regional summaries were created first, for each question asked by MfE the relevant questions in the interview to analyse were identified and summarised for each council.
- For the national summary a table was created that related to the specific questions asked by MfE. Analysis was made of each Council's response, these were recorded as Yes/No answers into a table appended to this report. This aided identification of the general consensus on approaches taken, plus the councils with alternatives. When answering the regional summary questions numbers of councils using a specific approach or giving a specific opinion were identified. The report sought to identify both common consensus in approaches and notable alternatives. Specific examples of approaches were noted in the summaries where these may be of value to investigating the issues under discussion in greater detail.
- All data gathered was presented in the final national summary report.

Additional Data

The following additional data sources were used as background and in contribution to this project:

- SKM's 2009 plan review table created as part of the contract to the MfE to undertake a cost benefit analysis for the National Environmental Standard on Ecological Flows and Water Levels. This table contained a summary of existing limits set for surface water, groundwater and wetland water quantity and water quality in all New Zealand regional councils.
- Hill Young Cooper's 2008 Water Allocation Policy Stocktake - A stocktake of plan provisions and practices for water allocation. Prepared for Local Government New Zealand and the Resource Managers Group
- Boffa Miskell Limited's 2010 Review of water quality standards determination & implementation. Draft prepared for Auckland Regional Council.

- **Figure 1 Research Methodology Key Steps**



1.4. Document Structure

This document contains a national summary of the outcomes of the plan review and interview process in Section 2. Section 3 contains regional summaries of the plan review and interview data for each council. Section 4 contains a summary of the key themes that have emerged through this project. Appendix A contains a quick access summary for specific questions for all the Councils. Appendix B and Appendix C contain the full details identified from the plan review stages for each council. Appendix B relates to water quality and Appendix C to water quantity. Appendix D contains the questionnaire template.

1.5. Assumptions and Limitations

The following general assumptions and limitations apply to this report:

Iterative nature of approach – The scope and focus of questions addressed through this research evolved as the project progressed. Questions to be addressed through this project were developed by MfE and were refined and agreed by MfE and the project team as information and data was gathered (as identified in Figure 1). This flexible approach was taken to ensure information gathered would be useful to MfE however has led to a wide breadth of information being gathered. In some cases the quantity of data has precluded comprehensive detailed analysis. It is anticipated that further analysis of key issues will be undertaken by MfE drawing on the information collected in this report.

Direction of approach - Questions were developed initially by MfE and MAF based on assumptions relating to where gaps in current water management may be. As a result, there is a potential for the nature of these assumptions to prejudice reporting (e.g. there was a general presumption that limits setting is good and this is reflected in the initial questions asked and consequently may also be reflected in the reporting). The report notes both the approach adopted by the majority of councils and alternatives to avoid bias in reporting.

Interpretation of results – Interpretation of results has not been undertaken in accordance with the requirements of MfE to have a document that provides them with factual information. Therefore no attempt has for example, been made to propose any method as being a preferred approach for national consideration.

Opinion of authors – The opinion of the authors regarding best practises or preferred approaches has again been avoided where possible. However, it is acknowledged that both the regional and national summaries are, by necessity, a summary of what the authors consider the main issues and points identified to be. Some opinion on the part of the authors associated with the selection of main themes and approaches is therefore unavoidable.

Level of detail and breadth of approach – The scope of the project was to review a wide breadth of information. Due to time imperatives related to reporting to the RMG in a timely fashion, both the desktop reviews and interviews were conducted within short timeframes. This combination of the breadth of the scope and timeframes is reflected in the level of detail gathered on specific issues. The intent of the report was to gather information to inform existing central government projects. As such no attempt was made to gather greater data on any particular issue based on the opinion of the authors on its importance. While every effort was made to be comprehensive this approach may have resulted in some information being reported in a low level of detail.

Applicability of summary of results – The summaries in general attempted to find the major points of consensus and note specific exceptions. In almost all cases for any consensus opinion gathered from councils there was almost always the opposite view identified by at least one council. Therefore majority acceptance or adoption cannot be considered to mean universal agreement by all councils.

Information provided through interview – Regional Council staff were asked for their professional opinions in relation to the questions posed for both water quality and water quantity sections. Different sections within the council may hold different opinions in relation to the questions posed.

Date of plan review / interviews – This project was undertaken and reported in 2010. The 2012 dated final version of the report contains minor amendments based on review comments only. No amendments were made to planning documents that may have changed since the original report was prepared.

1.6. Definition of Terms

Limits - This project relates to limits setting. In this project the use of the word limits is intended to be an overriding phrase to cover any form of standard, guideline or other approach that councils use to set a water quality or water quantity limit.

Standard and Guideline – Within this report we have used the words standard and guideline in relation to specific council provisions and approaches in the manner in which the words are used in council plans. The use of the word guideline indicates a limit that aids decision making but does not have to be met. The word standard is used in many plans. The meaning of its use varies, at times it indicates a limit that must be met but this is not always the case. As noted we have used the wording that the council document use.

Objective and Policy – Where these phrases are used they relate to objectives and policies set in either Regional Policy Statements or council Plans.

Numerical and Narrative limits – within the context of this report, numerical limits are considered to be any limits set in a plan that contain definite numeric limits or make reference to guidelines or standards outside the plan that contain definite numeric limits. Narrative limits are considered to be descriptions that set a limit on water quality or water quality change but without putting a number to this limit.

1.7. Acknowledgements

SKM would like to acknowledge the time and effort put in by the Regional Council and Unitary Authority staff around New Zealand in their attendance of interviews, reviewing of documents and provision of data for this report. This report draws upon expertise from many functions within those councils and could not have been completed without them. We would like to acknowledge the input from the following people:

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Yvette Kinselle – Gisborne District Council
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Graham Sevicke-Jones – Hawkes Bay Regional Council
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Tony Phipps – Northland Regional Council
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Raymond Ford – Environment Canterbury
Helen Caley – Environment Canterbury
Peter Savage – Environment Canterbury
Simon Moran – West Coast Regional Council
Rachael Millar – Environment Southalnd
Mary-Ann Baker – Tasman Regional Council
Helen Marr – Horizons Regional Council
Jon Roygard – Horizons Regional Council
Justine Young – Waikato Regional Council
Bruce McCauliffe – Waikato Regional Council
Bill Vant – Waikato Regional Council

2. National Level Summary

This project gathered a large amount of information through both the plan review and interview phases of research. All the gathered data is provided in Appendix B and Appendix C. A summary has been developed for each region in Section 3 and from this an indication of practise at a national level that relate to setting and meeting RMA based limits has been made. This section provides that national level summary. Section 2.2 and 2.3 provides details on questions that MfE specifically wished the project to address for both water quality (Section 2.1) and water quantity (Section 2.2). Both these sections contain a short general summary to initially set the scene around limits setting.

2.1. Water Quality

2.1.1. General Summary

The national picture regarding setting and meeting water quality limits reveals a number of main approaches to water quality regulation. There are general similarities in the approach to the setting of objectives and policies. Community stakeholders are involved in the determining of values of waterbodies and objectives for these values. This is usually undertaken before the statutory plan notification process. Councils developed classification systems for their waterbodies according to their values, and these were mostly undertaken using RMA Schedule 3 classes as the starting point. Thirteen councils set region wide limits in their plans for surface water and five for groundwater. Giving effect to these limits varied, seven councils required compliance with the limits in the rules, while the remaining only used them as guidelines for assessment matters during consenting.

Where no region wide limits existed the remaining councils managed water quality through their consenting processes. The four councils without region wide limits had activity specific limits within their discharge rules to assist this process.

Guidelines around the setting of numeric limits were one of the most frequently requested areas for central government assistance. Councils found the identification of values and objectives more straightforward but then found it more difficult to develop appropriate limits for those values once in place. This included both ecological and ‘intangible’ values such as social and Iwi values.

2.1.2. Specific Questions

The following questions were specifically identified by the MfE to be addressed in the national summary. These are discussed in turn below.

1) What councils have limits in place which have ‘regulatory teeth’ (including proportion in force and proposed)

2) What councils have objectives/limits in place with no regulatory teeth (including proportion in force and proposed)
3) What processes have been used to derive values, objectives and limits
4) What regulatory and non-regulatory methods are used to ensure limits are met (including proportion in force and proposed)
5) How is achievement of objectives and limits being monitored
6) What the perceived barriers are to setting and meeting limits

Table 3 in Appendix A provides a quick reference summary of specific results for each council. It is intended to give an easy reference overview of how each of the councils manage their water quality planning issues and the national variability of water management. This table is useful when considering the following points.

1. Councils with regulatory limits with "regulatory teeth" set in plans

(This section draws on water quality questions 1-7, 8, 9 and 17)

Thirteen councils set region wide surface water quality limits in their plans. Of these ten are in operative provisions and three are proposed. The proposed provisions are in Canterbury, Horizons and Tasman. The councils with no region wide water quality limits are Auckland, Chatham Islands, Gisborne and Otago. For groundwater five councils set region wide limits of which three are operative (Hawkes Bay, Marlborough, and Southland) and two proposed (Canterbury and Tasman).

All councils had activity specific discharge rules. For discharges to surface water all councils had rules which had some reference to activity specific water quality limits set as a condition of the rules. These varied in level of detail from Auckland Regional Council where the majority of rules contained detailed numeric and narrative limits to the Chatham Islands where the rules contain narrative descriptions only. Auckland, Canterbury, Horizons and Tasman rules are proposed, the remaining are operative. Five councils had conditions setting groundwater quality limits in activity specific discharge rules. These were Auckland, Canterbury, Hawkes Bay, Horizons and Tasman. All but Hawkes Bay's groundwater rules are proposed.

Discussion of whether these limits have "regulatory teeth" is covered in the regulatory methods used to ensure limits are met in question 4 below.

For groundwater a very different picture emerges with only five councils setting limits for groundwater quality across the region. These are Canterbury, Hawkes bay, Marlborough, Southland and Tasman. Of these two of the five are proposed provisions. The most common approach for regulation of groundwater quality was for the plan to contain one or both of the objectives that in general can be summarised as 'maintaining the quality of groundwater' and

'managing groundwater to meet NZ drinking water standards'. This second objectives has been considered within this report as setting limits for groundwater. Environment Southland's Regional Water Plan is an example of managing groundwater quality through this approach. Only five of the seventeen councils have specific conditions within specific activity rules that set any additional or stand alone groundwater quality limits that control allowable effects on groundwater quality resulting from discharges to land. These are Auckland, Canterbury, Hawkes bay, Horizons and Tasman. Four of these five provisions are proposed. It was noted by one council that there is some concern over the applicability of the drinking water standards where groundwater systems recharge surface waters. This is because the limits set in drinking water standards may be unsuitable to protect ecology. Nitrate nitrogen is an example of this.

2. Objectives/limits set in place with no regulatory teeth

(This section draws on questions 1-7, 8, 9 and 17)

All Councils set objectives in their plans that cover surface water quality. With the exception of Auckland, Canterbury, Horizons and Tasman these are operative. Four of the seventeen councils do not set water quality objectives specific to groundwater quality. These four are Chatham Islands, Nelson, Taranaki and Waikato. The plan objectives all have regulatory methods to implement them. The variety of these methods and degree to which they have "regulatory teeth" is discussed in question 4 below.

For groundwater quality thirteen of the seventeen councils set objectives. Those that do not are the Chatham Islands, Nelson, Taranaki and Waikato. The provisions of those councils that do set objectives are all operative except for Auckland, Canterbury, Horizons and Tasman.

The proportion of councils that set region wide or activity specific limits are discussed in question 1 above. Consideration of whether the plan regulatory methods have teeth is provided in question 4 below.

3. Processes used to derive values, objectives and limits

(This section draws on water quality questions 1-7, 16, 17, 18 and 20)

For all councils the exact process by which they derived values, set objectives and identified relevant limits for their waterbodies is not set out in detail in the plan. Process details are instead in background documents prepared prior to the plan and an understanding of the processes was developed mainly from interviews with councils. There are two elements of the process that are of relevance, these are the planning process and technical methods.

Values and Objective Development

Considering the planning process, when developing some of the older plans that exist in NZ councils identified that they had little community input to values identification. An example is Tasman District Council who in the past produced a policy options document and then sought comment from the community. Tasman has changed their approach for the latest plans. They still find it effective to identify issues and values at a high level rather than getting community to do so from scratch. They then target specific users to identify details of their values. This has apparently worked well for values such as kayaking.

A similar approach has also been taken by Horizons in their proposed One Plan. They develop technical reports and consult with the community to identify the main issues. Then council identify the relevant values at a high level. From these they decided who to consult with, target stakeholders and special interest groups to identify what is of value to them. An example is approaching Fish and Game and other fishing groups for fisheries values. They did note that when using this method the ability of individual groups to provide input and level of detail gathered from them varies.

Environment Canterbury and Environment Southland were two other councils who identified that they were taking a similar approach in their more recent plans. In essence the comment made by Councils was that this could be considered science led policy development. Council undertake scientific studies to characterise water resources, understand issues and problems and then report this to community. The community engagement is through focus groups and stakeholder groups to identify values for those waterbodies and then objectives for their management. These Councils aim to develop community derived values and objectives rather than being values/objectives being developed by council.

When considering who is involved as stakeholders in these processes the following are examples of groups identified by councils:

- Auckland – Territorial Authorities, Federated Farmers, Horticulture NZ, Transit, rate payer groups, rural groups, industry groups.
- Canterbury – Iwi, manufacturers, community, industry, rural water users.
- Nelson – Iwi, Territorial Authorities, Federated Farmers, Ministry of Agriculture and Forestry, Department of Conservation, Fish and Game.
- Northland –Forest and Bird, Fish and Game, local environmental groups.
- Southland – Community workshops, conservation groups, Department of Conservation, Fish and Game, Iwi.

- Tasman – land users, farmers, Federated Farmers, individuals from community, industry users, community water suppliers, environmental groups, NGO's, Fish and Game, Iwi.
- Waikato – For Taupo variation, Iwi, Federated Farmers, Department of Conservation, landholders, community groups, central government, general public.
- Wellington - Environmental Groups, Federated Farmers, Fish and Game, Territorial Authorities.

Classifying waterbodies and setting limits

It was observed by councils that the values identification and objectives development were less contentious stages of plan development than limit setting. Horizons and Environment Southland were two examples of this opinion. Twelve councils identified that further guidance on the appropriate limits to set and the science around numerical limits setting were either aspects that central government could assist them with or were barriers to limits setting. Those that did not raise this concern were Northland, Otago, Tasman, Waikato and the Chatham Islands. Of these Waikato's opinion was notably different in that they considered all the relevant science existed to set limits and what was lacking was the political will.

When setting limits councils classified their waterbodies and then assigned some form of water quality limit to each class. The RMA Schedule 3 classes (or a derivative of these) was used by most councils including; Bay of Plenty, Marlborough, Nelson, Northland, Taranaki, Waikato and Wellington. Three councils identified that they used the River Environment Classification (REC) as the basis of classifying their rivers; these were Canterbury, Southland and the West Coast. Hawkes Bay did not use Schedule 3 but had still undertaken a classification process. Horizons developed water management zones and subzones which were used for all policies in their combined One Plan. Tasman also developed a zone management classification system that integrates surface and groundwaters.

Auckland, Chatham Islands, Gisborne and Otago did not classify their waterbodies. Auckland did not have a classification system, they consulted on using Schedule 3 but from the community consultation decided not to classify waterbodies. Otago identified that Schedule 3 was irrelevant to their approach.

The direction councils have taken to classifying their rivers and limits setting did consider the alternative approaches. For instance Auckland Regional Council did consider setting region wide limits but in consultation with the community decided not to at the time the plan was developed. For their current proposed plan Environment Canterbury opted to take their chosen approach, a REC based classification with numeric limits, following consideration of options. They created options papers for other approaches and discussed these with the community. These option papers focused on the wider objectives and gave options of the best way to manage to meet these. Options

considered and rejected included: Using RMA Schedule 3 classes and associated water quality standards and the idea of having no classes and managing quality through the consent process.

Councils were asked whether an Integrated Catchment Management (ICM) approach had been taken to developing values, objectives and limits for their regions. SKM have not attempted to define ICM exactly in the context of this project but have taken the councils view of whether they consider that their methods used this catchment focused approach or not. Bay of Plenty, Horizons, Southland and Taranaki all identified that their plan development used this approach. Horizons considered that their development of water management zones and subzones was an ICM approach. Other Councils used an ICM approach in specific catchments, usually in response to specific issues. Examples include: Environment Waikato for Lake Taupo, the West Coast Regional Council using a type of ICM approach to manage point and non-point source discharge issues around Lake Brunner and Tasman District Council undertaking a long term ICM study on the Motueka River.

Two councils identified that they also intend to use the ICM approach, these were; Nelson City Council in the Waimea Estuary Project and Wellington Regional Council has identified in its proposed RPS. Auckland Regional Council requires Territorial Authorities to create non-statutory Integrated Catchment Management Plans to manage stormwater and other issues in its region.

Northland Regional Council had identified in its regional Plan that an ICM approach would be taken to classify all its watercourses, identify their values and then set catchment specific limits. This has never been undertaken and the opinion of the Council was that it may not be necessary in all catchments and would be very costly to undertake. This opinion combined with fact that an ICM approach is often taken in response to catchment specific issues indicate that it may only be appropriate as a method in catchments with issues of national or regional importance.

As noted above limits setting was considered to be the most contentious element of plan development. Table 1, in question 4 below, outlines the general approach to setting region wide limits for each council. Four main approaches to setting region wide limits were identified, these are:

- Provide numeric and descriptive limits (Bay of Plenty, Hawkes Bay, Marlborough, Southland, Tasman and Waikato)
- Provide numeric limits only (Canterbury, Nelson and Horizons)
- Provide descriptive limits only (West Coast)
- Provide reference to guideline documents outside the plan only (Northland, Taranaki and Wellington)

Auckland, the Chatham Islands, Gisborne and Otago do not set region wide limits.

For those councils that developed numeric limits the following approaches were identified as being taken:

The Bay of Plenty, Hawkes Bay and Tasman Councils identified that they used existing guidelines to identify limits of relevance to their waterbodies/values. The main one used was the 2000 ANZECC Guidelines (or earlier versions) which are predominantly for ecological values and Ministry for the Environment water quality guidelines. Canterbury, Nelson, Horizons and Southland Councils undertook (or commissioned) scientific assessments to develop limits specific to their waterbodies and values. Nelson City Council had input from Cawthorn institute and Environment Canterbury had input from NIWA. Environment Waikato advised that they were unsure exactly how limits were derived but that little technical work was likely to have been undertaken. Marlborough District Council again was unsure of methods due to staff changes.

As noted above further guidance on the setting of limits was noted by twelve councils as either a point central government could assist on or a barrier to setting limits. This included providing guidance on limits setting especially on applying existing ecological guidelines with respect to setting limits for ecological values and how to develop limits for the more intangible values such as cultural, recreational and aesthetic. More comment on this issue is provided in question 6 below.

It was noted by councils that there focus now is on non-point source pollution sources and control of effects arising from landuse. Eleven councils identified barriers around setting limits that involved non-point source pollution control. The following examples exist of approaches that have been used to control this issue at councils to date:

- Bay of Plenty Regional Council – Specific Rotorua Lake catchments have been identified as degraded. Water quality limits are set for the lakes and then land uses are controlled within the catchments to limit inputs of nutrients.
- Horizons Regional Council – The proposed One Plan identifies specific catchments in which water quality degradation as a result of farming landuses is a concern. Within these catchments consents are required for farming activities. These require a farm plan to be developed with nutrient budgeting. Limits to nutrient inputs from land use are set. Farmers are required to provide evidence of how their farming practises will meet the limits.
- Environment Waikato – The Lake Taupo catchment has a large scale regulatory approach to address declining lake water quality. This involved a variation to the plan that has been over ten years in the making. The council developed a strategy for the Lake in agreement with key stakeholders. This identified a large range of community values for the lake and then developed a smaller agreed set of key values. From these council developed some objectives for the lake and the community agreed a way forwards. This was to maintain water quality in the lake at the present quality (i.e. quality as at a set date). Once the objective and limit was

determined Environment Waikato undertook scientific studies to identify methods to implement this. The end result was a cap on nitrogen inputs and controls on landuses so that they can be undertaken within this cap. This will include the idea of nutrient transfer and trading within the catchment. Environment Waikato noted that while the science of the lakes issue has been known since the 1990's the main issue they had to address was agreeing the objectives and methods with the community

In addition there were two councils who were part way through developing new provisions to address this issue. The Hawkes Bay Regional Council noted that when the existing plan was developed a non-regulatory approach to land use control and non-point source pollution was adopted. However Hawkes Bay has advised that this is likely to change in future plans and statutory methods would be considered as additional methods to assist in addressing the impact of land use on water quality. The plan variation being considered for the Taharua River is likely to use this approach. The provisions in this variation are looking to address non-point source discharges and land use effects on water quality by establish loading limits for the catchment. Regulatory and non-regulatory methods would then be used to meet these limits. Otago Regional Council is currently in the process of considering how to manage this issue through their diffuse discharge plan project. This is looking to take set receiving environment limits as "end of pipe limits" for landuse activities. The intent is then that landowners can choose their land use practises so as to meet the limits. This is instead of specifying activity controls of how a landowner should undertake their activities. The approach aims to get more ownership of the problem by the landowners.

Iwi engagement in the values, objectives and limits setting process

Overall it was acknowledged by councils that Iwi involvement in plan development could be improved. This comment mainly related to improving the quality of Iwi involvement process and understanding about how best to address and reflect Iwi values in regional plans. However all Councils had engaged with Iwi in the process around values, objectives and limits setting. This was almost always as more than just a submitter on a notified plan. Specific examples of Iwi liaison activities that were undertaken are as follows:

- Auckland Regional Council – Prior to the plan development had hui with Iwi. As there were many Iwi groups it was agreed to have specific Iwi representatives. Iwi asked for representative on the council decision making committee. This was not supported by Council at the time.
- Environment Bay of Plenty – Hui's were undertaken prior to the plan development to identify relevant issues. These shaped the direction of the plan. There are 35 Iwi in the region so the role of Maori has always been a focus of council. A method used in plan development was consultation through a Maori regional representation committee.

- Environment Canterbury – The view of council is that Iwi are organised in the region and the Iwi values thread through the plan. A consultant developed a report on Iwi values and hui were held around these.
- Hawkes Bay Regional Council – Identified that Iwi had little input to values etc other than as a stakeholder.
- Horizons Regional Council – Council undertook consultation with Iwi but were constrained due to little resources in Iwi to identify values regionally (e.g. GIS etc). Consultation was therefore at grass roots level and gave a basic level of response that council translated into the plan.
- Nelson City Council – Council developed a paper on Iwi values and iwi were included in process as a stakeholder. The Iwi values identified did not change much of the provisions in the plan.
- Northland Regional Council – Council established an Iwi reference group while the current RPS and plan were developed.
- Otago Regional Council – In Otago the Iwi were commissioned to write the Iwi section of the plan. This then flowed into other bits of plan.
- Environment Southland - Iwi had a role on the expert panel group deciding on values/objectives and also on the council group that made plan decisions.
- Tasman District Council – Council noted that in their older plans Iwi were just dealt with as part of the community. However for newer provisions their view of specific values and uses of waterways has been sought. In addition council funded Iwi to produce a report on their values and uses. There was some contention as to how this report was used as it was background to the plan rather than directly incorporated into the plan.
- Taranaki Regional Council – Council established an Iwi liaison committee for the freshwater plan development. This included representatives from all eight iwis. Specific points were then followed up with individual Iwis. This approach was identified as having quite a big impact on the resulting objectives and policies.
- Environment Waikato – With the Taupo variation the Maori trust board worked with the council to produce a strategy. However the trust chose to not represent iwi landholders so there were other additional Iwi views that had to be sought.
- Greater Wellington Regional Council – Council identified that in previous plan development Iwi would have been treated as other stakeholders. For the proposed RPs development there was an Iwi liaison committee established. This helped develop policy in the RPS. A new committee containing seven council and seven Iwi members has been established to oversee the current freshwater plan review.
- West Coast Regional Council - Council asked the two Iwi to review the Iwi chapter of the plan.

4. Regulatory and non-regulatory methods used to ensure limits are met

(This section draws on water quality questions 21, 22, 24, 37, 38, 39, 44 and 45)

Regulatory Methods

Table 1 outlines the regulatory approaches to ensuring that limits are met that are used by the councils. These are:

1. Creating rules that require compliance with the region wide numeric and descriptive limits set in the plan. This can be either for permitted or other activity statuses. In permitted rules non-compliance requires application for consent. In other rules non-compliance can trigger a change in consent status e.g. from discretionary to non-complying. This applies to Horizons, Marlborough (in part), Nelson, Southland, Tasman (in part) and Waikato. Four of these are existing provisions and two proposed.

2. Having numeric and/or descriptive region wide limits or reference to guideline documents in the plans that are not referenced in rules. Instead these guidelines are considered as consent assessment matters This applies to the Bay of Plenty, Hawkes Bay, Marlborough (in part) Northland, Taranaki, Tasman (in part), Wellington and West Coast. These are all operative provisions.

3. Having no region wide limits but instead placing activity specific water quality limits in rules. Non-compliance either requires consent to be applied for or a change in consent status. This applies to Auckland, Chatham and Gisborne. One of these is proposed; the other two are operative.

Otago's management approach while closest to the third group is different in that very few rules contain limit and instead once consent is required council considers how an activity complies with their set policy approach of "maintaining and enhancing" existing water quality. This policy is based on the approach of maintaining the generally good regional water quality. The idea is that where water quality is good it should be maintained and where it is degraded it should be improved.

Table 1 Approach to limit setting and regulatory methods for surface water quality

Council	Region wide limits[1]	Compliance required in rules?[2]	Considered as assessment matter?	Activity Rule water quality limits
Auckland	None	-	-	Yes
Bay of Plenty	Region wide numeric and descriptive limits as standards. Descriptive limits reference guidelines to aid their interpretation	No	Yes	Yes
Canterbury	Region wide numeric limits as standards	Yes	Yes	Yes
Chatham Islands	None	-	-	Yes
Gisborne	None	-	-	Yes
Hawkes Bay	Region wide numeric limits as environmental guidelines	No	Yes	Yes
Horizons	Region wide numeric limits as standards	Yes	Yes	Yes
Marlborough	Numeric and descriptive limits as standards	In part[3]	Yes	Yes
Nelson	Numeric limits as graded water quality classes	Yes[4]	Yes	Yes
Northland	Reference to guideline documents outside the plan	No	Yes	Yes
Otago	None	-	-	Yes[5]
Southland	Numeric and descriptive limits as standards	Yes	Yes	Yes
Taranaki	Reference to guideline documents outside the plan	No	Yes	Yes
Tasman	Numeric and descriptive limits	In Part[6]	Yes	Yes
Waikato	Numeric and descriptive limits as standards	Yes	Yes	Yes
Wellington	Reference to guideline documents outside the plan	No	Yes	Yes
West Coast	Descriptive limits	No	Yes	Yes

Note: [1]Use of words standards or guidelines is as used by councils

[2]Indicates that some but not necessarily all rules require compliance with water quality limits in either the permitted and/or other discharge rules.

[3]Marlborough contains two Regional Plans based on geographic areas. Permitted rules in one plan require compliance only.

