

27 April 2016



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Clean Water Consultation 2017  
Ministry for the Environment  
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**Email: [watercomments@submissions.mfe.govt.nz](mailto:watercomments@submissions.mfe.govt.nz)**

Dear Sir or Madam,

**Environment Canterbury submission: Clean Water Consultation 2017**

Thank you for the opportunity to provide comment on the Clean Water package 2017. Environment Canterbury's submission on the Clean Water package is attached.

Environment Canterbury supports Government's ongoing reform of freshwater management in New Zealand. We would be happy to engage further with the Ministry for the Environment and other relevant parties to address concerns identified in the submission, and to help develop practical solutions to the freshwater management issues that we face.

For all enquiries please contact:

Cecilia Ellis  
Senior Strategy Advisor – Policy



Yours sincerely

A handwritten signature in blue ink, appearing to read "David Bedford".

David Bedford  
**Chairman**

Encl: *Environment Canterbury Submission to the Ministry for the Environment on the Clean Water Consultation 2017*



## **SUBMISSION TO THE MINISTRY FOR THE ENVIRONMENT**

### **CLEAN WATER CONSULTATION 2017**

27 April 2017

1. Environment Canterbury appreciates the opportunity to comment on the latest programme of initiatives for freshwater management in New Zealand set out in the Clean Water consultation document.
2. This submission is presented in relation to Environment Canterbury's roles, functions and responsibilities under the Resource Management Act 1991 (RMA) and the Local Government Act 2002 (LGA).

#### **Summary**

3. In this consultation round, feedback has been sought on:
  - a. the proposed swimming targets.
  - b. the proposed amendments to the Freshwater National Policy Statement (NPS-FM).
  - c. the proposed stock exclusion regulation.
4. Environment Canterbury supports Government's ongoing reform of freshwater management in New Zealand and welcomes the latest announcement of initiatives.
5. In Canterbury, freshwater management is coordinated through the Canterbury Water Management Strategy (CWMS). We have established ten zone committees to reach consensus on water management issues within their zones. We also have a schedule of sub-regional planning processes under the Progressive Implementation Programme to implement the NPS-FM and its amendments. We are well underway with considerable momentum across all ten zones.
6. Environment Canterbury is satisfied that a number of NPS-FM amendments have provided clarity on areas previously perceived as being ambiguous in feedback during the 2016 consultation on Next Steps for Freshwater. This diminishes the risk of the NPS-FM being open to different interpretations and allows for consistency.
7. In this submission, we highlight areas where further clarity is needed to understand the implications for freshwater management in the Canterbury region. In highlighting these areas we have proposed some suggestions that could reduce the impact of unanticipated consequences.

## **Swimming targets**

8. We support this non-regulatory initiative to set swimming targets for rivers and lakes detailed in the preamble of the Clean Water consultation document. Through the CWMS and in line with the NPS-FM, processes are in place to identify rivers and lakes for water quality improvements, and set the pathways and timeframes for doing so. Canterbury should be able to meet swimming targets and timeframes, however we need further clarity on what it is regional councils are required to do and the expectation to improve, particularly by October 2017 and March 2018.
9. It is hoped that the joint Ministry for the Environment/Regional Council taskforce on swimming targets, on which Environment Canterbury is currently represented will provide the clarity needed. We therefore strongly support this taskforce and the opportunity to be involved.
10. The taskforce should also provide clarity on the data used to assess current 'swimmability' at a national scale and produce the maps so that regional councils can set targets and sites to measure. We understand that this is being addressed through the taskforce's remit to define swimming targets and provide access to the model used to set targets. This is key to be able to measure success on a regional and zone scale.

