

## BRIEFING NOTE

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**To:** Kaituna and Pongakawa-Waitahanui Freshwater Futures Community Groups

**From:** Nicki Green, Senior Planner, Water Policy **Date:** 13 March 2019

**Subject:** **Workshop 9: Surface Water Quality – potential policy options  
26 March 2019, The Orchard, Te Puke**

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### 1 Introduction

#### 1.1 Purpose

The Community Groups provides active feedback and advice to Council as we continue to work towards implementing the National Policy Statement for Freshwater Management (NPSFM). At this workshop we will:

- 1. Present information on the estimated contaminant load reductions required in the catchments feeding into Maketū and Waihi estuaries;**
- 2. Present information on lowland water quality and ecology issues;**
- 3. Discuss the extent of the change we need to achieve, and potential ways to achieve it (early policy options for consideration)**
- 4. Look more closely at sources of contaminants and where we might need to focus our attention**
- 5. Discuss water quality issues in Waitahanui and policy options**

The agenda will also cover:

- national and regional updates affecting this work
- progress and next steps for this project
- work “on the ground” in your catchments now

#### 1.2 Outcomes sought

- Community Group members understand findings, limitations, and implications of recent science reports about estuaries and lowland water bodies;
- Community Groups have considered and provided initial feedback on potential policy options for surface water quality management;
- Staff understand the Community Group members’ perspectives and feedback. This will be considered by staff when preparing policy options and public discussion materials, and will be reported to Council and Te Maru o Kaituna.

At this meeting, the Community Groups may want to give some specific minuted advice to Council.

The agenda is attached. Most key workshop content is outlined below and in the linked attachments.

## 2 National and regional updates

### 2.1 Essential Freshwater

Central government has indicated a desire to accelerate policy to improve water quality and ecosystem health via their [Essential Freshwater work programme](#) focussed on:

- Stopping degradation and loss of freshwater resources, waterways and ecosystems;
- Reversing past damage to freshwater resources waterways and ecosystems; and
- Addressing allocation issues.

Changes will be made to national policy and environmental standards for freshwater and three waters management. Government intends to release public discussion documents for feedback around mid-year. Some changes being considered may have large implications in this Water Management Area, such as possible changes to stock exclusion regulations; land use intensification constraints; regulations for high risk land uses like intensive winter grazing of crops; farm environment plan and good practice standards; national regulations and investment for at risk catchments. Bay of Plenty Regional Council councillors have indicated they will not notify any more freshwater plan changes until central government delivers their policy changes and implications are understood. We will continue our work towards a *draft* plan change in the meantime.

### 2.2 Region-wide water quantity - proposed plan change 9

Proposed Plan Change 9 is now subject to appeals lodged with the Environment Court. This influences how we can progress surface and groundwater quantity limit setting in Kaituna-Pongakawa-Waitahanui WMA. No dates have been set for Environment Court mediation or hearings. A summary of appeal topics can be found [here](#) (pages 187-203).

## 3 Maketū and Waihi Estuaries

### 3.1 Estimated contaminant load reduction

Waihi and Maketū estuaries are in a degraded condition, and are getting worse. Scientists have estimated the contaminant reductions required to achieve a moderately healthy ecological state. A report was sent to you late last year at this [link \(pages 55-104\)](#). Table 1 summarises the estimated contaminant reductions needed. Staff will present this information at the workshop.

	Total Nitrogen (tonnes/year)		Total Phosphorus (tonnes/year)	
	Current	Limit and % reduction needed	Current	Limit and % reduction needed
<b>Maketū Estuary</b>	477.4	178.7 (63%)	22.2	13.8 (38%)
<b>Waihi Estuary</b>	618.2	211.9 (66%)	57.2	40.0 (30%)

	Total Suspended Solids (tonnes/year)		<i>E. coli</i> (units/day)	
	Current	Interim target	Current*	Limit (% reduction)
<b>Maketū Estuary</b>	4,647.2	2014 level (to be estimated)	2.84x10 <sup>12</sup> estimated, after Kaituna re-diversion. <i>Note: 2.84x10<sup>12</sup> is 2.84 trillion</i>	1.1x10 <sup>12</sup> trillion (60%)
<b>Waihi Estuary</b>	8075.8	2014 level (to be estimated)	1.74 x10 <sup>12</sup>	9x10 <sup>11</sup> (50%)

**Table 1: Current estimated combined contaminant load (from all upstream freshwater bodies) discharging to the estuary and estimated limits (maximum load) and % reduction needed to achieve moderate ecological health in Maketū and Waihi estuaries.**

Let's not beat around the bush ... these are daunting numbers. While there are uncertainties about these estimates, we believe the change needed for a moderately healthy ecosystem in each of the estuaries is substantial.

