

FLAG MEETING NOTES: 29 July 2016

Purpose:	Takaka Freshwater and Land Advisory Group (FLAG)– Meeting 24
Date:	29 July 2016
Time:	9.30am-3.00pm
Venue:	Takaka Fire Station
Present:	<p>FLAG members: Graham Ball (GB) Mik Symmons (MS) Mike Newman (MN) Piers MacLaren (PM) Margie Little (MLi- iwi representative on FLAG) Andrew Yuill (out for 9.45-10am) Greg Anderson (GA)</p> <p>Staff: Lisa McGlinchey (LM – Coordinator-Natural Resources Policy) Steve Markham (SM- Environmental Policy Manager) Joseph Thomas (JT -Resource Scientist - Water & Special Projects)</p> <p>Other: Rochelle Selby-Neal (RSN -Independent Facilitator) Andrew Fenemor (AF -Landcare Research) Roger young (RY – Cawthron Institute)</p>
Apologies:	Martine Bouillir (MB), Tony Reilly (TR), Neil Murray (NM) Mirka Langford (MLa) Kirsty Joynt (KJ), Hika Rountree (HR), Trevor James (TJ)
Notes taken by:	Lisa McGlinchey (supplemented by other staff)
Definitions and Abbreviations	AMA = Arthur Marble Aquifer FLAG = Freshwater and Land Advisory Group FoGB = Friends of Golden Bay l/s = litres per second MALF = Mean Annual Low Flow NOF= National Objectives Framework – under the NPS-FM NPS-FM 2014 = National Policy Statement for Freshwater Management 2014 TLA = Takaka Limestone Aquifer TRMP = Tasman Resource Management Plan (the Plan) TUGA = Takaka Unconfined Gravel Aquifer TWMC = Takaka Water Management Catchments TWS = Te Waikoropupu Springs SOE = State of the Environment WCO = Water Conservation Order application for Te Waikoropupu Springs and recharge area
<p><i>Note: records of discussion points have been grouped into similar topics and are not necessarily in the order discussed at the meeting. Notes in square brackets [] have been added post meeting for clarity.</i></p>	
<p>FLAG MEMBERS PLEASE NOTE: If you have any questions or need anything between meetings, then please contact Lisa McGlinchey by email: lisa@tasman.govt.nz or by phone ddi 03 543 8409.</p>	

Purpose of Meeting

Discuss and make decisions on:

- AMA recharge zone – a cease take trigger at Te Waikoropupu Main Spring:
 - What, why, where, and application in AMA Recharge Zone
- Upper Takaka River – takes and cease takes
 - Consideration of options for an A&B take regime and their suitability

Welcome and Karakia

RSN welcomed the group and MLI led the group in the Karakia.

[Note quorum achieved but only 7 of 13 FLAG members in attendance]

Check-in

- No check-in issues raised by the group.

Session 1 - Updates

Iwi – Steve Markham

- SM trying for some weeks to find a date that suits iwi and councillors – not succeeded in finding a date for August –looking at early to mid September.
- All eight iwi have been approached and offered to meet all together at Onetahua Marae or separately at their convenience.
- Te Atiawa happy to meet separately with TDC at Richmond [10 August]. Happy to have FLAG members present if they are available.
- Have a written request from Ngati Tama for a cultural and social impact assessment to be prepared and funded by Council. SM considers this is an appropriate aspect to talk through at the hui once we have a management package to test against cultural and social impacts as there is likely to be value in this. SM preparing a written response to Ngati Tama on this.

Action: SM to continue working with iwi and councillors to find suitable dates for hui.

Action: SM to send response to Ngati Tama on cultural and social impact assessment.

Comments on iwi update:

MLi: Since the treaty settlements Councils and everyone under the govern level are caught in the issue of figuring out who they should be talking to for iwi engagement. At the moment the statutory acknowledgements and overlays are not making any difference.

RSN: Two parts for consideration – getting iwi values and interests integrated within the FLAG process and wider understanding of obligations and rights involved.

SM: It is a work in progress.

GBCB letter response

RSN: has this gone to GBCB?

