Taharua
Policy Development Strategy

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Strategic Development Group
Policy Report

Taharua Policy Development Strategy

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1. PURPOSE

This Strategy sets out an approach, key steps and timetable toward development of an (ideally) agreed policy framework to manage the adverse effects of land use intensification in the Taharua catchment on the Mohaka and Taharua Rivers.

Preparation of the Strategy was instructed by Regional Council at its 23 September 2009 meeting (see Appendix 1: Council resolution).

The Strategy supports development of Council's initial preferred approach for dealing with water quality issues – that is, an effects based regulatory framework along with an adaptive catchment management approach – but also recognises the requirement under the Resource Management Act (RMA) Section 32 to fully consider alternatives.

2. OBJECTIVES

The objectives of this strategy are:

- To develop an effective, enduring and (ideally agreed) framework to manage adverse effects of land use intensification in the Taharua catchment in order to restore and protect community values of the Mohaka and Taharua Rivers
- To assess the risks to surface water values in the Mohaka River and tributaries from potential land use intensification in the Ripia catchment
- To effectively engage with stakeholders and the wider community to work towards Council's initially preferred management approach (i.e. an integrated approach incorporating an effects based regulatory framework with adaptive management), while appropriately examining all alternatives.

3. PROBLEM DEFINITION

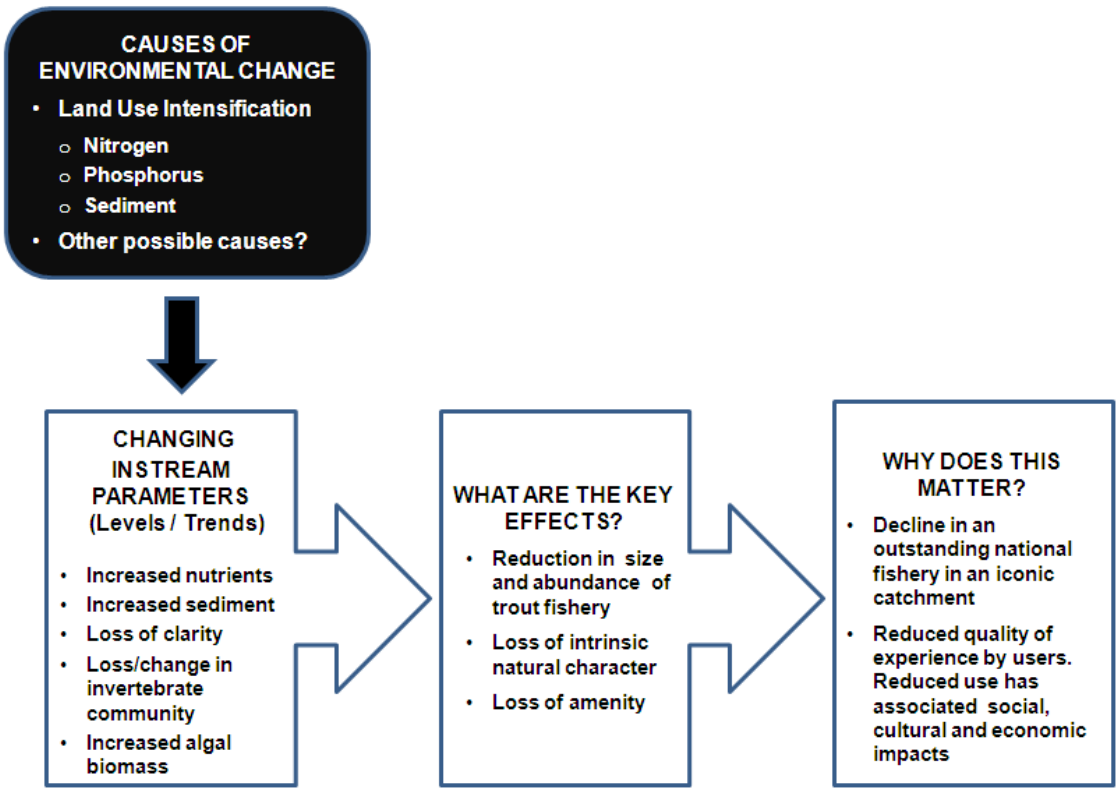
Work to define the Taharua/Mohaka problem and its causes is ongoing. However, Council's water quality monitoring (from 1999), the Taharua/Mohaka Investigations Project (from 2007), and investigations by other organisations (e.g. trout fishery studies) are now able to provide a fairly clear picture of the environmental problem and its likely causes.

