



Collaborative Stakeholder Group (“CSG”) Workshop 10 Notes
(Day one) 5 March 2015, Cambridge Town Hall, Cambridge 9.30am – 6.30pm

Attendees:

CSG: Chris Keenan (Horticulture), George Moss (Dairy), Gwyneth Verkerk (Community), James Bailey (Sheep and Beef), Phil Journeaux (Rural Professionals), Rick Pridmore (Dairy), Ruth Bartlett (Industry), Stephen Colson (Energy), James Houghton (Rural Advocacy), Sally Davis (Local Government), Jason Sebastian (Community), Alastair Calder (Tourism and Recreation), Sally Millar (Delegate for Rural Advocacy), Garry Maskill (Water supply takes), Michelle Archer (Env/NGO’s), Weo Maag - part (Māori Interests), Alan Fleming (Env/NGO), Gayle Leaf (Community), Liz Stolwyk – part (Community), Charlotte Rutherford (Delegate – Dairy), Garth Wilcox (Delegate for Horticulture), Alamoti Te Pou (Māori Interests), Evelyn Forrest (Community), Matt Makgill – part (Community), Brian Hanna – part (Community)

Other: Bill Wasley (Independent Chair), Helen Ritchie (Facilitator), Janine Hayward (WRC), Justine Young (WRC), Jackie Fitchman (WRC), Will Collin (WRC), Janet Amey (WRC), Alan Livingston (HRWO Co-Chair), Vicki Carruthers (WRC), Tim Manukau – part (Tainui)

TLG: Dr Bryce Cooper (Chair),

Other staff (part): Jacqui Henry (WRC)

Apologies:

CSG: Patricia Fordyce (Forestry), Gina Rangi (Māori Interests)

Item	Description	Action
9.15am	Waiata himene. Chair Opening Statement.	
1.	<u>Intro to CSG10 process</u> Overview provided by Helen Ritchie.	
2.	<u>Freshwater Management Units</u> CSG chairperson Bill Wasley outlined that at CSG workshop 9 the CSG came to an agreement in principle on the FMUs.	

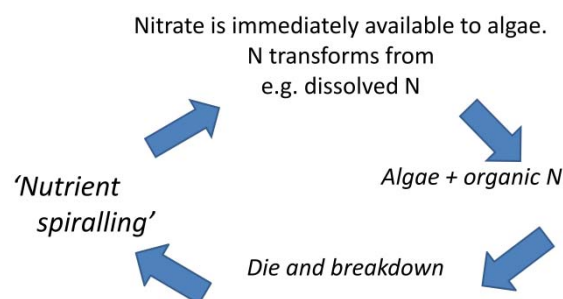
	<p>TLG chairperson Bryce Cooper talked to the agreement and approval report on FMUs (DM#3288061). He noted that there was no perfect solution but what the CSG has decided is a workable solution. Bryce also noted that the Ministry for the Environment (MfE) draft guidance is consistent with this approach.</p> <p><u>Discussion on the following points regarding lakes:</u></p> <ul style="list-style-type: none"> • Should lakes be all together or separate out some categories? TLG aware more work needed on that • Guidance from TLG on which ones are manageable – can't ignore them because they breach bottom lines • Note a catchment management plan has begun for Waikare now. • TLG have to look at what it would take to move them above bottom line and come back with feasibility and cost – CSG can look at options. <p><u>FMU boundaries</u></p> <ul style="list-style-type: none"> • Good to read TLG report – distinguishes FMU and monitoring sites • Want to see reasoning for Karapiro – (geological not just dams) followed through in slide show. <p>Resolution: That the CSG adopt the FMUs as per the report. Sally Davis/George Moss Carried by unanimous decision</p> <p><u>Lakes</u> Request a summary from TLG about what is the current state –and all current actions and catchment plans for lakes.</p> <ul style="list-style-type: none"> • Need a plan for the life of this plan change (7 – 10 years) and a longer term (e.g. 50 year) Vision and Strategy. • Need to consider what 'natural state' is and may want exemption if lakes are degraded due to natural factors. 	
10.30am	<p><u>Technical Leaders Group update - Dr Bryce Cooper (DM#3289963)</u></p> <p>Dr Cooper provided an update from the TLG on current research projects.</p> <p><u>Feedback from template:</u></p> <ul style="list-style-type: none"> • More detail to be added to template - fill in the 'who' and number the projects • Q: Clarity studies – peer review – what is it? Can the original article be re-posted as text was missing on left side? 	<p>Janine Hayward to circulate invitation details of upcoming sheep and beef data workshop to CSG.</p> <p>TLG and WRC to</p>

