

Pongakawa and Waitahanui Freshwater Futures Community Group

Meeting Notes: Workshop 4 - Community View on values in rivers and streams

Pongakawa Hall, Old Coach Road, Pongakawa

Wednesday 9 November 2016 commencing at 9.00am

Members present: Andre Hickson, Andy Bell, Bernie Hermann, Bev Nairn, Colin McCarthy, Darryl Jensen, Dennis Walker, Geoff Rice, Grant Rowe, BOPRC Councillor Jane Nees, John Garwood, John Cameron, John Meikle, Julian Fitter, WBOP Councillor Kevin Marsh, Mike Maassen, Paul Van der Berg, Te Awhi Manahi and Wilma Foster (Chair)

Apologies: Melv Anderson and Roku Mihinui

BOPRC Staff present: Pim de Monchy (Relationship Manager), Kerry Gosling (Support Facilitator), Stephanie Macdonald (Facilitator), Janie Stephenson, (Support Facilitator), Nicola Green (Senior Planner – Water Policy), Andrew Millar (Senior Planner – Water Policy), Clarke Koopu (Māori Policy Advisor), Rochelle Carter (Environmental Scientist) and Lisa Baty (Planning Coordination Officer – Water Programme)

Observer: Rani Dhaliwal (University of Waikato PhD student)

Related documents previously circulated:

1. Briefing Note: Workshop 4 - Community View of the Water in Rivers and Streams
2. Pongakawa and Waitahanui Freshwater Futures Community Group presentation 9 November 2016
3. Pongakawa and Waitahanui Community Group workshop 4 worksheets

1 Welcome / Updates / Focus of the Day

Geoff Rice opened with a karakia.

Pim de Monchy welcomed everyone to the workshop and welcomed a new member:

- Andy Bell, Water Solutions Director from the Rotorua Lakes Council.

1.1 Group members' burning issues:

Burning issues raised were:

- Clarification sought on how Plan Change 9 (Region-wide Water Quantity Plan Change) relates to our community group work.
- How will the work we are doing make a difference? What would happen if we didn't have this community group?
- As we go through our process, what if we supersede something in Plan Change 9? Would Plan Change 9 be changed due to our views?
- Councillor Nees confirmed her presence on the community group is not as an elected representative from Council, rather an interested community member. She noted Plan Change 9 is about setting consistent regional wide water quantity standards. The community group process will help inform more location specific objective and limits. Local community input is obtained rather than having the Council telling the community about decisions regarding values after they are made.
- Will there be alignment with other Water Management Area (WMA) groups?

Council responses to above issues:

- *Plan Change 9 is a separate process to the community group work. Unlike the community group process, Plan Change 9 is only related to water quantity and not to water quality. Plan Change 9 is a region wide proposed change to the existing Bay of Plenty Regional Council Regional Water & Land Plan. Plan Change 9 has recently been publically notified. There is currently an opportunity for anyone to make submissions on proposed Plan Change 9 [closes on 14th December 2016]. It address matters such as: water metering for consents to take water, more robust region wide water quantity limits and a management approach to consenting currently unconsented water use unauthorised use for which consents is required.*
- *Fact sheets on Plan Change 9 are available on the BOPRC website which provides more information.*
- *The separate community group objective and limit setting process follows on after Plan Change 9, over a series of Water Management Areas covering the whole the region by 2025. The region wide quantity limit set in Plan Change 9 is expected to be replaced with more location specific quantity limits reflecting local values. The Kaituna Pongakawa Waitahanui Water Management Areas is one of the first to be considered by a community group process. Other WMA's in other parts of the region will not be considered through a community group process for a number of years.*
- *Advice from the community groups will contribute to inform the subsequent location specific plan changes. If the community group did not exist the Council would develop the location specific Plan Changes without incorporating the communities view. It would then inform the community of those proposed Plan Changes.*
- *Will Federated Farmers be lodging a submission on Plan Change 9? Darryl Jensen commented that Federated Farmers are working on making a submission. He felt there were not adequate reasons for the plan change. Andre Hickson commented he wanted protection for root stock [ability to irrigate in times of water shortage] to be provided for in the plan. Supports metering water use.*
- *Will this community group put in a submission on Plan Change 9? Wilma Foster commented that the community group will not be making a submission. However, as individuals or members of other organisations you are more than welcome make a submission.*