**At the meeting, we will ask you ....**

1. Are you confident that you understand the estimates in Table 1, how they were estimated, and the uncertainties about those estimates?
2. Do you accept the need to reduce contaminant loads as estimated in the report in principle?
3. What concerns/questions do you have about this?

**3.2 Potential policy options - holding the line**

Council staff advise that policies *must* be set to “hold the line”, that is to halt further increase in contaminant loads to the estuaries (noting this would not *improve* the estuaries). This could include:

1. **Good management practice requirements** such as Farm/Orchard Environmental Plans and standards.
  - a. This could include requirements to estimate contaminant losses from the property, which would address a big information gap, that is, we don't know what practices are happening on each farm.
  - b. It could also include specific requirements, e.g. effective stock exclusion from contaminant source areas, better effluent management, run-off controls, fertiliser/compost controls, identification of loss risk areas, and actions.
  - c. It could include requiring land users to stay within a “good management” range of nutrient generation.
2. **Stopping change of land use to more intensive uses, and stopping intensification** of existing land uses (e.g., stop increases in stocking rates, or conversion of forest to pastoral or orchard uses) if it will cause more nitrogen and phosphorus losses, unless this can be mitigated.

3. **Stronger water quality requirements for discharges**, including industrial, commercial, wastewater, land drainage and other point source and diffuse discharges.

**At the meeting, we will ask you to think about each of these options....**

4. What are your big questions about how they would work?
5. What are the pros, cons and alternatives (from different perspectives)?
6. What take away messages do you want staff to consider from the group?

### 3.3 Potential policy options – reducing contaminant loads

In addition to holding the line, staff advise that policies *must* be set to start reducing contaminant loads over time. Appropriate timeframes and targets are part of this consideration. In addition to the above options, we can consider:

1. Water treatment technologies
2. Retirement of land / conversion to wetlands;
3. Nutrient allocation limits at catchment, sub-catchment, or property scale –
4. Change of land use

We are unlikely to start discussing these sorts of options at this workshop, but may do later. As we start to explore these options, we will also explore *how* they would be achieved, costs and who would pay for them.

## 4 Lowland water quality and ecology

### 4.1 Rivers and drains

The Natural Resources Regional Plan (Regional Plan) defines a natural water body (modified or not) and what is not a water body. In the operative Regional Plan, the following applies in the Kaituna Plains:

Kaituna Pongakawa Waitahanui Water Management Area		
Rivers		Drains
Natural watercourse	Modified natural water course	Artificial water course
Kaituna River and other rivers in mid- and upper catchments, including: Mangorewa River, Oeuteheuheu, Onaia, Pokopoko, Pongakawa, Pungarehu, Raparapahoe, Waiari, Waitahanui Streams	Kopuaroa, Ohineangaanga, Raparapahoe, Waiari, <b>Parawhenuamea</b> Kaikokopu, Pongakawa, Pukehina, Wharere Canals	Remainder of land drainage network, farm drains, other road side drains

Table 2: Rivers and drains in Kaituna-Pongakawa-Waitahanui Water Management Area

This distinction is important, because Council can control the water quality of discharges from the land in to water (in a drain or water body), and from pipes and drains in to water bodies.

The NPSFM makes it compulsory to manage water bodies (not drains) for ecological health and contact recreation values, and they may be managed for other important values too (e.g., mahinga kai). Drains and drain discharges will be managed to support these values in water bodies.

## 4.2 Water quality and ecology

Late last year you were sent this [link \(pages 105-113\)](#) to a report to council about lowland drainage scheme water quality and ecology. The full report is [here](#). We will present this and discuss implications.

In particular, we have heard concerns from you and others about ecological health, fish habitat/passage, and natural form/character. At the same time, we also understand that land drainage is in place to enable agriculture and protect people, land and infrastructure from flooding.

### **At the meeting, we will ask you ....**

7. Are you confident that you understand the findings of the lowland drainage report, how the results were measured, and the uncertainties/information we don't have?

