Healthy Rivers PLAN FOR CHANGE | Wai Ora HE RAUTAKI WHAKAPAIPAI

Collaborative Stakeholder Group ("CSG") Workshop 17 Notes

(Day one) 1 October 2015, Don Rowlands Centre, Lake Karapiro, 9.30am – 5.00pm

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Attendees:

CSG:	George Moss (Dairy), Gwyneth Verkerk (Community), Phil Journeaux (Rural Professionals), Ruth Bartlett (Industry), James Houghton (Rural Advocacy), Jason Sebestian (Community), Sally Millar (Delegate for Rural Advocacy), Charlotte Rutherford (Delegate – Dairy), Alamoti Te Pou (Māori Interests), Evelyn Forrest (Community), Gina Rangi (Maori Interests), Brian Hanna (Community), Dave Campbell (Delegate for ENV/NGO), Rick Pridmore (Dairy), Graeme Gleeson (Delegate - Sheep and Beef), Alan Fleming (Env/NGO), Patricia Fordyce (Forestry), Tim Harty (Delegate – Local Government), Weo Maag (Māori Interests), Garry Maskill (Water supply takes), Gayle Leaf (Community), Don Scarlet (Delegate – Tourism/Recreation), Matt Makgill (Community), Tim McKenzie (Energy)
Other:	Bill Wasley (Independent Chair), Helen Ritchie (Facilitator), Stu Kneebone (Deputy Co-chair), Kataraina Hodge (Deputy Co-chair), Jo Bromley (WRC), Billy Brough (River Iwi Co-ordinator), Janine Hayward (WRC), Jackie Fitchman (WRC), Will Collin (WRC), Janet Amey (WRC), Jonathan Cowie (WRC), Justine Young (WRC), Emma Reed (WRC), Ruth Lourey (WRC), Jacqui Henry (WRC), Michelle Hodges (WRA), Grant Kettle (Raukawa), Alan Livingston (HRWO Co-Chair)
TLG:	Dr Bryce Cooper (Chair), Graeme Doole, Liz Wedderburn, Antoine Coffin, John Quinn
Other staff (part):	Vicki Carruthers, Tony Quickfall, Sarah Mackay, Tracey May

Apologies:

CSG:	Rosemary Dixon (Delegate – Energy), Chris Keenan (Horticulture), Alastair Calder (Tourism and Recreation), Elizabeth Aveyard (Delegate – Industry), Liz Stolwyk (Community), Garth Wilcox (Horticulture - Delegate), Michelle Archer (Env/NGO's), Sally Davis (Local Government), Stephen Colson (Energy), James Bailey (Sheep and Beef),
Other:	

Item	Time	Description	Action

1.	9.30am	**Opening waiata**	
2.	9.35am	**Intro to CSG17 process** Apologies for the workshop were noted and introductions made by Gwyneth Verkerk in Bill Wasley's absence.	
3.	9.40am	**Modelling outputs 2 – Dr Bryce Cooper and Graeme Doole (DM#3574464)** TLG member Dr Graeme Doole gave this presentation Key points from his presentation included: • A recap on the goals of the modelling work and how the model works • The modelling of this round of scenarios looked at variations on improving water quality by 10%, 25%, 50%, 75% and 100% of the way towards achieving the scenario 1 limits (from the first round of modelling) • 3 variation cases were looked at: - All contaminants are bound to the limits defined and land-use change is constrained to historical (past 40 years) ranges - All contaminants are bound to the limits defined and land-use is fixed for the 10% and 25% movements whilst unconstrained land-use is the case for the 50% to 100% steps - All contaminants except TN are bound to the limits defined and land-use change is constrained to historical ranges • 10% movement along the path means an improvement of 10% towards scenario 1 limits (for every attribute). For example if the current state of a site for median-nitrate level is 2 g m^{-3} and the scenario 1 goal is a level of 1 g m^{-3} , then a 10% movement would mean that the new limit (for that scenario) would be 1.9 g m^{-3} • A key finding is that the 10% and 25% scenarios are able to achieve gains for less cost, through cost-effective mitigations. • As we move towards 50% there are diminishing returns and the toolbox begins to empty about the 75% of the way mark • Beyond 75% more breaches in the limits start to occur. 75% and 100% are best viewed as quite similar – both indicate high costs and an emptying of the toolbox • The impacts on annual profit as predicted by the modelling were outlined • The annual costs of the mitigations under each scenario were shown. These were discussed with the CSG and further details on mitigations were to	**Is there REM in forestry streams? TLG to respond**