[4]Nelson's rules relate to the class of water into which the discharge passes.

[5]Otago has only three rules with minor reference to water quality effects. Their management approach of water quality instead takes a policy approach of maintaining existing quality

[6]Tasman has limits specific to its water management zones, rules only require compliance with limits in certain zones

Questions 1 and 2 were considering which councils set limits (and objectives) that did or did not have "regulatory teeth". A definition of "regulatory teeth" was initially developed as *where water quality limits are set in a plan and compliance with those limits is required as a condition of permitted and/or non-permitted rules*. However when analysing the information gathered it became obvious that the definition was difficult to use. The other regulatory methods can still prove effective at managing water quality within the regimes where they are applied. Therefore as all the methods above have regulatory status and work within their council framework they are all considered to have merit. As such no further attempt to define regulatory teeth in terms of meeting limits has been made.

Considering the same point for objectives, all plans set water quality objectives and then have some regulatory method by which the objective is to be met. It was considered initially that a similar consideration of "regulatory teeth" could be made as for the limits. As all objectives lead to a method that has a regulatory status and a degree of effectiveness in its region, this is no longer considered to add value.

It may be that to understand the regulatory effectiveness of the variety of objectives and limits set it is necessary to compare how well they manage water quality. That is undertake a comparative study between councils of the water quality outcomes each planning framework has given rise to. This regulatory effectiveness could identify how well each approach resolves the issues and therefore would indicate which of the regulations have "teeth".

For groundwater quality where limits are set (five councils only) three have require that these be met within the rules (Hawkes Bay, Marlborough and Tasman). For the other two councils (Canterbury and Southland) the requirements in their objectives then become matters for assessment of proposed activities during consenting. Tasman and Canterbury's provisions are proposed whilst the others are operative.

Non-regulatory methods

Non-regulatory methods to ensure limits are met are much harder to summarise. The non-regulatory methods are set out in the RPS and plans as means to implement policies and therefore objectives. Five councils specifically noted that they put significant effort into non-regulatory methods as one of the main ways to ensuring limits are met. These include Gisborne, Marlborough, Hawkes Bay, Nelson and Northland. Gisborne District Council noted that non-regulatory methods are a focus for them. They consider that they can achieve more by getting people in a room to agree a way forward than by many regulatory methods. Marlborough District Council advised that they use regulatory methods infrequently and their non-regulatory methods are the main focus to meeting limits. Comments from councils included that non-regulatory methods aimed to get community and stakeholder buy in to issues and into choosing the

appropriate solutions. This was seen as often being a better way to resolve issues than telling people what to do without linking their actions to the environmental issue and outcome sought.

Environment Waikato was noticeable in their opinion as they considered that the non-regulatory methods they had used were insufficient to actually deal with the water quality issues. They advised that it is clear that voluntary methods are not enough to address the issues. But there is no clarity at this stage either by Council Staff or Council on the best way to get the required changes. It is likely that it will need to be either an industry-led initiative or a rule of some sort.

From plan review and interviews it became obvious that the large list of non-regulatory methods in RPS's and plans, especially the older ones bore limited resemblance to the methods actually in use. An example is Environment Bay of Plenty whose operative RPS contained a large range of non-regulatory methods. Many of these were never implemented. The new RPS moves away from this approach to set direction only rather than specify methods. Methods would now be developed in the plan and LTCCP. This change is in part to better integrate the methods with the LTCCP process as it allows more flexibility to adopt non-regulatory methods as issues arise. Greater Wellington Regional Council also identified that non-regulatory methods often develop outside the plan process as the best way to deal with issues that arise and change over time.

Examples of methods that were reported as successful are provided for each council in the interview summaries and include:

- Grants and other mechanisms to encourage fencing and planting of riparian margins and exclusion of stock from watercourses (e.g. Environment Canterbury, Horizons, Nelson, Otago, Southland, Tasman)
- Sustainable land management strategies and riparian plans (e.g. Marlborough, Taranaki)
- Non-regulatory action plans, strategies and programmes which attempt to work towards solutions to specific issues with local landowners and stakeholders (e.g. Environment Bay of Plenty, Hawkes Bay, Wellington
- Hill country erosion and sediment/phosphorous input control through their Sustainable Land Use Initiative (e.g. Horizons)
- Development of guidelines (e.g. For dairy shed discharges – Northland, Wellington; for stock access to waterways – Wellington; Erosion and sediment control guidelines – Auckland, Canterbury and Wellington

Councils were asked whether they considered that there was appropriate funding for their non-regulatory methods. Eight councils, the Bay of Plenty, Chatham Islands, Gisborne, Marlborough, Southland, Tasman, Waikato and the West Coast specifically noted that the amount they could fund was limited. The remaining councils generally thought that their non-regulatory methods were

adequately funded but specific councils (Auckland, Nelson, Northland and Wellington) did note the need to balance funds to prioritised methods.

5. Monitoring of achievement of objectives and limits

(This section draws on water quality questions 23, 26 and 27)

All plans make reference to monitoring. However none of the plans provide specific detail of the monitoring and exactly what parameters will be used to identify if specific objectives are being met. The detail on monitoring programmes sits outside the plan. From interview it was identified that all councils use State of the Environment monitoring to understand whether limits that are set are being met, these are reported routinely. All the councils also identified that they would also assess whether the objective are being met from this data.

All councils recognised their requirement to undertake plan effectiveness monitoring, however the undertaking of this appears to have been limited. Environment Canterbury and Environment Southland noted in their plans that they would setup methods to do this. Auckland, Bay of Plenty, Hawkes Bay, Horizons, Environment Waikato and Wellington made reference to plan effectiveness monitoring and the outputs from it.

A gap was identified with respect to monitoring the effectiveness of specific methods, especially the non-regulatory ones. Few councils appeared to have monitoring established to specifically understand whether specific methods were effective. Effective in this context is considered to be where the method leads to a direct and measurable improvement in water quality (i.e. the method addressed the issue it was created to address). The monitoring focused on the meeting of higher level objectives/limits. There were exceptions to this including:

- Hawkes Bay who advised that the methods being used in recent non-regulatory programmes were to date effective in raising awareness of the issues but the water quality had not changed yet.
- Horizons measured specific water quality changes as part of their plan effectiveness monitoring programme. This looks at monitoring changes in water quality state as a result of specific methods. It included upstream and downstream monitoring of point source discharges and a monitoring network to measure changes in turbidity and sediment programme which provides a measure of the effectiveness of the Sustainable Land Use Initiative programme.
- Environment Waikato had undertaken monitoring of some plan effectiveness methods, but noted these had not yielded conclusive results. They advised that for the Taupo variation monitoring is linked to objectives set in the plan rather than specific methods. Therefore it is hard to say if specific methods are effective.
- Wellington had completed efficiency and effectiveness reports for their plan review but these were quite subjective as to whether non-regulatory methods effective.

An alternative way of considering whether non-regulatory methods were effective was if there was significant community acceptance and uptake of them. Gisborne, Northland, Taranaki and the West Coast all noted that community acceptance and the degree of uptake (amount of fencing etc) was an important measure of whether non-regulatory methods were effective. There was no direct link of effectiveness of methods to change in water quality.

6. Perceived barriers to setting and meeting limits

(This section draws on water quality questions 20 and 25)

All councils identified some barriers to setting limits and all but two councils identified barriers to meeting limits. While some issues were specific to certain councils, there was in general a lot of similarity in the issues identified. The common barriers identified are set out below.

The following barriers to setting limits were identified:

- A lack of political will to set limits around non-point source pollution and land use that require the management of agriculture (Gisborne and Waikato).
- The level of stakeholder/community buy in to issues (again more related to non-point source pollution).(Auckland, Bay of Plenty, Canterbury, Horizons, Marlborough, Northland, Otago, Southland, Tasman, Waikato and Wellington).
- A lack of availability of guidelines/robust science to translate ecological values to limits (Bay of Plenty, Canterbury, Gisborne, Hawkes Bay, Horizons, Marlborough, Northland, Southland, Wellington and the West Coast) Waikato had a noticeably different opinion to this in that they considered that all the science they needed existed but what they lacked was politically will to implement the science.
- A lack of availability of guidelines to translate intangible (cultural, amenity, recreation) values to limits (Hawkes Bay, Horizons and Marlborough).
- Understanding how to trade and balance social versus economic outcomes (Canterbury, Horizons and Wellington).
- Time and resources required to develop specific limits for catchments (Chatham Islands, Northland and Taranaki).
- The ability to pollute up to any limit that is set (Taranaki).

The following barriers to meeting limits were identified:

- The main barrier identified repeatedly is getting stakeholders to understand and “own” the problem; this includes agricultural landowners and agricultural industry stakeholder’s attitudes to discharges. This limited the uptake and effectiveness of methods, especially non-regulatory

ones. (Bay of Plenty, Canterbury, Horizons, Marlborough, Northland, Otago, Southland, Tasman, Waikato and the West Coast).

- There appears to be a lack of scientific evidence to link land uses to effects and to establish which methods would be effective at meeting limits. (Hawkes Bay and Wellington)

2.2. Water Quantity

2.2.1. General Summary

The national picture of setting water allocation and flow limits demonstrates that councils around New Zealand have developed a range of approaches to manage this issue. All councils have objectives and policies that address water quantity. The majority (eleven) developed allocation limits for some or all of the surface water in their region (as catchment specific or default limits or both) with nine of the councils developing them for groundwater. Councils have developed allocation limits where water demand was occurring in the region but this prioritisation was only reflected in four councils plans or RPS's.

The majority (fourteen) of the councils set some form of minimum flows in some or all of the surface water bodies in their region. A common barrier to setting limits identified by councils was the translation of community identified values and objectives into a flow regime. This related to methods to be used to develop flow limits for ecological values and intangible values such as amenity, recreation and Iwi values.

Regulatory methods were most frequently used to ensure limits were met; these were predominantly associated with rules relating to the taking of water. The majority (twelve) of the councils that have flow or allocation regimes in place for surface waters gave the allocation status and/or maintenance of the minimum flow regulatory status in the rules.

2.2.2. Specific Questions

The following questions were specifically identified by the MfE to be addressed in the national summary; these are discussed in turn below:

1) Which councils set allocation and/or flow regimes?
2) Do the flow regimes have regulatory status in the rules?
3) What approach is taken for setting priorities for allocation?
4) What range of approaches do councils use for setting flow and allocation regimes?
5) How have the community, NGOs and resource-user groups been involved in setting regimes?
6) How have Maori been involved in setting regimes and what ongoing role do Maori play in water management in the region?

7) What methods are used to achieve the limits that are set?
8) What monitoring methods are used in order to assess compliance and to assess effectiveness of plan objectives/limits?
9) How do councils monitor permitted activities?
10) How does the plan address over allocation?
11) What barriers and or issues have been identified?
12) What lessons has the council learnt from setting/monitoring/enforcing water quantity limits?

An easy reference summary of the findings of this project for specific questions is set out in Table 4 in Appendix A. It is intended to give an easy reference overview of how each of the councils manage water quantity planning issues and the national variability. This table is useful when considering the following points.

1. Council setting of allocation and/or flow regimes

(This section draws on water quantity questions 1 and 5)

Thirteen councils set allocation regimes for surface water within their plans. Of these four are proposed planning provisions and the remaining are operative. Fourteen of the councils set minimum flows for surface waters in their plans. Northland, Taranaki and the West Coast are the three councils that set minimum flows only for water bodies without having allocation limits. The councils that have no surface water allocation regimes or minimum flows are Auckland, Chatham Islands and Gisborne.

Nine councils set allocation regimes for groundwater. These are Auckland, Canterbury, Horizons, Marlborough, Otago, Southland, Tasman, Waikato and Wellington. Three of these are proposed provisions.

2. Regulatory status of the flow regimes in the rules

(This section draws on water quantity questions 1, 5 and 9-13)

Of the fourteen councils that set surface water flow regimes (allocation and/or minimum flows) twelve have regulatory status in the rules. This is considered to be when compliance with the set allocations and minimum flows is a factor in determining whether consent is required and/or the status of that consent application. The two councils that do not take this approach are the Hawkes Bay and Wellington.

For groundwater six of the nine councils that set allocation limits use the allocation status of the groundwater resource as a factor in determining consent status. Horizons, Marlborough and Wellington are the councils which do not use the flow regimes to determine status within their rules.

3. Approach taken for setting priorities for allocation

(This section draws on water quantity question 3)

Fourteen councils do not list the water bodies in which they consider the setting of an allocation regime is a priority within their RPS or plans. For surface water four councils have listed priorities within their plans or RPS, these are Canterbury, Gisborne, Horizons and Nelson. Canterbury and Horizons are the only councils to have set priorities for groundwater allocation limit setting in a plan or RPS.

From interviews it was established that most councils had developed existing provisions first in areas that they considered were a priority due to predicted, or generally existing, demand for water. In addition councils had ideas of where their current and future priorities for provisions would be. It was noted by Canterbury that having a priority list in their RPS had proven to be of little value as water demand issues changed quickly and it was soon out of date.

4. Range of approaches councils use for setting flow and allocation regimes

(This section draws on water quantity question 5)

Table 2 expands on the table in Appendix A and provides information on the approaches taken by councils to setting plans. The table identifies whether allocation regimes are set for either groundwater or surface water and also whether minimum flows are set for surface waters. For all three questions differentiation has been made between those regimes developed for specific catchments (i.e. flow or allocation is based on the values of that catchment) and default methods that apply region wide.

Table 2 demonstrates that there is currently a range of approaches as follows:

- Four council plans (Canterbury, Horizons, Tasman and Waikato) have default methods for all flow and allocation setting in addition to having named catchment specific regimes for both surface and groundwaters resources. These are all proposed plans.
- Three council plans (Hawkes Bay, Marlborough and Wellington) contain catchment specific regimes for either surface or groundwater or both but no default methods.
- Southland is the only council to have default methods alone; these are intended to be used during consenting only.
- Auckland's plan contains allocation limits for groundwaters only.
- Bay of Plenty's plan contains some catchment specific minimum flows and default surface water allocation and minimum flow methods.
- Nelson's plan contains catchment specific minimum flows and a default surface water allocation method.

- Northland's plan contains minimum flows only; these include catchment specific flows and a default method.
- Otago's plan contains catchment specific allocation and flows, aquifer specific allocations and a default minimum flow method.
- The West Coast plan contains a default minimum flow method only.
- Three Councils have no allocation or minimum flow provisions (Chatham Islands, Gisborne and Taranaki).

Table 2 Range of approaches to setting specific or default allocation and flow regimes

	Does the plan set allocation regimes for surface waters?[1]		Does the plan set flow regimes?		Does the plan set allocation regimes for ground waters?	
Council	**Catchment specific**	**Default**	**Catchment specific**	**Default**	**Catchment specific**	**Default**
Auckland	No	No	No	No	Yes	Yes
Bay of Plenty	No	Yes	Yes[2]	Yes	No	No
Canterbury	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)
Chatham Islands	No	No	No	No	No	No
Gisborne	No	No	No	No	No	No
Hawkes Bay	Yes	No	Yes	No	No	No
Horizons	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)
Marlborough	Yes	No	Yes	No	Yes	No
Nelson	No	Yes	Yes	No	No	No
Northland	No	No	Yes	Yes	No	No
Otago	Yes	No	Yes	Yes	Yes	No
Southland	No	Yes	No	Yes	No	Yes
Taranaki	No	No	No	No	No	No
Tasman	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)
Waikato	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)
Wellington	Yes	No	Yes	No	Yes	No
West Coast	No	No	No	Yes	No	No

Note: [1] All answers are either Yes, No or Yes (P) indicating provisions are proposed and not yet operative.
[2]Bay of Plenty have only developed one catchment specific minimum flow to date

The planning process councils used to engage community/stakeholder in values, objective and limits setting are essentially the same for water quantity management as water quality. The main difference noted is that catchment or aquifer specific flow and allocation regimes are frequently developed after the main plan and added as variations. Canterbury and Otago are examples of

councils who have recently taken this approach to developing catchment specific flow regimes and incorporating them into their plans.

The technical methods used to determine flow and/or allocation regimes vary considerably. The technical methods identified are noted in the individual council summaries in Section 3 and are also outlined in the 2008 Hill Young Cooper report[1].

5. Community, NGOs and resource-user groups involvement in setting regimes

(This section draws on water quantity question 6)

The planning processes used in development of plan provisions were similar for water quantity and water quality. Therefore the methods used to engage stakeholders identified in question 3 in Section 2.1.2 also apply to water quantity. The following additional points were made specifically with respect to including the community/stakeholders in water quantity issues:

- Auckland – Council sought community input from user groups including TA's, Iwi, Watercare, federated farmers and Industry sector Groups and NGO's. At the time (10 years ago) there was little technical input from stakeholders.
- Bay of Plenty – The draft plan was circulated for comment and then the methodology was shaped through appeals and consent orders.
- Canterbury - Prior to the NRRP Council released the 'Water our future' document which set out draft recommendations and consulted on these with both the general public and key stakeholder groups. In plan provisions developed since that time the community engagement and technical processes have evolved quite a lot. Now the process has evolved to be more of a catchment planning approach where technical and scientific investigations are undertaken first and then a series of technical and other stakeholder advisory groups are consulted. The council then receives a report on the whole process including the views of community and recommendations of staff.
- Hawkes Bay – Undertook an extensive stakeholder process using a series of stakeholder groups. One stakeholder group included statutory agencies (DOC, Fish and Game, Councils, Government departments). Another group covered general interest groups, Forest and Bird and primary producers. Worked with these stakeholders early in process in preparing draft plan.
- Marlborough – Have noted that in developing their future provisions focus groups will be used. One group will be a Freshwater Focus Group. This will include a diverse mix of

[1] Hill Young Cooper, 2008. Water Allocation Policy Stocktake – A stocktake of plan provisions and practises for water allocation. Prepared for Local Government New Zealand and the Resource Managers Group

resource users, winery companies, industry groups, Federated Farmers, DOC, Fish and Game, Forest and Bird and freshwater scientists. The council view was that this focus group approach gives a chance for all people with an interest to test drive provisions before they are notified when there is greatest flexibility.

- Taranaki – When approaching stakeholders council included large consent holders (District Councils for community water supplies, hydro power, oil and gas suppliers, Fonterra, meat processing) and contacted them specifically to get their inputs. The groups involved in conservation and environmental protection (DOC, Fish and Game) were approached and were very vocal in the protection of instream values.
- Waikato – Council has purposely targeted major stakeholders as part of the latest plan variation (Variation 6). In particular this has included Iwi, the electricity industry such as Might River Power and Genesis Energy, WaterCare Services in Auckland, Federated farmers, Fonterra, DoC, Fish and Game, Horticulture New Zealand, water users and individual farmers.

6. Maori role in water management in the region

(This section draws on water quantity question 6)

Question 3 in Section 2.1.2 sets out the specific planning processes used to engage Iwi for the various councils. These same planning methods were applied to water quantity issues. As was noted for the water quality section the role of Iwi is almost always as more than just a normal community stakeholder in the plan development processes. The following additional points were made regarding the Maori role in water management in the region:

- Bay of Plenty – Major water users in the region deal directly with hapu. An example is the owners of the dam on the Rangatoki River who have an MoU with Iwi.
- Canterbury – Council noted that if a technical panel is formed then Iwi would become part of this group. They would also be supported to meet with their broader community and to bring along others to meetings and forums as needed. For bigger rivers Council would engage Iwi to prepare report on their values and uses of the river.
- Hawkes Bay – The plan identified that an assessment of Maori cultural and spiritual values is part of the criteria for determining minimum flows. However in interview council noted that they did not take Iwi values into account when setting existing flow limits except for the Ngaruroro River.
- Marlborough – With the new RPS and Plan that are in development an Iwi working group are developing their own chapter and reviewing all the draft chapters of the plan. The Iwi working group is funded with Council funding time and travel. This method works very well as the

eight Iwi are sharing own values amongst themselves and developing culturally specific objectives.

- Otago – Council employed a Maori elder that acted as a major liaison and also supported the development of Iwi management plans.
- Taranaki – A Maori liaison committee was established that had input to the process. It did not develop specific numbers but was clear on the values to be protected.
- Waikato – Council noted that for their latest water quantity variation (variation 6) it was hard to get feedback from Iwi. Council tried a number of different approaches including through council Iwi Liaison Officers and also through funding a consultant to prepare a report. Part of the challenge has been that the groups have been busy with Treaty process and that they are still developing their information on regional values. As part of Variation 6 Council tried having rules relating to transfer of rohe linked to maps showing group boundaries. Iwi objected to the maps and as a consequence the maps and provisions were removed.

7. Methods used to achieve the set limits

(This section draws on water quantity questions7, 10, 12 and 13 as well as the Plan review Table created by SKM for the NES minimum flow cost benefit project)

The main approach to achieving limits is regulatory through the application of the rules. For surface water twelve of the fourteen councils with flow or allocation regimes in place give them regulatory status in the rules. That is the rules make reference to the available level of allocation in the river, or the compliance with a minimum flow. Hawkes Bay and Wellington are the two councils in which water take rules do not make reference to the flow or allocations set. Activities that are outside the set allocation or flow regimes generally lead to a change in consent status. A common example is for takes to change from permitted or controlled to discretionary as allocation increases. Six councils use non-complying status when some or all of the allocation or flow regimes set in their plans are exceeded, these are Canterbury, Horizons, Marlborough, Nelson, Southland, and Tasman.

For groundwater six of the nine councils with allocation regimes make reference to the level of allocation in the rules. These are Auckland, Canterbury, Otago, Southland, Tasman and Waikato. Horizons, Marlborough and Wellington are the three councils whose rules do not reference allocation status. Takes outside the allocation limit are non-complying in some or all cases in Canterbury, Marlborough, Southland, and Tasman.

Two other approaches that were noted as being useful at managing water resources and meeting limits were having common expiry dates for consents and short term consents. Common expiry dates allows a review of all takes at one point in time. The Bay of Plenty and Hawkes Bay take this

approach. Gisbourne and Hawkes Bay use short term consents (5-10 years). These are again a means to have more control over consented takes.

Non-regulatory methods are generically identified in plans as a process for achievement of the objectives/policies. Methods were listed that link to achievement of flow/allocation limits. From the interview phase it was identified that some of these were not used and other methods had been developed. This was a similar finding to that for water quality non-regulatory methods. The following non-regulatory methods were identified as being used:

- Development of new strategies for water availability (Bay of Plenty, Canterbury, Northland, Southland and Tasman)
- Managing demand and especially encouraging efficiency of use (Bay of Plenty, Horizons, Marlborough, Otago and Taranaki)
- Encouraging metering (Bay of Plenty, Horizons and Nelson)
- Encourage the formation of water user groups to manage allocation/restrictions (Canterbury, Marlborough, Otago, Southland, Tasman and Waikato). Of note Marlborough identified that these were ineffective in their region.
- Investigate water trading and transfer (Wellington)

Having provisions and methods to deal with over allocation was noted as an important way to meet limits. These are discussed in question 10 below.

8. Monitoring compliance with limits and to assess effectiveness of plan objectives/limits

(This section draws on water quantity question 11)

Within plans councils have almost all identified that they will undertake monitoring to understand effectiveness of the plan provisions. This description of monitoring is brief within the plan. The main method identified was the routine State of the Environment monitoring for surface and groundwater levels. This is intended to give catchment specific and region wide pictures on the status of the waterbodies. From this it can be seen if limits and objectives are being met. This approach was used by the majority of councils including Auckland, Bay of Plenty, Canterbury, Hawkes Bay, Horizons, Marlborough, Northland, Southland, Taranaki, Tasman, Waikato and Wellington.

Where minimum flows are set eleven councils have identified that they will monitor stream flow (continuously or as spot gauging) to identify when flows approach the minimum flow and inform the public. In addition they have identified methods to get this data to users. These councils are Auckland, Hawkes Bay, Horizons, Nelson, Northland, Otago, Southland, Taranaki, Tasman, Waikato and Wellington. In general this data was available through Council websites or by

Council directly contacting users, the exception to this was Wellington where the onus was on the users to contact Council to find out whether minimum flows are being approached.

The Bay of Plenty and Canterbury councils recognised a gap existed when there was no monitoring of flow in a catchment or it was not real time. Provision of data to users, in real time if possible, was also cited as being necessary to get more effective management of the resource, especially as systems approached restriction levels by Bay of Plenty, Hawkes Bay and Horizons councils.

Regarding compliance with limits set in consents, ten councils specifically identified that they either require monitoring of takes or undertake compliance monitoring themselves. This was frequently undertaken by requiring the metering of the takes. Auckland, Bay of Plenty, Hawkes Bay, Marlborough, Nelson, Northland, Southland, Taranaki, Tasman and Wellington all had provisions or provided commentary that they required some form of compliance monitoring. Not having monitoring of takes in place was cited as a big problem to understanding resource use by Environment Canterbury.

9. Monitoring of permitted activities

(This section draws on water quantity question 12)

Only one council (Chatham Islands) requires monitoring of permitted takes, and that information is to be provided to council. Four councils (Horizons, Taranaki, Tasman and Waikato) identified that they had some form of method by which permitted take numbers and magnitudes were estimated or modelled for the region. This data was generally included when planning allocation regimes.

For all other councils the location, numbers and size of permitted takes is not known or estimated.

10. Dealing with over allocation

(This section draws on water quantity questions 7 and 10)

Nine councils have a definition of over-allocation in their plan; these are Auckland, Bay of Plenty, Canterbury, Hawkes Bay, Horizons, Nelson, Southland, Tasman and Waikato. For those councils that have allocation limits set for surface water eight of the twelve have identified methods in their plans to address over allocation. None of these were however specific provisions to reduce allocation in named catchments or aquifers that had already been identified as over-allocated. They were instead general approaches to be taken to attempt to reduce over-allocation. Two examples are:

- Auckland identified in the plan, that for surface water it would encourage voluntary reductions for existing consent holders; cease further allocation and review existing consents.
- Bay of Plenty whose plan stated that the following methods are used: (a) Use water user groups to encourage the voluntary rostering or rationing of water takes, or pro rata reduction of

water takes. (b) Encouraging, or recommending the surrender or cancellation of unused resource consents pursuant to section 126 and 138 of the Act. (c) Reviewing consent conditions on large water takes pursuant to section 128 (1) (b) of the Act. Environment Bay of Plenty will review a resource consent in accordance with section 128 of the Act, where it is proven that adverse environmental effects will occur or continue due to the exercise of that consent. (d) Reviewing resource consent conditions according to actual use pursuant to section 128(1) (a) or (b) of the Act, while allowing for matters under Method 168 (b) and (c). (e) Promote efficient use of water. (f) Promote the use of alternative water sources.

Other examples of lists of methods exist in the Canterbury and Hawkes Bay plans.

Question 7 above identifies where non-complying activity status is used for takes above allocation limits.

Marlborough, Otago and Tasman had concerns with defining exactly what over allocation was due to the fact that any decisions about allocation also had to include reliability of supply. Decisions on acceptable reliability of supply affected how efficiently a resource could be allocated. Willingness or not of resource users to accept a lower reliability of supply affected how many people could access a resource. A frequent point was raised regarding theoretical over allocation that existed on paper and actual over allocation (as identified by adverse environmental effects or lack of water/low reliability of water supply). There was often a difference between amount of water allocated to any given consent and the amount actually used. ECan's plan also recognises this issue of paper over-allocation versus actual over-allocation.

