

# TANK Collaborative Stakeholder Group

## Meeting Forty-Two Record



**Meeting Start time:** 8:30am

**Location:** Ellwood Function Centre, 12 Otene Road, Waipatu, Hastings, 4172

- Note: this meeting record is not minutes per se. It is not intended to capture everything that was said; rather it is a summary of the proceedings with key comments noted. Text in italics indicates a response from HBRC to questions posed during the meeting.
- *Where additional information has become available subsequent to the meeting (such as answers to questions unable to be answered in the meeting), this is included in red italics*

NAME	ORGANISATION	Present	Absent
Aki Paipper	Operation Pātiki ki Kohupātiki Ngāti Hori	present	
Bruce Mackay	Heinz-Watties	present	
Chris Dolley	Napier City Council	present	
Connie Norgate	Department of Conservation		
Craig Thew	Hastings District Council	present	
Emma Taylor	Gimblett Gravel Grape Growers' Assoc.	present	
Hugh Ritchie	Federated Farmers		apology
Ivan Knauf	Dairy Industry	present	
Jenny Mauger	Ngā Kaitiaki o te Awa a Ngaruroro		
Jerf van Beek	Twyford Irrigator Group	present	
Joella Brown	Ngā Marae o Heretaunga	present	
John Cheyne	Te Taiao HB Environment Forum	present	
Keith Dolman	CEO, Hawke's Bay Forestry Group	present	
Kim Anstey	Napier City Council	present	
Lesley Wilson	HB Fruitgrowers' Association	present	
Mark Clews	Hastings District Council	present	
Marei Apatu	Te Taiwhenua o Heretaunga	present	
Matt Brady	Department of Conservation	present	
Mike Glazebrook	Ngaruroro Water Users Group	present	
Nathan Burkepille	Fish and Game NZ (Hawke's Bay)		apology
Neil Eagles	Royal Forest and Bird Society (Napier)		
Ngaio Tiuka	Ngāti Kahungunu Iwi Inc.	present	
Nick Jones	Hawke's Bay District Health Board	present	
Peter Kay	HDC Rural Community Board/Sheep & Beef Sector	present	
Peter Paku	Ruahapia Marae	present	
Scott Lawson	HB Vegetable Growers	present	
Te Kaha Hawaikirangi	Ngā Hapū o Tūtaekurī, Maungaharuru-Tangitū	present	
Tim Herman	NZ Apples and Pears Inc.		apology

NAME	ORGANISATION	Present	Absent
Vaughan Cooper	Royal Forest & Bird Inc.		apology
Xan Harding	Hawke's Bay Winegrowers	present	
<b>HBRC Staff &amp; VMO research team</b>			
Ceri Edmonds	HBRC – Senior Planner	present	
Drew Broadley	HBRC – Communications Manager	present	
Gavin Ide	HBRC – Manager Strategy and Policy		
Brendon Powell	HBRC – Team Leader Catchment Management	present	
Madeline Hall	HBRC – Senior Land Management Advisor	present	
Louise McPhail	HBRC – Consents Advisor	present	
Nicola McHaffie	HBRC – Senior Land Management Advisor	present	
Shane Gilmer	HBRC – FEMP Project Advisor	present	
Grant Pechey	HBRC – Principal Economic and Legal Advisor		
Iain Maxwell	HBRC – Group Manager Resource Management		apology
James Palmer	HBRC - Chief Executive		apology
Dr Jeff Smith	HBRC – Principal Scientist Hydrology/Hydrogeology		
Nazlee Josephs	HBRC – Project Administration Support Assistant	present	
Mary-Anne Baker	HBRC - Senior Planner	present	
Malcolm Miller	HBRC – Manager Consents		
Pawel Rakowski	HBRC – Senior Resource Modeller		
Robyn Wynne-Lewis	Facilitator - Core Consulting	present	
Dr Stephen Swabey	HBRC – Manager Science		
Tom Skerman	HBRC – Group Manager Strategic Development	present	
Dr Thomas Wilding	HBRC – Senior Scientist - Hydrology	present	
<b>Regional Planning Committee members</b>			
Peter Beaven	HBRC Councillor		
Rex Graham	HBRC Councillor		
Tom Belford	HBRC Councillor	present	
<b>Observers</b>			
Terry Kelly (guest of John Cheyne) Te Taiao Hawkes Bay Environment Forum			
Charlotte Drury (substituting Jerf van Beek) on behalf of HortNZ			
Tom Kay (substituting Vaughn Cooper) – Forest and Bird Lower North Island			
Phil McKay – Mitchell Daysh			
Peter Wilson (substituting Nathan Burkepille) – Fish and Game			

### Key to text boxes

	<b>Actions required</b>
	<b>Recommendations</b>
	<b>Decisions, agreement/disagreement</b>

## Meeting Objectives

- To review and consider the stormwater rules – identify where there are areas of consensus, propose alternatives and solutions where there is non-consensus;
- To receive the recommendations presented by the JWG;
- To understand the revised Water Quality Attribute Table 1 and new Table 2;
- Review the covering report and the Draft Plan Change – Identify any outstanding issues/problems and identify where there is non-consensus;
- Receive the draft maps and provide comment; and
- Review the final draft of the Implementation Plan – identify further suggestions.

### 1. Welcome and karakia

Robyn welcomed everyone and Te Kaha blessed the meeting with a karakia.