		be discussed during the mitigations session later that day. • The impacts on land-use change and production as predicted by the modelling were outlined • Adoption of discrete mitigations as predicted by the modelling was outlined. In particular mitigating 2-pond systems and improved P management were highlighted as long hanging fruit. • The % of breaches of limits at sites as predicted by the modelling was outlined. • The % of scenario 1 limits that were met at each of the different steps along way was outlined. It was encouraging to see that many of the long term goal limits were able to be met at the 10% and 25% steps. • Another key finding of the modelling was for the variation about not putting a limit on TN and seeing if they values could still be achieved but for less cost. The model showed that there was little change by doing this. The reason being that the mitigations that are used to get improvements from the other contaminants have co-benefits for TN, which results in TN being decreased regardless. • The flow on effects for regional and national impacts were outlined. This was shown both in terms of impacts on value added and for employment. <u>Discussion points:</u> • What will minimise risk of toxic algal blooms? o The model looks at algae generally but it's debatable how this addresses risk of toxic bloom • Why does riparian fencing/ farm plans not kick in earlier? o Modelling is showing it's more cost-effective to reduce contaminants through edge-of-field (traps, bunds, wetlands) because their effectiveness is high for all the contaminants, e.g. soil conservation deals with sediment and P only; fencing has lower efficacy • Industry – what drives the cost there? o Improving the discharge quality • Wetlands – is their effectiveness/use sitting at a proven level? On pumice? o Good question – modelling highlights where we need tech people to focus o Not an option on free draining soil • Does the model take into account that with increases in forestry we will have more forest	

		processing discharges? o No feedback between amount of forest planted and industrial discharge • Does it count for there being nobody left to pay for municipal discharges? o No but IA might look into affordable infrastructure • Municipal – cost to change to land based system looks light? o It's an annualised cost over 25 years • Do the farm plans only deal with pastoral? o Yes • Why do we have 74 subcatchments if we don't have monitoring sites there? o Set up in the model makes sense hydrologically, not always coinciding with WRC sites (model also has virtual sites) o Necessary for model but need to consider this again for setting limits • Can we have information on how many scenario 1 limits are met (% of sites) and as absolute numbers of sites for constrained, unconstrained and mitigations only? o Yes • What is the total number of jobs in region? o 2014 – 2.4 million jobs in NZ o 2014 – 198,000 jobs in region o 2007 – 17.896 billion regional value add	
	10.40am	**Morning tea**	
4.	11.00am	**<u>Integrated assessment outputs Round 2 – Liz Wedderburn and Antoine Coffin (DM#3574546)</u>** CSG Chair Bill Wasley arrived. Bill acknowledged Gwyneth Verkerk for opening the workshop. Liz Wedderburn noted that further work has progressed since the last CSG workshop. The IA expert panel has also met. The Round 2 results were discussed with the group. <u>Discussion points:</u> • Why doesn't recreation increase as clarity improves? A – Not sure. • Does this assume riparian fencing under Accord includes a buffer? • A - Model includes one mitigation of stock exclusion and another of 5m buffers. For suitable for model to be accurate – but there is a cost to shift current fences to create a wider buffer. • Note that terrestrial biodiversity is a value but it hasn't flowed through to model. If we set limits for water quality, farms may need to have plans and biodiversity gains may result from that.	**Tim H to get data on municipal wastewater for the IA team** **Summary from WRC for when each of the major point source consents are up for review and the powers under their 5yr review clauses and loads from each – Mark B**

		• Note that South Waikato District Council (SWDC) have riparian buffer rules but didn't see biodiversity as a District Council matter. Planting requirements would have to be done via resource consents. • Narrative on riparian access – can't assume any effect on public access rights through this process. • No reference to setbacks that horticulture and forestry are required to do – capture this in baseline narrative. • Land values mentioned on page 101, but only in reference to dairy. Show land values right through. If forestry is locked into forestry only then land values will decrease. • Infrastructure – 10% step – minimal effect – looks like cost to improve point sources further are a step change and become unaffordable for some smaller areas. Action: Tim Harty can find data to show this. • Concern over assumption that land use change all goes to pine forestry – what about other land uses/ forest types. • Infrastructure - flow changes are not considered significant under constrained land use. IA is inconsistent because it says energy will be affected by change in flows, but the flow indicator doesn't change.	
5.	12:00pm	**<u>Reactions and reflections</u>** Small group session looking at: • What does this mean for us, in setting limits and targets? • What would we aim for in first Plan Change period? (still know we haven't looked at lakes) Groups fed back their initial responses. Summary from small groups • Range in groups' numbers • Hold the line to 10%, to 15-20% by 20yrs • With a ten-yr target to check when 10-yr review occurs • Within twenty years we could expect major pt sources to all come up for consent – get this timetable • Note that there are also 5 yr reviews How to achieve sector equity? • Pro-rata or Best Practice? • Step changes are required all-round (capital investment/capital write-off) • What is practicable will vary across sectors and individual properties – issue with ability to pay • Best practicable option applies to consents (toy	