As noted above proposed approaches to dealing with over allocation did include regulatory methods such as non-renewal of consents; however, no examples were cited of this having been done. Non-regulatory methods were most frequently cited. Methods identified as being practiced or being considered included:

- Creating water user forums or groups to assist in managing resources especially rostering at times of low availability Canterbury, Hawkes Bay, Otago and Southland have these established, Environment Waikato has identified they would do this in their plan and the Bay of Plenty advised at interview they were considering this approach.
- Promotion of efficiency of water use and matching consented take to actual take as noted with respect to non-regulatory limits in question 7 above.
- Investigation of provision of storage was identified as a method to address over allocation by Tasman District Council who were investigating water storage and augmentation on the Lee River. Marlborough identified that they were investigating the Southern Valleys Irrigation Scheme. Hawkes Bay identified that they would either investigate storage options or work with the community to investigate these.

- Greater Wellington Regional Council identified that they had capped the water takes from the Wairarapa groundwater system while investigating the required allocation limits.
- Marlborough District Council identified over allocation as an issue, their regions resources were often allocated but people still wanted more water. In addition to investigating storage and implementing efficiency methods they are looking to trial the Business Council for Sustainable Development model for water trading based on shares in water.
- Environment Waikato noted that they were likely to develop future provisions to enable transfer and trading of water.

11. Barriers and issues identified to setting and meeting limits

(This section draws on water quantity question 8)

The following barriers were identified to setting and meeting limits were identified by multiple councils:

- Making sure sufficient information is available to establish minimum flows/allocations is a barrier to limits setting. Seven councils identified that getting good technical information takes time and is a barrier to the process (Auckland, Canterbury, Hawkes Bay, Nelson, Southland, Waikato and Wellington)
- Environmental flow setting was identified as a difficult process. In general there is a lack of guidelines for translating values into flow regimes, especially for 'intangible values' such as Iwi, recreation, amenity. Existing guidance does not assist in actually setting a number for these values (Bay of Plenty, Hawkes Bay, Marlborough and Tasman).
- Getting defendable scientific information and agreement from all scientists is a constraint on the limits setting process. A significant amount of time and effort is spent debating and agreeing methods and their outputs. The statutory processes take a long time and can be challenged through the Environment Court. A lack of scientific certainty in data used to establish limits is a problem in the Environment Court. This is both a problem for limit setting in plans and additionally a barrier to meeting limits with respect to Environment Court deliberations over specific water take applications. (Canterbury, Tasman and Waikato).
- The cost and resources needed to set ecological or environmental flows were cited as barriers (Chatham Islands, Marlborough, Southland, Taranaki and Waikato).
- Lack of political will and the impact of political concerns over setting barriers – limits need to be seen as a priority issues to get the political support (Auckland and Northland)

The following points were raised by individual councils:

- A concern was raised by Gisborne District Council about applying existing default methods and guidelines to local rivers with differing values.
- Otago Regional Council identified that barriers to setting limits occurred in early plan developments of flow limits when the community were told the answer rather than being given a role in deriving the limits. They have changed the approach and now get the community to identify and drive the values they want Council to protect. The approach is to all agree both what the problems is and the solution. Environment Southland identified a similar pint in their lessons learnt discussed in question 12.

As a contrast to other councils Horizons did not identify any barriers to setting their limits. They have just completed the process and considered that the information they needed was available.

12. Council lessons learnt from setting/monitoring/enforcing water quantity limits

(This section draws on water quantity question 8)

The following is a summary of the main lessons learnt noted by councils:

- Environment Bay of Plenty identified a key lesson they learnt was regarding their approach to setting minimum flows. It was considered that a two step minimum flow process may have been better, this would involve setting the ecological flow component first so that it can be put into use immediately and then creating an environmental flow component (the more difficult element) if required.
- Environment Canterbury noted that when previously setting limits they have sometimes sought community input too early before understanding the water resources themselves. This has lead to lots of debate about the resource and delays while information is gathered. This was not the most efficient use of the council or community time. In its more recent catchment approaches and in the future they will do much more science on characterising the resource before engaging the community on its values and the appropriate limits for those values.
- Environment Canterbury has undertaken an adaptive management approach to limits setting to allow for seasonal variation. They advised that this has proved controversial as users want security of supply.
- Hawkes Bay Regional Council advised that a barrier to meeting limits and also a lesson learnt was the need to link growth strategies in the region and specific catchments to issues around water management. This integration was necessary to deal both with demand of water from that growth but also the resulting water quality impacts of that growth and the take and use of water.
- Horizons will in future is that spend more time with irrigators targeting efficiency of use and will also look to provisions (regulatory or non-regulatory) to enable water trading.

- Marlborough's view was that, despite the need for more limits in their region, future issues are not around setting limits for allocation. Instead the issues to be addressed are around existing full allocation and redistribution of water.
- The implementation of Nelson City Councils RPS was delayed as the freshwater plan provisions that gave effect to this took a number of years to be developed. To avoid this in future the next plans will integrate the RPS and Plan in one document to avoid the extra layer of regulation.
- When setting future limits and implementing methods to ensure that limits are met, Otago are looking at better balancing of the LTCCP and RMA process. This will be done in their RPS. They intend to describe the local authority role as well as RMA and address more issues through non-RMA processes.
- Northland Regional Council learnt that there is a need for more limits in their region. These may be through implementing a default limit which may be the proposed NES.
- For Environment Southland the change in resource pressure over the last ten years is an important factor. The increase in demand for water, and time taken to get planning provisions operative, means that ES has traditionally been reactive rather than proactive to issues. To counteract this ES are seeking to be more proactive in the future. This will involve investigations into specific catchments and initiating plan changes from the outputs of those investigations ahead of significant issues arising.
- Environment Southland has changed their approach to community inputs and are now seeking much greater community consultation and engagement in limits setting. This is considered to get more community buy in later in the process. This is a similar point to the barrier to setting limits that Otago identified.
- Hawkes Bay Regional Council identified that some of their catchments are at the limit of what they can sustainably provide, however the demand for water still exists. There is a lack of storage in many catchments to meet this demand.
- With respect to meeting limits Horizons noted that water users are starting to have to work together and Horizons see that they have a role in facilitating that. This includes establishing users groups that enables improved management of the resource.

3. Regional Summaries

The following regional summaries contain a snapshot of the main approaches to setting and meeting limits for both water quality and water quantity. These are presented for each region along with a summary of current and future governance issues. In addition, the main issues and barriers identified to setting and meeting limits and potential assistance from central government have been summarised. Each summary starts with a general preamble documenting the status of council plans and the overall council approach to limit setting. Each summary comprises 2-3 pages. These summaries are intended to provide overall understanding of the key approaches and differences between each council. Appendix A aids this understanding of the regional differences as it presents a brief overview and comparison of individual regional council practises in table format. The data in Appendix A was developed to support specific questions required for the national summary and does not therefore cover all aspects of the interview. The full information gathered by plan review and interview for each council are included in Appendix B (water quality) and Appendix C (water quantity).

3.1. Auckland

Auckland Regional Council (ARC) has an operative RPS (1999) and its main plan that relates to water quality is the proposed Air Land and Water Plan (notified 2001). Two interviews were held with ARC staff separately addressing the Water Quality and Water Quantity questions. Five staff were interviewed within from within the Land and Water Policy section holding a variety of senior positions including Policy Advisors and Analysts. A consent team leader was also asked for comments on specific questions through phone interview and email.

ARC has not classified water bodies or set any region wide limits. Instead through consultation with the community the Council adopted an approach of managing the effects of activities through the setting of performance standards in rules. These require specific receiving environment limits to be met for activities to be permitted. The limits include a requirement for compliance with numeric guidelines such as the ANZECC water quality guidelines for toxicants. ARC have adopted a different approach to most other councils in New Zealand through controlling activities primarily through rules and the consent process rather than identifying region wide water body classes. ARC provides well developed guidance to applicants on methods that can be used (e.g. design and use of stormwater treatment technologies) to achieve compliance with the rules. While other councils do include limits within rules these are generally in addition to region wide water body classes/limits. ARC is perhaps the best example of managing water quality through this approach.

For water quantity ARC again primarily manages water take through the consenting process. A specific method to allocate water was not developed in either the plan or RPS rather the plan gives

direction to Council Officers and applicants regarding establishing minimum flows on a consent by consent basis. To support this decision-making the ARC undertook a non-statutory Water Resource Assessment Report process to identify water availability in surface water catchments. The outputs of this inform consent applications and determination. For groundwater, methods for determining allocation limits were identified and limits have been developed for some groundwater resources in the region.

3.1.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 15 and 18):

- Council's existing provisions were developed over 10 years ago and ARC consider that they are now getting dated. In developing them ARC consulted with community and decided that it lacked information to set region wide water quality class based limits and that an activity control approach was best. ARC's water bodies are frequently steep, small and urban in nature. The view of Council at the time was that these factors supported that activity control approach. Consultation for the existing plan development included TA's, Iwi, industry and the community over a period of approximately 6 months of intensive consultation.
- The ARC developed a number of guidelines and accepted practises in support of this activity control method. These were intended to guide the community regarding how to undertake activities to minimise effects.
- The latest ARC RPS indicates a change of direction with the Council likely to move to targets and standards for receiving environments and land use controls for activities. However the transition to a single Auckland Council may delay any future changes in management direction.
- ARC are undertaking a review of their RPS and freshwater plan elements. As part of this they have commissioned a study of seven other councils approaches to limits setting. This identifies issues that have arisen and best practises to address these. At interview it was identified that ARC have not yet decided what their future approach will be based on this data but have indicated that region wide limits are being considered.

Limits that are in place (draws on water quality questions 1, 17, 37 and 38):

- The only limits that relate to water quality are in the rules that establish performance standards specific to certain activities. These are generally numeric and use existing guidelines as a form of "standard" to determine if consent is required. Examples of this include:
  - The permitted activity rule covering discharges from underground petrol storage tanks. This requires that discharges must not contain ANZECC water quality guideline toxicants at > the 80% protection levels.

- The permitted activity rule for the discharge of contamination to surface or ground water from solid waste landfills. This requires that discharges do not exceed the ANZECC 90% protection levels.

<u>How water managers ensure limits are met (draws on water quality questions 9, 10, 21- 24, 30, 44 and 45);</u>

- ARC provides significant guidance to the community regarding ways to manage discharge activities. These include design standards and recommended approved treatment devices that can meet permitted activity rules.
- Once consent is required the ARC consider water quality as an assessment matter. This includes assessment of the impact on existing water quality, the values of the stream and cumulative effects in the catchment.
- To manage overall land use effects on water quality the ARC has developed a number of Integrated Catchment Management Plans with TA's (or required TA's to develop these) to address stormwater and other discharge impacts and formulate management plans for catchments. These are either required as a condition of consent or developed through direction to TA's as a non-regulatory method.
- Non-regulatory methods to assist in meeting the management outcomes for water quality are outlined in the plan. These include advocating best practise for discharges, producing guidelines for farm dairy discharges and undertaking significant research and publishing guidance on sediment control. According to the ARC the most effective of the non-regulatory methods used to date include the Environmental initiatives fund, EnviroSchools programme, research/investigations into issues in the region (e.g. stormwater discharges and sedimentation) and advocacy on the implementation of the methods they have found suitable to address those issues.
- ARC has a long term strategic vision – the Auckland Sustainability Framework, this guides Council decisions towards achieving the management outcome they require for water quality.

<u>Barriers to setting and meeting limits (draws on water quality questions 20, 25):</u>

- ARC identified that their biggest barrier is the views of the community in relation to regulating rural landuses and non-point source pollution. They identified that setting water quality limits (especially nutrient caps as have been done for Lake Taupo) will dictate development in a catchment. At interview their opinion was that the political will necessary to achieve these controls is difficult to achieve unless this issue is seen as the highest priority.
- No barriers to meeting limits were identified as there are no region wide limits set in the plan.

3.1.2. Water Quantity

Derivation of limits (draws on water quantity questions 1 and 6):

- ARC liaised with water user groups, TA's, Iwi, Watercare, and industry sector groups in the pre plan and plan development phases to determine appropriate ways to manage water allocation and flows. An Iwi liaison group was used to get specific Maori value inputs into their values and management objectives.
- Minimum flows for surface water are not set regionally. Instead they are developed in response to consent applications. Specific methods for developing minimum flows were identified including IFIM, WAIROA. Guidance on when each method should be used during consenting was outlined in the plan depending on factors such as stream sizes and water quality considerations. For groundwater allocation limits were developed for certain aquifers based either on identifying sustainable yields for groundwater or more simple calculations of recharge, use and discharges.
- ARC have previously used a non statutory method set out in the RPS of developing Water Resource Assessment Report's as part of the catchment planning process. These determine availability of water for abstraction from resources and are a matter considered during consent applications.

Limits that are in place (draws on water quantity questions 1 and 5):

- The plan requires minimum flows to be set for surface waters during consenting rather than as a region wide Council process. Allocation of water from surface waters would also be considered at consenting stage rather than by setting and promoting allocation limits in the plan
- Allocation limits are however set for groundwater resources, these are intended to inform the community as to where water is available and the status of allocation in an aquifer does not affect consent activity status

How water managers ensure limits are met (draws on water quantity questions 9-13):

- For groundwater ARC have not to date granted consent to take water over the set allocation limit. Therefore they do not have over allocation concerns. For surface waters access to water is granted within the limits of what is considered available from the Water Resource Assessment Report's. ARC do not consider consent applications above this limits and so in theory do not over allocate resources. However, ARC acknowledge that a lack of monitoring makes it difficult to establish universal compliance with water allocation provisions or effects.
- ARC approach to water management and the meeting of limits is to predominantly use regulatory methods to ensure limits are met. ARC staff noted that at their last internal

restructure they lost the non-regulatory roles of water allocation/flow management and funding for these.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- Barriers to setting limits identified included the impact of political concerns and political will over setting limits. ARC identified that limits setting had to be seen as a priority issue to get the necessary political support. At present the potential impact of the political changes due to the super city will affect their future plans. ARC are currently considering future RPS and plan changes and their decision has to consider what to do now, taking into account the potential future impact of the proposed NPS on freshwater management on Council direction.
- ARC noted that there was limited monitoring information on smaller streams, of which there are many in Auckland. This was considered to be a barrier to both setting and meeting limits for these resources.
- In terms of future management direction ARC have indicated in the latest draft RPS that allocation limits and minimum flows and levels will be put in place for aquifers and streams that are not included in the current plan. However no specific timeline or process for this appears to have been developed to date

3.1.3. **Governance** (draws on water quality questions 50-56):

- The draft RPS, Regional Growth Strategy and ICM plans are intended to enable an integrated approach to be adopted for planning and decision making. This will aim to address the controls of land use activities that impact on both water quantity and quality. However ARC identify that at present they do not necessarily achieve this objective. ARC would like to have improved integration between regional and district planning so that the districts acknowledge water quality challenges at the regional level and address through regulatory and non-regulatory methods at the local level. ARC consider that the devolved structure of governance between regional and local levels means that integration of management is difficult. At interview they identified that this gap could be filled by NPS and central government guidelines that direct this integration. In addition to this ARC would like to see a RMA amendment to clarify functions of Regional Council and TA's regarding what each can do under s9 land use powers.
- ARC noted that links between RMA planning instruments and the LTCCP need to be better and are an issue that could be focused on by Council. Currently funding of methods through the LTCCP process tends to drive which of the methods in the plans get implemented.
- In terms of additional assistance ARC would like from central government, provision of best practise examples was cited. These could cover for instance – a series of best practices for setting objectives that includes the policies, methods and rules to implement these. They could address key existing issues.

- ARC identified that there are some significant challenging questions now being addressed in the second and third generation plans and RPS's that are under development. These are being dealt with by many councils and central government input and guidance would be beneficial. Examples include: What are the best technical management and planning methods to control nutrient inputs? What technical and planning methods can be used to control the impacts of fertiliser inputs in a catchment that is not currently meeting water quality objectives?

3.2. Bay of Plenty

The Environment Bay of Plenty (EBoP) RPS was made operative in 1999. They released a draft of the new RPS for discussion in 2010. Their main plan that relates to water quality is the operative Water and Land Plan (2008). In addition they have one operative catchment specific plan (Tarawera plan 2004). This was s formed primarily to manage the effects of large point source discharges by managing water quantity and water quality in the river catchment. One interview was held with staff addressing the water quality and water quantity questions. Three staff were interviewed who held senior positions and included a Senior Planner, Regional Planner and the Consents Manager.

EBoP consider limits setting an important element of the management of water quality and quantity. The current region wide approach adopted by EBoP to managing water quality is to classify rivers and streams according to their values, based on RMA Schedule 3 classification criteria. Water quality standards are then set for each class that are predominantly based on Schedule 3 and the RMA s107 descriptive limits. EBoP list numeric guidelines in their classes that link to these descriptive limits.

EBoP have identified that they have significant non point source and integrated land use/water quality management issues to address in their region around the Rotorua Lakes. At present the main regulatory approach is to control both point source and non point source discharges in the catchment. These are managed within a cap of allowable contaminants in a catchment with an aim of meeting a set limit in the lake receiving environment. This includes controlling discharges from individual wastewater systems and nitrogen and phosphorous impacts arising from land use through a series of rules.

EBoP's Tawarera plan is an example of a loading limit approach intended to address large scale point source discharges. This is developed at a catchment scale and also regulates water take activities to aid meeting of the receiving environment limits.

For water quantity, default allocation and Instream Minimum Flow Requirement (IFIM) methods are provided for surface waters. To date the detailed minimum flow method has only been used on

one river due to the difficulty of determining flows based on values other than those that underpin the ecological flows. For groundwater no allocation methods are set and the proposed Ecological Flows and Water Levels NES limits are used as a guide to allocation limits at present. One of EBoP's main focuses at present is a Water Sustainability Strategy that considers water allocation in the Western bay of Plenty.

3.2.1. Water Quality

Derivation of limits (draws on water quality question 1-7, 18):

- The just released draft RPS (Feb 2010) promotes an ICM approach to future values, objective and limit setting; this is a change to past processes. Working at a catchment level is considered necessary in the future to adequately ensure land use and water management are integrated.
- In terms of their methods for developing limits in plan provisions to date EBoP's approach is to release draft plans or discussion documents to gain community comment and input and refine the plans prior to notifying plans as part of the statutory process. This is considered to be a better method to identify values and agree the appropriate objectives and limits for these.
- In all plan developments a significant level of Iwi involvement is a regional focus as they are significant stakeholders in the region. There are a number of Iwi groups and involvement of these included a number of hui around specific plans/issues. From these a report was produced that covered Maori issues and helped set the direction of the plan. In addition Council has used input from a Maori Regional Representation Committee, specific advisors and members of Council.
- EBoP identified that in their operative plans and the operative RPS linking land use and water quality did not traditionally happen. The new RPS sets stronger direction to land use control to achieve water quality outcomes, especially in the Rotorua Lakes area.

Limits that are in place (draws on water quality question 1, 17, 18, 19):

- The current approach adopted by EBoP to managing water quality is to classify rivers and streams according to their values, based on RMA schedule 3 criteria. Water quality standards are then set for each class that contain a small number of numeric limits but are predominantly based on the RMA s107 descriptive limits. To guide consent applicants EBoP have linked the descriptive limits to the relevant ANZECC guidelines as the main reference source. For example, to ensure water is suitable for stock drinking the limits direct users to the ANZECC stockwater guidelines. These are then used as triggers to determine whether a discharge can comply or not, none compliance with the guideline triggers does not lead to refusal of consent but requires assessment of the potential impact on the watercourse values and plan objectives. Non-compliance with the limits does not in any way alter the consent activity status.

- The Tarawera Plan is specific to manage point source discharges in that catchment and takes an overall catchment loading limit approach. This is combined with controls on water allocation to ensure that set water quality limits are met. EBoP's plan is to migrate this catchment plan into the main Land and Water Plan.
- EBoP have identified that they have significant non point source and integrated land use/water quality management issues to address in their region. The quality of the Rotorua Lakes are a significant challenge for management and the proposed approaches look to integrate land use and water management decisions at regional and district levels. At present the main regulatory approach is to control both point source and non point source discharges in the catchment. This includes controlling discharges from individual wastewater systems and nitrogen and phosphorous impacts arising from land use through a series of rules (an approach known regionally as "Rule 11"). This approach sets a cap on nutrient inputs into identified lakes catchments and requires consents for activities that will increase their nutrient inputs beyond levels existing at a set date in time.
- EBoP have identified that it is likely that future work in these catchments will look at reducing the amount of nutrients that can be input. However a concern has been raised with the method was that it was not equitable to landowners as it allowed existing intensified activities to consider but stopped new ones and this particularly affected local Maori who had obtained lands through settled treaty claims.

How water managers ensure limits are met (draws on water quality question 9, 10, 21-24, 30-33, 37, 38, 44 and 45):

- EBoP's main regulatory approach is through provision of guidelines. It is not necessary that these are actually met. They are used as triggers to determine when consent is required and then used further as assessment matters. Therefore the consenting process is the main regulatory tool to manage discharges. This mainly relates to point source control. The permitted and other rules associated with the "rule 11" approach are the main method to enforce the limits set in terms of baseline lake quality when considering point and non-point source discharges to the Rotorua lakes.
- The existing RPS describes a large range of methods (As outlined in Appendix B), especially non-regulatory ones, from discussion with EBoP many of these were never implemented. The new RPS moves away from this approach to set direction only rather than specify methods. Methods would now be developed in the plan and LTCCP. This change is in part to better integrate the methods with the LTCCP process as many methods previously identified were never implemented and it allows more flexibility to adopt non-regulatory methods as issues arise. From interview EBoP advised that there main effort has gone into non-regulatory action plans for the lakes which attempt to work towards solutions with local landowners.

- To understand whether the plan limits are being met EBoP undertakes monitoring of the state of the environment plus plan effectiveness monitoring. The main focus is on the state of the environment monitoring and specifically looking to address whether objectives are being met. Plan effectiveness considers more whether the methods are effective, especially the regulatory ones. EBoP commented that many of the non-regulatory methods are fairly new so they are currently operating on faith that they will work.

Barriers to setting and meeting limits (draws on water quality questions 16, 20 and 25):

- EBoP identified a lack of appropriate guidelines as a significant barrier to setting limits. They noted that they (and consent applicants) tended to use the ANZECC guidelines. However there were issues with these as in practise they can be very conservative. This arises as they are intended as triggers of potential effects rather than to be used as limits. However there appears to be little other information available to use.
- EBoP have also identified that they have concerns regarding the fact their classification approach then use s107 to establish the limits (guidelines). There advice at present is that these may be only applicable to point source discharges which will make management of non-point source discharges within the existing classification and limits setting framework difficult.
- In terms of meeting limits the main barrier EBoP identified was resistance from those who are causing water bodies to breach limits to accept that this was the case and get involved in doing something to address the problems. Many stakeholders in these water management problems used economic well being arguments to resist further controls or as reasons to not undertake actions.

3.2.2. Water Quantity

Derivation of limits (draws on water quantity questions 4, 5 and 6):

- Community value identification and objectives/limits settings processes in existing provisions involved the community and Maori in a similar fashion to that detailed for water quality. EBoP have signalled a new direction (ICM based) to management in its draft RPS that is likely to be more relevant for understanding current issues.
- EBoP in its RPS and existing plan adopted an environmental flow approach for minimum flow setting. However to date only one water body has used this method. EBoP have identified that this is due to the difficulty in determining flows for values other than the ecological component of an environmental flow. The plan outlined default methods to apply to surface water minimum flows and allocations. At present EBoP are relying on these default methods, as there is only one IMFR set in Schedule 8 of the Plan at present. The default IMFR is 90% of the Q5 7 day low flow. These allocation limits do not apply to ephemeral flow paths as they fall outside of the definition of 'river'. Due to this use of default methods there is little consideration of stream values other than the ecological ones when limits are set.

- EBoP's draft RPS gives further direction to the setting of more environmental flows rather than just using ecological ones.
- The draft RPS also proposes other changes to water allocation management. These include moving away from the first in first served approach and measures to ensure efficient use of water.

Limits that are in place (draws on water quantity questions 5 and 12):

- For surface water takes EBoP allows applications to take water outside default allocation limits and below default low flows. However the consent status does change, from controlled within default limits to discretionary outside them.
- EBoP do not have any limits set on allocation from groundwater. At present they have adopted the proposed minimum flows NES limits and are using those.
- The Motu Water Conservation Order prohibits takes except for reasonable domestic, stock and fire fighting needs.

How water managers ensure limits are met (draws on water quantity questions 7,8,11 and 12):

- EBoP's plans define what they consider over allocation to be and the policies set out a proposed approach for when a resource is over allocated. This includes; recommending the development of resource user groups to manage rostering, encouraging surrendering of unused consents, reviewing consents and promoting efficiency of use.
- EBoP are currently gathering information on resources in their region to determine the status of existing allocation and where over allocation is occurring. They identified that at present this information is not readily available to the public and consider that making it available is a key task for their Water Sustainability Strategy (major water availability strategy being developed for the Western Bay of Plenty).
- EBoP advised that their current focus on managing resources to ensure that the limits (allocation and minimum flows) are being met is through non-regulatory methods. These include developing a Water Sustainability Strategy for Western Bay of Plenty with stakeholders and advocacy through TA's to manage demand on existing resources. As part of this they are working with TA's to encourage metering. This will allow them to understand resource use better.
- In terms of future methods to ensure that limits are being met the draft RPS proposes common expiry dates for the taking of water in nominated catchments/aquifers to assist future management. It is considered that this would underpin future provisions around consent reviews, changing from first in first served basis and encouraging efficiency of use.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- EBoP identified that setting environmental flows is difficult, especially identifying appropriate limits for the non-ecological values. These include Iwi, recreation, amenity, swimming etc and their view was that existing guidance could be improved to take these matters into account. Specifically they noted that existing MfE guidance does not assist in setting an actual number for some of these values, e.g. Iwi values.
- A key lesson learnt for EBoP was regarding their approach to setting minimum flows. It was considered that a two step minimum flow process may have been better, this would involve setting the ecological flow component first so that it can be put into use immediately and then creating an environmental flow component (the more difficult element) if required.

3.2.3. **Governance** (draws on water quality questions 50-56):

- EBoP have the Water and Land Plan at present and have signalled a move by Council towards more non-regulatory methods in general to assist with future governance. Rotorua Lakes are the primary issue at present. There are a range of non statutory structures in place to involve stakeholders, these include a joint committee established that involves the district councils, a land use future board (land owners from various sectors), and an action plan relating to each of the lake catchments.
- For water availability anon statutory Water Sustainability Strategy is being prepared for the Western Bay of Plenty due to demand for water in that area. This involves working with stakeholders in that area. The Rangitaiki will be the next catchment that a strategy will be developed for. To date all strategies that Council have developed have had Maori representation on the committees.
- In terms of central government leadership and guidance, EBoP identified that guidance on both regulatory and non-regulatory methods to implement limits that have been set would be valuable. In addition guidance on the use of an ICM approach to water management and specifically establishing allocation of resources to different values would assist EBoP. This especially relates to non-ecological values.

