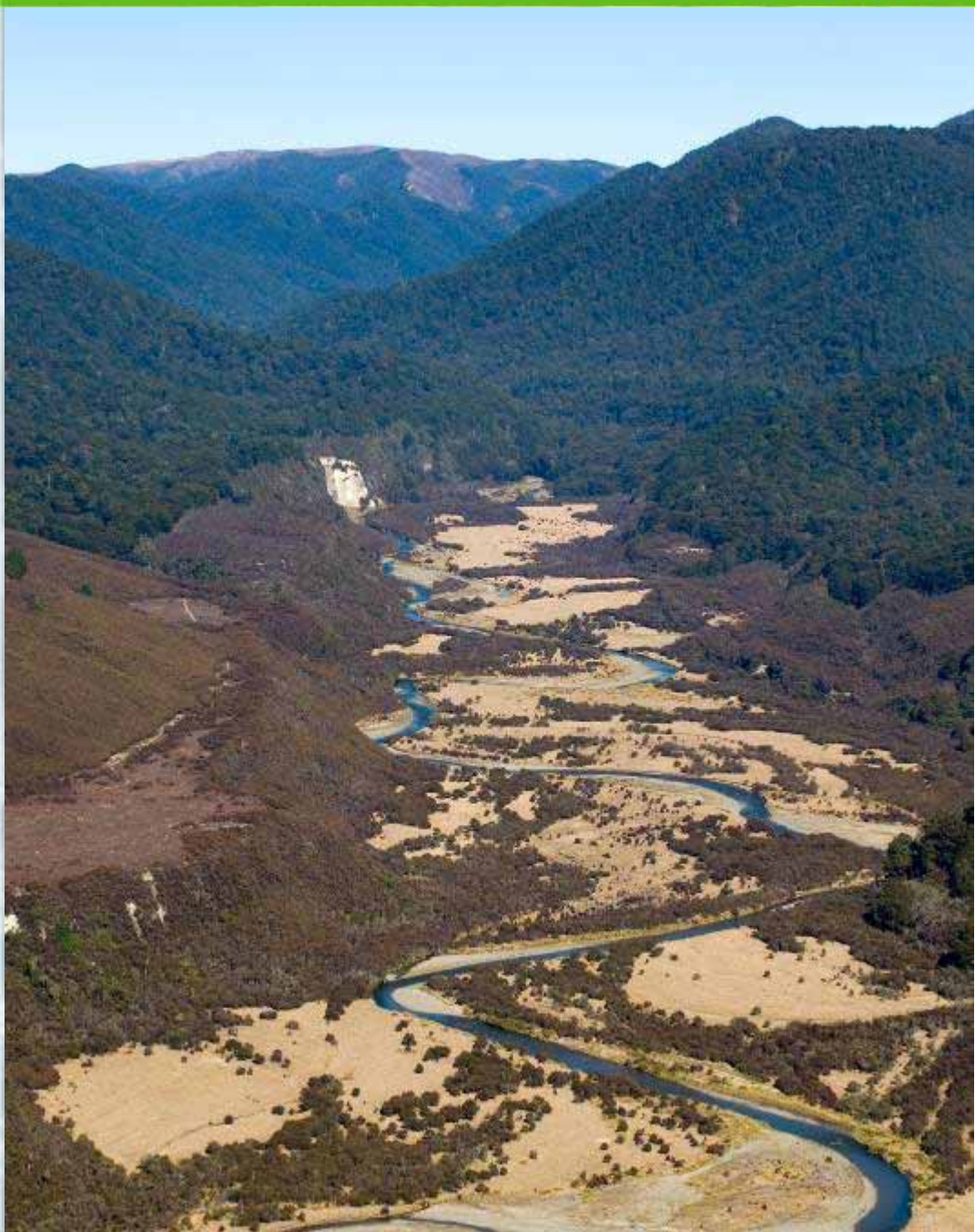




HAWKE'S BAY REGIONAL COUNCIL



SAFEGUARDING YOUR ENVIRONMENT + KAITIAKI TUKU IHO



Taharua and Upper Mohaka

Policy Development Process

October 2011
SD11/06
HBRC Plan Number 4280



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SAFEGUARDING YOUR ENVIRONMENT + KAITIAKI TUKU IHO

Strategic Development Group

Taharua and Upper Mohaka Policy Development Process

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EXECUTIVE SUMMARY

This report assesses the Hawke's Bay Regional Council's (Council) progress in addressing the land use and water quality issues for the Taharua and Upper Mohaka catchments. The progress that has occurred to date has been undertaken in collaboration with the Taharua Stakeholder Group (TSG). This report is based on contents of the 'Taharua and Upper Mohaka Draft Strategy' which was prepared for the purposes of public consultation, rather than an in depth review across all of Council's work programmes. This report follows on from a report prepared for Council in July 2009¹ dealing with generic policy development considerations for land use intensification. The July 2009 report identified a number of sequential policy development steps:

- (i) Having **clear management objectives** for the natural resources
- (ii) Properly **defining the problem** that pertains to those resources
- (iii) Identifying the full range of **potential solutions** to resolve the problem and **selecting** the most appropriate solution based on an objective comparison of the advantages and disadvantages of each
- (iv) **Implementing** the selected solution and **monitoring** its performance in terms of resolving the actual defined problem

Council has substantial further work to do to on each of these steps for the Taharua and Upper Mohaka catchments, particularly in terms of step (iii) – identifying the solutions. The current deadline of plan change notification by the end of 2011 is unrealistic. A more feasible timeframe could be mid-2012 if sufficient Council resources are available to undertake the remaining work identified in this report. However, the complexity of the issues and possible policy responses, together with Council's commitment to a collaborative process with the TSG, adds uncertainty to the timeframe.

