FLAG MEETING 12 NOTES: 24th July 2015

Purpose:	Takaka Freshwater and Land Advisory Group (FLAG)– Meeting 12
Date:	24 July 2015
Time:	9.30am-3.00pm
Venue:	Takaka Fire Station
Present:	**FLAG members:** Graham Ball (GB) Greg Anderson (GA) Mirka Langford (MLa) Mike Newman (MN) Mik Symmons (MS) Piers MacLaren (PM) Matt Rountree (MR) Margie Little (MLi- iwi representative on FLAG) Martine Bouillir (MB- council representative on FLAG) Tony Reilly (TR), Kirsty Joynt (KJ), Neil Murray (NM) **Staff:** Mary-Anne Baker (MAB - Environmental Policy Planner) Joseph Thomas (JT -Resource Scientist - Water & Special Projects) Trevor James (TJ- Resource Scientist – Water Quality & Aquatic Ecology) (Arrived 11am) **Other** Rochelle Selby-Neal (RSN -Independent Facilitator) Andrew Yuill.
Apologies:	Lisa McGlinchey
Notes taken by:	Mary-Anne Baker (supplemented by other staff)
Definitions and Abbreviations	FLAG = Freshwater and Land Advisory Group NPS-FM 2014 = National Policy Statement for Freshwater Management 2014 NOF= National Objectives Framework – under the NPS-FM TRMP = Tasman Resource Management Plan (the Plan) TWMC = Takaka Water Management Catchments SOE = State of the Environment WCO = Water Conservation Order application for Te Waikoropupu Springs and recharge area AMA = Arthur Marble Aquifer TLA = Takaka Limestone Aquifer TUGA = Takaka Unconfined Gravel Aquifer MALF = Mean Annual Low Flow
Note: records of discussion points have been grouped into similar topics and are not necessarily in the order discussed at the meeting.	
FLAG MEMBERS PLEASE NOTE: If you have any questions or need anything between meetings, then please contact Mary-Anne Baker by email: marya@tasman.govt.nz or by phone ddi 03 543 8486.	

Purpose of Meeting

Setting initial allocation and flow limits for

- Parawhakaoho Zone
- Upper Takaka (AMA Zone)
- Waingaro River (AMA Zone)

Welcome and Karakia

RSN welcomed the group and MLi lead the FLAG in the karakia.

Check in

Trevor is initiating the monitoring of water clarity in Te Waikoropupu Springs. He will join the meeting at 11am.

Andrew Yuill – is attending to contribute to discussions on the limit setting work in relation to the Te Waikoropupu Springs in view of the application for a Water Conservation Order by him (and iwi). His presence was seen as enabling an alternative to a WCO process to set limits and allocations for water that affect the Springs.

Greg A advised of a recent report by the organisation NOAA Oceans and Atmosphere (USA) about changing climate and CO_2 records. Rising CO_2 levels and global climate change effects very evident.

MLa has been distracted with the recent restructuring and potential job losses at Fonterra.

RSN - Apologies for late delivery of meeting papers and acknowledgement that papers may not have been read because of that. Agenda – structured but flexible according to how progress is being made. The idea of having a different meeting structure such as a meeting over two days to enable more in depth discussion was floated.

Session 1 – Updates

Water Wheel (WW)

Key points:

- WW matrix – thanks to Piers for work on this in the interim. Workshop 29th will help answer question about what role for WW in this limit setting process. ADF paper to come out early next week.
- Some questions about overall usefulness and whether it can provide timely assistance in actually setting the limits in the next stage of the FLAG work.
- MS – still not convinced water wheel will be useful... but willing to see how it can be improved
- PM agrees -sees it as potentially useful – but needs all the bits need assembling – a bit sceptical about usefulness
- Mike N – referred to ONL process and concerned about anything like the WW that slows process down.
- Useful as visual high level tool to explain connections – useful for conceptual representation.
- MAB noted potential usefulness of tool at conceptual level – and additional resources the project brought to FLAG
- The group saw the need for technical robustness and that any numbers generated into limits are supported by real data
- Some of attributes more difficult to quantify and assign technical support to.

Action: *Group will be meeting on Wednesday 29th. One of the questions will to further explore the WW usefulness in the limit setting process*

Water Allocation and limit setting triangle

Key points:

MS – the triangle was not exactly the way he thought the decision process followed and that it really started with setting a minimum flow. He felt the process involved in decision making was a little more linear and depended firstly on establishing minimum flow (regimes).