SM/LM: not yet. SM and LM to action.

Action: LM and SM to get written response to GBCB asap.

Nitrate subgroup update

- Summary has gone to FLAG
- Group have had discussion about irrigation and water allocation.
 - FLAG can allocate water from TWS as long as the values are being catered for and as long as ecological values in aquifers are also protected – and the nitrate subgroup think the values are being catered for.
 - Regular ongoing monitoring of nitrate is paramount.

RSN: So it is ok to decouple allocation limit decisions from water quality considerations for the AMA/TWS?

[no specific answer from members present]

MS: You can recover some of the monitoring costs from those who use the water.

JT: There are Sec 36 charges that are placed on consents.

MLi: It is user pays and while there may only be a few users – they are big users.

LM: This aspect can be included in the implementation programme that goes to council.

PM: I'm impressed with the quality of the data being collected by FOGB and if this continues for a year this will provide a really good data set.

GA: there is some difference between labs and between FoGB and TDC.

Action: LM to add further monitoring of nitrates to implementation programme draft.

RSN: I'm wondering if we now draw a line on effort put into gathering further information on nitrate to inform the FLAG process. Is trying to get any more information going to materially affect the decisions being made in the process now?

GA: The question still to be answered: If you put 'x' amount of urea on the ground, what do we see at a certain point and what is the time lag?

AY: We have a big hole where we don't understand where 70% of the nitrate in the deep aquifer is coming from. Nitrate from the karst uplands is the unknown. Just about all of this recharge area is under bush cover and the amount we are estimating coming from this area is nowhere near nitrate levels from other bush catchments, so something is going on here and we don't know where the nitrate is coming from.

PM: We have identified the need for ongoing monitoring.

LM: TJ will be starting monthly monitoring at Lindsay's Bridge of river water quality parameters including nitrate – starting July 2016.

AF: There is definitely a possibility of contribution of natural sources to the nitrate load, but this should not stop FLAG from making decisions. We could take samples from karst uplands in areas that are not affected by human activity to help identify a baseline – there have been some high samples in the past from Spital's spring (0.29 mg/l in Mueller report).

AY: FoGB members are looking at expanding their sampling regime.

AF: The nitrate budgets that we presented were heavily influenced by dairy, but dryland sources of nitrate in the valley may be under-estimated.

AY: There is no question that dairy is major in the nitrate budget – there is fairly good agreement on the numbers.

MK: There is nothing we can do about nitrate coming from the karst uplands and we need to focus on what we can manage.

JT: The models make assumptions of the system being homogenous (well mixed) and don't account for denitrification. But we know that the aquifer is not homogenous and we can't answer the issue of denitrification. Triggers and monitoring are the best methods to address this issue.

RSN: FLAG need to look at the actions attached to the triggers, once the plan change has been drafted.

MN: Allocation is a 3-legged stool - we have allocation, monitoring and compliance to adapt our management to suit the ongoing results. We have to move first in one direction and enable adaptation in the process to allow future change.

RSN: One of the key outcomes of this work is identifying the best places to monitor and what to monitor. Once LM has drafted the plan change then FLAG can look at things like activity status of consents and what conditions might be put on consents to manage risk.

GA: *The only concern I have with adaptive management is the loop takes so long – once you see a trend, how long does this keep going? But more predictive management is difficult.*

RSN: Does anyone else have concerns they would like to raise before we move on?

AY: *The December 2013 letter I got from NIWA recommended 0.4mg/l nitrate trigger for protection of stygofauna and Stark has recommended 0.44mg/l. I am not prepared to take 0.5mg/l nitrate or 45% for oxygen and 50m for clarity [as recommended by the science panel]. I am prepared to accept a 0.4mg/l nitrate trigger in the spring.*

RSN: *As soon as someone holds onto a position and others hold onto another position we will not reach consensus.*

AY: *I understand this. I also don't agree with the percentages of MALF being used by FLAG [for minimum flow protection]. I also haven't seen any attribution of increased allocation to further benefit for the Takaka community. I don't think we will be providing for present needs, but I see the benefit for local farmers. We haven't even discussed economics issues – as Margie has said we are dealing with the Rolls Royce of taonga here.*

RSN: My understanding of the purpose of the science panel work was to get the experts around the country to agree to a consensus amongst themselves and we assume that if any of those scientists turned up in a hearing/court that they would be sticking with their consensus decision. Roger can you respond? – how did the panel get to the numbers?

