Collaborative Stakeholder Group ("CSG") Workshop 8 Notes

(Day one) 2 December 2014, Pukekawa Hall, Clark and Denize Road, Pukekawa 9.30am – 6.30pm

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Attendees:

CSG:	Chris Keenan (Horticulture), George Moss (Dairy), Gwyneth Verkerk (Community), James Bailey – part (Sheep and Beef), Patricia Fordyce (Forestry), Phil Journeaux (Rural Professionals), Rick Pridmore (Dairy), Ruth Bartlett (Industry), Stephen Colson (Energy), James Houghton - part (Rural Advocacy), Matt Makgill (Community), Sally Davis (Local Government), Jason Sebestian (Community), Alastair Calder (Tourism and Recreation), Jim Crawford (Delegate for Env/NGO's), Sally Millar (Delegate for Rural Advocacy), Garry Maskill (Water supply takes) , Michelle Archer (Env/NGO's), Alamoti Te Pou (Māori Interests), Weo Maag (Māori Interests), Garth Wilcox (Delegate for Horticulture)
Other:	Bill Wasley (Independent Chair), Helen Ritchie (Facilitator), Ben Ormsby (River Iwi), Jo Bromley (WRC), Janine Hayward (WRC), Justine Young (WRC), Jackie Fitchman (WRC), Will Collin (WRC), Jacqui Henry (WRC), Matt Newman – part (DairyNZ),
TLG:	Dr Bryce Cooper (Chair), Dr Mike Scarsbrook, Dr Graeme Doole
Other staff (part):	Vicki Carruthers (WRC), Blair Keenan (WRC), Femi Olubode (WRC)

Apologies:

CSG:	Brian Hanna (Community), Alan Fleming (Env/NGO), Evelyn Forrest (Community), Gayle Leaf (Community), Liz Stolwyk (Community), Gina Rangi (Māori Interests)

Item	Description	Action
1.	Workshop commenced at 9.45am. Chairs Opening Statement Welcome to all to the lower part of the river. Two items to note: • Desire to set aside some time in the new year for the CSG to talk in depth at each meeting. There has been a lot of technical information given this year. • Also look at the CSG research gaps. Apologies noted: Gayle Leaf, Liz Stolwyk, Brian Hanna,	**A good allocation of time will be made at future CSG workshops discussing issues and solidifying the CSG's**

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	Evelyn Forrest, Al Fleming. Delegates in attendance: Sally Millar (Rural advocacy), Garth Wilcox (Horticulture), Charlotte Rutherford (Dairy).	**position on issues.**
2.	**Intro to CSG8 Process:** Introduction and outline for CSG8: • Day 1 will have a mainly technical focus and day 2 would have a mainly policy focus. • There would be a number of presentations as well as several interactive sessions. • At the end of Day 2 the evaluators would be present to talk through the latest round of CSG evaluation results. The National Policy Statement/National Objectives Framework (NPS/NOF) process the CSG are working through was outlined. The CSG have looked at values (including considering the national values) and have begun to look at attributes and attribute state levels. The next step is developing limits then thinking about policies and targets (i.e. allocation methods). It is important for the CSG to start thinking about what technical information will be required to do the community engagement next year. What technical support is required to do this engagement? Discussion on what scenarios are currently being considered. Bryce Cooper (TLG Chair) noted that tentative scenarios will be talked about at the next TLG meeting but the key focus at the present time is getting the information for the models and refining the models to be able to run the scenarios. He also noted the iterative process for the scenarios where discussions between the CSG and TLG will need to occur in order to refine the scenarios.	
3.	**State of Waikato and Waipa waterways – Dr Mike Scarsbrook, Doc # 3237698** Overview provided of rivers, land and lakes using last five years of data. Sites are classified into A, B, C, and D. The TLG have tried to get a consistent framework to use and measure these. **Discussion points:** • Mangamingi – other factors involved – man-made lake with birds and sewage from town • Clarity – note 10% of highest flow samples are excluded • How will we define 'Act of God' events that nobody can possibly manage?	