The problem can be summarised as:

- Excessive loss of nutrients (primarily Nitrogen, but also Phosphorus) and sediment from intensive land use practices in the Taharua catchment is leading to exceedance of instream environmental thresholds, causing a reduction in the size and abundance of a nationally outstanding trout fishery and eroding community values attached to the Mohaka and Taharua Rivers.

Figure1 illustrates this, but recognises that additional problem definition work is still required.

Figure 1. Taharua / Mohaka problem definition.



4. SPATIAL SCOPE OF STRATEGY

The spatial scope of this strategy is designed address an identified resource management issue, while keeping the project focussed and manageable. See Fig. 2 on the next page.

4.1 Values, objective, target setting

The focus will be the Mohaka River upstream of State Highway 5 and the Taharua River. This reflects the Mohaka Water Conservation Order's definition of the outstanding trout fishery (section 4(a)). Values attached to the wider Taharua catchment will also be considered to inform management outside the plan change process.

4.2 Effects based policy framework

This will focus on the Taharua sub-catchment, where there is an increasing body of evidence indicating adverse effects from land use intensification on Mohaka and Taharua instream values.

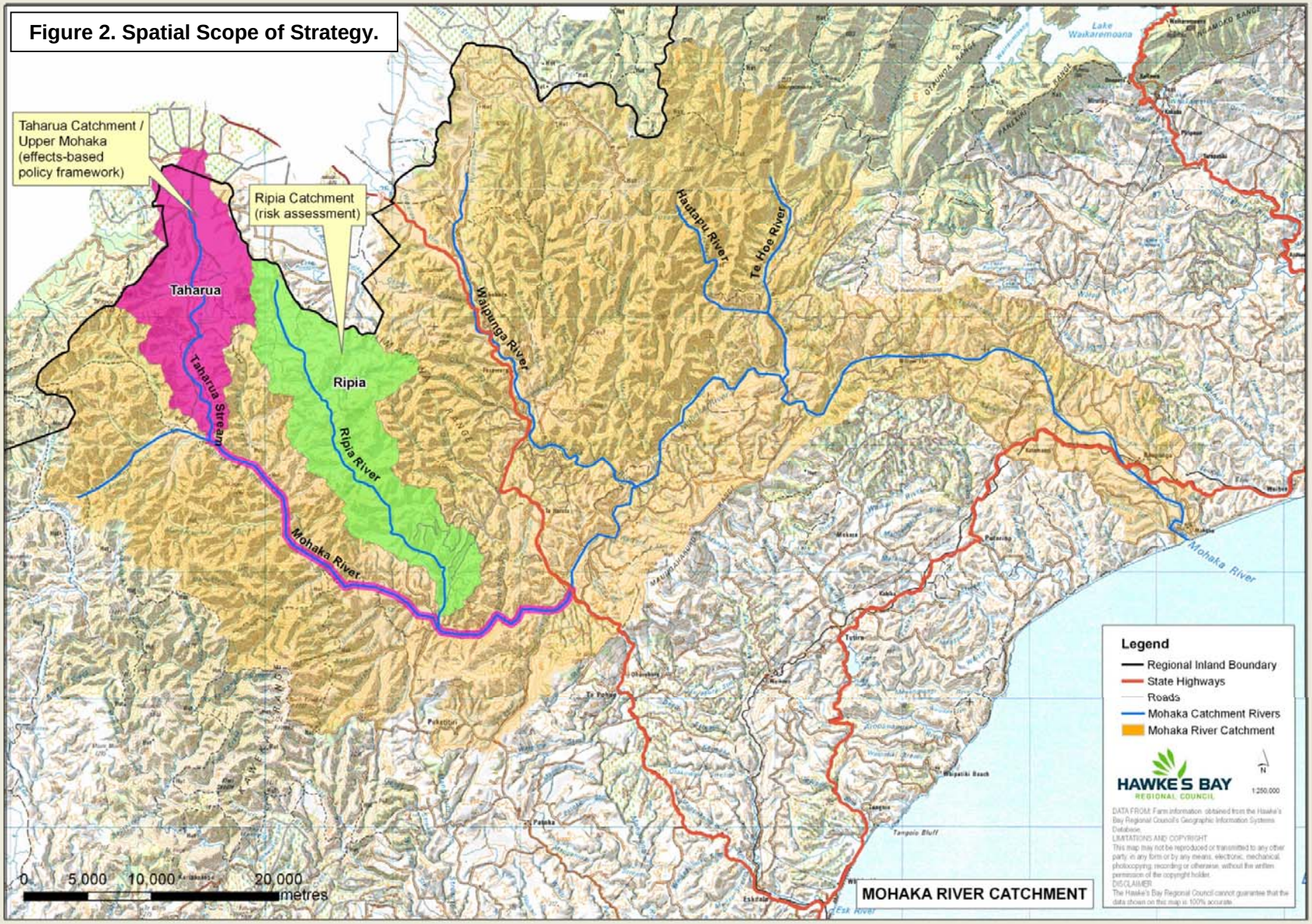
4.3 Ripia risk assessment

Additional scoping of risk to Mohaka River values from the Ripia sub-catchment (i.e. potential for land use intensification and environmental sensitivity) should form part of a proactive approach. This work is not included in current budgets.

If there is high-risk, the development of a Taharua-type framework for the Ripia sub-catchment could be considered. One year's monitoring data (mid-2010) would be sufficient to inform an initial instream target setting process.

Monitoring to date shows low nutrient loading to the Mohaka River from the Ripia sub-catchment. Implications of Taupo District Council's Landscape and Natural Values Plan Change (hearings stage) need to be fully understood for both the Ripia and Taharua catchments.

Figure 2. Spatial Scope of Strategy.



5. PROJECT TEAM