### 2. Apologies, Housekeeping, Agenda, Meeting Objectives

Hugh Ritchie, Nathan Burkepille, James Palmer, Vaughan Cooper, Tim Herman.

### 3. Notices

There were no notices

### 4. Objectives

Mary-Anne explained that this was the last scheduled TANK meeting with a full agenda (as per the objectives above) there was a lot of detail to cover. She noted that there was a fair amount of printed material in both the Draft Plan Change and the Covering report where feedback and identification of issues from the group will be appreciated.

### 5. “State of the TANK nation” Executive Housekeeping – Tom Skerman

*Tom told the group that there are a series of questions he wants to speak to.*

*Is this in fact the very last TANK Meeting? Of recent times the Group has been challenged around the speed, pace and time of meetings. There are concerns that people want more time to discuss issues these requests have been noted and we do understand the issues, I can confirm that this is the final TANK Meeting and it is not said lightly. Why is it the last when many of you feel that there is so much work to be done and so much discussion to be had? We are not ruling out that discussion but we are going to address the last two major outstanding items today - Stormwater and Drinking Water.*

*The Group is reaching a point where we are getting diminishing marginal returns in terms of the discussions. The Group has been going at it long and hard and it is time. There is no judgement, but what is beginning to come through in some of the comments on the Draft Plan is some external fingerprints which is understandable. People are beginning to think ‘what next’. The next phase being submissions. Some of the comments received represent more ideological views as opposed to issues based views which is fine, but it’s a sign that we are ready to move to the next phase.*

*Is this the end of the TANK Group? No, the relationships that have been built will be enduring. We talk about gifts and gains and the relationships built here are the gifts from the TANK process.*

*Next steps? This is the last decision-making forum for the TANK Group. On the 9<sup>th</sup> August you will be invited to a celebration of your hard work. This was originally slated as being a formal handover but we are not going to call it that. Discussions were had with a few TANK members, we’ve been usefully guided towards calling it a celebration and acknowledgement of the work that’s been done. I want to thank those people who have supported us in that decision.*

*Internally HBRC staff will be holding workshops for Governors, taking them through the Plan Change and how and why the consensus and non-consensus items were reached. Following that in honour of the Terms of Reference, there is an undertaking that once the Governors have considered the Plan Change that they will refer back or give the TANK Group the opportunity to receive any amendments or final decisions and comment on that.*

Then there is an opportunity to make submissions (Schedule 1 process) through notification. The TANK will play a big role in that, with their own constituencies and the wider community. The TANK Group is far from over as a group and we have the Implementation Plan which we are asking the Group to support.

I am using the word Governance as opposed to Regional Planning Committee. It was the RPC who constituted this Group. As some of you may be aware there has been some strong words spoken across the table of the RPC not formally in a RPC forum but nonetheless in a public forum. The issues that have been raised are a real challenge to us as an organisation and do create some uncertainty in terms of how we are going to advance our planning documents and planning processes and these are issues that I'm quite confident will be resolved. Those resolutions have to take place at a Governance level. Staff are going to continue with 'business as usual' and keep faithful to the process. This plays a part in why we are taking the opportunity to celebrate on the 9<sup>th</sup> August as opposed to formally handing something over. It is not entirely clear who we are handing it over to at this stage. I wanted to acknowledge that because it's a live issue and we look forward to a good resolution and outcome to those issues.

The last question has this Draft Plan come together? I am really happy because some incredibly hard work has occurred and produced a document I honestly believe can and will work. It's a document we can hand to our Governors pointing out the issues and areas we know are going to be difficult. It's an elegant document that goes a long way towards delivering significant change that the community are asking for. We should be able to narrow down the issues that will see us end up in the Environment Court. As we go through submissions etc., this group is advising, helping and supporting people and those conversations start at such a strong level and based on good relationships.

The 9<sup>th</sup> August is the opportunity to acknowledge everyone who has worked really hard and I'm really pleased that we have reached this point. It is a significant day for our organisation and I want to acknowledge the hard work that you've done. Thank you so much.

## 6. Stormwater Policy and Rules – Rina Douglas

Rina introduced her presentation with a photo of the Stormwater Working Group (SWWG) on a visit to one of their more notorious stormwater sites in HB, Lowes Pit. She explained the field trip marks the journey of the SWWG and was helpful for the Group to hear the initiatives that were taken by the TLA's to address some of the issues.

At the 22 February 2018 TANK meeting four draft stormwater rules were presented. These were the result of discussions and analysis by the Stormwater Working Group, the technical staff, TLA's and HBRC staff. The TANK Group considered those and agreed that we continue to refine them. There was quite a bit of feedback on those rules and the TANK Group was thanked for their time and effort in delving into really technical matters and providing helpful feedback.

There has been a few meetings since then to further refine those draft rules the most recent was on 24<sup>th</sup> July, where the SWWG met with TLA representatives to narrow down what we wanted to present back to the TANK Group. The purpose of this presentation is to bring the final four draft rules.

### Rule 1: small-scale residential activities

- New and existing small-scale residential activities (note definition still being refined)
- Diversion and discharge of SW into water or onto land is permitted
- Subject to conditions i.e. no scouring and erosion, no hazardous substances etc.
- Discharge is not permitted if there is a TLA reticulation option present.