1.2 Agenda, Purpose and Updates

Nicola outlined:

- A brief recap of what we have covered in workshops to date and work programme. Council has confirmed the draft Freshwater Management Units (FMUs) and a draft regional freshwater value set in principle.
- Focus today: 'in-river' values, what's happening to them and how well you think they are provide for.
- Council is investing in building better catchment modelling for Kaituna / Maketū, Pongakawa / Waitahanui and Rangitaiki Water Management Areas; which will include groundwater and surface water. More sophisticated modelling will help us to predict effects of likely future demand and use on water quality and quantity and, the implications of different objectives and limits.
- National updates:
 - National Policy Statement for Freshwater Management (NPSFM): Central government has stated intention to notify changes to this document in December 2016. [Since the workshop Council has been advised this has been delayed to early 2017 because of the Kaikoura earthquake]. We do not know what these changes look like or what we will have to change in our programme as a result.

- Regional Councils' Chief Executives have agreed in principle to work with industry organisations, the Ministry of Primary Industries and the Ministry for the Environment towards 'Good Management Practice' accords and consistency for things like farm environment planning across the country.
- Healthy Rivers / Wai Ora: Proposed Waikato Regional Plan Change 1 for Waikato and Waipa River catchments has been notified. We have summary fact sheets should you need more detail. Remember we are in a somewhat different stage of the plan change development process here. We have not yet started developing management options.
- Plan Change 9: Region-wide Water Quantity (PC9) has been publicly notified for formal submissions. Anybody, including group members, can lodge a submission by the closing date of 14 December 2016. Plan Change 12 will address water quantity and quality objectives, limits and methods for the Pongakawa / Waitahanui catchments and may replace / supersede some region-wide quantity allocation limits in Plan Change 9. We are in the pre-draft stage for Plan Change 12, working with the community group and others. Community group member input will help to inform key decisions for Plan Change 12.
- FMU maps are still draft, there is room to change them. If you see gaps or reasons for changing them please let staff know.
- The 'in-river' values the group described for the draft FMU's at the previous community group meeting have been summarised [slide 12 & 13 of the presentation]. We will be checking with you in the workshop today that we have captured this information correctly. There are some question marks in the summary which indicate that feedback was unclear on the presence or absence of value in some locations. This is where we need more information from the community group.

2 Assessing in-river values – for creating preferred objectives

Steph noted that staff have identified which in-river values exist in each FMU and invited community group members to check whether this is correct.

Steph explained the focus of the day; in-river values.

- Swimming and other recreation involving immersion.
- Mahinga kai – Kai is safe to harvest and eat and the mauri of the place is intact.
- Ecosystem health.
- Significant / threatened / rare indigenous species.
- Fishing.
- Natural form and character.
- Wai tapu and / or site of cultural significance.
- Transport and Tauranga waka.

Freshwater use values including those relating to taking, using and discharging to fresh water are not covered in this workshop today. Workshop 5 will have a focus on freshwater use values.

2.1 Key comments / questions:

- At what stage do we review the implications i.e. economics? *Nicki confirmed through the modelling we will show implications of different objectives. There will be an opportunity for the community group to review these once completed. Council is working with sector groups through the Council's Regional Water Advisory Panel (RWAP) and discussing data requirements via all sectors (sharing of information). They are positive about this. We all need to work together and get the right information to base the model on.*

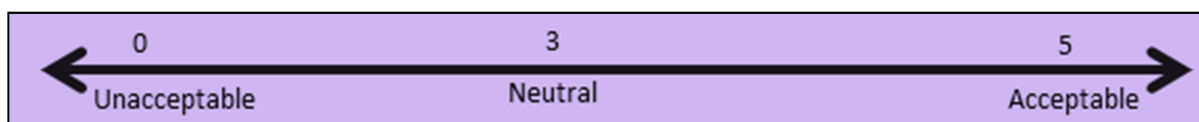
- Rather than just theoretical modelling will there be robust science facts? How are we going to come to the right decision if we have insufficient facts? *Rochelle confirmed we have wide monitoring data across the region. The science monitoring data that we have will be used in the model. Modelling will also be used to help fill gaps where we have a lack of data. Nicki confirmed that the community group will provide other sources of information which will be used in the modelling.*
- What is the baseline for the Council data? *Rochelle explained that it depends on the location. Some sites where monitoring data is collected have a much longer term record than others.*
- Are estuaries included in the process / how difficult is it to include them? *Effects from the freshwater environment on estuaries are considered. [Limits set on fresh water will need to reflect the needs for the marine environment]. Effects from the freshwater environment on estuaries are sometimes difficult to assess as the effects may come from multiple sources such as activities and processes in the marine environment, not just the freshwater environment. In the future improved modelling techniques may assist assessment.*