An internal Taharua Project Team has been established to progress this Strategy. Project management will be led by Chris Reed, Senior Planner, Strategic Development Group. Brendan Powell, Land Management Advisor will take primary responsibility for landowner/industry liaison.

The wider inter-team Land Use Group (LUG) will be kept informed and involved in the process as appropriate.

6. COMMUNITY ENGAGEMENT

Council will need to work in close partnership with landowners, industry representatives, iwi, other key stakeholders and the wider community to develop a practical framework that can both address ongoing deterioration of outstanding values in the Mohaka catchment and is (ideally) acceptable to everyone. This is considered a high priority.

6.1 Taharua Stakeholder Group

At a Taharua Stakeholder Group (TSG) meeting on 14 October 2009 it was agreed that the group will be expanded to form the primary forum for discussion. There was a commitment from parties present to work together towards certain and enduring solutions. Terms of reference are to be drafted and put to the group at the next meeting (provisionally late November).

At this stage, focussed engagement with the key stakeholders is considered most likely to achieve effective progress. Representatives are included on the TSG to add specific value to the process, but it is recognised that this may need future adjustments:

- All Taharua landowners
- Federated Farmers
- Fonterra
- DairyNZ
- Iwi including Ngati Hineuru, Ngati Pahauwera, Ngati Tuwharetoa (to be confirmed)
- Department of Conservation (Hawke's Bay, Turangi)
- Fish and Game
- Taupo District Council.

6.2 Wider Community

The Hawke's Bay Dairy Liaison Group (DLG), recently established by Council as a forum for dairy issues, should be engaged in the process. This group presents opportunities for a wider industry perspective, discussion of options to deliver benefits across the wellbeings, and to facilitate peer support/censure for on-farm changes. Fonterra, Federated Farmers and DairyNZ representatives are included on this group and the TSG.

Opportunities for broader community engagement will be required at key points in the process. This is examined in relation to Phases 1 and 2.

6.3 Communications Strategy

An initial draft Taharua Communications Strategy has been developed. This adopts a proactive approach and will be regularly reviewed and updated.