### Rule 2: TLA networks

- Diversion and discharge of SW from an existing or new TLA managed SW network
- TLAs will be required to submit for the approval of Council an Integrated Catchment Management Plan
- This plan will capture such as monitoring of water quality, identification of priority streams or catchments, identification of measures to demonstrate the discharge will not contain hazardous substances and contaminants
- This will be a controlled activity

### Rule 3: low risk industrial or trade premises

- What constitutes low risk is still subject to refinement. Table 3.1 of the Waterways Design Guidelines is a starting point
- Controlled
- Note if the premises is located over a Source Protection Zone, regardless of being low risk = becomes Restricted Discretionary Activity

### Rule 4: high and medium risk industrial or trade premises (and low risk over an SPZ)

- What constitutes high and medium is subject to refinement. Table 3.1 of the Waterways Design Guidelines is a starting point
- Restricted Discretionary
- Required to prepare an Urban Environment Site Management Plan which outlines measures such as stormwater management devices, use of best practice treatment
- Where the premises is located on an SPZ, Council can control: the appropriateness of measures, the effect of the activity, assess the potential for the purpose activity to increase risks etc.
- Note if the premises is low risk and is located over a Source Protection Zone= Restricted Discretionary activity



Rules 3 & 4 are new. Rule 3 targets low risk and industrial or trade premises, Rule 4 targets medium to high risk industrial or trade premises. What constitutes those categories of low risk, medium, high etc. it is all subject to finer refinement. We are looking at table 3.1 of Hawke’s Bay Waterway Design Guidelines which is available on the HBRC website and that covers the full list of industries, contaminants and treatment practices. The document needs a bit of work and was discussed at length how it can be made fit for purpose. When we are assessing consent application we need a robust matrix or process that clearly identifies what falls into the various categories. The other thing to note is that even if an industrial or trade premises is considered low risk, if they are located over a Source Protection Zone they will become a restricted discretionary activity.

- The definition of small-scale, residential activity, and
- Overhaul of Table 3.1 which sets out what are low, medium and high risk activities

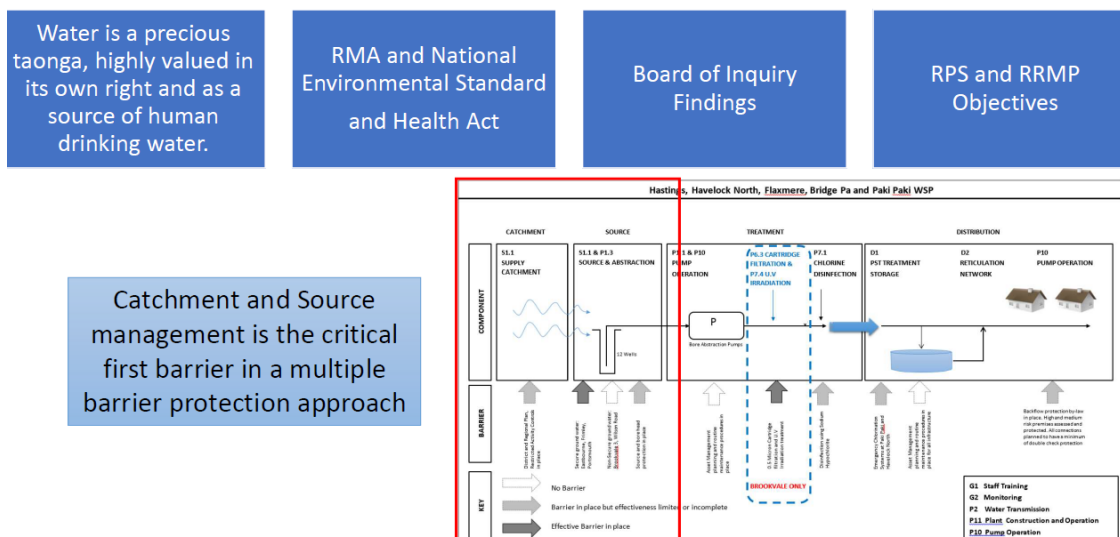
There was a White Board session, the comments have been captured in the Meeting 42 Response Sheet.

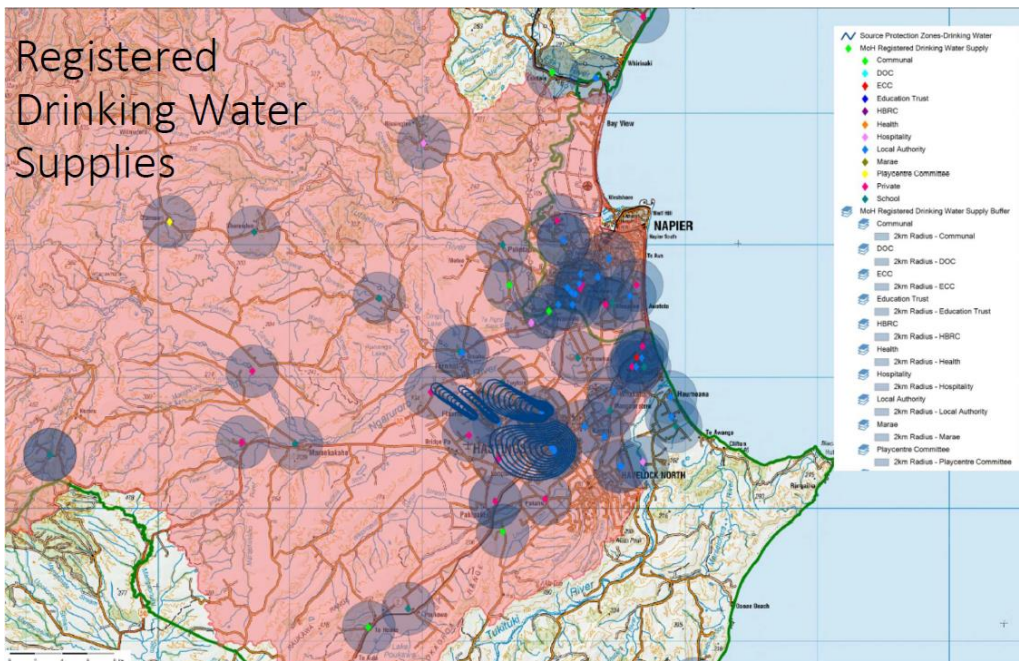
### 7. JWG Recommendations – Craig Thew & Dr Nick Jones