3.3. Canterbury

The Environment Canterbury (ECan) RPS is operative (1998). They have three operative catchment specific plans that include provisions relating to water quantity and/or allocation (Opihi, Waimakariri and Waitaki) and four operative and one proposed Water Conservation Orders. Their main region wide plan is the proposed Natural Resources Regional Plan (NRRP), this was notified in 2004. It integrates a number of plans into one document of which Chapter 4 covers water quality and chapter 5 water quantity. Two interviews were held with staff separately addressing the Water Quality and Water Quantity questions. Two staff were interviewed within from within the

Planning section holding a variety of senior positions including Manager Planning and Senior Water Quality Scientist. In additional phone conversations and emails were followed up with staff from the Consents section.

Within the NRRP ECan manage surface water quality using a principle of 'maintaining' water quality. ECan has classified all surface waterbodies in their region according to geology and source of flow using the River Environment Classification (REC) methodology. Receiving environment standards are then provided for each class, being in the main numeric limits. These are intended to apply to the management of discharges after the zone of non-compliance. This management approach was adopted after consultation with stakeholders regarding various options. ECan contracted NIWA to develop the numeric values to be used for each class.

For groundwater ECan use drinking water standards as the appropriate quality limits when considering discharge activities, although the RPS recognises the potential for groundwater quality to influence water quality in hydraulically connected rivers and streams.

Pressure on water resources and over allocation are significant issues in Canterbury. Default minimum flow and allocation methods exist in the NRRP for both surface and groundwaters. Specific flow and allocation regimes have then been defined for groundwater and surface water resources based on priority catchments and systems that are under pressure. Once a specific regime is developed with the community it is included as a variation to the plan.

A key non-statutory approach to water management in Canterbury is the Canterbury Strategic Water Study. This is attempting to ensure more integrated land and water management framework. It involves working with the community to address issues of values and use of water. This framework is intended to set the direction for the region. Specific water zones have been identified, the first zone committees are being established and the study is likely to influence the ongoing RPS review.

3.3.1. Water Quality

Derivation of limits (draws on water quality questions 1,2,3,6, 13 and 15):

- ECan's pre plan studies and consultation with stakeholders identified a range of values for waterbodies. Council staff and consultants (NIWA) then developed recommended limits for those values. Specific studies were commissioned to consider Maori values using parties acceptable to local Iwi. Limits in the draft plan were then discussed further through ongoing submissions and plan review processes.
- Regarding the setting of these limits once values were identified ECan commented that many limits are difficult to set for the range of values identified. They are currently undertaking a

review of the proposed water quality limits and objectives to ensure they adequately manage for the values identified.

- Having proposed receiving environment limits ECan identified that having policy approaches of the maintenance or improvement of water quality were equally important. This is specifically to ensure that limits are not polluted up to i.e. the emphasis is on maintaining/enhancing water quality and is considered with respect to consent applications. ECan had a category of waters classed as natural state and the specific limit for these was that there shall be no change in water quality. This was supported by the maintain and enhance policy approach. Where water quality is degraded below the existing standards ECan has identified that they will review discharge consents once the plan is operative.
- In terms of future direction, ECan has a collaborative project underway to address the cumulative effects agricultural land uses on water quality. This will involve the extensive use of social scientist in a series of regional, catchment, and farm scale workshops. This is considered likely to change some of their methods that have historically been used.

Limits that are in place (draws on water quality question 6, 17, 38):

- ECan sets surface water quality limits (standards) for each identified water quality class. All water bodies in the region are assigned to a class. These standards relate to discharges and are intended to be met outside the zone of non-compliance (a method to determine this is outlined in the plan). ECan's approach to managing these limits is that the majority of discharge rules reference the water quality limits. The ability of the discharge to comply with these receiving environment limits affects both the need for consent and the activity status.
- For groundwater ECan uses drinking water standards as the appropriate limits. These do not affect consent status for discharges but are instead intended to be used as assessment matters for consenting. In addition ECan have a permitted activity rule for discharges to land (and land use activities) that limits the amount of allowable changes in groundwater quality for nitrate nitrogen. The amount of change is a set amount above existing levels in 2004 rather than using the drinking water standards as limits on their own that may be able to be polluted up to. ECan have noted that where groundwaters cause significant recharge of surface waters the use of drinking water standards as limits may not be appropriate as they are not protective of aquatic ecology.

How water managers ensure limits are met (draws on water quality questions 21, 22, 37, 38, 44 and 45):

- ECan regulatory approach to its limits is that the rules require compliance with the limits. This includes both permitted and non-permitted activities. Therefore the approach directs activities to comply with the receiving environment standards in order to be permitted. This is backed up by non-regulatory methods to address specific water quality issues. Issues include existing

degraded lowland waterbodies and methods include providing information and assistance to farmers to retire riparian margins and exclude stock from lowland waterways.

- ECan have also developed conditions in rules to specifically protect other water quality values. These include excluding stock from waterbodies above bathing sites to protect bathing water quality and allowing no zone of non-compliance in proximity to community water supply takes.
- ECan has recognised that water quality is degraded in areas (lowland streams and urban areas predominantly). To address this, the plan has policies that guide decision making and set direction when water quality is already degraded beyond limits. There are also rules regarding discharges into water bodies that do not meet the set water quality class limits. These give direction to resource users and decision makers regarding how to manage water bodies that fail to meet the existing limits.

Barriers to setting and meeting limits (draws on water quality questions 20 and 25):

- Regarding barriers to setting limits ECan identified a need for better and more robust science to aid decision making. This related to the ability to set limits that relate to identified values with a degree of certainty and which would lead to less stakeholder challenge regarding their suitability and the methods used.
- An additional barrier identified was that once a potential scientific limit was identified for the protection of a certain value there was still difficulty in trading and balancing social versus environmental outcomes.
- When discussing barriers to meeting limits the following points were identified. Landholders/stakeholders often did not accept that there was a problem and that their activities may be contributing. There was not the willingness of these landholders/stakeholders to address the problem and be involved in the solution.

3.3.2. Water Quantity

Derivation of limits (draws on water quantity questions 3-6):

- A similar process to values identification and objectives/limits setting to that outlined for water quality was used in setting the default provisions in the proposed plan. Default flow and allocations methods have been proposed for surface and groundwater. The plan also included some existing flow regimes carried over from existing consents and earlier provisions. ECan's approach is to develop specific flow and allocation regimes for surface water and include these as variations to the plan. These involved dealing on a catchment basis and were based on priority catchment (with high demand). ECan formed groups to work with stakeholders to identify appropriate management values for water bodies (including a range of ecological, use and other values). Flow regimes were then developed around these values before being

released as a variation to the plan. Specific regimes for surface water use IFIM methods to develop appropriate flows based on all the identified values identified by stakeholders.

- Technical panels are sometimes formed to decide on the appropriate values to choose, these include Iwi representation. ECan consider that this process built collaboration and acceptance of the outcomes. Over the lifespan of the plan to date the community engagement and technical processes have evolved quite a lot. Now the process has evolved to be more of a catchment planning approach where technical and scientific investigations are undertaken first and then a series of technical and other stakeholder advisory groups are consulted. The council then receives a report on the whole process including the views of community and recommendations of staff.
- For surface water the policy approach sets out that minimum flows are first developed for ecological values and a second policy allows more restrictive minimum flows to be developed to protect other values (e.g. recreation).
- For goundwater again a default allocation limit method was developed through technical work that lead to the development of the plan provisions. The amount of water available in each aquifer and resulting level of allocation has been refined over time as information becomes available.

Limits that are in place (draws on water quantity questions 5, 12 and 13):

- Limits exist for all flowing surface water bodies and groundwater in Canterbury. For both surface and groundwater takes the activity status of an application is focused on the level of allocation. Activity status within allocation limits can be controlled through to discretionary. Takes above the limits are non-complying. Permitted activities are based in the main on the rate and volume of take and do not reference either allocation status or minimum flows.
- It was noticeable that ECan as a Council has traditionally granted consents for longer durations than most other councils. Consents were frequently granted for up to 35 years for both takes and discharges; it appeared that the presumption was for a 35 year consent unless there were reasons to have shorter duration. ECan have identified that this now causes the some issues around reviewing of consents. The majority of other Councils had a presumption for shorter duration consents (10-20 years).

How water managers ensure limits are met (draws on water quantity questions 7, 8, 11, 12 and 13):

- One of the key issues ECan identified regarding their meeting of limits was the need for knowledge of where resources are or may be over-allocated. This includes both having suitable knowledge of the resource (hydraulic or hydrogeological information) and knowledge of the actual use of that resource by consent holders. With respect to this ECan identified that there is a significant difference between over allocation on paper and actual use. ECan noted that limited monitoring of actual water use is currently undertaken in Canterbury therefore it is

difficult to distinguish between situations of theoretical and actual over allocation. In addition it is also difficult to attribute a particular level of environmental effect to a given level of abstraction to identify whether allocation limits are suitably environmentally protective without having good data on the actual amount of use. ECan have to date struggled to implement region wide monitoring of water takes.

- ECan do allow allocation above set limits in the plans, this is through the use of non-complying consent status to determine that the individual takes would not have adverse effects on other users and the values of the resource.
- In terms of meeting the limits set for water bodies ECan identified that a non-regulatory approach of using water user groups have proved a very effective management method to date. These do not exist in all catchments and it was noted that to be effective they need real time data and the tools to manage and share allocation.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- When previously setting limits ECan have sometimes sought community input too early before understanding the water resources themselves. This has lead to lots of debate about the resource and delays while information is gathered. This was not the most efficient use of the council or community time. In its more recent catchment approaches and in the future ECan will do much more science on characterising the resource before engaging the community on its values and the appropriate limits for those values.
- A key barrier to limits setting identified to date is that getting defendable scientific information and agreement from all scientists is a constraint on the process. A significant amount of time and effort is spent debating and agreeing methods and their outputs.
- ECan have undertaken an adaptive management approach to limits setting to allow for seasonal variation. This has proved controversial as users want security of supply.

3.3.3. **Governance** (draws on water quality questions 50-56):

- The Canterbury Strategic Water Study (CWMS) is the main approach to integrated land use planning and management for land use activities that impact on both water quantity and quality. This is a non-statutory study and involves considerable stakeholder input from a wide range of stakeholders. Catchment planning, at least for surface water, is considered a key approach for the future to better integrate issues, these will involve the creation of zone committees, the first of which has just been established. The Strategic Water Study is ongoing and depending on the outcomes may lead to significant changes in the statutory management of water issues in Canterbury. The review of the RPS has specifically included provisions to implement the CWMS. ECan sought central government support for the CWMS proposals and the associated governance and legislative requirements to give effect to it.

- Another key strategic document that may lead to changes in ECan's methods is the ongoing 'cumulative effects of land use on water quality project'. This is developing a collaborative process with substantial involvement from primary industry and other stakeholders. This will help put in place non regulatory and regulatory measures that will manage the non point source water quality component of this issue.
- ECan identified a comprehensive list of method and issues where central government assistance would be valuable. These included the following:
  - Provision of national direction - Including finalising the National Policy Statement for Freshwater Management and producing a NES for water quality standards. This NES should include guidance for setting measurable water quality targets for vertebrates (i.e. fish and birds), provision of guidelines for setting and allocating catchment scale nutrient limits and the provision of sediment limit guidelines for both embedded fine sediment and suspended solids.
  - Guidance on non-point source discharge management including: Better tools to measure/describe the transport, volume and concentration of diffuse discharges from land to groundwater and surface water, better estimates and measurements for contaminant losses/leaching under different land uses, upgrading and calibration of nutrient loss models e.g. Overseer to be regionally accurate, national guidance on setting and allocating nutrient loads in catchments and the national development of methods and tools for assessing compliance with nutrient limits

3.4. Chatham Islands

The Chatham Islands Council (CIC) is a unitary authority with one plan combining the RPS and all plan functions (Chatham Island Resource Management Document, operative 2001).

One interview was held addressing the water quality and quantity questions. Michael Bowden of consultants Bowden Environmental Ltd was interviewed. They are undertaking a plan review of the Chatham Islands Resource Management Document. It was recommended by ECan that he was the most appropriate person to answer the questions.

The CIC has a very small ratepayer base with a population of only ~600. Therefore plan provisions are simple for both water quality and water quantity. There are no limits for water quality and no flow regimes set. Issues are just dealt with when consents are applied for. Consenting is very infrequent however there are some permitted discharges and water takes. Generally water quality is not seen as an issue, but in current work being undertaken by a consultant to review the plan it was noted that the lagoon system on the islands is where issues could arise if any were likely to do so. There is no perceived pressure on surface water resources and groundwater is not drinkable so again little pressure. At present the review is still underway and it is too early to tell whether

provisions will have to change. Due to the distance from the mainland it is unlikely that land use will change significantly or quickly so existing provisions are considered adequate.

3.4.1. Water Quality

Derivation of limits (draws on water quality questions 1-7):

- The planning process for the existing plan was not well known as the consultants have changed. However it is likely to involve local meetings and the input of Moriori and Maori. With a small population there is generally good input from the community.

Limits that are in place (draws on water quality questions 7 and 17):

- There are no limits in place.

How water managers ensure limits are met (draws on water quality questions 9, 14, 16, 21-23, 37, 38 and 44):

- When discharge consent is required issues around water quality for are dealt with as assessment matters. A current plan review and the monitoring that feeds into it are determining whether the current approach is acceptable.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- Funding was the key barrier identified to both setting and meeting limits. The low ratepayer base means that central government funding is required for many planning activities.

3.4.2. Water Quantity

Derivation of limits (draws on water quantity question 6):

- As for water quality, the process involves consultant review and community input.

Limits that are in place (draws on water quantity question 5):

- No flow regimes are in place.

How water managers ensure limits are met (draws on water quantity questions 1, 8, 10, 12 and 13):

- The plan review and monitoring that is feeding into it will identify whether any problems with the existing framework are evident.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity questions 8 and 9):

- Funding is again the key issue.

3.4.3. **Governance** (draws on water quality questions 50-56):

- As a unitary authority the CIC is responsible for any land based activities, therefore they integrate all their land and water management. The Maori and Moriori are very much a part of the CIC and are involved in all planning developments.
- Their main strategy is the current plan review; however, they are very constrained financially so a long term strategy cannot be expected.

3.5. Gisborne

The 2002 Gisborne District Council (GDC) RPS is operative. GDC is a Unitary Authority and have three operative plans that relate to water quality issues. These are the 2002 Transitional Regional Plan, the Regional Plan for Discharges to Land and Water, Waste Management and Hazardous Substances and the Combined Regional and Land District Plan. Both these plans became operative in 2006. One interview was held with staff addressing both the water quality and quantity questions. Three staff were interviewed within from within the Natural Resources and Water Conservation teams, these were team leaders of; Natural Resources Policy, Natural Resources and Water Conservation.

The GDC plan sets no water quality or quantity limits. GDC did not rate water management issue as high priority for the Region. However they are currently undertaking work to develop water availability limits in the areas of the district that have the most highly allocated water resources. A key point GDC noted was that they consider that their unitary authority structure means that land use and water management issues are integrated in the plans. GDC manage most issues around water quality and quantity through the consent process. One principle element of this approach is through the use of short- term consents. GDC's approach has a focus on working with the community to resolve water issues that arise through non-regulatory methods.

3.5.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 17, 37 and 38):

- GDC have not developed region wide limits for their district that relate to water quality classes. In terms of managing water quality GDC advised that guidelines are used when required in consenting to assist decision making and assist resource users. For example GDC use, and also encourage applicant's to use, ARC guidelines on stormwater management.
- GDC do have some limits (standards) within permitted activity rules that must be complied with for the discharge to be permitted. These set standards that must be met by the discharges. They are activity specific and include for instance controls on the discharge of stormwater.
- GDC have a couple of ongoing science projects, funded from outside the district, that are considering the values of the districts waterbodies and whether limits may be suitable. At

present GDC consider that limits may not be a suitable approach for the Gisborne region as there rivers are quite different to others in NZ with high sediment loads and little fisheries value.

- Despite having few rules and no limits on water quality and quantity, the unitary authority approach and non-regulatory methods used allows GDC to manage land use and water quality in a manner it considers is integrated and effective for their needs.

How water managers ensure limits are met (draws on water quality questions 13, 21-24, 30, 37, 38 and 44):

- In order to keep a good handle on water quality issues and allow management to change over time GDC issue short term consents (5 years). This allows review of effects arising from activities (on their own or cumulatively) on a regular basis
- Non-regulatory methods are a focus for GDC; they consider that they can achieve more by getting people in a room to agree a way forward than by many regulatory methods. GDC has a good relationship with the community and consider that this is why this approach is effective. GDC comment was that they consider themselves both a regulator and educator.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- GDC consider the water environment to have different values to much of NZ. These include high sediment loads, little fisheries value and little recreational use. Therefore they have concerns that existing national guidance and approaches may not be applicable and as such have not adopted any for setting limits in their region.
- For both limit setting and meeting limits GDC noted that there is a lack of robust science in the region, mainly due to lack of council resources. This realistically limits their ability to set limits and also to defend them (during hearings, consent applications etc). Having questions raised over the adequacy of set limits makes management of activities to meet those limits more difficult. Any limits established therefore have the potential to become a political issue in which stakeholders seek council politicians involvement in the process.

3.5.2. Water Quantity

Derivation of limits (draws on water quantity questions 3 and 5):

- Water bodies across the region do not have minimum flow or allocations set.

How water managers ensure limits are met (draws on water quantity question 7, 8 and10 - 13):

- As no allocations or minimum lows exist GDC takes an approach of issuing short term consents (5 years). This is their key method of dealing with water management. It allows frequent review of effects arising from consented activities. In addition they take the approach

that all consent applications for water takes are notified so that community and stakeholder comment can be sought.

- In terms of managing their resources GDC feel they have good handle on where high water demand occurs and where over abstraction may occur from monitoring. To manage these areas GDC has established user groups that manage these resources. This is especially used when the resource gets close to trigger points for restrictions. Their recent experience is that demand is not as high as it was in the 1980's.
- GDC outlined that they have little concern with groundwater allocation and use. There have been only two occasions where water levels were a concern in 10 years, and on both occasions levels quickly recovered. Therefore they consider that their current management approach is sustainable.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- In a similar manner to the issues identified for water quality, the underpinning values of the districts waterbodies were the main limit identified. GDC had concerns about applying other guidance and methods locally and especially choosing appropriate limits to match the local values. An example cited was the proposed NES default limits are based on a proportion of MALF as suitable to protect certain values. GDC questioned whether this would be applicable to their district given that the rivers have no fish.

3.5.3. **Governance** (draws on water quality questions 50-56):

- Council are considering a value based approach to water management and developing options around this at present. However it is early stages and GDC are not sure where it will go. Their current consent based management approach is considered appropriate but they are aware a more strategic view may be necessary. As part of this GDC are considering the requirements of the central government proposed NPS on freshwater management and NES on minimum flows to see how well they may manage the regions issues. As noted above GDC have some reservations about the NES minimum flow defaults and methods as these as may entail significant regional costs without perceived benefits to local rivers.
- As a unitary authority with combined regional and district plans GDC's opinion is that they already have integrated approach to land use activities that impact on both water quantity and quality. However in terms of future works and wider water management GDC are developing terms of reference for a Water Management Forum with representatives comprising users, Iwi, environmental groups and community from across region. This group will feed into the future direction of water management in the region.
- When asked about central government assistance GDC identified that having central government remove barriers to integrated planning documents could assist their future plans

and promote better integration. In addition it was considered that more regional funding of science work would assist for councils such as GDC that are short on resources.

3.6. Hawkes Bay

The Hawkes Bay Regional Council (HBRC) operative Regional Resource Management Plan (2006) combines the RPS and Regional Plans into one document. In addition the 2004 Mohaka River Water Conservation Order manages water issues in that catchment. One face to face interview was held with staff addressing the both the water quality quantity questions. Six staff were interviewed from a variety of sections, with many senior positions, including; Team Leader Policy, Manager Environmental Science, Group Manager Resource Management, Group Manager External Relations, Team Leader Hydrology, and Team Leader Groundwater.

The HBRC sets region wide limits for the surface water quality in their region. These are based on setting classes of waterbodies across the region and having numeric limits for a small range of parameters specific to these classes. These limits are used as environmental guidelines. That is compliance with them is considered as an assessment matter during consenting. In addition certain catchments have been identified as needing management to address existing issues/values and have additional limits specified for identified parameters (e.g. microbial limits). For groundwater quality the objectives set the overall direction for management with provision of water suitable for drinking. This is provided for in the Policy framework. For discharges activity specific limits (standards) are set within the permitted activity rules. These relate to specific activities, e.g. discharges of bore drilling fluids or more general rules such as the discharge of water to surface water. These standards must be met for an activity to be permitted.

For water quantity HBRC have set allocation regimes and some minimum flows for specific surface water bodies only. These have developed over time based on methods set in the plan. There are no default methods applying to the other waterbodies and there are no allocation limits for groundwater. Therefore management of the impacts of water takes in other areas is dealt with through the consenting process. This existing management situation has arisen as water quantity did not appear to be an issue when the previous RPS was developed. Council has indicated that its latest RPS review will direct the setting of many more specific limits.

3.6.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 11, 12, 15, 17 and 30):

- HBRC overall strategy was to start limits setting with a broad approach using guidelines and certain activity specific limits and then they have indicated they will look to more specific limits in the future.

- HBRC implemented stakeholder consultation processes as part of the development of its Regional Resource Management Plan. This included input into the identification of values for regional water bodies. This was undertaken by forming consultation stakeholder groups. One group was established for statutory agencies and one for general stakeholders. Iwi were involved in the stakeholder consultation groups. The values identified through this process were then used in setting of limits.
- When the existing plan was developed a non-regulatory approach to land use control and non-point source pollution was adopted. However HBRC have advised that this is now likely to change in future plans and statutory methods would be considered as additional methods to assist in addressing the impact of land use on water quality. An example of where this may change is the draft plan variation for the Taharua River. The provisions in this are looking to address non-point source discharges and land use effects on water quality by establish loading limits for the catchment. Regulatory and non-regulatory methods would then be used to meet these limits.

Limits that are in place (draws on water quality questions 11, 12 and 37-39):

- The region wide limits are called environmental guidelines by HBRC. They contain numeric receiving environment limits that are intended to guide decision making around activities that can affect those water bodies. These guidelines are not related to the rules and therefore compliance (or non-compliance) with the guidelines has no effect on either the need for consent or activity status.
- Within the permitted activity discharge rules are activity specific limits (standards) that must be met for the discharge to be permitted.

How water managers ensure limits are met (draws on water quality question 21, 22, 23, 37, 38 and 44):

- The activity specific limits set in permitted activity rules require compliance for discharges to be permitted. Once consent is required then the environment guidelines assist in determining whether impacts on water quality can occur. HBRC noted that these guidelines were intended to be relevant to both point source and non-point source discharges.
- The HBRC has taken the approach of putting considerable efforts into non-regulatory approaches to ensuring that water quality limits are met. These include developing a sustainable freshwater programme in the region and working key stakeholders such as TA's and the farming community on specific issues/catchments.
- In terms of understanding the effectiveness of this approach HBRC recognise that while non-regulatory methods may have been effective at raising awareness of issues, a corresponding change in water quality has yet to be identified by monitoring.

Barriers to setting and meeting limits (draws on water quality question 16, 19, 20 and 25):

- With respect to barriers to limits setting HBRC identified that setting appropriate limits for intangible values (e.g. aesthetic values and Iwi values) was identified as an issue.
- An additional area of concern and potential barrier was raised with respect to the proposed changes in the Taharua variation and potential future attempts to integrate land use management and water quality. This is the technical difficulty in understanding the linkages between land use, water quality and ecology. The uncertainty in the science and cause and effect relationships between land use, water quality and ecology makes limits setting (e.g. for catchment loading limits) more difficult and contentious. Within the resource management framework and especially at Environment Court dealing with this uncertainty is very difficult. The requirement for science to demonstrate robust cause and effect and the burden of proof required to defend choices over approaches and limits was considered a barrier by the HBRC.

3.6.2. Water Quantity

Derivation of limits (draws on water quantity questions 2, 5, 6, 8 and 9):

- The HBRC advised that the stakeholder involvement in value identification, objective and limit setting is very similar for both water quantity and quality.
- HBRC have a schedule of rivers where limits have been set. These document the minimum flows and allocation limits for these bodies. At present limits are not in place for many surface water systems and there are none for any groundwater systems. The HBRC indicated that there is a proposal for a plan review by 2012 for all surface water bodies to have a default minimum flow and allocation. This is to be in place in time for the next series of consent reviews. HBRC noted that water quantity was not considered a significant issue when the existing RPS was developed. However this has changed over time as demand has increased.
- The Plan identified that any flow regimes that are set would consider Maori cultural and spiritual values as part of the criteria for determining minimum flows. HRBC advised that this did not actually occur in the original setting of minimum lows and allocation limits. This has only been done in the variation associated with the Ngaruroro River where the consideration of these values lead to a higher minimum flow than just required for ecological values.

Limits that are in place (draws on water quantity question 5):

- The approach to setting allocation and flow limits for surface waterbodies has been that priority was given to areas where resource demand has been identified. Limits once set are considered during assessment of consent applications only. Where there are no specific regimes set the plan gives no guidance on default values to be used.

How water managers ensure limits are met (draws on water quantity question 7, 10, 11, 12 and 13):

- Rules (permitted and others) do not require compliance with the flow and allocation limits when set in the plan. In essence, all water is consentable. However compliance with the limits is a consideration during assessment of consent applications.
- Where HBRC have established allocation limits in surface water bodies they have identified that nominally well over half the regions rivers are over-allocated. However this is calculated from the consents database so is therefore nominal, not necessary actual over-allocation. Council lacks data on actual takes and the status of the resources to understand whether there are issues arising from this nominal over-allocation.
- At present to manage the resource to best meet the limits the HBRC use common expiry dates and short term duration on consents (5-10 years). This allows frequent revisiting of consents to manage issues that have arisen, particularly with regard to cumulative effects of takes.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity questions 4 and 8):

- Similarly to many other councils HBRC identified that creating limits (water quantity and quality) for intangible things such as amenity and recreation values were common barriers to their limits setting. Associated with this the HBRC identified that they need more thorough research into minimum flows and allocation limits. This research would help limits setting.
- When discussing barriers to meeting water quantity limits HBRC identified that this is difficult in some catchments as they are at limit of what they can sustainably provide. However the demand for water still exists. They identified that there was a lack of storage in many catchments to provide for this demand.
- A barrier to meeting limits and also a lesson learnt was the need to link growth strategies in the region and specific catchments to issues around water management. This integration was necessary to deal both with demand of water from that growth but also the resulting water quality impacts of that growth and the take and use of water.

3.6.3. **Governance** (draws on water quality questions 50-56):

- In terms of future integration of land use and water management HBRC has a number of strategies in development; these include the Sustainable Freshwater Programme, Future Scenarios for Hawkes Bay, the Regional Water Demand and Availability Study and a Regional Water Value study. HBRC consider that working with other partners is the key approach to managing land use/water interactions at present. An example of this is with HBRC currently working with three TA's to ensure better integrated management of land and water issues on the Heretaunga Plains.
- In terms of central government assistance on governance issues HBRC considered that central government could provide clear national goals, targets and guidance for water management

priorities. These would present a clear idea of the national focus for water management and aid implementation of issues to address those matters at regional level.

