Submission on Action for Healthy Waterways

AgFirst NZ Ltd

Background

1. AgFirst is the largest agricultural consultancy firm in New Zealand, with 50+ consultants based around the country, covering pastoral agriculture, horticulture, and agricultural engineering.

2. AgFirst is involved in a wide range of environmental issues affecting the primary sector, particularly water quality and greenhouse gases, and the implications around mitigations at a farm level.

3. As such, AgFirst would like to make a submission on the “Action for Healthy Waterways” across a range of issues.

General

4. AgFirst accepts, and supports, the requirement on the agricultural sector to mitigate its impact on waterbodies, provided that the policies and regulations are:
   (i) Based on sound science
   (ii) Practical, and
   (iii) Cost-effective

Restricting further intensification of rural land.

   Definition of “horticulture”

5. The proposal is to require any increases in the area of land in irrigated pastoral, arable or horticultural production above 10 hectares to require a consent to ensure contaminant discharge is not increased.

6. AgFirst would submit as to the definition of “horticulture” – whether this includes permanent horticulture such as kiwifruit, pipfruit, viticulture, etc. Currently the government is promoting such land use as an answer to some of the nutrient/greenhouse gas issues, so is the proposal now to slow this down?
7. In a similar vein, Zespri is currently releasing 700 hectares/year of gold kiwifruit licences, so is the intent to again slow or stop this expansion.

8. Presumably, in respect of “intensification of land use” in the sense of increasing discharge of contaminants, “horticulture” actually means intensive vegetable production. In which case why not state this.

_Beef to dairy grazing_

9. The proposal also looks to restrict the change in land use from beef to dairy grazing. The rationale for this is unclear, given that beef animals have the same impact as dairy grazers, assuming the intensity of farming is the same. AgFirst would submit that this requirement be deleted.

10. There may be an issue when grazing dry dairy cows over the winter, but this is different to land use change.

_Forage Cropping_

11. The proposal is seeking to set minimum thresholds as to forage crop areas, above which a resource consent is required. AgFirst is opposed to setting such input-control restrictions, as they seriously affect the flexibility of the farming system. The amount of forage cropping a farmer may carryout would depend on a range of variables, including the farmer themselves as to their attitude to forage cropping, the feed demand for animals, which varies from year to year, and the requirement for pasture renewal. Often a forage crop is a precursor to regrassing, and in some instances, for example post a drought or severe insect attack, farmers may look to crop a significant proportion of the farm prior to regrassing.

12. Often, with respect to the above latter factor – regrassing after a drought/insect attack, many farmers would plant an annual ryegrass sward. Currently this does not count as a forage crop, despite the effects of grazing it being much the same of a forage crop.

13. AgFirst would submit;
   (i) That the minimum areas be deleted, and
   (ii) That the area of forage cropping, and any attendant issues, be covered within the Farm Environment Plan

_Farm Environment Plans_

14. AgFirst would support the idea of mandatory Farm Environment Plans (FEP). We would note that within the Waikato Regional Council’s Proposed Plan Change 1, the intent is that (for the majority of) farms would require a consent as a controlled activity, with the requirement of the consent being the farm must have an approved FEP.

15. AgFirst would submit that this is probably the most practical approach to many of the contaminant discharge issues (including Greenhouse Gasses), whereby the various issues and mitigations can be discussed within the specific farm context, meaning they (a) have more ownership by the farmer, and (b) are more likely to be implemented.
16. The discussion document indicates the cost of an FEP at $3,500. It is difficult to see how this was derived. Our cost for developing an FEP for a dairy farm would be circa $5,000, and for a sheep & beef farm circa $8,000. These costs can vary significantly depending on the farm system, what records are available, and the requirements on the farm to meet any reduction targets.

*Logistics and capability*

17. The discussion document indicates that all farms would have an FEP by 2025. This is wholly unrealistic for two key reasons:

(i) Most councils will not have plans in place until 2025 (or even later) and farmers will be very reluctant to develop FEPs in the absence of knowing what the specific policies and rules will be.

