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The Inconsistent Regional Management of Farming Effects on Waterways

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The Inconsistent Regional Management of Farming Effects on Waterways

Prepared by Maree Baker-Galloway[1] for the New Zealand Agricultural and Resource Economics Society Conference 2013

Introduction

In assessing the regional management of farming activities on water quality, this paper focuses solely on the mechanisms contained in regional plans as at August 2013. It does not assess how particular councils implement their plans, nor has it correlated particular planning mechanisms and styles with particular water quality trends or farming productivity and profitability.

Planning instruments under the Resource Management Act

By way of introduction to the Resource Management Act 1991 (RMA) framework sitting above regional plans is a hierarchy of planning instruments including regulations, national environmental standards, national policy statements (NPS) and regional policy statements. The superior instruments in the hierarchy have varying influences on regional plans, which are ultimately the planning instruments that directly control farming activities in this context.

There is little discretion to depart from regulations and national environmental standards.[2] However, in respect of national policy statements, in this case particularly the National Policy Statement for Freshwater Management 2011 (NPSFM), the more generally worded objectives and policies in NPSs must be "given effect to" in a regional plan.[3] A regional plan's methods for "giving effect" to a NPS is at the discretion of the regional council and this is one of the several reasons that there is such variation between regional plans. The NPSFM has of course only been operative since 2011 and therefore has had limited time to directly influence regional planning outputs.[4]

The RMA has different presumptions for landuse activities and activities involving the take, use or discharge of water and/or contaminants. Landuse activities on the surface of the land are permitted unless a plan requires a resource consent.[5] Water takes, uses and discharges by comparison are prohibited unless a plan or resource consent authorises them. [6] The presumptions are completely opposite. When controlling farming activities some councils focus primarily on controlling landuse, others focus primarily on controlling discharge and some use a combination of both.

Regional Variation

Another explanation for the variety of approaches is that councils in different regions are dealing with different circumstances and are therefore aiming to achieve quite different outcomes. Some councils are trying to claw back over allocation of contaminant discharges to fix degraded water quality for example. In these circumstances the period of time which councils give themselves to fix water quality also varies with some setting ambitious, short time frames and others, longer timeframes.

Other regional councils are fortunate in that their water quality has not degraded significantly. Some regional plans in these circumstances are intended to achieve a "holding of the line" and maintain water quality in its current good state.

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[2] Resource Management Act 1991 (RMA), Section 44A

[3] RMA, s67

[4] National Policy Statement for Freshwater Management 2011

[5] RMA, s9

[6] RMA, ss14 and 15

Where a council focuses on controlling the type of farming activity that may occur i.e. landuse, the potential is that the council is more directly involved in telling farmers how to farm, by controlling matters such as stock numbers. By comparison councils that instead try to focus on the effects of point and non-point source discharges have the opportunity to effectively leave farmers to farm as they see fit in order to achieve those outputs, however as will be seen, that is not always the case.

In general terms when councils attempt to manage the effects of farming on water quality by controlling landuse the options utilised so far are limited. The focus of some councils is primarily on stock numbers, varying definitions of intensive farming, and varying attempts to classify land or catchments in which farming takes place and controlling farm types depending on those classifications.

However, when it comes to the numerous methods by which councils control actual discharges the options are much more numerous. Some councils control loading whereas other councils control leaching. When setting nitrogen discharge allowances (NDAs) the methods for setting the NDAs range from grandfathering existing leaching, to use of as yet unspecified industry benchmarks, through to the use of NDAs that are modelled to achieve the desired instream effect and contaminant limits. Reference to Overseer as the identified method for assessing compliance with NDAs is common but not used everywhere.