- To assist the HBRC in future plans central government assistance by the provision of proven or robust tools or methodologies, particularly for science would be of value. Agreement on methods and tools can avoid debate on these methods. The decision making focus can then be on the different weighting to be given to each value and how these values relate to the quality/allocation effects. HBRC considered that one approach could be for central government to provide funding for tools/methodologies to be developed by councils for national uptake.

3.7. Horizons

The Horizons Regional Council (Horizons) has an operative RPS and six operative plans. Their proposed One Plan has just completed hearings and this intends to replace all these planning documents. In addition there are water conservation orders on the Rangitiki and Manganuioteao Rivers.

One interview was held with both the Manager of Science and the One Plan Manager addressing both the Water Quality and Water Quantity questions.

Horizons have recently developed the One Plan that covers both the RPS and Regional Plan requirements. Within this water quality limits have been set across the whole region for surface water systems. The regions water bodies were classified, using RMA Schedule 3 classes as the start point. Water quality limits were developed for each of these classes by scientific investigations into appropriate numeric value. These limits are intended to be used as standards that must be complied with in the permitted activity rules. Activity specific permitted activity rules also contain additional limits. These control specific effects associated with discharges. While in the main Horizons approach has been receiving environment based it has also considered a loading limit approach when dealing with diffuse pollution. A regulatory approach has been developed to limit nutrient inputs from farmland in specific problem catchments. This sets limits on the activities in order to control nutrient inputs into the wider catchment. This approach requires consent for agricultural activities in these catchments. This is a good example of a regulatory method being used to control non-point source pollution.

Minimum flows and allocations have been set for both surface and groundwater. These are based on the same set of water management zones which were developed after extensive identification of the community values in the region. Some minimum flows are default methods based on the MALF and specific minimum flows based on values for that waterbody have been developed for other zones. Water allocation is undertaken by identifying a core allocation for a zone.

The opinion of most of the Resource Managers Group when questioned as part of this project was that Horizons were leading the way on limits setting.

3.7.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 17, 18 and 30-33):

- Council undertook extensive consultation with the community and specific stakeholder groups to develop four main groupings of values. These values were then used to identify Water Management Zones to apply to all aspects of water management. Policies that seek to protect each value to a satisfactory level were developed and linked to water quality standards. Scientific and technical investigations were undertaken to identify the water quality standards needed to protect the particular values, reference was made to recognised standards and guidelines such as ANZECC. Iwi were involved as stakeholders in the process through a specific consultation programme. However, Horizons identified that there was not as much input as they would have liked and they would like to achieve better inputs from Iwi in future.
- The water quality standards derived for the region are for receiving environments. However as part of the One Plan Horizons also consider loading limits in their approach to diffuse inputs from agricultural landuses. This is attempting to develop a regulatory approach to non-point source pollution associated with intensive agriculture in catchments where it is specifically a concern. The regulatory approach involves setting loading limits from agricultural activities and requiring land users to demonstrate compliance with the limits through measures that control the activity/source.

Limits that are in place (draws on water quality questions 7, 17 and 37-39):

- Horizons region wide water quality limits are all numeric rather than narrative as it was considered that these were a more certain management approach. The setup of the plan requires compliance with the limits (after reasonable mixing) in permitted activity rules relating to discharges.

How water managers ensure limits are met (draws on water quality questions 11, 21-23 and 37-39):

- Horizons commented that this is the most difficult aspect of setting limits. Horizons have proposed regulatory methods to control both point and non-point source discharges. Point sources require compliance with region wide limits to meet permitted activity rules. In addition specific activity rules also require compliance with limits set within those rules for activities to be permitted. Rules look to manage intensive agricultural activities in catchments with identified water quality issues to limit loadings to those catchments, therefore addressing the land use impacts on water quality.
- Horizons also have a suite of non-regulatory methods that are currently in progress. Their main non-regulatory method is the Sustainable Land Use Initiative (SLUI) which targets hill

county erosion and thus sediment and phosphorous inputs to waterbodies. Early stage monitoring of plan effectiveness indicates that this method is being effective at minimising erosion and improving water quality. For Horizons the other main non-regulatory focus is provision of advice, funding and guidance to farmers for the fencing off of streams and wetlands and exclusion of stock from these.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- The key barrier identified by Horizons to setting limits is getting agreement and consensus on what the limits should be. Horizons were of the opinion that this is a huge technical task that is almost impossible for smaller councils due to the resources involved. This issue covers both the agreement on relative weighting to give to each value, balancing of these values as well as the technical methods used to develop limits for those values.
- In addition Horizons identified that once limits were set that they had an issue with public understanding that geology and flow affect water quality too and can lead to water quality limits not being met. This natural variability was something that the limits did not necessarily allow for.
- One of the main barriers to setting limits around non-point source pollution identified by Horizons was that people have established attitudes to farming. Although evidence identifies that most pollution comes off farms there is huge resistance to regulating land use activities. This is from community/stakeholders, agricultural industry bodies and also politically.

3.7.2. Water Quantity

Derivation of limits (draws on water quantity questions 1, 3, 6 and 9):

- Values, objective and limits setting for flows and allocation took a similar approach to water quality as the same management zones are used. The limits that were derived focus on protection of the values identified in the particular zones, this aims to integrate all aspects of water management under one set of policies in the plan.

Limits that are in place (draws on water quantity question 5):

- Horizons proposed One Plan establishes default minimum flows and allocation methods for both surface and groundwaters. Where a detailed water assessment process identified high potential use areas specific flows and allocations were developed for those zones. Where specific allocation/flow regimes were developed for surface waters IFIM methods were used to determine the specific flows and allocation required to protect the identified values of the waterbodies.
- For surface waters all bodies have a minimum flow and a core allocation. All groundwater have a core allocation set.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 11, 12 and 13):

- Horizons use a regulatory approach through the rules to aid meeting limits. Rules for surface water takes (excluding permitted takes) reference allocation status, with activity status depends on whether takes are from the core allocation. Most takes are discretionary and then non-complying outside set allocations. For groundwater most takes are discretionary.
- Horizons have also identified with respect to meeting limits that over-allocation is recognised as an issue in localised areas. However, regulatory plan provisions are not developed to specifically address this issue. Horizons main non-regulatory approach to address over-allocation is around efficiency, assisting users to be efficient and then matching the consented take to actual take. As part of this Horizons also address improving efficiency of on farm permitted takes through non-regulatory methods.
- In terms of understanding over allocation and also compliance with minimum flows Horizons note that getting real time data on resources and getting data from users (telemetering of water use) is essential to meeting limits. Horizons consider that provision of data about the status of the resource to users allows those users to assist in managing the resource to meet limits.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- No major barriers to setting limits were identified by Horizons. They have just completed this process and had the technical information they needed.
- With respect to meeting limits Horizons noted that water users are starting to have to work together and Horizons see that they have a role in facilitating that. This includes establishing users groups that enables improved management of the resource.
- As lessons learnt that Horizons will take forward into the future, Horizons will spend more time with irrigators and target efficiency of use and will also look to provisions (regulatory or non-regulatory) to enable water trading.

3.7.3. **Governance** (draws on water quality questions 51-56):

- Horizons have just come through a process that is leading much of NZ in terms of an integrated approach to planning and decision making for land use activities that impact on both water quantity and quality. This has lead to the One Plan that is currently at hearings stage. At present they have some future methods to work on but no major governance changes. Having this One Plan with a common set of policies and common water management zones is seen as key to this integration of land use/water management.
- One recent development in the region outside the One Plan process is the establishment of the Manawatu Leaders Forum. This looks to get all key stakeholders meeting regularly in one room to discuss water management issues among others.

- In terms of better governance Horizon's see LTCCP's as key and the goal of Council is alignment of work programmes between the One Plan and LTCCP's.
- Horizons view on central government's role is that they show leadership and direction on national issues, e.g. introduction of the NPS for Freshwater Management. This can also include setting national direction on water standards that support the work done to date by Horizons. In addition funding for regional initiatives is important as demonstrated by the success of the funding of the SLUI project.
- With respect to other central government direction Horizons commented that it is important to make sure proposed national instruments such as the NES on minimum flows don't undermine what has been done regionally. Horizons seek that these set minimum standards only, not prescribe what must be done. Horizons had concerned that the "hard limits" option may do this.

3.8. Marlborough

The Marlborough District Council (MDC) RPS was made operative in 1995. Council has two plans relevant to water. These cover two geographical areas, the Marlborough Sounds Resource Management Plan (operative in part 2003) and the Wairau/Awatere Resource Management Plan (operative in part 2009). One face to face interview was held with staff addressing both the water quality and quantity questions. Two staff were interviewed who held senior positions of Manager Environmental Science and Monitoring and Manager Environmental Policy.

MDC is a unitary authority with two resource management plans covering both district and regional matters. These are old plans and the Council is currently working to replace with a combined plan that will also include the RPS. A key feature of the district is that it has little pressure on water quality, especially from point source discharges. As such plan provisions for water quality will be retained in the future plans. Existing provisions set region wide classes based on schedule 3 of the RMA and water quality standards for these classes. Discharges are required to comply with these standards.

As a comparison to water quality management, water quantity issues are very important in areas of Marlborough. There is a high degree of use of the region's water resources and continuing high demand. Minimum flows and allocations have only been developed in an ad-hoc fashion on certain surface waterbodies where resource use pressure has been evidence. A similar situation exists for groundwater with allocation limits only set in areas of high demand. There is no overall strategic approach to setting limits across the region. MDC would like region wide limits but the cost of doing specific limits (based on ecological or environmental values) for all systems is too high so a

default approach is likely. MDC consider that the NES on minimum flows may be suitable to do this.

3.8.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 16, 17 and 18):

- Existing MDC plans contain a schedule of values for waterbodies; these are then used as basis of classification. The exact process used in identifying these values was unknown to the MDC staff interviewed due to staff changes since the plans were developed. For the current plan review process a Freshwater Focus Group has been established. This is a diverse mix of stakeholders who are tasked with working through and identifying values and relevant provisions before the plan is notified.
- As part of this process an Iwi working group has been established and is working well according to MDC, it is tasked with developing its own chapter and reviewing all the others, in addition Iwi are developing their list of own values and objectives to feed into plan.
- MDC's view was that derivation of limits is a non issue for them at present. If anything changes they will address but at present they will maintain their existing provisions.

Limits that are in place (draws on water quality question 6):

- The approach taken by Marlborough for the existing limits are that they are for receiving environments. Each water quality class established has a set of standards for that class. The regulatory approach taken in one of the existing plans is that discharge rules relate to these classes of water, some, but not all of the discharge rules require compliance with the set water quality limits for activities to be permitted. The other operative regional plan (covering different catchments) does not take this approach and the rules do not require compliance with set limits.

How water managers ensure limits are met (draws on water quality questions 11-13, 15, 21-23, 37-39 and 44-45):

- MDC has very few point-source discharges so uses regulatory methods infrequently. Non-regulatory methods are the main focus to meeting limits and MDC consider that these will be in the future These include working with the community on projects to exclude stock crossings and in the management of riparian areas. MDC's focus is on working with industry to create sustainable land management plans to achieve greater buy-in to the proposed works and outcomes. This focus on getting industry to work on and lead partnerships was a core area for them to develop.
- MDC were of the view that being a unitary authority and having combined plans, with the next plan also to include the RPS, aids integrated management of land use activities that impact on water quality. This was a similar view to that presented by many unitary authorities.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- MDC identified a similar barrier to many other councils regarding knowing how to set limits for certain values that have been identified by stakeholders. This is for the more intangible values such as cultural values.
- With respect to meeting limits MDC consider that getting community, especially industry buy in on non-regulatory methods is difficult. One reason for this is that for many methods there is a lack of science to demonstrate to community/industry that non-regulatory methods are effective, e.g. around the improvements in streams that occur due to plantings and fencing. It is therefore hard to get these stakeholders to buy into the solution.

3.8.2. Water Quantity

Derivation of limits (draws on water quantity questions 4, 6 and 9):

- As for water quality the process behind the existing limits is not known due to staff changes. The minimum flow and allocation limits in all water bodies in North Marlborough have allocation limits/minimum flows set and all water bodies in South Marlborough from which demand was anticipated also have allocation limits/minimum flows. These were developed systematically based on best available information.
- For those rivers in South Marlborough that do not have a minimum flow but from which there has subsequently been demand, ad hoc allocation limits and minimum flows have been developed that sit outside the plan in response to the demand, again based on best available information.
- MDC's view was that for future plans limit setting with respect to flow regimes will be more contentious. This is due to the facts that there is now much more awareness of issue around water and more pressure on the resource.
- MDC's thoughts at this stage are that the next plans to come out of current review/plan development will involve setting default limits across the region. Their hope was that the NES on minimum lows would do this for them as it will save a huge amount of resources.

Limits that are in place (draws on water quantity question 5):

- Where demand has occurred on surface waters council has established specific flow/allocation limits which include sustainable flow regimes. Similarly where demand has existed on groundwater allocation limits have been established.
- All other waterbodies do not have minimum flow or allocations set and these issues area dealt with during consenting.
- In the current plans there is no link between allocation status and activity status in rules. MDC have identified that this is an issue for them and does not assist their management of the resource.

How water managers ensure limits are met (draws on water quantity questions 7 and 10-13):

- MDC opinion was that they have used the best methods to set limits in the past based on the available data at that time. They have then stuck to them to limit over-allocation unless the science behind them proved incorrect. This is based on the assumption that the limits were suitably conservative in the first instance.
- Regarding exceeding set limits MDC identified that over-allocation exists in three aquifers at present. Their approach to date has been non-regulatory methods to deal with this. This has involved users undertaking voluntary restrictions to manage water shortage. Within the wider region many resources are theoretically over-allocated so there is a big drive by MDC with users on efficiency of use and ensuring actual takes matches consented take. In addition specific non-regulatory methods have focused on specific stakeholders. These have included the "one crop – grapes project" which aims to increase efficiency of use and is considered by MDC to be effective.
- In terms of ineffective methods to ensure limits are met, MDC tried using Water User Groups but these were the least effective non-regulatory method used. This is due to the nature of the region's water users where there was little community as such to draw on and convince to work together.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity questions 7 and8):

- A key barrier to limits setting that MDC identified was how to translate identified specific values in a water body into a flow requirement. Potential models aren't cheap and for MDC resources are short. Water is a contentious issue so setting future limits will be very difficult to accomplish regionally unless the NES sets defaults.
- In terms of lessons learnt MDC's view was that, despite the need for more limits in their region, future issues are not around setting limits for allocation. Instead the issues to be addressed are around existing full allocation and redistribution of water.

3.8.3. **Governance** (draws on water quality questions 50-56):

- MDC, as a unitary authority, consider themselves well placed to approach land use effects on water, current integrated plans are designed to do this. The current plan and RPS review is likely to roll over the existing water quality provisions as these are considered adequate. However an alternative water quantity approach will be used as it is acknowledged that this needs to change. These reviews and plan changes will also consider addressing how to deal with full allocation while there is still demand for water. This is a significant issue for MDC.
- In terms of the Council's review of its resource management framework, the Council has created an iwi working group to assist with the review process. This group is made up of one representative of each of Te Tau Ihu iwi (Top of the South iwi). This working group performs

an advisory role in terms of considering draft provisions (i.e. prior to the notification) to ensure that they adequately provide for cultural and spiritual values that the iwi have in respect of water bodies. This process has been in place since 2007 appears to work well. It not only provides a forum for discussion amongst iwi, it also offers greater opportunity to influence policy development given that the role of decision makers is limited to the scope of submissions. The iwi working group also recognises that any influence in terms of policy development is more powerful than involvement in consenting given that policy guides the determination of consent applications.

- As a potential new governance approach MDC is trialling the New Zealand Business Council for Sustainable Development Model. This recognises the difference between paper and actual full allocation and combines a statutory planning model with enhanced transfer mechanisms. This will see allocation set in terms of shares with share value and state of the resource determining entitlement to water. MDC would appreciate support from MfE and MAF for translating this new water quantity model into a statutory planning instrument.
- In terms of central government assistance, implementing the NES for minimum flows would establish region wide limits for MDC and would be more cost effective than them doing it themselves. Regarding water quality, despite being happy with their current planning approach MDC did note that central government could establish more comprehensive standards for water quality classifications.

3.9. Nelson

The Nelson City Council (NCC) RPS was made operative in 1997. The Nelson resource Management Plan is operative (2004) and contains a freshwater plan change that was incorporated into the plan in 2007. One interview was held with staff addressing both the water quality and quantity questions. One staff member was interviewed holding a Senior Policy Planner position. The interviewee had consulted with a variety of staff at Nelson City Council in preparation for the interview.

NCC is a unitary authority, their council area is different to most other Councils considered (except for Auckland) in that it has a high proportion of urban catchments and hence stormwater discharges are one of the main water quality issues. The Council approach to limit setting for water quality also contains unique elements in NZ. Council has set five water quality classes; these are based on their ability to support certain values and are graded in terms of quality, from good to very degraded (A-E). The numeric criteria are the same across the classes but the limits set for each parameter in each class is different. NCC undertakes monitoring every 5 years and classes all waterbodies into one of the five classes. This then affects the management of these bodies, both in terms of discharges into them and also whether water quality that is degraded (<class C) needs to

be improved. Council's policy approach is to aim to manage water bodies so that they meet at least the moderate water quality class (class C) and where water quality is better than this it should be maintained.

Regarding water quantity, the majority of the district's water use is for urban supply. Allocation limits are set for all rivers, some are specific to the values in that waterbody and others are set using default methods (based on a proportion of flow). Minimum flows are not set for all rivers; these are only set as required on specific areas of demand. There are no allocation limits for groundwater except for one aquifer system where takes are prohibited. The cumulative effects of takes from groundwater are dealt with in consent applications.

3.9.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 12, 13 and 18):

- The NCC plan specifies different values, uses and limits for waterbodies in the region. A working party approach was taken towards identification of values and classifying of waterbodies according to those values. The working party included two Iwi representatives, four councillors, a Tasman District Council member, MAF, Fish and Game, DOC, Federated Farmers and others.
- A technical paper produced for NCC specifically considered the values identified by the stakeholders, including Iwi values, as well as the scientific values identified for waterbodies. The intention was that the parameters used to set limits for each class would need to be relevant to aid understanding of whether all of these values were being maintained/enhanced.
- Limits were then derived for these values. Limits were based on the quantitative ANZECC guidelines and the narrative water quality standards in the RMA. The same parameters apply in the limits for each water quality class. However the numeric values are different recognising the gradings of water bodies from good to very degraded (A-E).
- The Council gives effects to their function of controlling land use for the purposes of controlling water quality through a Policy which aims to control land use activities which have the potential to adversely affect surface water quality, and to encourage land use activities that minimise contaminants entering water bodies

Limits that are in place (draws on water quality questions 3, 6 and 17):

- Water bodies classes were developed according to their ecosystem health and usefulness for a variety of values/uses, these were graded from excellent through to degraded. These gradings are revisited every 5 years and waterbodies reclassified. The intent is to improve all waterbodies so that they meet a minimum of class C standard and maintain water quality when it is above class C. Rules relating to discharges make reference to the water quality class that the discharge is passing into. The water quality class shall be maintained if class C or better or

enhanced if class D or E. Compliance, or not, with these set water quality classes affects consents status, especially for permitted activities. This covers all activities except for the discharge of stormwater, agrichemicals and fertilisers.

- Stormwater rules do not relate to the region wide classes, instead MDC's approach is to use narrative limits in the conditions of the permitted activity rule that limit allowable effects of the discharges. Non-compliance with these requires consent for discharge.
- For groundwater quality no limits are set but an objective does exist to avoid groundwater contamination.

How water managers ensure limits are met (draws on water quality questions 21-23, 37-39 and 44-45):

- NCC have a focus on non-regulatory methods, the three main methods identified are providing funding for planting of streamside vegetation, raising community awareness through the Waimaori stream care project and a rural fencing grants project. The Council originally developed proposals for a regulatory approach to fencing to assist controlling diffuse land use impacts but this was very unpopular and dropped through the hearing process.
- To understand whether methods are effective NCC use SOE data to identify whether the objectives are being met. This also identifies whether water quality classes are changing for a particular waterbody and whether plan methods are effective. The SOE data is used to reclassify water bodies every 5 years. Regarding the effectiveness of non-regulatory methods NCC noted that they do monitor the amount of fencing installed as a result of their non-regulatory approaches. Monitoring of the change in water quality resulting from this is not undertaken.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- The main issue NCC identified was regarding existing stormwater discharges and the impacts these have in urban area. These cause significant degradation of water quality (the more degraded classes in their region are generally urban). These discharges are difficult to deal with due to the fact that they relate to discharges from existing historic landuses and space is limited for alternatives.

3.9.2. Water Quantity

Derivation of limits (draws on water quantity questions 5, 6 and9):

- NCC used the same working party approach as for water quality to understand values and develop appropriate objectives and methods. Allocation limits are set for surface waters only. Some by default methods others through creating specific limits based on the values of specific catchments. Minimum flows are set for some rivers only with no default methods. At present there is some thought from Council that the default approach they have adopted is too

conservative and more water may be available than is currently allocated. There are no allocation limits set for groundwater except for one aquifer where takes are prohibited.

- At present for surface water systems there are no default minimum flow methods, NCC recognised that these are important and they considered that the proposed minimum flows NES may be able to set these.

Limits that are in place (draws on water quantity question 5):

- Default allocation methods exist for surface waters, minimum flows are only set for specified catchments. Takes of surface water are only permitted in the plan if there is no take below the specified minimum flow. For all consents to take surface water activity status changes depending on compliance with the relevant flow and allocation limits.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- In NCC's region much of their water use is urban. NCC requires measurement of takes to ensure compliance with the consents. This data allows them to understand if limits are being met. With respect to minimum flows, NCC measure stream flow to understand when these are reached. To date NCC have not had to engage restrictions so do not know how well methods to manage water during periods of low flow will work. However they are currently working through a process to do this.
- In terms of the existing allocation limits NCC has developed a specific policy regarding dealing with over-allocation. The main approach of this policy is to limit further takes.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity questions 4 and 8):

- NCC identified that for them the lack of natural flow data is a barrier to limit setting. In addition the region has a number of existing consents that don't expire until 2026. This is a barrier to both setting and meeting limits as no changes can be made to them.
- In terms of RMA process and setting/meeting limits the implementation of the NCC RPS was delayed as the freshwater plan took a number of years to be developed. To avoid this in future the next plans will integrate the RPS and Plan in one document to avoid the extra layer of regulation.

3.9.3. **Governance** (draws on water quality questions 51-56):

- NCC's future strategies for dealing with integrated land use and water management include the Waimea Estuary study (with Tasman DC). This is NCC's first attempt to fully enable an integrated approach to planning and decision making for land use activities. This will look at all the different influences on the estuary and all the activities in the catchments that can affect the estuary.

- NCC's ongoing approach to management of water quality in the region is to focus on achieving class C water quality classifications. Further water quality limits setting is not considered an issue to NCC.
- In terms of central government assistance, NCC's biggest concerns for water quality are around stormwater discharges and they would value assistance through providing best practise guidelines for stormwater management.
- Additional assistance identified was that it would be useful for consents staff to have tools available to determine the level of effect that land use activities have on water. This will allow a better understanding of the impact of land use decisions during consenting on water quality in the district.

3.10. Northland

The Northland Regional Council (NRC) RPS was made operative in 1999. The operative Regional Water and Soil Plan (2004) contains the region's water provisions. One interview was held with staff addressing both the water quality and quantity questions. Three staff were interviewed holding the following senior positions; Groundwater Manager, Operations Director and Regional Policy Senior Programme Manager.

NRC proposed undertaking an Integrated Catchment Management (ICM) Plan approach to classifying its waterbodies and setting limits in its operative plan. An interim method was identified to use before sufficient information was available to apply the ICM approach. This used RMA schedule 3 surface water classes and then specifies water quality guidelines to be used when considering specific activities to identify relevant numeric parameters for each of these classes. This has been applied to date as the ICM model has not been implemented. NRC are currently of the view that classifying all there waterbodies in accordance with an ICM approach may not be justified.

For water quantity management NRC acknowledge that they need to improve their current provisions. Minimum flows are set for all surface water bodies, some are specifically calculated and a default method applies for all others. No allocation limits are set for either surface or groundwater.

3.10.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 15, 17, 18, 30 and 33):

- Values were developed through consultation with Iwi, stakeholders and general public. An Iwi reference group was used in both the RPS and plan development. The plan specified two limits setting approaches to apply to these values. An interim approach using RMA schedule 3 and guidelines followed by a more comprehensive ICM approach. The ICM approach was

never adopted due to the large number of waterbodies and high cost. It is considered unlikely by NRC that this will be taken forward.

- The existing process classifies the region's water bodies according to RMA Schedule 3 classes. The plan identifies relevant guidelines for the values identified for each class. When a discharge activity is considered at the consents stage compliance with these guidelines is an assessment matter.
- NRC did consider setting land use controls as means of achieving limits but District Councils were against anything that would restrict their land use decisions. NRC's view was that implementing land use control for diffuse sources was politically difficult in their region.

Limits that are in place (draws on water quality question 6):

Existing limits focus on recommending guidelines for each water quality class. These are mainly used in determining consents applications. NRC identified that the existing limits (guidelines) are also used by Council in discussions regarding the allowable effects of permitted activities.

How water managers ensure limits are met (draws on water quality questions 13, 21-23, 37, 38, 39, and 44):

- Where water quality is worse than limits identified Council mainly use non-regulatory strategies to address issues. These included developing a working group with stakeholders to address dairy shed discharges by informing and educating stakeholders and developing appropriate guidelines.

Barriers to setting and meeting limits (draws on water quality questions 15, 16, 18, 19, 20 and 25):

- The Northland Region has a large number of catchments and NRC considered that there would be a high cost in classifying them. This was cited as a barrier to why the identified ICM approach of setting limits was never used.
- With respect to the chosen approach NRC considered that the lack of numeric guidelines applicable to Schedule 3 of RMA was an issue. This meant that everything had to be developed locally.
- In consideration of the setting of any limits NRC identified that limits that are set need to be adaptable to changes and improvements in science and knowledge.
- NRC main identified barrier to meetings limits with respect to its regulatory methods setting is that it regionally has a problem with the low capability and willingness of applicants to provide information on water quality effects of proposed activities when applying for consents.
- In terms of barriers to meeting limits that are affected more by non-regulatory methods NRC identified a lack of buy-in from stakeholders. There was a big gap in terms of people wanting to improve water quality. This applied to stakeholders such as intensive agriculture. NRC need to demonstrate the benefits of proposed approaches and improvements to get community

buy-in as it is easy to see the costs. However having information to do this effectively was not always available. As noted above consideration of a regulatory approach to land use control was considered but this was not supported politically.

- Within their plan NRC proposed a number of methods for meeting limits, many have not been undertaken (e.g. research and developing best management practises) due to the cost. NRC are of the view that nationally it may be better for these to be done centrally rather than the current fragmented approach of doing them regionally.

3.10.2. Water Quantity

Derivation of limits (draws on water quantity questions 5, 6 and 9):

- Values, objectives and limits setting was predominantly through the plan development process and used similar methods to those for water quality. With respect to their existing provisions that provide minimum flow only NRC have identified that they need a more robust approach including allocation regimes. They are working on a new Water Allocation Strategy/Regime to address this.
- For future limits setting NRC is in the process of setting up a Regional Governance Model for Iwi, NRC believes this could make engagement over Iwi values etc more robust. This is however in very early stages.