1 INTRODUCTION

In recognition of its statutory function under section 30(1)(c)(ii)² of the Resource Management Act (RMA) the Council has been considering an appropriate response to the identified effects of land use intensification on water quality in the Taharua and Upper Mohaka catchments. Council has chosen to follow a collaborative policy development process with the TSG, as the main multi-stakeholder working party. Council's progress to date is encapsulated in its July 2011 Draft Strategy report.³ Council has received submissions on that document and these have been summarised by Council staff.

This report discusses Council's progress to date in terms of each of the four steps set out above. As set out in the Draft Strategy, a key component is the notification of a specific Change to the Regional Resource Management Plan (RRMP).

2 CLEAR OBJECTIVES

It is impossible to identify whether or not a resource management problem exists unless the management objectives for the resource in question are clear and certain. In simple terms, unless there are clear management objectives there is no 'yardstick' against which to judge whether or not a problem exists. Council's science monitoring and investigations have

¹ Regional Resource Management Plan Land Use Intensification Policy Development Process Considerations, July 2009

² Every regional council shall have the following functions for the purpose of giving effect to this Act in its region:

(c) the control of the use of land for the purpose of – ...

(ii) the maintenance and enhancement of the quality of water in water bodies and coastal water:

³ Taharua and Upper Mohaka Draft Strategy, A Discussion for Future Management, July 2011

shown that the region-wide water quality objectives of the Regional Policy Statement are not being achieved in the Taharua and upper Mohaka catchments. Accordingly, Council's Draft Strategy proposes specific management objectives for the future health of the Taharua and upper Mohaka rivers.

