

# **Managing the Adverse Effects of Intensive Farming on Waterways in New Zealand — Regional Approaches to the Management of Non-point Source Pollution**

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*New Zealand is a nation reliant on the agricultural industry. A decade of intensification in the dairy sector has led to scrutiny of the adverse environmental impacts farming practices have on freshwater ways throughout the country. The excess nutrients discharged onto land which reach waterways are of notable concern. This article provides an overview of the current methods and measures for freshwater management in New Zealand's largest industry. It examines the interaction of national guidance from central government, industry initiatives and the role regional councils play in reducing pollution. Particular focus is given to New Zealand's two largest dairy regions, Waikato and Canterbury. All the efforts made in this area need to reflect the "common interests" of ensuring fresh water is wisely managed.*

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## 1. INTRODUCTION

*All New Zealanders have a common interest in ensuring the country's freshwater lakes, rivers, aquifers and wetlands are managed wisely.*

— National Policy Statement for Freshwater Management 2014<sup>1</sup>

Lakes and rivers in New Zealand are becoming increasingly vulnerable due to overexposure to excess nutrients from dairy farming. The major challenge to environmental management in this area is the dispersed nature of this pollution. The quality of water bodies has been on the conscience of decision-makers at a regional level for some time but needs national attention. The introduction of a National Policy Statement for Freshwater Management in 2011 and the revised 2014 statement has drawn focus to this issue and aligned expectations at a national level. The monitoring and protection of waterways, under the Resource Management Act 1991 (RMA), is carried out at a regional level. This article assesses how effective current measures are. The flexibility of regional management allows for catchment-specific schemes. Lake Taupo, in the Waikato region, and Lake Ellesmere, in Canterbury, are examples of how targeted nutrient schemes can be highly effective at changing land uses and improving water quality. On the flipside, regional management can lead to discrepancies within a region and steps need to be taken to ensure region-wide policies are in place. The agricultural industry itself has also made efforts to reduce the negative effects farming can have on waterways. The Clean Streams Accord and Supply Fonterra agreements show an attitudinal change within the industry. While these efforts have flagged the issue the agreements have had little practical effect. New Zealand needs clear land-use and water-management guidelines which are both economically appealing to the dairy industry while also stringently protecting waterways on a national level.

## 2. WHY WATER?

Water is a resource which is vital to life. New Zealand's lakes, rivers and streams serve a diverse number of needs such as supporting aquatic life, providing hydroelectricity, aiding agriculture as well as furnishing the development basis for recreation and tourism.<sup>2</sup> The diverse use of the resource

1 Ministry for the Environment [MfE] *National Policy Statement for Freshwater Management 2014* <[www.mfe.govt.nz/sites/default/files/media/Fresh%20water/nps-freshwater-management-jul-14.pdf](http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/nps-freshwater-management-jul-14.pdf)> (4 July 2014) at 3.

2 MfE *Protecting People and the Environment: Briefing to the incoming Minister for the Environment 2005* <[www.mfe.govt.nz/sites/default/files/briefing-minister-oct05.pdf](http://www.mfe.govt.nz/sites/default/files/briefing-minister-oct05.pdf)> at 11.

means it is under constant pressure and these varying demands often conflict. In New Zealand water is a resource with strong social and cultural ties. It is therefore not surprising that there has been increasing public concern over its sustainability.<sup>3</sup>

The degradation of water quality in rivers and lakes all over the country is an example of how dramatically the change in land use over time has increased pollutants reaching the waterways. Water has a great capacity for absorbing pollutants which can mask immediate change but over time the net effect upsets the natural balance and creates vulnerable water bodies.<sup>4</sup> One challenge to water management is that, although it is easy to pinpoint discharges from large outlets — for example, sewage disposal — more distributed pollution from a combined effect of multiple sources, such as intensive farming, makes it impossible to pinpoint single sources of pollution. It is therefore a difficult area for the law to intervene in.

Another challenge to water management is the philosophy that it is a common pool resource. It is shared by all for the benefit of all.<sup>5</sup> The Crown has a responsibility to protect both the spiritual and physical elements of water, yet the responsibility of water management does not fall solely on central government.<sup>6</sup> The protection of waterways calls for collaboration. Over the last decade there has been an increasing onus on water conservation by regional councils and territorial authorities. This change benefits from the local input into local issues, but leaves gaps at a national level. There is broad consensus that New Zealand's current water management scheme is ill-equipped to mitigate problems of increased pollution.<sup>7</sup>

### **3. THE IMPORTANCE OF AGRICULTURE IN NEW ZEALAND**

In New Zealand, agriculture, and in particular dairy farming, has been subject to most of the blame when it comes to pollution in waterways. Agriculture has far-reaching social and economic ties in this country and these must be balanced when considering the environmental impact of the industry. It is said

3 Robert A Young and John B Loomis *Determining the Economic Value of Water: Concepts and Methods* (2nd ed, RFF Press, Oxon, 2014) at 9 [1.1.3].

4 Young and Loomis, above n 3, at 5 [1.1].

5 Derek Nolan *Environmental and Resource Management* (5th ed, LexisNexis, Wellington, 2015) at [8.1].

6 Ezekiel Hudspith "Freshwater Management in New Zealand: A Challenge for Ecology, Equity and Economic Efficiency" (2012) 16 NZJEL 277 at 277.

7 New Zealand Institute of Economic Research [NZIER] *Water management in New Zealand: A road map for understanding water value* (NZIER, Public Discussion Paper, Working Paper 2014/01, March 2014) at [2.2].

that farming is the backbone of New Zealand and dairy exports are the biggest single earner of export dollars.<sup>8</sup> In the Waikato, dairy farming boosts the local economy by providing 10,000 jobs directly.<sup>9</sup> The performance of the dairy sector heavily affects supplying firms operating in other sectors. For example, of the \$10.4 billion of dairy products exported by Fonterra, \$3.6 billion was reinvested domestically on inputs, like feed, agricultural services and fertiliser.<sup>10</sup> On a social level, rural communities are built around farming. The livelihood of those in remote areas depends on the strength of the industry.<sup>11</sup> The most frequent concern from those farming is the cost of “sustainability”.<sup>12</sup> Any regulation and intervention imposed to develop more “environmentally friendly” practices directly impacts on the profitability of a farm, and in turn the wealth of the community.

Opinions differ on the issue of how effective current measures have been at improving water quality. With tight regulations around new conversions to dairy it is arguable that environmental management is under control. The results of these measures, however, take decades to work through. In 2011 the Parliamentary Commissioner for the Environment Dr Jan Wright was worried over findings that New Zealand was facing a direct “economy versus the environment” dilemma.<sup>13</sup> The general attitude seems to be one which seeks to reduce the environmental footprint of farms, but the most effective way to achieve this outcome is what is in debate.<sup>14</sup>

#### 4. NON-POINT SOURCE POLLUTION

A major challenge in regulating pollution from agricultural practices is that it is hard to isolate individual causes of contamination. Pollution of this kind is referred to as non-point source (NPS) discharges, or diffuse discharges.<sup>15</sup> This is where the water receives additional materials from a combination of

8 Parliamentary Commissioner for the Environment [PCE] *Water quality in New Zealand: Land use and nutrient pollution* (November 2013) <[www.pce.parliament.nz/assets/Uploads/PCE-Water-quality-land-use-web-amended.pdf](http://www.pce.parliament.nz/assets/Uploads/PCE-Water-quality-land-use-web-amended.pdf)> at 6.

9 Gerald Piddock “Primary Industries Minister Nathan Guy rejects dairy freeze” *The Waikato Times* (Hamilton, 18 March 2015) at A4.

10 Chris Schilling, James Zuccollo and Chris Nixon *Dairy’s role in sustaining New Zealand — the sector’s contribution to the economy* (NZIER, Final Report, September 2010) at 2.

11 Lucie Drummond “Managing the Environmental Effects of Agriculture under the Resource Management Act: Non-Point Source Discharges” (2006) 10 NZJEL 255 at [1.3].

12 At [1.2]–[1.3].

13 PCE, above n 8, at 7.

14 Piddock, above n 9, per Minister for Primary Industries Nathan Guy at A4.

15 Drummond, above n 11, at 261.

sources. This can be contrasted with a point-discharge source where it is readily identifiable where the pollutants enter the water.<sup>16</sup>

There are three main sources of NPS discharges as a result of dairy farming. One is sediment: this is predominantly soil eroding from riverbanks due to increased stock access and a lack in stability from plants.<sup>17</sup> Another is bacteria contamination from animal faeces, which enter the waterways directly or flow into water bodies after rain. Finally, there are increasing levels of nitrogen and phosphorus entering waterways. This comes from both fertilisers used to increase pasture growth and animal urine.<sup>18</sup>

It is estimated that the 3,000 dairy herds in the Waikato create as much waste as 5 million people.<sup>19</sup> Surface and groundwater are therefore subject to higher levels of nutrients than what would naturally occur.<sup>20</sup> The boom in the dairy industry has resulted in high rates of conversion to dairy farming across the country.<sup>21</sup> The impact this has had on waterways is noticeable on a national scale.<sup>22</sup>

#### **4.1 Impacts of Increasing Levels of Nitrogen and Phosphorus**

By international standards, New Zealand's water quality is generally good but declining.<sup>23</sup> The main focus of research in recent years has been on the negative effects that nitrogen and phosphorus have on the ecology of waterways.

##### *4.1.1 Nitrogen*

Nitrogen is vital to the atmosphere and nutrient cycle. Nitrogen is a soluble nutrient which is easily transferred through water but there is a limit to how much can be absorbed. The changes to agricultural practices have seen an increase in nitrogen fertilisers to promote plant growth. High levels of nitrogen are also present in animal feed and animal urine.<sup>24</sup> A study carried out by the National Institute of Water and Atmospheric Research revealed that nitrogen levels in river water are five times worse in pasture areas than in native forests,

16 Nolan, above n 5, at 562.

17 MfE *Water Programme of Action: The Effects of Rural Land Use on Water Quality* (MfE, Technical Working Paper 563, July 2004) at 14.