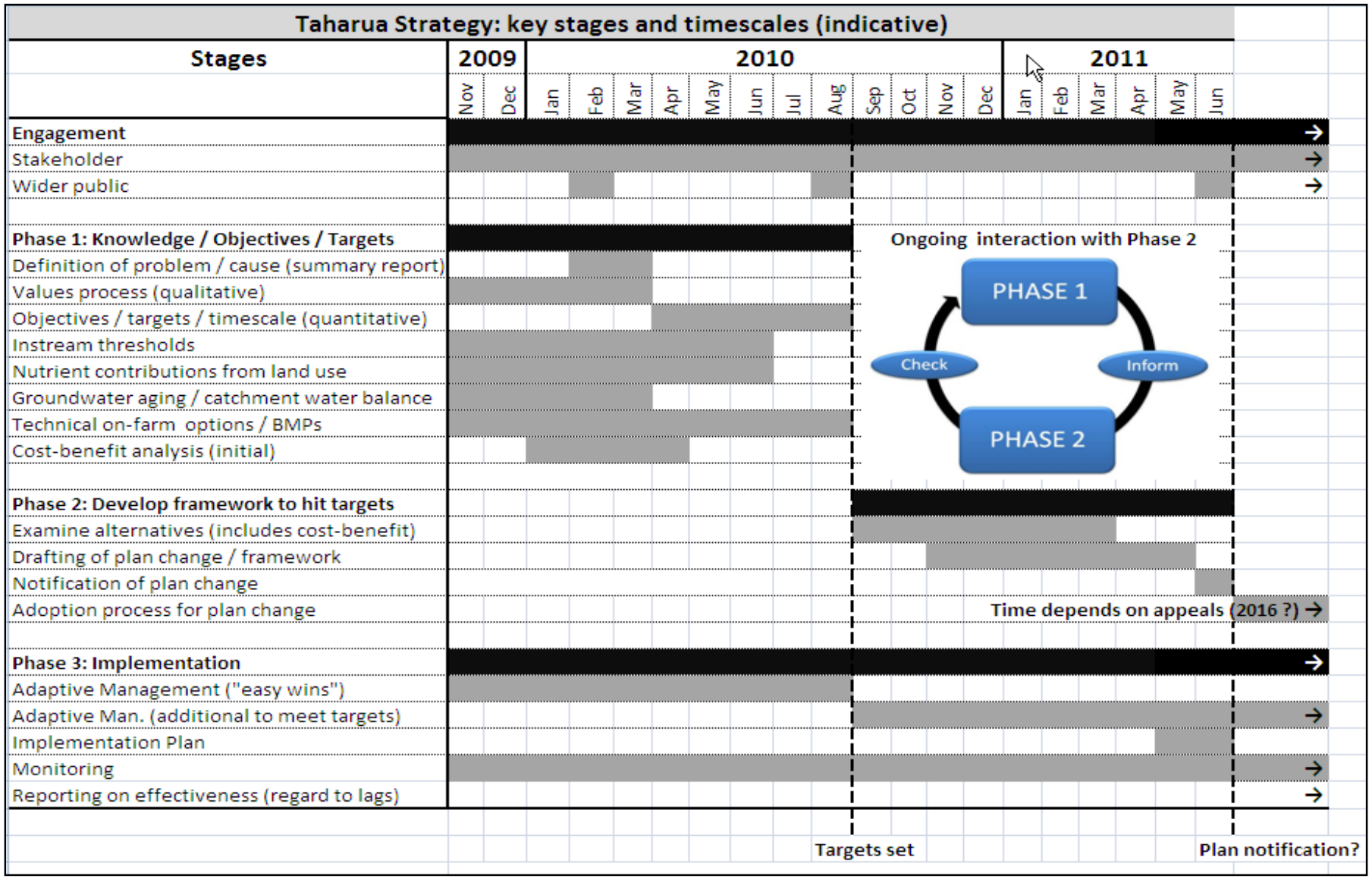
A Taharua webpage on the Regional Council's website will provide up-to-date information and access to key documents. This was requested at the last TSG meeting as a priority.

Media releases will be pre-released as a matter of courtesy to the TSG.

7. STRATEGY PHASES – OVERVIEW

An overview of framework development and implementation phases, workstreams and indicative timescales is provided in Figure 3.

Figure 3. Strategy phases, workstreams and indicative timescales.



The policy development process can be considered as three interlinked phases.

- **Phase 1: Preparation and target setting.** Workstreams in this phase are designed to inform the setting of community-endorsed, effects based targets in mid-2010 and subsequent examination of policy options. Phase 1 should continue to inform Phase 2 through an iterative framework development process. This reflects the increasing level of rigour required to be demonstrated under RMA S.32.
- **Phase 2: Framework development to meet targets.** Once Phase 1 has established the size of changes in on-farm practices required to meet catchment targets, a suitable framework can be considered. All alternatives will need to be rigorously examined. A realistic timescale for notification of a plan change is considered to be mid-2011 (i.e. 12 months from target setting).
- **Phase 3: Implementation.** Adaptive management to improve on-farm practices is already being implemented by Land Management in partnership with landowners. This process will be ongoing prior to target setting in mid-2010 and will concentrate on big gains for low cost. Once targets are established, practices are likely to need further adjustment according to the scale of change required. Implementation of a plan change may take 5 years, but is difficult to predict.

