

# Submission to the Ministry for the Environment

## Re: Clean Water

---

28 APRIL 2017

### Introduction

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. We have approximately 19,500 Members, including engineering students, practising engineers and senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest, giving an informed view on important issues, independent of any commercial interest.

IPENZ is a member of the Land and Water Forum.

### General Comments

Water is a precious resource that supports life, enables industry and economic growth, provides opportunities for recreation, is culturally important and enhances well-being. Our environment and waterways are an integral part of our identity as New Zealanders and form part of our image as a nation. The maintenance and improvement of water quality needs to be a priority if we are to return to the situation where New Zealanders can safely swim and play in our water bodies, and freshwater ecosystems flourish. Improving the quality of our freshwater resources and environment is also important to ensure the image we portray to tourists and trade partners is accurate.

Many IPENZ Members are passionate about our environment and have expressed an interest in this consultation. All IPENZ Members are expected to practice in accordance with the [IPENZ Code of Ethical Conduct](#), which includes, amongst other things, the obligation to “have regard to reasonably foreseeable effects on the environment from those activities; and have regard to the need for sustainable management of the environment”.

IPENZ set out its thinking in relation to water in *Water: New Zealand’s Valuable Natural Resource*. While this document was produced in 2008, many of the messages in it are still relevant today, including the fact that:

- The current first-in, first-served approach to water allocation does not adequately ensure our natural water resources are used for their highest and best use, or in the public interest
- There are opportunities to increase demand management and use our water more efficiently
- There is a need to change people’s attitudes to water so they appreciate that New Zealand’s water resource is not unlimited or a right

- There is a need to use economic instruments and prices to place a value on water to encourage behaviour change and reduce water wastage.

We encourage the Ministry to be a bold leader on behalf of our environment to ensure current and future generations of New Zealanders have the quality and quantity of freshwater available to them that they expect and that previous generations have enjoyed.

The remainder of this submission sets out our specific comments on the proposals.

## Specific Comments on the Proposals

### Proposal: 90% of rivers and lakes swimmable by 2040

We support the intent of ensuring more of New Zealand’s rivers and lakes are swimmable. We commend the targets of 80 percent and 90 percent of rivers and lakes being swimmable by 2030 and 2040 respectively.

However, we have a number of concerns about this proposal including:

- Uncertainty as to whether the proposed swimmable requirements are more stringent than the wadeable requirements they are replacing. The proposed attribute states are reproduced from Appendix 2 below.

Attribute State	Wadeable requirement	Swimmable requirement
A	Less than 260 E. coli/100 mL	Exceeds 540 E. coli/100mL less than 5 percent of the time
B	260-540 E. coli/100 mL	Exceeds 540 E. coli/100mL 5-10 percent of the time
C	540-1000 E. coli/100 mL	Exceeds 540 E. coli/100mL 10-20 percent of the time
D	More than 1000 E. coli/100 mL	Exceeds 540 E. coli/100mL 20-30 percent of the time
E		Exceeds 540 E. coli/100mL more than 30 percent of the time

We understand that swimmable waterways will be those in attribute states A, B and C so the lowest quality “swimmable” waterway would be one which has more than 540 E. coli/100mL 10-20 percent of the time. The comparator for wadeable waterways is one which contains 540-1000 E. coli/100mL. Thus there is potential for the swimmable waterway to actually be no higher in quality than a wadeable waterway. We question whether this is the intent of the policy proposal. Further, we encourage the Ministry to ensure policy decisions are based on robust science and data, are set out clearly and enable stakeholders to clearly understand the policy objective and whether the policy proposal will achieve that objective.

We also have concerns at the use of a “percentage of time” as a measure. It is not clear what time period the measure is for – is it for the whole year or limited to a bathing season, as the European directive is. We recommend further clarification be provided to ensure effectiveness of the rating system.

- The limited scope of the proposal given it only applies to “large lakes and rivers”. We note the proposal will only apply to “large lakes and rivers”, defined as “rivers that are fourth order or above and lakes with perimeters of at least 1,500 metres”. We are aware of Forest and Bird’s analysis which shows up to 90 percent of New Zealand’s rivers and streams won’t be covered by the proposal and will not need to meet any level of safety for human health<sup>1</sup>. This is unacceptable and places New Zealanders in a vulnerable state where they have no information about the health risk of swimming in a large number of New Zealand waterways. We recommend the proposal be extended to ensure waterways where significant numbers of people are known to swim are included.

