



Waipaoa Catchment Planning Advisory Group – Hui 10

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Title of report: Waipaoa Catchment – Development of the Action Plan

Report no: 1

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Purpose of this report

This report outlines the process and requirements to develop an Action Plan to support the achievement of the limits and targets set within the Waipaoa Catchment Plan. It includes the information gathered from the group in Hui 6 where we first looked at potential actions to improve water quality and considers what actions might need to be included to address water quantity issues.

This report is intended to assist the FWAG to consider further and suggest appropriate actions to support water quality and quantity environmental outcomes for the Waipaoa Catchment.

Outcomes sought

- Members of the Group provide input into the development of the action plan for the Waipaoa Catchment.
- Members' expertise and knowledge is shared with the Group to help build the collective understanding of effective interventions to improve water quality and quantity.

Getting ready for the hui

Please consider the questions in this report ahead of the next hui. This will aid the discussion at the hui.

Contents

1.	Introduction	3
2.	What is an Action Plan?	3
3.	Scene setting - the National Objectives Framework	4
4.	Action Planning and the Operative Waipaoa Catchment Plan	5
5.	Gap Analysis – Where is Action Planning Needed?	7
6.	Actions to Support Water Quantity Provisions	8
7.	Next Steps	8
	Appendix 1	10

1. Introduction

At Hui 6, staff introduced the concept of Action Plans as a requirement of the National Policy Statement for Freshwater Management 2020 (NPS-FM). Action Plans are required where specific water quality attributes are not met. Action Plans will be key to guiding the achievement of the limits and targets set within the Waipaoa Catchment Plan.

Members then spent some time workshopping potential actions to address water quality issues in the catchment.

This report provides more information around Action Plans and the types of approaches that could also be considered to address water quality issues within the catchment. This report also includes a list of potential actions for further discussion within the hui in Appendix 1.

2. What is an Action Plan?

Under the NPS-FM, there is a requirement to produce an Action Plan in relation to specific water quality attributes. Action Plans are also part of the requirements where degrading trends have been identified.

In the Waipaoa Catchment the following attributes require an Action Plan:

For Lakes:

- Submerged aquatic plants (natives)
- Submerged plants (invasive species)
- Lake dissolved oxygen (lake bottom and mid hypolimnetic)

For Rivers:

- Fish
- Macroinvertebrates (MCI, QMCI and ASPM measures¹)
- Deposited Fine Sediment
- Dissolved Oxygen
- Dissolved reactive phosphorus
- Ecosystem metabolism
- E.coli at primary contact sites

In addition, deteriorating trends have been identified for the following attributes requiring an Action Plan:

- All nutrient attributes in the Waipaoa Hill Country FMU
- All nutrient attributes in the Turanga Flats FMU
- All nutrient attributes and macroinvertebrates in Te Arai FMU
- Phosphate across the Gisborne Urban FMU as well as ammonia in the lower Taruheru River

Clause 3.15 of the NPS-FM sets out the requirements for Action Plans. It states that Action Plans may:

(1)...

- a. *Be prepared for whole FMUs, parts of FMUs, or multiple FMUs;*
- b. *Set out a phased approach to achieving environmental outcomes;*
- c. *Be "prepared" by adding to, amending, or replacing an existing action plan.*

(2) An action plan may describe both regulatory measures (such as proposals to amend regional policy statements and plans, and actions taken under the Biosecurity Act 1993 or other legislation) and non-regulatory measures (such as work plans and partnership arrangements with tangata whenua and community groups).

(3) If an action plan is prepared for the purpose of achieving a specific target attribute state or otherwise supporting the achievement of environmental outcomes it must:

- a. identify the environmental outcome that the target attribute state is aimed at achieving; and
- b. set out how the regional council will (or intends) to achieve the target attribute state.

3. Scene setting - the National Objectives Framework

This work is part of the second stage of implementing the National Objectives Framework (NOF).