8. PHASE 1: PREPARATION AND TARGET SETTING

8.1 Definition of Problem and Cause(s)

By mid-2010 Council's ongoing science investigations, as detailed in the Ten Year Plan, *should* provide a sufficiently robust picture of problems and causes to inform land use policy development. Key ongoing and planned investigations, their timings and risks to the process are listed in Appendix 2.

At present, Council's increasing understanding of the Taharua / Mohaka issue has not been consolidated in a single summary document. It would be useful for Science Team to prepare an interim report to this effect. This report could be revised around mid 2010 in the light of additional investigations.

A key step for RMA S.32 purposes will be clear articulation of Council's (and other) evidence of problems and associated causes/drivers. Elimination of potential causes other than land use intensification is also important.

8.2 Values identification / objective and target development

Clear understanding of community values and objectives for the natural resource is vital to provide a 'yardstick' for judging whether a problem exists and inform target setting for improvement. The operative Regional Resource Management Plan (RRMP) objectives are not detailed enough to deal with the Taharua/ Mohaka issue. Further work is required to provide a clear focus for future effects based management.

An intensive engagement process needs to take place as a priority between now and mid-2010 in parallel to ongoing science investigations. These complementary workstreams will enable effects based target setting with the community around mid 2010.

While qualitative identification of values can commence immediately, setting of objectives and quantitative targets and timescales will need to be informed by:

- Science
- Initial analysis of costs and benefits
- Understanding of what a best management practice 'toolkit' can achieve (effectiveness and cost) and realistic timescales

The TSG will be the primary forum for Phase 1 engagement, but appropriate consideration needs to be given to the wider public input. Early public meetings will assist with a broader understanding of values. Further public meetings around mid-2010 will allow contribution to objective and target setting.

Establishing common agreement, particularly between the main stakeholders, on catchment values, objectives and environmental targets will be key aim of Phase 1. If this common position can be achieved it will form a solid foundation for Phase 2.

8.3 Understanding instream thresholds

Investigation of instream nutrient thresholds (Nitrogen and Phosphorus) to inform community objective and target development will not be completed until mid-2010.

Assembly of a robust evidence base will benefit from ongoing engagement with key organisations. For example, Fish and Game investigations can assist with evidence in relation to the protection of habitat for trout under RMA S.7 (e.g. evidence that fishery decline in not due to overfishing). The main body of scientific evidence can also be usefully supplemented by other anecdotal evidence such as past and present angler surveys.

8.4 Nutrient contributions from land use

Investigations to mid 2010 to understand catchment nutrient loading and cause-effect linkages include: detailed catchment nutrient modelling; a catchment water balance; and groundwater dating. See Appendix 2.

Until the scale and timing of the nutrient problem is fully understood, it will be difficult to seriously consider potential solutions in Phase 2.

8.5 Best management practices / adaptive management / effects based regulation

Preparatory workstreams to assist Phase 2 framework development include:

8.5.1. **Adaptive management research.** The level of nutrient reduction achievable (in the Taharua context) through implementation of an expanding spectrum of nutrient reduction measures for dairy farming needs to be assessed. Farm-specific scenario testing using Overseer will be a key tool, but other site-specific practices outside of Overseer modelling need consideration.

Cost-benefit analysis of options will be important. It may be appropriate to commission a detailed, independent report (e.g. AgResearch). This report will form a key part of the examination of non-regulatory alternatives as part of the RMA S.32 process, before any decision to head down an expensive, time-consuming and relatively untested regulatory route.

Council needs to increase understanding of adaptive management approaches, drawing on lessons learned elsewhere, particularly regarding implementation practicalities. Land Management will take a lead. Opportunities to develop practical research linkages with industry should be investigated. This might focus on “keystone” nutrient management measures that would have national application.

8.5.2. **Effects based regulation issues.** Opportunities should be taken to learn from other regional councils’ experiences of development/implementation of effects based regulatory frameworks for intensive land use. This work has commenced.