Limits that are in place (draws on water quantity question 5):

- At present minimum flows are set on surface water bodies with no allocation limits. To mange activities around these the permitted activity and other take rules must comply with these minimum flows. Applicants can apply through the consent process for a different minimum flow. In general, for both surface and groundwater, takes other than the small amounts allowed through permitted activities are generally discretionary and water availability is considered as an assessment matter.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- NRC's main approach to meeting limits is to have efforts around non-regulatory public education and District Council encouragement to ensure that takes are managed to maintain the minimum flows.
- Overall NRC's view is that the community undervalue water and therefore NRC struggles with its management and struggles to meet limits. To address this issue a New Water Allocation Strategy/Regime is being developed that intending to set more limits and provide more methods to aid meeting them.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity questions 4 and 8):

- NRC identified that they have problems setting limits due to their councillor's perception of issues. They are not always supportive of regulation as demonstrated by issues around land use management.
- Additional concerns over setting and meeting limits are that public perception of issues is a concern. There is a lack of understanding of the values of water and a general belief there is a right to take and use water. As part of this there is a general misunderstanding that a resource consent guarantees supply.
- In terms of lessons learn NRC has learnt that it needs more limits, possibly defaults that the NES may assist with (as long as NRC can override with own if necessary).

3.10.3. **Governance** (draws on water quality questions 51-56):

- NCC has problems at moment with integrated land use and water management due to the politics of regulating this issue. This is coupled with the poor existing regulations and is an area they are working on. Overall integrated land use and water management is a key area and considered to be a national issue, but there is a big problem of political will to regulate this. Central government direction that integrated management is a national priority would be good assistance. NRC identify that it is hard to deal with this on a local level and direction could be given by central government.
- Regarding future approaches to water allocation management the New Water Allocation Strategy/Regime that will setup a water allocation plan. This plus a review of the RPS are two steps to address water quantity management. To assist with these NRC is currently in the process of developing a new governance model with Iwi that includes water management issues.
- Central government could assist NRC future plans by establishing the NPS for freshwater and with the provision of the science and guidance to go with the NPS.

3.11. Otago

The Otago Regional Council (ORC) RPS was made operative in 1993. Their plan that covers water management is the Regional Plan: Water that was made operative in January 2004. One interview was held with a staff member addressing both the water quality and quantity questions. One staff member was interviewed, the Director of Policy and Resource Planning.

ORC has taken a generally different approach to water quality limits to all other councils in NZ. The only broadly similar approach is that undertaken by Nelson City Council. Rather than set limits for waterbodies the approach is to maintain existing quality and enhance degraded waterbodies. Effort goes to giving direction to industry to treat wastewaters to the best quality

possible or remove them from water bodies. This is considered a good approach by ORC as it avoids arguments over limits and recognises geographical diversity. However ORC are considering some receiving environment limits as part of a proposed plan change under consideration to mange non-point source discharges. This would look to put limits on discharges from land use activities rather than specifying activity controls. This then lets land users decide how best to meet the limits.

For water quantity this is a significant issue for ORC. There plan approach has set minimum flows in all surface water bodies, some are specific to the values of that waterbody and they do have a general default method too. Allocation regimes are set in specific waterbodies (surface and groundwaters) based on the protection of their values. These have been developed where demand on water resources was evident. Other areas do not have management regimes and are managed through the consent process.

3.11.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 10, 16, 17, 30 and 33):

- ORC's approach to water quality management is generally quite different to the all other NZ Councils except Nelson City Council. The ORC do not set any limits. Council process in developing this policy approach involved working with community to identify the values they have in the waterbodies, these are then set in the plan and the intent is to maintain existing water quality or improve degraded water quality to maintain these values.
- To date this approach has not included land use management. ORC did originally in their RPS envisage producing a land plan but this has not been developed. Instead it has been agreed with TA that any land use control rules will go into district plans. This is as part of an agreement under the Local Government Act.
- At present ORC are considering their future direction of water management. The current approach will be retained however they will produce a diffuse (non-point source) discharges plan. This is looking to control outputs from land use systems. Therefore ORC will create some receiving environment limits and allow agricultural landuses determine how best they can meet them. This approach is attempting to transfer ownership of the problem to land owners rather than just telling them what to do and controlling their inputs.

Limits that are in place (draws on water quality question 1):

- The Council approach is to take the existing water quality and seek to maintain it. This is undertaken through consideration of consents and the council has communicated expectations for community, especially industry discharges to minimise their effects as much as possible.

How water managers ensure limits are met (draws on water quality questions 21, 22, 23 and 37-39, 44):

- ORC uses a mix of regulatory and non-regulatory methods at present to meet these limits. Their view is that consenting works well as a regulatory method with respect to this approach. New regulatory methods will be developed in accordance with their non-point source discharge control plan. These are likely to also include permitted activity rules associated with land use activities.
- Non-regulatory methods include advocacy to landowners and district councils as well as fencing of waterways. The overall view of ORC is that regulatory methods are more effective than non-regulatory ones. With respect to understanding whether specific methods aid meeting limits ORC noted that measuring effectiveness of non-regulatory methods is difficult as you can measure the amount of fencing but does not mean water quality has changed.

Barriers to setting and meeting limits (draws on water quality questions 20 and 25):

- The main barrier to both setting and meeting limits identified was getting stakeholders to understand and "own" the problem. This includes current farmer attitudes to the impacts of discharges and urban attitudes to the impacts of stormwater runoff.

3.11.2. Water Quantity

Derivation of limits (draws on water quantity questions 1, 4, 5, 6 and 8):

- When developing existing plans ORC knew that water availability was a big issue in much of the region. Hence existing plan provisions addressed this in the original RPS and Plan. However the original methods have changed. Rather than telling the community what limits are to be set ORC employs significant consultation in limits setting. The current approach is to hold three workshops. The first to define values, second to discuss flow limits and third to agree a flow regime. ORC considered that this current approach is successful as in the three catchments it has been used in there have been no appeals once the plan was notified and went through the hearing process. This process will be used in future.

Limits that are in place (draws on water quantity question 5):

- Existing limits set minimum flows for all surface waters and allocations for specific surface and groundwater resources. Within the rules for takes to be permitted activities they must comply with minimum flows. The allocation status of the waterbody is a factor involved in determining consent activity status. Takes within allocation blocks are generally restricted discretionary with generally discretionary status outside the limits.

How water managers ensure limits are met (draws on water quantity questions 7, 9, 10, 12 and 13):

- ORC's view is that the non-regulatory regime is only there to support the regulatory process. Council views and experience is that it cannot purely use non-regulatory methods to change behaviours. Regulatory methods are needed in addition. Non-regulatory methods that are used include establishing water allocation committees and promoting effective water utilisation.
- The ORC were of the view that over-allocation as not a simple term to use and is also a difficult issue to address. The concept of over allocation links in to reliability of supply and efficiency of resource use. High reliability may lead to ineffective use of the resource and through acceptance of a lower reliability of supply further water could be allocated to others. However decisions around reliability of supply were difficult to address as abstractors generally wanted high reliability. This leads to less people being able to access the resource.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- Barriers to setting limits occurred in early plan developments of flow limits when the community were told the answer rather than being given a role in deriving the limits. ORC have changed the approach and now get the community to identify and drive the values they want Council to protect. The approach is to all agree both what the problems is and the solution.
- In terms of future limit setting and also implementation of methods to ensure that limits are met ORC are looking at better balancing of the LTCCP and RMA process. This will be done in their RPS. They intend to describe local authority role as well as RMA and address more issues through non-RMA processes.

3.11.3. **Governance** (draws on water quality questions 51-56):

- ORC is in the process of developing a non-point source discharge plan to set limits around discharges from land use activities that impact on water quantity. This is a current area that requires management.
- They have released a Water Management and Allocation in the Future Strategy. This arose from community forums and meetings. The purpose of the strategy is to provide direction and a common focus for policy and decision making. A proposed plan change is building on the idea of community management of water consents when issued. In this model consent holders will determine how the regime is operated, especially when resources are under pressure.
- As a general governance approach the ORC is shifting away from absolute science to more understanding of community values. This includes more methods around community values definition. Central government assistance around community values definition would be valuable.

- ORC comment that central government needs to stay open to alternative approaches and creative/innovative ways of linking water management issues together. ORC noted that central government could focus on environmental outcomes they want, rather than best practice, to create innovation in land use. This is the approach ORC were attempting with their non-point source discharge management approaches. Their draft plan will set standards for farmers and let them choose the technology necessary to meet targets; the aim is to get land users engaged in the issue.

3.12. Southland

The Environment Southland (ES) RPS was made operative in 2004. The main plan relating to water is the Regional Water Plan for Southland (almost entirely operative 2009). There is also an operative effluent land application plan (currently under review and to be merged with the water plan as part of the Discharge Plan Project). Two Water Conservation orders occur in the Council areas, on the Mataura and Oreti Rivers.

Two interviews were held with a Senior Planner addressing the Water Quality and Water Quantity questions. Other regional council staff input to key questions as required and this was coordinated by the Environment Southland contact.

ES used the River Environment Classification (REC) to classify their waterbodies into types based on source of flow and geology. An additional class specific to the Mataura Water Conservation Order was added. Water quality standards were developed for each class. These are predominantly numeric limits that are intended to be used as receiving environment standards. The main discretionary activity discharge rule requires compliance with these standards. Otherwise a discharge activity would be classed as non-complying.

For water quantity ES set minimum flow and allocation methods to apply to all surface and groundwaters. Minimum flows on surface water bodies are not defined in the plan and the methods are not fixed. Instead a conservative default minimum flow method is used when resources have low allocation. As allocation increases a more detailed minimum flow needs to be developed. For groundwater a staged allocation approach it taken rather than exact set allocation limits. This reflects a lack of data on the resources and allows potential issues to be dealt with during consenting as allocation increases.

3.12.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 10. 13, 15-17 and 28):

- ES developed classes around a REC framework which included using community workshops to identify significant values. They then used an ICM approach to develop appropriate objectives and limits for these values. This used an expert panel, incorporating advice from consultants, to identify and then refine limits for each class. The expert panel group included DoC, Fish and Game, Iwi groups and other technical groups. Iwi also sat on the council group that made decisions in relation to the plan.
- Regarding limits that relate to the impact of land use activities the RPS is under review in conjunction with the Southland District Council's review of its District Plan. There is some discussion on what level of direction to give to TLA's on land use but ES identified that is too early to indicate where this discussion is heading. The discharge plan project that is in progress is reviewing the existing regional plans that deal with discharges to land. These will be incorporated into the water plan. As part of this discharge plan project ES will be addressing non-point source pollution and the cumulative effects of land use on water quality. It is not yet decided how ES will manage these issues.

Limits that are in place (draws on water quality questions 6 and 17):

- Water quality limits (standards) are provided for each class and provide for the protection of the critical values identified for that class. Limits set for each class are predominantly numeric with some narrative descriptions. Surface water quality limits have regulatory status in the rules as the permitted activity discharge rules and default discretionary activity discharge rule require compliance with the set water quality limits for the receiving environment after reasonable mixing. Non-compliance triggers the need for consent as a non-complying activity.
- For groundwater the objectives set maintenance of existing quality and achievement of drinking water standards as the region wide groundwater quality limits. Groundwater quality limits are only given regulatory status once consent is required as part of the decision making/assessment process.

How water managers ensure limits are met (draws on water quality questions 14, 21-24, 37-39 and 44-46):

- The main regulatory method the Council uses is through the rules and specifically for surface water the requirement that discharges meet the water quality set to be permitted or discretionary activities. Combining this with the non-complying activity status gives a strong direction to potential applicants that discharges should meet water quality classes. ES has separate permitted activity discharge rules for a few specific activities that do not require compliance with the set standards. These generally have other water quality limits specific to

the activity in the rules. These include the rule for stormwater that requires that the discharge does not give rise to scums foams etc.

- ES in its plan list 14 non-regulatory methods that can aid achieving limits. From discussion with council one of the most effective of these was the living streams project. However, ES did identify that non-regulatory methods are resource intensive, which constrains its ability to roll out non-regulatory methods such as the living streams project across the whole region.

Barriers to setting and meeting limits (draws on water quality questions 20 and 25):

- The main barrier to limits setting that ES identified was the development of water quality standards where there was not enough scientific information. This especially relates to non-point source discharges as it is a challenge to collect the right scientific information to justify limits. This is particularly the case for councils with limited resources.
- ES identified that bringing the community along with the need to manage land use and non-point source discharges is another identified barrier to both setting limits around these activities and meeting the region wide water quality limits.

3.12.2. Water Quantity

Derivation of limits (draws on water quantity questions 4, 6 and 9):

- ES advised that developing values, objectives and limits took a similar process to water quality. However the situation regarding water availability has changed significantly since the RPS was developed. There is now more pressure on resources. Future limits setting will address the links between groundwater abstraction and stream depletion better and involve setting up and engaging more water users groups in the process. Overall ES's view was that much of existing water quantity management they have undertaken has been reactive rather than proactive due to the rapid change in land use that has occurred in the region (especially to dairying) and the nature of planning processes under the RMA. Their intention is to attempt to become more proactive. This will be done by initiating catchment reviews.

Limits that are in place (draws on water quantity questions 5 and 9):

- The methods outlined in the plan set default minimum flow and allocation methods. However ES's approach is that the complexity and level of detail in the methods to be used to establish the minimum flow will depend on the state of allocation of the resource. In general the methods to be used become more robust as the level of allocation increases. When allocation is low default minimum flows can be used that are conservative. As allocation increases these methods change and minimum flows need to be developed specifically for that water resource. Applicants have the option of undertaking the more detailed work if they wish to have a minimum flow lower than that identified through using the conservative default method.

- For groundwater ES has a staged approach to allocation. This is because there was not enough data to establish set allocation regimes. Risk is then managed through the consenting process with higher risk takes (larger or where aquifer already has high numbers of takes) being subject to greater information and monitoring requirements.
- The consent activity status changes with the level of allocation of the resource for both groundwater and surface water. Above a nominated allocation threshold applications change from discretionary to non-complying status.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- ES's main regulatory method is that they have established a process for having default allocations and minimum flows for all resources. The consent activity status then changes if these limits are exceeded. In terms of non-regulatory methods the key methods are the establishment of water user groups and initiating of strategic water studies in catchments with high demand and existing issues. This is currently being undertaken in the Mataura catchment.
- Within its plan ES do not set direction regarding dealing with over allocation.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- ES's identified that the main barriers it has had to setting limits are a lack of information on flows/values of waterbodies. As a small council they have a lack of sufficient resources to get that information.
- For ES the change in resource pressure over the last 10 years is an important factor. The increase in demand for water, and time taken to get planning provisions operative, means that ES has traditionally been reactive rather than proactive to issues. To counteract this ES are seeking to be more proactive in the future. This will involve investigations into specific catchments and initiating plan changes from the outputs of those investigations ahead of significant issues arising.
- As a lesson learnt ES has changed their approach to community inputs and are now seeking much greater community consultation and engagement in limits setting. This is considered to get more community buy in later in the process.

3.12.3. **Governance** (draws on water quality questions 51-56):

- ES has two big policy processes ongoing. These are the review of the RPS and the Discharge Project. The discharge project looks to review the plans that deal with discharges to land and incorporate more focus on land use impact on water management.
- ES is also seeking to work more cooperatively on non-regulatory strategies with the primary sector such as the Balfour Groundwater Project. Other ongoing strategies include the Living Streams programme and a strategic water study for Mataura catchment. As noted above ES is conscious that previous policy responses have been more reactive than proactive. Hence the

initiation of the strategic water demand study for the Mataura catchment as this is the catchment that is under the most pressure. With respect to this reactive policy point ES identify that having a method to put consents etc "on hold" in a catchment while a policy response can be developed to issues arising is put in place may be valuable.

- In terms of central government's role, ES considered that it could reinforce the role of water planning at catchment level as they are of the view that is the appropriate level at which to be managing a resource. In addition central government could provide guidance on national values and nationally significance to aid councils developing provisions. Within this could be guidance on how to balance competing values for growth.

3.13. Taranaki

The Taranaki Regional Council (TRC) RPS was made operative in 2010. The council also has an operative Regional Freshwater Plan (2001) and a local water conservation order on the Stony River. One interview was held with staff addressing both the water quality and quantity questions. One staff member was interviewed, the Policy Manager. Specific questions were followed up with phone calls to a Scientific Officer and the Consents Manger.

TRC has the view that limits' setting is important but not necessarily required for all resources. The approach to water quality is to use guidelines, these are implemented in conjunction with the schedule 3 RMA classes and intended to be guides to assessing effects on the schedule 3 values when assessing consents. For water quantity TRC again takes a guideline approach to protecting the quantity, level and flow of water to retain at least 2/3 of the habitat for trout at mean annual low flow. This is used in assessing consent applications and Council staff have internal guidance on where water may be available. There are no actual minimum flows or allocation limits set.

3.13.1. Water Quality

<u>Derivation of limits (draws on water quality question 1-7):</u>

- TRC consulted with a wide range of stakeholders including Iwi, farmers, industry, community water users, environmental groups, NGO's etc to identify values and a policy approach for the region. They used technical reports that were developed by Council, public discussion documents and other methods of engagement to support this community consultation process. Through this it was decided that limits were not required on all resources and guidelines were more appropriate.

<u>Limits that are in place (draws on water quality questions 6 and 17):</u>

- The guidelines developed were intended to provide details of appropriate numeric limits to support RMA schedule 3 values in a waterbody. TRC have a list of appropriate guideline documents in the plan. At present the ANZECC 2000 guidelines are the most frequently used

guidelines. Also used are the 'Surface water quality guidelines' in Appendix V of the Plan (which are based on the water quality classes under schedule 3). The guidelines are used in consenting decisions only, they have no status in rules

How water managers ensure limits are met (draws on water quality question 11, 15, 16, 21-23, 37-39 and 44-45):

- TRC's approach to meeting limits uses both regulatory and non-regulatory methods. TRC consider 85% of inputs that affect water quality in their region are from diffuse sources arising from farming. They have established a Sustainable Land Management Programme. This includes a riparian management strategy that involves development of farm based riparian management plans to control diffuse inputs.
- The Council has also adopted a Regional Action Plan under the Dairying and Clean Streams Accord between the Council and farming industry groups. The Regional Action Plan focuses on reducing the impacts of dairying on water quality in Taranaki. Current monitoring shows targets under the Action Plan for 2010 in relation to preparation of property plans, implementation of property plans through riparian fencing and planting, stream crossings with bridges or culverts, fencing of regionally significant wetlands, farm nutrient budgeting, and farm dairy consents compliant with regional plans – have been met. It also shows however that more effort will be required on physical works if the 2015 target for implementation of riparian fencing and planting is to be met.
- For TRC a significant amount of effort continues to go into working with the community and farming industry groups to implement its non-regulatory programmes. This is still TRC's preferred approach but if it is not successful TRC will consider regulatory methods to address diffuse source contamination.
- The TRC also continues to use the resource consents process to ensure water quality limits are met through a process of continual monitoring, review and enforcement of resource consents and consent conditions.
- Advice from TRC was that current state of the environment monitoring shows overall water quality in the region is being maintained and enhanced in accordance with TRC policy.

Barriers to setting and meeting limits (draws on water quality question 19, 20and 25):

- TRC consider that cost is a key barrier to setting limits; they noted that it is expensive to do detailed values identification, classification and limits setting on each water body (particularly given the region's very high drainage density) and limits may not be appropriate on all water bodies.
- An additional concern raised was the issue of being able to pollute up to limits that are set. Council has a policy approach of maintain and enhance water quality to attempt to counter this.

- TRC identified that in Taranaki the most significant examples of degraded waters are or have been associated with municipal wastewater discharges. The last major discharge of municipal wastewater to inland waters in Taranaki will cease in 2010. It has taken time and money to remove these discharges from waterways. Technical and resourcing constraints also play a part in meeting water quality limits generally. However, the Council's latest state of the environment report shows considerable expenditure continues to be made by industry and councils in improving waste treatment and disposal across the region to meet consent conditions and Fresh Water Plan objectives.

3.13.2. Water Quantity

Derivation of limits (draws on water quantity questions 6 and 9):

- TRC identified that the process taken to derive limits was the same as for water quality. The review of the Fresh Water Plan due in 2011/2012 will consider current and possible alternative provisions relating to water allocation including setting allocatable volumes, providing for flow variability or flow sharing, prioritizing between different uses and setting minimum flows etc. However the current approach has generally worked to date. While pressures are on some resources it is not considered that detailed ecological or environmental flows need to be developed for all resources.

Limits that are in place (draws on water quantity question 5):

- Existing limits are guidelines only. The guideline is a habitat based guideline (rather than a simple hydrological flow guideline) for adult brown trout which has been derived from Taranaki based research using the IFIM methodology (Note: The habitat requirements for adult brown trout also meet the requirements for many other freshwater species). These limits are assessed at consenting stage only and do not affect activity status.

How water managers ensure limits are met (draws on water quantity questions 7, 10 and 12-13):

- Council staff have internal guidance on where water is available that they use when processing consents. TRC uses the resource consents process to ensure that Fresh Water Plan policy is met regarding instream values, minimum/residual flows, justification for water sought, alternative sources considered, efficiency of use, mitigation measures etc. The TRC also uses non-regulatory methods including promoting efficient water use and getting users to adopt water saving measures.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- Cost is again the main issue identified as a barrier to limit setting. TRC consider that, to do all instream habitat assessments and develop minimum flows for all rivers will be very expensive and may not be needed for all resources.

- From the lessons they have learnt implementing the current approach TRC will look at options for different tools and mechanisms in their Freshwater Plan review that is soon to be undertaken.

3.13.3. **Governance** (draws on water quality questions 51-56):

- TRC consider that they generally have the plans, strategies and agreements with District Council's in place that they need to manage the region. They consider that the need to integrate land and water use is well recognised in the policies in the plan. The Sustainable Land Management Programme is one of the key ongoing strategies for improving the region's water resources. Monitoring of the effectiveness and uptake of the riparian plans falling out of this programme is being undertaken and Council have noted that they would like to see improvement there.
- The big question for TRC is how to deal with non-point source discharges. Options they may consider include increasing the rates for incentives or use regulatory rules. At present the TRC's approach is to promote wider and faster voluntary uptake and implementation of riparian plans.
- Central government support for non-regulatory approaches would be helpful; this could be aimed at informing, encouraging and promoting good practise to landowners and sector organisations (dairying, forestry etc). This can aim to get national support on these issues. If central government undertook good research with clear recommendations and outcomes TRC consider that this would be something farmers may respond to.

3.14. Tasman

The Tasman District Council (TDC) RPS was made operative in 2001. TDC have a proposed plan of relevance to water management, which is the Tasman Resource Management Plan (2008).

Two interviews were held addressing the Water Quality and Water Quantity questions. A Senior Planner from the Planning section was interviewed and coordinated other council staff input to the questions as required.

TDC is a unitary authority. The councils approach to water management was to develop Water Management Zones across the region. These identify the values and use of the zone and relate to RMA schedule 3 classifications. Water quality limits are developed for each zone when set. These are a mix of numeric and descriptive limits. At present, zones and limits have only been set for certain catchments. TDC have been trialling a long term Integrated catchment management approach in the Motueka catchment in conjunction with Landcare Research. This is considered by council to have developed some really good catchment modelling tools and is doing work that is improving the understanding of the relationship of the catchment with coastal areas.

For water quantity the same zones and values are used to set minimum flows and allocations in the region for both surface water and groundwater. These are base don IFIM methods that use the underpinning values identified for each zone. Default allocation methods also exist where there are no specific zones established or where a flow regime is still to be developed for a zone.

3.14.1. Water Quality

Derivation of limits (draws on water quality questions 1-7 and16):

- TDC developed a schedule of values and uses for waterbodies in their region. This was used to underpin the water management zones. The details in this schedule were mainly rolled over from previous plans and involved relatively limited stakeholder input. Recent approaches to setting zones has involved much greater community and stakeholder involvement to determine values for waterbodies and agree appropriate limits. As an example of this a detailed ICM approach is being undertaken as a study on the Motueka River by Landcare Research.

Limits that are in place (draws on water quality questions 6 and 17):

- Water quality limits in place include a mix of numeric and descriptive values that apply in the receiving environment. The regulatory approach to these limits depends on the zone. Within two specified zones compliance with the limits is required for activities to be permitted. In other zones consideration is only given to the limits as a form of guidance in assessing consents.

How water managers ensure limits are met (draws on water quality questions 15, 2, 22, 37-39 and 44-45):

- TDC's main regulatory approach to ensuring their limits are met is through development of the discharge rules. These in the main require assessment of the water quality during consenting of discharge activities. TDC state that non-regulatory methods are limited due to limited council funds (small council). However TDC do provide advice to farmers regarding fencing and planting as do other groups in their region such as Forest and Bird. TDC find that industry led partnership groups are effective non-regulatory methods to address water quality problems where primary industry groups are interested and willing to be involved.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- TDC identified that barriers to setting meeting generally occur where existing land use already exceeds assimilative capacity. In these catchments promotion of best practise is unlikely to be effective. In addition lack of community commitment to the problem or stakeholder buy in is a barrier to both meeting and setting limits.

- For council to deal with the impacts of non-point source discharges on set limits the current approaches require Council having to internalise environmental costs. This puts a cost barrier on how much can be done and therefore how well limits can be met.

3.14.2. Water Quantity

Derivation of limits (draws on water quantity questions 6 and 9):

- Limits setting followed a similar approach as limits are set around the Water Management Zones and their values. Limits can either be set by default methods (default allocations that apply across the entire region) or through more detailed investigations and IFIM methods specific to identified water management zones. IFIM gives specific flows for the values and uses identified as important for that Water Management Zone.
- At interview TDC identified that three principles underpin the establishment of flow regimes, these are: 1. Flows settings required to maintain environmental quality, 2. Allocation of water above these limits and 3.Water use efficiency to increase the available water resource.

Limits that are in place (draws on water quantity question 5):

- Specific limits are set on zone by zone basis and include both surface and groundwaters in that zone. Continued development of specific limits is ongoing, however TDC have identified that some catchments may not need limits due to low demand.
- In terms of a regulatory approach to managing the limits the permitted activity rules for takes of water do not relate to set minimum flows or allocations. Once consent is required, compliance with the minimum flows established in the plan is one condition that helps determine activity status.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- The primary regulatory method is the setting of regional rules requiring resource consent for water takes above stated thresholds. Non-regulatory methods include providing information to users, and promote industry codes of practise. For TDC determining the effectiveness of non-regulatory methods is mainly done through assessment of how much they are challenged, the level of community/stakeholder buy-in and the degree to which they are utilised. This is as opposed to monitoring the environmental effectiveness of the approaches.
- TDC identified that they have over allocation in the Waimea Plains Management Zone. They are investigating options for water augmentation and undertaking feasibility studies into a dam. As part of this the council is looking to align this approach with their set limits.
- A non-regulatory method that TDC have identified as working well is having water user groups develop a community rostering system to collectively meet low flows. For users the threat is that these voluntary methods do not work they may face a regulatory approach (i.e. rationing rather than rostering)

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- TDC identified that there is never an exact answer to how much water should be left behind in a catchment. This is the subject for much debate and lack of certainty can be challenged legally. The issue of provision of certainty in a RMA framework has also been identified by other councils. With setting these limits TDC identified that there is more information available for fish and instream values than for cultural and social ones. Therefore setting limits that included provision for these values was more difficult.