	<ul style="list-style-type: none"> • A: Peer review was about Bill Vant's work on determinants of clarity in different parts of catchment – (algae/sediment). Has been completed • Response from Liz – still not adequate detail to understand what's behind the work. April session will focus on that in more detail • Clarity perception studies. TLG reviewed it and concluded that bands probably reasonably robust and that sort of study can only be repeated in summer • Re – 4 metre boundary – subjective expert view • TLG will go back to expert panel re 4 m upper threshold, and size of 1.6 – 4m band; also should clarity change be considered • It was noted that there is a workshop in March to go over the Economic Joint Venture sheep and beef data. Blair Keenan is organising this and would like to extend the invitation to the CSG and TLG. CSG to advise their attendance through Janine Hayward. • Weed issues – how does that fit in with swimmability? • For our brief, need to determine relationship of 4 contaminants and weeds. Also relevant is how weed removal methods affects the 4 contaminants – TLG to look at. • MRP has the consent for weed removal. Fine to look into it – look into context of full extent of weed in river and small extent of area undergoing removal, when determining extent of effect. • Request that TLG comes directly to MRP for data • Don't consider only one case as it may relate to macrophytes in other lakes so if there is other general info please share it. <p><u>CSG lake and research related questions:</u></p> <ul style="list-style-type: none"> • Could the CSG please receive a summary from WRC about what is the current state (hierarchy of best to worst) for the lakes? • What are the current actions and catchment plans for the lakes? What catchment plans are in the pipeline? • The CSG need advice from the TLG about the historical state of the lakes, i.e. Have they always been this way? If so, WRC may need to apply for an exemption under the NPS schedule 4? <ul style="list-style-type: none"> – TLG to look at what it would take to move the lakes above the national bottom lines. The feasibility, likely actions that would need to be taken and the associated costs, form the scope of this. – The answers to the above points will result in guidance from the TLG on which lakes are manageable • Could TLG please fill in the 'who' part of the TLG 	<p>respond to CSG lake and research related questions in this section.</p>
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	<p>handout and number the projects for ease of identification?</p> <ul style="list-style-type: none"> • Weed issues – how does that fit in with swimmability? <ul style="list-style-type: none"> – TLG to consider the relationship of the 4 contaminants and weeds. This will involve looking into how weed removal methods affect the 4 contaminants. TLG will need to consider how important this issue is in the broader context of the Waikato and Waipa river catchments. – There is a request from the energy sector CSG member that the TLG comes directly to Mighty River Power for data regarding the basic facts of the issue – The CSG would like the TLG to consider more than just one case as in some cases it may relate to macrophytes. If there is other generic information please share it. • Human health aspects of water quality? <ul style="list-style-type: none"> – TLG to get faecal source tracking done first then get someone in to speak to the CSG on this • Forestry and P pathways – What is the level of P at parts of forest cycle? <ul style="list-style-type: none"> – This is still on the list of things to do 	
10.30am	Morning Tea	
3.	<p><u>Nutrients – significance of N and P – Mike Scarsbrook (DM#3314981)</u></p> <p>Mike Scarsbrook discussed the report 'Managing for Ecosystem Health in the Waikato River: Interactions between phytoplankton, nutrient availability, flow and temperature' provided to CSG. This is a peer review/summary report as the actual reports are not public yet.</p> <p><u>Reports discussed:</u></p> <ul style="list-style-type: none"> • Two reports for the Bioassay work (not published at present). . One commissioned by WRC on Waikato River (work done by NIWA) and the second report was commissioned by Dairy NZ on Lake Karapiro (work done by NIWA). The CSG have not seen these reports <p><u>Discussion points:</u></p> <ul style="list-style-type: none"> • Is the sampling method difference significant? Need to consider if tailrace is representative of lake and river water – need to look at multiple lines of evidence. • What is significance of zooplankton grazing on algae/phytoplankton? Can be significant at times • Numbers lower in late season and dominated by smaller types so there may be seasonal effect 	

	<ul style="list-style-type: none"> • Some phytoplankton may been reduced, especially in lakes, but less in rivers except early in season, after a flood • Standard predator/prey effect • What is effect of flow and temperature? Do have effects e.g. late season higher temperature and higher residence time at low flow times • Also see 'stratification' in Karapiro – different temperatures at different levels. • Draw from hydro station may also increase that effect – faster moving layer on top, deep, still layer further down • May – peak biomass on top • Jan – peak biomass below • March – algae didn't increase at depth, by then system running out of nutrients – staying relatively stable and suggests it was limited by nutrient supply. • Also looked at relationship of biomass and nutrient levels – showed lower nutrients when biomass higher, suggesting nutrients used up. • Differences between 2 studies also suggests that the seasonal effect of nutrients differs i.e. if add more N to Karapiro in March might see a response. • Notable that phytoplankton is just one attribute and that there are many values in Vision and Strategy. • Focus on phytoplankton because it's important for both ecosystem healthy and human use (due to effect on clarity). • If we let N increase but other attributes are held steady, what does it mean for the Vision and Strategy? • There is also Nitrate toxicity – levels much higher for that. • Remember we also have to consider the lakes, most of which breach NOF- TN, TP and phytoplankton levels – not just measuring/managing for hydro lakes. • Experts agree there is stratification (at least in March). Temperature drives difference in density of water. Effect enhanced by velocity of draw of the hydro system. • Consequence – algae are concentrated in surface water, using up the nutrients there, but bottom water will have more nutrients available. • Please provide info on other studies e.g. on residence time and algal growth. • Part of consideration is future effect – if not managing contaminants • Caucusing meeting held last Thursday to get experts' opinion on these two reports to ensure messages from studies are agreed, including by the authors • (Terminology, strength of statements) 	
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	<ul style="list-style-type: none"> • Will this process consider current and future loads of nutrients? • First step is experts agreeing on <u>these</u> reports. Future scenario modelling will take into account current/future loads, attenuation, groundwater etc. • Will be two sets of comments – one from the experts and then the TLG ‘call’ based on imperfect information. • Which values are impacted by phytoplankton? • Ecosystem health – changes types of species present – excessive blooms can create scums, change oxygen in water and affect types of animals that can live there e.g. fish • Different lakes have different natural levels - but NOF does not discriminate. • Particular type of algae – cyanobacteria cause toxins – related to human health • Phytoplankton also affect clarity – human and ecosystem values. <p><u>Other requests of TLG:</u></p> <ul style="list-style-type: none"> • Human health – getting faecal source tracking done first – the get someone into speak to CSG in on this (next 3 – 4months) • Using macroinvertebrae Index • Forestry and P pathways - what is the level of P at parts of forest cycle – Still on list to do? 	
4.	<p><u>Attributes – nutrient related</u></p> <p><u>Mike Scarsbrook did a recap on the Attribute presentation from CSG8 (DM#32376598)</u></p> <p><u>WOF Summary of Attributes handed out (DM#3278995)</u></p> <p>Discussion points:</p> <ul style="list-style-type: none"> • Can community/management affect temperature? (and affect phytoplankton growth) • Shading in small streams, up to 8 m width. If you had a reservoir of cold water to add in. • Nutrient attribute set • Can we know more re: toxicity effects of nitrate/ammonia - which species are affected at which levels? Chris Hickey report – Nitrate ANZEC guidelines/ammonia. • How do nitrate and ammonia relate to N and P • Ammonia – NH₃ • Nitrate – NO₃ both dissolved forms of N • Total N includes these and organic forms of N • If you control N and P you can control dissolved forms or other forms • Cow urine – urea – ammonia – nitrate • Nitrate is dissolved and doesn’t attach to soil 	<p>TLG to provide Chris Hickey’s report on nitrate toxicity to CSG</p>



