CHANGES PROPOSED BY MS BARTON ARE MARKED IN YELLOW HIGHLIGHT. THOSE PROPOSED BY GERARD WILLIS ARE MARKED IN RED TEXT. CHANGES AGREED IN PLANNER CONFERENCING IS SHOWN IN BLUE TEXT

Note: Changes marked in grey highlight were made as a result of mediation. This Appendix is not a complete list of provisions. Only those provisions in contention are included.

Objective 6-1: *Water^* management Values

Surface *water bodies^* and their *beds^* are managed in a manner which advances the achievement of the Values ~~has regard to the Values~~ in Schedule AB[1] with particular regard to safeguarding life-supporting capacity.

Policy 6-1: *Water Management Zones and Values**

For the purposes of managing *water^* quality, *water^* quantity, and activities in the *beds^* of *rivers^* and *lakes^*, the catchments in the Region have been divided into *Water Management Zones** and *Water Management Sub-zones** in Schedule AA.[2] Groundwater has been divided into *Groundwater Management Zones** in Schedule C.[3]

The *rivers^* and *lakes^* and their *beds^* must be managed in a manner which ~~has regard to~~ advances the achievement of the Schedule AB Values with particular regard to safeguarding life-spupporting capacity when decisions are made on avoiding, remedying or mitigating the adverse *effects^* of activities or in relation to any other function exercised by the Regional Council or Territorial Authorities. The individual Values and their associated management objectives are set out in the Schedule AB Surface Water Management Values Key and repeated in Table 6.2.

Policy 6-4: Enhancement where *water^* quality ~~targets~~ numerics are not met

(a) ~~In each case w~~Where the existing *water^* quality does not meet the relevant Schedule D *water^* quality ~~targets~~ numerics within a *Water Management Sub-zone**, ~~activities must be managed in a manner which, beyond the zone of reasonable mixing~~ *water^* quality within that sub-zone must ~~in accordance with objective 6-1~~, be managed in a manner that enhances existing *water^* quality so that there is progress towards:

(i) ~~Having regard to in order to meet~~ the *water^* quality numerics for the *Water Management Zone** in Schedule D; and/or~~: + and in a manner that is consistent and~~

(ii) The relevant Schedule AB Values and management objectives that the water quality numeric is designed to safeguard

~~(iii) In accordance with Policies 6-7, 6-7A, 6-7B and 6-8.~~

~~+ except in the case of toxicants where investigation as per ANZECC (to be clarified)~~

~~(i) enhances existing *water^* quality where that is reasonably practicable, or otherwise maintains it, and~~

[1] Schedule AB is not a component of Part I - the Regional Policy Statement. It is a component of Part II - the Regional Plan.
[2] Schedule AA is not a component of Part I - the Regional Policy Statement. It is a component of Part II - the Regional Plan.
[3] Schedule C is not a component of Part I - the Regional Policy Statement. It is a component of Part II - the Regional Plan.

(ii) ~~has regard to the likely *effect*^ of the activity on the relevant Schedule AB Value that the *water*^ quality target is designed to safeguard.~~

(b) For the avoidance of doubt:

(i) in circumstances where the existing *water*^ quality of a *Water Management Sub-zone** does not meet all ~~any~~ of the *water*^ quality ~~targets~~ numerics for the *Sub-zone**, (a) applies to every *water*^ quality ~~target~~ numeric for the Sub-zone

(ii) in circumstances where the existing *water*^ quality of a *Water Management Sub-zone** does not meet some of the *water*^ quality targets for the *Sub-zone**, (a) applies only to those targets not met.

6.1.1.1 Discharges and Land use Activities Affecting Water Quality

Policy 6-7: Dairy Farming* l~~L~~*and*^ use activities affecting groundwater and surface *water*^ quality

The management of dairy farming* land use activities affecting surface water must give effect to the strategy for surface water quality set out in Policies 6-2, 6-3, 6-4 and 6-5, and the strategy for groundwater quality in Policy 6-6~~,~~ ~~and~~ by managing diffuse discharges of contaminants in the following manner:

(a) **Nutrients**

(i) Existing *dairy farming** *land*^ use activities must be regulated in specified *Water Management Sub-zones** to encourage adoption of reasonably practicable measures that reduce nutrient leaching from dairy farming systems ~~achieve nutrient management planning~~ by:

~~(A) Setting nitrogen leaching rates for each *LUC** class of land^ which must not be exceeded except as provided for in (B)~~

~~(B) Providing a three year step down approach to meet the nitrogen leaching rate for each *LUC** class of *land*^. In year one the annual average nitrogen leaching loss from the dairy farm must be based on the nutrient loss in the year 2011. In year two there must be either a 33% reduction in the difference between the loss limit set in year one and the *nitrogen leaching maximum** set out in Table 13.2 or a reduction of 2kg/N/ha whichever is the greater. In year three there must be a further 33% reduction from the loss limit set for year one and the *nitrogen leaching maximum** set out in Table 13.2 or a reduction of 2kg/N/ha whichever is the greater. With achievement of the nitrogen leaching rate for each *LUC** class of *land*^ by year four,~~

(A) Requiring property-scale nutrient management planning on all existing dairy farms.