Catchments are classified through a variety of means. Discharges are classified differently in accordance with those different catchment classifications land use classification (LUC) is one method, soil classification is another and catchment classification dependant on water quality standards is yet another. Most regional plans if they have gone to the extent of setting instream water quality limits or some sort of target to be achieved set out an allocation mechanism so that landholders can determine their entitlement under the different consenting options. However, one particular example has not attempted to allocate and has simply set one catchment load for nitrogen and phosphorous, and instream limits relating to toxicity values, and left the allocation of the remaining assimilative capacity of the rivers to be determined on a case by case basis.[7]

When controlling discharges in order to maintain or improve water quality councils also have to address what lead in time they will allow if they are having a material effect on existing operations, and these vary between the regions. The methods for ensuring farmers reduce their discharges in catchments where this is required are also very different. Some councils set a cap and allow for transfer of nutrient discharge rights and others do not. Many councils have some requirement for nutrient or farm environment plans but all in different contexts, with different objectives and with different requirements.

Regional case studies

These case studies highlight some examples of simple through to complex plans. It is no surprise that in regions that are at the degraded end of the spectrum where councils are attempting to clean up lakes and rivers, the plans are more complex. What is however surprising is that at the end of the spectrum where this complexity arises due to degraded nature of water, there is still a wide variation of techniques used.

For regions at the other end of the spectrum where water quality is still good, councils are tasked with holding the line and simply maintaining water quality. Here while the regional plans are not as complex as their peers, they are still vastly different from each other.

Horizons One Plan

At the time of writing this paper the Manawatu-Wanganui Region One Plan (the One Plan) was currently under appeal in the High Court. The hearing has been completed and a decision is awaited.

Due to the increase in intensive farming over the years the Manawatu River and other water bodies in the region have become much degraded. The solution proposed by the Horizons Regional Council was to identify the most at risk catchments and implement a 20 year decreasing discharge consenting regime for nitrogen leaching, resulting in a level that will maintain an acceptable level of water quality. In the most at risk catchments the One Plan controls all existing and new intensive farming and requires landholders to obtain a resource consent as a controlled activity, or higher. In order to qualify as a controlled activity, (in respect of which a council cannot decline consent), a landholder must implement a nutrient management plan and comply with the nitrogen leaching maximums set out in table 13.2. Farming activities in the at risk catchments that do not comply with either the implementation of the nutrient management plan or the nitrogen leaching maximums must get consent as a restricted discretionary activity. The nutrient leaching maximums (or NDAs) are set taking into account the landuse capability classification (LUC) of subject land. In table 13.2 at years 1, 5, 10

[7] Proposed Hurunui-Waiau River Regional Plan

and 20 the NDAs for each farm is reduced over time and this is the manner by which the Horizons Regional Council is trying to claw back the pollution of its waterways.[8]

Table 13.1 also provides some lead-in time before farms have to take part in the consenting process, and these lead-in times are staggered for different catchments.

In summary, the particular tools used by the Horizons Regional Council includes defining the problem catchments by taking into account water quality; defining the landuse activities of concern as "intensive farming"; controlling those farming types and the associated discharges with a combination of the underlying landuse capability classification and Overseer; providing a lead-in time and staggered implementation of the consenting requirements; and then once in the consenting regime requiring specified reduction over a period of 20 years.

Waikato Regional Plan

For the Waikato River catchment with the exception of Lake Taupo a reasonably simple planning framework controls farming effects on rivers. Non-point discharges of farm activities generally are not controlled but instead the more simple approach of controlling the discharge of collected farm effluent from storage is controlled through consents. The permitted discharge of farm animal effluent relates to specified loading limits, loading rates and provision of information. Above these loading limits and rates a consent is required.[9]

In the Lake Taupo catchment the Environment Court issued its decision in 2008 confirming the new planning regime. The objective is to ensure that by 2080 the water quality in Lake Taupo is restored to its 2001 levels. In general terms this is to be achieved by capping nitrogen outputs, and to reduce and retire from this cap an additional 20%.[10]

The plan enables low nitrogen leaching activities as permitted activities within specified standards for stock numbers and a NDA to allow for up to 8kg of nitrogen per hectare per year to be leached. Any other nitrogen leaching activities from July 2007 are managed on a controlled or higher activity status using Overseer. NDAs are set for each property based on a 12 month period chosen by the farmer (usually with the highest leaching value) between 2001 and 2005. In other words a type of grandfathering approach.[11] The catchment cap is then set at the grandfathered level based on the NDAs from all the farms. A system of nitrogen trading and offsetting was established as a controlled activity.[12]