(ii) There is insufficient capability within the Industry and farm consulting fraternity to develop circa 28,000 FEPs over 5 years. While AgFirst supports the contention that FEPs be developed by certified persons, we would note that (a) there is a current lack of such certified people, and (b) the process of certification will in itself slow the process down.

18. AgFirst would also note that there still needs to be an agreement as to what exactly an FEP will cover, and to what detail.

19. AgFirst would therefore submit that a more realistic timeline to ensure all farmers have a recognised FEP is 2035.

20. The discussion document also suggests that all FEPs be audited either annually or biennially. AgFirst would regard this as totally unrealistic, given the amount of effort required. Assuming 4 audits per week per auditor (which would be good going), then 159 auditors would be required full-time nationally. If only 3 audits per week per person, this figure grows to 212. While AgFirst supports an independent 3rd party audit, we would submit that a more realist approach would be to have random audits such that all farmers were covered over a 5-year period. If a farm was found to be not complying, then the audit could be stepped up to an annual audit. If the farm is complying, then the audit could be every (say) 5 years.

21. The document also notes that the expected audit cost is $1,500 every 2 years. AgFirst has recently completed a study on the cost of the nitrogen cap on farmers in the Lake Taupo catchment. The average annual cost of compliance regarding monitoring and auditing was $3,900 per farm – this is the cost to the farm and ignores any Regional Council Costs.

22. The document notes the government initiatives to provide information to farmers and build capacity within the industry. While AgFirst strongly supports such initiatives, we would again note that it takes some time to build capacity, particularly with regard to both expertise and experience.
Nitrogen Loss Mitigation

23. The discussion document outlines the issue of reducing nitrate nitrogen in various high nitrate-nitrogen catchments. Three options are outlines, as discussed below.

National nitrogen fertiliser cap

24. AgFirst would strongly oppose such an approach. Input controls have been used in various countries overseas, especially Europe. In the absence of very intrusive controls and monitoring, and a destruction in the flexibility of the farming system, these input controls are largely a complete failure, especially as often they can be easily circumvented.

Nitrogen loss cap/Farm plan-based reductions

25. AgFirst would see these as much the same thing. If a farm plan specifies that the farm must reduce its nitrate-nitrogen leaching from \( x \) kgN/ha/year to \( y \) kgN/ha/year, or even if it specifies a percentage reduction, both approaches directly infer a starting point, i.e. the “\( x \)” kgN/ha/year, which then effectively becomes the cap – the farm cannot increase nitrogen leaching above this point, and most probably has to reduce below this level.

26. While AgFirst supports the introduction of FEPs, a component within this will, for most farms, deal with nitrogen leaching, and therefore will specify what the farmer must do to manage any discharges. If the plan is silent on nitrogen leaching, then by default the farm can increase its leaching level, and while this may not have an immediate effect on the catchment, it will directly add to the cumulative impact downstream.

27. AgFirst would also note that all human activity, including farming, has an adverse environmental effect, and that it is not possible to mitigate this to zero.

75th percentile

28. The document proposes that farms above a set percentile (75th is proposed in the document, although other levels are suggested) must reduce their nitrogen leaching down to this level. The actual percentile figure would be based on dairying, but then apply to all pastoral farms.

29. AgFirst would support this proposal, as it places more of the burden for mitigation on the highest leaching farms. While there can be debate around exactly which percentile level is used, AgFirst accepts that the 75th percentile is as realistic and practical as any. A higher figure (e.g. 90th) would result in a limited total reduction, whereas a lower figure (e.g. 50th) would place an onerous burden on many farmers.

30. The document indicates that the reduction down to the required percentile level be achieved within a year. AgFirst would submit that in many instances this would place a significant burden on the farmer, and in some cases is simply not possible. In this respect we would submit a 5-year deadline is more realistic.
31. A 1-year timeline for reduction to the 75th percentile level also has implications for financial stability given debt, and associated debt servicing, is an important factor on many farms. Affected farms will need time to develop plans in association with their bankers in order to migrate to farm systems that are likely to have lower productivity if they have to make significant changes to reach the 75th percentile. This reinforces the need to allow a longer than 1-year transition period.