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	• How do the existing limits for water classes correlate with the clarity/black disc attribute?
	• Concern that streams aren't monitored currently – relates to forestry
	• Wondering why Nitrogen and Phosphorus are not to be looked at for smaller streams/tributaries?
	  o Relates to type of stream and low risk of periphyton
	• Where did the clarity ABCD come from?
	  o A state from WRISS study: 4m = excellent
	  o Studies as part of national network survey related to swimming/user survey and relating to water quality
	  o Give B and C states of minimal acceptability
	  o Other potential measures for sediment?
	  o Could use suspended sediment or turbidity
	  o Clarity relates directly to what people see
	• Narrative standards
	  o Each band covers a range of states – trends are important information as well
	• Should we aim to maintain a set number or just a band?
	  o Band allows for variability between years
	• How should we take trends into account?
	  o Would be useful to know where objectives are likely to be set and then could look at trends posing a risk
	  o Trend reports are available from WRC
	• What time period makes sense to look for trends?
	  o Good to have a reason for choosing a trend e.g. 10 years relates to a planning cycle
	• What epidemiological studies are available to show actual risk from swimming?
	  o National limits relate to a study done on Campylobacter and risk of infection
	• What is correlation with the E. coli indicator and the common pathogens?
	  o Depends e.g. at base flow may be more avian strains, after 'freshes' more stock sources
	• Can we use DNA techniques to define sources?
	  o It is possible – some targeted work proposed ($500/sample)
	• Point sources – HCC sewage single biggest source to river
	• Using WRISS – have things improved?
	• Some decreases e.g. Phosphorus, other trending up e.g. Nitrogen
	• Do we need more monitoring sites on the Waipa?
	  o Can provide more detail from current sites
	• Can we have Waikato-specific information?
	  o People's perception of acceptable clarity for swimming?
	• Can we have an idea of the natural state of low land	

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	lakes? o NPS has set national bottom lines o Expectations to improve over time o Some lakes may never get above a certain level – need to know realistic expectation • Did the panel feel there were sufficient monitoring sites for each attribute to know: 1. The state of the tributaries and 2. Contribution to main-stem state o There are always limitations o Need to be cautious of focus on single points as they are likely to be representative of other sites o Attributes will vary in importance at sites / main stem / tributaries o Waikato monitoring network is extensive. Have a good picture. o Diminishing returns from adding new sites • Considering soil types in Waipa, are there other similar rivers we can benchmark against? o Some around Auckland, Gisborne. o People get used to own type of river o If it can't be improved, should we devote energies elsewhere? CSG can /should determine what is an appropriate level, where (in different parts of catchment)	
10.45am	**Morning Tea**	
4.	**<u>Workshop session: Issues/problems in parts of the catchment</u>** <u>E. coli Summary</u> • Are we ok with the current state? No • Upper main stem ok but tributaries not. • And may contribute to problems further down • Other parts of river need to improve – need to be A or B to meet Vision and Strategy. • Lower and Waipa might have interim target to get 'C' band but long term objective still has to be 'B'. • Apply to all seasons of the year because taking of food may occur at any time. **<u>More information wanted to understand the problems and drivers:</u>** • Info on sources/origins/how to allocate responsibility • Sources: point and non-point contributions, natural sources, farm level, tributaries • Origins: stock, birds, other animals, human – epidemiology – risk of illness. • Sources in different parts of catchment: o Waipa: - Why upper and lower Waipa seem high	**Base GIS info on the land and what is occurring on the land right now, e.g. so many ha in dairy, so many ha of LUC IV**