Session 2 -

Limit setting for the Pariwakaoho

The material from the previous meeting powerpoint presentation with flow data and allocation regime options was used as the basis for this discussion. A map showing the catchment area was handed out.

Questions and Discussion

MLi There was a resource consent application made that was refused – why should we be setting limits – there is hardly any water there.

That application was not officially lodged and the idea abandoned by the farmer even though staff suggested that there was a likelihood of the consent being granted if there was a cease take at MALF. Staff did not close the door on a cease take based on a lower flow statistic, only that there was then a greater need for information proving effects were no more than minor. Council may still get other applications that accept higher flow trigger – there is still need to set limits for future. It also provides easy example to illustrate concepts and shows how decision making done.

MS – MALFs may become default summer flow because people draw down to that level?

Only the amount allocated is taken – not all of the water at any time. Freshes (small floods) will still occur. This limit setting determines the extent to which abstraction is going to affect low flow severity and duration.

Doesn't the duration of low flows have effects on temperature and habitat?

JT: Yes, particularly for unshaded shallow waterways. IFIM (Instream Flow Incremental Method) use the calculated MALF to base allocation given the high degree of agreement in the level of protection. This method takes temperature and habitat into account.

There was then some discussion about what minimum/bottom line should be.

TR – observed the relationship between the NPS and the RMA and that the NPS is to achieve the purpose of the RMA.

Values have to be identified and managed for including social and economic values.

MB Balancing – does that mean "degrading" is OK?

Overall quality within a particular waterway (not across the whole FMU) has to be maintained. It is about understanding what values are important and how they are to be maintained.

MAB – "maintain and improve" is perhaps not always about a single attribute. Managing a nitrate effect may be through establishing intercepting wetlands – it might not always be about maintaining just the nitrate (say) at a set number.

Do people think water bodies should be degraded for the benefit of the economic values?

It is still a question about the bottom line direction of the NPS and about maintaining and improving the overall quality.

GA felt that it was no longer a question of environment vs business – they must be blended together. Can have environmental well-being as well as better economic performance.

RSN – we are looking for win-win scenarios.

PM We also need to be clear about what we mean by economic benefit – it is provided across a range of activities including farming, aquaculture. GA - and diversity across a range of economic activity is very important

MLi – we need to think ahead too – and perhaps quite strong in decision making - some decisions might be quite hard and we need to acknowledge this.

The catchments we are going to work on will illustrate where tensions are – and bring various management elements together to ensure objectives met.

MB Expressed concern about constant 'squeezing' and erosions of standards
MLa We need to understand what trade-offs mean to our values. We all read the same information and data – but make decisions from our own filtered experience, values and point of view.

GB –we don't have farm water storage and are exposed to adverse drought effects.
Animal welfare is provided for, but looking to manage the risk of droughts overall. Droughts will still occur and may be severe and need active management.

MS – We routinely carry conflict in many of the decisions we make including during events such as drought. We need to manage with pragmatism without too much nostalgia.

MN The water management challenges are 'easy' in places because you can see it and measure it – but you can't see it all and managing the water in resources like the AMA is also a challenge.

RSN – Expressly acknowledged everyone's investment in this process.

Pariwhakaoho data

Existing policy already there to provide guidance – but we are now looking at more detailed numbers. Existing situation and data presented by JT. He reminded FLAG about how 'minimum flow' can be managed differently – cease take or rationed

JT also noted the existing water harvesting policy for takes above the median flows. – Could over-ride this policy to be specific for particular rivers if warranted.

The Cawthron report has previously recommended a low flow protection level of 90% of MALF. It also suggested a "cease take" approach to protect native fisheries.

TR What other cease take limit or allocation regime are used?
It was variable depending on values and flows of water bodies – 80-90% are usual.

GA –Are there any trends in MALF over time or does it tend to be stable?
In the AMA there has been more rain in recent years and MALF has gone up slightly as a consequence.

PMc – Cease take – still means that natural flows will still decline if a drought continues.
We can reduce the effect on low flow with higher minimum flow/cease take. After the take ceases the river returns to normal flows that would have been occurring naturally.

What does it mean that we can't use standard security of supply policy?
We generally manage for one in ten year drought – with a 35% cut in ten year drought. This is based on a historic approach originating in the mid 1980s that has survived analysis since then. It seems to provide for the right level of certainty for economic investment given the risks of rationing provided at this frequency.