Nick thanked Annette and Grey from Good Earth Matters (GEM) for their hard work on behalf of the JWG.

Craig presented provided a recap of the GEM presentation from May as a number of the TANK Group were not present, explaining why Source Protection Zones are required, why the rules are in place and how we define the protection zones. The crux of it is getting to the rules and objectives that the JWG has unanimously proposed through to TANK.

Issue Identification: Why do we need Source Protection?



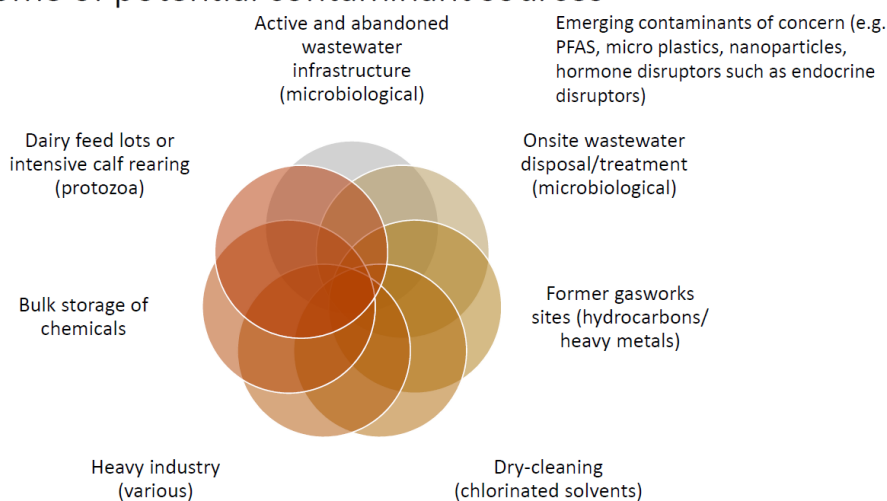


The map highlights a number of registered drinking water supplies across the TANK catchment.

Regional Rules cannot include Permitted Activities unless satisfied they are not likely to introduce or increase contaminants such that health standard or aesthetic guidelines are not met after existing treatment.

Craig explained that there are many ways that contaminants can get into a drinking water source. The HB community have lived under a myth the reality is that the water beneath our feet is not protected, it's not pure and there are a number of ways it can be damaged and put us all at risk.

### Some of potential contaminant sources



Contamination can enter Heretaunga Plains aquifer systems by:

- Surface contamination leaching into unconfined areas of the aquifer, or in confined areas where the aquitard is thinner or 'leaky'
- Operational and decommissioned private bores which intercept the aquifer system – poor bore head security – direct or less restricted pathway into groundwater
- Contamination of springs and spring feed streams for hydraulically connected bore fields
- Stock access to unfenced water ways or run-off during high rainfall events
- Breaches or damage to the aquitard could open pathways for contamination of the aquifer.

Craig reminded the Group that the aquifer is an extremely complex system. This highlights why there needs to be an understanding of the activities in the catchment, there is no guarantee that the aquitards are waterproof as there are degrees of leakiness. This is a key point that Tonkin & Taylor have concluded, there is potential for vertical movement for water over the confined aquifer. This has been put into the model, to model the risk and identify the source water protection zone.

Tonkin & Taylor's approach for developing SPZ's is as follows:

- Immediate protection zone (SPZ1)
- Microbial protection zone (SPZ2): defined by numerical modelling that represents 1 year groundwater travel time from the bore field
- Capture zone (SPZ3): defined catchment by hydrogeological boundary. Where a time of travel zone is required to prepare an SPZ3 a 10 year time of travel threshold was used.

## Recommended Regional Plan Amendments Overall Structure & Intent

Objective

- Manage activities in SPZs of registered drinking water supplies to ensure water does not become unsuitable for human consumption & risks to supply of safe drinking water are appropriately managed

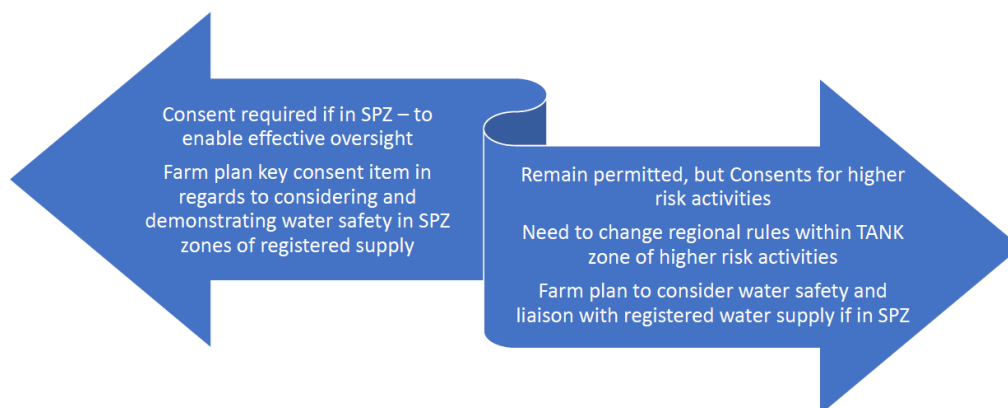
Policy

- Define SPZs via an appropriate technical method; adopt 2km default radius where SPZ undefined
- Regulate activities that have potential to cause adverse effect / risk to source water safety
- Guidance for decision making on consents
- Encourage & participate in sharing of information and collaborative multi-agency groups