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	o Mid: What is the role of HCC wastewater plant vs other urban sources? What are the levels just upstream of the HCC plant? o Lower: How much comes from Waipa/ upstream and how much generated locally? (Relates to cumulative effect and die-off) • Trends and variability. Is it different for a longer (10 year) period, due to recent droughts in 2 of last 5 years? Is there a trend (especially in relation to changing land use)? What is the seasonal variability? The CSG would like to see the data that the TLG has used. Could track A, B, C, D status over 5 year time periods. Discussion on the suitability of monitoring network. Need the right locations to ensure we have the right info.	
5.	**<u>Farms types and modelling (Economic Joint Venture team) Doc # 3237691 and Doc # 3237693</u>** WRC economist Blair Keenan gave an overview of the context of the current economic model that was used in the Economic Joint Venture project for the Upper Waikato catchment. Around 18 months ago central government had a desire to get some more information regarding the implementation of the NPS – namely what are the implications for setting limits and targets. The work being shown today is regarding the building blocks of the catchment model. It is a tool which can be used to try and find out what some of the implications are for the regional economy for setting limits and targets, such as the profitability of land use (sheep and beef, dairy, horticulture and forestry). However, the outputs of the project weren't limited to that. Also want to look at the benefits of cleaner water and although this won't be discussed today, just wanted to make it clear that there are other aspects to the project as well. <u>Sheep and Beef data</u> Presented by WRC economist Femi Olubode. WRC conducted a survey of 450 farms to study pugging/flooding mitigation. From this 170 farms allowed follow up questions. From these farms 20 of them were selected for further study [on areas other than just pugging/flooding].	

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	A workshop was held to further deepen the knowledge gained from these studies and to workshop with these farmers, in a focus group type session, mitigation options and the likelihood of uptake. 5 farm types/systems were identified: 1. Small lamb finishing farm 2. Traditional hill country farm 3. Hill country/dairy support (maize silage cropping) 4. Hill country/dairy support (pasture silage) 5. Bull and prime beef finishing farm Choices of mitigation options were taken from the menu for sheep and beef farms, which was developed by WRC, Beef + Lamb and others. A number of case studies were shown to illustrate the results of mitigation options (at different scenario levels) on representative farm types. This showed both the reduction in nutrient loss (kg/ha/year) for a given mitigation option and the cost to the farmer ($/ha/year). This was followed up by highlighting some of the policy implications, including showing the farm-level marginal abatement costs by the different farm systems and scenarios. This allowed for an analysis of the least cost mitigation option by farm system. <u>Dairy data</u> Presented by DairyNZ economist Matt Newman. The objective is to determine the economic impact of reducing N loss on dairy farms. This involves creating abatement cost curves. Methodology: 1. Collect baseline data 2. Select farms for modelling – representative types 3. Identify mitigations and assumptions 4. Farmax and Overseer modelling 5. Checking and interpretation of results 6. Write up 26 dairy farms were modelled for the overall Waikato catchment. Weightings were given to each farm type based on area, i.e. higher weightings were given to farm types that took up more of the area of the catchment. N leaching in the Upper Waikato tended to be higher than the other parts of the Waikato catchment. 5 N mitigation options were tested: 1. Optimise feed pad / standoff pad 2. N fertiliser – timing, applications, volume	

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	3. Reduce imported supplements (up to 20%) 4. Reduce stocking rate (up to 20%) 5. Introduce standoff pad Several assumptions were used including holding fixed a $6.50 milk price. The impacts were shown in terms of % change in N leaching per hectare (10%, 20%, 30% and 40%) and change in operating profit per hectare. Conclusions: 10-20% reduction in N loss, smaller impact on profit 20%+ reduction in N loss – larger impacts on production and profit requiring more change on-farm with different management skill level.	
1pm	**Lunch**	
6.	**<u>Mitigations and Modelling – Dr Graeme Doole, Doc # 3237716</u>** Welcome to Alan Livingston (Healthy Rivers Wai Ora Co-Chair). Focus on the economic model content, in regards to mitigation and how they fit into the catchment model. Requirement to develop a number of scenarios regarding different limits and targets. • Develop a number of land use scenarios, with a range of associated limits and targets • Limits define the loads allowed to be placed on water quality from inputs, like nutrients and sediment • Targets define the time frames associated with reaching a given limit • Economic model will help link: Land use → limits Limits → land use The area the project is looking at is a large catchment – over one million hectares, with a variety of uses/broad diversity/intensity and biophysical diversity. It is not possible to model every farm as the data is not available. Profit versus mitigation techniques drive key relationships in the waterways. A model aims to achieve a target at the least cost. It helps gain an understanding of what has to change (land management including land use, intensity and mitigation) to achieve that. There may be implications for production and profit.	**Reports on costs and benefits of a trading system – Graeme Doole**

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	There are a number of reasons for using this frame: its flexible, can deal with multiple contaminants, provides key outputs, qualitative outcomes and what is the extent of change we have to achieve to meet goals.
	