The reason for setting minimum flow (in the Pariwhakaoho) –is for the (native) fish – At MALF it means can't allocate enough for the standard security as flows not high enough with enough frequency – the ten year low flow is already low at 156 – and less than the 90% of MALF flow of 175l/sec.

The group examined relationship between allocation and when cease takes apply to maintain the minimum flow. The rate of recession is also important in making sure the rules work practically and in a timely manner. (i.e the flows in the Pariwhakaoho fall quite quickly during drought and adopting rationing steps may mean rationing steps are only days apart.)

The options range from saying "no summer take" or allowing up to 20% of MALF *or* Could just adopt the allocation numbers as the rules as listed in the current default policy.

Policy provides guidance – but rules provide more structure and certainty to decisions.

Discussion about how notification for water permits applications work. They might be non-notified if the application is within an already established limit.
MS; Need more than just the policy as that doesn't provide the rationing/cease take management to guide effect on river in drought.
We need flow limits to manage summer take effects. It also prevents uncertainty about what MALF is from year to year. MALF might change – but the longer the record, the less the variation.

MLi; Who can get the allocatable water?
JT There are some rules that guide point of take effects so that all of it might not be able to be abstracted at a particular point.
MAB; We will need to revisit the way in which water is allocated – and whether the "first in time" approach is appropriate PARKED for discussion when allocation limits are set.

What is the rationale for Cawthron recommending 90%?
It is based on 7 day MALF as this flow parameter is more stable (calculated over a week). It suits the needs of river health because it is the normal summer flow which the ecosystem is accustomed to and a 10% reduction is (likely) sustainable in a river with quite a variable flow regime.

Can also set MALF as minimum but it means less security for takes as nearly all years require a cease take.

Consider providing for rationing – but examples given show only one 50% cut because river is quite small and flows fall quite quickly.
It is hard to manage many small steps cost effectively or efficiently. JT also noted that this river is small and flashy
It has less value for irrigators because it does not have the same certainty or volume of flow as larger rivers.

AY Monitoring and rationing in upper Takaka R automatic and based on set flows. It's large size and economic value mean management different.

Action: Ensure everyone has access to the Cawthron report

Break Out Groups

Three groups each considered the data provided and were asked to think about:

1. Whether information provided was good enough (how useful and useable) on which to base decisions about limits.
2. Do you prefer Cease Take or Rationing with cease take? Why?
3. What could those limits be?

Group 1

Quickly reached a consensus

– good information provided
– good enough to make decisions
– but wondered what Cawthron took into account, and whether there would be a range of tech opinions on that recommendation

The Group concluded MALF supported ecological systems – agreed 195 as the low flow –so would look at 214 as cease take. (No allocation of 10% of MALF)

Group 2

Good information, some background information needed to assess Cawthron recommendation as they weren't sure about going below MALF. However overall it was easier to decide as there is no current demand and water harvesting might be a better in a 'flashy" catchment.

Preference for allowing 10% allocation (19.5lsec) with cease take at 195.

Group 3

Useful information and enough to enable decision.
Cease take only as option (not worth rationing given flow recession and size of resource).
Looking at all parts of triangle – but especially recognised instream values as most important.

Agreed Cawthron recommendation 90% of MALF as minimum flow 19.5l/sec allocation and cease take at 195.

Common elements of the groups:

Cease take regime preferred – and allocation limit of 19.5 (10% of MALF)

But two options for the minimum flow-
Low flow at 175 cease take at 195 Or a more precautionary low flow 195 and cease take at 214. (i.e MALF or MALF less 10%)

The groups all like getting options with some information about the different effects to help them make a good decisions.

They also identified a need for information on how rivers respond in droughts, and recession curves.

The group referred back to the Cawthron Report which says that the high native fish values support high level of protection – and that 90% of MALF minimum flow was supportable and likely doesn't have adverse effect given the already variable flows of that river.
The report further suggested that without additional work to support this approach a more precautionary approach would be MALF.

NM Stated that DoC operates under this guideline protection level (of 10% abstraction in high value areas) for drinking water takes for huts and campgrounds in the Department of Conservation estate. It has removed takes that take a higher proportion of MALF but it would be hard to operate without this level.

Group Decision:

MALF should be the bottom line - We can still allocate 19.5 but need to cease take at 214 so that MALF is maintained. This precautionary approach accounts also for permitted takes and land uses.

Does this apply to all the coastal catchments?
Base flows in granite catchments is higher and might mean different impact? **Check this**

If cease takes at MALF – then rationing will happen every year.