18 PCE, above n 8, at 15.

19 Dr J Morgan Williams *Growing for good: Intensive farming, sustainability and New Zealand's environment* (PCE, October 2004) at 90.

20 MfE, above n 17, at 24.

21 PCE, above n 8, at 30.

22 NZIER, above n 7, at 4.

23 PCE, above n 8.

24 *Horticulture New Zealand v Manawatu-Wanganui Regional Council* [2013] NZHC 2492, 24 September 2013 at [1].

and nine times worse than in urban areas.<sup>25</sup> New Zealand has had the largest percentage increase in nitrogen fertilisers used in the OECD (>800%).<sup>26</sup> Increasing numbers of stock will impact on the soil's ability to absorb nutrients, and in wet seasons nutrients will run across the surface and directly into waterways. The increased input which is absorbed by the soil will enter the groundwater. As this groundwater reaches waterways there is a delayed seeping effect of the nitrogen. Too much nitrogen can kill sensitive organisms in the water and also affects drinking water. As nitrogen interferes with the ability of blood to carry oxygen, excess nitrogen can be toxic to aquatic life.<sup>27</sup>

#### 4.1.2 Phosphorus

Phosphorus occurs naturally in soil but the increased use of fertilisers has resulted in more phosphorus binding to soil which is not easily washed away.<sup>28</sup> The increased level of sediments eroding into waterways can increase phosphorus levels. Animal effluent is rich in phosphorus, and is the main source of excess in New Zealand. Fertilisers are also high, with New Zealand having the second highest increase in phosphate fertiliser (>100%) in the OCED.<sup>29</sup>

#### 4.1.3 Eutrophication

Eutrophication is the general excess build-up of nutrients in the water and phosphorus contributes to this accumulation. The growth of aquatic life and plants due to eutrophication becomes an "ecosystem effect", as the development of plants and algae forms mats over the water surface.<sup>30</sup> It reduces the photosynthesis process so bacteria and other algae die. In turn decreasing oxygen levels directly affects aquatic life. An example in New Zealand is the growth of periphyton, which is a slime-like algae covering rocks which smothers other plants, and cyanobacteria which is seen with algal bloom.<sup>31</sup> Although water bodies in New Zealand rarely suffer from direct untreated

25 Ministry for the Environment "Analysis of National River Water Quality Data for the Period 1998–2007" <<http://mfe.govt.nz/publications/analysis-national-river-water-quality-data-1998-2007>> summary of Tom Snelder *Analysis of national river water quality data for the period 1998–2007* (MfE, NIWA Project MFE10502, December 2010).

26 NZIER, above n 7, at 14.

27 Drummond, above n 11, at 258.

28 PCE, above n 8, at 16–17.

29 NZIER, above n 7, at 14.

30 Daniel B Botkin and Edward A Keller *Environmental Science: Earth as a Living Planet* (8th ed, Wiley, Danvers, 2011) at 405.

31 PCE, above n 8, at 19.

discharges it is the build-up of nutrients from indirect means which has the same unpleasant side effect.<sup>32</sup>

The management of NPS discharges is difficult. Discharges can take years to affect waterways and water quality will greatly vary depending on the time of year, size of water body and amount of naturally occurring elements.<sup>33</sup>

## 5. LEGISLATIVE HISTORY

In New Zealand water cannot be owned. However, rights to water use can be permitted. The common law principle of riparian rights to use waterways where they are adjacent to one's land still operates, but some water bodies are vested in the Crown.<sup>34</sup> The first Act to focus on land use and water management was the Soil Conservation and Rivers Control Act 1941. This Act was established to manage flood-risk areas and soil erosion.<sup>35</sup> The lasting impact of this legislation was the establishment of catchment districts and catchment boards within these.<sup>36</sup> These regional water authorities still exist today.<sup>37</sup> The decades from 1940 to 1960 saw an increasing demand on waterways from domestic, industrial and agricultural sources.<sup>38</sup> The Water and Soil Conservation Act 1967 (WSC Act) was the first comprehensive water allocation and statutory control regime.<sup>39</sup> The purpose was to prevent erosion and flooding while also conserving water quality and taking adequate account of the needs of the primary and secondary industries. As part of establishing a "national and comprehensive policy", the National Water and Soil Conservation Authority was established.<sup>40</sup> The WSC Act also established a classification system which categorised water bodies based on water quality; from water bodies in their natural state to water which was highly polluted and not for human consumption.<sup>41</sup> The National Water and Soil Conservation Authority had control over catchment boards and aided with this classification process. Those wishing to discharge contaminants into

32 Botkin and Keller, above n 30, at 406.

33 NZIER, above n 7, at 13.

34 Nolan, above n 5, at [8.7].

35 Soil Conservation and Rivers Control Act 1941, s 10.

36 Parts 2 and 3.

37 Neil Deans "Freshwater Values: Duties and Responsibilities under the RMA" in Rob Harris (ed) *Handbook of Environmental Law* (Royal Forest and Bird Protection Society of New Zealand Inc, Wellington, 2004) at 204.

38 David AR Williams, Derek Nolan and Simon Berry *Environmental and Resource Management Law in New Zealand* (2nd ed, Butterworths, Wellington, 1997) at 253.

39 Kenneth Palmer *Planning and Development Law in New Zealand* (2nd ed, The Law Book Company Limited, Sydney, 1984) at 830.

40 Water and Soil Conservation Act 1967, s 23.

41 Palmer, above n 39, at 837.

the water were allowed to so long as the discharge did not breach minimum standards.<sup>42</sup> The discharge could not be of a lesser quality than the receiving waterway.<sup>43</sup> A detrimental discharge was permitted if it was balanced against public interest to be a low risk.<sup>44</sup> The classification system pointed towards a more holistic view of water management, but the Act lacked a list of priorities so there was no mechanism to manage competing discharge rights.<sup>45</sup> Under this system there was no requirement for agricultural practices to control discharges.<sup>46</sup> Discharge of effluent onto land was permitted provided it did not risk reaching waterways or breach regional water boards' minimum standards.<sup>47</sup>

The WSC Act was accompanied by a range of offences, for breaches of certain standards in the Act. In relation to discharge of wastes, these tended to be strict liability.<sup>48</sup>

The major concerns with this Act were the difficulties of classification. The regional nature of the classification system precluded nationally applicable guidelines to water management. The Water and Soil Amendment Act 1987 introduced water conservation orders. These were to encourage catchment-wide planning and aimed to protect fisheries, wildlife habitats and other important features of the water.<sup>49</sup> Although the Act recognised the importance of balancing public interests with industry demands, and the importance of upholding water quality for the future, it failed to acknowledge the cumulative effects of multiple discharge points and there was no integration of land and water management.<sup>50</sup>

## 6. RESOURCE MANAGEMENT ACT 1991

Water conservation and management is now provided for under the Resource Management Act 1991 (RMA). The RMA provides for an integrated approach to how resources are managed in New Zealand with the underlying purpose of sustainability.<sup>51</sup> Sustainability is defined as meeting “the needs of the present without compromising the ability of future generations to meet their own

42 This is now reflected in the Resource Management Act 1991 [RMA], s 69.

43 Williams and others, above n 38, at 268.

44 Drummond, above n 11, at 262.

45 Palmer, above n 39, at 872.

46 At 874.

47 *Kinred v Hauraki Catchment Board and Regional Water Board* (1978) 6 NZTPA 417.

48 Palmer, above n 39, at 891.

49 Water and Soil Amendment Act 1987, s 13: “to protect values of national or international importance”.

50 Drummond, above n 11, at 263.

51 Nolan, above n 5, at 583.



needs".<sup>52</sup> As outlined in ss 5 to 8, the purposes are clearly applicable to water management. It encourages the preservation of the natural character of water, protection of indigenous habitats, safeguarding of the life-supporting capacity of ecosystems and requires that water management plans regard the intrinsic value of water.<sup>53</sup>

There is a patchwork of responsibilities under the RMA with water management provided for by local, regional and national government.<sup>54</sup>

Figure 1: The planning framework: national, regional and local<sup>55</sup>



The role of central government is to support regional councils, set national policy statements and environmental standards, and issue water conservation orders to protect outstanding water bodies.<sup>56</sup> National policy statements and environmental standards may relate to regulations, qualitative standards, or standards for discharges.<sup>57</sup> They outline environmental bottom lines which regional plans must create regulations in accordance with.

52 *Report of the World Commission on Environment and Development: Our Common Future* A/42/427 (1987) <www.un-documents.net/ocf-02.htm> at 2. IV. Conclusion.

53 RMA, s 5: to promote sustainable management of natural resources; s 6: matters of national importance; s 7: other matters; s 8: Treaty of Waitangi.

54 Drummond, above n 11, at 263.

55 Environment Waikato “Waikato Regional Policy Statement” (Environment Waikato Policy Series 2000/30) <ww.waikatoregion.govt.nz/PageFiles/6777/rpsdecember07.pdf> at 23.

56 Local Government Act 2002; RMA, s 43: national environmental standards, s 45: purpose of national policy statements, s 52(2): Governor-General may approve a national policy statement.

