

Further Submission on Lake Rotorua Nutrient Management - Proposed Plan Change 10

Clause 8 of Schedule 1, Resource Management Act 1991

Please send your submission to be received by **4:00 pm, Monday, 1 August 2016.**

Further Submission Number
Office use only
FS 05

TO: The Chief Executive
Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

FAX: 0800 884 882
EMAIL: rules@boprc.govt.nz

Name: Astrid Coker

[Full name of the person or organisation making the submission]:

This is a further submission in support of or opposition to a submission on Lake Rotorua Nutrient Management - Proposed Plan Change 10 to the Bay of Plenty Regional Water and Land Plan.

The submission is in addition to that sent on 24th April 2016 (Submitter No 12)

1. I **do not** wish to be heard in support of my further submission.
3. I am: [Please tick one]

~~A person representing a relevant aspect of the public interest. (Specify on what grounds you come within this category).~~

A person who has an interest in the proposal that is greater than the interest the general public has. (Specify on what grounds you come within this category).

On the following grounds:

We have a dry stock farm in Tarukenga and are in the catchment which will be directly impacted by the proposed rules in PC10

Signature *[of person making submission or person authorised to sign on behalf of person or organisation making submission. A signature is not required if you make your submission by electronic means].*

Date: 31 July 2016

Address for Service

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Contact person *[Name and designation if applicable]:*

Astrid Coker

Note: A copy of your submission must be served on the original submitter within 5 working days after making this further submission.

A Coker Page 1 of 4

FURTHER SUBMISSION POINTS:

FS 05

<p>Submission number [Submission number of original submission as shown in the "Summary of Decisions Requested" report]</p>	<p>Submitter name [Please state the name and address of the person or organisation making the original submission as shown in the "Summary of Decisions Requested" report]</p>	<p>Section reference (Submission point) [Clearly indicate which parts of the original submission you support or oppose, together with any relevant provisions of the proposed plan change]</p>	<p>Support/oppose</p>	<p>Reasons [State in summary the nature of your submission giving clear reasons]</p>
<p>37-7</p>	<p>Ngati Whakaue Tribal Lands Incorporation</p> <p>Postal Address not included in "Summary of Decisions Requested"</p>	<p><i>Overarching comments LRP4</i></p> <p>Support the original submission that PC10 is focussed almost exclusively on N. Nutrient reduction pathways for both N and P must be addressed</p>	<p>Support</p>	<p>I support the view that on farm nutrient reductions of both nitrogen (N) and phosphorus (P) must be addressed in PC10</p> <p>Recent science published by Smith et. al* (2016) indicates that control of both N&P within the catchment is necessary to improve water quality and reduce algal blooms caused by cyanobacteria in Lake Rotorua.</p> <p><i>Control of only nitrogen will lead to worsening water quality in the long term.</i></p> <p>However I oppose the obligatory use of Overseer in farm plans for P mitigations on farm for this purpose.</p> <p>The current version of Overseer does not take into account the degree of attenuation likely around the root zone or acknowledge the limited range of P fertiliser types available. Consequently recommendations based on Overseer may be misleading</p> <p>Best management practises for P mitigation involve controlling storm water runoff, preventing erosion, preventing sediment discharge and using sustainable P fertilisers on farm .</p> <p><i>*Smith, V.H., Wood, S.A., McBride, C.G., Atalah, J., Hamilton, D.P., Abell, J. 2016. Phosphorus and Nitrogen loading restraints are essential for successful eutrophication control of Lake Rotorua, New Zealand. Inland Waters 6 : 273-283</i></p>