GB – how long does this restriction last?
It would be variable across district and depends on nature and flows for each river – JT will look at **duration curves**. Anatoki cross correlated with rivers in coastal catchment and will be used to **calculate number of days**.

MS 10% is relatively arbitrary figure and we could use 6% couldn't we?
The combination of minimum flow and allocation limit will affect how often cut-offs occur. We could build a case using 95% MALF and lower allocation.

Action: FLAG members to check Cawthron report – it is on-line already.
Action: *JT to g*et duration of rationing for cease take/allocation options.
Action: MAB to collate rationale/reasoning for the proposed limits and to report back.
Action: JT to check flow data for granite Wainui R *[TJ: Rocky River flow record may be the best reference.]* to assess impact of this approach there.
[Post meeting note: – check also what this does to Onekaka catchment where there is already allocation.]

Session 3 – Allocation in the Upper Takaka River Reach

Presentation: Data on flows, instream values, allocations and waiting list (Joseph Thomas, Trevor Thomas)

- AMA – recharge map showing consents and flow statistics. The AMA is large area – we are starting now with Upper Takaka, followed consequentially by Waingaro, groundwater and Takaka Gravels. We will need to look at the three parts before we can state what the new limit will be.

Key points:
- We are starting in upper reach as this is a key part of AMA and TWS recharge. Current position provided and we will see what happens as a consequence of possible decisions.
- Hydrology and instream model done as part of Cobb consents
- Describes area where the current provisional 500l/sec limit applies.
- Using normalised statistics that account for Cobb and long record shows reasonably "flat" flow data.
- Upper Takaka important driver of recharge to Te Waikoropupu Springs
- There are several existing consents but only 3 significant sized takes and all 3 have a cease take regime in place through consent conditions. All three permit holders are also on waiting list for more water in this reach.
- Existing use rights for land use and water take activities different – land uses have more protection from rule changes but where rules manage water quality/quantity, then existing activities can be affected.
- Total allocated is 239l/sec
- Current cease take is 1-day MALF 1669 but allocation is 10% of the 7day MALF 2380. In summer when Cobb not operating there is more rationing. When Cobb is releasing, there is less rationing and more river flow.
- Also looking at take for storage options – compared to policy position of 10% above median. Flow data provided to show that the flow is above the median 28% Nov to April. And 21% of the time from Jan to April.

Questions/comments arising:

Is all the allocated water used?
not 100% but quite high.

What is the durations of water permits?
Currently usually 15 years. New applications or renewals can be subject to new rules or given different durations. Renewals are allowed for as controlled activities in the Plan (and also the RMA). Subject to bona fide test. Aim to protect existing investment.

What does a cumec (1,000l) look like?– a milk tanker is 800l.
10cumecs not a particularly high flow for the Takaka River?
No but the take for storage allowance is only for 10% when it is above this flow.

- Ecological values – brown trout – "regionally significant", native fish values are not certain. While a "very high" IBI is listed for this reach, the model does not see the affect of the Takaka River drying reach. Poor native fish abundance and diversity has been found in surveys over the last 15 years or so. Allocating water for trout is likely to provide sufficient water for natives.
- Assessing appropriate flows includes looking at life stages and amount of habitat available. Some data for Harwoods site. Trout species in this reach limited by natural flows.
- Native fish are lower demanding of water flows – the optimum for several is still above MALF for this reach.
- At Lindsays Bridge – naturally limited for trout and native fish happy with lower flows and are limited naturally.
- Further reductions in flows would adversely affect native and trout fisheries.
- Trout abundance has declined significantly in this catchment (large trout numbers have fallen to about 25% with small trout to about 12% since the 1980's).

What about the Upper Takaka Catchment was previously in tall trees and more shaded – we are not looking at a natural system anyway

The decline in trout began well before Didymo arrived in the Takaka River in 2007.

NM Trout fisheries have declined in recent times – not just in Takaka River.

- Flow graphs explained. JT explained how the drying reach changed with different drought flows. As flow gets to 14400 at Harwoods the bottom water permit holder start to struggle for access. Access difficulties would be exacerbated by increasing allocations as river drying extends upstream.
- Water that you see at Paynes Ford is Limestone sourced and is not coming back into the river from the upper reaches from Upper Takaka.

AY: What happens to irrigated water?
It depends mostly on rainfall – and how much water in soil at the time. Despite best attempts to match irrigation to demand after rain there will be losses to groundwater.