57 RMA, s 43(2)(a) and (b).

The 13 regional councils covering New Zealand have a pivotal role to develop policies to control the use of land and to maintain the quality of water bodies.<sup>58</sup> Under regional plans, regional councils are to adhere to pt 3 of the RMA: to manage the use of river and lake beds, control water use, place restrictions on land use, and notably control discharges into water.<sup>59</sup>

Section 15 prohibits any discharge which could contaminate water or land unless it has been expressly authorised by the regional plan or the national environmental standards.<sup>60</sup> Discharge is seen to include contamination from diffused nutrients where the landowner or authority had control over the source.<sup>61</sup> In theory this would cover NPS discharges.<sup>62</sup> Section 70 provides that a regional council can only approve discharges into waterways or onto land if they are satisfied that it will not have significant adverse effects on water clarity or on the aquatic life.<sup>63</sup>

The quality of water is to be upheld by regional authorities under s 69. There are guidelines under sch 3 which set minimum standards of water quality in light of the main use of that water body.<sup>64</sup> Water being preserved for recreation, for example, needs to uphold clarity for bathing.<sup>65</sup> Water used for supply purposes has set levels of pH and oxygen to uphold.<sup>66</sup> There is concern that emphasis on bottom lines leaves water bodies vulnerable as they can be further polluted if it is a calculated cost of doing business.<sup>67</sup>

Considering water quality, regional councils which grant resource consents for discharge permits can only do so where it would not be counter to s 15. Overall the regional council must have plans to preserve water quality.<sup>68</sup> Territorial authorities similarly have a responsibility to create plans which control the use of land, to mitigate or avoid environmental effects. These must be consistent with national policy statements. As all regional and district plans have legal effect, non-compliance with these rules will be an offence under the RMA.<sup>69</sup>

58 Section 30(1)(c)(ii).

59 Section 13: restriction to uses of bed and lakes and rivers; s 14: restrictions relating to water; s 15: discharge of contaminants; s 9: restrictions on use of land.

60 Section 15(1).

61 Section 2.

62 Deans, above n 37, at 214.

63 RMA, s 70(1)(a), (b), (e), (g).

64 Schedule 3.

65 Schedule 3(5): Class CR Water.

66 Schedule 3(6): Class WS Water.

67 Sir Geoffrey Palmer "The Resource Management Act — How we got it and what changes are being made to it" in Trevor Daya-Winterbottom (ed) *Resource Management Theory and Practice* (Thomson Reuters, Wellington, 2014) at 42.

68 RMA, s 69(1)(a).

69 Section 68: regional rules; s 76: district rules; pt 12: declarations, enforcement, and ancillary powers.

Finally, regional plans are required to have integrated management.<sup>70</sup> In relation to management of dairy, in particular, there is scope for regional councils to put plans in place to control discharges of contaminants to land.<sup>71</sup> The Resource Management Amendment Act 2003 put further onus on councils to protect biodiversity of ecosystems.<sup>72</sup> This encourages management on a local level to focus on the link between use of land and water quality.<sup>73</sup> Overall the RMA is to have a broad statutory meaning to account for the diverse values of the environment.<sup>74</sup>

## **7. OTHER INITIATIVES FOR NPS DISCHARGE AND WATER QUALITY MANAGEMENT**

### **7.1 National Efforts: National Policy Statement for Freshwater Management**

The National Policy Statement for Freshwater Management (NPS-FM) was first introduced in 2011.<sup>75</sup> This was part of a reform to assist councils with managing allocation and quality of water. The policy arose from a desire for freshwater sustainability to be upheld on a national level.<sup>76</sup> The Land and Water Forum was critical of the first policy statement for not adequately outlining the need for collaboration between regional councils.<sup>77</sup> It further recommended that targets for water quality should be established and good management practices were to be defined in all catchments. In 2013 the Government announced a review of the NPS-FM, with the intention of establishing a National Objectives Framework (NOF).<sup>78</sup> The NPS-FM 2014 introduced these changes. The NOF was to assist regional councils and communities to more reliably and transparently plan for freshwater objectives.<sup>79</sup> The new framework is a clear

70 Section 59.

71 Section 30(1)(f).

72 Resource Management Amendment Act 2003, s 9(2), inserting RMA, s 30(1)(ga).

73 RMA, s 30(1)(a).

74 Section 5.

75 MfE *National Policy Statement for Freshwater Management 2011* <[www.mfe.govt.nz/publications/rma-fresh-water/national-policy-statement-freshwater-management-2011](http://www.mfe.govt.nz/publications/rma-fresh-water/national-policy-statement-freshwater-management-2011)>.

76 Nolan, above n 5, at 599.

77 Land and Water Forum *Second Report of the Land and Water Forum: Setting Limits for Water Quality and Quantity — Freshwater Policy- and Plan-Making Through Collaboration* (April 2012) <[www.landandwater.org.nz/Site/Resources.aspx#H126743-5](http://www.landandwater.org.nz/Site/Resources.aspx#H126743-5)>.

78 Amy Adams, Nathan Guy “Government Finalises First Stage of Freshwater Policy” (10 July 2013) <[www.beehive.govt.nz/release/government-finalises-first-stage-freshwater-policy](http://www.beehive.govt.nz/release/government-finalises-first-stage-freshwater-policy)>.

79 MfE, above n 1, at 3.

direction from central government that there is an onus on regional councils to uphold the NPS-FM. It requires that regional councils divide water bodies in their region into freshwater management units (FMUs).<sup>80</sup> They are to manage freshwater bodies to achieve national bottom lines. The overarching objectives are twofold: (1) to safeguard the ecosystem's health and human health for recreation with regard to land development and the discharge of contaminants; (2) to ensure the overall quality of freshwater is maintained and improved.<sup>81</sup>

The NPS-FM gives guidance on minimal acceptable states for the water quality in various water bodies (national bottom lines). An example is that of nitrogen levels in lakes, where the national bottom line annually is 750 mg/m<sup>3</sup>. If a lake is classified within this group it means that the lake will be moderately impacted on by additional algal and plant growth.<sup>82</sup> Regulations need to be in place to ensure the moderate impacts do not eventuate.

There are various policies to re-enforce the objectives in the NPS-FM. With regard to NPS discharges regional councils are required to consider freshwater quality limits when allowing people to discharge onto land.<sup>83</sup> Regional councils must keep a record of water bodies within their catchment, set targets to reduce the contaminants, and put methods in place to achieve such targets.<sup>84</sup> They must also establish conditions for discharge permits so contamination can be avoided.<sup>85</sup>

To ensure that freshwater objectives are nationally consistent every regional council must set up monitoring plans.<sup>86</sup> Local authorities should also take reasonable steps to involve iwi and hapū in water management.<sup>87</sup> The final requirement of the NOF is that the national policy be implemented promptly, so that regional councils are compliant by 31 December 2015. These plans for compliance standards can be extended by up to 15 years if the foregoing date would lower the quality of planning or be impracticable.<sup>88</sup>

80 Buddle Findlay *Environment Court decision casts doubts on an "overs and unders" approach under the National Policy Statement for Freshwater Management* (Legal Update: Environment and Resource Management, April 2015) <[www.buddlefindlay.com/article/2015/04/17/legal-update-environment-court-decision-casts-doubt-on-an-overs-and-unders-approa](http://www.buddlefindlay.com/article/2015/04/17/legal-update-environment-court-decision-casts-doubt-on-an-overs-and-unders-approa)>.

81 MfE, above n 1, at A1(a)(b).

82 Appendix 2 at 25.

83 Policy A4(3).

84 Policy A2.

85 Policy A3, A4.

86 Policy CA1, CB1, CC1.

87 Policy D1.

88 Policy E1, E1(ba).

## 7.2 Industry Efforts: The Clean Streams Accord

The Dairying and Clean Streams Accord provided a unique possibility of having industry-driven guidelines to manage NPS pollution.

The Clean Streams Accord was an agreement signed in 2003 between the Ministry for Primary Industries, the Ministry for the Environment, Fonterra and local governments. The Accord ran for a 10-year period and ended on 31 December 2012.<sup>89</sup> The Accord recognised that the actions of the dairy sector do not exist in isolation.<sup>90</sup> The ultimate goal was to improve the water quality of streams which run past and through many dairy farms all over the country.<sup>91</sup> The waterways which were targeted under the Accord, “Accord-type waterways”, were defined as being permanently flowing, wider than 1 metre and ankle deep.<sup>92</sup>

The 2003 Accord set out five targets to be achieved by farmers nationally:<sup>93</sup>

1. Cattle to be excluded from half of Accord-type streams, rivers and lakes by 2007 and this rising to 90 per cent by 2012.
2. To construct bridges over regular crossing points.
3. All dairy farm effluent discharges to immediately comply with resource consents and regional plans.
4. All farms to have programmes in place which monitor nutrient inputs and outputs.
5. To have half of regionally significant wetlands to be fenced by 2005 and this to increase to 90 per cent by 2007.

The progress of these goals was assessed by farm visits from trained advisors, and regional council monitoring of compliance with resource consents.<sup>94</sup> It was successful to the extent of fencing waterways and raising awareness of the effects NPS pollution has on waterways.

The Accord prompted specific industry responses. The most influential was that of New Zealand’s largest dairy supplier Fonterra, which in 2013 established

89 Ministry for Primary Industries [MPI] *The Dairying and Clean Streams Accord: Snapshot of Progress 2011/2012* (MPI, Progress Report, February 2013) at 2.

90 DairyNZ *Sustainable Dairying: Water Accord — A Commitment to New Zealand by the Dairy Sector* (8 July 2013) <[www.horizons.govt.nz/assets/Uploads/Events/Regional\\_Council\\_Meeting/2013-02-26\\_100000/Report-No-13-29-Annex-A.pdf](http://www.horizons.govt.nz/assets/Uploads/Events/Regional_Council_Meeting/2013-02-26_100000/Report-No-13-29-Annex-A.pdf)> at 3.

91 Fonterra *Environmental Sustainability on Farm Progress Update* (Fonterra, Progress Update Report, November 2013) <[https://moodle.unitec.ac.nz/pluginfile.php/382007/mod\\_folder/content/0/Fonterra%20\(2013\)%20Environmental%20sustainability%20on%20farms.pdf?forcedownload=1](https://moodle.unitec.ac.nz/pluginfile.php/382007/mod_folder/content/0/Fonterra%20(2013)%20Environmental%20sustainability%20on%20farms.pdf?forcedownload=1)> at 3.