Rules

- Improve knowledge re activities in the SPZs and verify Permitted Activity criteria are met
- Where activities already require consent, ensure that risks to drinking water sources are part of decision making process when located within the SPZs
- For some activities where there is an potential risk to drinking water sources, require consent in SPZ areas.
- **Activity status in SPZ areas to match activity status of other sensitive areas (eg unconfined aquifers)**

Craig noted that the biggest discussion the JWG had was around productive land use within the SPZ and how to deal with that. Two options were discussed:



The JWG took on board Mary-Anne's recommendation – to think about what it is that we are actually concerned about in production land. As a consequence the JWG agreed to leave it as permitted activity rule with expanded requirements within the Farm Plan, and change the regional rules within TANK to focus on the at risk activities.

There may be some residual risk which is not captured in these rules which is one of the reasons why Good earth Matters proposed production land use consent but the JWG felt on balance that it was better to give people more certainty about what the risks are and have rules for those but as was pointed out that might require multiple consents for some places, that's the trade-off.

Those rules apply to not only production land use but also to industrial users who will need to comply with those rules. There was stuff going on in parallel and you'll note in the table that we have reflected all the Joint Working Groups plan changes.

The following recommendations were put to the TANK Group from the JWG.

- Recommendation one: production land use controls to be included in permitted activity rule with expanded requirements for Farm Environment Plans in SPZ, and changes to regional rules for noted activities - Y/N
- Recommendation two: All other rules to be accepted by TANK as recommended by JWG subject to further technical refinement Y/N

The Group broke for morning tea.

### Questions & Comments

Intrigued about the confining layers and the impact particularly on Eastbourne with the 80m deep wells. Most of the other irrigation wells in that vicinity are 36-39m deep and probably have two confining layers, is that taken into account in the management protections? Is there backflow protection at the top of the bores?

**Craig** – All water takes out of the layer change the hydrostatic pressure which changed the effective leakiness of the confined layer. Water takes at 30mm, 50 or 70m all have a collective impact but we don't know the precise route because we don't have enough information of all of those layers yet. It's an extremely complex three dimensional braided river and the work that Jeff and the team with the fly over will help us define those layers better.

Backflow protection should be in place at bore heads and that's to stop water (if you have a pressurised system) being pumped backwards, back down into the ground. Bore management and maintenance of bores is important (HBRC are doing inspections). The SPZ's highlight areas that we are particularly interested in, it's a priority area. Communication is important e.g. storage of contaminants. There are different activities in the SPZ that have the potential for contaminants or viruses to leach into drinking water e.g. Waipatu septic tank is too close to drinking water and the viruses that affect us are from human viruses. HDC/NCC will be managing techniques.

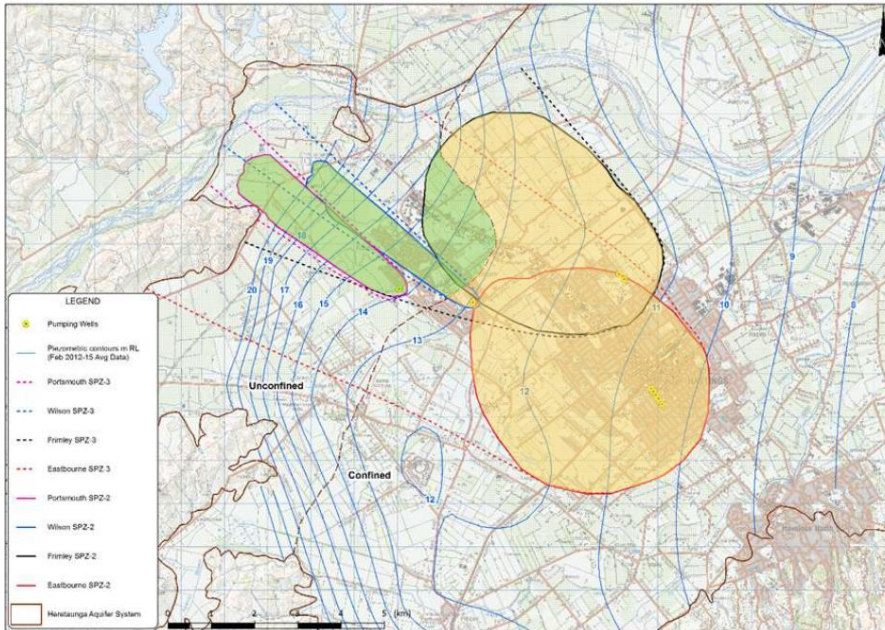
There is a lot of movement going on sub surface, queried if it was the splatter or drawn effect?