Stage 1: Identifying aspirations and goals for freshwater

- Identifying freshwater values
- Defining Freshwater Management Units
- Setting environmental outcomes
- Identifying a Long-Term Vision

Stage 2: Identifying how and when to achieve those goals

- Understanding attributes and baseline states
- Setting targets and timeframes
- Setting limits, methods and actions – **we are here**
- Monitoring

The following image shows the process in a different format:

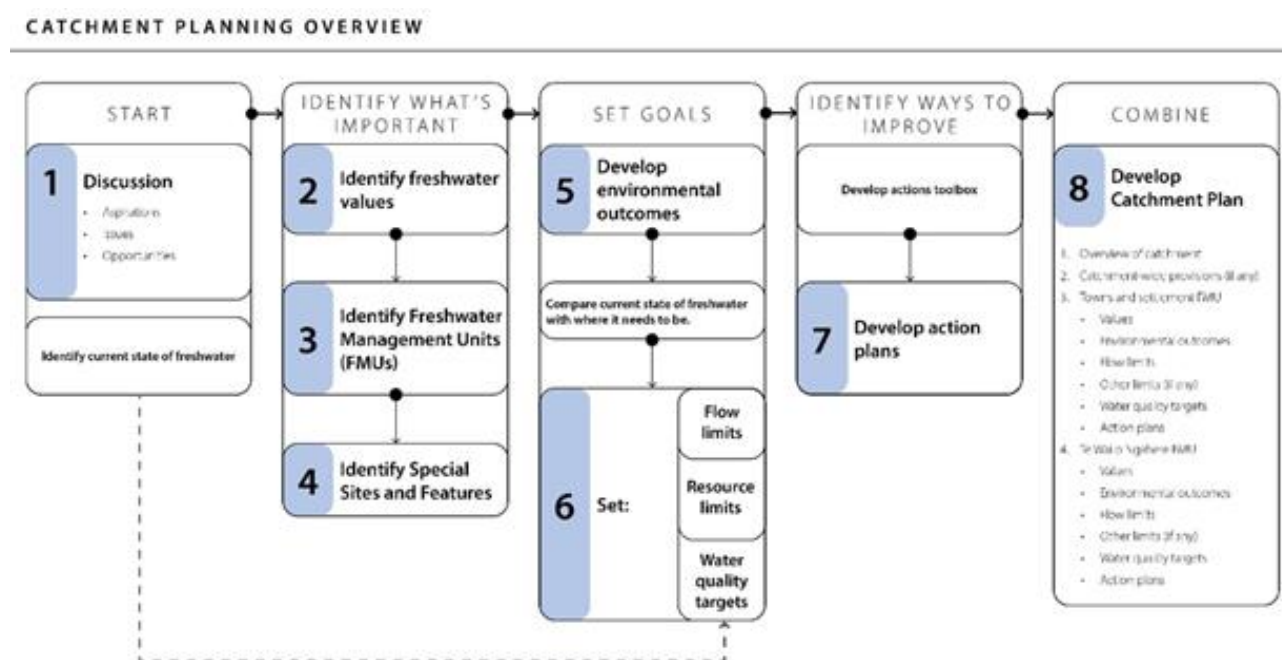


Image 1: Catchment Planning Overview

4. Action Planning and the Operative Waipaoa Catchment Plan

The operative Waipaoa Catchment Plan does not have an Action Plan as set out in the NPS-FM. However, it does identify ten 'non-regulatory projects' projects that form the basis of the actions that were intended to be undertaken within the catchment, to help achieve the limits and targets set out in the Waipaoa Catchment Plan.

