

HAWKE'S BAY REGIONAL COUNCIL

ENVIRONMENTAL MANAGEMENT COMMITTEE

Wednesday 14 July 2010

SUBJECT: TAHARUA CATCHMENT UPDATE

REASON FOR REPORT

1. The purpose of this paper is to update the Committee on progress of workstreams under Phase 1 of Council's *Taharua Policy Development Strategy* (November 2009). This supports Council's resolution in September 2009 to develop and implement an effects-based framework to address water quality issues in the Taharua and upper Mohaka rivers.
2. The paper is supported by a summary presentation of Phase 1 progress, including results and implications of key science investigations.

Phase 1 Overview

3. The primary goal of Phase 1 is:
Stakeholder agreement of provisional catchment management objectives and nutrient targets, informed by robust science and the full range of community values.
4. Workstreams remain on track to potentially achieve this goal by end August 2010, in line with the plan change timetable set out in the Strategy. However, this is dependent on the time required by the Taharua Stakeholder Group (TSG) to agree a way forward. Effective stakeholder engagement requires that the Group be given enough time to consider its recommendations and to take ownership of them. Such "front-loading" should assist subsequent framework development and implementation.
5. A final Phase 1 report will be presented to the Committee once provisional objectives and targets are agreed by the TSG. The Group has expressed interest in being involved in presenting its recommendations directly to Council.

Stakeholder Engagement

6. In late 2009 the TSG was formalised and expanded as a working group to address issues affecting the Taharua catchment and upper Mohaka River. Membership of the TSG is given in Appendix 1.
7. From the outset, representatives formally agreed:
 - 7.1 catchment issues need addressing
 - 7.2 certain and enduring solutions are required, which are resilient to landowner changes
 - 7.3 a commitment to be fully involved in the process of developing and implementing solutions.
8. While nutrient impacts on water quality are the primary focus, the Group acknowledges a broader management approach could yield wider benefits for the Taharua catchment.
9. The frequency of TSG meetings has been limited by stakeholder commitments, but to date 4 meetings have taken place since last November. Changes in representation have added to the challenge. However, the Group have been working positively through a structured programme of science updates, sites visits, lessons from other catchments, sharing of values and visioning.

10. Full reporting on TSG values will be left to the Group. Some key themes include:
 - 10.1 a balanced approach that supports healthy businesses, communities and environment, underpinned by healthy water
 - 10.2 full expression of kaitiakitanga, embracing geographic and generational connectedness and responsibility
 - 10.3 a preference for self-determination.
11. Various assessments are taking place or planned to support community decision-making in addition to science investigations. Most are not vital to Phase 1 and will inform Phase 2 processes. Assessments include:
 - 11.1 economic stocktake (Phase 1) and economic testing of scenarios (Phase 2)
 - 11.2 Cultural Health Index assessment of iwi values (Phase 2)
 - 11.3 Regional river values assessments (e.g. kayaking and angling) (Phases 1 and 2).
12. The need for wider public engagement is identified by the Strategy, but is currently on-hold due to the TSG's preference to develop provisional recommendations first. Wider public engagement will then be a priority.

Science Investigations

Progress overview

13. Monitoring of the surface waters of the Taharua and Mohaka and groundwater of the Taharua basin have continued monthly since the last update (November 2008). Additional work on algal biomass, flows and water quality has been undertaken to assist in modelling nutrient fluxes and estimating biomass yields. Field work on validating the trout energetic model was completed in summer with the final report due end of August. This work was contracted to Cawthron Institute in partnership with Fish and Game Council.
14. Continuous monitoring of river flows, climate, temperature, conductivity, pH and dissolved oxygen is carried out by a telemetered site located on the boundary of Poronui station. This site has provided valuable information on catchment hydrological characteristics, which has assisted in determining an estimate of the water balance. Additional supporting hydrological surveys were conducted to assess loss and gain areas of the Taharua River to determine water fluxes of the area and support the groundwater investigations. Further field surveys looking at Taharua instream and riparian habitat have been conducted to enable benchmarking for future and current interventions that are being employed (such as riparian planting and fencing).

Groundwater results

15. Shallow groundwater has elevated levels of nitrate (median 8.3 mg/l, range 4 mg/l to 12 mg/l).
16. Deep groundwater nitrate ranges from <0.002 mg/l to 1.9 mg/l and is not considered elevated.
17. The two shallow bores closest to the Mohaka confluence show increasing nitrate concentrations with time (increasing trend).
18. Groundwater age of the shallow groundwater is up to 5 years; deeper groundwater in the range up to 152 years. The implication of this is that interventions initiated may realise positive environmental results within 5 years.
19. Water balance indicates more inflow than outflow (26%). This infers that water is leaving the catchment not only via the Taharua River, but also possibly as deeper groundwater

via eastern and northern valleys (i.e. out of the Taharua Catchment into Environment Bay of Plenty catchments).