Homework exercise- Steph checked how people found the exercise. Comments included:

- Difficult to rate values with a single answer as the response may vary over time and space. Estuary grass extent as an example. It may vary over the year. What times of the year should I be referring too?
- It felt like the answers were being heavily influenced by the information that was provided.
- Could only provide personal view.
- Swimming takes place at locations that are rated as poor.
- How do you judge? I may have lived here for two years, or maybe 40 years. There is a huge difference. How will our comment be used?
- How do you measure what we see scientifically?
- What is the depth of knowledge you are looking for, seasons, or years? If Council can fill in these details it will assist us when completing tables / questions in the future. Be more specific.
- I am a newcomer. We want perfection, which we won't get. I put a sad face in nearly every box. We want to be up there, but this will take time to achieve. We will only get this if we set our sights high.
- Boxes / comments section was too small. I wanted to write more.
- Found it difficult, but felt the objective should be aspirational.

2.2 Group discussions

Context: Sub-groups of 3 - 4 members discussed whether each value is present and provided for within each FMU and responded to the following questions:



1. Is the value at an acceptable level?
2. Do current conditions of water quality / quantity allow / support for the value to be present? (why, why not)
3. Was the value previously here but has since been lost or nearly lost (when, why)?
4. Has the value recently improved? (why, how, where)
5. How would you expect it to be? (when, where, why, by when)

6. What further information would give you greater confidence in making this recommendation? (or are you comfortable with Bay of Plenty Regional Council (BOPRC) setting this)

Where a group couldn't reach consensus about the scoring, different viewpoints could be expressed as multiple X's on the scale, with a small number beside to show how many people gave each score. Notes about all viewpoints were to be recorded by participants, also noting when participants felt there was insufficient information to comment.

Groups worked on one value at a time and not all values were discussed by all groups.

Pim talked about the group exercise explaining; the importance of input and knowledge from community group members; the homework within the briefing note; and, how this feeds into the work we need to complete.

Steph and Pim gave background about the process for the exercise – scoring and views which will be used to help draft preferred objectives.

Members then worked in groups through to approximately 1:00pm.

Analysis and worksheets are included in Attachment 1.

Comments and Questions:

- What's happening up in Rotorua that affects us? Most of the water from Lake Rotorua is directed via the Ōhau Channel wall to the Okere Arm of Lake Rotoiti and then directly down the Kaituna River. However, the Pongakawa and Waitahanui are fed from springs, part of which are sourced from water seeping through the ground from Lakes Rotoiti, Rotoehu and Rotomā, so there is some connection.
- Water supply is taken from the lake, so we have a vested interest in the quality of water. What we do has an influence downstream. We are looking for *E.coli* to be very low.
- One thing the community looked at was the water supply; drinking water should be added to this.
- Has groundwater seen an increase in *E.coli*? Do we have any statistics about the downstream effect? *Rochelle will look into this.*
- Clarke confirmed the only two areas within the Pongakawa / Waitahanui catchment that have any iwi management plans are Waitaha, Tapuika and Ngāti Whakaue. Geoff said he and Te Awhi would talk to the elders for further information.

3 Credible Future Scenarios - Think 2030

3.1 Context:

In workshop 1, the group considered significant current and future trends affecting land and water use in the Pongakawa / Waitahanui catchments.

The community group was asked to focus on more specific detail about:

- what big changes you anticipate in land use;
- land use practices;
- industries that use water;
- where in catchment will these occur;

in the absence of any change in water policy / rules. Eg. Expected changes based on trends in their industry / sector or changes already occurring. BOPRC will also talk to industry organisations.

The information will be used when working up scenarios about potential future land and water use. Raw notes and summary feedback is attached in Attachment 2.