92 MPI, above n 89, at 3.

93 At 3.

94 At 3.

and implemented a programme called Supply Fonterra. This regime had four key initiatives:<sup>95</sup>

1. **Waterway Management Programme:**  
This programme focused on water quality and encouraged farmers to assess risk areas on the farm, such as drainage systems. The programme helped fund farmers to build fences to prevent stock from entering streams and encouraged replanting around waterways.
2. **Effluent Management Programme:**  
Farms which supply Fonterra had to ensure that effluent discharges did not reach waterways. The most effective way to ensure this was by maximising the use of nutrients on the farm so that they have a minimal effect on waterways.
3. **Nitrogen Management Programme:**  
The aim of this measure was to give guidance to farmers on how to best spread nitrogen and reduce its use. By 2012/13 Fonterra required all farms to calculate nitrogen loss and measure efficiency of nutrient conversion on farms by using nutrient budgeting software like OVERSEER.
4. **Water Use Programme:**  
This part of the programme promoted responsible and efficient use of water on the farm.

These programmes generally reflected the overall goal of the Accord. However, such measures were only placed on those farms which supply Fonterra, and no penalties were enforced for non-compliance. Farms which were non-compliant were expected to work with advisors to develop environmental improvement plans.<sup>96</sup>

The Clean Streams Accord drew to an end in 2012, and the results were promising in some areas. For example, pressure on a regional level resulted in the fencing of 90 per cent of all wetland areas in Taranaki.<sup>97</sup> However, the aim for full compliance of fenced waterways by 2012 was not achieved. In terms of managing effluent discharges there has been an increase in farms complying with resource consents in this area. In the Waikato there was an increase from 66 to 72 per cent compliance during the 2010–2012 period.<sup>98</sup> In terms of nutrient management, according to the Fertiliser Association only 56 per cent of farms had nutrient management plans by May of 2012.<sup>99</sup>

95 Fonterra, above n 91, at 3.

96 MPI, above n 89, at 9.

97 DairyNZ *One Year On ... What have we achieved? What do we need to keep working on?* (DairyNZ, Audit Report DNZ40-004, 11 December 2014) at 12.

98 MPI, above n 89, at 6.

99 At 7.

### **7.3 Industry Efforts: Sustainable Dairying: Water Accord**

The Clean Streams Accord has, in effect, continued with the Sustainable Dairying: Water Accord launched in July 2013. This Accord was developed by the Dairy Environment Leadership Group, which includes representatives from farmers, dairy companies, central government, regional councils and the Federation of Māori Authorities.<sup>100</sup> The Accord does not purport to take control over land and water management which are vested in central government with the RMA. Rather, it sets good practices for the industry.<sup>101</sup> This is a broader focus than the Clean Streams Accord as it applies to all dairy companies and enforces tighter regulations around stock exclusion from waterways. This renewed Accord also encourages riparian planting and there is a greater emphasis on efficiency of water use as well as more support for nutrient management.<sup>102</sup> It covers 11,400 farms nationally.<sup>103</sup> The Accord aims to have 100 per cent of farms with nutrient budgets by May 2015. Nutrient budgets are a modelling tool to examine the external nutrient input compared to the nutrient uptake of the soil. There are now 78 rural professionals across the country certified as nutrient management advisors to help with this objective.<sup>104</sup> The challenge faced is that it is not clear how many farmers get individual performance reports from their dairy suppliers.

The audit report carried out in 2014 revealed that 11 per cent of the 812 farms monitored in the Waikato had significant non-compliance when it came to effluent management.<sup>105</sup> This means that discharge was entering the waterways or was likely to do so, or that abatement notices had not been complied with.<sup>106</sup> The non-compliance has been mainly due to over-irrigation, or overflowing discharge ponds.<sup>107</sup> The monitoring was carried out by visits following a 15-minute phone call warning. If a farm is found to be non-compliant they are visited until they are compliant.<sup>108</sup>

100 DairyNZ, above n 90, at 2.

101 At 4.

102 MPI, above n 89, at 11.

103 DairyNZ, above n 97, at 5.

104 At 6.

105 At 29.

106 MPI, above n 89, at 6.

107 DairyNZ, above 97, at 29.

108 At 30.

## 8. REGIONAL PLANS AND APPROACHES TO NPS DISCHARGE MANAGEMENT

### 8.1 Waikato Regional Council

The Waikato region is known for its large dairy sector. From 1996–2008 the region lost 42,800 hectares of sheep/beef farming and gained 35,500 hectares in dairy. The industry contributes \$4.2 billion annually to the local economy.<sup>109</sup> The heavy focus on farming and the importance of nationally important water bodies, both Lake Taupo and the Waikato River, sees water quality as a consistent priority for the Waikato Regional Council (WRC). The Waikato Regional Plan (WRP) has specific regulations around NPS discharges and the WRC has implemented a nitrogen cap in the Taupo catchment. Another unique feature of the WRC's efforts is the development of collaborative programmes for freshwater management with local iwi and independent farming groups.

#### *8.1.1 General policies and specific rules to minimise the adverse effects of farming in the Waikato*

Chapter 3 of the WRP is the water module. It was created in light of the NPS-FM 2011, and plans to give effect to the standards in that.<sup>110</sup> The revised 2014 NPS-FM has not altered Module 3 and the WRC is confident that the measures outlined below are a step toward implementing the national policy objectives by 2025.<sup>111</sup>

Module 3 acknowledges a difficulty in regulating NPS pollution due to the fact that contamination tends to be hidden.<sup>112</sup> The overall stance of the WRC is to take a non-regulatory approach to NPS discharges. This is seen as being the most effective way to change behaviour over time.<sup>113</sup>

Non-point source discharges are dealt with in Chapter 3.9, and three policies are in place to mitigate the adverse effects of this pollution. A summary of the policies are as follows:<sup>114</sup>

109 Piddock, above n 9, at A4.

110 Waikato Regional Council "Waikato Regional Plan: Chapter 3 Operative Regional Plan" <[www.waikatoregion.govt.nz/Council/Policy-and-plans/Rules-and-regulation/Regional-Plan/Waikato-Regional-Plan/](http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Rules-and-regulation/Regional-Plan/Waikato-Regional-Plan/)> Chapter 3.1 at 5.

111 Waikato Regional Council *Waikato Remains on Track to meet new Government Guidelines* (17 July 2014) <[www.waikatoregion.govt.nz/Community/Whats-happening/News/Media-releases-archived/Waikato-remains-on-track-to-meet-new-Government-guidelines/](http://www.waikatoregion.govt.nz/Community/Whats-happening/News/Media-releases-archived/Waikato-remains-on-track-to-meet-new-Government-guidelines/)>.

112 Waikato Regional Council, above n 110, Rule 3.9.

113 Rule 3.9 at 168.

114 Rule 3.9.3 at 168–169 (emphasis added).



- Policy 1: Land Use Effects  
Reduce the adverse effects of non-point source discharges arising from land-use practices and activities by minimising leaching and run-off contaminants and sediment into water bodies.
- Policy 2: Streamside (Riparian) Management  
Promote the use of streamside management that recognises the importance of current vegetation and promotes new planting of appropriate vegetation to reduce sediments.
- Policy 3: Livestock Access to Water Bodies  
Use a mixture of non-regulatory methods (education and incentives) and a *permitted activity* rule to manage adverse effects of livestock that access water bodies.

The WRC divides land-use activities into three categories. First are permitted activities which do not require resource consents. Second are controlled/discretionary activities which require consents. Finally, prohibited activities cannot be carried out.<sup>115</sup> The discharge of untreated effluent is prohibited. The discharge of treated effluent into waterways is a discretionary activity which can be carried out with consent.<sup>116</sup> This consent must be in line with the NPS-FM 2014.

The WRP encourages the discharge of animal effluent back onto farm land. This is a permitted activity where farmers can discharge waste onto land provided they do not cause unacceptable outcomes, such as from leaking sprayers or overflowing effluent ponds.<sup>117</sup> Another form of guidance from the WRC are land discharge limits. These limits try to minimise NPS discharges which leach into groundwater and enter surface water.<sup>118</sup> The plan cautions farmers to pay attention to seasonal changes as the rate of effluent discharge may need to be altered.<sup>119</sup>

Similarly, the application of fertiliser is a permitted activity. If nitrogen fertiliser is to be applied at rates greater than 60 kg/N/ha/yr, or in an area where effluent is also being discharged, then farmers are required to prepare nutrient management plans.<sup>120</sup> OVERSEER, a nutrient budgeting technology, helps

115 Waikato Regional Council “Farmer’s Guide to permitted activities” (March 2014) <[www.waikatoregion.govt.nz/PageFiles/1247/3892\\_Guide%20to%20permitted%20Activites%20Booklet\\_2014-WEB.pdf](http://www.waikatoregion.govt.nz/PageFiles/1247/3892_Guide%20to%20permitted%20Activites%20Booklet_2014-WEB.pdf)> at 2.

116 Waikato Regional Council, above n 110, Rule 3.5.5.6, Rule 3.5.5.5.

117 Waikato Regional Council *Assessing environmental compliance of ponding and seepage from dairy feed pads and stand-off areas* (Waikato Regional Council, Technical Report 2012/03, 20 September 2011) at 40.

118 Waikato Regional Council, above n 110, Rule 3.5.5.1.

119 Rule 3.9.4.11.

120 Rule 3.9.4.11.

farmers plan this management and it is a mechanism used by the WRC to monitor leaching rates around the region.<sup>121</sup>

Pollution of waterways due to sediment is also provided for under the WRP. Landowners must have practical measures in place to prevent stock from entering waterways.<sup>122</sup> The impacts of erosion are also dealt with under the rules, and those carrying out riparian planting of riverbanks need to consult the WRC.<sup>123</sup>

### *8.1.2 District plans and NPS discharges*

The RMA provides a unitary system for resource management with a strong focus on regionalism. Territorial authorities have the power to control any actual or potential hazards to surface water in rivers and lakes.<sup>124</sup> If a regional plan is not sufficiently clear on NPS discharge control then water bodies may be at risk. A concern is that the non-regulatory methods in the WRP place no obligation on district authorities to enforce NPS discharge controls.