## **Proposed amendments to the National Policy Statement for Freshwater Management**

### **General**

11. The NPS-FM preamble includes clarification that it is up to communities and iwi, through councils, to determine the pathway and timeframe for ensuring freshwater management units meet the national bottom lines. We strongly support this statement as it aligns with the collaborative approach applied in Canterbury through the Canterbury Water Management Strategy and is fundamental to our council role. This principle is also consistent with our Land and Water Regional Plan and plan changes made under the provisions of the NPS-FM 2011.
12. We note that there are no transitional or savings provisions in the proposed NPS-FM. Our Land and Water Regional Plan and three sub-regional plan changes (which introduce water quantity and water quality limits) were prepared under the provisions of the NPS-FM 2011. Decisions on each of those plan changes have been notified and one has since been made operative. The other two are under appeal. Since the gazetting of the NPS-FM 2014 further sub-regional plan changes which establish water quantity and water quality limits have been prepared and the resulting decisions notified. In addition, Council has defined and notified a Progressive Implementation Programme in respect of updating its Land and Water Regional Plan so that it gives full effect to the NPS-FM 2014.
13. Our concern with the proposed amendments to the NPS-FM is that there is no recognition given to this very recently completed work. We propose that a provision be included to the effect that where a Council has prepared and publicly notified a plan or plan change prior to the date the NPS-FM 2017 comes into effect and that plan or plan

change gives effect to the NPS- FM 2014, there is no requirement to give effect to the NPS- FM 2017 in respect of that plan or plan change until either that plan or plan change is next reviewed or is modified.

14. We support removing the reference to secondary contact (wadeable) to make it clear that regional councils must improve the suitability of rivers and lakes for swimming.

### **E.coli monitoring methodologies**

15. Whilst a lot of the clarity needed on the swimming targets is being addressed by the taskforce group, we have concerns that the monitoring methodologies in Appendix 5 of the NPS-FM overlap with the 2003 MfE and Ministry of Health microbiological water quality guidelines for recreational water currently used for surveillance monitoring of swimming sites. We question why Appendix 5 needs to be in the NPS-FM when it relates to surveillance monitoring for public health that is covered by existing guidelines which we understand will not change under the new proposals. Long-term monitoring data gives a view on the long-term risk of swimming at sites rather than whether a site is safe to swim at a particular point of time. Therefore, we strongly recommend removing Appendix 5 and any references to it to avoid confusion between monitoring of long term water quality improvements and surveillance monitoring for public health.
16. The NPS-FM amendments now include the percentage of exceedances over 540 *E. coli* in the National Objective Framework Appendix 2 attribute table rather than number of *E.coli* per 100ml. Analysis carried out on Canterbury's State of the Environment sites indicated that, if assessed under the amended National Objective Framework, 73% of sites would be considered suitable for immersion compared to 51% of sites based on the NPS-FM 2014 attribute table. To provide assurance that this amendment is not decreasing standards we recommend including the other tests used to assess swimmable categories within the NPS-FM. These are the details provided in the table below from supporting documentation on the MfE website which has median, 95<sup>th</sup> percentile and percentage of samples above 260 *E.coli*. According to our analysis, including these categories would mean standards are a lot closer to the standards of 2014.

Table 1. The *E. coli* swimming categories (attribute states) in detail

| CATEGORY | PERCENTAGE OF EXCEEDANCES OVER 540: E. COLI PER 100 ML | MEDIAN: E. COLI PER 100 ML | 95 <sup>TH</sup> PERCENTILE: E. COLI PER 100 ML | PERCENTAGE OF SAMPLES ABOVE 260: E. COLI PER 100 ML |
|----------|--|----------------------------|---|---|
| Blue     | < 5 per cent   | ≤ 130                      | ≤ 540   | < 20 per cent                                       |
| Green    | 5-10 per cent  | ≤ 130                      | ≤ 1000  | 20-30 per cent                                      |
| Yellow   | 10-20 per cent   | ≤ 130                      | ≤ 1200  | 20-34 per cent                                      |
| Orange   | 20-30 per cent   | >130                       | >1200   | >34 per cent  |
| Red      | > 30 per cent  | >260                       | >1200   | >50 per cent  |

17. More specific technical issues to do with how methodologies are applied are detailed in Appendix 1. Environment Canterbury welcomes the opportunity to work with MfE to ensure methodologies are practical.

#### **Dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP)**

18. Environment Canterbury notes the inclusion of the management of dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP) when managing for periphyton concentrations. We have concerns that this approach is overly simplistic and has posed technical issues in the past. We would support this inclusion on the basis that research should be carried out to understand the relationship between DIN, DRP and periphyton so that improved tools can be made available. This would reduce uncertainties and increase confidence that appropriate tools are available and used.