32. The document intimates that the percentile figure will be calculated at a catchment level. While this will work for many catchments, there are also other catchments where the number of dairy farms is relatively low, meaning the percentile figure could be very distortionary. AgFirst would note that the Waikato Regional Council’s Proposed Plan Change 1 requires the 75th percentile be set at a Water Management Unit level. While this is greater in area than a single catchment, AgFirst would submit that it provides a realistic compromise across several catchments.

Timeframes

33. The discussion document notes in a number of places the requirement for a “rapid reduction” in nitrate-nitrogen levels.

34. AgFirst would submit as to the definition of “rapid reduction” – does this mean 5 years, as noted in the summary? The situation that we are now looking to mitigate/remedy has developed over many decades – the document notes that the pressure on freshwater is the result of more than 150 years of population growth, and changes in the way we use the land. It is simplistic to expect that this can be remedied in a few years, and in many situations, it is simply not possible to remedy a degraded waterbody “rapidly”. For nitrogen, there is also the question of levels that have built up in aquifers over time, which in many cases will take decades to reduce – meaning that despite any mitigation strategies, the situation may well get worse before it gets better.

35. Which is not to say that no action is required. But AgFirst would submit that reasonable timeframes be allowed for to give farmers time to introduce mitigation strategies. The Waikato Regional Council Proposed Plan Change 1 has an 80-year timeframe. While this was criticised as too long by some, most accepted it as realistic given the size, complexity, and cost of remediying the current situation. As such, AgFirst would submit that a realistic timeframe for many of the proposals in the discussion document would actually have a much better probability of being accepted and acted on.

Instream nutrient levels

36. The document proposes in-stream bottom-line levels of an annual median of 1.0 milligrams per litre of dissolved inorganic nitrogen (DIN), and annual median of 0.018 milligrams per litre of dissolved reactive phosphorus (DRP).

37. The determination of such figures is outside of AgFirst’s expertise, but we would note:
   (i) Several bodies have questioned the scientific validity of these figures
   (ii) No justification was provided as to why these levels were set
   (iii) No analysis was presented as to the cost/benefit of achieving these levels
While there are several “critical” catchments/waterbodies identified (for rapid action) in the document, no information was provided as to their annual median DIN or DRP, meaning it is difficult to understand the size of the issue and the level of mitigation required.

In many water bodies, it is actually the ratio of nitrogen to phosphorous which is important for algae/problem weed growth. No discussion is raised on this matter.

Many water bodies, especially in the North Island, have relatively high natural DRP levels. No discussion is raised on the implication of this.

As such, AgFirst would submit that the imposition of such bottom-line figures be postponed, until the situation can be clarified, including rigorous scientific and economic analysis.

Stock Exclusion/Setbacks

Overall, AgFirst would support the idea of stock exclusion from waterbodies. We would note that the document concentrates on land with a slope are of 10 degrees or less, which we also support, noting that fencing off streams in hill country is problematic due to both the contour of the land and the cost involved.

AgFirst also agrees with the inclusion of new technologies such as electronic collars as “stock exclusion” methods. These could well provide a more cost-effective approach to stock exclusion in a number of circumstances, especially in hill country, than fencing.

The document proposes that stock exclusion be achieved on gently rolling (low slope) land within 5 years, or 3 years for dairy cattle and pigs. In many respects the requirement for dairy farms has already been met, notwithstanding the requirement for farmers to now shift these fences to increase the setback area (discussed below).

AgFirst would submit that these time limits are wholly unrealistic, noting that it has taken the dairy industry over 15 years to achieve the current level of stock exclusion, but mainly due to the lack of capability within the industry to achieve such a level of fencing within that time-frame. As such we would submit a more realistic timeframe would be to achieve this goal by 2035. Part of the rationale for this is that Regional Plans may well alter stock exclusion rules and setback widths; farmers therefore are going to be reluctant to expend effort and cost on this until the rules are clear.

There are some questions however around the rationale for the setbacks proposed. These are in effect riparian buffers, which act to reduce surface run-off of, particularly, sediment, microbes, and phosphorous. The concern is there is minimal discussion as to the rationale for a 5-metre setback.