The challenges of combining participatory adaptive management with effects based regulation need investigating, particularly in relation to landowner ‘buy in’ to this integrated approach.

8.5.3. **Limitations of Overseer.** The challenges of using the Overseer nutrient management model to assist with catchment loading allocation at the farm-level need to be assessed. The specific characteristics of the Taharua catchment may raise additional challenges for an effects based framework, given the limits of model accuracy.

8.5.4. **Other options.** Investigation of the spectrum of interventions (both RMA and outside) that might be part of the framework should be commenced. Innovative options should be considered, including use of financial instruments as a control and/or incentive (e.g. 'tax' on excess nutrient loss linked to a mitigation fund), covenants/restrictions on land titles etc.

8.6 Preliminary cost-benefit analysis

Preliminary cost-benefit work should be carried out at Phase 1 to inform setting of objectives and targets. This also plays a key role in managing community expectations. Key elements include:

- broader regional economic justification for addressing the problem, as opposed to doing nothing
- indicative economic implications (particularly for landowners) of setting different targets for water quality (e.g. trout, contact recreation, 'pristine' condition).

8.7 Other

Early gap analysis should be undertaken of other potential research requirements. The values identification process may highlight existing knowledge gaps (e.g. understanding of recreational use of the Mohaka).

On-farm lysimeter monitoring may be required to validate Overseer modelling work. This will require winter spring data. This issue is being discussed with NIWA.

Key Reports: Phase 1

- Summary report(s) on Phase 1 process:
  - Problem definition (science: cause and effect)
  - Values / objectives / target setting process.
- Review of land management best practices for nutrient and sediment reduction (costs/benefits/impacts).
- Economic implications of Taharua / Mohaka issue.

9. PHASE 2: FRAMEWORK DEVELOPMENT

9.1 Introduction: implications of RMA Section 32

Although Council has expressed support in principle for an effects based regulatory framework combined with an adaptive catchment management approach, any policy development process will need to demonstrate rigorous consideration of alternatives, benefits and costs to satisfy RMA S.32 (see box below). The 'most appropriate' test under S.32(3)(a) and (b) is a stringent test and applies to non-regulatory methods as well as regulatory. Considerable work will be required to justify the 'shape' of any proposed framework, particularly with the likelihood of Environment Court challenges (it would be prudent to plan for this worst case scenario).

RMA Section 32: Consideration of alternatives, benefits and costs

(3) An evaluation must examine—
  (a) the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and
  (b) whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.

(4) For the purposes of the examinations referred to in subsections (3) and (3A), an evaluation must take into account—
  (a) the benefits and costs of policies, rules, or other methods; and
  (b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.

Meeting RMA S.32 needs to be an ongoing process throughout Phases 1 and 2, not left to a final document.

9.2 Continuing the partnership approach

The partnership approach with key stakeholders established for Phase 1 should continue throughout Phase 2. As well as facilitating more effective outcomes, this approach is most likely to reduce costs and time spent dealing with later submissions and Environment Court proceedings.

9.3 Developing a framework: considerations

A wide range of considerations will need to be taken into account in developing and selecting a framework and eliminating other options. These considerations include, but are not limited to:

- the need for an enduring framework that is not compromised by landowner change
- the behavioural impacts of the framework and its ability to support innovation, community learning and longer-term ethical changes (social science plays a key role in sustainable management)
- the benefits of landowner and community support for a framework
- the size of the change (e.g. nutrient reduction) required
- the need for rigorous cost-benefit analysis of options taking account of regional, catchment and landowner impacts
- the need for a (ideally accepted) strong bottom line
- the potential benefits of combining the use of disincentives with incentives
- the need to set interim management targets to ensure stepped landowner progress towards ultimate target(s)
- the need for an effective monitoring framework to track progress towards targets (complicated by cause-effect time lags)
- the need to consider implementation issues (compliance and administrative requirements) at the development stage.

10. PHASE 3: IMPLEMENTATION

Implementation issues need to be fully considered in Phase 2 framework development. This includes monitoring requirements, appropriate reporting on policy effectiveness, compliance issues and ongoing administrative costs and procedures.