These non-regulatory projects, implementation progress, and alignment with current NPS-FM Action Planning attributes is summarised in the table below:

Project and outcome sought	Progress	Alignment with NPS-FM 2024 Action Planning attributes
Gisborne Urban Stormwater Management - improvement in heavy metal and hydrocarbon levels in stormwater	Commenced – focus has been on developing the Integrated Stormwater Catchment Plan for the Council stormwater network.	None
Waikanae Stream Restoration – riparian restoration and habitat improvement	Underway – now part of wider Turanganui restoration project Hau Manu Tu Ora that is part funded by the Ministry for the Environment	Fish Macroinvertebrates
Waipaoa Fish Passage Enhancement - removal of barriers to native fish migration	Underway – some retrofitting of priority structures for improved fish passage has been undertaken	Fish
Lower Te Arai and Waipaoa Inanga Spawning Enhancement - improvement in inanga spawning success	Underway – good progress was made until Cyclone Gabrielle which destroyed much of the progress.	Fish
Taruheru River Restoration - improvement in habitat quality and nitrogen levels	Underway – Some initial water quality and soil testing was undertaken early on until funding priorities were changed.	E.coli at primary contact sites, Dissolved Reactive Phosphorus, Dissolved Oxygen

	Refinement and feasibility analysis of opportunities is needed following collaboration and planning with identified partners: mana whenua, residents and horticultural industry. The Māhaki Mahinga Kai kaimahi group are involved in enhancing the Taruheru and have indicated their desire to carry out further restoration work along the awa.	
Rere Falls and Rockslide Water Quality Enhancement - reduction in E.coli levels at the Rere Falls and Rockslide swimming sites	Underway – 5 years of funding from the Ministry for the Environment was provided to support this project. The project involved fencing waterways from stock and the construction of stock crossings. Initial evaluation indicates that while the project is positive, its focus on “working with the willing” rather than targeting interventions at the properties where the impact will be greatest, means that progress towards improvement in E.coli levels has been limited.	E.coli at primary contact sites
Awapuni Lagoon Water Quality Improvement - improvement in fisheries values, reduction in ammonia and other eco toxic pollutants.	Commenced – several science studies undertaken to identify the best approach to improve water quality.	Fish
Managed Aquifer Recharge (MAR) Pilot - identification of suitability of MAR in the Makauri Aquifer and parameters for a wider scheme	Completed. The pilot has helped confirm that MAR is suitable and effective in the Makauri Aquifer.	None – but supports water quantity provisions
Waingaromia Riparian Restoration - improvement in temperature in the river	Not started	Fish

Forestry Harvest Mitigation Project - reduction in sediment and forestry slash from harvest sites	Not started	Fish Macroinvertebrates Deposited fine sediment
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While these projects were included in the Waipaoa Catchment Plan, they were not specifically tied to particular environmental outcomes or attributes. The new Action Plan for the Waipaoa Catchment Plan will need to set out if these existing projects are part of the (to be developed) Action Plan, and how they will be undertaken to support the Action Plan targets.

In some cases, this might require a refocussing or expansion of efforts within the projects. In other cases, it may be that the project is no longer a priority and effort to support the Action Plan should be targeted elsewhere.

5. Gap Analysis – Where is Action Planning Needed?

The non-regulatory projects identified in the operative Waipaoa Catchment Plan reflect the state of knowledge of water quality attributes in 2014. We now have a much clearer picture of the current state of water quality, as well as some imperatives around degrading trends.

Where there is a degrading trend, non-regulatory action can only be a part of the picture, new rules will also be required to ensure that water quality improvement occurs.

With the exception of Te Arai FMU, where macroinvertebrate attributes are also deteriorating, the degrading trends found within the catchment all relate to nutrients, meaning that we will need to consider additional regulation around nutrient management. It is recognised that any regulation could be more effective where it is supported by non-regulatory actions.

There is still a poor understanding of the state of fish in the catchment. More information is available on this than there was 12 months ago, however there is no information on trends. There is also no information held on the state of Action Planning attributes for the lakes in the catchment, so identification of their state must be a key early action.

In relation to other Action Planning Attributes, macroinvertebrates and deposited fine sediment are both below national bottom lines in most parts of the catchment and in all FMUs. However, outside of Te Arai FMU there are no degrading trends – this is a longer-term issue.

Dissolved oxygen, and consequently ecosystem metabolism attributes are both generally good within the catchment, and therefore there may be no specific need for actions within the action plan to address these.