A brief comparison of district approaches reveals this discrepancy. The South Waikato District Plan, while supporting the regional focus on improving waterways, would prefer to consider a non-regulatory voluntary approach to discharge monitoring. The concern is that more stringent regulations would result in significant changes in practice for dairy farming and this would be economically challenging for farmers and impact on the region as a whole.<sup>125</sup> Instead the South Waikato District Council supports voluntary efforts like the South Waikato Environmental Initiative. Here, a group of local farmers have a fund to allocate to those interested in planting up waterways, by subsidising trees and fencing. Since 1997 around 300 projects have been funded, with 32 in the last year at a total value of \$47,200.<sup>126</sup>

The Hauraki District Council, on the other hand, sees intensive outdoor farming as a discretionary activity. This requires that all effluent management and farm activities must avoid serious impacts on the environment.<sup>127</sup> There are

121 Rule 3.10.5.12.

122 Waikato Regional Council, above n 115, at 12; Waikato Regional Council, above n 110, Rule 4.3.5.4.

123 Waikato Regional Council, above n 110, Rule 4.2.18.1.

124 RMA, s 31(1)(e).

125 South Waikato District Council “Draft Long Term Plan 2015–25” (25 February 2015) <[www.southwaikato.govt.nz/our-council/agenda-and-minutes/Documents/Long%20Term%20Plan%202015-25%20-%2025%20February%202015.pdf](http://www.southwaikato.govt.nz/our-council/agenda-and-minutes/Documents/Long%20Term%20Plan%202015-25%20-%2025%20February%202015.pdf)>.

126 James Piddock “South Waikato Environmental Initiatives 2014/2015” (31 October 2014) <[www.southwaikato.govt.nz/our-district/groups-and-organisation/Documents/SWEI%20Flier.pdf](http://www.southwaikato.govt.nz/our-district/groups-and-organisation/Documents/SWEI%20Flier.pdf)> at 1.

127 Hauraki District Council “Significant Resource Management Issues and Role of the District

also by-laws which put the onus on landowners to prevent stock from entering streams.<sup>128</sup>

The WRP provides a detailed overview of the expectations in relation to NPS pollution. An additional and attainable option for region-wide consistency would be to require all districts to implement by-laws for fencing, such as those in Hauraki.

### *8.1.3 Enforcement and offences under the Waikato Regional Plan*

Section 17 of the RMA places a duty on every person to mitigate adverse effects on the environment. In light of this duty, the WRC reserves the right to issue enforcement orders with regard to infringements of regional or district plans.<sup>129</sup>

There are several measures of enforcement, from a formal warning, a \$750 infringement notice, to prosecution. Any unauthorised activity in relation to water is an offence, and offenders can be liable for a summary conviction carrying a maximum penalty of two years' imprisonment or a fine not exceeding \$200,000 and \$10,000 for each reoccurrence.<sup>130</sup> The Council can also issue abatement notices or enforcement orders. These are not punitive but require action on the part of the offender.<sup>131</sup>

The strict liability nature of RMA offences means that many offences arise from carelessness. The judge is expected to weigh the steps taken to mitigate harm and willingness to abide by WRC rules.<sup>132</sup> The rules apply whether it is the farmer or a worker who causes the breach.<sup>133</sup>

### *8.1.4 Monitoring compliance with the Waikato Regional Plan*

As part of monitoring compliance the WRC will inspect and assess farms. Upon inspection properties will be seen as: significant non-compliance, partial compliance, high level of compliance and full compliance, in relation to the permitted activity rule. Those with less compliant management systems will

Plan" <[http://www.hauraki-dc.govt.nz/Files/council\\_documents/dptext/1252594\\_Sect3.pdf](http://www.hauraki-dc.govt.nz/Files/council_documents/dptext/1252594_Sect3.pdf)> Rule 3.5.1(2)(d) at 21.

128 Hauraki District Council "Specific and District Wide Matters" <[www.hauraki-dc.govt.nz/Files/council\\_documents/dptext/1252621\\_Sect7.1.pdf](http://www.hauraki-dc.govt.nz/Files/council_documents/dptext/1252621_Sect7.1.pdf)> Part 7 at 11.

129 Rule 3.9.4.10.

130 RMA, s 339.

131 Waikato Regional Council "Farm dairy effluent: Frequently asked questions" (February 2012) <[www.waikatoregion.govt.nz/PageFiles/1189/farm%20dairy%20effluent%20FAQ.pdf](http://www.waikatoregion.govt.nz/PageFiles/1189/farm%20dairy%20effluent%20FAQ.pdf)> [E5] at 9; RMA, pt 12.

132 *Waikato Regional Council v Rex Holloway & Co Ltd* DC Hamilton CRI-2013-013-3819, 6 May 2014 at [59].

133 Waikato Regional Council, above n 131, at [E6].

have to provide property records and improve systems.<sup>134</sup> The main concern with the current process is that the inspections risk subjective assessment. Breaching of discharge rules can also be hard to discover due to the discreet nature of the offence. The WRC relies on others being proactive and contacting it directly when they become aware of offences.<sup>135</sup>

In the past the WRC took to monitoring farm compliance with random helicopter checks. Flights were an effective way to monitor large areas at a time, compared to individual property inspections. For now, these have been stopped due to the “fear” and “stress” they create for farmers. The helicopters were also considered counterproductive to WRC’s focus on educative compliance. The Council is looking into the legality of regulating via air and is assessing other methods for monitoring compliance.<sup>136</sup>

#### *8.1.5 Variation 5: The initiative for reducing NPS discharges in the Lake Taupo catchment*

In early 2000 it came to the wider public attention that the health of Lake Taupo was deteriorating. The region gains \$90 million per annum from tourism, and this is dependent on the untarnished nature of New Zealand’s largest lake.<sup>137</sup> Due to its depth the lake naturally lacks nutrients and so is vulnerable to excessive nutrient loading. It was estimated that 93 per cent of the increase in nutrients was from pastoral farming.<sup>138</sup> The growth of algae and depletion of oxygen impacting on trout life was of particular concern. In 2001 the Tūwharetoa Māori Trust Board and Environment Waikato signed a contract with the Minister for the Environment to develop an integrated strategy to protect Lake Taupo.<sup>139</sup> The Taupo-nui a-Tia joint management regime emerged from this agreement. The Lake Taupo catchment is provided for in a separate variation in the Waikato Regional Policy Plan. Farming now has a controlled activity status, and a nitrogen cap-and-trade scheme is in place. This is a substantial regulatory step toward NPS discharge control compared to the rest of the region.

134 Waikato Regional Council, above n 131, at 3–4.

135 Waikato Regional Council “Pollution or environmental incidents” <[www.waikatoregion.govt.nz/Forms/Enquiries/Pollution-Incident-Report/](http://www.waikatoregion.govt.nz/Forms/Enquiries/Pollution-Incident-Report/)>.

136 Waikato Regional Council “Halt to helicopter flights recommended pending review” (13 June 2014) <[www.waikatoregion.govt.nz/Community/Whats-happening/News/Media-releases-archived/Halt-to-helicopter-flights-recommended-pending-review/](http://www.waikatoregion.govt.nz/Community/Whats-happening/News/Media-releases-archived/Halt-to-helicopter-flights-recommended-pending-review/)>.

137 Waikato Regional Council, above n 110, Variation 5 — Policy 1 at 185.

138 At 178.

139 Environment Waikato “2020 Taupo-nui-ā-Tia Action Plan — An Integrated Sustainable Development Strategy for the Lake Taupo Catchment” <[www.taupodc.govt.nz/our-council/policies-plans-and-bylaws/plans/Documents/2020%20Taupo%20nui%20a%20tia%20action%20plan/2020-Taupo-nui-a-Tia-Action-Plan.pdf](http://www.taupodc.govt.nz/our-council/policies-plans-and-bylaws/plans/Documents/2020%20Taupo%20nui%20a%20tia%20action%20plan/2020-Taupo-nui-a-Tia-Action-Plan.pdf)> (19 July 2004) at 7.

Variation 5 has several set policies:<sup>140</sup>

Policy 1: Tangata whenua values and interests

Policy 2: Identification of Lake Taupo as an Outstanding Waterbody in the Waikato Region

Policy 3: Cap nitrogen outputs from land in the catchment

Policy 4: Reduce nitrogen outputs from land use activities and wastewater

Policy 5: Review of Nitrogen Reduction Target and its Method of Achievement

Policy 6: Phosphorus and water quality

Policy 7: Landowner involvement in catchment management

Policies 3 and 4 are the most radical provisions. Policy 4 provides for a catchment-wide target of reducing nitrogen loads generated through human activity by 20 per cent by 2020.<sup>141</sup> It is estimated that of the 1,360 tonnes of nitrogen entering the lake per year, around 710 tonnes come from human sources.<sup>142</sup> Policy 5 provides for a review of this target in 2018.<sup>143</sup> For the time being the target is considered sufficient due to the large social and economic costs associated with increasing the target.<sup>144</sup>

The nitrogen cap aims to reduce leaching from land by placing limits on the annual average amount of nitrogen put onto land. Low nitrogen leaching activities can continue without any specific consent. Dairy farming in the Taupo catchment, however, has essentially become a controlled activity.<sup>145</sup> The main objection to this change came from Federated Farmers and was a philosophical stance, as it goes against the presumption that farming activities can freely be carried out in rural zones.<sup>146</sup> The Environment Court rejected Federated Farmers' claim and highlighted that many industries require consents to operate. Farming was no exception.<sup>147</sup> If farming was to be seen as a permitted activity, then the rule would be too complex. A permitted activity needs to be simple to understand, be certain, and capable of objective assessment.<sup>148</sup> If the cap was

140 Waikato Regional Council, above n 110, Rule 3.10.3 at 184–188; overview in Waikato Regional Council “Variation 5 — Lake Taupo Catchment Operative Version” <<http://www.waikatoregion.govt.nz/PageFiles/3918/V5%20Operative%20Version.pdf>>.