4 Summary

Steph confirmed Council will prepare workshop notes and distribute for participants to review. Council will work up draft preferred objectives which could be 'written and / or numeric' and credible futures and is starting to build the catchment model. This will take time but we will advise of our progress along the journey.

4.1 Outstanding – for the Group

Nicki confirmed it will take some time to prepare the catchment model. This process is likely to determine when the next workshop is held. At the next workshop we will have initial model results based on the credible futures scenario to bring back.

Staff have been taking notes which we will circulate back to you. Let us know if we have missed anything.

ACTIONS – Pongakawa / Waitahanui CG 9/11/2016		
What	Who	Completed date
Homework from briefing note. If not handed in today members can post or email back to council	CG members	
Advice on presence of <i>E.coli</i> from Lakes Rotoiti, Rotoehu and Rotomā and any actual or potential downstream effects on bacteria in spring water.	Staff (Rochelle)	
Provide information on assumptions used in the model at the next workshop	Staff	

Workshop ended at 2.27pm with a karakia from Clarke.

Attachment 1: In-river values exercise: Analysis notes

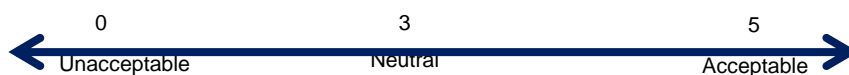
Analysis of Pongakawa-Waitahanui Community Group workshop 4 outputs

In this workshop we asked the community group members to share their thoughts, experience and observations on *whether they think the identified values in rivers in each draft FMU and in Waihi Estuary are provided for*.

The expected outcome for this workshop is that the group identify and broadly agree on which in-river values within each FMU:

- they are generally happy / satisfied with as they are now
- they are generally accepting of, but wish more could be done
- they find unsatisfactory and why
- they hold different views on and why?

The following table summarises the range of views expressed by sub-groups of 3 - 4 members by way of a scale of acceptability from 0 - 5. Green indicates small variation in views, yellow shows medium variation, and orange shows a wide range of views. These numbers relate to the range of scores, are relative and indicative only.



	Draft Freshwater Management Unit as on 9 November 2016			Waihi Estuary
	Mid-Upper Pongakawa	Lower Pongakawa	Waitahanui	
Ecosystem health (3 groups)	2 - 4	0 - 4	1*	0
Significant threatened or rare indigenous species (4 groups)	3 - 5	0 - 4	5	0 - 2
Swimming / immersion activities (5 groups)	3 - 5	0 - 4	0 - 5	0 - 3.5
Mahinga kai (4 groups)	3 - 5	0 - 4	5	0 - 3
Fishing (4 groups)	4.5 - 5	1 - 5	3 - 5	0 - 4
Natural form and character (3 groups)	2 - 4	0 - 4	2 - 5	1 - 5
Wai tapu and sites of cultural significance (1 group)	4	4	-	1
Transport / Tauranga waka (2 groups)	3 - 4.5	4 - 4.5	4	4.5 - 5

* Note: Two groups left a blank. The other group scored it 1, but commented; *stream ok / no experience with this stream*.

Summary of 'acceptability' of in-river freshwater values drawn from community group feedback

General

Some general suggestions made by group members include:

- Talk to more people / locals (several were named), particularly local Māori about wai tapu and sites of cultural significance.
- Survey users at different times (commercial white-baiters, farmers, swimmers).
- Suggestion that better public access on public land is needed and education as to where access is available.
- Fishing, ecosystem health, mahinga kai and significant / rare indigenous species values are affected by obstacles to passage for native migratory fish species.
- We don't know how much of the species loss is due to water quality or quantity, or from over harvest or habitat changes / loss. It is complex.
- How do we find a balance between land use and conservation / protection of these areas? Recognise that full restoration is not realistic and people need to earn a living.