**Craig** – there is a natural hydraulic gradient under the ground in summer and winter time and the effect of the zone is altered by the Watties take which is just over 300l/s. That's all taken into account in the modelling for that zone.

The map of the blue zones represent areas where additional requirements under a farm plan would exist. Four areas shown around the HDC bore fields. Seeking confirmation that this applies to City drinking water supplies and not all the smaller ones?

**Craig** – All rules apply to four SPZ's in presentation (see image below) until such a time that these are further or better defined. Until we have a better view of that default zone. It was a balance that we took but happy to take advice.





Overlay of Hastings SPZs with unconfined aquifer

Portsmouth Road, Wilson Road and part of Frimley SPZs are in unconfined aquifer. Activities recommended to be discretionary in SPZs already require consent as Discretionary activity over unconfined aquifer.

[Solid waste on production land; new sewage systems; solid waste to land; discharges that may enter water; animal effluent]

Recommendations do not change activity status in these areas

Recommendations change activities from Permitted or Controlled (Animal Effluent) to Discretionary (ie, give the SPZ similar status to the unconfined aquifer area)

Rule 7 - includes root systems, by definition within these designated SPZ's we wouldn't be able to clear any vegetation if it has roots going down into the confined aquifer. This is a bit over the top and needs moderation.

**Craig** – There is a note in respect of this 'What is the situation we really care about?' In the Havelock North event there was no conclusion as to what had actually changed – there had been a lot of tree felling and rotting trees, that was one potential hypothesis. That's why it's tabled. The JWG haven't come to a conclusion as to what the reasonable level is because there are some tree types and environments that we would want to know about but generally not.

Did the JWG consider the risk around abandoned bores or bores that are not covered by a consent?

**Craig** – Abandoned bores are a big issue and what we know from other investigations there are approximately 30-40% more bores than there are records for. There are rules around decommissioning those bores (RRMP) that we know about, but there is a management issue about how to go and find them. HBRC tried survey but there was a low participation. Those who said it was all good, site inspections found that none of them were good.

**Nick** – Could that be included as a guideline as part of FEP?

Rule 37 new sewage systems. Does the rule apply to the Ruataniwha Plains because it is outside of TANK?

**Craig** – This is the regional rule, therefore Ruataniwha is included.

What is the intention of how this rule applies to Maraekakaho? The prohibition on new discharge only applies to wastewater, the presumption you can't have a house with more than primary treatment. It's a prohibition.

**Grey** – That is an existing RRMP rule.

**Craig** – There is a change from a permitted to restricted discretionary activity, you would need a consent

**Annette** – Only changing the existing rule to include reference to SPZ's

**Gavin** – Rule 37 was inserted in the RRMP in 2009 through Plan Change 3. Houses with on-site waste water discharge or treatment needs a consent and due diligence to assess the impacts. Where the discharges do not comply with Rule 37 they are discretionary (Rule 52).

At the Awatoto Bores understand they would be under positive head is there risk of contamination

**Craig** – Tonkin & Taylor only looked at HDC bores, haven't looked at Awatoto. Every zone on the blue map has the default 2km zone.

**Chris** – NCC is getting this work done in the next 12 months

There is confusion about the default zones and different regard to protecting water source to SPZ's. When will those on the lower bar be picked up to have their water supply protected e.g. Marae not registered. NCC and HDC will do a lot more work, bringing the blue zones into SPZ's, but can we afford to wait?

**Craig** – JWG went through a balancing discussion, if we could have more confidence in the default zones. Took a staged approach to justify the default zone. Concerned about potentially creating requirements without having done the work to support it. A better or slightly more conservative default zone might be a good way to start and allow people to grow a bit. HDC ensuring other supplies will be investigated within time for the Plan change. Individuals can become scheduled.

**Nick** – There is a lot of other policies and rules in the plan to protect the quality of water (without requiring scheduling) and will have the net effect of improving the quality of the water.

How do the small supplies afford the work to get the investigations done? Households and communities will potentially miss out on the extra protection within the plan change. Tangata Whenua reluctant to register supplies in the first instance. Costly and takes time.

**Craig** – Not sure if there are any between 500 (people) and municipal supplies, will have to check the register  
*Gavin confirmed that there are no non-local authority registered supplies that are 500 plus, they are all less than 500.*

**Mary-Anne** – *The key is understanding what activities are going to pose a risk to groundwater or surface water that is subsequently used for drinking water. There are a lot of activities that could have those outcomes when protecting the wider environment, it's going to be a matter of degree. Are we eventually going to require consents for all of those (blue default zone) areas because they cause a risk to groundwater or are we making sure that we establish performance standards at the right level to protect groundwater? One of the things in the Plan is a policy to work with the Councils to identify communities that are at risk from water reliability or quality and to look at how we resolve those risks as well. It's not all about rules it might be better reticulation or water supplies.*

A whiteboard session took place. The notes from the session are captured in the Meeting 42 Response Sheet.

#### 8. Water Quality Attributes Update – Sandy Haidekker

Sandy spoke to the group and recapped what was agreed on in Meeting 39. She noted that for some of the objectives and limits, we are quite far away from meeting the targets in some rivers, as seen in Table 1. The aim is to get out of the bottom line through management responses such as planting which will have an effect on water quality.

The second table gives us a long term perspective of the objective. The Group (previously) agreed on water clarity, turbidity and deposited sediment to be included in the plan, these two variables have now been added.