141 At 188–189.

142 At 180; *Carter Holt Harvey Ltd v Waikato Regional Council* [2011] NZEnvC 163 at 5.

143 Waikato Regional Council, above n 110, Rule 3.10.3, Policy 5(g).

144 Rule 3.10.3, Policy 4 at 189; RMA, s 32.

145 Rule 3.10.5.1.

146 *Carter Holt Harvey Ltd v Waikato Regional Council*, above n 142, at [126].

147 At [126].

148 *Carter Holt Harvey Ltd v Waikato Regional Council*, above n 142, at [117] from *Twisted World Ltd v Wellington City Council* (W024/2002) at [63].

included in a permitted activity rule, it would become convoluted. A “controlled activity” requiring consent is more suitable.

Currently each property must obtain a consent to carry out farming activities, and is granted a nitrogen discharge allowance (NDA). This is a benchmarking tool, with the annual cap calculated from the best year with nitrogen leached between 2001 and 2005.<sup>149</sup> All consents expire in 2036 and are all subject to review.<sup>150</sup> Generally, farm activities can continue so long as they do not breach the cap.

Policy 14 provides for nitrogen trading (offsetting); the NDAs have in effect created a market which allows pollution up to a predetermined limit. Provided these limits are adhered to, property owners can trade NDAs. This incentivises those who can reduce their environmental impact for little cost. Limits on properties can be increased in some areas provided they are offset in others.<sup>151</sup> The trading scheme was introduced to provide flexibility for landowners as a strict cap would have been costly and this scheme encourages compliance.<sup>152</sup>

The major objections to this plan have been for economic reasons. It was predicted that imposing such a strict cap would result in many farms becoming insolvent. As a large portion of the nitrogen leaching comes from stock urine, the cap is essentially one on stock production.<sup>153</sup> The emphasis on trading in the cap-and-trade scheme allows for farmers in the region to negotiate stock production to remain within the limits, and under s 32 analysis the targets should be attainable without being unduly detrimental to farmers economically.<sup>154</sup> The overall cost, \$83.5 million, of the project was split between the three levels of governance: 45 per cent central government, 33 per cent Environment Waikato, and 22 per cent Taupo District Council.<sup>155</sup> The

149 Waikato Regional Council “Nitrogen Management in Lake Taupo Catchment” <<http://www.waikatoregion.govt.nz/PageFiles/183/Nitrogen%20management%20in%20the%20Lake%20Taupo%20catchment%20Aug%202011.pdf>> at 2.

150 Waikato Regional Council, above n 110, Policy 8 at 202–203; RMA, s 138.

151 Policy 14, Rule 3.10.5.7(a), 3.10.5.8; Waikato Regional Council “Cap-and-trade of diffuse emissions of nitrogen in Lake Taupo Catchment” <<http://www.waikatoregion.govt.nz/PageFiles/27778/TR201334.pdf>> at 24; SE Greenhalgh and S Walker and others “Environmental markets for New Zealand: the barriers and opportunities” (2010) <[www.mwpress.co.nz/store/](http://www.mwpress.co.nz/store/)>.

152 Waikato Regional Council, above n 151, at 7, 14.

153 Rural Delivery “Nitrogen Mitigation” (20 October 2012) <[www.ruraldelivery.net.nz/2012/10/nitrogen-mitigation/](http://www.ruraldelivery.net.nz/2012/10/nitrogen-mitigation/)>.

154 Waikato Regional Council “Variation 5 — Lake Taupo Catchment Operative Version”, above n 140, at 16.

155 Environment Waikato “Protecting Lake Taupo: A Long Term Strategic Partnership” (6 November 2003) <[www.ew.govt.nz/PageFiles/7058/strategy.PDF](http://www.ew.govt.nz/PageFiles/7058/strategy.PDF)> at 17; Local Government Act 2002, s 122.

idea of having cost spread across all levels was that regional ratepayers could not fund the project and the protection of a nationally important lake should receive national funding. The input of the Government also acknowledges the lack of regulatory action in the past, and allows government to play an active role in land development in the catchment.<sup>156</sup> The Lake Taupo Protection Trust was established to administer a public fund to help with projects. Critics of this initiative were concerned that the public fund would set a precedent by compensating farmers and only funding research which would benefit farmers. They suggested a “polluter pays” approach.<sup>157</sup>

Variation 5 relies on careful monitoring on the part of farmers who are expected to bear the costs. These costs are around \$1,000 per year and administration costs of \$300 per year.<sup>158</sup> Monitoring the nitrogen cap takes similar measures to the rest of the Waikato. Farm inspections will be used to establish those who are close to their nitrogen discharge allowance. They are ranked as priority one, two or three and will receive visits and annual auditing accordingly. There are enforcement measures in place but they are not frequently used. There is also a database which lists consents which have been granted and declined.<sup>159</sup>

### *8.1.6 Co-operation: A Waikato solution to NPS discharges*

Waikato is unique in that it was the first region to introduce a significant co-management regime. The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010 and the Nga Wai o Maniapoto (Waipa River) Act 2012 have a shared vision of improving water quality in both the Waikato and Waipa rivers. This has established the Waikato River Authority which administers the Waikato Clean-up Fund, and over the next 30 years the plan is to contribute \$220 million to achieve a cleaner Waikato.<sup>160</sup> The Authority has focus areas. The most recent focus is developing a catchment-wide plan for the Upper Waipa to address NPS pollution, with regard to riparian setbacks along the river, requirement for fencing and planting, and assessing farm management

156 Waikato Regional Council, above n 151, at 20.

157 At 20; Environmental Defence Society “EDS Submission to Environment Waikato on the Lake Taupo Strategy” (2004) <[www.eds.org.nz/eresources/submissions.cfm?content\\_id=110393](http://www.eds.org.nz/eresources/submissions.cfm?content_id=110393)>.

158 Waikato Regional Council, above n 151, at 23.

159 Waikato Regional Council, above n 110, Rule 3.10.4.

160 Waikato Regional Council “Waipā catchment plan” (December 2014) <[www.waikatoregion.govt.nz/PageFiles/19601/Draft%20Waipa%20catchment%20plan.pdf](http://www.waikatoregion.govt.nz/PageFiles/19601/Draft%20Waipa%20catchment%20plan.pdf)>; Waikato River Authority “Waikato River Clean-up Trust: Funding Strategy 2014/15” <[www.waikatoriver.org.nz/funding/](http://www.waikatoriver.org.nz/funding/)>.

methods. The annual report reveals large input into riparian planting schemes throughout the Waikato.<sup>161</sup>

## 8.2 Canterbury Regional Council

Over the last decade the Canterbury region has seen a dramatic change in its countryside. From 1999–2011 there was a 38 per cent increase in the total number of dairy farms in the region. Natural conditions are harsher in Canterbury. Droughts are becoming increasingly regular, and sub-zero temperatures in the winter make it a challenging region in which to dairy farm. There is a strong reliance on water bodies for irrigation purposes.<sup>162</sup> The high extraction rates inevitably disrupt the natural flow of rivers, lakes and streams reducing their nutrient content and in turn making them more vulnerable to contamination from NPS discharges. Nearly half of the rivers and streams in the region are either over, fully, or near full allocation.<sup>163</sup> The weakness of the devolution of power under the RMA is evident in the case of Canterbury. In 2010 central government intervened to re-establish Canterbury's water management regime.

### *8.2.1 Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010*

The Canterbury Regional Council (CRC) failed for nearly 19 years to create an operative plan for natural resource control.<sup>164</sup> The Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010 (ECan Act) was introduced under urgency in March 2010 and addressed major concerns about allocation, use and management of water in the Canterbury region.<sup>165</sup> The Act replaced Environment Canterbury's elected council with government-appointed commissioners. Under the 2013 Amendment Act this arrangement will continue until October 2016.<sup>166</sup> An interesting feature of the ECan Act is that appeals on regional plans and policies can only be made on points of law to the High Court.

161 Waikato River Authority, above n 160, at 15.

162 Environment Canterbury *Canterbury Regional Policy Statement 2013* (Revised December 2013) <<http://ecan.govt.nz/our-responsibilities/regional-plans/rps/Pages/regional-policy-statement.aspx>> [1.1] at 3.

163 NZIER, above n 7, at 19.

164 (30 March 2010) 661 NZPD 9941 (Amy Adams, Member for Selwyn).

165 Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010, s 3(b); Nolan, above n 5, at 586.

166 Environment Canterbury (Temporary Commissioners and Improved Water Management) Amendment Act 2012.



### 8.2.2 Natural Resources Regional Plan

The Canterbury Water Management Strategy, created under the ECan Act, established a new paradigm for water allocation and management.<sup>167</sup> This influenced the regional plan, as reflected in the 2011 update. The Natural Resources Regional Plan is the framework for statutory water management in Canterbury. Chapter 4 applies to water quality in several areas including surface and groundwater quality. The plan recognises that NPS discharges have a cumulative effect as a result of land-use activities over a wide area.<sup>168</sup>

Rule WQL5.1 establishes measures to avoid and minimise the cumulative adverse effect of NPS discharges on surface waters. NPS discharges are recognised as being excess nutrients, fertilisers and sediment. Intensive farming is seen as any stock grazed on irrigated land, and WQL25 specifically looks at discharge of animal effluent onto this land.<sup>169</sup> It is a permitted activity so long as discharge is 10 metres from any watercourse, the ground is not frozen, and there are no pools of effluent after two hours of discharging.<sup>170</sup> There is a larger discharge permit than in the Waikato where discharged nitrogen must not exceed 200 kg/ha/yr. If the stipulations are not followed then the CRC will require discharging to be a controlled or discretionary activity.<sup>171</sup>

WQL5.1 promotes the exclusion of livestock from entering waterways. The general view is that exclusion of all livestock is desirable although not reasonably practicable in all areas as there may be a large cost to landowners with little benefit to the environment.<sup>172</sup> WQL5.2 also provides that the CRC must ensure discharge of fertiliser is undertaken in a way to minimise contaminants entering the water.