		law) – direct discharges • Might need to change people's thinking about the most effective sort of changes • Ideal places for some mitigation might be on another property and identified at a catchment scale • Have to bring people along with what we're trying to achieve and why • Can capture all land blocks under region-wide rules. Must be <u>enforced</u>. Farm plans might only be required for larger blocks • If we could get info on load by sector by catchment to look at where fastest gains can be made especially for first steps • Sectors can't be legally responsible for change unless they form a legal entity. <u>Where to from here?</u> Further discussion at 4pm today. Focus session on 21 October on mitigations.	
	1:00pm	**Lunch**	
6.	1.50pm	**<u>Approvals and updates session</u>** **a) The CSG16b workshop notes (DM#3539837) were approved.** **Trish Fordyce / Brian Hanna** **Carried** **b) Timeframe discussion – Justine Young and Jo Bromley (DM#3572653)** Discussion from the CSG on the project timeframe, taking into consideration the letter from river iwi at last meeting. CSG want to have level of comfort as devil is in detail/need a high level of understanding. <u>Further sector engagement:</u> • CSG members want to go back to engage with sectors. • Dairy would like to engage again early 2016 (check with CSG on what) within given timeframe. February could engage again. Sheep and beef would also like to meet again – possibly one large meeting as drawing to a close. • ENV/ NGO want to further engage with their sector. • Don't want timeframe to impact project and be squashed into a couple of months after two years of working on this. This will affect people's livelihoods/incomes etc.	**Bill Wasley to discuss the project timeframe further with WRC and TLG and revisit tomorrow.** **Get info on the election date, last council meeting and rules around elections about using things a platform to the CSG – Jenni S**

		Action: Bill Wasley to discuss the project timeframe further with WRC and TLG and revisit tomorrow.	
7.	2.45pm	**<u>Feedback from our networks</u>** <u>Sally Millar – Federated Farmers:</u> • Meeting last Friday for executives and chairs. Some CSG members attended. Bryce Cooper presented scenarios of modelling. Great to have Bryce there. • Takeaway message – yes numbers are big and let's find a solution. • Lots of technical questions, lots of questions are the same that have been asked around CSG table. • Attribute bands – want to know impacts on their sub-catchment. • Most questions on E.coli. Know N and P but E.coli not as well known. • Sally has themed some of the questions as she wants to do a fact sheet for Federated Farmers. • Participants got the message that they need to get out to their networks and get them involved. Other meetings: • Stakeholder/ sector meetings - clear info needed on status of iwi land (which is changing with new Ture Whenua Act next year) • Dairy – range of feedback (high level of interest at Fonterra meetings), big operations keen to know what it means for their business. • ENV/NGO's noting frustration that request for model was made in June – not yet been able to view it • Tourism sector heartened by mood around this table, attitude that change is required. • General acceptance change is on its way. • Local govt catch up – accept change is coming, collaborative work is underway. Concern with affordability of infrastructure, especially for small communities. Impacts on everybody. Losing social infrastructure. Bill Wasley noted that there will be a short session on modelling on 21 October. Provide some clarity around some of the items noted during this session. Not a CSG decision at end of the day to release the model – TLG only. <u>Release of documents:</u> The CSG agreed that the CSG Chair will have the mandate to decide what goes out to sectors. Bill requested authorisation for sectors to have access to attributes table and Current state table. **All CSG**	**Janine H to send out invite for 21 October for technical upskilling** **Sally M to send feedback template to Will C**

		members can use attributes table and current state table info. The CSG Chair noted that the release of information for all sectors would help with engagement period. He also noted that the release of documentation process is still underway. If CSG are not sure which documents can be released, please check with Bill. Further discussion on the release of documents to be held tomorrow. Tomorrow talk about TLG – Bryce to attend sector meetings. Bryce has been videoed giving a presentation on modelling – may be able to assist with sector talks.	
	3.15pm	**Afternoon Tea**	
8.	3.45pm	**<u>Mitigations Report – Dr Bryce Cooper and Graeme Doole (DM#3574505/ 3567480)</u>** Dr Cooper gave an update on the remaining scenarios to be modelled. These are: • Business as usual (BAU) scenario. This models what the water quality would look like if we continued with the current rules and frameworks in place. This is a requirement for the s32 analysis • An 1863 scenario which is a water quality scenario rather than anything else, trying to simulate what the water quality may have been for those 4 contaminants at that time. • The last scenario models if we didn't have mitigations in place now what would the water quality look like. This will help sectors to be able to go out to and say that the efforts they have put in have achieved xx improvement in water quality. These scenarios will come back at the next meeting (13/ 14 October 2015). <u>Mitigations report – Graeme Doole:</u> Key points from his presentation included: • Mitigation report describes the assumptions that were made and provides further information on the references that were used • The model is annualised and this is justifiable. For some mitigations they are a 'one-off cost'. These have been annualised for the purposes of the model • There is no definitive set of mitigations in New Zealand. They vary across space and time. Soil type is an important determinant in terms of whether a mitigation can be used or not.	**Put answers to modelling questions on portal – Janine H**