- Where we know trends, can we see at what point it would knock into another band? Where it's below a band, is it just below or way below?
- With increased flow, N increases also. Do we know where it comes from?
- Comes with the water – if there's a store of N in the soil, it will come with the groundwater as it exits. A combination of sources. If no rain, it is deeper groundwater, if raining – comes off surface.
- In between get 'through – flow' of water bringing N from current land use.
- How much of total tonnes N is surface versus groundwater? Will vary across catchment and will get this from groundwater research.

5.

Policy Selection Criteria and Values – Tim Manukau (DM#3314058)

Tim presented on a hui that had taken place on River Iwi values. The hui was to look at the working list of values and uses that the CSG had created. It was looked at in the light of the NPS and Vision and strategy. At the hui River Iwi also talked through the NPS process and talked about some Mātauranga Māori frameworks that could work for the project.

Firstly, River Iwi acknowledged the good work done by the CSG so far in the process.

At the hui a lot of discussion took place regarding the Vision and Strategy. Waikato is unique because of the Vision and Strategy.

MfE attended the hui and they noted that the Vision and Strategy prevails over the NPS/NOF.

Feedback from River Iwi

- The visibility of the V&S appears to be missing.
- Some suggestions on how to connect more with the V&S:
 - Put the CSG's focus statement at the beginning.
 - Write a preamble explaining the importance of the V&S
 - Appendix how each CSG value aligns to which V&S and NPS values (table form).
 - Expand on the social/cultural identity theme. Social = mental, health, medicinal, lots of other things, not just swimming.
 - There appears to be a gap between the overarching value and list of values.
 - Expand on the community as a whole.
- Suggest Te Mana O Te Wai as an overarching value e.g. if swimmable and fishable (attributes) that means the mana is there (core value).
- There is also the Mana Atua Mana Tangata Framework that shows the interconnected relationship between spiritual, intrinsic values and use values.
- Values are interconnected and the relationships between them are important. Many of the values will be about relationships.
- With regard to Mātauranga Māori and knowledge frameworks, TLG are working on identification of the five River iwi values and coherence between them.
- Those at the workshop thought it was important as to how the CSG values list should read as a whole.
- It should be balanced and reflect key principles.
- All the sections of the current working list are important to our region.
- Perhaps the wording could be tweaked to keep the river central to all the sections.
- Much discussion regarding 'values' and 'uses' and making this distinction.
- Suggestion was to re-sort the CSG list into values and uses. Call the uses – 'use values'.
- Noted inconsistencies in CSG values developed i.e. farming and electricity appear to have more descriptive information. Implies these values are more important than the other values.
- Re-word descriptions to focus on why river is important for that use, rather than just trying to justify that use.
- Values should be the same across the whole catchment but how they are given effect to can be different in different locations.