Mid-Upper Pongakawa draft freshwater management unit

- **Ecosystem health:** Acceptable / neutral but could improve. Feeling is that ecosystem health is declining. Pongakawa has slime rafts in summer time. No slime rafts in the Kaikokopu Stream. Reduce silt / sediment especially after significant rainfall events. Nitrification is variable and data incomplete – limit Nitrogen. Need minimum flows to ensure fish habitat is maintained.
- **Significant indigenous species:** Mainly acceptable / neutral but could improve. Need to improve riparian habitat. Overfishing. Keep at least as is with no decline. No decline in species diversity, size and presence.
- **Swimming:** Acceptable. Swimming to stay at least as good as now. Whole upper catchment is in great condition. Safer higher in the catchment due to surrounding vegetation and less human land use. Mangatoetoe Stream is clear. Clear, free flowing. Public access and secret local spots. People think that because it is clear it is safe to swim at the SH2 bridge and higher in the catchment. Kaikokopu Canal murky at the highway, but cleaner than it was - doesn't look great but we swim in it. Since 1990 holding ponds have made a difference as do / will innovations in farming practices. Canals between SH2 and the estuary are not where people swim. They should be filtered by wetlands – Kaikokopu, Wharere and Pongakawa do not feed into wetlands anymore, they have been straightened and channelised directly to the estuary. Erosion of banks but farmers now fencing, sometimes too close to waterways.
- **Mahinga kai and fishing:** Acceptable. Keep at least as it is, with no decline in species diversity, size and presence. Good numbers of eels / tuna. Whitebait ok, with seasonal variations. Fishing still seems to be good. Also have rongoa. Fly fishing all year round. Plenty of watercress, including in-side drains. Clean good flow. Commercial eeling still present / ceased? Decrease in koura. Sediment is an issue and needs improvement – “you could almost walk on the water in high rainfall” due to forest harvesting, landscaping for kiwifruit in past years, erosion. Forestry has stopped planting gullies – should be less in five years. Most have learned better practices now. Sediment is causing shallowing and is killing areas. More native stands on river bank.
- **Transport / Tauranga waka:** Acceptable. Quantity and navigation fine – limited access is the issue. Fenced off streams impede access. Banks undercutting and plants falling in. Who should maintain – shared benefit – share costs? Hone Heke rafted all the way up Pongakawa. No jet boating any more as trees overcrowding. Fenced off both sides. Can't see stream – trade-off between water quality and access.
- **Natural form and character:** Acceptable / neutral. Forestry, farming and soil erosion have altered character.

- **Wai tapu and sites of cultural significance:** Drawings in cave and top of Pongakawa stream.

Lower Pongakawa draft freshwater management unit

- **Objectives:** Better than what it was - something closer to what is in other FMU within reason. Reclaim parts of farmland into wetlands, especially around estuary where sea level rise. Pukehina on treated wastewater. Safe to eat kai all year round (eels, flounder, whitebait, ducks etc.), managing amounts harvested (people) and water quality and quantity important. Not sure whether deteriorating – some would say improved because of doing best practice changes. Manage sediment load.
- **Ecosystem health:** Unacceptable / improve – little of natural wetland ecosystem left. Poor for invertebrates due to silt. Lost wetlands. Improve management of drains and dairy effluent. Need to understand impact of spraying vs clearing drains. Slime rafts entering estuaries. Riparian planting needed. Land use practices have improved – dairy effluent, fenced drains. Increased fertiliser but more targeted application based on soil testing. Would like information on impact of agrichemicals – land and water risk.
- **Significant indigenous species:** Acceptable but want it better. Fish and bird life lack habitat plus are affected by predators. Watercress, invertebrates, fish / tuna, mullet, whitebait are all present but not enough. Reptiles gone. Plenty of cockabullies in drains. No koura. High [invertebrate] diversity according to BOPRC. Findings across streams vary. Reduce silt affecting invertebrates. Support withdrawal of commercial eeling licenses – not sure of quota. Commercial white baiting should be stopped. Weed is good for inanga spawning – the spray used to kill them, but now they don't spray in spawning time. Kokopu sighted in drains one in 5 years.
- **Mahinga kai and fishing:** Unacceptable and needs to be better – improve and restore but be realistic. There's a cost and people have to make a living. "Before wetland drainage / canals, this was a supermarket – kai awa, kai rakau, kai moana, kai manu, kai tuna. Now it's not ever a corner store". Mauri is not intact, is compromised and is getting worse. Think eels and whitebait should be safe to eat from the rivers and canals at all times. Different for the different rivers / canals. Tuna common but deteriorating as drains are dredged – none in drains that are sprayed. Eeling still common and plenty are caught. Dead kuku (mussels) beds on rock wall. Below SH2 used to be prolific with freshwater mussels. Fishing stock reduced, due to habitat loss / overfishing. Need to look at the number of people harvesting. Whitebait numbers fluctuate, but are down on previous years. Flounder numbers reduced. Carp and increase in pest plants. Kahawai – full of whitebait this year. Drop in native species – not a good year. Siltation and excavation are destroying habitat. Issues with septic tanks. Groundwater used rather than river water for the key ingredient for "rotten corn". Kaikokopu has not been good for white baiting for the last two years. Increase in sediment means we can't see them. Fished whitebait well in Wharere for last two years. Pongakawa ok. Whitebait catches limited from SH2 to the estuary. Good kahawai.
- **Swimming:** Should be able to jump in and be safe [from pollution] at all times, or November to March, except after heavy rain or in summer low flows. Pongakawa River: neutral - unacceptable: swimming at railway bridge and bridge below Braemar Road. December to March, particularly not good after rains and at low flow. But people don't get sick. Better effluent discharge management, but far more sediment (sand and silt) in last 10 years. Runoff deters swimming. More weed encroaching. Poor public access. Wharere is worse than Pongakawa. People still swim at bridges upstream but not at the river mouth. Unacceptable after rain or at low flow. Sometimes it's good, but sometimes we get rashes. Swimming at the bridge on Old Coach Road is best. Lower down it gets worse from SH2 down along the Wharere. More sediment this year than last. Sometimes there is an oily layer on the rivers. Siltation is destroying habitat. Canals have contributed to decreased