The efficacy of riparian strips depends on a combination of the width of the strip, relative to the slope of the land; the flatter the land the less width is required, and conversely for steeper land. The reference cited (Lui, X, et al) notes that the optimum riparian strip on a 9° slope, is in fact 10 meters.
45. AgFirst would submit that there needs to be more analysis as to optimal setbacks, in that a blanket 5-metre strip may be more than is required in some circumstances, and not sufficient in others. It would be important to determine this before requiring a large number of farmers to start shifting existing fences.

46. The document notes that the estimated cost of stock exclusion is $600 million. This cost excludes the cost of planting riparian strips, on the basis that this is not actually mandated by the regulations. However, planting of riparian strips, especially of 5 metres or more, is necessary to both improve the efficacy of the strip and prevent wholesale reversion to weeds such as blackberry and gorse. In this respect stock exclusion results in a need for riparian planting, whether mandated by the regulations or not. Excluding this cost is therefore just an exercise in sophistry, especially as it would add circa $800 million nationally to the cost.

 Allocation/Trading

47. The placing of a nitrogen leaching cap is in effect an allocation, which is basically grandparenting. Allocation of nitrogen leaching levels is fraught due to questions around equity. AgFirst would note that there is no perfectly equitable allocation system – all impose some degree of inequity across farms, so in many respects the aim is to have the least inequitable system – one which minimises economic and social disruption.

48. The exact mechanism to achieve this can vary depending on the catchment, and Regional Councils have introduced various allocation approaches. AgFirst would draw the governments attention to the allocation approach used by Bay of Plenty Regional Council for the Rotorua Lakes catchment (Plan Change 10). This was a “sector averaging” approach, based around grandparenting, but has the effect of requiring the higher nitrogen leaching farms to reduce most, and drew a line such that the lower leaching farms did not have to reduce their leaching (in fact some could increase leaching levels). While again not perfectly equitable across all farms, it goes some way to minimising economic and social disruption.

49. There has been some support for a “natural capital” allocation, based on Land Use Capability (LUC), and which has been used in Horizons’ One Plan, and in the Hawke’s Bay (Plan Change 6). AgFirst would note:
   (i) No scientific or economic analysis has been done which supports the contention of a natural capital approach, and
   (ii) The analysis which has been done shows that it maximises economic and social disruption, and does not lead to “highest and best” land use
   (iii) In other words it is more inequitable than grandparenting

50. AgFirst would note with some disappointment that the discussion document does not raise or discuss the issue of trading – both nutrient and water trading.

51. Nutrient (i.e. nitrogen) trading is operating in the Lake Taupo catchment, and is to be introduced for the Rotorua Lakes catchment. There have been several analyses done
on the Lake Taupo trading system, all of which indicate it has been very successful, particularly in aiding in the flexibility of farming systems, and allowing for land use change, within the overall nitrogen leaching cap.

52. Similarly, overseas experience with water trading, usually for irrigation, has been quite successful.

53. There is no reason therefore why trading should not be an integral component of both our nutrient and water management systems. If, for example, a farm has a low nitrogen cap, but wishes to intensify their operation, then they could buy nitrogen leaching rights in order to achieve this – the same way they buy in all of the inputs required for the farming system. Similarly, if a farm wishes to change land use such that they require water for irrigation, then they should have the opportunity to buy the right to use such water.

54. AgFirst would strongly submit that both nutrient and water trading be incorporated into the Freshwater Management Plan. In many respects, if a cap is placed on nutrient discharges or water takes, then trading should be mandatory.

Urban Issues

55. AgFirst would support the development of a Wastewater NES, covering the treatment and disposal of urban waste and storm water. AgFirst would note that:
   (i) Many urban centres, as a condition of their consents, can readily discharge untreated wastewater if “technical problems” and/or “acts of god” (i.e. storms) occur. No such leeway is afforded to dairy farmers’ effluent treatment systems.
   (ii) Very few urban centres discharge wastewater to land – due to cost – whereas this is mandatory for most dairy farms, regardless of the fact that in a number of situations the environmental outcome is worse relative to discharging to water.
   (iii) Most urban people swim in urban streams or rivers, so no wonder they notice the level of pollution/are concerned for their health.

Thank you for your attention to this