#### **Monitoring plan requirements**

19. We note in the proposed amendments that the monitoring plan methods have been extended, including to cover measures of the health of indigenous flora and fauna. This is a broad category that could be open to a variety of interpretations and therefore have significant resource implications for monitoring. Furthermore, if Appendix 5 is not removed as we have suggested, and all sites used to inform the model are deemed to be 'swimming sites,' we would also be concerned about the significant impacts on monitoring resources.
20. There is currently no mechanism for charging consent holders, except for fair and reasonable costs through consent monitoring. We suggest it would be appropriate to introduce statutory funding mechanisms to allow regional councils and local authorities to resource additional monitoring activity.

#### **Cyanobacteria**

21. Benthic cyanobacteria in rivers is a key limitation for achieving swimmability in Canterbury rivers. We encourage Government to fund further research, so appropriate management can be applied.

#### **Te Mana o Te Wai**

22. We support further clarification of Te Mana o Te Wai within the NPS-FM, but ask whether 'consider and recognise' is aligned with the RMA which refers to 'recognise and provide for'. We would recommend that the terminology should be 'recognise and provide for' to be consistent with the RMA.

#### **Environmental protection and economic well-being**

23. We have noted that for overall quality of fresh water within a freshwater management unit (FMU), environmental protection is prioritised ahead of economic well-being (objective A2). However, in relation to water quantity, the criteria of ecosystem health and economic well-being are given equal weight (objective B1). Ideally, these should be phrased in the same way.

24. Regardless of the way they are phrased, whether prioritised or given equal weight, Environment Canterbury's instruments – the Regional Policy Statement and the Land and Water Regional Plan will give effect to the NPS-FM as well as to the Environment Canterbury Transitional Governance Arrangements Act (2016) which requires Environment Canterbury to have particular regard to the Vision and Principles of the CWMS (as noted in Schedule 3):
- Vision: To enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.
  - Primary Principles: Sustainable management; Regional approach; and Kaitiakitanga
  - Secondary Principles: Natural character; Indigenous biodiversity; Access; Quality drinking water; Recreational and amenity opportunities; and Community and commercial use.

Under the Primary Principle of the Regional Approach, the planning of natural water use is guided by the following:

- first order priority considerations: the environment, customary uses, community supplies and stock water:
- second order priority considerations: irrigation, renewable electricity generation, recreation, tourism and amenity.

### **Coastal Lakes and Lagoons**

25. We note that intermittently closing and opening lakes and lagoons (ICOLLs) have now been included within the National Objective Framework for freshwater lakes following feedback MfE received in the 2016 Next Steps for Freshwater consultation round. The current limits set for Te Waihora and Wainono<sup>1</sup> lagoon are below the national bottom line.
26. Reductions required in nutrient load to achieve a bottom line at Te Waihora will have significant implications for land use and associated negative social and on-farm consequences. The current limits were set through comprehensive consultation with community and iwi, which resulted in agreement on how to achieve cultural, environmental and economic outcomes up to 2035 and beyond. A formal public hearings process to establish CWMS standards and priorities as a sub-regional chapter within the Canterbury Land and Water Regional Plan was also held.
27. For ICOLLs where it will be difficult to meet national bottom lines, the NPS-FM allows communities to set water quality objectives below a national bottom line temporarily, provided the water body is listed in Appendix 4 of the NPS-FM. This is not an approach

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<sup>1</sup> Wairewa, Canterbury's other ICOLL will be able to meet national bottom line based on the current programme of work.

that is supported more widely by community and iwi as it is perceived negatively as an 'opt out' and does not reflect the long term commitment made.