Sandy explained that Cyanobacteria has been omitted from Table 1 in error (which is at less than 20% and it's an alert level). Turbidity is for the upper catchment, zone 1 is always upper Ngaruroro and upper Tutaekuri and a guideline for trout fishery at 0.7 with two statistical guidelines for Hill country and lowland areas.

There was some discussion about the maps which had been presented, it was noted that some of the colours did not correctly cross reference to the legend. This will be amended.

Sandy explained that the 'boundaries' of the zones were based on ecological similarities, having a big main stem gravel bed and tributaries that is smaller in one hill country, algae dominated and lowland, macrophyte dominated.

#### Questions and Comments

Wanted to socialise the Group with the Treaty Partner Working Group request for the Freshwater Management Units to align with Hapu Management Units

**Ceri** – *Noted that in the (pre-circulated) response sheet indicates in Table B Work in Progress (number 5), Hapu Management Zones/Freshwater Management Zones is an identified item that we will be working on. It highlights a discussion we had with our Treaty Partners and I've identified the 7 units that were suggested. It is indicated in the Table that further work is needed around Sandy's ecological characteristic zones and the monitoring etc.*

What is the difference between limit and target and the consequence of going below the "maintain" limit.

**Sandy** – *They become a target when they don't meet the limit. Then you have to manage them.*

**Mary-Anne** – *The table that Sandy put together is now connected to the priority catchment, priority stresses, policies and provisions around farm plans milestones and targets. If the catchment doesn't meet the limits, the target that we are*

*aiming for is then reflected in the maps that indicate priority catchment. The objective is to maintain. We have rules around activities, the farm plan commitments identifying risks and mitigation measures and additional rules for land use change and those are the mechanisms by which we want to maintain.*

Does not achieving the limit trigger any other rules and provisions?

I can't see anything in the plan that answers your question, the plan is somewhat silent on that.

Sandy provided the following background:

Attributes, turbidity and deposited sediment has been included now, it wasn't in originally because water clarity attributes presents all the values and is a critical value for that. Turbidity is now an additional guideline using trout fishery for the upper catchment and statistical the NZ guidelines for the mid to lower catchment tributaries. There is less than 20% cover for the deposited sediment guideline and is recommended in the guideline report. There is also an additional one of 15% which is seasonal e.g. spawning in the upper catchments.

MCI, was discussed for zone 4 and that is the lowland tributaries for the Karamu catchment and some of the Ngaruroro tributaries were shown as having an MCI of 80, the Group asked for this to be increased to 90. This was taken on board. A further query from the Group was whether this could be raised to 100. This has been included in the aspirational target in Table 2.

For *E-coli* the Group asked for a change the upper zone to something more stringent than the A band in the NOF which gives you four different statistical guidelines and one of them is 5% over 540. It was changed it to 260, it is more than the band A in the NOF.

The remainder of the Table stayed as it was.

The Group discussed dissolved oxygen in Meeting 39 for zones 1, 2, and 3 for the upper catchments, the main stems and hill country tributaries, this should all be above 80%. The A band of the NOF guideline which is more than 8mg/l as a seven day minimum and more than 7.5 as a one day minimum. We don't have a problem with that at our SOE sites. In the Karamu catchment or lowland streams periods of anoxia occur, this is shown as D band and below bottom line. We need to start management and raise it from D band to C band. It's in a bad condition and it's a lot of work where we have to wait for plantings to have a result on water quality. We can have dissolved oxygen guidelines that are more stringent in table 2 which is more aspirational and longer term management. We can start with the ones in the priority catchments where we have anoxia and try to lift it above the bottom line threshold.

What is the sampling frequency for E.coli?

**Sandy** – *In the recreational sites we have summer weekly samples and all the rest is monthly samples*

Is there a difference between saturation and %?

**Sandy** – *Saturation and percent changes with temperature, warmer water holds less oxygen and this is why the NOF guideline gives you mg/l*

For MCI, the policy refers to NOF bands, do we need to change the policy?

**Sandy** – *The MCI doesn't have a NOF band. For the lowland streams, an excellent condition is anything above 100 (of an MCI) so it's not a NOF. That's why this is in Table 2.*

**Mary-Anne** – *Objective 2 refers to the NOF band*

Confused with the references to Nitrate, Nitrite and DIN, does nitrate equal DIN?

**Sandy** – *Dissolved Inorganic Nitrogen is Nitrate = Nitrite + Ammonia. DIN is the main component is Nitrate. DIN relates to algal growth and nitrate and ammonia relates to toxicity guidelines and that is another cause and effect relationship. They have different values and levels as one relates to toxicity on fish and the other to plant growth.*

How is monitoring of dissolved oxygen done?

**Sandy** – *It is continuous monitoring which we rotate.*

Sandy noted an error in the Table (footnote to E.coli and MCI) this will be removed.

It's hard to work out why temperature is higher in the upper regions. Is it warmer as it goes down?