	Examples of how the model may work were provided.
	
	Mitigation establishes flexibility to respond to different limits.
	
	Abatement cost curve shows that as there is an increase in mitigation on farm, there are small gains. To achieve large gains, it can be quite costly. Curves delineate the relationship between costs and abatement.
	
	TLG are looking at a social impact assessment. There is work going on within TLG by Dr Liz Wedderburn.
	
	Discussion points:
	
	• Concern about baseline – picking a single year due to variability in sheep/beef profitability year-by-year – better to use average over several years
	• Maize not necessarily substitutable for pasture silage because pasture silage is opportunistic and transfers Nitrogen loss elsewhere
	• Q. If it's easier/cheaper to mitigate Phosphorus than Nitrogen, especially on sheep and beef farms, few opportunities to change Nitrogen (and on dairy – want to see the work)
	• How does planting trees mitigate Nitrogen? More likely to be addressing Phosphorus/sediment – done for erosion/economic reasons
	• If case study data flows on into modelling, it will be based on poor assumptions (can compare production of sheep and beef and then run sensitivity analysis on price for products) e.g. might think we can change sheep : beef ratio and solve issues, but it won't necessarily happen
	• Can you model a scenario where a per ha allocation is made and trading occurs? Yes, can.
	• Assume all dairy streams fenced? This will be covered when we extend the model from only Nitrogen to also Phosphorus and sediment
	• Can we do analysis on impacts on farmers to reach range of reductions and impact on viability? Operating profit won't show this
	• EBIT / cash cycling, employment effects are much wider than EBIT – multiplier effects in different sectors
	  o Has to feed into regional economic modelling
	  o Need scenarios to do that modelling
	• Groundwater – is it a hydrological model or interactions of ground and surface water and with nutrients and seasonality?	

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	• In many cases we don't know how effective our mitigations are – concern about abatement curve
	• Modelling trading system – effects of transfer unclear – benefits/costs of trading regime
	• Seems like modelling still quite 'broad brush' – high level of uncertainty
	  o Science is not definitive but indicative
	  o Identify general principles that hold
	• Forestry NES being prepared
	  o May need a consent for planting (LUC 8, 7e)
	  o Can't assume all steep land can go into forestry
	  o Also, cost of roading – makes it impractical, especially relevant to Waipa
	• Will groundwater model cover the whole catchment? Yes
	• Point source inputs – how are they included?
	  o Opus – desktop analysis – have data for major discharges
	  o Know less about stormwater
	  o Ongoing work to check/verify	

7.	**Revised Community Engagement Plan Doc # 3208832** Discussion on what the CSG wanted to achieve in March 2015. Is the group trying to meet the November date and what are the scenarios and implications of this? Changes to CEP: • Added in two new objectives to the CEP. • Truncated – LSF moved to March 25 2015. **What will we need to be able to front the March/April events:** • Confirm FMU's (would need more information to do this/discussion) • Confidence around Tangata Whenua consultations • Current state and problems for the attributes/what's driving these? (Sources/origins). Cumulative? Different for various parts of catchment? May not be able to be definitive on this. May be better to focus on fewer attributes where we have better data. • Information on trends • Different problems in different FMU's (including lakes) • Localised focus	
8.	**Feedback from sector/community networks and decision makers** Moved to day two.	
3.40pm	**Afternoon tea and prepare for field trip (safety briefing)**	
4pm	**Field trip – horticulture sector**	