28. We therefore seek an alternative approach to Appendix 4 that does not undermine the commitment made by community to date or create uncertainty, whilst recognising that attributes of ICOLLS are similar but not identical to freshwater lakes. A proportionate way forward could be to set a pathway to reach the national bottom line over time, recognising the work to date whilst managing for specific ICOLLS attributes.
29. This links to our proposal in bullet point 13 that a provision be included to the effect that where a Council has prepared and publicly notified a plan or plan change prior to the date the NPS-FM 2017 comes into effect and that plan or plan change gives effect to the NPS- FM 2014, there is no requirement to give effect to the NPS- FM 2017 in respect of that plan or plan change until either that plan or plan change is next reviewed or is modified.

### **Excluding stock from waterways**

30. Provisions on Livestock Exclusion from Water Bodies are already in place in Canterbury in the Land and Water Regional Plan and our community has been addressing this. The provisions in the Land and Water Regional Plan seek to achieve the same outcome of the proposed stock exclusion requirements but not by the same method.
31. In Canterbury, after a thorough and open planning process it was found impractical to apply slope gradients universally across the region so a more practical solution was applied focusing on sensitive waterbody areas and type of stock attracted to water. Given the rules contained in our operative Land and Water Regional Plan seek to achieve the same outcome we would expect some provision for flexibility is provided to recognise existing provisions a regional council may have in place that work on a local scale.
32. The reported back Resource Legislation Bill has amended provisions for flexibility which allow councils to establish appropriate measures for the circumstances and the kinds of stock being farmed in particular locations. We would expect similar flexibility be applied to any regulation draft to ensure provisions allow for flexibility to be applied at local scale.
33. From our experience in Canterbury we strongly recommend MfE explore the practicalities of applying proposed requirements. We would welcome the opportunity to work with MfE to find practical solutions. Our provisions as set out in our Land and Water Regional Plan are summarised in Appendix 2.

### **Final comment/Recognition of others' views**

34. We note concerns of other parties, including Te Rūnanga o Ngai Tahu and CDHB that groundwater related attributes are not considered in the NPS-FM in the context of the holistic view that incorporates the sustainable management of freshwater and the importance of groundwater quality and quantity as a source for drinking water supplies.

35. The CWMS vision reflects benefits from our water resources within an environmentally sustainable framework and as detailed in point 24, community supplies are a first order priority consideration. We suggest concerns on management of groundwater quality and quantity are addressed in a future NES.

For further enquiries please contact:

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## APPENDIX 1 – TECHNICAL ISSUES

| <b>Where in document</b>                            | <b>Difficulty</b>   | <b>Suggestion for amendment/clarification</b>  |
|---|---|--|
| Phytoplankton, TN, TP attribute tables (p31-33 NPS) | Canterbury ICOLLS normally stay open for only short periods of time (1-2 weeks) so 12 samples for an open regime will frequently take a long time (greater than 10 years) to be collected.  | Clarification on how open and closed attribute states are treated.   |
| Phytoplankton, TN, TP attribute tables (p31-33 NPS) | The wording of the note at bottom is about open and closed state. How is the attribute state and national bottom line to be used? Is it in the open or closed state?  | Clarification on how open and closed attribute states are treated.   |
| <i>E. coli</i> attribute table (p39 NPS)            | Use of term "regular". Is this regular through the whole period of sampling? If so then Contact Recreation data cannot be used as they are regular (weekly) over the summer but then none or monthly (if doubled up with State of the Environment (SOE) sites). Also a problem where sampling has switched from quarterly to monthly.   | Clarification on what regular means and whether contact recreation sites are suitable for inclusion in analysis  |
| <i>E. coli</i> attribute table (p39 NPS)            | Requirement for a minimum of 100 samples but within 10 years. Where there has been, or is, quarterly sampling the data cannot be used. Of ECan's current 104 SOE sites only 17 meet this criteria.  | Amend wording to set a time limit; suggest: 3 years with a minimum of 10 samples per year.   |
| <i>E. coli</i> attribute table (p39 NPS)            | If table 1 is used, we assume that the worst outcome for the four metrics (lowest category) counts as the final attribute state or is there some other way?   | Clarification on how table 1 is to be used.  |
| <i>E. coli</i> attribute table (p39 NPS)            | If the desire is to keep the same standards of suitable/non-suitable for immersion as the 2014 NPS-FM, Table 1 could be simplified to one column (95 <sup>th</sup> percentile) with the bottom of C (Yellow) being 540 <i>E. coli</i> per 100 ml.   | A review panel of suitably experienced scientists is used to find the best measure out of table for a simplified measure of "suitability". Environment Canterbury welcomes the opportunity to be involved in that panel. |
| Policy A5 (p14 NPS)                                 | "Suitable for immersion" is defined as large rivers and lakes in Attribute A, B or C of <i>E. coli</i> attribute table. It is unclear on what basis A, B & C are suitable and D & E are unsuitable for immersion. D & E may not be acceptable as states of the river but by definition they are suitable for immersion 80% and 70% of the time. The use of the term "suitable for immersion" based on short term (i.e. 540 <i>E. coli</i> on a day) as well as long term (percentage of time below 540) is confusing. | Reword "suitable for immersion" to include a risk terminology. Perhaps "Too high a risk for immersion".  |