<p>66-3</p>	<p>Lake Rotorua Primary Producers Collective</p> <p>136 Stewart Road, RD6, Rotorua 3096</p>	<p><i>Overarching comments</i> LRM2(iii): an assessment of the efficacy and risks of alum dosing</p> <p>Oppose the approach taken for assessing the risk of alum dosing.</p>	<p>Oppose</p> <p>The collective appears to be trying to obtain the approval of the public by in effect endorsing the safety of alum dosing in Lake Rotorua. The reason being that there is no current science either in NZ or internationally that shows any ill effects from continued dosing. Because of the lack of evidence this should not be taken to mean that the practise is safe, only that there is a lack of research on the long term effects of alum.</p> <p>A time frame for continuation of alum dosing is not given, just a wait and see approach until there are negative environmental consequences.</p> <p>Presumably the strategy will then change from P/N mitigation to cleaning up, in the worse case scenario, the toxic effects of years of alum/aluminium dosing.</p> <p>What legacy are we leaving for future generations?</p>	<p>A number of submitters (including 63-1) to PC10 have indicated their desire to use the lake for recreational purposes eg swimming, fishing (presumably eating the caught trout), and aesthetics. Members of the community would also include children.</p> <p><i>PC 10 Policy WL 3B</i></p> <p><i>contaminants to be managed to avoid compromising public health and each catchment's ecology, mauri. fishability, swimmability. and aesthetics.</i></p> <p>To date at least 496 tonnes of aluminium in the form of alum has been released at the inflow of two tributaries to bind P entering Lake Rotorua. Smith et al* (2016) suggest that alum dosing be continued for another 10 -20 years during which time other N and P mitigation practises within the catchment would have an effect .</p> <p>The eco toxic effect of aluminium to fish under some conditions has been described overseas. However the long term effects of alum on the Lake Rotorua environment and aquatic organisms is unknown.</p> <p>While aluminium is not considered toxic to humans , it is an established neurotoxin and has been implicated in human neurodegenerative diseases such as Alzheimers.</p> <p>I encourage a thorough assessment of the health and safety risk of aluminium arising from alum practises for the public who will be using the lake for recreational purposes and for owners of shoreline properties.</p> <p><i>*Smith, V.H., Wood, S.A., McBride, C.G., Atalah, J., Hamilton, D.P., Abell, J. 2016. Phosphorus and Nitrogen loading restraints are essential for successful eutrophication control of Lake Rotorua, New Zealand. Inland Waters 6 : 273-283</i></p>
<p>63-1</p>	<p>Bruce Thomasen</p> <p>P.O.Box2353 Rotorua 3040</p>	<p><i>Overarching comments</i> <i>Policy WL 3B (a)</i></p> <p>Support the standard for "swimmable" water quality</p>	<p>Oppose</p> <p>The collective appears to be trying to obtain the approval of the public by in effect endorsing the safety of alum dosing in Lake Rotorua. The reason being that there is no current science either in NZ or internationally that shows any ill effects from continued dosing. Because of the lack of evidence this should not be taken to mean that the practise is safe, only that there is a lack of research on the long term effects of alum.</p> <p>A time frame for continuation of alum dosing is not given, just a wait and see approach until there are negative environmental consequences.</p> <p>Presumably the strategy will then change from P/N mitigation to cleaning up, in the worse case scenario, the toxic effects of years of alum/aluminium dosing.</p> <p>What legacy are we leaving for future generations?</p>	<p>A number of submitters (including 63-1) to PC10 have indicated their desire to use the lake for recreational purposes eg swimming, fishing (presumably eating the caught trout), and aesthetics. Members of the community would also include children.</p> <p><i>PC 10 Policy WL 3B</i></p> <p><i>contaminants to be managed to avoid compromising public health and each catchment's ecology, mauri. fishability, swimmability. and aesthetics.</i></p> <p>To date at least 496 tonnes of aluminium in the form of alum has been released at the inflow of two tributaries to bind P entering Lake Rotorua. Smith et al* (2016) suggest that alum dosing be continued for another 10 -20 years during which time other N and P mitigation practises within the catchment would have an effect .</p> <p>The eco toxic effect of aluminium to fish under some conditions has been described overseas. However the long term effects of alum on the Lake Rotorua environment and aquatic organisms is unknown.</p> <p>While aluminium is not considered toxic to humans , it is an established neurotoxin and has been implicated in human neurodegenerative diseases such as Alzheimers.</p> <p>I encourage a thorough assessment of the health and safety risk of aluminium arising from alum practises for the public who will be using the lake for recreational purposes and for owners of shoreline properties.</p> <p><i>*Smith, V.H., Wood, S.A., McBride, C.G., Atalah, J., Hamilton, D.P., Abell, J. 2016. Phosphorus and Nitrogen loading restraints are essential for successful eutrophication control of Lake Rotorua, New Zealand. Inland Waters 6 : 273-283</i></p>

<p>53-6</p>	<p>Lachlan McKenzie 289A Kapukapu Road, RD6 Rotorua</p>	<p>Phosphorus management LR M2(iii) Oppose the focus on land-based phosphorus loss mitigation only.</p>	<p>Support in part the decision sought. Need to consider land based soil particulate phosphorus contribution to the internal sediment as well as contribution from organic matter (N and P), to the internal Lake bed sediment.</p>	<p>With climate change causing heavier rain falls accompanied by more storm water runoff from the catchment, as well as hotter and calmer days in summer, the likelihood of stratification events within the lake rises along with oxygen depletion zones and nuisance algal blooms. The internal cycling and deposits of N and P are fuelling the algal blooms and perpetuation of organic matter within the lake bed The sediment in the Lake bed is making a major contribution towards enabling the successful establishment, survival and ongoing lifecycle of harmful cyanobacteria. I support a thorough and transparent evaluation of alternative methodologies and options to find the most cost effective solution for handling the sediment and internal load of N and P.</p>
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