The objectives derived to date are set out on page 8 of the Draft Strategy. They are:

Taharua

- Promote biodiversity values
- Provide suitable conditions for a high-value trout fishery and healthy native fishery

Upper Mohaka

- Protect the high natural character
- Reduce downstream impacts to a level acceptable to the Hawke's Bay community

If we ask ourselves the key question "are these objectives clear and certain," the objectives are adequate for a public consultation document (which it is understood the Draft Strategy was), but it is obvious that the proposed management objectives would benefit from further refinement prior to them being promulgated in a regional plan change. This would include:

- a) The term "Promote biodiversity values" is vague and uncertain. What does this actually mean? Does it relate to terrestrial biodiversity or just instream biodiversity? Does it apply to the main stem of the Taharua and Upper Mohaka rivers or to their tributaries as well? It is also arguably redundant given the second objective.
- b) The term "Provide suitable conditions for a high-value trout fishery and healthy native fishery" is reasonably clear and certain but it could usefully refer to "Restore and maintain" instead of "Provide", recognising that existing water quality degradation needs to be remedied. Also the term "conditions" should be clarified – what does it mean? Is it water quality only (and if so which water quality parameters) or does it include matters such as riparian vegetation and the facilitation of public access to the rivers?
- c) The term "Protect the high natural character" suggests that the existing level of natural character is to be maintained. Is this the case or is remediation to some former state (pre-dairy farming) desired? Also natural character is a subjective term. It would be better to define measurable characteristics of natural character such as water quality, riparian vegetation and acceptable levels of periphyton growth.
- d) The term "Reduce downstream impacts to a level acceptable to the Hawke's Bay community" is vague and uncertain. What does "downstream" mean – downstream from where to where? What "impacts" are referred to? These should be specified (such as water quality and levels of periphyton growth). The phrase "to a level acceptable to the Hawke's Bay community" is meaningless. It is up to Council to set that level (following appropriate consultation) and test that through the RMA First Schedule process, taking account of public feedback on the Draft Strategy. In that regard it is clear from the submissions received that there is a desire to restore the Upper Mohaka water quality to the state it was in prior to dairy farm development in the Taharua.
- e) Council should also include objectives for land use that will enable the achievement of the water quality objectives. For example, does Council wish to maintain current land use or see it change? Does it wish to preclude further dairy conversions in the Taharua, Ripia and Waipunga catchments? Does it wish existing farms to remain financially viable?

Until Council addresses these matters it is arguable that Council has not yet completed the essential first step in the policy development process – having clear management objectives for the natural resources to be managed.

4 PROBLEM DEFINITION

Once clear and certain objectives are formulated the fundamental next step is to identify the problem(s) with the natural resources under consideration. Namely, the identification of where the Plan objectives are not being met. This necessitates the obtaining of hard data, namely verifiable monitoring data, as opposed to anecdotal evidence or simple assumptions based on community consultation or lay person observations.

In this case it appears that the problem has been well defined (excessive nitrogen leaching leading to nitrogen toxicity in the Taharua and unacceptable periphyton growth in the upper Mohaka) and the cause of the problem has also been identified (the four farms in the catchment as there are no point source discharges to the rivers). Council should however ensure its body of evidence is clearly documented and address any remaining gaps it may be aware of.

5 RANGE OF SOLUTIONS AND SOLUTION SELECTION

Having adequately achieved the problem definition step, and assuming that the management objectives will be refined as discussed above, the Council can now proceed to selecting a solution. It is in this area that the Council has yet to undertake a large body of work. It appears that a number of matters still need to be addressed as follows:

- a) It is unclear what the geographic scope of the intended plan change is. If it is to cover the Upper Mohaka catchment above Glenfalls then the plan change will need to include the Ripia River. If it is to extend further down the Mohaka River then it will need to include other catchments such as the Waipunga River.
- b) The veracity of the water quality targets specified in the Draft Strategy needs to be verified as the proposed targets have been challenged by submitters on technical grounds. A scientific report needs to be prepared that addresses the technical concerns raised by the submitters and either confirms the nitrate toxicity target and the total nitrogen targets or derives alternative numerical values.
- c) The scientific report discussed above should also justify the focus on nitrogen and explain why water quality targets are not being set for sediment, phosphorous and perhaps faecal coliforms.
- d) It seems more logical to set the Taharua nitrate toxicity target immediately downstream of the existing dairy farms so that it 'captures' the contributing land uses of concern. The Twin Culverts site may be inadequate for that purpose, as identified by submitters.
- e) A total nitrogen water quality target (instantaneous water quality concentration measured in mg/l or ppm) may need to be set for the Taharua River just above its confluence with the Mohaka River. This would be based on both toxicity for fish in the Taharua and acceptable periphyton growth levels in the Upper Mohaka. Until this is done there is no way of determining what the allowable nutrient load for the Taharua catchment should be. In addition, a total nitrogen load (kgN/year) needs to be set for the Taharua catchment at that same location. The total nitrogen load should be determined to ensure that the above water quality targets can be met.
- f) Using the Mohaka catchment nutrient model developed by NIWA, the following steps are advised:
 - i. The existing total nitrogen load generated by existing land uses in the Taharua catchment needs to be determined. It should be based on modelled Overseer leaching rates for the four farms and estimated nitrogen leaching rates for the forestry and non-productive land⁴. It should also include nitrogen inputs from