The TLG Mātauranga representative is working with River Iwi to identify River Iwi values and working with River Iwi on

	<p>Maori indicators for the project.</p> <p>Commonality of values across all the iwi by each area is unique. River Iwi have different styles, history and spiritual connections.</p> <p>River iwi still reviewing draft policy selection criteria. They will provide feedback to the CSG in early April.</p> <p>River iwi need to come together and come up with a framework that covers all of them and then bring it to CSG.</p> <p><u>CSG discussion points:</u></p> <ul style="list-style-type: none"> • Will cover taha wairua and taha tangata will use material from iwi environmental plans • For the values with more description do others need more, or do longer ones need less? However we do it, keep it consistent. • Expand on community as a whole? Community more than users in the room. • Do iwi advisors see their work on values coming together with CSG values framework and merging them, or for CSG to work with both? Tim's view is first step is river iwi to consolidate their framework, then come and see how to work together – with CSG – they'll inform each other. • What's the difference between values and uses? Most important is to be speaking same language re core values and uses so it's clear. • Considering interconnectedness, how might we show that? (In an overview, perhaps from river iwi – recognising that we don't view things in isolation – our uses and values are interconnected)? • Vision and Strategy applies right across; our work is to look at how to achieve our part of it. • Can we define values? E.g. things we value or use; or outcomes community aspires to? 	
12.45pm	Lunch	
6.	<p><u>Nutrient workshopping</u></p> <p>Group work activity</p>	
7.	<u>Summarise from nutrient workshopping</u>	
8.	<p><u>Confirm attribute set</u></p> <p><u>Attribute set: N and P monitor in tributaries also.</u></p> <p>Macrophytes:</p> <ul style="list-style-type: none"> • What are the causes of macrophytes? • Physical environment • Plants can get light – relates to depth 	

	<ul style="list-style-type: none"> • Flow with not too much flooding (carries them away) • Other species that are present e.g. introduced plants may be more successful at using nutrients • Nutrient availability – Needs N and P but can grow over longer time so day to day levels less important • How does the Lake SPI work relate to this? • Does monitor condition of lakes – high Lake SPI score – native species of plants • Lower Lake SPI score – more exotic species <p><u>Periphyton:</u></p> <ul style="list-style-type: none"> • Most local sites with suitable streambeds also have shade. • Need to check if we can opt out or is it compulsory. Could ask at LSF about sliminess – does it bother you? Could apply in limited sites. <p><u>Dissolved oxygen:</u></p> <ul style="list-style-type: none"> • Nutrients – Plants – use up oxygen at night • In some lowland waterways would breach at night (relates to flow and levels of plant material) • Controls on sediment and nutrients might help; other factors relevant e.g. light/temperature • Point sources like sewerage use lots of Oxygen to breakdown. Also an issue in lakes – bottom layers get low in oxygen – results in nutrient release from sediment. <p>Which indicators are within our project scope? – Reflections from Chair of TLG</p> <ul style="list-style-type: none"> • Record view about measuring ecosystem factors but look at attributes relating directly to our contaminants. • MCI – does reflect ecosystem health value – is it an attribute or an environmental indicator? Keep it in front of us. • Does depend on a large number of factors. • Better as an SOE indicator 	
9.	<p><u>Feedback from decision makers</u></p> <p>Alan Livingston, co-chair of the Healthy Rivers Wai Ora committee, welcomed everyone to Cambridge. He congratulated the group on reaching an agreement on FMUs. He noted that CSG members are gaining a great deal of knowledge through the process.</p> <p>Cnr Livingston talked about the following items covered at the HRWO committee meeting:</p> <ul style="list-style-type: none"> • The project timeline recommendation was approved in principle but noted that some of the committee members would further consider the impacts of the extension and this would be discussed at the April HRWO Committee meeting. 	

	<ul style="list-style-type: none"> Alan noted that the project was delayed in being set up (by 3-4 months) and that there was a need for more science. This process must be robust process and that the project is being viewed on a national scale. 	
3.45pm	Afternoon tea	
10.	Sheep and Beef Field trip – Bill and Sue Garland Farm (Rahiri Farm)	
6pm	Workshop closed. BBQ dinner	

Approved



Collaborative Stakeholder Group (“CSG”) Workshop 10 Notes

(Day two) 6 March 2015, Cambridge Town Hall, Cambridge 8.45am – 4pm

Attendees:

CSG: Alan Fleming (Env/NGO), Garry Maskill (Water supply takes), George Moss (Dairy), Gwyneth Verkerk (Community), Jason Sebastian (Community), Matt Makgill (Community), Phil Journeaux (Rural Professionals), Rick Pridmore – part (Dairy), Ruth Bartlett (Industry), Stephen Colson (Energy), Alamoti Te Pou (Māori Interests), Alastair Calder (Tourism and Recreation), Garth Wilcox (Delegate – Horticulture), Patricia Fordyce (Forestry), Sally Davis (Local Government), Michelle Archer (Env/NGO’s), Weo Maag (Māori Interests), Charlotte Rutherford (Delegate – Dairy), Sally Millar (Delegate – Rural Advocacy), James Houghton (Rural Advocacy), Evelyn Forrest (Community), Gayle Leaf (Community), James Bailey – (Sheep and Beef) Brian Hanna – part (Community),

Other: Bill Wasley (Independent Chair), Helen Ritchie (Facilitator), Janine Hayward (WRC), Will Collin (WRC), Jackie Fitchman (WRC), Justine Young (WRC), Janet Amey (WRC), Jo Bromley (WRC)

Other (part): Emma Reed (WRC), Ruth Lourey (WRC), Tracy May (WRC)

Apologies:

CSG: Chris Keenan (Horticulture), Gina Rangi (Māori Interests), Liz Stolwyk (Community)

Item	Description	Action
8.45am	Waiata	Audio link for Ma Wai Ra on portal
11.	<u>CSG-only time – Reflect</u>	
12.	<u>Summarise day one work</u> <u>Summary – Phytoplankton</u> <ul style="list-style-type: none"> • Upper : B, with no further degradation of A areas, possibly expanding A areas, keeping Narrows at high B • Mid: B 	