3.14.3. **Governance** (draws on water quality questions 51-56):

- TDC's view was that being a unitary authority and small council helps integration of land use and water planning. At present they are comfortable with the approaches taken and plan on continuing to move forward with these.
- In terms of future direction TDC have identified that they need to use an inclusive process. Key aspects involve getting the right people (stakeholders) involved. They also note that there is a fine balance between getting them involved early and giving them enough information to deal with when they do first get involved.
- TDC identified that the role of the LTCCP is important in getting methods implemented. TDC consider their integration is good at present between RMA and LTCCP methods. TDC voiced the opinion that when looking to integrate land and water management it is important for council to note that a lot of integrated work is outside the plan and RMA process, can be difficult to integrated into RMA context.
- Future work for TDC will include develop their uses and values schedule for waterbodies further. Putting more community input into this.
- In terms of central government assistance, TDC noted that guidance on national values can be slow in arriving as many regions have already progressed their regional approaches to addressing RMA issues. Having clarity on these would be valuable. In addition having assistance on integrating hydro and energy values into the setting of limits would be good as these are not well understood.

3.15. Waikato

Environment Waikato's (EW) RPS was made operative in 2000. The Waikato regional plan covers water management issues and was made operative in part in 2007. Variation 5 to this plan is especially relevant to water quality as it seeks to manage land use around Lake Taupo to meet limit in lake water quality. This variation was 10 years in the making and was proposed in 2005.

Three interviews were held with staff separately addressing the Water Quality and Water Quantity questions. Three staff were interviewed within from within the Planning and Science sections holding a variety of senior positions including Senior Scientist Ecology and Senior Planner.

EW's operative plan sets region wide water quality limits based on classification of the waterbodies in accordance with schedule 3 of the RMA. These are a mix of numeric and descriptive limits and are considered appropriate for most of the region. EW have undertaken a different approach in the Taupo catchment in a more recent variation by setting an overall loading limit on landuses to maintain water quality in the lake at its current level. This is a large scale attempt to control land use and diffuse discharges within a framework of an allocation cap. Community involvement in this variation was widespread and lead to a strategy for the lake. Central government support was also provided to the issues being dealt with.

For water quantity the plan contains set minimum flow and allocation regimes for specific waterbodies based on their values. In addition region-wide minimum flow and allocation limits exist for surface waters. For groundwater allocation limits have been established for some key groundwater systems. No default methods exist for establishing allocation for other groundwater and water availability is dealt with at the consenting stage.

3.15.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 12, 13):

- The Taupo variation represents the latest Council processes on limits setting as the operative plan was developed 12 years ago. A much more intensive consultation strategy was developed for the Taupo variation. This lead to the development of an action plan for the lake by key stakeholders. The process identified many values for the lake and then prioritised the key ones. The community were then given options of how they wanted the lake to be managed in the future. The outcome of this was an objective of maintaining existing lake quality.
- From this objective a significant amount of scientific work identified appropriate catchment loading limits and these were assigned as nutrient budgets to existing land uses. These sit within a framework of capping nitrogen inputs to maintain the lake quality. It is recognised that this is a long term approach due to the lag between land use activities and change and resulting impacts in the lake.

Limits that are in place (draws on water quality questions 5, 6 and 17):

- Region wide limits are established as receiving environments limits. EW's regulatory approach is that some permitted activity rules make reference to compliance with the water quality classes. However once consent is required compliance with the classes does not affect consent status and water quality impacts are purely assessment matters.
- For Lake Taupo the limits are again receiving environment (maintain existing lake quality) but the controls involve setting loading limits on activities. The approach taken is that compliance with the permitted activity rules is intended to lead to compliance with the allocated load of nitrogen.

How water managers ensure limits are met (draws on water quality questions13, 21-21, 37, 38 and 44):

- The main regulatory method in the operative plan is the development of rules. For Lake Taupo, setting an allocation cap is a key method of Council. Then strict permitted, controlled and non-complying activity rules set the direction for land use activities.
- In terms of meeting limits, EW have a range of non-regulatory methods outlined in the plan. From discussion they identified that there is no clear sense if any of the non-regulatory water quality methods are being effective, as monitoring is not showing clear improvements linked to methods. EW advised that the non-regulatory methods are not effective, or at least not as effective as council needs them to be in response to the water quality issues. It is clear that voluntary methods are not enough to address the issues. But there is no clarity at this stage either by council staff or council on the best way to get these changes. It is likely that it will need to be either an industry-led initiative or a rule of some sort.

Barriers to setting and meeting limits (draws on water quality questions 18-20 and 25):

- For EW the political will (of council) and lack of agreement from landowners are identified as barriers to both setting and meeting limits. This especially relates to control of non-point source discharges.
- As an interesting counterpoint to many councils EW noted that they consider they know all the science that is needed. Their issues were around the political will to set standards based on what the science was saying. In addition to this point EW identified that a basic "no further degradation" approach to managing water quality could be an appropriate national direction.

3.15.2. Water Quantity

Derivation of limits (draws on water quantity questions 4, 6 and 9):

- EW transferred some older environmental flow regimes into its plan and has a more recent variation (Variation 6) that introduces new processes for allocating water. In this variation 6 process EW stated at interview that they found it difficult to get input from Iwi on their values.

Once other values were identified for waterbodies, EW used the MfE Environmental Flow Guidelines for In stream Values (1989) and IFIM and other modelling to develop appropriate minimum flows and allocation limits.

Limits that are in place (draws on water quantity question 5):

- Methods exist to set default minimum flows and allocation limits for all surface water bodies. Where resource demand occurs specific regimes have been developed in certain catchments. EW has established allocation limits for all major groundwater systems. The impacts on other users and the environment of water takes from other groundwater are dealt with through consents.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- As a regulatory approach to managing set limits the existing allocation status affects the activity status for takes of water from surface waters. For surface waters takes within 70% of the allocation limit are generally controlled with activity status above this including restricted discretionary, discretionary and non-complying. For groundwater, any takes above permitted levels are generally discretionary or non-complying. For general non-regulatory methods to achieve limits, EW identifies that establishing water user groups are a key mechanism in the region.
- Where resources may be over allocated EW has policies regarding over-allocation. The methods used to address over allocation specify that non-regulatory approaches will be used. These are to include: encouraging voluntary reductions, reviewing existing consents, shared reductions and rostering.
- With respect to all their objectives, policies and regulatory and non-regulatory methods EW have an intention to monitor plan effectiveness. However this is on back-burner as Council's resources are busy on the RPS review and next generation plans.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- EW identified that getting good technical information takes time. The time and costs associated with this are barriers to getting limits in place quickly. An additional element of this is that in limits setting stakeholder involvement can be time consuming. Again this means that provisions take a long time to be developed and be made operative from when issues are first identified. Any data that is gathered, or provisions proposed, can be challenged through the Environment Court again leaving council in a difficult position of attempting to manage the issues with no operative limits.

3.15.3. **Governance** (draws on water quality questions 51-56):

- EW's latest approach to land use planning and management is demonstrated in the Taupo variation. They are already targeting two catchments with an ICM approach that in addition will focus on building good relationship with landholders. These are the Little Waipa and Waipapa catchments.
- In terms of non-regulatory strategies, the clean streams projects with farmers and national Clean Streams Accord are significant ongoing projects.
- In terms of improving EW's current approach to long term strategic planning, their opinion was that it is as simple as identifying non-degradation goals for particular parts of the region for water quality. EW expanded on this with respect to amending schedule 3 of the RMA. They considered that water quality degradation from increasing intensive land use is not an issue unique to Waikato. Their opinion was that the best thing MfE could do is to promote a simple standard of "no further degradation of water quality" to give national direction to managing this issue. EW considered that the proposed NPS on freshwater would assist in this approach.

3.16. Wellington

The Greater Wellington Regional Council (GWRC) proposed RPS was released in 2009. GWRC also have a Regional Freshwater Plan that became operative in 1999. One face to face interview were held with three staff addressing both the water quality and quantity questions. The staff were the Team Leader Policy Development, a Resource Advisor and the Team Leader Environmental Regulation.

GWRC have just completed a significant review of their RPS and initiated a review of their regional plans. The RPS sets direction that many of the existing provisions that relate to water quality and quantity will change. At present, Council sets water quality classes across the region (based on schedule 3 of the RMA) and provides a list of guidelines to assist in determining water quality requirements to support the class values. The indication from Council is that more specific limits setting (as numeric limits relevant to each class) is likely to be part of the upcoming plan review. However they recognise that this will be lengthy and expensive and consider that national direction on appropriate limits for identified values would be useful. GWRC noted that any limits and Schedule 3 of the RMA should consider both quality and flow elements of guidelines to protect values. This will deal with whole ecosystem rather than issues in isolation.

With respect to water quantity, at present some minimum flows and allocations are set a group of catchments and aquifers specified in the plan. These have developed over time. The new RPS

gives direction that Council will develop more flow and allocation regimes and will also review the existing ones created using older methods.

3.16.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 13, 15 and 16):

- The new RPS provides the future direction of the GWRC and is reported here rather than focusing on older plan provisions. An ICM approach is integral to the new RPS and will be given effect to in the Regional Plan review. Methods of value and objective identification used in developing the RPS will be used in the plan review. The GWRC initiated meetings and working groups with key interested parties, Iwi were involved in these working groups and these groups will continue to provide input. Since the RPS was developed a new Council committee has been established to oversee the Regional Plan review, this has seven councillors and seven Iwi representatives.
- While the new plan is likely to set standards for water quality and may use loading limits; the GWRC indicated that this is still to be decided at this stage. At present non-point source discharges are not addressed in the current plans except by non-regulatory methods. GWRC indicated that they may include regulatory methods to address these issues.

Limits that are in place (draws on water quality question 17):

- Existing limits are established for each water quality class. They apply in receiving environments and are intended as guidelines to decision making only as they do not relate to the rules.

How water managers ensure limits are met (draws on water quality questions 12, 21-23, 37-39 and 44):

- The main regulatory approach to ensuring limits are met is through the consideration of the guidelines in the consenting process.
- GWRC have a large range of non-regulatory methods in progress that aim to ensure limits are met. These include implementing a regional water strategy, erosion and sediment control guidelines, dairy effluent guidelines, riparian strategies and guidelines for stock access (in progress). Many of these are methods are not outlined in the current plans as they have been adopted since the plan was developed. GWRC commented that non-regulatory methods often develop outside the plan process as the best way to deal with issues that arise and that can change over time.
- GWRC has assessed the effectiveness of its existing plan provisions and methods at meeting these limits. This plan effectiveness monitoring is being undertaken to feed into the regional plan review and will indicate which objectives and methods are more effective.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- GWRC view on barriers to setting limits was that getting agreement from stakeholders on what values are important and getting community engagement in the issues were the biggest constraints. This issue of getting agreement on issues, or balancing competing demands, has been noted by some other councils. GWRC further noted that once values are agreed getting the data right and the science to back up any limits chosen is difficult.
- In response to questions regarding barriers to meeting limits GWRC identified that in most catchments in the region there is a lack of specific information on the contribution and sources of non-point source contaminants. Therefore it is difficult to develop targeted land use controls to ensure that limits can be met.

3.16.2. Water Quantity

Derivation of limits (draws on water quantity questions 4, 6 and 9):

- As identified for water quality the processes the GWRC used for developing the operative RPS and plan will not be used in the next phase of plan development change. Instead the methods used in developing of the proposed RPS will be used.
- GWRC intend to review all their existing allocation limits and minimum flows as part of the Regional Freshwater Plan review. Any minimum flows established using historic methods are being replaced with methods in the MfE Environmental Flow Guidelines for In-stream Values. As a general concept GWRC indicated that they intend to develop flow and allocation regimes for more rivers then exist at present.

Limits that are in place (draws on water quantity question 5):

- GWRC sets flow and allocation limits in certain named surface waters and specified groundwater in the region. The rules related to takes of water do not use the minimum flows or allocation status in determining activity status. The rules structure instead uses the proposed volume of take as the main factor affecting activity status. Consideration of the available allocation and required minimum flow is made during consenting of takes.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- For GWRC the regulatory methods implemented through the rules are the main way to ensure limits are met. In addition other methods were identified in the plan (regulatory and non-regulatory). As for water quality the list of non-regulatory methods in the plan does not necessarily match what GWRC have implemented.
- GWRC have taken action regarding existing over allocation. Where over allocation has been identified in three aquifers, these limits have been capped while allocation limits are reviewed. This involves not accepting further applications for takes of water. A non-regulatory method was planned to investigate water trading and transfer to aid dealing with over allocation.

However the plan effectiveness review of the freshwater plan identified that this had not been implemented. Moving forwards on this GWRC identified that many water resources are now fully allocated so Council must now look to new management methods. Their initial thoughts are to increase water availability by increasing efficiency of use and make further consideration of water trading. Key to this for GWRC is the need to understand growth in water demand to understand how water trading may work.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- The main barrier identified by the GWRC was ensuring that sufficient information is available to establish minimum flows. Coupled with this was a need to undertake adequate consultation and community engagement to get buy in to limits.
- Overall GWRC has learnt a number of lessons from past experience and will be changing historic methods significantly as indicated in the new generation RPS.

3.16.3. **Governance** (draws on water quality questions 51-56):

- For GWRC the proposed RPS gives significant direction to District Councils role in managing land use activities that impact on both water quantity and quality. Implementation of the proposed RPS is considered the main governance task for GWRC moving forwards. As part of this GWRC has endorsed catchment-scale management as the way forwards.
- The Regional Water Strategy, developed with City and District Councils, will be a key vehicle for delivering non-regulatory approaches to ICM. This Regional Water Strategy will be implemented through both LTCCP and RMA planning documents.
- As part of these strategies and non-regulatory approaches GWRC will continue to develop action plans and guidelines to address specific issues of relevance to the region through non-regulatory means. When discussing central government assistance GWRC were of the view that that central government could assist with preparing, or assisting industry to prepare good practise guidelines relevant nationwide as opposed to each council doing regional guidelines
- Additional assistance GWRC noted was that central government could assist by completing the proposed NES and NPS as this will give national direction.

3.17. West Coast

The West Coast Regional Council (WCRC) RPS was operative in 2000. The main plan covering water issues is the operative Water Management Plan (2007) and there are also two Water Conservation Orders in the Region on the Buller and Grey Rivers.

One interview was held with a Senior Planner from the Planning Section addressing the Water Quality and Water Quantity questions. Further follow up with the Consents Manager was also undertaken to confirm consent related questions.

The WCRC does not have the pressures on water quality and quantity that many other regions do. It also has a large number of rivers to mange. The existing planning provisions are basic in comparison to many regions but are considered suitable by Council. Two water quality classes are provided (from schedule 3 of the RMA) and these contain descriptive limits only to be used as guidelines. Allocation limits are not set for surface or ground waters and minimum flows are only required once above a certain proportion of the Mean Annual Low Flow in a waterbody is allocated.

3.17.1. Water Quality

Derivation of limits (draws on water quality questions 1-7, 13 and 17):

- The WCRC developed limits through standard plan notification processes. These identify two classes of values to be managed for only, contact recreation and aquatic ecology. This approach is considered appropriate by the WCRC. Where specific water quality issues have arisen Council is addressing these with specific provisions. A recent case is the Lake Brunner special management area where phosphate input is a concern. The WCRC recently consulted with stakeholders about proposed approaches to manage activities identified as giving rise to the environmental effects. With this Lake Brunner special management area no additional limits are being set but methods are proposed to address the issue through non-regulatory means.

Limits that are in place (draws on water quality questions 6 and 17):

- Existing guidelines are intended to assist in consenting only. They do not contain numeric limits and provide general direction n the waterbodies values and narrative limits to allowable effects in the receiving environment.

How water managers ensure limits are met (draws on water quality questions 21-23, 37-40 and 44):

- Consideration of guidelines is made at consenting stage, to date there has generally low pressure on resources and as such the consenting approach is considered by the WCRC to be sufficient. The main way of dealing with water quality issues and ensuring that activities meet the limits set are non-regulatory including providing advice and information through the full range of Council staff.
- Where pressure has been observed (e.g., Lake Brunner) methods have been discussed with the community to address these, these will include development of codes of practise, rehabilitation of river and lake edges, promotion of land use practises to protect water quality and prioritise enforcement action for activities that do not comply with the plan or resource consents.

Barriers to setting and meeting limits (draws on water quality questions 19, 20 and 25):

- The major barrier identified by WCRC to setting standards is that with opposing interest groups everything ends up in Environment Court. This is a problem for Council due to the amount of scientific certainty that is needed to support decision making. Council lacks the resource to develop a sufficiently detailed level of science across the entire region.
- The WCRC view with respect to the main barriers to meeting limits was that the amount of industry leadership is insufficient on water quality issues. Their view was that this was certainly the case within the farming community. They identified that more leadership would enable a step forwards in terms of management of activities that affect water quality.

3.17.2. Water Quantity

Derivation of limits (draws on water quantity questions 6 and 9):

- The WCRC identified that limits setting was done through the plan development process as for water quality.

Limits that are in place (draws on water quantity question 5):

- The WCRC has established processes for minimum flows only. These are only required to be established as a result of consent applications in systems that have a moderately high degree of allocation already.

How water managers ensure limits are met (draws on water quantity questions 7, 10, 12 and 13):

- The WCRC identified that council monitoring is not showing up any problems at present, this is the case even in the catchments with water higher use. For the WCRC one of main methods to tell if limits are OK is by number of complaints, they have had only 1one complaint about water availability in five years.

Barriers to setting and meeting limits and lessons learnt (draws on water quantity question 8):

- None identified

3.17.3. **Governance** (draws on water quality questions 51-56):

- On the whole the WCRC consider their existing plans provide a good governance structure. However they noted that integration of land use planning and water management could be better undertaken. This will be addressed through ensuring internal consistency on plans.
- The WCRC consider that central governments assistance would best be in recognising that many central initiatives can add costs to both Council and applicants which are not justified locally.

4. Summary of Key Themes

This section briefly highlights key overall themes that have been identified through the research. This section is based on the opinion of the authors after undertaking the plan reviews, interviewing councils and analysis of the resulting data.

Limits

- More recent water quality planning processes are generally moving towards numerical rather than narrative limits.
- Councils are generally utilising receiving environment based limits but loading based limits are used where a specific issue requires that approach.
- The "maintain and enhance" policy approach is often used to support limits.

Process

- There has been a recent move towards science led planning. This starts with science based characterisation of the waterbodies (quality, characteristics, flows etc) ahead of community engagement. This results in an informed community and provides initial data about resources that they have something to respond to.
- There is a move towards more community engagement to define their values of waterbodies and assist in setting objectives around these, this leads to more agreement on the limits that result. In general, there is recognition of the need for early and transparent consultation processes.
- Catchment based planning processes are being used more recently. This included identification of values and use of waterbodies on a catchment basis and then consultation on a catchment basis. Related to this was a recognised need for integration of catchment planning process with land use, groundwater and all other aspects of water management in the catchment.
- It was noted that this catchment based planning process is costly and only needs to be undertaken where pressure exists or may exist on resources. There was recognition by that for some resources and even some entire councils have no need to do this catchment based process or change what they do now; other councils have no resources to implement this approach.
- There is recognition of the need for a strong link from RMA processes to the LTCCP. An example was that some RPS and plan non-regulatory methods never make it into LTCCP funding and conversely many effective non-regulatory methods funded by the LTCCP are not directly referenced in RPS or plan methods.

- Where councils had taken the approach of integrating RPS and plans into one document to have management under a common set of policies they considered this lead to better integration of issues.
- Unitary Authorities in general considered that they had good integration of council functions and plan provisions around land use and water management due to their structures and responsibilities.

Determining Flows and Allocation Priorities

- In general the view of councils was that there is a need for default allocation and minimum flows in their regions. For those without these provisions, their view was generally that centrally set methods would use fewer resources to implement.
- In decisions around setting any regime there is a desire by water users for security of supply to underpin economic development, however, security of supply can lead to inefficient allocation of resource.
- A move towards stakeholder management of water resources through actions such as user groups managing rostering during low flows was noted.
- Over allocation was noted as being a complex issue to define and mange and often theoretical (paper based) rather than actual. Methods to manage allocation more efficiently included working on efficiency of water use and matching actual takes to consented takes. Water trading is seen as a solution to over allocation that may be developed by some councils.
- There is recognition of the need for increased use of telemetric monitoring supplying users, council and community with real time information. This information will both support council decision-making and enforcement of limits and also enable water user groups to use water efficiently.

Key Needs from Central Government

- Councils noted a need for direction on national water quality/quantity issues; this included a clear outline of what is important at the national level.
- The impact of non-point source pollution arising from land use activities (predominantly agricultural) is generally considered to be key issue to be addressed, but is politically difficult, central direction on national priority for this could assist and may also get stakeholders more involved in solution.
- The majority of councils think there is a need for national guidelines on water quality limits for the full range of values including social and cultural. Councils identified a lack of methods for setting limits (quality and quantity) around ‘intangible’ values such as social and cultural. Centrally developed documents will minimise arguments around methods and limits and allow the community and council to focus on values and objectives.

- Duplication of effort was occurring regarding producing guidelines for industry groups and stakeholders in individual regions (e.g. dairy shed discharges). Council noted that central government (or industry) could take the lead on developing national guidelines.
- There is recognition that there is no one size fits all and any central government guidelines or direction should support existing provisions and not force all councils to implement set methods in their region.

Key Barriers for Councils

- The controversial nature of regulating non-point source discharges was a barrier. Political will and stakeholder buy in were not always evident.
- The high cost and resources needed to develop specific limits in catchments was a barrier to catchment style planning, especially for smaller councils.
- Overall the lack of national guidelines on setting limits, around ecological values but also intangible values such as amenity and recreation, caused significant delays and disagreements. This delayed the implementation of limits and put cost barriers in many areas.
- It was considered that the RMA process is lengthy and the Environment Court process makes it difficult for council to get policies through within reasonable timeframes. There were a number of issues raised regarding matching the available science to the level of certainty required in Environment Court processes. The processes did not appear well developed to deal with uncertainty.

Monitoring

- Understanding if objectives and/or limits are met through region wide State of the Environment (SoE) monitoring is well established. However there was not a lot of monitoring being undertaken on the effectiveness of specific methods in the plans.

Non-regulatory Methods

- In general there is a wide range of non-regulatory methods and these are important methods for all councils. One key advantage of non-regulatory methods appeared to be the ability to work with the community/stakeholders in both understanding and accepting the problem and developing and implementing solution.
- Effectiveness of non-regulatory methods were generally measured by community uptake and acceptance, with less emphasis on direct monitoring of whether the issue has been addressed by the method. For example the effectiveness of riparian management was measured more by the amount of fencing installed than by resulting changes in water quality. It was noted however that many methods are newer and long term so their impact may not yet be observable.

Plan Evolution

- The plans and RPS's assessed in this project represent well over ten years of planning provisions, from early first generation RPS's and plans (that are coming up for review) through to more recently operative plans (<2 years old) and recent proposed plans and variations. There is by nature some evolution in the approaches taken in the plans. This is possibly due to a number of factors including:
  - Accumulated experience with implementing the RMA through plan provisions in New Zealand
  - Increased availability of guidance on technical methods to use
  - Increasing land use pressures on resources over that period combined with changing public expectations will lead to different planning provisions
- All existing provisions in New Zealand were assessed in this project. Some are likely to be more relevant when attempting to understand the current status of planning and technical processes and what may be considered 'current or best practise'. At times councils voiced the opinion that the focus of the research should be on where they are going and what they want to do rather than what they did historically.
- Analysis of the more recent planning provisions and directions councils intend to take may be the best focus to understand what issues currently exist regarding meeting and setting freshwater limits. This will then enable MfE to identify current gaps in water management in which the MfE or others may effectively have a role.

Resource Pressure

- The RMA planning provisions are delegated to Regional Councils to identify and address significant issues in their regions. It is apparent in many areas that the degree of resource pressure has had some impact on the provisions developed. Where pressure is low, simple provisions have been applied, such as for both water quality and water availability in the West Coast Region. Where resource pressure and observable effects are greater appears to be where the most recent and (potentially) leading plan provisions are being developed. Examples include water quality provisions around Lake Taupo in the Waikato Region, provisions controlling land use to limit non-point source discharges in the Manawatu Wanganui Region and water availability provisions in Canterbury. These areas of resource pressure can also lead to more detailed and widespread stakeholder concerns and interest in the planning provisions.

Appendix A Quick Reference Answer Tables

Table 3 Quick Reference Summary Table for Water Quality Limits for Surface and Groundwaters

Council	Does the council set water quality objectives? (yes/no or proposed – Yes(P))		Do the objectives have regulatory status? (yes/no or proposed - Yes(P))		Does the council set region wide water quality limits? (yes/no or proposed - Yes(P))		Do the region wide limits have regulatory status in rules? (yes/no or proposed - Yes(P))		Is the process for deriving values, objectives an ICM method? (yes/no)	Are there regulatory methods to ensure limits are met? (yes/no or proposed - Yes(P))		Are there non-regulatory methods to ensure limits are met? (yes/no or proposed – Yes(P))		Is monitoring with respect to objectives or limits undertaken? (yes/no)		Will monitoring identify if Objectives are met? (yes/no)		Has Council identified any barriers to setting limits? (yes/no)	Has Council identified any barriers to meeting limits? (yes/no)	Are limits specified in activity rules?	
	S/W	G/W	S/W	G/W	S/W	G/W[6]	S/W	G/W	S/W	S/W	G/W	S/W	G/W	S/W	G/W	S/W	G/W			S/W	G/W
Auckland	Yes (P)	Yes (P)	Yes (P)	Yes (P)	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	No	Yes (P)	Yes (P)
Bay of Plenty	Yes	Yes	Yes	Yes	Yes	No	No	N/A	Yes	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Canterbury	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	No	No	Yes (P)	N/A	Yes (P)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P)	Yes (P)
Chatham Islands	Yes	No	Yes	N/A	No	No	N/A	N/A	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	Yes	Yes	No
Gisborne	Yes	Yes	Yes	Yes	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Hawkes Bay	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Horizons	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)[1]	No	Yes (P)	N/A	Yes	Yes (P)	N/A	Yes (P)	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P)	Yes (P)
Marlborough	Yes	Yes	Yes	Yes	Yes	Yes	Yes[2]	Yes[2]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Nelson	Yes	No	Yes	N/A	Yes	No	Yes	N/A	No	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	Yes	Yes	No
Northland	Yes	Yes	Yes	Yes	Yes[3]	No	No	N/A	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Otago	Yes	Yes	Yes	Yes	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Southland	Yes	Yes	Yes	Yes	Yes[1]	Yes	Yes	No	Yes	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Taranaki	Yes	No	Yes	N/A	Yes	No	No	N/A	Yes	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	Yes	Yes	No
Tasman	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)[5]	Yes (P)[5]	Yes (P)	Yes (P)	No	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P)	Yes (P)
Waikato	Yes	No	Yes	N/A	Yes	No	No[4]	N/A	No	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	Yes	Yes	No
Wellington	Yes	Yes	Yes	Yes	Yes	No	No	N/A	Yes (P)	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
West Coast	Yes	Yes	Yes	Yes	Yes[1]	No	No	N/A	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	No	Yes	No

Note:
[1]Also includes limits for lakes, where not stated limits relate to rivers only, not lakes or wetlands.
[2]Marlborough DC has two plans covering different areas, one requires compliance with set limits in permitted activity rules, the other only considers limits as an assessment matter for consents.
[3]Northland RC has set interim region wide guidelines while determining catchment specific standards.
[4]Waikato RC limits do not in general have regulatory status in the rules except in relation to suspended solids.
[5]Tasman DC has developed limits for two specific catchments and is in the process of developing others across the region.
[6]Where the objectives or policies set the meeting of drinking water standards this is considered to be a limit for groundwater quality.