Once an NDA is determined for a property any further increase of leaching on that property must be offset on another property. The resulting trade is a controlled activity and both properties must have their NDA's amended accordingly. The cap is not an absolute cap as the opportunity is still available in the context of non-complying activities to apply to decrease nitrogen above the cap.[13]

The regional plan sets itself the additional target in the future of reducing and retiring 20% of the nitrogen total cap by 2020. The Lake Taupo Protection Trust ("Trust") was created in 2007 and entrusted with this task. The Trust is funded by the Government, Waikato Regional Council and the Taupo District Council. The original funding amount was $81.5 million. The Trust's current funding will remove 153,000kgs but estimates the required amount to reach a 20% reduction is 183,000kgs. The Trust is seeking funding to secure the remaining 30,000kg shortfall. The Trust is confident it will reach its target by December 2013 and reduce the total manageable nitrogen by 20%. .[14]

Bay of Plenty Regional Water and Land Plan – Rotorua Lakes

In nearby Bay of Plenty region a similar but different cap and trade system has been established for the Rotorua Lakes in order to protect the water quality of those lakes. Small scale low nutrient landuse activities are permitted on very small properties on the condition that nitrogen export from the property is less than 10kg of nitrogen per hectare per year. Land uses on properties that do not comply with the permitted activity requirements are also permitted however if they comply with an effectively grand parented discharge allowance that either maintains or decreases nutrient exports. Increases in nutrient exports beyond the grand parented level are treated as controlled activities if any increase in nutrient exports are offset on another property in the catchment and the offsetting property has a grand parented nutrient discharge set for it.[15]

Discharges that are not offset default to a restricted discretionary activity.

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[8] Horizons One Plan, Chapter 13 (Discharges to Land and Water) Objective 13.1A, Policies 13-2C, Rules 13-1 – 13-1C as at 1 November 2012

[9] Waikato Regional Plan Chapter 3.5

[10] Waikato Regional Plan Chapters 3.10.2 – 3.10.3 Objectives and Policies

[11] Waikato Regional Plan Chapter 3.10.5, Rules 3.10.5.1 – 3.10.5.9

[12] Waikato Regional Plan Chapter 3.10.3 and 3.10.5 Policies 3 and 14, Rules 3.10.5.7 – 3.10.5.8

[13] Waikato Regional Plan Chapter 3.10.5, Rules 3.10.5.7 – 3.10.5.9

[14] Lake Taupo Protection Trust, www.laketaupoprotectiontrust.org.nz

[15] Bay of Plenty Regional Water and Land Plan, Chapter 3, policy 21(a,)Method 41, Rules 11 – 11E

Compared to the Lake Taupo catchment the Rotorua Lakes catchment does not use Overseer specifically and also is potentially more permissive. In the Lake Taupo catchment only the low level discharges are permitted activities and discharges that comply with the grand parented rate are controlled whereas in the Rotorua catchment both low discharges and discharges complying with the grand parented rates are permitted. In the Taupo catchment the act of offsetting discharges between one property and another is also controlled as it is in Rotorua.

However in the Taupo catchment discharges that are not offset default to non-complying which is restrictive compared to the Rotorua catchment which defaults to restricted discretionary only.

Canterbury

Proposed Hurunui Waiau Rivers Regional Plan

Moving south now in the Hurunui and Waiau catchments where the water quality is currently still reasonably good the proposed Hurunui Waiau Rivers Regional Plan (pHWRRP) allows for a certain level of intensification under a permitted activity framework. This plan is currently under appeal in the High Court (there being no right of appeal to the Environment Court on plans in Canterbury thanks to the Environment Canterbury Temporary Commissioners and Water Improvement Management Act 2010).