	<ul style="list-style-type: none"> • Lower: B (may take longer timeframe) • Lakes: Individually, complementing catchment plans) • Noted: Bands cover broad range, don't want to see further degradation within bands <p><u>Summary – Ammonia and Nitrate</u> (If deal with – total N will take care of it)</p> <ul style="list-style-type: none"> • Lift C sites to a B • Need more info on where vulnerable/;threatened species are • Might need some B sites to lift also <p><u>Summary - N and P</u></p> <p>Relativity of N and P important – need to understand more. <u>But</u> risky to rely on controlling P <u>so</u> need to look at both.</p> <p>P – Raise to a B throughout – timeframe is the question and maintain where already A.</p> <p>N – Initial target – no degradation. Then aim to raise to a 'B' but at a slower rate than for P and with no degradation of A areas. (Considering legacy effects (groundwater lags) and current land use changes. Need to be taken in account)</p> <p>Q: Why does the colour change in between sites 5 and 6? Noting this is aspirational.</p>	
10.00am	Morning tea	
13.	<p><u>Plan change framework - Justine Young (DM#3287412)</u></p> <p>Justine noted the purpose of this session is to show the CSG what the plan change will look like. She also noted that the general form and content of the plan change is, under legislation, something for River Iwi and Council to decide on together.</p> <p>Currently this framework consists of several headings. The framework will be one of two RMA documents. The other that will be produced is a section 32 document (this will be where a lot of numbers come in, e.g. around cost).</p> <p>A third and final document will be an overview that will be produced by the CSG and contain the detailed recommendations needed to finish the draft plan change.</p> <p>The framework could be useful to the CSG to see the blanks that need to be filled in. The policy workstream are waiting for instructions from the CSG on how to fill in the template.</p>	

Discussion points:

- RPS – at final stages of sorting appeals – not far off being operative
- What findings might fall outside the RMA Plan Change? E.g. how councils work funding might become more helpful - recommend to other processes going on.
- Setting objectives (p45 agenda) for the FMU's. Need to know what the numbers in the water mean for limits/measures on land.
- Very helpful getting this early on
- Need consistency in terminology e.g. attributes – not parameters to minimise confusion
- Other measures will go into the Recommendations /overview report - documents all the thinking supporting what ended up in Plan.
- Something someone could pick up and see: This is where we're at. This is where we want to get to. This is how. (Perhaps in an overview document).
- Tables need to add narrative on how this would be achieved and when e.g. Achieve 70% of change in first 5 years....
- Might be in policies
- Consistent terms. More reference to legislation and glossary of terms.
- Can take a long time to finalise glossary etc. What is the process now for filling in template? Suggestions can be built in over time.
- Propose a template session each workshop

Resolution:

1. That the report [Template for Waikato Regional Plan: Waikato and Waipa River Catchments Plan Change 1] (Doc #3248906 dated 25 February 2015) be received, and
 - a) That the CSG agrees to adopting or amending the headings in the template as shown in Doc# 3287412 as a guide to what the Waikato Regional Plan: Waikato and Waipa River Catchments Plan Change 1 ("the plan change") will look like.
 - b) That the plan change template be placed on the agenda at each meeting. As part of this regular session the CSG will determine any matters to ask staff to do work on, in terms of populating the framework.
 - c) That two additional templates be provided so the CSG so can see what the other end products of Healthy Rivers project may look like. These are the CSG Recommendations Report to Healthy Rivers Committee and the Resource Management Act Section 32 analysis of alternatives and reasons for the content of the plan change that will be publically

	<p>notified with the plan change.</p> <p>d) That the CSG seek input from Te Rōpū Houtū (notably River iwi partners) on ideas about the general form and content of the plan change. This feedback is to be provided to CSG at the April workshop.</p> <p>George Moss/Stephen Colson Carried</p>	
14.	<p><u>Check in session – issues in each FMU</u></p> <p>Facilitation session looking at issues in each FMU.</p> <p>LAKES Issues</p> <p><i>Lowland lakes:</i></p> <ul style="list-style-type: none"> • Koi • Sediment • Algal blooms • Bottom of catchment • Flat land – no flushing – long retention time. Slow/ low flow. Flood protection scheme. • Big lakes – large wind fetch • Grazed to edges – summer grazing into lake edges • Nutrients and faecal inputs <p><i>Peat lakes:</i></p> <ul style="list-style-type: none"> • N inputs • Peat shrinkage • Stock access • Sediment (catchment-specific) • Landlocked – groundwater fed – some weir-controlled • Pest fish • E. coli • Infrequent algal blooms <p>4 contaminants role</p> <p><i>Lowland lakes</i></p> <ul style="list-style-type: none"> • Sediment is No 1 visual issue – natural resuspension (wind fetch) and by pest fish, note natural geology is soft sediments • D band for N and P for majority • Cyanobacteria – D band 4 out of 5 lakes. <p><i>Peat lakes</i></p> <ul style="list-style-type: none"> • Data deficient? • Sediment ecological issue (e.g. smothering mussels, no light for macrophytes) 	