Surface water quality results

20. Surface water quality of the Taharua River continues to increase in nitrate, with concentrations at the central Twin Culverts site approaching 4 mg/l. The lower site at Poronui station, although continuing to increase, is less than 2 mg/l. Typical nitrate levels in upper river sites are less than 0.1 mg/l.
21. Nitrate increases in the Mohaka River downstream of the Taharua are currently not being observed possibly a result of algal uptake, but also due to laboratory detection limits.

Trout modelling results

22. Food value and water clarity is optimal for trout upstream of the Taharua confluence.
23. Food value and water clarity is less than optimal for trout downstream of the Taharua confluence resulting in smaller trout. This supports the anecdotal evidence Council has received of a reduced fishery within the Taharua River and in the Mohaka downstream of the confluence with the Taharua.

Nutrient modelling

24. A proposal to undertake detailed catchment nutrient modelling to understand the linkages between Taharua land use and water quality has now been received by NIWA and is currently being reviewed. This builds on the preliminary report by Phillips (July 2009). Work is expected to be completed on the initial phases by the end of July allowing catchment objectives to be discussed and the setting of nutrient limits to afford an acceptable level of algal biomass.

Taharua problem definition

25. A summary of current understanding of the Taharua problem and the evolution in understanding over the past 10 years is being finalised.

Ripia risk assessment

26. A preliminary assessment of risk to water quality and ecosystem health from potential land use intensification in the Ripia sub-catchment is nearing completion, including scenario testing.

Landowner Adaptive Management

27. Relationships with catchment landowners and farm managers are constructive, despite the instability of recent receiverships and ownership/personnel changes. New owners are actively involved in the TSG, however one of the landowners has lodged a pre-application that would seem to go against good practice and existing consent requirements.
28. Various on-farm nutrient management measures are in place or planned. Programmed riparian fencing totals 48km (2009-2010 and 2010-2011), of which half is completed. Planting will be negotiated once fencing is done. Country Spirit is undertaking a planting programme for erosion control.
29. Land Management is commencing work with landowners and DairyNZ on nutrient budgets for all catchment farms using the nationally accepted tool Overseer. This will provide a consistent approach in assessing diffuse nutrient losses from farm practices and will allow management options and scenarios to be considered.

Next Steps

30. Work is on-track for agreement of provisional objectives and targets by the TSG in August 2010, in-line with plan change timetable set out in Council's adopted *Taharua*

Policy Development Strategy. However, there is risk of slippage if the Group requires additional time.

31. Supporting science investigations are largely complete, with detailed catchment nutrient modelling to be reported in August.
32. Following TSG agreement on provisional objectives and targets, these will be reported to Council and inform wider public consultation. Phase 2 policy development will then commence along with tailored on-farm adaptive management measures.
33. A review of the current monitoring will be undertaken once the catchment nutrient modelling is complete. This review will ensure that measurement of the catchment initiatives and interventions to improve Taharua and Mohaka water quality and ecology takes place. This information will inform the landowners of progress towards the objectives and enable adaptive management to evolve as the stakeholder group continue to learn about working within the Taharua environment.

DECISION MAKING PROCESS

34. Council is required to make a decision in accordance with Part 6 Sub-Part 1, of the Local Government Act 2002 (the Act). Staff have assessed the requirements contained within this section of the Act in relation to this item and have concluded that, as this report is for information only and no decision is to be made, the decision making provisions of the Local Government Act 2002 do not apply.

RECOMMENDATION

1. That the Committee receives and notes the report titled "Taharua Catchment Update".

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Taharua Stakeholder Group Membership (at 7 July 2010)

Country Spirit

Dairy NZ

Department of Conservation (Tongariro Taupo; Hawke's Bay)

Feather Holdings (Wairango Farm)

Federated Farmers

Fish and Game (Hawke's Bay Region)

Fonterra

Hawke's Bay Regional Council

Mana Ahuriri

Milkpride (Taharua Farm lease from CraFarms receivers)

New Zealand Forest Managers

Ngati Pahauwera

Ngati Hineuru

Ngati Tuwharetoa

Poronui

Stevenson Agriculture (Lochinver)

Taupo District Council

Timberlands Ltd