**Sandy** – *This is elaborated on in the NOF attribute discussion paper. There are different temperature bands for different regions - Maritime or Eastern dry climate. Maritime does not apply to HB. HB has an Eastern Dry climate, which results in bands 1 degree higher. There is a difference from the Eastern Dry climate reference to the natural condition. HBRC only have loggers in the upper parts of the catchment. If we used the same index as we used in the NOF proposed discussion paper then we are already in the B or C band and/or pristine sites. A few years showed higher temperatures were reached in the pristine sites. We are already at more than 20 degrees in zone 1 which is higher than Cox Rutherford. The species that we find or expect there would be protected. 21 degrees is already the temperature recorded in the upper catchments we are quite happy with the MCI there and the fish we find. They are living above where NOF says it's already impacting on species. The smaller tributaries that have a shorter length of warming up to manage for 22 degrees and a lot of them don't meet that yet. They are 23 or 24 degrees in the Hill Country tributaries and in the low land we have to start shading for very high temperatures there.*

I disagree with that proposal, you can either have the temperature criteria high or you amend the values of the fish species. I don't have an issue with the science, it's a policy issue.

Can you explain cyanobacteria guidelines?

**Sandy** – *We have the MFE guideline for cyanobacteria, less than 20% cover. We do not have the science to manage cyanobacteria. It is in there but it is an alert threshold.*

The Group broke for lunch.

## 9. Late Notice

Waiohiki Marae Public Planting this Saturday at 9am

## 10. ...Continued. Water Quality Attributes Update – Sandy Haidekker

Sandy continued her presentation, asking the Group whether there was anything else that needed to be covered in Table 2 Aspirational Water Quality Targets (water quality and objectives already having been covered).

### Questions and comments

What does 'All flows' mean?

**Sandy** – *Measurements taken at all flows regardless of high/low flow.*

Still not confident that I understand how failure to achieve a limit or target is addressed in the Plan.

**Sandy** – *HBRC undertake SOE monitoring, looking at trends and that's maintaining the current state. The proposed TANK Maps and priority table identify where we are significantly over the guideline or limit. The next step, is to look at where we realistically start management. This will be where we have the greatest exceedances and critical source areas.*

It seems subjective as to what an exceedance is and discretionary if limits/targets are not being met.

**Mary-Anne** – *The Plan is trying to reflect quite complex and various issues in the catchments. We have to consider what is it that we want (water quality) and how do we get what we want (targets and limits). There is input from science around sediment control, riparian planting, stock exclusion etc. that we know will make a difference to water quality and ecosystem health. There was a focus in terms of getting those things done in the next ten years. It was the priority activities that we were focusing on in order to get the objectives we were looking for.*

*There are some risky activities in terms of meeting the targets that we set e.g. land disturbances, sediment problems and land use change. Concern about what changes might happen that require more control. Going to meet the objectives by working with primary industry and having them understand that there is a problem in the catchment that they are in. This work needs to be on at a catchment scale and it's reflecting the fact that one size does not fit all, we have a range of issues across the catchments. The onus is on catchment collectives, industry programmes, and farm plans to identify the problem that exists in that particular catchment and deliver the appropriate mitigation. The Implementation Plan will work alongside*

*the Plan to enable the objectives to be met. Regular meetings will be held with the stakeholders to ensure accountability and to assess whether milestones have been met.*

*Plus there is Council control over the farm plans and the catchment collectives. These identify the issues within the catchment and will set out the mitigations proposed. One of the challenges is to knowing whether you are improving things. What does success look like? We are not going to see improvements in these attributes in five or ten years' time. We've acknowledged that it's taken a while to get this bad, we need time to improve things. That is why we have milestones around those things that need to be done. If those things are not done we can expect that we will not meet our objectives. It's a package that's been built through these meetings. There was discussion with the Treaty Partners that lead to an objective that says to look at all those attributes collectively because if you focus on one, you lose the integrated management of those waterways.*

There are no clear timeframes in this plan stating when things will be reviewed with respect to the limits, targets and goals. That is the missing feature of the structure of the plan. If one was provided, it would help with some of the questions being asked. Suggest adding clear, common timeframes for review. It will help things substantially. 2025 gives measures around fencing, good management practice etc. a chance to work (I personally don't think it will work). Then could have a targeted plan change for the part of the region that has the problem.

This review could be linked to the SOE monitoring with the next SOE report in 2018 then five years on.

It is going to take five years to do the planting and fencing then another five years to see whether any changes are occurring, 2025 is ridiculous.

If we see deterioration occurring, what is the trigger to make changes? Don't want to wait five years (potentially).

Agreement: That a review clause be developed and circulated in the next iteration of the plan.

#### 11. Draft Maps – Sandy Haidekker

Sandy noted that the maps are not complete yet and there are errors which need amending. The concept of the maps is to highlight where the priority areas are, where the highest yield and concentrations are that impact on our values.

Action: Add some more place names, identify rivers so people can work out where they are

Sandy noted a point of clarification – she has calculated the yields by what comes into the estuary. The concentration map relates to algal growth, complimented by SOE monitoring. This tells us where the algal growth is highest because we have higher concentration. The yield or the load coming into the estuary is valid for the estuary itself.

Sandy suggested to the Group that should they wish for further attributes to be included within Table 2 these could be discussed with her at the meeting or emailed.

There was a query as to where the estuaries are. Sandy explained that they are represented in Table 1 as the accumulation rate and the loads coming into the estuary in terms of priority management in the Yields map.

#### 12. Covering Report and the Draft Plan Change – Identify any outstanding issues/problems and identify where there is non-consensus – Mary-Anne Baker

Mary-Anne addressed the Group explaining that there are a number of issues that the Group haven't entirely resolved these have been captured in the Meeting 42 Response Sheet. The intention for this next item was to run through these with the Group, capturing comments on the whiteboard. She welcomed any further feedback on how these should be addressed.

The feedback has been captured in the Response Sheet.

The meeting closed at 4:30pm.