By definition, adaptive management involves continuous improvement through trial, monitoring and adjustment. This element of an integrated framework can be implemented immediately (and steps are already being taken). Land Management have identified a number of changes in farm-specific practices that could cumulatively deliver a significant environmental and potentially financial benefits. There is initial indication from landowners of a willingness to implement financially acceptable changes as a priority. Once effects based targets are established in mid-2010, additional on-farm mitigation measures are likely to be required. Stepped management targets should be considered.

Development of an overarching Implementation Plan will be important at the time of a plan change notification to coordinate this with the full range of measures (including adaptive management and direct interventions).

11. ADDRESSING RISKS TO THE PROCESS

There are a number of risks to such a complex policy development/implementation process, which could have significant implications for Council in terms of cost, time and policy effectiveness. Key risks are examined in the table below, along with steps to either reduce the risk or its impact:

Table 1. Risks to Framework Development

Risk	Explanation	Risk reduction steps
Relationship breakdown	The main risk to the process that is likely to add considerable cost and time to the process and reduce outcome effectiveness. Stakeholder engagement must be seen to add real value and not be tokenistic or top-down.	• Framework development that is sensitive to socio-economic processes. Avoid a mechanistic approach. • Early and ongoing commitment to partnership with landowners, industry, iwi and other key stakeholders through the Taharua Stakeholder Group (in place) • Managing expectations regarding the future impacts of an effects based framework (e.g. costs-benefits) • Providing necessary information to the community to make informed decisions (e.g. objective and target setting)

Risk	Explanation	Risk reduction steps
Media impacts	A reactive, uncoordinated approach to the media is likely to adversely affect relationships (see above).	• A proactive communications strategy (in place), setting out positive steps forward and partnership commitments • Stating realistic timescales • Pre-release of media statements and HBRC reports to stakeholders (in place) • Responding to misinformation
Inadequate Knowledge Base	RMA S.32 requires a rigorous policy development process including: • Science (problem definition and causes) • Socio-economic (cost-benefit analysis and community values) • Examination of alternatives Failure to assemble this evidence can cause later delays.	• Robust Phase 1 process prior to Phase 2 policy development (including articulation in key reports) • Ongoing updating of knowledge and effective feeding into Phase 2 • Early gap analysis to flag potential future requirements
Science Implications	Risks to ongoing science investigations (to mid 2010) are listed in Appendix 2. Ongoing investigations could raise issues that considerably complicate the framework development process (see Resources/Funding below). These include: • Potential need for additional investigations (e.g. groundwater) • Instream nutrient limits and catchment nutrient loss reductions that are challenging to meet and strain a partnership approach (see Target Setting below). • Potential cross-boundary impacts requiring coordination with Environment Bay of Plenty. • Complexities of longer cause-effect lag times Applicability of Overseer as a management tool.	• Managing expectations by recognising the uncertainty of a complex process (e.g. timescales, impacts on landowners) • Building flexibility into financial and resource planning (see below) • Phase 1 investigation of: ▪ Overseer applicability ▪ Nutrient reduction toolkit
Objective / Target Setting	Community objective / target setting is a key step in developing an effects based framework. Risks include: • Relationship breakdown when hard decisions are required • Uninformed decision-making Need for democratic accountability	• Manage expectations – avoid creating false optimism • Provide adequate information to inform community decisions • Supplement Taharua Stakeholder Group engagement with open public meetings and publicity material to assist wider input.

Risk	Explanation	Risk reduction steps

Resources / Funding	Potentially significant resource implications could arise from results of ongoing science investigations (e.g. if groundwater catchment extends beyond surface catchment).
	Workstreams not presently funded include:
	• Detailed catchment nutrient modelling ($50,000)
	• Other science work ($14,400) to complete
	  ▪ Instream biological growth assessments to refine catchment load modelling
	  ▪ Nutrient limitation assessments
	• Risk assessment of Ripia catchment
	• Adaptive management research
	• Values research
		• Anticipate potential cost range
		• Review during December reforecast

Implement-ation issues	Detailed implementation issues are often overlooked at the development stage	• Consider implementation issues in Phase 1 and Phase 2 work • Commitment to partnership working with landowners and industry assists with "reality check" of implementation issues (in place)

12. SUMMARY

This strategy is a working document and will need to be reviewed and updated, in conjunction with key stakeholders, in response to changing circumstances and additional knowledge.