## 4.3 Policy options

Council must prepare action plans to improve ecological health of lowland waterbodies, where the Macroinvertebrate Community Index (MCI) is below 80. Ecological health is affected by water quality, habitat (including channel form, shade, etc), connectivity/passage, and flows.

At this stage, our policy work will focus on improving water quality, particularly *E.coli*, ammonia, Dissolved Oxygen, Temperature in water bodies. Council's catchment management teams and rivers and drainage teams are also looking for opportunities to improve habitat in water bodies and trialling fish friendly pumps.

In addition to the policy options discussed above, lowland drainage issues are likely to require a focus on:

1. lowland drain and land management; and
2. pump station discharge management.

### **At the meeting, we will ask you ....**

8. Do you agree that we need to focus on lowland drain and land management, and pump station discharge management?
9. What options are there to improve the water quality and ecology of lowland water bodies, and the water quality of drain discharges? What are the challenges, pros and cons?
10. What further information do we need to inform this?

## 5 Sources and causes

We will spend some more time looking at what modelling results suggest about sources of contaminants. We will look at results by sub-catchment, by land use, by tributary, and by draft Freshwater Management Unit (lower, mid-upper, Waitahanui). Have a look at the [modelling slides presented at the last workshop](#) if you have time to refresh your memory.

At the last meeting, you raised concerns about modelling results. The modellers are still working through feedback from several internal and external peer reviewers. We don't expect the model will be changed yet, but they will express uncertainties and assumptions more clearly. Staff are still looking into the assumptions driving high sediment loss results from forestry.

## 5.1 Policy options

Policies and rules can be applied to:

1. Particular activities, e.g., industrial/commercial discharges, stock crossings etc.
2. Particular land uses or practices
3. Particular areas (sub catchments, tributary catchments or freshwater management units)

### **At the meeting, we will ask you ....**

11. Based on the information we have, where / what might we need to focus our attention on?
12. How well do you think we understand sources and causes of nitrogen, phosphorus, *E.coli* and sediment in the catchments?
13. What concerns you have about this and what further information you think we need?

## 6 Waitahanui

Water quality issues in Waitahanui catchment differ from the rest of the WMA, particularly because there is no very sensitive estuary. Monitoring shows a rising nitrate trend that needs to be addressed, but currently no nitrate toxicity problem, and no algal bloom problem is indicated. Sediment loads are substantially higher than estimated natural loads. *E.coli* monitoring indicates *E.coli* is in central government's C band in the lower reaches. This is still safe for swimming, but the Community Group has indicated B or A band are appropriate objectives. Invertebrate monitoring at one site indicates invertebrate health is currently good.

## 6.1 Policy options

In the Waitahanui, staff suggest policies will need to focus on arresting nitrate trends, reducing *E. coli* inputs and sediment loss, and maintaining and restoring habitat and mauri of the wai. As a first step, we will estimate what good practice across the catchment could achieve, based on modelling results.

### **At the meeting, we will ask you ....**

14. Whether you agree with the focus issues above?
15. Whether you agree with the policy direction considerations above?
16. What outstanding concerns and questions you have.

## 7 **Next steps**

### 7.1 **Good practice modelling scenario**

A good practice mitigation scenario has been developed in close discussion with agricultural consultants and industry organisation, based on the good practices discussed in previous workshops (M1 mitigations). This will be sent to you shortly.

Modelling results for this scenario will be presented at a later workshop, along with more discussion about surface water quality. This will provide a rough estimate of what contaminant load could be achieved in the catchment if good practice was implemented, because we don't have a detailed understanding and model of current on-farm practice, so we have to make quite a few assumptions.

### 7.2 **Meetings with iwi and hapū**

We have held meetings with some local iwi and hapū, and we provide regular freshwater policy updates and workshops to Te Maru o Kaituna. However, we still need to meet for the first time with some, and need to hold further discussions with each. We are summarising what we have heard to date, and will need to check it with the iwi we have spoken to before circulating this to Community Group members.

### 7.3 **Talking with the community**

Council has directed staff to start talking about these issues with the wider public in the catchment. Staff will consider your feedback as we prepare information. We will start by raising awareness about the state of the estuaries. We will prepare a discussion document about management issues and policy options. A communications plan is being prepared. We will discuss this at the next workshop.