		• The process used was to collate the information, review it, document it, peer review it and then finally update and test it. Once this was done it was repeated again and again to give further scrutiny to the work.
		• Sensitivity analysis was also conducted to determine how robust the model was. They identified the primary mitigation strategies and generated new estimates of their cost and efficacy. This varied from -50%, -25%, +25% and +50% of the current baseline.
		• The sensitivity analysis involved running the model with the new estimates to see how it changes and how sensitive the model is to the assumption.
		• They repeated this for the 10%, 25% and 50% scenario runs.
		• For each model run they calculated the sensitivity of the model. The results showed that the model was highly insensitive to changes in the assumptions. This indicated that the model was very robust because even if the assumptions are 50% out the model still doesn't change its answer by that much.
		• Some examples were shown to the CSG with the full analysis contained in the report
		• Edge of field mitigations have a key role according to the modelling results. As scenario 1 is approached a significant amount of pastoral land is serviced by an edge of field mitigation. The edge of field mitigations are insensitive to changes in their assumptions.
		
		<u>Conclusions</u>
		• A wide set of mitigations are included in the model
		• Cost and efficacy assumptions are in line with standard knowledge
		• Strong focus on broad search and expert peer review
		• Extensive sensitivity analysis highlights that model is very robust to large changes
		
		<u>Discussion points:</u>
		• Why one side of stream fenced for dairy?
		• A - Ross Monaghan advice.
		• 2 pond conversion - zero cost. What is the basis?
		• A - Ross Monaghan pers. com.
		• Use of R.P.R: This is not widely used because more expensive
		  ○ Model assumes higher use
		  ○ Dairy farmers unlikely to uptake due to acid soils
		• A - RPR is one component of improved P	

		management – assumes farmers do this in different ways (RPR, reduced Olsen P etc) • Reducing Olsen P is more relevant to dairy. • Steep country riparian fencing – sheep and beef = bulldozing, helicoptering in materials – question value for cost. • A - Agree practicality questionable but model does apply fencing and buffers throughout • Can model tell us what to put, where, in a sub-catchment? • A - Not suitable for this – use at high level only The model is robust and can highlight critical source areas but shouldn't be used to go down to farm level. • Did the mitigation factor in a certain storm size? A - Question for Chris. • Forestry mitigations not costed • Q – How do we measure whether we have succeeded? • A – Model is indicative. It tells us that these kinds of mitigations will achieve this sort of change, but the CSG have to give a reality check. Model can't do that so there is a point where you have to leave the model behind and then say how do we do this. The CSG agreed it was worthwhile to go ahead with the mitigations day on 21 October 2015. The mitigations day will have Sandy Elliot, Ross Monaghan and Chris Tanner.	
	5.00pm	**Close**	

Healthy Rivers PLAN FOR CHANGE | Wai Ora HE RAUTAKI WHAKAPAIPAI

Collaborative Stakeholder Group ("CSG") Workshop 17 Notes

(Day two) 2 October 2015, Don Rowland Centre, Lake Karapiro 8.30am – 4pm

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Attendees:

CSG:	George Moss (Dairy), Gwyneth Verkerk (Community), Phil Journeaux (Rural Professionals), Ruth Bartlett (Industry), Patricia Fordyce – part (Forestry), Weo Maag (Māori Interests), Charlotte Rutherford (Delegate – Dairy), Sally Millar (Delegate – Rural Advocacy), James Houghton (Rural Advocacy), Evelyn Forrest (Community), Dave Campbell (Delegate – ENV/NGO's), Matt Makgill (Community), Jason Sebastian (Community), Rick Pridmore (Dairy), Graeme Gleeson (Delegate – Sheep and Beef), Alan Fleming – part (Env/NGO), Tim McKenzie (Delegate - Energy), Garry Maskill (Water supply takes), Gayle Leaf (Community), Alamoti Te Pou (Māori Interests), Gina Rangi (Māori Interests), Tim Harty (Delegate – Local Govt), Don Scarlet (Delegate – Tourism/ Recreation), Tim McKenzie (Energy)
Other:	Bill Wasley (Independent Chair), Helen Ritchie (Facilitator), Janine Hayward (WRC), Will Collin (WRC), Jackie Fitchman (WRC), Janet Amey (WRC), Jacqui Henry (WRC), Justine Young (WRC), Michelle Hodges (WRA), Alan Livingston (HRWO Co-chair), Kataraina Hodge (HRWO Co-chair), Stu Kneebone (HRWO Deputy Co-chair), Billy Brough (Iwi Co-ordinator), Grant Kettle (Raukawa), Poto Davis – part (Maniapoto)
TLG:	Dr Bryce Cooper (Chair), Mike Scarsbrook
Other (part):	Tracey May (WRC), Vicki Carruthers (WRC), Jo Bromley (WRC), Emma Reed (WRC), Ruth Lourey (WRC),

Apologies:

CSG:	Elizabeth Aveyard (Delegate – Industry), Brian Hanna (Community), Chris Keenan (Horticulture), Alastair Calder (Tourism/ Recreation), James Bailey (Sheep and Beef), Sally Davis (Local Government), Stephen Colson (Energy), Garth Wilcox (Delegate – Horticulture), Liz Stolwyk (Community), Michelle Archer (Env/NGO's), Rosemary Dixon (Delegate – Energy)
Other:	

Item		Description	Action
9.	8:30am	**Waiata and CSG-only time**	

		Reflect on day one.	