Key features of the strategy include:

- A focus on addressing impacts of land use intensification in the Taharua catchment in order to restore and protect community values of the upper Mohaka and Taharua Rivers. However, opportunities to restore values in the Taharua catchment are also recognised through the stakeholder engagement process.
- An initial risk assessment of the potential impacts of land use intensification in the adjacent Ripia catchment and the need for a similar framework.
- Detailing of key steps and indicative, but realistic timeframes for development of effects based regulation.
- A three-phase process that recognises the need for an iterative approach to policy development/implementation: Phase 1 problem definition and objective/target setting; Phase 2 identifying solutions; Phase 3 implementing solutions.
- A strong emphasis on a partnership approach with landowners, industry, iwi and other key stakeholders through a Taharua Stakeholder Group. This includes:
  - management objective and target setting (Phase 1)
  - community solution development (Phase 2).

- Ongoing development and implementation of on-farm adaptive management measures. This process is already taking place through partnership between landowners and Council's Land Management Advisor. Until effects based targets are set in mid 2010 on farm improvements will focus on the high impact 'easy wins'. Thereafter, further adaptive management measures are likely to be required. Voluntary agreement of stepped, voluntary nutrient reduction targets may be appropriate.
- Initial risk assessment and risk reduction steps.

The scope of the strategy has been tightly defined to both address an identified resource management issue while also maintaining project manageability. This does not preclude the resulting effects based framework being incorporated into a broader, overarching management framework for the wider Mohaka catchment over the longer term.

APPENDIX 1

Extract from the MINUTES OF A MEETING OF THE REGIONAL COUNCIL

Wednesday 23 September 2009

10. **RECOMMENDATIONS AND REPORTS FROM:**

10(i) Environmental Management Committee

Taharua Catchment: Land Use Issues and Management Options

RESOLUTIONS:

That Council:

1. Receives the report titled '*Taharua Catchment: Land use issues and Management Options'*.
2. Recognises the Mohaka River and its tributaries as having outstanding values in terms of ecosystems, natural character, fisheries, public amenity and cultural significance, requiring integrated and sustainable management of the water resource.
3. Supports an approach for dealing with the water quality issues in the Taharua and Mohaka catchments that incorporates an effects based regulatory framework along with an adaptive catchment management approach.
4. Endorses a zero tolerance approach to consent non-compliance in the Taharua River Catchment.
5. Instructs staff to clearly communicate Council's position on the effects of land use intensification of the Taharua River Catchment to relevant industry organisations such as Federated Farmers and Fonterra, both at a local level and at a national level.
6. Instructs staff to communicate with all landowners in the Taharua Catchment, the issues and management of the environmental effects of land use activities in the catchment.
7. Instructs staff to establish a catchment stakeholder group for the Taharua and Mohaka rivers for the purpose of community engagement.
8. Instructs staff to prepare a Taharua River Strategy which sets out the approach, key steps and timetable toward the development of an (ideally) agreed policy framework for inclusion in the regional plans, with the draft Strategy to be reported back to the November 2009 Environmental Management Committee meeting.

Remmerswaal/von Dadelszen
CARRIED

APPENDIX 2

HBRC TAHARUA/MOHAKA SCIENCE INVESTIGATIONS				
INVESTIGATION	**PURPOSE**	**STATUS**	**ESTIMATED COMPLETION**	**RISKS TO PROCESS**
Instream Investigations	Instream nutrient limits to inform target setting process with community	Ongoing	Mid-2010	High instream limits may lead to more challenging targets for intensive land use. Could strain engagement process, reduce policy options
Catchment Water Balance	Indicate extent of groundwater catchment. Informs cause-effect linkages and nutrient modelling.	Ongoing	End-2009	Cross regional boundary effects could significantly complicate / extend policy development process
Groundwater dating	Indicate lag times between nutrient loss from land use and instream effects. • Is current deterioration from dairying? • What's the load to come? • Managing expectations.	Ongoing	Early 2010	Could indicate a larger problem to come (i.e. current effects not from recent dairy expansion) Greater lag time increases difficulty of monitoring progress towards target (more reliant on models)
Detailed nutrient modelling	More accurate estimates of nutrient losses from land uses in the Taharua catchment. Understanding of cause-effect linkages.	Scoping with NIWA	Mid-2010	Need for: • accurate on-farm information (Overseer) – landowner cooperation • Verifying model accuracy (work not currently programmed)