(B) Providing for existing dairy farming* land^ use activities to continue to leach nitrogen at, but generally not above, the levels that existed prior to the notification of the One Plan except where reasonably practicable measures exist to achieve reductions in the rate of nitrogen leaching.

(C) Managing, in accordance with (B) above, by establishing a benchmark level of nitrogen leaching:

a. below which, existing dairy farms are deemed to be operating using reasonably practicable measures; and

b. above which, assessment must be carried out to determine the potential for adoption of additional reasonably practicable nitrogen leaching mitigation measures and, where such measures are identified, to require the adoption of such measures (if necessary, through staged introduction).

(D) Establishing the benchmark level of nitrogen leaching referred to in (C) above, by identifing a benchmark that is likely to target assessment, in accordance with (C) b. above, on the highest quartile of nitrogen leaching dairy farms.

(E) ~~the~~ Excluding~~sion of~~ dairy cattle from some surface *water bodies*^ and their *beds*^, and

(F) ~~the~~ R~~r~~equire~~ment~~ing ~~for~~ ~~provision of~~ dairy cattle crossings over some *rivers*^.

(ia) New *dairy farming** *land*^ use activities must be regulated throughout the Region so as not to exceed nitrogen leaching rates based on the *natural capital** of each *LUC** class of *land*^, and to achieve nutrient management planning, the exclusion of dairy cattle from some surface *water bodies*^ and their *beds*^ and the provision of dairy cattle crossings over some *rivers*^.

(ii) For the purposes of (a)(i), specified *Water Management Sub-zones** are those *Sub-zones** listed in Table 13.1 where, collectively, *dairy farming** *land*^ use activities are significant contributors to elevated nutrient levels in groundwater or surface *water*^.

~~(iii) Existing and new *dairy farming** *land*^ use activities shall manage nitrogen leaching rates in order to advance the achievement of the Schedule AB Values and the *water*^ quality numerics for the *Water Management Zone** in Schedule D no later that the first ten year anniversary of the relevant common catchment expiry date in Table 11A.1.~~

(b) **Faecal contamination**

(iii) Those persons carrying out existing *dairy farming** *land*^ use activities in the *Water Management Sub-zones** listed in Table 13.1 or new conversions to *dairy farming** anywhere in the Region must be required, amongst other things, to

(1) prevent dairy cattle access to some surface *water bodies*^ and their *beds*^

(2) mitigate faecal contamination of surface *water*^ from other entry points (eg., race run-off)

(3) establish programmes for implementing any required changes ~~to advance the achievement of the Schedule AB Values and the *water*^ quality numerics for the *Water Management Zone** in Schedule D no later than the first ten year anniversary of the relevant common catchment expiry date in Table 11A.1.~~

(c) **Sediment**

(i) In those *Water Management Sub-zones** where agricultural *land*^ use activities are the predominant cause of elevated sediment

levels in surface *water*^, the Regional Council will promote the preparation of voluntary management plans under the Council's Sustainable Land Use Initiative or Whanganui Catchment Strategy for the purpose of reducing the risk of *accelerated erosion**, as described in Chapter 5.

Policy 6-7A: Rural *land*^ use activities (other than dairy) affecting groundwater and surface *water*^ quality in Water Management *Sub-zones listed in Table 13.1**

Rural land^ use activities (other than dairy) affecting groundwater and surface *water*^ quality in the Water Management *Sub-zones** listed in Table 13.1 shall be managed in the following manner:

(a) The management of water quality within the Water Management *Sub-zones** listed in Table 13.1 must acknowledge that all rural *land*^ use activities (other than dairy) have the potential to affect water quality.

(b) Rural land use activities other than dairying that ~~make a~~ contribute significant ~~contribution to problem nutrient~~ levels of nutrients ~~in~~ to surface water bodies either on a per hectare or cumulative activity basis must be actively managed, including through regulation.

(c) The adequacy of the approach taken in the One Plan must be reviewed as further monitoring data is available and by no later than 30 June 2017, to enable assessment of progress towards ~~achieving~~ the water quality numerics in Schedule D, and where necessary regulatory control will be extended over all rural *land*^ use activities including through requiring compliance with relevant industry standards and codes where they exist and would provide an appropriate and effective means of securing enhanced management practices that would in turn be effective in securing enhanced water quality. ~~and through~~ A~~a~~men~~ding~~ment of the cumulative nitrogen leaching maximums by Land Use Capability contained in Table 13.2 will also be considered.

(d) As additional *land*^ use activities are regulated then the policy framework may include mechanisms to provide for nitrogen trading.