⁴ Such land generally leaches at the rate of 3kgN/ha/year

other sources such as rainfall and atmospheric deposition. It is understood that the catchment nitrogen load can be modelled by NIWA.

- ii. The existing total nitrogen load needs to be split into a 'manageable' component (namely that deriving from the four farms) and an 'unmanageable' component (namely that deriving from forestry, unproductive land, rainfall and atmospheric deposition). It is the 'manageable' load that will be the focus of the plan change's policies and rules.
- iii. The allowable total nitrogen load required in order to meet the total nitrogen target for the Taharua River catchment needs to be determined and compared to the existing total 'manageable' load. This will confirm the nitrogen reduction target in the Draft Strategy which is understood to be around 30,000 kgN/year.
- g) The confirmed nitrogen reduction target needs to be allocated across the existing land uses (namely the four farms). It should be assumed that forestry and non-productive land cannot further reduce their nitrogen leaching.
- h) As a reduction in catchment nitrogen leaching will be required, the plan change should preclude any increase in existing property nitrogen leaching levels. Offsetting increases by decreases elsewhere in the catchment would only achieve the status-quo which is not adequate in this case.
- i) If the existing land uses primarily causing the water quality degradation (the dairy farms) will be required to reduce their leaching, then an initial leaching rate (or nitrogen discharge allowance) needs to be assigned to each property. This can be achieved by averaging (each farm is allowed to leach the same amount per hectare – being the allowable catchment load attributed to the productive land divided by the total number of hectares farmed) or grand-parenting (whereby each property is allowed to leach the amount of nitrogen leached in a selected base year – probably 2011 in this case). The Lake Taupo plan variation evidence clearly established that grand-parenting is the global norm in situations like this and is the more equitable approach.
- j) Nitrogen reduction targets would then be set for each dairy farm. These can be derived in several ways including:
 - Pro-rata reductions from existing leaching rates to achieve the catchment wide nitrogen reduction target (for example everyone reduces by 20%)
 - Reductions to what can be economically achieved on each property using all available best management practices
 - Reducing leaching to what the 'natural capital' of the land can support based on LUC⁵
- k) Each of the possible scenarios should be modelled to see if the catchment wide nitrogen reduction target can be met (the first option above would clearly meet that aim if the percentage reduction mirrored the catchment nitrogen leaching reduction target). If it cannot, then more intrusive regulatory measures will be required such as land retirement or a reduction in stock numbers. Reducing nitrogen leaching in this way is problematic as it erodes existing use rights. While this is not precluded by the RMA, care needs to be taken that the land in question is not rendered incapable of reasonable use. If it is, then s85 of the RMA comes into play and the Environment Court can direct the relevant plan to be modified, deleted or replaced. The need to avoid this pitfall is one of the reasons why the Waikato Regional Council has elected to cap existing leaching levels by ways of rules and then achieve nitrogen reductions in the Lake Taupo catchment voluntarily⁶ through the use of a \$81.5⁷ million fund

⁵ This is the Horizons Regional Council One Plan approach

⁶ The Public Fund will be used to purchase nitrogen – mainly by buying and retiring farms.