|                                      |  |   |
|--------------------------------------|--|---|
| Policy CB1 (p21 NPS)                 | Welcome the extension of monitoring to include health of indigenous flora and fauna, and Mātauranga Maori; however we have concerns over robust methodology for this.  | Require clarification on the methods intended for measures of the health of indigenous flora and fauna, and Mātauranga Maori  |
| Objective A3                         | States “the quality of freshwater in large rivers and lakes is improved...” which implies all can be improved. What if already in the very top state?  | Rewording to allow for maintain if in an already top (blue) state.  |
| Periphyton attribute table (p34 NPS) | The note at the bottom of table refers to setting maximum concentrations of DIN and DRP. The tools available for assessing periphyton are based on average not maximum concentrations.   | Amend to say median or average concentrations.  |
| Interpretation (p10 NPS)             | The definition of “large lakes and rivers” describes “fourth order or above”. There are different stream ordering systems (e.g. Strahler; Shreve) and different versions of the River Environment Classification (REC) have different stream orders. Plus REC does not work well in groundwater fed systems.   | Definition of how fourth order is to be calculated and an ability for agencies to use systems other than REC  |
| Interpretation (p10 NPS)             | The definition of “large lakes and rivers” describes “lakes larger than 1.5 kilometres in perimeter <u>on average</u> ”. What does the “on average” refer to? Is it a time based average or something else?  | Clarification on what “on average” refers to.   |
| Appendix 5 (p43 NPS)                 | <p>If Appendix 5 is included in its current state there are several difficulties with the monitoring requirements;</p> <ul style="list-style-type: none"> <li>a) It is not clear whether this applies to named Contact Recreation sites or all monitored sites (e.g. State of the Environment (SOE)). We have many SOE sites where the requirement for moving to daily sampling is prohibitively expensive and no one does contact recreation there.</li> <li>b) The term “notify the public” is loose.</li> <li>c) The current 2003 guidelines require informing the Medical Officer of Health after the second reading is above 540 <i>E. coli</i> per 100 ml, not the first (i.e. there is a persistent rather than transient problem). The current wording will result in constant notification and taking off of notices; being very confusing for the public.</li> </ul> | <p>Our overall submission is to remove the appendix to avoid confusion with 2003 Contact recreation guidelines) but if Appendix 5 is to remain:</p> <ul style="list-style-type: none"> <li>a) Change wording to apply to named contact recreation sites only.</li> <li>b) Clarification on whether notifying via a website is enough or signage needs installing at sites.</li> <li>c) Align NPS-FM with 2003 guidelines and make notifiable after second reading above 540 <i>E. coli</i> per 100 ml.</li> </ul> |

## Appendix 2

### ***Livestock Exclusion from Water Bodies – Policies***

- 4.31 Damage to the bed or banks of water bodies, sedimentation and disturbance of the waterbody, direct discharge of contaminants, and degradation of aquatic ecosystems and inanga and salmon spawning habitat is avoided by:
- (a) excluding intensively farmed stock from lakes, rivers and wetlands; and
  - (b) excluding stock from within freshwater bathing sites listed in Schedule 6, salmon spawning sites listed in Schedule 17, Community Drinking-water Protection Zones as set out in Schedule 1, other sensitive waterbody areas; and the waterbody bed and banks closely adjacent to and upstream of these areas; and
  - (ba) excluding stock from inanga spawning habitat; and
  - (c) limiting access to wetlands, and the banks or beds of lakes and rivers to stock species that prefer to avoid water and at stocking rates that avoid evident damage.
- 4.32 Adverse effects arising from stock access occurring under Policy 4.31(c) on water clarity and colour, bank stability, or riparian vegetation cover are minimised through the design and construction of stock crossing points and the management of stock grazing and stock movements across water bodies.