10.	9:15am	**Setting limits across the catchments – Bryce Cooper, Helen Ritchie, Justine Young**
		
		Helen gave an overview summary of yesterday's thinking regarding limits and targets.
		
		• Aim for 25% in first 20yrs (indicative) and a target to check against in 10yrs (10%) and targets on actions and a strong indication of future change (50%-100%) to give certainty
		• Whilst knowing we haven't looked at lakes yet
		• And there is a load to come
		• Talk about
		  o Cost sharing
		  o Difference across FMUs
		  o Headroom for iwi land development and horticulture
		
		Comment from Al Fleming
		When the scenario modelling was rolling out one of the Environmental/NGOs representatives (Al Fleming) requested a copy of the model for peer review by his sector. A caveat is in place from him that he can't support a target until their peer review has been conducted.
		
		The 10% and 25% scenarios include the load to come. We will need to get the figure on the load to come.
		
		It is possible to make rules effective from notification.
		
		Catchments with greater load to come will likely have bigger targets to reach. The scenario modelling shows that Upper has to do proportionally more to address that load to come.
		
		Summary of approaches discussed so far:
		• Catchment-wide rules –cover blocks of all sizes (?)
		  o Need info on numbers and sizes of blocks
		• Step-changes all round
		  o Best practicable option – concept applied widely
		  o Consents come up over 20yrs (point sources)
		  o Might require new thinking as to what's effective e.g. wetland on someone else's property
		  o Not wholesale land use change but parts of farms put into trees
		  o Property plans find most effective gains for individuals
		  o Catchments to find effective measures/sectors to identify (load by sector by catchment) but sectors/catchments can't be legally responsible
			Info on how many blocks of small sizes are in the catchment – Vicki C

– unless they become a collective legal entity

It is unlikely that wholesale land use change will occur but parts of farms could be planted with trees. But model predicts lots of land use change. We need to do more thinking around this.

The commercial model of forestry shows that the foresters can't buy the land and make a profit. Forestry won't buy land and put into trees. Farmers themselves will need to look into what they can do on their own farms.

The model shows forestry is big mitigation. We have heard that no farmer will plant pine trees due to costs. There will be appropriate places for pine to be put in but there will also be other opportunities, such as planting natives or retiring land. Perhaps people will pay for others to plant? We need to think outside the box.

Spatial limits. Key points to start discussion:

- Can identify limits per sub-catchment (going by scenario 1 bands set for each FMU and a 25% step)
- Can figure out change in load required at sub-catchment and scale (differs by FMU and within FMU, depending on current state)
- Some catchments must work harder or focus on different contaminants THEN we somehow tie that back to individual properties in that catchment or catchments identify mitigations or sectors find gains
- Suggest Overseer group consider on 6th Oct and whole group works on this next meeting

N and P

- Matters in main stem, for Chlorophyll and clarity
- Main stem diluted by Taupo water
- Model gave indication of 'cheapest' way to reduce N and P
  - With land use change (Table 5)
  - Without land use change (Table 10)
- If not changing land use (Table 11) – it is hard to control TP
- But Chlorophyll still met 100%, clarity mostly met, nitrate mostly met
- Difference between N and P and other contaminants is we can reduce N and P anywhere above the main stem sites to control algae.
- Gives potential to trade (though will need to check the Ngati Kahungungu decision)

		Q – What reviewing of the plan happens e.g. at 10rs? A – Legally have to review 10yrs after operative. We could put a review clause e.g. 10yr after notifying. V + S has a 5yr review. Plan will have to spell out how it will be monitored. If we go backwards on N due to load to come – is this legal? Ngati Kahungungu decision. Q – It was noted that an under's and over's approach was rejected by a Judge. Are we implying that we will balance things out? A – It depends on how you measure degraded water quality and where you are measuring the attributes. Baseline loads are on page 75. This would show hotspots, if we were aiming for same band, but we're not. It was noted that the way the information was presented to the CSG was in terms of % change required. This means that if a sub catchment is already high yielding then whilst they may have to reduce by a large number of kg's of N this might not equate to a significant percentage. The CSG will be provided with the numbers by subcatchment in addition to the percentages. It is also possible that for a subcatchment that has a mixture of land use types that the overall % reduction of the subcatchment is lower than a catchment that just has intensive agriculture. Are the 74 catchments true hydrological catchments? Generally yes but under the ground it might be slightly different, though Tony's presentation suggested not markedly. Monitoring points are not always at the end of the sub-catchment. 5 years of monthly samples = good data set. **Does it make sense to set N and P limits in the 74 sub catchments? (or only in main stem)** <u>CSG discussed this question in small groups. Key points:</u> • Setting limits will help to manage changes on land • Support for tributary limits so a bad catchment isn't subsidised by a good catchment. • Good to ID catchments where loads are high • Making N and P attributes focuses those landowners on change and makes it fairer for those discharging less • Gives landowners more clarity • BUT • Limits at 74 places gives less trading flexibility and get more policy complexity - different rule and regulations - can we monitor those catchments and use that information to determine how much change is needed in farm plans. • Burn money in policy complexity instead of on	