⁷ It was estimated that 13,500 hectares of pasture (assuming average pasture leaching of 13.75 kilograms of nitrogen per hectare per year) or 26 percent of the pasture land in the catchment (13500/52500), would be required to be converted from

administered by the Lake Taupo Protection Trust.⁸ Namely, if the community desires legitimate farming activities to cease trading or even reduce their financial returns, then the community should pay.

- l) A decision would need to be made on whether to base the necessary rules on s9 (relating to controls on use of land) or s15 (relating to discharges of contaminants) of the RMA. Work in other regions suggests that s9 is more appropriate with a 'catch-all' s15 rule for point source discharges such as farm dairy effluent.⁹ It is assumed that s14 (restrictions relating to water) is not an option as there is not widespread clean water irrigation occurring on the farms.
- m) A realistic timeframe for achieving the catchment nitrogen reduction target should be set. The submissions on the Draft Strategy suggest a shorter timeframe than 10 years should be considered.
- n) The plan change rules would need to specify how the nitrogen leaching reductions are to be achieved for each farm (such as in annual steps over five years).
- o) The plan change should also consider compulsory fencing and planting of riparian margins on the four farms, as was suggested by a number of submissions. This would extend the voluntary commitments of the Clean Streams Accord (for the three dairy farms) and would assist with reducing the output of other contaminants of concern to submitters including sediment, phosphorous and faecal coliforms.
- p) To add a further level of complication to this matter, the identification of the possible solutions and the selection of the desired solution must occur in a manner that is consistent with the requirements of s32 of the RMA. This will necessitate an economic analysis of the costs of change for the four farms and the cumulative costs across the catchment, including multiplier effects on the wider regional economy¹⁰. These real and tangible costs would need to be matched by a quantifiable environmental benefit. In the case of Lake Taupo, the assumed benefit was the avoidance of a multi-million dollar loss of recreation sector derived revenue should the Lake water quality become degraded. In the case of the Taharua and upper Mohaka Rivers, the adverse effects of degraded water quality on downstream users (commercial rafters and kayakers, commercial angling guides, other tourism operators, and private recreational users – including many of the submitters) should be estimated by a suitably qualified and experienced resource economist.
- q) If the plan change is to include the neighbouring Ripia and Waipunga catchments, then the steps outlined above must also be completed for those catchments. Council should not simply extrapolate data from one catchment to another or one aquifer to another as this will inevitably be exposed under cross-examination when the plan change proposal is tested in Council and Court hearings.
- r) The 'solution' needs to be codified into objectives, policies, rules and other methods.

6 IMPLEMENTATION AND MONITORING

Once a solution to the problem has been selected then Council must implement the solution and monitor its effectiveness (ongoing monitoring is essential). An effective implementation and monitoring framework needs to be developed upfront but it does not need to be contained in the plan change. That would lack flexibility (changes to the monitoring framework would need to occur by way of a First Schedule process) and the monitoring framework would be better included in a non-statutory monitoring plan.

pasture to forestry at a cost of \$5000 per hectare. Thus the actual cost of the reduction was estimated to be \$67.5 million plus \$14 million for research and administration costs (total \$81.5 million).

⁸ Jointly funded by Central Government, EW and the Taupo District Council.

⁹ The author has recently prepared a report on this matter for Environment Canterbury.

¹⁰ For example, Horizons RC did not do this prior to the notification of the One Plan, but it subsequently commissioned PGG Wrightson Consulting to prepare such a report.

Water quality needs to be intensively monitored at each of the sites where in-stream nitrogen water quality targets are set. Periphyton levels in the upper Mohaka should be monitored at the water quality target sites.

Land use change should also be monitored (the area of the catchment(s) in various land uses) as should the extent of riparian retirement and planting.

On-farm leaching rates will need to be assessed annually to ensure compliance with the individual farm nitrogen leaching reduction requirements. This can be achieved by undertaking annual Overseer modelling for each farm. Council will need to ensure auditing of any Overseer modelling undertaken by the farmers themselves is effective and consistent.