### **Stock Exclusion – Rules**

- 5.68A For the purposes of Rules 5.68 to 5.71 of this Plan, the bed (including the banks) of a braided river is limited to the wetted channels, any gravel islands, the gravel margins, and the outer edge of any flood protection vegetation or where no flood protection vegetation exists, the lesser of:**
- 1. The distance from the outer gravel margin to land that was cultivated or was in crop or pasture prior to 5 September 2015; or
  - 2. 10m landward of the outer gravel margin as measured at any time, except that if a stopbank exists then the stopbank does not form part of the bed.
- 5.68B Rules 5.68 to 5.71 of this Plan do not apply to the bed (including the banks) of any artificial lake unless:**
- 1. The artificial lake has been created as a result of the damming of a river; or
  - 2. The artificial lake discharges directly into a river, lake or wetland.
- 5.68 The use and disturbance of the bed (including the banks) of a lake, river or a wetland by stock and any associated discharge to water is a permitted activity, provided the following conditions are met:**
- 1. The use or disturbance of the bed (including the banks) of a lake, river or wetland and any associated discharge to water is not categorised as a non-complying activity under Rule 5.70 or a prohibited activity under Rule 5.71; and
  - 2. The use or disturbance of the bed (including the banks) of a lake or river and any associated discharge to water is at a stock crossing point that is:
    - (a) not more than 20 m wide; and
    - (b) perpendicular to the direction of water flow, except where this is impracticable owing to the natural contours of the riverbed or adjoining land; and
    - (c) aligns with a constructed track or raceway on either side of the crossing point; or
  - 3. The use or disturbance of the bed (including the banks) of a lake or river and any associated discharge to water that is not at a permanent stock crossing point does not result in:

- (a) pugging or de-vegetation that exposes bare earth in the bed (including the banks) of a lake or river; or
  - (b) a conspicuous change in colour or clarity of the water, outside the Mixing Zone; or
  - (c) cattle standing in any:
    - (i) lake located outside of the Hill and High Country Area, other than any farm pond specifically constructed to provide stock water and that has no outlet to a lake, river, artificial watercourse or wetland;
    - (ii) lake located within a Lake Zone, as shown on the Planning Maps; and
    - (iii) lake classified as a High Naturalness Waterbody; and
4. The disturbance of a wetland does not result in a conspicuous change in colour or clarity of water, or pugging or de-vegetation that exposes bare earth.

**5.69 The use and disturbance of the bed (including the banks) of a lake, river or a wetland by stock and any associated discharge to water that does not meet one or more of the conditions of Rule 5.68, excluding condition 1, and is not listed as a non-complying activity under Rule 5.70 or a prohibited activity under Rule 5.71 is a discretionary activity.**

**5.70 Unless categorised as a prohibited activity under Rule 5.71, the use and disturbance of the bed (including the banks) of a lake, a river that is greater than 1 m wide or 100 millimetres deep (under median flow conditions), or a wetland, by intensively farmed stock and any associated discharge to water is a non-complying activity.**

**5.71 The use and disturbance of the bed (including the banks) of a lake or river by any farmed cattle, farmed deer or farmed pigs and any associated discharge to water is a prohibited activity in the following areas:**

- 1. In a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat; or
- 2. Within a Community Drinking-water Protection Zone as set out in Schedule 1; or
- 3. Within 1,000 m upstream, in the bed of a lake river, of a fresh water bathing site listed in Schedule 6; or
- 4. In the bed (including the banks) of a spring-fed plains river, as shown on the Planning Maps.