Policy 6-7B: Existing dairy farming* and other rural l*and*^ use activities in *Water Management Sub-zones not listed in Table 13.1**

To advance the achievement of the Schedule AB Values for all *Water Management Sub-Zones** not listed in Table 13.1 through the following:

(a) Focus on the following *Water Management Sub-Zones* as priority catchments for monitoring and assessment:

(i) Mowhanau (West_3)

(ii) Lake Horowhenua (Hoki_1a and Hoki_1b)

(iii) Other south-west catchments (Waitarere) (West_7)

(iv) Other coastal lakes (West_4 and West_5)

(v) Coastal Rangitikei (Rang_4)

(vi) Mangawhero/Makotuku (Whau_3b, Whau_3c and Whau_3d)

(b) Additional *Water Management Sub-Zones** must be added to Table 13.1 through a change to the One Plan when:

(i) water quality and land use monitoring within a *Water Management Sub-Zone** demonstrates water quality such that the Schedule D water quality numerics are not met and/or the relevant Schedule AB values are compromised ~~and these changes can reasonably be attributed to specified *land^* use activities~~; and

(ii) when all the *land^* use activities that are major contributors to water quality not meeting Schedule D water quality numerics in the Sub-zone will be effectively managed as a result of the Sub-zone being added to Table 13.1

Method 6-6A	Lake Horowhenua and Other Coastal Lakes
Description	The Regional Council and other agencies will work with all agencies to protect and enhance Lake Horowhenua and other coastal lakes. Landowners and other agencies will be provided with advice and project management assistance to carry out enhancement and protection measures including fencing, planting, sediment control, wastewater/stormwater management and fertiliser application management. The Regional Council will seek funding from third parties to assist with this method. The effectiveness of the protection and enhancement works in achieving improved water quality within Lake Horowhenua and other Coastal Lakes will be monitored. The method will include publicity to increase public awareness about the importance of the lakes. The method will include utilising industry codes of practice as a means of enhancing and protecting water quality e.g. the Code of Practice for Commercial Vegetable Growing in the Horizons Region.
Who	Regional Council, Territorial Authorities, Fish and Game, Department of Conservation, iwi, Horticulture NZ, landowners and other agencies.
Links to Policy	This method implements Policy 6-7B.
Target	The Lake is actively managed, including protection and enhancement measures, within 5 years of this Plan becoming operative.

Method 6-6B	Lake Quality Research, Monitoring and Reporting
Description	The aim of this method is to develop an integrated research, monitoring and reporting programme. The focus will be to define the current state of the quality of the Region's lakes particularly the Region's coastal lakes. The method will seek to assess the state and quality of the lakes to better understand the influences on water quality in those lakes. The outcomes will link into work to refine existing policies, objectives and methods in terms of the need to add rural land uses and water management sub-zones in managing nutrient management and effects on water quality. The outcomes will also guide implementation planning and allow implementation effectiveness is to be assessed.

Method 6-6B	Lake Quality Research, Monitoring and Reporting
Who	Regional Council, Department of Conservation, Fish and Game, Horticulture New Zealand, DairyLink, research institutes, universities, non-Government agencies, community groups and iwi authorities as required.
Links to Policy	This method implements Policies 6-3, 6-4, 6-5, 6-7, 6-7A and 6-7B.
Targets	A research, monitoring and reporting programme that defines the current state of water quality of the Region's lakes (particularly coastal lakes) and measure changes in water quality.

Glossary

New term to be added

Tier 1 N leaching mitigation measure means one of the following nitrogen leaching mitigation measures:

N fertiliser use:

- Application of N fertiliser according to FertResearch Fertiliser Code-of-Practice
- Avoidance of winter N applications
- Use of frequent low N rates (e.g. < 30 kg N/ha during slower growth and < 50 kg N/ha at other times)
- Reduction in N fertiliser use and replace lost production by low-protein brought-in feed

Farm Dairy Effluent:

- Use of land application rather than two-pond discharge systems
- Ensure application area is sufficient to achieve < 150 kg N/ha/year (and reduce fertiliser-N accordingly)
- Use of storage (sealed for leakage), deferred application and low rate application methods as required according to soil risk

Brought-in feed:

- Use oflow-protein feed sources rather than brought-in pasture silage
- Reduction in N fertiliser use and replace lost production by low-protein brought-in feed

Winter forage crops:

- Minimisation of use of forage crops (particularly winter forage crops)
- Minimal or nil cultivation for crop establishment
- Minimisation of N fertiliser use by soil N testing to define requirements

Soil management:

- Apply DCD according to industry specifications

Farm management options:

- Optimise per-cow efficiency (e.g. increase milksolids production per cow and decrease stocking rate; reduce replacement rate)
- Winter cows off-farm (preferably in low-N-sensitive catchment

Tier 2 N leaching mitigation measure means one of the following nitrogen leaching mitigation measures:

- Installing constructed or artificial wetlands
- Create riparian or buffer strips beside stream margins
- Cease use of N fertiliser
- Use stand-off pads or animal shelters (lined for effluent collection) during autumn/winter with effluent storage system and optimised land-application system for effluent use in low-risk periods
- Introducing ungrazed pasture or treed areas

N use efficiency means the ratio of annual N ~~leaching loss to annual milk solids production~~ outputs in product (i.e. milk) to annual N inputs (i.e. feed and fertiliser). The more output that can be achieved per unit of input, the more efficient the system is.