

Kia Ora,

Thank you for this opportunity to write a submission about why it is so important we maintain clean rivers are for our health, happiness and our environment and economy.

My name is Bronwyn Drysdale

My address is [withheld]. I would like my personal contact details left off the submission.

Recently I went to the beautiful clean un dammed Mohaka river to enjoy a simple holiday at a DOC campground with my daughter a good friend and her son. It was a starkly different river to the Otaki and Waikanae river swimming holes that I went to last summer on a visit up to the Kapiti coast. it really drew my attention to why we need to have really strict guidelines to protect our rivers.

We need national indicators ("attributes") for human health and these should measure:

-Water clarity monitoring

-**Periphyton cover** which is a measure of how much algae, bacteria and detritus is covering the river bed.

I really noticed lack of clarity and the algae in the lower Waikanae and the Otaki rivers both of which have unrestricted farm animal pollution and likely pollution from nearby industrial sites.

The indicators ("attributes") for ecosystem health should include:

-The Macro-invertebrate Community Index which is a well-used and understood measure of river and stream health.

This is needed to monitor changes in the number and diversity of aquatic insects such as mayflies and caddisflies

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-A limit on nitrogen and phosphorus as nutrients.

-The proposed bottom line for nitrate is the level where it is toxic to fish and other aquatic life. This will not prevent nuisance algal blooms

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-A limit on deposited sediment. Soil belongs on the land not in rivers. Sediment smothers spawning areas and habitats.

A measure for dissolved oxygen across a river, not just in relation to point source discharges. Dissolved oxygen is critical for life and can vary hugely between day and night.

-Measures for estuaries. Estuaries are vital as fish nurseries and pathways and have important recreational and cultural values.

Try to find clean watercress now in the urban streams of Wellington. Impossible because of how we allow pollutants into our waterways via these small streams into the harbour or sea.

Thanks for this look forward to addressing these things in your new legislation, for the good of future generations.