RY: *Yes – and the critical thing is what are the actions that go with the triggers. I understand there would be some strong land use controls proposed. I also understand that there won't be nothing being done until the triggers are reached – there are management proposals being discussed by FLAG to apply before any triggers. The trigger numbers were based on a number of standards and a number of these are quite low bars and Te Waikoropupu Springs is a special place, which is why we identified the 'natural state/status quo'. 1mg/l nitrate is the level where issues are seen and so we decided the trigger needed to be lower than this to allow for a lag in response – and at a 0.5 trigger this would be reached by the year 2047 with the same trends and this provides time for response. The numbers were suggested and discussed by the panel.*

GA: Were there different scientist opinions about the numbers?

RY/AF: *Yes there have been differing opinions and we are not completely at consensus and we will be having another round to ensure all on the panel are comfortable.*

RY: *Some are saying 1mg/l some are saying 0.4 mg/l. As a group we have selected 0.5 mg/l.*

AF: *Some of the scientists are coming from different viewpoints – some are just looking at the data and some are looking at the values involved which is really the FLAG role. Trying to reconcile these views.*

RY: *Also trying to cover measurement uncertainty and unknowns such as the variability in the water clarity in springs.*

MS: So the NIWA scientist that gave AY the original advice of 0.4 is involved in the science panel?

JT: *Yes, as well as Dr Hickey who has done similar work for Hawke's Bay Regional Council.*

AY: *FoGB have looked at the cost of funding a water clarity monitoring regime and it is about \$10,000 and we can't cover this with private funding. I've talked to Graham Fenwick and he stands by his 0.4mg/l conclusion so I'm not sure how this fits with the consensus of the science panel.*

MLi: You also mentioned that abstraction was not a concern – can you elaborate?

RY: *If there was abstraction that reduced the flows in the springs we should be concerned – that is why we have been discussing the issue of allocation and regimes to protect this.*

MLi: I've had a lot of comment on the street that the springs don't bubble like they used to.

RSN: AY has said he is not happy with the science panel outcomes – how do the rest of you feel?

MN: I'm looking at a graph that shows a trend out to 50yrs, we can't 'cover our xxx' out past 50yrs

MLi: As far as the cultural aspect goes I feel very pulled, I feel as though everything is getting maxed out and that concerns me. I'm not a scientist and I don't operate on this level and the iwi cultural perspective doesn't operate of that level either. A lot of major decisions we make are made on gut feeling. To be honest nothing will convince me that the science way is the only way – there has to be a balance. There has to be compromise on both the science and our viewpoint. This taonga is the only thing we have left after colonisation and [iwi] are going to stick our neck out for it.

RSN: I'm seeing the FLAG may be presenting two viewpoints to this and possibly a third once we have talked to iwi, and Council will have to make a decision on these.

SM: FLAG should still try to reach a consensus

RSN: SM/AF can you talk about your experience about what happens when science and cultural aspects are considered by hearings panels?

SM: In my experience when there is science included, the cultural dimensions do not fare very well as the court adopts a sceptical approach to cultural dimensions. The pattern around the country is probably not much different. I agree with Margie that there has to be a balance.

GB: Science will get you to the cultural values anyway don't they? They corroborate them.

AF: I think hearings/courts are pretty accommodating to inclusion of cultural values in achieving a balance. If there is no clear middle ground they tend to go with science, but I think in this catchment there is good reason to put forward cultural reasons for management approaches.

MS: I guess it is what management of the impacts are and how reversible this is. I think nitrate is a management issue – to me sedimentation is the issue we haven't covered. There is a great deal of on-farm management practice that can help address this. The big issue for me is the clarity at the springs. I wonder if we can get a better collaboration on this issue at the springs – until we have more than one data point at the springs we won't understand the impacts of our management.