What is quite unusual about the pHWRRP's approach is that in the context of a permitted activity rule and resource consents generally there is no allocation mechanism of the available nitrogen and phosphorous discharge quota. The pHWRRP simply sets a total catchment load limit that applies as the permitted activity threshold along with a requirement that in order to be a permitted activity a discharge must not cause any tributaries or the mainstem to breach specified toxicity limits. There is no allowance or credit given to farmers that undertake efficiency measures on their farms thereby creating headroom in this total load or toxicity measure. There is simply no allocation mechanism, which effectively moves the debate in respect of allocation from a plan context to a consenting context (or in the context of those trying to be permitted activities some other context). While the Hurunui River has both a total catchment load and a toxicity limit set the Waiau River does not even have load limits set for nitrogen and phosphorus but instead the sole controlling mechanism of farming activities on water quality are instream limits relating to toxicity levels and species' protections. Landholders are somehow left to determine their allocation rights based on that figure.[16]

Proposed Canterbury Land and Water Regional Plan (pCLWRP)

The pCLWRP is also a work in progress at the time of writing this paper and a decision is expected from the Commissioners before the end of 2013. In contrast to the pHWRRP the Canterbury region generally is grappling with several severely degraded catchments, and catchments that are completely allocated that require some sort of claw back of contaminant discharge if the water quality of those catchments is to be restored. The pCLWRP as notified set up a certain framework however it is anticipated that the plan as decided by the Commissioners may be materially different to what is described below.

In summary the plan as notified sets up a three-step approach for managing nutrient effects:

1. Region wide measures to "hold the line" until July 2017;
2. The establishment of limits by communities and zone committees which will be introduced through plan changes;[17] and
3. The setting of default NDAs in accordance with as yet unspecified industry benchmarks to be introduced at 2017 if a catchment specific plan is not in place.[18]

All catchments in Canterbury are classified ranging from "water quality outcomes not met" through to "meets water quality outcomes" and "unclassified". The activity status for particular farming types and discharges is linked to these classifications.[19]

Prior to July 2017 existing farming activities are permitted if farmers record certain information relating to Overseer, and provide a farm environment plan, regardless of the zone or their actual leaching. If farmers choose not to record this information they are classified as a restricted discretionary activity. A "change" to an existing farming activity is permitted prior to 2017 if it meets certain conditions again relating to recording of information. "Change" is defined with a change in landuse that arises, from a new resource consent to use water, or an increase of more than 10% in the loss of nitrogen. In other words even in over allocated

[16] Proposed Hurunui-Waiau River Regional Plan, chapters 2.5 and 3.3, Polices 5.3 – 5.3B, Rules 10.1 – 11.1A

[17] Proposed Canterbury Land and Water Regional Plan, Section 2.8

[18] Proposed Canterbury Land and Water Regional Plan, Sections Policies 4.28 – 4.29, Rules 5.46 – 5.49, Sections 6-15, Schedule 8

[19] Proposed Canterbury Land and Water Regional Plan, Planning Maps

catchments the pCLWRP permits at least a 10% increase in the discharge of nitrogen as a permitted activity with no other controls on those activities.[20]

From 2017 farming activities are permitted if they are outside particular zones, if they comply with as yet unspecified industry benchmark leaching limits and if they impose farm environment plans. There is no mechanism in the pCLWRP requiring set reductions in nutrient discharges in the over allocated or at risk catchments.[21]

Otago Regional Plan: Water for Otago

Further south the Otago Regional Council's Plan Change 6A ("Plan Change 6A") in respect of water quality is currently subject to Environment Court appeals and in mediation at the time of writing this article. Compared to other plans, Plan Change 6A focuses very little on landuse and primarily focuses on controlling the actual discharge and the effects on water. Admittedly in Otago the task is a little easier because water quality is again generally in good condition with some discreet, degraded catchments that require attention.