		implementation. • Could take 5 years to work out the equitable way to achieve • Can still track progress without a hard limit • Hold attribute in main stem but use sub-catchment info to manage. • Set rules at FMU level but monitor for compliance at 74 points • Extra N and P not impacting clarity or chlorophyll or ecosystem health in the tributaries • Does property level allocation adequately deal with the hotspots? (Overseer group) • Are the 74 sub-catchments hydrological? • Monitoring sites not at very bottom • Makes it more complicated • Little groundwater transfer Council does do N and P monitoring in the tributaries. It is recommended to continue monitoring. It was noted that the attribute bands in the NOF for TN and TP relate to lakes and that they may not be suitable attribute levels for tributaries.	
	10:30am	**Morning tea**	
11.	11am	<u>Managing N and P and setting limits</u> (summarised): • Need a system that maintains simplicity and flexibility • But gives assurance that change will happen via policy and rules • If we set limits, we would use concentrations specific to each sub-catchment • Modelling concentrations would be a starting point and are the only available technical basis we would have by next year • We know there will have to be change – rules have to ensure everybody has to do something. **<u>Further work on limits and targets – Emma Reed (DM#3538762)</u>** Update on framing the steps to achieve the Vision and Strategy over time and a list of relevant information developed so far to assist with this discussion. <u>Possible wording for a plan change:</u> • The Outcome statement and staged approach was developed by staff and River Iwi Technical Advisor after CSG discussions on what to model in Round 2. • Keep working on overall plan - this is what the first stage may be • CSG edits to narrative objectives are on record for completeness and they can be revisited • The policy team checked in with the CSG - Is this the	**Send out meeting request to CSG re learning's meeting and mitigation and modelling meeting on 21 October – Janine H** **Rivers index to be uploaded to portal – Janine H** **Take feedback to Overseer group and how N and P can be managed at property levels –**

		right track we are on? <u>Thoughts from CSG members:</u> • Visual chart of where we are going – poster? Swimming/fishing etc • Intent is nested in the Vision and Strategy (CSG articulate common outcome) • Have you thought about the next stage (2015 etc). 2095 was from outcome principles document (80 years timeframe), all those key thresholds need to be looked at, staged approach (or can't think beyond a date so hard to plan for it) • 2025 makes sense for 10 year 10% target, 25% in 20 years etc • Big breakthrough or innovations to get to 75% - 100% • Some detail hard to populate at this stage • Adaptive management plan but at a larger scale CSG to discuss further. First plan change: • Stage One – 10% in 10 years • Stage Two – 25% in 20 years Stage Three – 50% in 60 years Ultimate – 100% in 80 years Small group discussion: how are these limits discussed yesterday sitting with you? Responses: • Is 10 years after operative? • Notified/ proposed? A – 10 years after notification. • Actions timeline • Requires implementation / capacity. • Have to signal long term change for people who are thinking about major investments e.g. 50% in 60 years • Will need some land use change • Need to be explicit on that • Have farm plans reflect the longer term actions • Set a farm level target for a contaminant in 20 years and longer to have the intergenerational conversation and it factors into land value on sale and signal within farm/ across farm land use change • Those creating the farm plan need this direction • Short term actions mandatory, long term not – driven by environmental outcomes (retain flexibility) • Is it possible to flatten the curve? Innovation 'silver bullet' or something requiring more than edge of field? Incentivise land use change. • Take care not to require capital expense in first period, that's wasted in next period (farm plan approach).	**Justine Young**

Resolution:

1. **That the report [Framing the steps to achieve the Vision and Strategy] (Doc #3538762 dated 25 September 2015) be received, and**

2. **That the Collaborative Stakeholder Group confirm that policy staff should continue investigating the concept of a staged approach to achieve the Vision and Strategy over time, and should:**
    a. **work with TLG to understand the results of Round 2 scenario modelling and Integrated Assessment, and**
    b. **work with River Iwi technical advisor to understand River Iwi perspectives, and**
    c. **prepare a second 'draft outcome statement and steps towards restoration' for CSG consideration at workshop 18, 13-14 October.**

Ruth Bartlett/ George Moss
Carried

Technical support at sector discussions (DM#3538762):

The TLG is unable to provide this level of support to all sectors due to their capacity and workload. This may lead to (amongst other things) the perception that some sectors are receiving preferential treatment over others.