water quality. Where kids swim there have been E.coli incidents – flooding events, summer low flows. Council should put up notices after a storm.

- **Transport / Tauranga waka:** Maintain; access is fine. Sedimentation in lower Kaikokopu is causing shallowing. There is access at SH2, Cutwater Road and Wharere Road. Desire to use canals for boating is limited – mainly used for access to the estuary. Flow rates and heights are fine and there has been no change over time. Paper road alongside of canals provides good access. Drain clearing ruins the ambience and natural habitat. So does spraying, but reduces the number of times it is cleared.
- **Natural form and character:** Neutral / unacceptable (one group noted similar concerns as below but scored this is acceptable). Channelised, no meander, wetlands gone. Restore some wetlands – reinstate some balance, but recognise significant cost. Drainage scheme considers ecosystems now. Suggestion to retire wetlands for river to meander near Pukehina. Some have the feeling that the drainage scheme is not going to change.

Waihi Estuary (receiving environment):

- **Ecosystem health:** Unacceptable, very degraded. Slime, silt, stinks. Seagrass has retreated and is covered with algae. Seagrass is important food for juvenile fish. Mangroves in the estuary and up the canal – spreading. Pukehina septic tank leakage. Tree cover and riparian planting for whitebait is needed. Mice eat whitebait eggs. Concerned about future impact of population growth.
- **Significant indigenous species:** Unacceptable. Overharvested. Severely degraded. Fewer birds, pest plants prevalent. Farms at bottom of catchment have reduced habitat. Need more information.
- **Mahinga kai and fishing:** Unacceptable; food collection is a big part of local and kiwi culture. Don't eat shell fish due to pollution / do eat but not when there is algal bloom. Pressures include siltation, overfishing and urbanisation. Pipi are in a smaller area / no longer get them. Flounder much reduced - no big breeding yellow belly flounder anymore. Only fish for sea fish – kahawai, mullet. Little Waihi and motor camp faecal contamination. Safe to eat at the moment – toxic algae bloom times mainly over summer – do know some people who get sick / some haven't heard of people getting sick. Have seen overharvesting – taking shellfish that are too small. Weed prevents us from gathering kai and chokes swimming area. Common practice to eat oysters from the channel. Snapper will not be present if there are no shellfish. Need fisheries information.
- **Swimming:** Neutral to unacceptable for swimming (based on Enterococci), but there is a growing number of users. Some only swim at the mouth on still tide November to June for safety and depth. Not swimming in upper estuary. The value is worsening, in part due to summer specific lower inflows. Is this due to more irrigation (mainly kiwifruit as there was very little 10 years ago)? Too recent to see improvements from estuary project. Objective: no faecal matter and able to swim – improve. Slime at head of estuary is terrible and midway down is now bad too. Channel depths affected by water flow level and sediment coming down the rivers. Not flushing sufficiently and has declined over time. Greater sea water intrusion. Some questioned whether all of these statements / observation are fact – modelling?
- **Natural form and character:** Unacceptable / neutral. Restoration should continue. Siltation and mangroves. One group noted similar concerns but scored this is acceptable. Visually fine – dunes improving –interventions working. Channel changes all the time.
- **Wai tapu and sites of cultural significance.** Unacceptable. This value includes food collection, picnic areas and motor camp. Water quality faecal contamination affects food collection. Green algae decreases enjoyment.
- **Transport / Tauranga waka:** Two main access channels for small craft. Adequate boat ramps but estuary has become shallow due to sediment. Manage access to protect habitat and species.