Schedule 15 in Plan Change 6A sets instream water quality limits which are to be achieved by 2012 or 2025 depending on the waterbody. Compliance with limits however is not linked to activity status in the rule framework but is intended to be a guide for the regional council to investigate on case by case basis. The Otago Regional Council have taken the approach that they do not want to "tell people how to farm" but instead want to set limits based on what observations and records have shown will achieve existing water quality and a permitted activity framework that is intended to be simple and user-friendly. Point source surface water discharges are controlled at the point of discharge with concentration limits applied before reasonable mixing occurs. Non-point source discharges are managed in a permitted activity rule along with three sensitivity classes with 10, 20, and 30kg of nitrogen per hectare per year discharges being permitted accordingly. The non-point source discharge rule uses Overseer 6. Plan Change 6A proposes a lead-in time to 2020 with both surface water and non-point source discharge limits not applying until that date. [22]

Southland

Further south the Southland region is at a transition point between old school and new school plans. State of environment monitoring shows that water quality is below standards and a change in approach is needed. In the meantime while a new approach is developed farming activities are controlled by a combination of the Effluent Land Application Plan and the Regional Water Plan for Southland. The discharge of agricultural effluent to land is permitted depending on stock numbers, rate of discharge, loading and prevention of direct discharge to water. Direct discharges are controlled with instream standards set in an appendix and the requirement of consent for all direct point source discharges. A plan change is currently being considered by Council requiring that all new dairy farming is a discretionary activity requiring farming nutrient management plans and the use of Overseer to develop a nutrient budget. The Southland Regional Water Plan also uses soil categories as an additional control on discharges of farm dairy effluent to land with different controls being exercised depending on the soil category.[23]

West Coast

The operative West Coast Regional Land and Water Plan manages Lake Brunner in particular due to concerns about water quality in the lake. All farmed animals are prevented from entering any waterway in the catchment and the discharge of agricultural effluent into or onto land into the Lake Brunner catchment is a controlled activity whereas anywhere else on the West Coast it is permitted.[24]

Hawkes Bay

Back up north the very recent Hawkes Bay Regional Council Proposed Change 6 Tukituki River ("Tukituki Plan Change") is currently in a Board of Inquiry process, in partnership with the corresponding consent applications for the Ruataniwha Irrigation Scheme. The Tukituki Plan Change uses a sequential combination of grand parenting, 10% increase on grand parented rates, then 2018 nitrogen leaching should be shown not to cause or contribute to exceedance of instream limits, and then after 2020 nitrogen leaching is not to exceed as yet unspecified industry good practise leaching rates. [25]

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[20] Proposed Canterbury Land and Water Regional Plan Rules 5.39 – 5.45, Section 2.10 (Definitions)

[21] Proposed Canterbury Land and Water Regional Plan, Rules 5.46 – 5.49

[22] Otago Regional Plan: Water Plan Change 6A (Water Quality), Rules 12.C.0.1 – 12.C.0.3, 12.C.1.1, 12.C.1.3, 12.C.2.1, 12.C.2.3, 12.C.2.4, Schedules 15 and 16

[23] Regional Effluent Land Application Plan, Rule 5.4.1, 5.4.5, 5.4.6; Regional Water Plan for Southland, Policy 13B, Rules 1 – 3, 16C and 50, Appendix G

[24] Proposed West Coast Regional Land and Water Plan Rules 11, 18 and 88

[25] Proposed Change 6 Tukituki River Catchment: to the Hawke's Bay Regional Resource Management Plan, Policy TT4, Rules TT1 – TT2

Summary

In summary it is apparent that every region has a completely different plan but it must be acknowledged that every region has different circumstances. Also due to the passage of time and the fact that our understanding, technology and knowledge is increasing dramatically in this area it is not surprising that a plan drafted in 2007 is quite different to a plan drafted in 2012. There is no doubt however there is a trend of increasing regulation and that some of the differences in these regional regulatory instruments reflects the different regional pressures and circumstances.

The subject of a subsequent paper could be how this regional inconsistency could affect cost of compliance. In other words, is it beneficial to have regional differences addressing different regional circumstances or is it inefficient to have such a range in a context where tools such as Overseer, farm management plans, industry benchmarking and basic classifications of farming types and land catchment types are used in a completely different way in each region? A paper such as this would prove useful and contribute to improving our understanding of the best approaches for management of our waterways.