E.coli at primary contact sites – Rere Rockslide, Rere Falls, the Waipaoa River at Te Karaka and the Taruheru River in urban Gisborne are all very poor. Faecal source tracking (using DNA) has identified that livestock is the main source of E.coli in these rivers. However, there are improving trends for E.coli in most parts of the catchment. The action plan might then aim to accelerate those trends in these priority locations.

Questions for the Advisory Group

- ❖ To what extent should non-regulatory actions support nutrient improvements across the catchment? What might be useful non-regulatory actions for nutrients?
- ❖ Macroinvertebrates and deposited sediment are poor everywhere. What locations should be targeted/prioritised over the 5-10 year timeframe?
- ❖ How could we speed up improving E.coli levels at swimming sites? What role should non-regulatory action take in speeding up these improvements?

6. Actions to Support Water Quantity Provisions

While the NPS-FM *requires* Action Plans to support water quality improvements, there are also some actions, outside of regulation, that could support water quantity improvements. In the operative Waipaoa Catchment Plan the MAR trial is an example of this.

When we set the limits and targets for water quantity for the Waipaoa Catchment Plan, there could be non-regulatory/ non-RMA actions that could be or are being undertaken now to support the future implementation/reaching of targets. For example:

- Work to scope above ground storage options for the Turanga Flats FMU and Te Arai River FMU.
- Residential water metering of the Gisborne Municipal Supply.
- Expansion of wetlands to help retain water in the upper catchment to improve summer flows.

Questions for the Advisory Group

- ❖ Should water quantity actions be included in the action plan?
- ❖ What sort of actions should be included?
- ❖ Are there priorities for water quantity actions?

7. Next Steps

At this hui 10 we discuss and workshop the priorities for inclusion in the Action Plan. These will need to be considered alongside the regulatory proposals to ensure that there is a package of effective measures that the Council considers will be able to achieve the water quality limits and targets.

Work is underway looking at the requirements specifically around nutrient reductions, through SPASMO modelling work being undertaken by Plant and Food. Once that modelling work is available then we will be able to further consider what proportion of improvements can be met through non-regulatory actions, and what additional regulation might be required.

At hui 11, we are bringing together both the Regional FWAG and the Waipaoa FWAG to summarise everything we have learned about water quantity. Hui 11 is our final hui for 2024.

Appendix 1

Potential Actions for Consideration in Waipaoa Catchment Action Plan

Action	Primary Action Planning Attributes it supports	Where this could be prioritised
Stock		
Stock exclusion from main rivers	E.coli Nitrate Ammonia	At and above swimming sites and mahinga kai sites Where there are known threatened species or important ecosystem or cultural values
Stock exclusion from lakes	E.coli Nitrate Ammonia Fish Lake dissolved oxygen	Lake Repongarae
Stock exclusion from wetlands	E.coli Nitrate Ammonia Fish	Where there are known threatened species, mahinga kai or important ecosystem or cultural values
Wider setbacks for stock exclusion and long grass	E.coli Deposited sediment	At and above swimming sites and mahinga kai sites Where there are known cultural values. May be most useful where there is intensive grazing or break feeding
“Critical source area” stock exclusion	E.coli Nitrate Ammonia Deposited sediment	At and above swimming sites and mahinga kai sites Where there are known threatened species or important ecosystem or cultural values. May be most useful where there is intensive grazing or break feeding