The plan also provides that where the standards of water bodies are not improving, Environment Canterbury (ECan) will write to local communities and require resource consents to reduce adverse effects to land. There is an environment enhancement fund which community projects can apply to when implementing measures to improve water quality.<sup>173</sup>

WQL10 requires NPS discharges to land which may affect groundwater to manage the input of nitrogen so it matches plan requirements and to avoid

167 Canterbury Mayoral Forum “Canterbury Water Management Strategy — Strategic Framework with Updated Targets, Provisional” (July 2010) <[ecan.govt.nz/publications/Plans/cw-canterbury-water-management-strategy-05-11-09.pdf](http://ecan.govt.nz/publications/Plans/cw-canterbury-water-management-strategy-05-11-09.pdf)> at 1, 6.

168 Environment Canterbury “Canterbury Natural Resources Regional Plan, Chapter 4: Water Quality” (operative 11 June 2011) <<http://ecan.govt.nz/publications/Plans/nrrp-chapter-4-operative-110611.pdf>> at 52.

169 At 53.

170 Rule WQL25 at 167.

171 At 167.

172 At 53.

173 Rule WQL5(g).

the accumulation of nitrate. Again the requirements are not strictly regulatory as landowners are expected to use “best management practices” to minimise leaching rates. Nutrient budgets are seen as an important tool to indicate levels of leaching, and the plan recognises the increasing use of OVERSEER to monitor regional changes.<sup>174</sup>

Similarly, fertilising land is a permitted activity within conditions and discharge of nitrate-nitrogen is permitted provided this is monitored with OVERSEER, and the limits set within the Canterbury Water Management Strategy plan are not breached.<sup>175</sup>

The plan also provides for management of riparian zones. Those activities which disturb soil on riverbanks are expected to be carried out with minimal impact. The Council has ranked areas of particular importance and established partnerships with local authorities to help with riparian planting.<sup>176</sup>

### *8.2.3 Monitoring and enforcement*

The plan acknowledges that minimising nitrogen levels is a slow process due to the time delay in the movement of nitrate. In terms of stock exclusions the plan outlines that territorial authorities are to establish by-laws to protect water quality in stock races.<sup>177</sup> This is achieved through fencing.

The main methods with regard to managing NPS discharges to both surface and groundwater are via information and education of landowners. If water quality in an area is well below the stated objectives then ECan may require landowners to prepare and implement water care programmes, or require resource consents to continue farming activities.<sup>178</sup>

ECan keeps a consent database of all point discharges and there are yearly reports which summarise each major catchment.<sup>179</sup> Similarly to the Waikato region, there is a compliance and reporting programme for permitted activities and farms are monitored to determine high, moderate, or low priority with regard to water quality standards.<sup>180</sup>

### *8.2.4 Canterbury Water Management Strategy: Variation 1 — Te Waihora*

The years with no change in activities to improve water quality in the Canterbury region has finally prompted some radical change over the last year. On 9 May

174 At 79.

175 Rule WQL10, Rule WQL20.

176 Rule WQL6.

177 Rule WQL5(1).

178 At 53; Rule WQL5.2(3).

179 At 254.

180 At 266.

2015 the Canterbury Land and Water Regional Plan introduced changes to its Variation 1. This plan was established with separate management rules and policies for specific catchment areas. Variation 1 applies to the Selwyn-Waihora catchment, which contains Te Waihora/Lake Ellesmere. It is a lake naturally low in nutrients and has a sensitive environment.<sup>181</sup> Intensive farming in the area and over-extraction of water for irrigation has caused irreversible damage.

The amended Variation 1 looks to activities which have a direct impact on the health of the lake, and limits these. The regime is similar to NPS discharge controls in the Lake Taupo catchment. The overall aim of the new scheme is to “restore the mauri of Te Waihora while maintaining the prosperous land-based economy and thriving communities”.<sup>182</sup>

Discharges of nitrogen and phosphorus contaminants from farming activities must not exceed nitrogen baselines.<sup>183</sup> Farmers are also required to put in good management practices. From 2017 all farms with property greater than 10 hectares will need to have “farm environment plans”.<sup>184</sup> Where nitrogen output is more than 15 kg/ha/yr, then from 2022 farmers must significantly reduce their nitrogen losses by an average of 14 per cent.<sup>185</sup> This should be possible with reasonable management practices. The steps in place are to encourage farms to reduce their inputs now, so that reductions of 14 per cent in the future are more achievable.

The Variation acknowledges that drains play a large contributory role in waterway pollution. There is a requirement for stock exclusion from drains on a regional level.<sup>186</sup> The Variation sees this as a way to reduce phosphorus leaching.

There are also limits on abstraction from surface and ground water in the zone, as well as minimum flow expectations on rivers and streams. Many of the nutrients are already trapped in underground aquifers, so the quality of Te Waihora is likely to get worse before it improves.<sup>187</sup>

Monitoring of this Variation, as elsewhere, will be through requiring farms to produce environment plans. The obligation to produce these plans is seen as in line with current industry practice in the region. The commissioner David

181 Environment Canterbury “Proposed Canterbury Land and Water Regional Plan: Variation 1 Selwyn Te Waihora” (April 2015) <<http://files.ecan.govt.nz/public/council/council-agenda-230415-3.pdf>> at 10.

182 Environment Canterbury “Decisions on Selwyn-Waihora water plan” (23 April 2015) <<http://ecan.govt.nz/news-and-notice/news/Pages/decisionson-selwyn-waihorawaterplan.aspx>> per Professor Skelton.

183 Environment Canterbury, above n 181, at 11.4.12.

184 At 17.

185 At 18, 11.4.14.

186 At 11.4.12(d).

187 Environment Canterbury “Selwyn-Waihora Water Plan Q&A” (23 April 2015) <<https://www.youtube.com/watch?feature=youtu.be&v=y3CDPpvO4FU&app=desktop>>.

Caygill acknowledges that the ultimate sanction would be losing the right to farm. This is unlikely to occur as steps are in place to educate landowners and warn them of non-compliance.<sup>188</sup> The Variation was seen as economically viable under a s 32 analysis and will be legally effective from 9 May 2015.

## 9. SUMMARY OF CURRENT APPROACHES TO NPS DISCHARGE MANAGEMENT AND POSSIBLE CHANGES

The intensification of agriculture has led to changes in water management practices to reduce adverse side effects. These changes are slowly being adopted throughout the country. It is important to look at the central and local government efforts to briefly analyse where they can be amended to ensure there is environmental preservation and protection of waterways.<sup>189</sup>

The state has the ability to design principles and rules for broader governance. The most notable change in recent years has been the introduction of NPS-FM 2014. This has resolved the struggle regional councils had in the past of setting comparable water quality standards.<sup>190</sup> The catchment-based approach first introduced under the Water and Soil Conservation Act has become pivotal to water quality control today.

The general critique of the NPS-FM is that once bottom lines are achieved there is no need to alter practices. Bottom lines for freshwater quality need to be challenging but not unattainable. Variation 1 in Canterbury demonstrates how instrumental the NPS-FM quality standards are. Classifying Lake Ellesmere as well below bottom-line standards led to a targeted land-management plan. Similarly, a report on the Waikato River catchment revealed that the water quality in low-lying lakes will not meet NPS-FM national bottom lines.<sup>191</sup> These vulnerable bodies are likely to be a focus for regional councils in the near future.

A recent case in the Environment Court looked at regional councils' obligations under the RMA to uphold the quality of freshwater bodies in respect of the NPS-FM.<sup>192</sup> The Court considered what was meant by *the overall*

188 Environment Canterbury, above n 187.

189 *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38 at [146].

190 Ali Memon and Peter Skelton "Institutional Arrangements and Planning Practices to Allocate Freshwater Resources in New Zealand: A Way Forward" (2007) 11 NZJEL 241 at 243.

191 Waikato Regional Council "Waipā catchment plan" (11 September 2014) <[www.waikatoregion.govt.nz/PageFiles/35069/TR201433.pdf](http://www.waikatoregion.govt.nz/PageFiles/35069/TR201433.pdf)>.

192 *Ngāti Kahungunu Iwi Inc v Hawke's Bay Regional Council* [2015] NZEnvC 50.

quality of fresh water within a region.<sup>193</sup> It held that a planning authority could not compensate for derogation of a water source in one area by ensuring the overall quality is maintained across the region.<sup>194</sup> This is an important qualification, which could be included in future amendments of the National Policy Statement. However, such a qualification sits at odds with nitrogen cap-and-trade schemes, which are premised on the idea of setting benchmarks for levels of pollution region-wide and allowing for offsetting. Another anomaly of the Court's findings is that other areas of the National Objectives Framework do allow for discretion on the part of FMUs, such as setting the status for water bodies in their region as "at or above" national bottom lines.<sup>195</sup> It appears that although the NPS aimed to set "strict" limits to water quality, in reality discretion around these limits exists. If cap-and-trade schemes are implemented nationally, as the trend seems to be, then councils will need to carefully analyse catchments to make sure that water bodies "well below" national standards are well protected. Cap-and-trade schemes risk increasing pollution in one area, while minimising it in another, and may not be appropriate where water bodies are particularly vulnerable.

Under the RMA, NPS pollution is dealt with either under s 15 (discharges) or s 9 (land-use provisions). When regulating in this area regional councils confront the interaction of two conflicting presumptions. Section 9 carries a presumption of use, that one can carry out activities on one's property as one wishes, and s 15, which has a restrictive presumption, that any discharge is prohibited.<sup>196</sup>

A possibility to avoid this confusion is to alter s 15(1)(b) to specifically include non-point source discharges,<sup>197</sup> making it unlawful to have discharges from animal emissions. The problem with doing this is that it would restrict all farming activities. It may also be out of line with the purpose of s 15, which targets point pollution sources. Point source pollution can be controlled by someone. As has been discussed, the dispersed nature of NPS pollution makes it difficult for farmers to specifically control and other measures would be more effective than a blanket change in the wording of the statute.<sup>198</sup>

There is a trend for regional councils to tackle NPS discharges through permitted activity rules. These are a type of hybrid rule with land-use and discharge control. To establish these rules regional authorities must be satisfied that allowing an activity will have no more adverse effects than what could

193 MfE, above n 1, at A2.

194 *Ngāti Kahungunu Iwi Inc v Hawke's Bay Regional Council*, above n 192, at [64].