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	Field trip including AS Wilcox farm, a Packhouse (ST Growers), Status Produce Ltd (Glasshouse). Overview of Pukekohe Vegetable Growers Association (PVGA) from Bharat Jivan (Doc # 3230802).	
	<u>Return to Pukekawa Hall for presentations from:</u> **Peter Butler (BNZ) Doc # 3231798)** • Horticulture in NZ is a $6.7b industry. • Potential to be a $10b by 2020. • Much of the production is in the Pukekohe region. Food supply is a global challenge. In 1950 was half a hectare of farmland per person to grow food on. Predict 0.16 of a hectare by 2050. The number of growers are declining across the country also. Key messages: • Local growers are producing significant amount of food. • Growers are a vital part of the local economy • They are consolidating and numbers are in decline. • They provide significant employment opportunities both directly and indirectly. • Their income generation/Ha is high, but so are their costs. High redistribution of income. Profitability can be challenging. **<u>Alan Livingston – Update</u>** • Thanks to CSG for Large Stakeholder Forum on 23 October 2014. • Eye opener coming up this area, shallow lakes, challenges to lower Waikato different to upper Waikato. • HRWO Committee meeting postponed due to lack of quorum. Next meeting on 17 December. Bill Wasley unable to attend so the invitation is extended to CSG reps to attend. Photoshow of the year for CSG. Thanks to the CSG for their commitment to the process this year. Dinner served by local growers. **<u>Chris Keenan (Horticulture NZ) Doc # 3237636</u>** Covering the following items: • Environmental management processes • Soil conservation • Good Agricultural Practice (GAP); and	

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	• Franklin Sustainability Project	
	Close for the day.	
7.30pm	**Workshop closed by Alamoti Te Pou.**	

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Collaborative Stakeholder Group ("CSG") Workshop 8 Notes

(Day two) 3 December 2014, Tuakau Memorial Hall, Hall Street, Tuakau 8.30am – 4pm

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Attendees:

CSG: Alan Fleming (Env/NGO), Garry Maskill (Water supply takes), George Moss (Dairy), Gwyneth Verkerk (Community), James Bailey (Sheep and Beef), Jason Sebestian (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), Chris Keenan (Horticulture), Patricia Fordyce (Forestry), Sally Davis (Local Government), Michelle Archer (Env/NGO's), Weo Maag (Māori Interests), Garth Wilcox (Delegate – Horticulture), Charlotte Rutherford (Delegate – Dairy), Sally Millar (Delegate – Rural Advocacy)

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

Other (part): Emma Reed (WRC), Ruth Lourey (WRC), Debbie Goodwin (TKI), Judy Oakden (TKI) and Kate McKegg (TKI), Blair Keenan (WRC), Alan Campbell (WRC), Geoff Kaine (Geoff Kaine Research), Erica van Reenen (Beef and Lamb NZ)

Apologies:

CSG: Liz Stolwyk (Community), James Houghton (Rural Advocacy) Brian Hanna (Community), Evelyn Forrest (Community), Gina Rangi (Māori Interests), Gayle Leaf (Community)

Item	Description	Action
8.30am	Arrive at Tuakau Hall. Karakia. Waiata	
11.	**Reflection Day 1** Apologies: Liz Stolwyk, James Houghton, Brian Hanna, Evelyn Forrest, Gina Rangi, Gayle Leaf. Delegates in attendance: Charlotte Rutherford, Garth Wilcox and Sally Millar. **CSG8 – Reflecting on day one** The CSG reflected on their Day 1 experience. Appreciation for the workshop on E. coli was expressed and further such opportunities requested for future CSG workshops. It was noted that time in the February workshop would be made available for more discussion around attributes. It was noted that the modelling will only be as good as the base data fed into it. Need for the CSG to feel confident in the peer review process for the modelling. **Action:** **Following the presentations on Day 1 regarding modelling that the CSG requests:** **1. The independent peer review of the base data and assumptions going into the Joint Economic Venture model (and results as they come out). Peer review should be by professionals recognised by each sector (e.g. wastewater, forestry, horticulture and different farming types)** **George Moss/Phil Journeaux** **Carried** **2. An answer to - what peer review will be needed for all models? Models including economic (farm level, catchment/region level) and biophysical (groundwater, sediment)** **Stephen Colson/Ruth Bartlett** **Carried** 3. **The TLG reports back to the CSG in February on all the modelling briefs (roadmap) including what models they are using, what the models do, their pros and cons and how the models interact – and how non-economic (social and ecological) info fits. This should be both in**	**See Actions 1, 2 3 on modelling (in this section)**