It is untenable for the TLG to:

- Continue technical delivery for the CSG and support CSG sector engagement (there is not enough capacity).
- For TLG to cease technical delivery to the CSG, to then support CSG sector engagement (this would impact on the overall project timeline).

Therefore staff propose that technical information is presented by CSG members supported by the following:

a. A video covering the scenario modelling as presented by Dr Bryce Cooper.
b. Communication materials to assist CSG members i.e. powerpoint's, key messages, question & answer sheets for presenters and hand-outs etc.
c. Should CSG members field questions they are unable to respond to then these can be collated and provided to the TLG for response through the 'feedback from our sectors' agenda item at the following CSG workshop.

CSG members agreed with this approach.

Action: Janine H to send out meeting invite to CSG for 21 October (Learning's meeting and Mitigations/ Modelling

		meeting)	
12.	12.15pm	**<u>Community engagement – Janet Amey and Will Collin (DM#3565952)</u>** The CSG were asked 'What do you want to ask our sectors/ community about these limits and targets?' • How realistic are these stages and timeframes? • Have we set the limits and targets right for the FMU's? • Should there be cost-sharing and if so, how? • Should farm plans be compulsory and how should they be staged? [and catchment plans?] How far ahead do people currently look? What would people require for long term planning? • What do you think about more major land use change and how/ when that might be brought about? What do we want to share with community and what do we want to ask the community? Discussion on what would CSG need to share with groups: To be continued after break.	**Do we have data for loads by sector by sub-catchment ? TLG to respond**
	1:15pm	**Lunch**	
13.	2:00pm	**<u>Community engagement</u>** Continued from previous session <u>Community Engagement presentation (DM#3565952) – Janet Amey and Will Collin</u> Items to discuss: 1. Subgroup for community engagement? 2. Volunteers to present at the open stakeholder workshop 3. Preparation for community engagement with TLG 4. Draft questions for CSG feedback <u>Subgroup:</u> • Purpose would be to progress key community engagement matters outside of CSG meetings • Propose 2 meetings of the subgroup – 1 before CSG18 (13/14 Oct) and 1 after • Mandate to make calls on some matters, using guidance from the full CSG • Raised last workshop the idea of a subgroup to work on detail (to meet between now and 27 October) • Also review survey • **Volunteers for community engagement subgroup– Sally M, Gwyn V (after next workshop), Jason S** <u>Volunteers for OSW:</u>	**Get 'red flag' list from Ruth Bartlett – Janine H** **Send out invite for 21 October – Janine H**

		Volunteers were requested for 27 October. CSG members to communicate with Janet or Will regarding this. <u>Preparation for community engagement:</u> There will be a meeting on 21 October to go over the presentation for the Open Stakeholder Workshop. Action: **Janine H to send invite out to CSG**. TBC venue. <u>Draft questions:</u> A set of draft questions were shown to the CSG, for feedback. Discuss these further at CSG18 – don't want to lead discussions down a certain path if that's not we are doing. <u>Resources/what to share:</u> • Mitigations list - at table/ for sectors • IA wheels (booklet only) showing achievement and impacts - timeframe basis. Visual. Arrow table (for tables) • Model results presentation • Curve showing diminishing returns • Bullet points of key effects/ impacts/ implications • Employment table and Value add table showing FMU's (on the tables) • Which scenarios? 10, 25, 50, 100 of scenario 1 and BAU (constrained – mention 10, 25% mitigations only) • At community meeting, info by FMU. • What could be available on the website earlier? • 'Red flag' issues (Ruth's list) including land use change • Emphasise it's based on today's thinking - can't anticipate into long term • Explain 'constrained' • Mention original scenario 4 and size of load to come • Reference where the CSG has got to <u>On walls</u> • FMU maps showing monitoring site • Current state paint chart • Lakes info – update on progress Presentation modelling mitigations, IA, scenarios = 20 mins Results and implications presentation on limits and targets = 30 mins. <u>Discussion points:</u> • Ensure we have clear descriptions around scenarios with V and S. Has anybody put anymore thought into how we convey these messages? Insert the words '**For water quality**..' after we say these scenarios meet the V and S. • Need talk about how we are focussing on scenario 1 as it meets Vision and Strategy. Others didn't but needed to look at it. • It's hard to know/predict what community will be like in	