MLi: The water has been underground for 10 years – I find this a bit scary – how many people were irrigating 10 years ago?

AY: The waters coming out now were before the dairy price boom.

JT: We have provided FLAG with this information – if you look at the age curve there is water that is 100 years old, but also water that is 1 year old – the average being 10.2 years. We have waters elsewhere in Tasman that are 20,000 years old. [Note also that dairy and irrigation were in existence more than 10 years ago.]

RSN: Is the sediment issue being dealt with elsewhere?

LM: We have a review of land disturbance rules, plus work looking at good practice for land disturbance. On-farm management of sediment will be included in the good management practices approach being looked at by FLAG, but the land disturbance rule review will also look at this – including consideration of land disturbance on karst landscapes.

SM: We are seeking a package that has integrity from a representation of the community.

JT: When the package finally goes out we will have the wider public also adding their views on trigger values and approaches.

MLi: A positive for me is there is more monitoring occurring at the springs.

GA: Roger, you mentioned 1ppm was considered the trigger for nitrate for sensitive species?

RY: This is the nitrate toxicity issue. Dr Chris Hickey has assembled information from a wide variety of species and the most sensitive of those (lake trout, snails and mayflies) show a change in growth rate at 1mg/L [1ppm] with changes increasing as concentrations increase. There has been a lot of discussion in the science panel over stygofauna and there have only been 2 studies in the world looking at this and they are contradictory, one says stygofauna are very resilient to concentrations of nitrate and the other says they are very sensitive to it.

GA: And what about the limit for plant growth – where did that get to?

RY: You can get algae growth affected by relatively low nitrate levels, however they need both Nitrate and Phosphorus -so we have also looked at the balance of nitrate and phosphorus. In the concentrations in the springs we are seeing phosphorus is controlling the growth. But phosphorus is at a very low level. In the springs growth will be on the bed, rather than in the water column as water is flowing through.

GA: What is the risk to water clarity?

RY: Inorganic sediment running off the hills - and if the processes in the aquifer that remove this weren't working for some reason, this would be a concern. There is no organic carbon in the springs as this is being removed by the processes in the aquifer. That is why we have suggested Dissolved Oxygen [DO] as a critical attribute and a DO trigger of 45% [saturation].

AY: The figures of organic carbon match the amount of DO levels seen – so the oxygen is being used up to process the organic carbon - and we don't know what levels of oxygen the stygofauna need to keep doing their job in clearing the water. I also agree with Mik that sediment is a looming problem. Any sediment passing through the system will settle as the water is moving very slowly. Hika has also mentioned that sediment plumes into the Bay are an issue.

AF: We are coming out the tail end of the historic deforestation period with a legacy of sediment flushed through the system but recent sediment losses will have been reducing.

AY: Professor Williams “Dr Karst” – has said that “little objective science guidance is available on what low flows will provide for ecological protection” therefore political value judgements are needed. There is no justification for the risks taken with the environment – no one can say if we don't take this risk there would be some significant adverse effect on the economy.

SM: The efficiency and validity of the management approaches recommended by FLAG will be tested throughout the RMA Schedule 1 process – including effects on the environment and economy and how the management package affects the use of water, including the balance of cost and benefits compared to other management methods.

RSN: Is it correct that the RMA s 5 considerations have been considered through the FLAG's values and management objectives, which will in turn drive the policies and objectives in the plan?

SM: It is the change that is made by the proposed management package, compared to the current situation that will need to be looked at, including in the s32 analysis of costs and benefits.

RSN: There is reason to focus on ensuring the objectives and policies are strong to show what you were aiming for (eg when a decision maker is deciding on a resource consent application).