	<ul style="list-style-type: none"> • N through groundwater – leads to algal growth • Other factors • Recreational use (stirring up sediment) – e.g. Lake D Horsham Downs water skiing • Bird impacts e.g. Lake Rotoroa (Hamilton lake) <p>UPPER</p> <ul style="list-style-type: none"> • N and P – affects swimmability, can affect clarity, if feeding weed growth • Sediment to a point – needs to be dealt with. Clarity, swimmability. Sediment accounts for 50% of clarity effects in upper. Also contributes to nutrients - sediment pathway for P. Dams prevent some sediment moving downstream. • E. coli an issue in tributaries – affects swimmability, food gathering • Natural geothermal influence needs to be taken into account • Impoundments may have positive and adverse effects • Lake Taupo provides major dilution • Contaminants accumulative for downstream <p>MIDDLE</p> <ul style="list-style-type: none"> • Not swimmable <ul style="list-style-type: none"> ○ E. coli (health risk) – what bands? Not an E. coli swimmability issue most of the way on main stem, but issue in tributaries. ○ Clarity – 1-1.6 – could be a concern. ○ Algal blooms – cyanobacteria do occur (in tributaries) • Not fishable – do we know this? Fish? Health of fish? • Receiving and passing on effects • Ammonia – C band in places – don't know why. • Urban aesthetic effect e.g. Fairfield bridge <p>LOWER Issues</p> <ul style="list-style-type: none"> • Poor clarity • Not safe to swim or collect food • Degraded ecosystem health • Phosphorus, sediment, N to some extent, clarity, E. coli • D or C band most parameters <p>Role of 4 contaminants</p> <ul style="list-style-type: none"> • Clarity – sediment majority; N and P – phytoplankton • Unsafe to swim/ food collection/ ability to collect food – E. coli, N and P 	
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	<ul style="list-style-type: none"> Degraded ecosystem – P, N, sediment <p>Other factors</p> <ul style="list-style-type: none"> Collecting problems from upstream Tributaries – unclear role Koi carp Gravel extraction <p>WAIPA</p> <ul style="list-style-type: none"> Nitrate and ammonia OK Sediment P directly related to sediment – but where is it coming from? Tributaries? Hill country high sediment but low P, flat country lower sediment but high P E. coli? Median OK. 95% not. Sources? Legacy issues – gravel extraction Flood event – high sediment, high E. coli Improvement in waste water treatment, meat plants. 	
15.	<u>FMU – Attributes workshop session</u>	
Agreement and Approvals Session		
16.	<p><u>Approvals session</u></p> <p><u>CSG workshop notes:</u> The workshop notes for CSG9 were approved by the group. The notes from the CSG only session to be included in the workshop notes.</p> <p>Alastair Calder/George Moss Carried</p> <p><u>Nutrient reports update:</u> Bryce Cooper noted that he has permission to provide the report to the TLG and peer reviewers only.</p> <p>Resolution: CSG request to Chair of TLG for CSG to have access to nutrient reports. If TLG don't have authority or ability to approve, that they seek approval from (source organisations) Dairy NZ/WRC or other to release reports. Also require peer review – questions asked and their responses (when completed) and noting that info needed in a timely manner, as CSG participants are investing time and resource in this process and unnecessary delays are costly.</p> <p>Stephen Colson/Trish Fordyce Carried</p>	

CSG resolutions regarding River Iwi input:

- The CSG are not sure that River Iwi have sufficient mechanisms in place for them to keep up to date with the CSG and for River Iwi to provide the relevant input the CSG needs
- The CSG note that it is not simple for some River Iwi to provide input but that the environment plans can provide a basis for input. *However, information needs to keep going out from river iwi organisations so constituent Iwi members are up to speed – especially on the policy selection criteria and values and then subsequent matters, and then provide input back to CSG*
- The CSG feel confident the River Iwi are working on the values and policy selection criteria but are not sure that they are working to the same timeframe as the CSG
- The CSG has concerns about the current approach regarding implementation of the tāngata whenua engagement plan and whether it is being given the required priority, given the timeframes that the CSG is required to work to
- The CSG need a process that allows Iwi to provide free and frank feedback – using 1 or 2 of the frameworks Antoine presented.
- The CSG will consider the suggestions from River Iwi in the presentation from yesterday e.g. Te mana o te wai as overarching value. This will occur at the next CSG (CSG11) with River Iwi and Antoine in the room.
- The CSG have been asking River Iwi for feedback on the values/uses and Policy Selection Criteria that they've developed.
- Delay in timeframe, not able to then go to the March LSF on PSC and values

Resolutions:

- 1. Independent Chair to raise concerns with TRH about an emerging risk that there may be a lack of alignment of receiving River Iwi input in a timely manner in accord with the approved timeframe and to also highlight such concerns at the next HRWO committee meeting**
- 2. The CSG want to hear from Antoine Coffin again and get an update on his work plan [at CSG 11] and request that there is regular attendance by him at CSG meetings**
- 3. That River Iwi (advisors) be invited along to CSG meetings at regular intervals to provide regular updates and input, and to allow the CSG to ask questions, and for River Iwi (advisors) to advise if there are information gaps or emerging issues that CSG need to be aware of, and what actions are required to address these**