Stockwater reticulation	E.coli Nitrate Ammonia Deposited sediment Fish	Where excluding stock from streams or wetlands is a priority
Best practice breakfeeding	E.coli Nitrate Ammonia Deposited sediment	
Restoration		
Native planted riparian environment – or native/willow combination	Fish Macroinvertebrates Phosphate Deposited sediment Dissolved oxygen (rivers and lakes) Ecosystem metabolism	Where there are known threatened species, mahinga kai or important ecosystem or cultural values.
Wetland restoration – small wetlands	Fish Macroinvertebrates Deposited sediment Nitrate Phosphate Can also help with improving summer river flows and mitigating flood flows	Where there are known threatened species, mahinga kai or important ecosystem or cultural values Where there are problems of high amounts of runoff from land
Constructed wetlands and sediment traps	Fish Macroinvertebrates Deposited sediment Nitrate Phosphate Can also help with improving summer river flows and mitigating flood flows	Urban areas, horticultural and farming areas, where there are known problems with pollutants, and sediment loss
Wetland restoration – major projects	Fish Macroinvertebrates Deposited sediment Nitrate Phosphate	Urban areas, horticultural and farming areas, where there are known problems with pollutants, and sediment loss

	Can also help with improving summer river flows and mitigating flood flows	
Nutrient Management		
Maximum synthetic fertiliser use limits	Nitrate Ammonia Phosphate	Where there are known eutrophication/nutrient enrichment problems
Maximum overall nutrient application	Nitrate Ammonia Phosphate Macroinvertebrates Fish Dissolved oxygen (rivers and lakes) Ecosystem metabolism	Where there are known eutrophication/nutrient enrichment problems
Treatment of discharge from tile drains to strip nitrogen	Nitrate Ammonia Macroinvertebrates Fish Dissolved oxygen (rivers and lakes) Ecosystem metabolism	Where there are known eutrophication/nutrient enrichment problems
Drain and streambank planting for shade	Macroinvertebrates Fish Dissolved oxygen Ecosystem metabolism	Where there are known eutrophication/nutrient enrichment problems (this will help with temperature, periphyton and dissolved oxygen problems)
Limiting conversions to more intensive land uses (eg dairy support, breakfeeding, dairy farms, vegetable growing) eg through maximum stocking rates or maximum area of land	Nitrate Ammonia Phosphate Macroinvertebrates Fish Dissolved oxygen (rivers and lakes) Ecosystem metabolism	Where there are known eutrophication/nutrient enrichment problems
Maximum stocking rates for existing land uses	Nitrate Ammonia Phosphate	Where there are known eutrophication/nutrient enrichment problems

Wider setbacks for higher intensity uses	Nitrate Ammonia Phosphate Deposited sediment	Where there are known eutrophication/nutrient enrichment problems Also to prevent these arising in locations they aren't currently an issue
Use of cover crops for maize over winter	Phosphate Deposited sediment Macroinvertebrates Fish	Where there are known eutrophication/nutrient enrichment problems (helps with phosphate)
Sediment management		
Sediment traps required for sites that are cultivated	Phosphate Deposited sediment Macroinvertebrates Fish	Because of the link of sediment and phosphorus where there are known sedimentation or nutrient enrichment problems
Minimum Cultivation setbacks from drains and streams	Phosphate Deposited sediment Macroinvertebrates Fish	Because of the link of sediment and phosphorus where there are known sedimentation or nutrient enrichment problems
Wider setbacks for forestry harvest	Phosphate Deposited sediment Macroinvertebrates Fish	Where there are known land stability problems
Restrictions on area/amount of forestry harvest (coupe harvest)	Phosphate Deposited sediment Macroinvertebrates Fish	Where there are known land stability problems
Space planted poplars/sterile willows for erosion management	Phosphate Deposited sediment Macroinvertebrates Fish	Where there are known land stability problems
Culverts, drift decks and bridges over streams replacing fords/unformed crossings for stock and vehicles	Phosphate Deposited sediment Macroinvertebrates Fish	Where there are known threatened species, mahinga kai or important ecosystem or cultural values

Retirement of unproductive/unsuitable land to native regeneration	Phosphate Deposited sediment Macroinvertebrates Fish	Where geology and risk factors means current land uses are unsustainable
General Pollutants		
Treatment of runoff from point sources eg tracks, yards, feed pads, fertiliser storage, industrial sites, carparks, busy roads	Nitrate Phosphate Ammonia Deposited Sediment	
Improvement in On-site wastewater disposal systems	Phosphate	Small communities with high groundwater table or close to waterways