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	detail and summarised with the summary circulated as soon as possible. **Sally Davis/Al Fleming** **Carried**	
12.	**<u>Policy options 1 – Justine Young (WRC) and Geoff Kaine (Geoff Kaine Research), Doc #3231312 and 3232616</u>** Justine put two questions to the group: 1. Would a decision support process for finding the most appropriate policy instruments be helpful for the CSG? 2. Are you ready to give this a go while the technical work is progressing? The policy workstream has identified an opportunity to do some work while the technical work is being done. There was a request for base information about what is happening right now on the land e.g. areas in different land uses, Land Use Capability ratings of land in the catchment. There was support for doing some policy work in parallel whilst we are waiting for the technical work. <u>Discussion on the following:</u> There are different primary policy instruments for each contaminant. Questions will need to be asked for each contaminant, such as do we need a tool box approach rather than a primary policy instrument? The group could start with something that will fix the issue. Then think will it work for landowners, what will it cost, can people in the council administer it? It might be too soon to know if you have different primary policy instruments for each of the FMU's and each of the contaminants. Suspect that it might be different. A primary policy instrument really just gives you a starter. What you ask of people at a property level might be different in each FMU. The criteria in the policy selection criteria are what you would also find in the policy choice framework. **<u>Geoff Kaine presentation</u>** Geoff outlined a fundamental structure to policy making and key matters to be considered in each stage. We have policy for fundamentally two reasons – equity problems and efficiency problems.	

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	Equity problems are about the way the economic, social and cultural wealth is distributed in the community. Equity is about fairness. It is about how the 'cake' is divided up. Efficiency problems are about the way we use resources. Efficiency is about how people behave. Efficiency is about creating a bigger 'cake'. Equity and efficiency are different things and consequentially the policies and criteria are different for achieving each of these two objectives. <u>First essential matter: The resource</u> With regard to natural resources we are dealing with an efficiency problem. Identifying the inefficiency is the first step. The use of natural resources is non-exclusive – hence either too much of the resource is being used or the resource is not allocated as efficiently as it could be. The bottom line is that the resource is being used inefficiently. This is the fundamental justification for the community to intervene and adjust the behaviour of resource users. However the aggregate benefits of intervening must outweigh the aggregate costs. <u>Second essential matter: The people</u> Having identified the problem we now need to find a way to change how people use the resource - the current use of the resource is inefficient overall therefore we need to change the way resource is used. To do this we need to understand people's behaviour – why do people use the resource in the way they do. Once we know this we will be able to make a sensible judgement on how many people will easily be able to change their behaviour and how many won't be. We may be able to use voluntary change methods or compulsory change methods depending on this judgement and we may need to balance equity issues that arrive as a result. <u>Third essential matter: The three stages</u> 1. Satisfactory allocation of uses: what mix of uses is desirable for the resource? 2. Choose a primary policy instrument to change behaviour 3. Consider the fairness of any equity effects flowing from the change in resource use <u>Stage 1</u> The first stage involves weighing up the economic, social and cultural benefits of uses of the resource. In the Healthy Rivers process this correlates to setting limits. Methods like scenario	

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	analysis and cost-benefit analysis are useful at this stage. <u>Stage 2</u> The second stage is correcting the non-exclusiveness. Key criteria here are feasibility, least cost and administrative efficiency. <u>Stage 3</u> The third stage is the equitable sharing of costs. If necessary choosing a package of support mechanisms. Key criteria are sound principles of allocation and recognising efforts. To be successful in policy design you need to do these three steps separately. <u>Fourth essential matter: measurement</u> There are a whole variety of policy instruments. The choice between instruments and the variations of them comes down to 2 factors - whether the change in resource use is to be voluntary or compulsory, and whether the use of the resource can be measured to an acceptable level and at a reasonable cost. In conclusion everything is important when designing a policy. There is a fundamental structure to policy problems. This structure can provide a way of working through policy problems.	
10.30am	**Morning tea**	
13.	**<u>Policy options 2</u>** <u>Discussion points from the group regarding Policy Choice Framework:</u> • Would our Policy Selection Criteria fit across the 3 stages? Yes with some overlaps. • Support measures – are they policies or methods? Could be more methods? • Why doesn't ecological wealth appear under equity/efficiency? Welfare can be defined as we want to. Can be part of mix of uses. Equity in cost of change sense is separate from mix of uses. • Is it helpful to split regulatory/voluntary? A package of instruments maybe needed. • If that's everybody's responsibility to manage freshwater, how does a primary policy instrument reflect that, if equity issues aren't considered at the start? • Equity does come in when you choose your mix of uses (setting limits). Balancing what change is required for sectors. • Then choose most effective instrument to achieve the change in practices (Measurable? Compulsory or voluntary?) Then look at equity again when you look at how cost of change is shared.	