**Sally Davis/Ruth Bartlett
Carried**

17.	<p><u>Feedback from sector/community networks (DM#3080587)</u></p> <p>Moved to Wrap up session</p>	
12.30pm	<p>Lunch</p>	
18.	<p><u>Community Engagement Planning – Helen Ritchie and Will Collin (DM#3301113)</u></p> <p>CSG to provide feedback on the following items: Draft agenda and survey, community engagement plan update.</p> <p><u>Discussion points:</u></p> <ul style="list-style-type: none"> • Reverse order of current state and attributes • Relate all back to values and attributes • Make sure we say what we'll use this for • Explain what happened with stuff from last time • Remove WOF – use attribute • Cut up table/slide each value • Avoid jargon • FMU's – 3 main values • Quantified by looking at these things (why each of these affects that value) and where we are up to. • Eventually we want to determine what levels <p><u>Attributes – is anything missing?</u></p> <ul style="list-style-type: none"> • What feedback or comments do you have about the proposed list? (Explain why the maybe's are maybes) • Test clarity • What we've done is map those bands to our current state, and what we're going to do next is decide how much more we want to do. <p><u>Current state:</u></p> <ul style="list-style-type: none"> • Dots need to follow NOF bands • Add in A,B, C, D in the dot. • Use arrows not dots in trends • Drivers – will vary across tributaries <p><u>Drivers</u></p> <ul style="list-style-type: none"> • Remove the graphs • Summarise the 4 FMU 'download session' • George Moss, Stephen Colson, James Bailey to see it. <ol style="list-style-type: none"> 1. And why 2. Take out the feel part 3. Change trends to changes <p><u>FMU's</u></p> <ul style="list-style-type: none"> • We've divided in this way, what's your view on this? 	<p>Provide engagement event and CSG role information to CSG – Will Collin</p>

	<p>Needs to reflect TLG report</p> <p><u>Scenarios?</u></p> <ul style="list-style-type: none"> • What's important to your sector about how we go about developing options? • What timeframe do you think the values should be achieved by? <p><u>Engagement events – 7pm – 9.30pm:</u> Upper - Tokoroa - 1 April Lower – Huntly – 9 April Central – Hamilton – 13 April Waipa – Otorohanga – 15 April</p> <p><u>Draft agenda:</u></p> <ul style="list-style-type: none"> • State and trends before attributes/up first? • Values is key – needs to be up front and centre of day • For each session – what we will do with this info/feedback – how we will use it. • Explanation on what has happened with the stuff that was asked last time – where at. i.e. PSC values • Can we give the opportunities for people to update the values? Hold – look at it all in one place. <p>Group comfortable with general content for the day.</p> <p><u>Goals for the day slide:</u> Attributes – What do we want to show people in terms of WOF?</p> <ul style="list-style-type: none"> • Remove jargon acronyms – keep it simple i.e. WOF etc • Presentation far too complicated/busy/difficult. Content ok. Cut it up though. Make it user friendly. • Explain why it is important to human health etc <p><u>What could we ask them?</u></p> <ul style="list-style-type: none"> • Is anything missing? • Are there any comments? (WOF page and ecosystem indicators) • Why they are in/out? Examples <p>CSG members to present:</p> <p>FMU's: Sally Davis, Gwyneth Verkerk, Michelle Archer Focus statement: Weo Maag Values/uses: Stephen Colson</p> <p>To date, 81 people have RSVP'd for the Stakeholder Forum on 25 March 2015.</p>	
19.	<p><u>Wrap up session</u></p> <p>Tracey May provided an update on the following:</p> <ul style="list-style-type: none"> • Landuse conversions 	<p>CSG request to view an high level budget of healthy rivers</p>