Can landowners take groundwater?
Potentially – it depends on where a well is drilled. However, we need first to look at river as an abstraction source. Takes from deep bores is part of the groundwater contribution to the Springs and also needs to have allocations developed for it. Only one deep bore in catchment at the moment.

Robust body science already part of existing permits – but need to add this to Plan limits and

What if a consent is allocated before numbers are established in the plan?
It becomes a question of seeing whether we are over-allocated or not after FLAG numbers are calculated.
New takes downstream won't affect the downstream user – they already have access issues.

AY: What about effects of water use on aquifer quality?

This will be part of the decision making process – and will be re-visited as we look at impact of current and new irrigation. PARKED

We need to be careful about how allocation to existing users is discussed - it is not just one person involved in each case and we should be careful to consider allocations neutrally.

NM: Total for zone is showing less total use of allocated amounts?
Yes – Zone use can be less than for an individual – any one permit holder can use a lot more at any time and will be dependent on different crops demands, time of year etc. Would not expect 100% use anyway because of how use patterns change over season, crop demand, crop type etc.

Irrigators still have potential to talk with Cobb to consider options to increase security of supply, or increase amount taken. (they would still would need consents to take water)

Action: JT review science behind Upper Takaka water permit allocations to see if there is room to move or change them.

PARKED: We will be looking at priority water takes/reservations once allocations are set, including community or drinking water

Water permits – are they tied to land /use?
Council haven't previously limited changes in land use by permit holder – water allocated can be used for any crop/farm system and allow landowners to respond to market demands. However, we may have to consider end uses where they have an impact on water quality.

Action Staff to provide some options for managing water for group to think about before deciding
Action: MAB to organise meeting with 3 irrigators before next FLAG meeting and before assembling options for FLAG. – Mirka and Tony to attend as well.

Further comments on the day?
RSN called for any further comments from the group on the meeting.

- Group thanked Lisa McGlinchey for her great note taking
- Please ask caterers for Soup next time
- Include Laura P at Takaka office in all e-mails so that she can copy and print them for Mike who will not have computer access for the next few weeks.
- Greg not here next FLAG meeting.

Action: MAB – to arrange meeting with consultation sub-committee.

<End of meeting>

Action Points – Council Staff/Facilitator/Advisor

No.	What	Who
1.	Ensure everyone has access to the Cawthron report	MAB
2.	*JT to g*et duration of rationing for cease take/allocation options.	JT
3.	MAB to collate rationale/reasoning for the proposed limits and to report back.	MAB
4.	JT to check flow data for granite Wainui R *[TJ: Rocky River flow record may be the best reference.]* to assess impact of this approach there. *[Post meeting note: – check also what this does to Onekaka catchment where there is already allocation.]*	JT
5.	JT review science behind Upper Takaka water permit allocations to see if there is room to move or change them.	JT
6.	Staff to provide some options for managing water for group to think about before deciding	MAB
7.	MAB to organise meeting with 3 irrigators before next FLAG meeting and before assembling options for FLAG. – Mirka and Tony to attend as well.	MAB
8.	MAB – to arrange meeting with consultation sub-committee.	MAB

Action Points – FLAG members

No.	What	Who
9.	*Group will be meeting on Wednesday 29th. One of the questions will be to further explore the WW usefulness in the limit setting process*	ALL
10.	FLAG members to check Cawthron report – it is on-line already.	ALL

Action Points – FLAG Sub-groups

No.	What	Who
11.	Consultation sub group to meet.	

Scheduled FLAG and FLAG Subgroup meetings

Date	Friday 21 August 2015 (FLAG Meeting 13)
Time	9.30am -3pm
Venue	Takaka Fire Station
Agenda Items	TBA

Date	TBA – possible date of 25 September (FLAG Meeting 14)
Time	9.30am -3pm
Venue	Takaka Fire Station
Agenda Items	TBA

Information and resource documents identified during meeting

Date	Title	Author/Source
2006	*A Framework for Flow Management in the Takaka River Catchment -Roger Young 2006*	Cawthron, Roger Young

**Key documents available electronically will be added to the online PDF document bibliography.*

Issues or topics identified during meeting for future consideration

Topic/Issue Description	Requester
FLAG to consider review clauses for consents when looking at Plan Rules	*ALL*
Priority Allocation regimes within allocation limits	
Nutrient impacts of changing land use.	

**Issues or topics unable to be addressed at the meeting, but requiring future consideration will be recorded in the Takaka FLAG 'Information Eddy'.*