195 Buddle Findlay, above n 80.

196 *Carter Holt Harvey Ltd v Waikato Regional Council*, above n 142, at [169].

197 Drummond, above n 11, at 290.

198 *Carter Holt Harvey Ltd v Waikato Regional Council*, above n 142, at [172].

already be lawfully done.<sup>199</sup> Permitted activity rules have been effective in the Waikato. They limit discharges yet allow farming to continue without much disruption. A concern with permitted activity rules is that they are reliant on self-auditing. This leads to a retroactive approach to compliance. It is only once a monitoring body is aware of a significant breach that penalties can be imposed. There is concern that this is inconsistent with environmental protection, which demands proactive action to prevent damage ever arising.<sup>200</sup>

Steps taken in both the Taupo and Selwyn catchments have essentially made farming a controlled activity. Low nitrogen caps restrict most intensive farms from operating under permitted activity rules. The serious set of policies and rules in place were justified due to a grave environmental issue at hand.<sup>201</sup> It has been discussed that classifying farming as a prohibited activity would be counterproductive to educative measures about reducing pollution. Labelling intensive farming as a controlled activity is therefore preferable. Requiring resource consents with regard to particular aspects of farming is a way to actively avoid risk and have standardised checks on farming practices.

This, however, is a costly and time-consuming process, for both landowners and regional councils. Section 36 of the RMA requires monitoring charges to be imposed with a controlled activity. A regular concern is that the cost of high compliance may not be “sustainable” for individual applicants.<sup>202</sup> However, what is “sustainable” is seen on a holistic level. If compliance costs were a significant concern for many people, then imposing resource consents may not be appropriate.<sup>203</sup> The s 32 analysis carried out in the Canterbury catchment was not seen as unduly harsh to individual landowners. The “overall broad judgment approach” which consent authorities take would ensure individual economic constraints were considered.<sup>204</sup>

The “controlled activity” approach in Canterbury and Waikato are positive and realistic steps toward NPS discharge control. Due to the lag time in results it is yet to be seen how effective these land-based control measures are in improving water quality.

Another critique of current regional plans is that they are broad and ambiguous without committing to stringent regulation. For example, the

199 Nolan, above n 5, at 308.

200 Canterbury Mayoral Forum, above n 167, at 55, 100.

201 Environment Canterbury, above n 187, per David Caygill.

202 *Day v Manawatu-Wanganui Regional Council* [2012] NZEnvC 182 [164], [165], [176].

203 Philip Maw and Lucy de Latour “Variation 1 to the Proposed Canterbury Land & Water Regional Plan” (November 2014) <<http://ecan.govt.nz/publications/Plans/v1-s42a-report-appended-decision.pdf>> at [44].

204 *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd*, above n 189; Waikato Regional Council “Strategy and Policy Committee” (14 April 2015) <<http://www.waikatoregion.govt.nz/PageFiles/19543/Agenda%20Package%20Strategy%20and%20Policy%20Committee%2014%20April%202015.pdf>>.

Waikato Regional Plan is “committed” to “promoting” reduction in NPS discharges. This leaves gaps as territorial authorities, in charge of specific catchments, may not enforce the proposed policies. Counter to this, it provides flexibility and the opportunity for catchment-specific rules. In 2012 the Land and Water Forum encouraged good management practices to be ascribed in all catchments.<sup>205</sup> An example of “good management” may be the above, controlled activity, approach.

It is hard to manage the complex range of exceptions and tensions between private interests and public good. This is why generally the power for water quality management has been delegated to a regional level. The RMA provides important overarching principles given by centralised government.<sup>206</sup>

The Taupo cap-and-trade scheme is one which has proven to be most cost-effective and encourages careful farm management plans. Provided pollutants are seen as a tradable commodity such a scheme can be applicable elsewhere.<sup>207</sup> To apply to other catchments, specific models would need to be developed due to the differing natural qualities in each region, and the initial limits placed in catchments would be very important.<sup>208</sup> A risk of extrapolation is that the Taupo scheme was unique. It is a catchment with a limited number of farmers and receives significant funding from a national level. The major concern when implementing any change in practice is the associated costs. Farmers in capped zones have pressure to abide by these caps, due to the threat of penal sanctions, while also continuing to turn a profit. Similarly to concerns raised with comparable schemes in Europe, the cost of compliance cannot be completely covered by regional authorities and so the increased price of farming is transferred to consumers.<sup>209</sup> Consumers need to be aware of the environmental impacts of their purchases. A demand for good products at a cheap price only encourages intensification.

There is scope in the RMA to have national requirements to fence waterways. Section 14 outlines water-diversion controls, which can cover farm drainage canals, and s 15 would therefore be applicable. The current approach is optional by-laws for fencing at a district level.<sup>210</sup> The Local Government Act 2002 has a provision which may allow for similar regulation. Section 288 has a list of offences relating to water races and every person commits an offence

205 Land and Water Forum *Third Report of the Land and Water Forum: Managing Water Quality and Allocating Water* (October 2012) <[www.hortnz.co.nz/assets/Uploads/Third-Report-of-the-Land-and-Water-Forum.pdf](http://www.hortnz.co.nz/assets/Uploads/Third-Report-of-the-Land-and-Water-Forum.pdf)> at 5.

206 NZIER, above n 7, at 55.

207 Waikato Regional Council, above n 151, at 7.

208 At 53.

209 Commission of the European Communities *Directions towards sustainable agriculture: COM 22 (1999)* 8 at 5 in Drummond, above n 11, at 284.

210 Hauraki District Council, above n 127, Rule 3.7.3 at 26–27.

if they directly or indirectly pollute a water race in an offensive manner.<sup>211</sup> Allowing livestock to enter a water race is also prohibited.<sup>212</sup> Such provisions support regional plans and could be engaged more regularly as a mechanism of holding offenders liable.

Local government cannot significantly improve water quality management in isolation.<sup>213</sup> The primary sector has an interest and arguably a responsibility to engage in NPS discharge control. As one of the largest contributors to the derogation of freshwater quality, the wider community benefits when the sector takes steps to minimise its impact. In New Zealand the Clean Streams Accord raised public awareness about the dairy industry's input into management of NPS discharges. The fencing of waterways was well received, yet attitudinal change to effluent discharge and riparian planting has been slow.<sup>214</sup> Furthermore, the lack of penalties meant that breaches were seen as trivial and not acted on.

Another issue that the Clean Streams Accord highlighted was the discrepancies between regional councils. With different modes of assessment, and rules around consents to discharges, the impact of the Accord was not felt equally in all regions.<sup>215</sup> Additionally, councils do not meet to compare records. Regional councils acknowledge that the commitments in the Accord reflect expectations of good practice but it may not be seen as an adequate response to some, or all, dairying and environmental issues.<sup>216</sup>

In the Waikato the collaborative projects to manage water quality are a new focus. They provide an opportunity for local iwi and communities to get involved. This acknowledges the holistic view that needs to be taken towards water quality management in a New Zealand context.<sup>217</sup> It is also a unique measure to ensure that more funding is sourced to help alter farming practices and notably fence waterways. The downside is that the initiatives launched by the Waikato River Clean-up Trust are still voluntary. The other danger with collaborative efforts is that they can lose momentum and risk consultation fatigue.<sup>218</sup> There is also concern that economically powerful primary interests will prevail over other demands for water, posing a threat to collaborative responses. Despite these pressures, the Healthy Rivers Wai Ora project is making collaborative progress to address the issue of non-diffuse discharge in

211 Local Government Act 2002, s 288(1)(h).

212 Section 288(1)(i).

213 MfE, above n 17.

214 DairyNZ, above n 97, at 4, 7.

215 At 10.

216 DairyNZ, above n 90, at 3.

217 Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, s 22(2)(b).

218 MfE, above n 17, at 18.



the lower Waikato catchment. The aim is to establish targets and set limits on certain discharges.<sup>219</sup>

## 10. CONCLUSION

Sustainable management is at the heart of New Zealand's environmental legislation. It provides a "framework, where the environment is the basis for social, cultural and economic wellbeing".<sup>220</sup> The existence of non-point source pollution is a current threat to the wellbeing of New Zealand waterways. This impacts on both commercial and recreational uses of freshwater resources. The RMA provides important overarching principles which help establish a balance between tensions of private interests and the public good. Delegating water quality management to a regional level ensures regulations find this balance with regard to local circumstances.<sup>221</sup> While New Zealand could benefit from a more cohesive regional dialogue the National Policy Statement for Freshwater Management has resulted in consistency of water quality management between regions. The voluntary and "non-regulatory" approach of regional councils to the management of discharges is slowly disappearing. Although self-auditing is still the main mechanism of monitoring, technology has allowed for region-wide identification of polluted areas. Catchment-specific targets and industry initiatives are changing attitudes towards the management of NPS pollution and farming in general. Improving waterway quality is now an attainable goal. To achieve this goal regional councils face a large battle to protect the environment through regulations while ensuring these are not unduly harsh or restrictive to farming practice. It is vital that regional councils foster good relations with landowners and, as seen in the Waikato, overregulation can be detrimental to this object. The current efforts do more than target the polluter. Funding from various sectors encourages a collaborative approach and shared responsibility for NPS discharges. A practical step being taken by many community groups is reducing sediment erosion by planting in riverbanks. This is an excellent immediate fix while complex regulatory schemes are developed. New Zealand as a whole would benefit from education of the current efforts being made as the amelioration of freshwater quality through reducing non-point source pollution is in the interests of the wider public.

219 Waikato Regional Council, above n 160.

220 Environment Canterbury Regional Council "Draft Canterbury Regional Policy Statement" (Environment Canterbury, Report No R10/65, 2010) at 50.

221 NZIER, above n 7, at 55.