Waitahanui draft freshwater unit

Only a few people with local knowledge.

- **Ecosystem health:** Acceptable / improve but not unacceptable. Stream ok / no experience with this stream.
- **Significant indigenous species:** Monitor. Predominantly healthy. Oystercatchers are all down the Waitahanui Estuary.
- **Swimming:** Acceptable (some views differ) – better than mid-upper Pongakawa. More water cress. Cleaner, clearer, attractive pumice bottom. Some riparian planting. Rather swim here than anywhere else – land use influence is lower down. “When I was young stingrays lived in the lower catchment of the Waitahanui so we would swim further up. Now people are swimming by the rail bridge.”
- **Mahinga kai and fishing:** Acceptable / good. Whitebaiting, trout, kahawai up past the rail bridge. Suitable to eat and quantity as good as 40 years ago. Trout and kahawai in good numbers. Whitebait varies seasonally. Good healthy fish life.
- **Objectives:** Keep as is – no decline. No decline in species diversity, size and presence.
- **Transport / Tauranga waka:** Too planted up to access. Public access is important. Water levels for vessel passage haven’t noticeably changed in 59 years.
- **Natural form and character:** Acceptable / neutral. Restore some wetlands – reinstate some balance. Flooding at river mouth. Blackberry and other invasive weeds on banks. Lacking information. Farming, forestry and erosion have altered natural character.
- **Wai tapu and sites of cultural significance:** Specific piece of work to be done with kaumatua of the area – needs to be specific to locals.

Attachment 2: Potential changes in land use by 2030: Summary of raw notes

1. Farming intensification – Land Use Change or Intensification

- North Eastern Bay.
- Intensification of horticulture is likely:
 - kiwifruit and avocado
 - will potentially see diversification into other crops e.g. vegetable growing
 - partially dependant on industry strategies and market returns
- Expect further kiwifruit development:
 - new varieties / colours
 - gold has greater value, therefore the amount of gold is increasing
 - land below 200 metres elevation, above the peat and not too steep could potentially be developed
 - area developed could quadruple
 - reliance on Hi-Cane and new management practices in the medium to long term.
- Housing increasing:
 - water take and stormwater discharge impact will be huge on the region
 - expect it will happen in the next five years
 - mostly around towns, minimal in rural areas
 - water demand increasing
- Industry increasing:
 - in next 10 to 20 years
 - in zoned areas
 - more processing as increasing specialisation of products
 - increasing food supply to the Tauranga and export market
 - increasing demand for water and wastewater discharge
- Afforestation in the mid-upper Pongakawa
- Around Te Puke
 - dairy converting to kiwifruit for better returns
 - farms subdivided into lifestyle block

2. Are there any other changes that you think should be on the radar?

- Climate change:
 - Councillor Nees confirmed research from NIWA. Kiwifruit will become marginal as there will not be frosts to set buds. We need to think about where things might go given the potential increase in climate change.
 - What is going to happen if the Dutch system of dykes comes here? What do we do about it?
- Wastewater reuse:
 - there will be a time where we will not have enough water to go around
 - with the quality of water coming out of treatment plants the water can be reused
 - household grey water reuse
 - dairy farmers recycle water taking it for cooling, using it for wash-down and then spraying it back on the land
 - this is the only way as otherwise infrastructure will not be able to cope
- Water storage / harvesting:
 - essential
 - on-site storage
 - house hold rainwater harvesting.
- Speed at which the change may occur could be subject to many issues. Restraints and restrictions could hinder.
- Water Banking:
 - human consumption is driving this
 - if the demand is there now, what will it look like in 20 years?