		80 years time – doing our best with info we have now. Things will change over time..... • Need to impress upon people that environmental driver is the Vision and Strategy (achieving it – health and wellbeing of river – can't change that).	
14.	3:00pm	**<u>HRWO Co-Chair and Project Sponsor update</u>** No updates from co-chairs. <u>Project timeline:</u> Further discussion on timeframe. The following changes are suggested: • Move the draft plan change date back from 2/3 April to 10 May • There are assumptions on the timeframe • Five additional meetings • Use of subgroup – confidence in this subgroup. Purpose to provide ongoing guidance. Still a sign off around table etc. • Workshops between CSG and HRWO on March/April so not a big surprise at end of process (no need to go back and forward). • WRC provide resources to allow this is achieved in timeframe. **<u>Recommendations to TRH and HRWO Committee:</u>** • **That the timeframe for the development of a plan change be amended so that a draft plan change is signed off and recommended to the HRWO Committee by 10 May 2016** • **That workshops be arranged with HRWO Committee in March and April 2016 to allow the CSG to discuss the draft plan change as it is developed** **<u>That CSG agree to:</u>** • **Establish a plan change advisory sub group to be chaired by the CSG chair** • **Development of a sub-group terms of reference for subsequent confirmation by CSG** **George Moss/Rick Pridmore** **Carried** <u>Model:</u> There have been requests for the release of the model used. At this stage there is no decision on this matter, it will be discussed at the 13/ 14 October workshop. Some components of the actual model may not be released due to confidential information from some parties. The outputs, structure and assumptions behind the model, including the mitigations used are intended to be released, although the timing of this has not	**Janine H to add recommendation slides to portal** **WRC to check how many models in the country ever been reviewed by another sector?** **The list of mitigations has been given the OK by CSG to be shared (subject to approval from Bryce C). Put on a 1pger and share with CSG members – Vicki C**

		been finalised. There are thousands of pages of code which would not be useful to most people. It was also noted that Graeme Doole provided the model in its entirety to a peer reviewer in the US. The reviewer then deconstructed the model and put it back together and got similar results. In addition to this another person went through the code and checked it. Somewhere along the line – people have to trust science. This is the best we have. The model is only a tool/ guide used in the process and it is the CSG that makes the recommendations. The modelling reports will be able to be released in due course which may assist in this process. <u>What are some key questions to be considered for the release of the model?</u> • What are the challenges with releasing the model given that a sector has requested it? ➢ Confidential information will need to be removed – running the model without this information is problematic ➢ Other points raised by Bryce/Graeme yesterday (1/10) • What information is confidential within the model, why and how might this impact a third party running the model? (not party to these confidential agreements) • Who owns the model? ➢ There are various models drawn on by the model to get the scenario outputs. • Components of the model were developed under the Economic Joint Venture; those components may need approval from EJV members prior to sector review? • In what form does the model exist? ➢ Code or otherwise (guaranteed it doesn't have a user interface) • What are the primary model assumptions, where have these come from or how have they been derived and what confidence can we have these assumptions are reasonable? • What are the model inputs, where have these come from, what confidence can we have that the inputs are correct? • What is happening now with the model? • Is the CSG satisfied such that no further work is required on the model inputs? Staff to report back to CSG18 (13/14 October). Note some content was covered by Dr Doole's presentation 1/10 and further CSG discussion with mitigation peer reviewers	

		will be occurring at focus session planned for 21/10. <u>What will become available?</u> • If requested, the model code can be printed (minus the confidential input) and provided • A report on the structure of the model (includes the equations, coding etc will be appended, non-confidential data) • A report on the mitigations (includes sensitivity analysis) • A report on the justification (rationale for why this model was chosen over other possibilities) • The TLG commissioned peer reviews on all of the above that includes commentary on the strengths and weaknesses and a comment from Dr Doole as to how he's dealt with these peer reviews. **<u>Media</u>** The CSG to continue to send media enquiries to Bill Wasley. Discussion on the opportunity for media presence at next open stakeholder forum.	
15.	3:15pm	**<u>Wrap up session:</u>** Next workshop will be held 13/14 October 2015. The key areas covered will be: • Policy • Property level limits/ plans • BAU and 1863 scenario results • Catchment wide rules • Lakes • Community engagement Other: • The Overseer group is meeting on 6 October/12pm-3pm – they will report back to CSG18 • There are sector meetings next week: • Sheep and Beef next Wednesday • Dairy sector next Friday. • Discussion on what can be talked about? **The following was to be confirmed with the TLG:** • **List of mitigations (1 pg - not the report)** • **None of the round 2 results have been approved for release/talking points yet.** • **Keep with round 1. Could talk about approach of round 2.** • **The aim of these meetings is to have people up to speed for OSF.** The next HRWO meeting is on 16 Oct, 10am workshop, 11am formal meeting in Hamilton. CSG volunteers are needed for this.	**Janine H to send out reminder email to CSG re upcoming HRWO meeting.**

16.	3.55pm	**Chairperson closing reflections**	
	4pm	**Meeting closed by Helen Ritchie at 3.10pm. Afternoon tea and depart.**	