	<ul style="list-style-type: none"> • Recent HRWO Committee meeting • Upcoming Karapiro meeting • CSG11 presentation • Finance and Audit Committee <p><u>Landuse conversions</u> GIS are currently doing work. There are 8000 hectares of conversion to come online in next 12 months. There is a need to understand the size of issue and responses. WRC met with MfE last week. MfE interested in land use conversions work and what the CSG are doing. They want to understand what the issues are that the CSG are facing and how to help/support the process. They understand complexity of environment.</p> <p><u>HRWO Committee Meeting</u> The Committee met last week and it was good to see representation from CSG at the meeting. The two main items discussed were 1) communication and 2) timeframe. The HRWO Committee understands that this is a new process and there is much learning occurring. There are many situations where groups (CSG, TRH and HRWO) can interact/communicate with each other. Iwi governors will confirm commitment to new timeframe at next meeting (April 2015).</p> <p><u>Karapiro Meeting - Community</u> WRC approach at meeting will be in an observation role.</p> <p><u>CSG11 presentation</u> Waikato and Waipa Rivers Restoration Strategy, which involves WRC, WRA and Dairy NZ (Mike Scarsbrook, Tracey May and Bob Penter). Working on the development of a project plan. Aim to present at the next CSG and talk about how Healthy Rivers project fits into strategy.</p> <p><u>Finance and Audit committee</u> Looking at the TLG to meet the very high timing for delivery of reports and the overall project timeframe.</p> <p><u>Sector feedback:</u></p> <p>Sectors may have information/data from experts that will assist TLG i.e. Energy sector. Sectors can provide this information for the CSG/TLG.</p> <p>Discussion on research papers on CSG portal that could be made public. Some CSG papers aren't at publishable quality and have been pulled together in a short timeframe for the CSG workshops; however some technical reports could be made public.</p> <p>The feedback template was updated with recent information (<u>DM#3080587</u>)</p>	<p>project – Jo Bromley</p> <p>Sectors to provide an relevant information/data that may help project to Janine Hayward</p> <p>Local govt sector – availability of water quality monitoring data from HCC, which also includes Waipa info. Jo Bromley to follow up with Bryce Cooper</p> <p>Collate list of documents on CSG portal that could be made public and check with author – Jo Bromley/Janine Hayward</p> <p>Request for 100 lakes report (shallow lakes) reports to be put on portal – Janine Hayward</p> <p>CSG members to advise Janine Hayward if they would like business cards/details</p>
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	<p><u>Evaluating collaboration</u> (DM#3315093) The CSG were provided with a high level overview of evaluation process to date. This will be provided to TRH and HRWO Committee over the coming weeks. The evaluators will provide an update at April meeting (CSG11)</p> <p><u>Other items:</u></p> <ul style="list-style-type: none"> • The CSG were offered the opportunity to have personalised business cards and their details on the WRC website if they wish. CSG members to advise Janine Hayward. • Suggestion for Healthy Rivers branding on shirts etc for engagement events. • CSG members Catch up session to be held 17 March at 10.30am • There will be a closed TRH meeting on 23 March. • Key reference documents to be updated on portal • Sheep and beef modelling workshop on 19 March • Next trip – CSG11 to Lower Waikato, hosted by Environment NGO sector. <p><u>CSG lake and research questions:</u></p> <p>Brian Hanna/Phil Journeaux Carried</p> <p><u>Agenda –suggested focus for CSG11 (Page 11):</u></p> <ul style="list-style-type: none"> • Workshopping with WRA (Vision and Strategy) • Look at items to discuss May to August 2015 • Integrated Assessment Framework – Liz Wedderburn update • Waikato River Restoration Strategy • What has worked in other areas/experiences • TLG ecological indicators info 	<p>on WRC website. Look into branded HRWO clothing for Engagement Events.</p> <p>Key reference documents section on portal – Garry Maskill – Janine Hayward call to check what else. (Ones that we will be missing: Values, FMU's, attributes, term's to add to, framework, contaminants in monitoring locations)</p> <p>Colour code documents on portal that can be made public</p> <p>Attribute maps with boundaries on Attribute maps on portal Information by topic page updated</p>
20.	<p><u>Chairperson closing reflections</u></p> <p>Bill Wasley acknowledged the field trip to Bill and Sue Garland's farm and the important work they are doing. The Chair also conveyed his appreciation to TLG members for</p>	

	their presence and interaction during the workshop.	
4pm	Meeting closed by Alamoti Te Pou at 4pm. Karakia and depart.	

Approved

Table of documents received by the CSG:

	Document name	DM Reference #
1.	Agenda Pack for CSG10	3298677
2.	FMU Approval Report	3288061
3.	TLG report on research	3289963
4.	Report: Managing for Ecosystem Health in the Waikato River: Interactions between phytoplankton, nutrient availability, flow and temperature'	3314981
5.	CSG8 Attribute presentation – Mike Scarsbrook	3237698
6.	WOF Summary	3278995
7.	PSC and Values presentation from River Iwi CSG10	3314058
8.	Plan change framework	3287412
9.	Feedback from sectors/community networks	3080587
10.	Community Engagement Planning	3301113
11.	Evaluating collaboration	3315093

Actions from CSG10:

	Action	From	Person people responsible	/ Due date	Done?
1	Put an audio link for Ma Wai Ra on the portal	Helen			
2	Questions regarding lakes and research (see slides on this topic - #3311377)	CSG / Bill			
3	Janine to circulate details of 19 March workshop to people	CSG?			
4	TLG to provide report on nitrate toxicity by Chris Hickey to CSG	TLG			
5	Recommendations regarding River Iwi input (see slides on this topic - #3311379)	CSG / Bill			
6	<p>Request to TLG regarding releasing of information (as below) and if necessary, they request the source organisations - WRC and Dairy NZ:</p> <ul style="list-style-type: none"> • Original reports (bioassay) • Peer review – Q's asked and their responses (when completed) • Also noting that info needed in a timely manner, as CSG participants are investing time and resource in this process and unnecessary delays are costly. 	CSG			
7	<p>Input feedback from CSG on community engagement items and various actions surrounding that, such as:</p> <ul style="list-style-type: none"> • Survey pilot names – Sally Millar, James Houghton, Jason Sebastian, Al Fleming • Extra CSG members for Central – Phil J (modelling), Alastair C (Current state) • People who want buddies – Gayle, Jason, Rick, Garth • Presenters: <ul style="list-style-type: none"> ○ Weo – Focus statement ○ Stephen – Values/uses and PSC ○ Sally – FMUs ○ Gwyn – Modelling/research ○ Michelle – Next steps • Take Weo out of modelling table for Upper Waikato EE and put in 	CSG			

	Trish instead <ul style="list-style-type: none"> Changes to presentation slides 				
	Staff to provide CSG with a broad overview of the budget	Weo M			
	Colour coding the tech docs on the portal by public or not public	CSG?			
	Put Brian Hanna newspaper column into feedback template	Brian H			
	Get the attribute maps with FMU boundaries	CSG / Helen?			
	Look into branded shirts for engagement period	CSG			
	100 lakes report – state of nation for shallow lakes	Gwyn			

Approved