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	• What does the decision support process look like? • And where do the PSC fit in? The PSC can slot into the framework. • Tool – assumes there are limits • Takes you through judgements on: Blue boxes: • Is compulsory/voluntary needed? • What can be measured? • Suggests most appropriate primary policy instruments Green boxes: • Test it with land owners/everyone who would be affected • Will it work on the ground • May require complementary measures Orange boxes: • Look at how difficult it will be for the organisations to implement • What kind of measures can address cost sharing equity? • Incentives – can use allocation to address equity • Principle of proportionality is an equity one • Can we change the wording so it has more meaning for us/public to relate it to what we want to achieve? • Can we see how the Policy Selection Criteria relate to the three stages? Yes •	
14.	**Farm plans – Erica van Reenen, Beef and Lamb NZ, Doc # 3239967** Erica van Reenen (Extension Manager) provided a brief overview of Beef + Lamb and what the organisation does. Farmers want to hand on their land in a better condition than how it was when they purchased it. Over time farming practices have changed – sheep and beef farmers have many jobs and challenges. There is no such thing as a typical sheep and beef farm. A key aspect is scale – you can have little lifestyle blocks right up to big blocks. Can also have anything from flat to vertical land for sheep and beef farms. Sheep and Beef farmers produce many different products. It is a very complex market which deals with a lot of volatility. Erica showed a Google Earth view of a farm and highlighted the topography, isolation and some of the environmental and farming improvements that have been done. Improvements have	

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	been done from a business perspective as well as protecting the environment. Having multiple waterways on any given property is common. Farmers' attitudes and access to capital is important when they are considering making changes or improvements. Erica listed some key things sheep and beef farmers can do for environmental mitigation: • Managing land to its potential, e.g. not putting heavier stock on erosion prone slopes. • Riparian protection, e.g. getting cattle out of the waterways. However, fencing waterways is expensive for sheep and beef farmers. • Winter grazing practices and cropping management. Often dairy cattle are grazed on sheep and beef farms in the winter for example. • Understanding the nutrient cycle. Sheep and beef farmers don't generally have a good understanding of nutrient cycle and nutrient budgeting. The key tool Beef + Lamb have to do support this are the Land Environment Plans (LEP). Workshops are held to help develop these plans. The LEP's are successful because the farmers write their own plan for their own farm systems. They then buy in to the plan as it is something they have created themselves. LEP's are relevant to deer farmers too. The 'menu' for farmers is also useful as a book that all farmers can use to see mitigation options with a cost/benefit analysis. LEP's are done at different levels – 1, 2 and 3. Farmers can do levels one at a time. 1 and 2 can be done at workshop level but not level 3 yet. LEP's help farmers understand how to achieve their goals and make it into a long term plan for their farm. LEP's include a nutrient budget and there are different sections for different issues, each of which allows for the prioritisation of actions. It is a systems approach with data; it enables planned development and ultimately achieves environmental and profitable outcomes. The stages of the farm plan process are: • For a level 1 plan the first activity is getting a farm map. • Then identifying key resources on property. • Next is going through a risk assessment process. • The risk assessment involves answering a range of questions for different areas. • If the answer to any of the questions is yes, then an action is needed to be identified. • The workshops are usually attended by multiple farmers and a conversation around the room about mitigation options [including personal experiences] takes place.	