<sup>1</sup> Forest and Bird (2017). *Maps show most NZ rivers are excluded from swimming standard*. Available at <http://www.forestandbird.org.nz/what-we-do/publications/media-release/maps-show-most-nz-rivers-are-excluded-swimming-standard>

- Uncertainty as to whether “swimmable” waterways will actually be swimmable. Page 10 of the consultation document notes that rivers need to be “deep enough to swim in” but does not provide any further clarification or advice such as a minimum depth or when it must be deep enough. Further, the table on page 11 notes “safe to swim” is based on water quality information alone and does not consider factors such as access or flow rates. We suggest further clarification be provided to ensure “swimmable” rivers and lakes can actually be accessed and swum in.
- Potential for long time periods between samples, during which waterways could pose health risks to swimmers. According to a note on page 39 (Appendix 2), the attribute state of rivers and lakes is to be determined using at least 100 samples collected over a period of up to 10 years. Thus, there could potentially be a long period of time between tests, during which the swimmability of the waterways is unknown. We note the EU equivalent requires tests that are not more than a month apart<sup>2</sup>. We recommend a similar maximum period be set.
- We note the consultation document refers to the proposed “swimmable” standards as being comparable to European standards. Our understanding is the EU directive limits E. coli levels to 250 - 1,000 cfu/100 ml, depending on the type of waterway and whether it is classed as sufficient, good or excellent quality. These ratings are based on sampling during a bathing season, with a minimum of four tests per bathing season, with no more than a month between tests<sup>3</sup>. Given the differences in monitoring, we believe it is misleading to state the proposed New Zealand “swimmable” requirements are similar to those of the European Union.
- The potential for a lack of will or funding to undermine efforts to improve water quality. The *Section 32 Evaluation Report* (page 19) notes “Regional councils will retain discretion over where, when, and by how much they improve water quality – as long as planning is explicit and aims to improve how often rivers and lakes are suitable for swimming. While reducing the frequency and magnitude of E. coli exceedances will have some negative impacts (eg, cost of fencing, constrained land use, sewerage upgrades), regional councils and communities are able to mitigate these by prioritising waterbodies for improvement, lowering expectations of improvement, or working to longer timeframes”. This suggests that to achieve the overall goal of improving water quality across the country, it will be acceptable for some lakes and rivers to become further degraded. Given the current state of our waterways and the need to improve water quality, it is concerning that lowered improvement expectations are considered an acceptable outcome. We believe such an outcome is unacceptable.

## Proposal: Better information on water quality for swimming

We appreciate the importance of good information in making decisions as to where to swim. We applaud efforts to improve the quality and availability of information. However, we believe it is important to ensure as much information on as many waterways as possible is available. If, as Forest and Bird suggest, up to 90 percent of New Zealand’s rivers and streams will not be covered by these proposals then a significant information gap will continue to exist.

## Proposal: Amending the National Policy Statement for Freshwater Management 2014

### Swimming and recreational values

Please refer to our comments above.

---

<sup>2</sup> European Commission (2006). *DIRECTIVE 2006/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC*. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006L0007&from=EN>

<sup>3</sup> European Commission (2006). *DIRECTIVE 2006/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC*. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006L0007&from=EN>

## **Monitoring macroinvertebrates**

We have no specific comment to make regarding monitoring macroinvertebrates, except to note support for thorough monitoring of freshwater quality.

## **Maintain or improve overall water quality**

We note the amendment such that freshwater is to be maintained or improved within a freshwater management unit, rather than over a region. We believe this amendment is sensible and will enable regional councils to better manage their waterways.

We also note the proposed clarification in relation to how regional councils can demonstrate maintenance of water quality. We believe these criteria are appropriate.

## **Economic well-being**

We appreciate the importance of regional councils providing clarity and information to their communities. However, we are unclear as to why this amendment is needed - we would expect that regional councils consider their community's economic well-being as a matter of course.

Further, we believe economic well-being needs to be a secondary concern and taken at an aggregate level across a region. In our view it should not be used as rationale for not taking actions to improve water quality.

## **The effect of national bottom lines on infrastructure**

We note the use of the term "infrastructure" in Policy CA3. We believe this wording is too broad and should be amended such that the Policy only applies to lifeline infrastructure, as defined by Schedule 1 in the Civil Defence and Emergency Management Act 2002.

## **Proposal: Funding to improve freshwater**

We support initiatives to improve freshwater and commend the Government's investment in the Freshwater Improvement Fund. We note the Fund is available for the next 10 years and encourage the Government to consider extending the Fund a number of projects will be needed to improve water quality and achieve the swimmability targets.

We support the criteria for the Fund as set out on page 23 of the consultation document.

## **Proposal: Keeping stock out of waterways**

We support initiatives to keep stock out of waterways. We note different timeframes are proposed for excluding dairy cattle, pigs, dairy support, beef cattle and deer on various types of land. We question the timeframes set, especially those set for 2022 or later. These timeframes seem late given the freshwater targets are to be achieved by 2030 and 2040. We encourage the Ministry to seek more urgent action to ensure stock are excluded from waterways to protect the waterways and their surroundings.

# **Conclusion**

We appreciate the opportunity to make this submission and are able to provide further clarification if required. For more information, contact:

Susan Freeman-Greene

Chief Executive, IPENZ

Email: [susan.freeman-greene@ipenz.org.nz](mailto:susan.freeman-greene@ipenz.org.nz)

Phone: 04 474 8935

PO Box 12241, Wellington 6144