Table 4 Quick Reference Summary Table for Water Quantity and Flow Limits for Surface and Groundwaters

Council	Does the council set water quantity objectives? (yes/no or proposed – Yes(P))		Do the objectives have regulatory status? (yes/no or proposed - Yes(P))		Does the plan set allocation regimes? (yes/no or proposed - Yes(P))		Does the plan set flow regimes? (yes/no or proposed - Yes(P))	Do the allocation/flow regimes have regulatory status in rules? (yes/no or proposed - Yes(P))		Have priorities for allocation been set? (yes/no or proposed - Yes(P))		Are there regulatory methods to ensure limits are met? (yes/no or proposed - Yes(P))		Are there non-regulatory methods to ensure limits are met? (yes/no or proposed – Yes(P))		Is monitoring with respect to objectives or limits undertaken? (yes/no)		Will monitoring identify if Objectives are met? (yes/no)		Are permitted takes monitored / estimated? (yes/no)		Has Council identified any barriers to setting limits? (yes/no)	Has Council identified any barriers to meeting limits? (yes/no)	Does the plan set methods to address over allocation? (yes/no or proposed - Yes(P))	
	S/W	G/W	S/W	G/W	S/W	G/W	S/W	S/W	G/W	S/W	G/W	S/W	G/W	S/W	G/W	S/W	G/W	S/W	G/W	S/W	G/W			S/W	G/W
Auckland	Yes	Yes	Yes	Yes	No	Yes	No	N/A	Yes	No	No	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Bay of Plenty	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	N/A	No	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	N/A
Canterbury	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (p)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Chatham Islands	Yes	Yes	Yes	Yes	No	No	No	N/A	N/A	No	No	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A
Gisborne	Yes	Yes	Yes	Yes	No	No	No	N/A	N/A	Yes	No	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Hawkes Bay	Yes	Yes	Yes	Yes	Yes	No	Yes	No	N/A	No	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Horizons	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	No	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Marlborough	Yes	Yes	Yes	Yes	Yes	Yes[1]	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Nelson	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	N/A	Yes	No	Yes	N/A	Yes	N/A	Yes	?	Yes	?	No	No	Yes	Yes	Yes	N/A
Northland	Yes	Yes	Yes	Yes	No	No	Yes	Yes	N/A	No	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	No	No	Yes	Yes	N/A	N/A
Otago	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Southland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Taranaki	Yes	Yes	Yes	Yes	No	No	No	Yes	N/A	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	N/A	N/A
Tasman	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	No	No	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P)	Yes (P)
Waikato	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes (P)	No	No	Yes (P)	Yes (P)	Yes (P)	Yes (P)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (P)	Yes (P)
Wellington	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
West Coast	Yes	Yes	Yes	Yes	No	No	Yes	Yes	N/A	No	No	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	No	No	No	No	N/A	N/A

Notes: [1]Marlborough DC has two plans (separate areas). Groundwater limits are set in one of these only.

Appendix B Council Reports for Freshwater Quality

Appendix C Council Reports for Freshwater Quantity

Appendix D Interview Question Templates

Council Name – Water Quality

1. Setting water quality objectives and limits (community involvement etc)

In relation to other natural resource management issues in [region name], how important is water quality? 1 Not important 2 Somewhat important 3 important 4 very important 5 exceedingly important **Do you consider the establishment of water quality limits important in addressing water quality issues?** Yes, No
1. Tell us about the process that the Council used for defining objectives and values for water quality and limits? *(summary of the council process as identified in the intro sections of the plan, background technical reports, reports to Council, s32 reports or from discussion with Council – to be noted where data is sourced from; focus is on the PROCESS.)* **Was an Integrated Catchment management (ICM) approach used?**
2. Whose viewpoints were considered? *(Note specific stakeholders and general community input into defining water quality objectives and limits; the focus of this question is WHO was included and in what way)*
3. What values were considered? *(Note processes used to identify the specific values for the water resources, including technical and community contribution processes)*
4. Were Iwi engaged in defining objectives for water quality, and if so, how? *(Document the processes and which, and whether all Iwi were engaged)*
5. How was the wider community, including special interest groups, engaged in defining objectives for water quality, and how was that consultation reflected in limit setting? *(Identify the processes used)*
6. Does the plan specify different limits/uses/values for different waterbodies? E.g. native fish habitat; drinking water catchment. *(Briefly describe what classifications based on these factors are; are the rivers and lakes classified in some way e.g. REC for rivers)*
7. How were the values chosen and decisions made on the appropriate limits for these values? *(Document decision making process to determine limits for these values)*

7b. Was all information needed available? What happened in the absence of full information? *(Note how and when decisions have been made in absence of full information and what the Council proposed to do about this? i.e. set interim limits or require further investigation/plan variations)*

2. Regional Policy Statement (RPS)

8. Does the RPS set any water quality objectives? (*Yes/No*) **8b. What are they?** *(Summary of the objectives and what they cover)*
9. How does the RPS intend water quality objectives to be met? *(summary of policies, and methods, and or explanations on how these will be met, e.g. Anticipated Environmental Results)*
10. Does the RPS provide objectives or policies or direction on the role of district councils and the relationship between land use decisions and water quality? *(Summary of scope of RPS on this issue; MoUs with TAs, advocacy?)*

3. Regional Plans – setting water quality limits and plan structure

11. What regional plans relevant to water does the Council currently use? *(List of existing plans, variations and Water Conservation Orders, all the answers below need to be done for each plan/document).* **11b. Are there any relevant non-statutory plans or strategies e.g. water strategy, catchment plans, iwi management plan?**
12. How is the relationship between flow and Point Source/Non Point Source (PS/NPS) discharges handled? *(There are potentially high concentrations of contaminants at low flows. Are there any limits set for loads or concentration? Note what process is taken to deal with this issue plus reference the SKM tables for what contaminants are specified if relevant)*

Council Name – Water Quality

13. How does the Council deal with water quality that is already worse than any set limit i.e. water quality "over-allocation"? *(Are there specific objectives, policies, rules, or processes that govern what happens when the water quality of a water body has already exceeded set limits? What are they?)*
14. How does the Council know if and when/where this "over allocation" of water quality happens in water bodies in the region? *(note whether the Council specifies already degraded waterbodies in their plans or if not through questioning identify whether degraded water bodies are identified through other means (e.g. consenting)*
15. Does the Council have future plans to address water quality management e.g. any initial plan review? *(Interview question, note where these are)*
16. Will the Council change any of its previous methods (technical, planning and/or stakeholder and community engagement) in its future water quality management planning? *(Discussion with Council about which of their existing methods they would not use again, which they will use again and any new ones they intend to use)*
Translating objectives into quantifiable parameters
17a. Tell us about the methods that the Council has used to translate water quality objectives into quantifiable parameters for management? *(note for instance whether they identify values/management purposes for water bodies, then identify the key parameters to support these values/management purposes (e.g. if managed for contact recreation parameters likely to include once of public health relevance), alternatively note other approaches in the plan)* **17b. Is a loading water quality limit used (source control) as opposed to a receiving environment (concentration) water quality limit? – for diffuse sources, and for point sources.**
18. Does the Council use Schedule 3 of the Resource Management Act (Water quality classes)? If not, why not? If yes, how? *(ID whether the Council uses all or some of this schedule and how they tailor it for their region if they do so)* **18b. How do you think Schedule 3 could be improved or made more useful?** *(Opinion of Council as question for interview)* **18c. Do you think Schedule 3 should be removed and/or replaced with a different approach?**
19. Are there technical or regulatory aspects regarding water quality limits and/ or management that central government could assist you with? *(Opinion of Council*

as question for interview)
20. What are the barriers and issues to setting limits? *(Opinion of Council as question for interview)*

4. Regional Plans – achieving or meeting the water quality limits

21. What regulatory and non-regulatory methods has the council used to meet any water quality limits (if applicable)? *(document methods as outlined in the plan, also question Council of other non-regulatory methods that are not in the plan- ties in with question below)*
22. What non-regulatory methods are employed for achieving or maintaining water quality? Has there been much use of or uptake of non-regulatory methods e.g. riparian planting? *(Document methods in and outside plans (note whether they are in plans or not) that could for example include: incentives for riparian planting, stock crossings, fencing waterways; promotion /adoption of Best Management Practices; Dairying and Clean Stream Accord; on-farm advice; subdivision/development design.)*
23. How do you know if the non-regulatory methods are effective? *(Note how the Council plans to monitor the specific effectiveness of each of these non regulatory methods)*
24a. Would you say that there was sufficient or insufficient funding allocated to make the non-regulatory methods effective in your region? *(Opinion of Council as question for interview)* **24b. Are there any other factors that limit the effectiveness of non-regulatory methods in your region?**
25. What are the barriers and issues that Council identify to meeting limits? *(Opinion of Council as question for interview)*
Where water quality limit provisions are proposed or operational:
26. How are water quality limits monitored by Council or others? *(To include both monitoring for consent compliance purposes and as a Council function to show whether objectives (in terms of water quality limits) are being met by the Council methods, this should note whether monitoring is State of the Environment reporting, or specific to*

individual objectives or overall limits)
27. What do the monitoring results show? *(Note whether the data identifies whether limits are met or not, whether the specific policies/objectives are effective and also whether the values/uses for which the specific parameters and limits were set are being protected, or whether monitoring is not targeted to specifically answer this question (e.g. SOE monitoring) – data from Council reports or discussions)*
28. Is there an allocation regime for water quality/assimilative capacity in the region? *(Do any water bodies have effective enforcement of water quality limits by placing limits on the upper concentration of contaminants and/or have an amount of assimilative capacity available for the dilution of discharges that is "allocated" through the consent process (or allocated to existing activities))* **28b. What happens when water quality is better than what's allowed in the plan? How do you address the "pollute up to" problem?** **28c. Is the status of allocation for water bodies in the region monitored?**
29. How does the Council consider cumulative effects for point source discharges in the region with respect to any water quality limits or water quality allocations set? *(Note how the Council deals with cumulative effects of the build up of contaminants from numerous PS/NPS discharges as they will use up any "allocation" of assimilative capacity)*
Relationship between land use and water quality
30. How does the Council give effect to their function of controlling land use for the purposes of controlling water quality? *(Any methods the Council identifies to do this either in the RPS, a regional plan or gathered through conversation with Councils, could include for instance: Memorandum of Understanding with district councils or advocacy on district plan changes and major consents)*
31. Does the plan have any land use rules which relate to water quality objectives or policies? *(Note the approach the plan takes to setting rules to cover section 9 [restrictions on use of land] and Section 15 [discharge of contaminants into environment] RMA issues in the plan. Also need to talk more broadly with Councils about wider approaches in general to managing effects of land use on water quality)*
32. Is there any relationship between land use rules and discharge rules? *(In conjunction with point above note interactions between how the rules are setup and applied,*

i.e. Does a rule cover both the s9 land use activity and its resulting discharge s15 activity in one rule or are they separate?)
33. Does the plan regulate non-point source discharges? If so, how? *(Document how the plan does this; include reference to the process and relevant objectives, policies and rules. Describe the land use controls for activities that give rise to non-point source discharges (e.g. farming, forestry)).*
34. Are there seasonal allowances (or allocations) in relation to water management? *(Do any of the controls allow different effects to occur in different seasons in accordance with "availability" of assimilative capacity, changing seasonal demand for the resource and risk of adverse effects on features of interest)*
35. Are water take and water use consents issued separately or bundled together? *(Does the Council separate issue separate consents?)*
36. What tools are available to consents staff to determine the level of effect that land use activities have on water quality? *(Note any modelling tools or guidance staff have to aid their decision making and determine the likely effects of land use activities including whether these effects are effective)*
For permitted activities
37. What specific discharge activities do permitted rules cover? *(List the activities e.g. tile drains, feed lots, effluent irrigation.)*
38. Are permitted rules subject to conditions? *(What are they?)*
39. What relationship is there between any water quality limits set in the plan and permitted activity rules for discharges? Do these permitted rules require compliance with any water quality limits? *(Outline the links between the set water quality limits and the rules in the plan, do the rules directly reference compliance with the limits or not to be permitted, do they contain other additional limits?)*
40. Are there any combined section 9 and section 15 permitted activity rules in the plan(s) for water quality? *(Note whether permitted rules require compliance with water quality limits or alternatively just require general control of adverse effects on water quality)*
41. Does the Council know where permitted activities are located and the extent to which they are used? *(Question for Council at interview. Is there a list?)*

Council Name – Water Quality

42. Does the Council have a way of monitoring/estimating the extent of and impact of permitted discharges? *(Document any processes, this could be pre plan in determining appropriate water quality limits or post plan development in monitoring effectiveness of plan or could be in technical reports)* **42b. If so what does this monitoring tell you about the extent of and impact of permitted discharges***? (To record whether the impacts or more or less than anticipated)*
43. Are there any mandatory water quality monitoring or reporting requirements for permitted activities, either self reported or by the council? *(Note any reporting required by individuals as a condition of complying with permitted activity rules or Council reporting etc)*
For activities for which consent is required
44a. How do discharge rules (for controlled, discretionary, restricted discretionary activities) apply with regard to any water quality limits? *(Outline the links between the set water quality limits and the rules in the plan, do the rules directly reference compliance with the limits or not, do they contain other additional limits? Is compliance with the limits merely an assessment matter for consent conditions? If so does the objective and policy framework ensure that limits must be achieved?)* **44b. In what circumstances are discharges non-complying or prohibited?**
45. What specific discharge activities do the rules cover? *(List the activities the plan regulates discharges for)*
46. Are consents required for urban storm water discharge? How is storm water managed in regards to water quality? *(Document how the Council manages stormwater regulation in general with specific note of water quality impacts of stormwater from urban and other areas)*
47. Are there rules for stock fencing from water bodies and stock crossings? *(Note any rules on stock access to waterways.)*
48. What are the typical consent duration terms for point source and non-point-source discharges? *(Opinion of Council as question for interview. Ask also for an indication of the range of terms granted.)*
49. Does the plan refer to 'reasonable mixing zones' for discharges? If so, how do you determine 'reasonable mixing zones' for point discharges? How are they dealt with in consent conditions? *(To include set methods in plans (note whether in objectives, policies or rules, if in rules note what activities they apply to). If not in plans*

ask Council as question for interview what process they use to apply them in consent conditions. How are they monitored?)

5. Governance issues around water quality and flow

50. What arrangements are in place in your region to enable an integrated approach to planning and decision making for land use activities that impact on water?
51. What strategies and tools are being developed / used to put in place long term visions for water management in your region? (include LTCCPs)
52. What mechanisms are in place to ensure iwi/Maori have a role in decisions about these long term water strategies/plans? (include LTCCPs; any relevant iwi settlement – in place or in negotiation?)
53. How do you think your region's current approach to long term strategic water planning could be improved?
54. How do you think your region's current approach to integrated land and water management could be improved?
55. What could central government do that would be helpful to the effectiveness of your region's long term strategic water planning?
56. What could central government do that would be helpful to the effectiveness of integrated land and water management in your region?

1. Regional Policy Statement (RPS)

Plans reviewed

In relation to other natural resource management issues in [region name], how important are water quantity issues?
1 Not important 2 Somewhat important 3 important 4 very important 5exceedingly important

Do you consider the establishment of flow limits important in addressing water quantity issues?

1. Overview

1(a) Does the RPS set any water flow/level objectives? If so, what are they? *(Summary of the objectives and what they cover, flow limits considered to include both surface water and groundwater systems and any reference to minimum, ecological or environmental flows and allocation)*

1(b) How does the RPS intend water flow/level objectives to be met? *(Summary of policies, and or explanations on how these will be met)*

1(c) Does the RPS provide comment or direction on where water flow/level issues are relevant in the region? *(High-level overview of whether the RPS recognises water flows/levels are a key issue and if so, whether certain areas or issues are specifically addressed for action)*

2. Balancing and trade-offs between values

2(a) Does the RPS provide any direction on how competing values will generally be balanced when setting flow/level and allocation regimes, either generally across all waterbodies, or specifically in relation to certain water bodies (or classes/types of waterbody)?

2(b) To what extent does the RPS provide direction about how the council will balance, when setting flow and allocation regimes, the following potentially competing values:

(i) instream versus out-of-stream values

(ii) future domestic water supply needs against other consumptive uses (e.g., irrigation)

(iii) reliability of supply to existing water 'take' consent holders (i.e., consumptive users) against providing for potential future additional demands for out-of-

stream consumptive use

(iv) potential future irrigation needs against potential future needs for hydroelectricity generation?

(Summarise relevant provisions. Also summarise any explanation given for any explicit trade-offs signalled by the RPS. Record if there are any technical documents or s32 reports that justify the approach taken in the RPS).

3. Consistency with Proposed NPS

3(a) Does the RPS determine and timetable priorities for when flow/level and allocation regimes will be set for all waterbodies in the region?

3(b) What classification system, if any, does the RPS use to classify 'significance' of waterbodies in the region?

3(c) Are specific values attributed as the reason for that significance?

3(d) Are instream values only identified as significant, or does the RPS also classify significance of out-of-stream values (e.g., irrigation, hydroelectricity generation, municipal/domestic supply etc)?

3(e) Does the RPS identify degraded waterbodies? Are specific values cited as being degraded?

3(f) Where the RPS identifies significant or degraded waterbodies, is the regional plan directed to provide in its flow and allocation regimes:
(i) a higher level of protection to high-value waterbodies (i.e., is any balancing of values to be 'tilted' in favour of protecting the values cited as of high significance?)
(ii) regimes that enhance or restore degraded values?

3(g) Does the RPS provide direction on how flow/level and allocation regimes are to be set to manage the future effects of climate change on (a) instream values, and/or (b) other values? If not, is there an intention to develop this direction in the next-generation RPS?
(Mostly plan review – part of (g) is interview. Record if there are any technical documents or s32 reports that justify the approach taken in the RPS).

2. Regional Plans – setting water flow limits and plan structure

4. Consistency with RPS (with reference to questions 1-3 above)

4(a) Does the direction provided by the RPS still provide the foundation for the approach to setting flow and allocation regimes in regional plan/s? If not, what aspects of the provisions identified above are not reflected in the plan, and why?

4(b) What lessons have been learnt through implementing the current RPS that are likely to be translated into changes to the next generation RPS? *(If the current RPS is a second-generation RPS, explain what lessons were learnt that are reflected in the current RPS). (Plan review informed by interview questions)*

5. Existing planning framework

5(a) What regional plans does the council currently use? *(list of existing plans, variations and Water Conservation Orders, all the answers below need to be done for each plan/document).*

5(b) Does the plan set flow and allocation regimes for all waterbodies in the region?

6. Setting water flow objectives and limits (community involvement etc)

6(a) Tell us about the process that the council used for defining objectives for water flow and limits? *(summary of the council process as identified in the intro sections of the plan, background s32 reports or from discussion with Council – to be noted where data is sourced from. Note any specific tools used.)*

6(b) Whose viewpoints were considered? *(Note processes used to engage specific stakeholders and processes for general community input into defining water flow objectives and limits)*

6(c) What values were considered? *(Note processes used to identify the specific values for the water resources, including technical and community contribution processes)*

6(d) How were Iwi engaged in defining objectives for water flow and how was that consultation reflected in limit setting? *(Document the processes by which Iwi were engaged)*

6(e) How was the wider community engaged in defining objectives for water flow and how was that consultation reflected in limit setting? *(Identify the processes used, can include pre plan development and through the hearing/decision making process, including any technical guidance to the hearing process that considered the community views in limit setting.)*

6(f) Does the plan specify different limits/uses/values for different waterbodies? E.g. native fish habitat; salmon spawning, natural state waters that gives rise to specific flow or allocation regimes. *(Briefly describe what classifications these factors are based on)*

6(g) How were decisions made on the appropriate flow regimes for these values? *(Document decision making process to come to limits for these values)*

6(h) Was all information needed available? What happened in the absence of full information? *(Note how and when decisions have been made in absence of full information and what the Council proposed to do about this? i.e. set interim limits or require further investigation/plan variations)*

6(i) Does the plan specify any flow/level or allocation limits for wetlands, lakes, and/or ephemeral rivers/streams? Were there any unique challenges in setting limits for those waterbodies, and how were these overcome? *(Informed by plan review and response to interview question)*

7. Over-allocation

7(a) Does the plan or RPS provide clear criteria defining 'over-allocation'? If so, what are they? *(Plan review).*

7(b) How does the Council deal with water over-allocation, i.e. a water body in which allocation is already over the allocation limit when the limit is set. *(Are there specific objectives, policies or rules that govern what happens when the allocated water in a water body is above the allocation limit? What does it state?)*

7(c) How does the Council know if and when/where this over allocation happens in the region? *(note whether the Council specifies already over-allocated water bodies in their plans or if not through questioning identify whether over-allocated water bodies are identified through other means (e.g. consenting)*

8. Future plans

8(a) Does the Council have future plans for further flow or allocation regimes? *(Interview question, note where these are)*

8(b) Will the Council change any of its historic methods (technical planning and/or stakeholder and community engagement) in its future water flow planning? *(Discussion with Council about which of their existing methods they would not use again, which they will use again and any new ones they intend to use)*

8(c) What are the barriers and issues that Council identify to setting limits? *(Opinion of Council as question for interview)*

8(d) With the benefit of hindsight, how could Council have improved the process they followed for setting existing limits? *(Interview question).*

9. <u>Translating objectives into quantifiable parameters</u>

9(a) What methods has the council used for translating water flow objectives into quantifiable parameters for management? *(note for instance whether they identify processes by which they will set flow, level and/or allocation limits and controls to support objectives and use these for management of the resource to protect its identified values or any other approaches in the plan)*

9(b) Does the Council have default limits for flows, levels and allocation? *(ID whether the Council has any default limits in place to support their objectives and put them into practice for water bodies where specific flow limits are yet to be set.)*

9(c) Are there technical or regulatory gaps about water flow limits that central government could assist you with? *(Opinion of Council as question for interview)*

3. Regional Plans – achieving or meeting the water flow limits

10. <u>Non-regulatory methods</u>

10(a) What regulatory and non-regulatory methods has the council used for ensuring water flow limits are met? *(document methods as outlined in the plan, also question Council of other non-regulatory methods that are not in the plan- ties in with question below)*

10(b) What non-regulatory methods are employed for achieving or maintaining water flow? *(Document methods in and outside plans (note whether they are in plans or not) that could for example include: stakeholder/ user forums etc.)*

10(c) How do you know if the non-regulatory methods are effective? *(Note how the Council plans to monitor the specific effectiveness of each of these non regulatory methods)*

10(d) Would you say that there was sufficient or insufficient funding allocated to make the non-regulatory methods effective in your region? *(Opinion of Council as question for interview)*

11. Regulatory methods - general

11(a) How are the flow limits monitored by council or others? *(To include monitoring for consent compliance purposes and as a Council function to show whether objectives (in terms of water flow limits for flows and allocation) are being met by the Council methods, this should note whether monitoring is specific to individual objectives or overall limits)*

11(b) What do monitoring results show? *(Note whether the data identifies whether limits are met or not, whether the specific policies/objectives that intend to meet the limits are effective and also whether the values/uses for which the specific parameters and limits were set are being protected – data from Council reports or discussions)*

11(c) How does the Council consider cumulative effects for water takes if there is or is not an allocation regime in place. *(Note how the Council deals with cumulative effects of multiple applications as a difference between where allocation regimes are set and where they are not set)*

11(d) Does Council know current allocation for waterbodies? *(Document the state of Council knowledge across all water bodies, data either in plans, website or from interview. Note whether there is any difference in knowledge of allocation from water bodies with allocation limits and those that do not have limits)*

11(e) How does the public find this out? *(interview question about finding this info, both for bodies with and without allocation limits)*

11(f) Does Council know when minimum flows are reached in all waterbodies with consents that have minimum flows set? *(Document the state of Council knowledge across all water bodies, data either in plans, website or from interview)*

11(g) How does the public find this out? *(interview question about finding this info)*

11(h) Are there seasonal allowances or allocations of water? *(Do any of the existing flow regimes make reference to seasonal allocation in different seasons based on water availability and risk of effects on features of interest)*

11(i) What tools are available to consents staff to determine the level of effect that land use impacts have on water flow? *(Note any modelling tools or guidance staff have to aid their decision making and determine the likely effects of applied for takes on water resource systems. How do these differ where there are and are not limits set in plans)*

13. For permitted activities

13(a) What specific take activities do rules cover (permitted rules only)? *(list the activities the plan regulates discharges for, e.g. domestic and stockwater, small takes <2L/s etc)*

13(b) Are permitted rules subject to conditions? *(Outline generic conditions that govern water flow)*

13(c) How do take rules for permitted activities apply with regard to set water flow/level and allocation limits? *(To outline how permitted activities relate to any set water allocation or flow regimes for water bodies, are they calculated as being within the allocation limit, does the minimum flow have effect etc. Are there any differences for specific permitted water take activities?)*

13(d) Do the Council have a list of permitted activities underway and know where permitted activities are located and the extent of their activity? *(Question for Council at interview)*

13(e) Does the Council have a way of monitoring/estimating the extent of and impact of permitted takes? *(Document any processes, this could be pre plan in determining appropriate water flow limits or post plan development in monitoring effectiveness of plan or in technical reports)*

13(f) If so what does this monitoring tell you about the extent of and impact of permitted discharges? *(to record whether the impacts or more or less than anticipated)*

13(g) Are there any mandatory flow monitoring or reporting requirements for permitted activities, either self reported or by the council? *(Note any reporting required by individuals as a condition of complying with permitted activity rules or Council reporting etc)*

12 For activities for which consent is required

12(a) How do take rules (for controlled, discretionary, restricted discretionary activities) apply with regard to water flow limits? *(To outline the framework of*

management of the water flow limits for activities within the limits that are set?)

12(b) What happens to water takes outside these limits? *(Document the difference in the management framework for takes outside the set limits)*

12(c) What are typical consent duration terms for water takes inside and outside set allocation limits? *(Opinion of Council as question for interview)*

12(c) Does the plan indicate how applications for groundwater takes that would have some connection to surface water (rivers, streams, wetlands or lakes) are to be managed? If so, what does it say particularly about:

(i) Degrees of connectivity and how that affects the way it is managed.

(ii) How connected takes are dealt with to ensure surface water 'minimum flow' provisions are not breached (e.g., include minimum flow restrictions as condition of consent)

(iii) How connected takes are dealt with to ensure surface water allocation limits are not exceeded (e.g., include of all or part of the take in council calculations of total allocation from the relevant surface water).

(Summarise approach. Plan review informed by interview response).