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	• The workshop is ½ a day in length at level 1. • Level 2 is a bit more detailed, e.g. SWOT analysis, and level 3 expands upon level 2. There are challenges to doing LEPS – costs, the long term nature of some projects, knowledge gaps, policy challenges, weeds and pests are a big challenge (particularly within riparian areas) and attitudes are another challenge but there has been a huge change in behaviour and attitudes in recent years. There are opportunities too – productivity gains, intensification in right areas, improving efficiency, other income streams etc. Over 600 level 1 plans have been developed in the past 10 months over the country. Discussion on who is covering off drystock farmers that only dairy graze. An environment plan depends on the system, so Beef + Lamb are encouraging farmers to pick between plans [LEP or DairyNZ's Sustainable Milk Plan] depending on their situation. DairyNZ and Beef + Lamb are working together to look into dairy support. It is identified that there is a gap there. There is no blanket policy approach – if an LEP would work then B+L will encourage it.	
12.30pm	**Lunch**	
15.	**<u>Focus on groundwater</u>** Group mapping exercise	
	Agreement and Approvals Session	
16.	**<u>Approvals Session</u>** <u>Confirm CSG7 workshop notes</u>: The workshop notes were approved with the following changes: • Objective J to be changed to Objective I on page 4. • Diagram – on page 21. Differentiate use values to in stream/intrinsic values. Discuss further at February 2015 workshop. Action to add the word 'value' to 'use' box. • E. coli summarised. Request that TLG tell CSG what they can and can't answer. Where are the gaps? **George Moss/Jason Sebestian** **Carried** <u>Receive: Paper on Values – discuss next steps</u> Suggestion to remove number 2 (a, b, c). The CSG are capable of doing it themselves, don't need TLG to do this for them but could be discussed while TLG members are present to get their input. **Recommend that items 1, 3, 4 be approved:**	

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	Phil Journeaux/George Moss **Carried** Receive: Paper on Policy Choice Framework – confirm approach **Recommend item 1:** **Rick Pridmore/George Moss** **Carried**	
3pm	**Afternoon tea and discuss evaluation results** **CSG Only session** **Recommendations:** 1. **That Bill Wasley is retained as the permanent CSG independent chairperson for the duration of the CSG; and** 2. **That Helen Ritchie is retained as the permanent CSG facilitator for the duration of the CSG.** **Chris Keenan/Trish Fordyce** **Carried**	
17.	**Wrap up session** HRWO committee meeting: CSG Chair Bill Wasley is unable to attend 17 December at 10am**.** Rick Pridmore, Gwyn Verkerk and Stephen Colson to attend. Bill to brief these members. Timelines re meetings/project: There was a clear request form the CSG for extending the project timeframe. Identify why there is a need. Milestones have slipped (TLG establishment etc). The CSG requested that Bill draft a suitably worded statement to take to project decision makers. This (project timing) was also noted as a key concern in evaluation results. Tracey May- Project Sponsor: Update provided on the project timing. There is a need to look at next 12 months and consider what's ahead. There also needs to be time to have those conversations too. It is important to continue to communicate with the CSG. CSG members were thanked for their work and perseverance this year and we look forward to 2015. **That the CSG request that the project timeframe be reviewed to recognise the later than planned establishment of the TLG, the need for research to be reported back and**	**Bill Wasley to brief CSG members prior to attending HRWO meeting 17 December 2014.** **Bill Wasley to wordsmith a revised timeframe.** **TLG to provide answers to the E. coli questions asked on Day 1 to the Feb CSG meeting – please highlight any questions that can't be**

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	considered by CSG before provisions of the plan change are finalised (in particular groundwater research), and providing for the undertaking of work in parallel to minimise any time extension. **That the draft reviewed project time be provided to the February CSG workshop for consideration.** **Al Fleming/Chris Keenan** **Carried**	**answered.**
18.	**<u>Chairs closing comments</u>** The Chair noted it has been a pleasure to be involved in the group. It has been good to see group evolve and build trust and integrity. He acknowledged the input from the group this year as well as Helen's facilitation and staff assistance. Best wishes for the festive season. Next meeting 9/10 February 2014 at Don Rowlands Centre, Lake Karapiro, hosted by Tourism/Recreation sector.	
4pm	**Meeting closed at 4pm. Karakia and depart**	

Approved