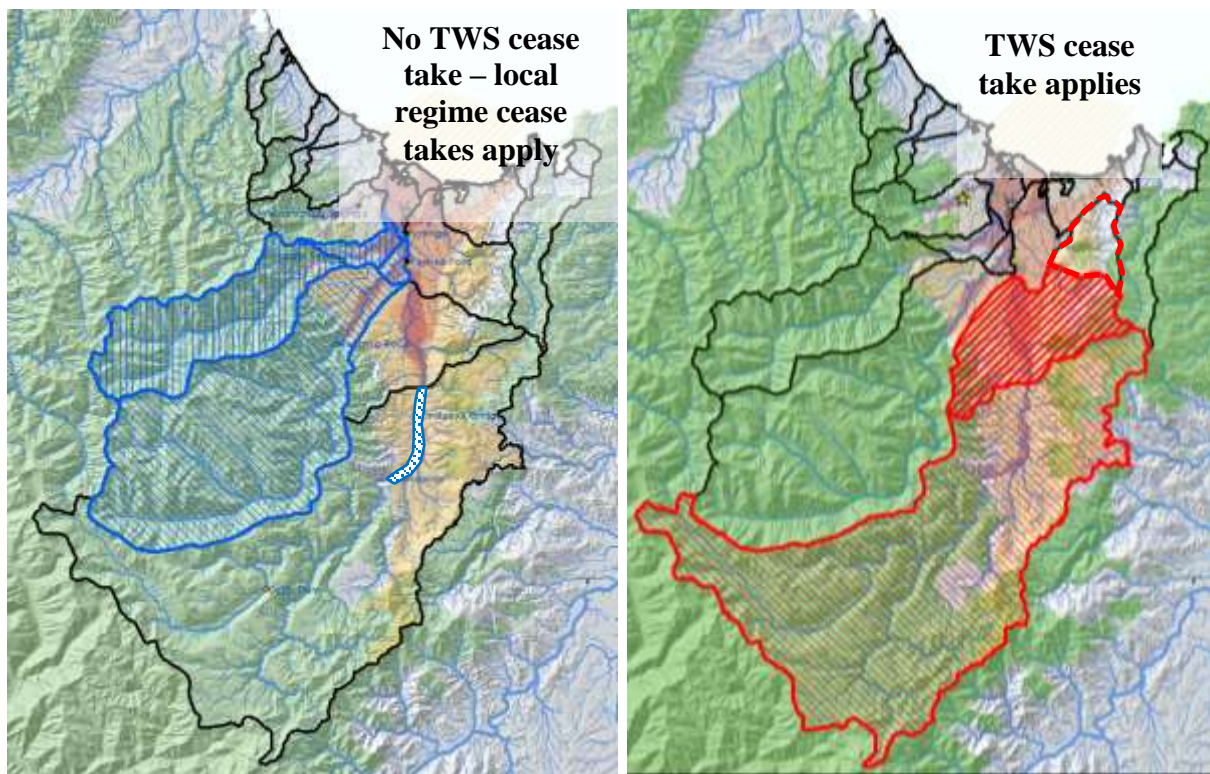
Session 2 – AMA Recharge Zone: Te Waikoropupu Springs cease take trigger

LM/JT and RY gave a presentation on cease take trigger options for the AMA Recharge Zone and Te Waikoropupu Springs (TWS). This covered outcomes from the last FLAG meeting and review of options for both the level of the cease take trigger and where it should apply.

Key points:

- Discussions at the previous FLAG meeting (8 July 2016) identified:
 - There should be a cease take of some kind at the springs to protect ecological values
 - The TWS cease take should be measured at the main spring and not at Fish Creek Spring
 - The TWS cease take should not apply to Upper Takaka main stem takes as there is a poor correlation between river flows and spring flows
 - The TWS cease take should apply to all takes that do not have their own regime based cease takes
- A cease take at Fish Creek is not justifiable as:
 - There is poor correlation between Takaka river flows and spring flows
 - A cease take at the main spring higher than 6100l/s will avoid Fish creek drying as a result of water takes and proposed triggers are above this
 - Security of supply based on Fish Creek flows is significantly lower than a trigger at the main spring
 - There is poor justification of benefits against costs as the beneficial effect on flow protection and ecology is [small enough to not be] measurable, against a poorer security of supply.
- Options for level of cease take include:
 - Option 1: 90% of MALF protecting a minimum flow of 6895 l/s
 - Option 2: 96% of MALF protecting a minimum flow of 7350 l/s
 - Option 3: 100% of MALF protecting a minimum flow of 7661 l/s
 - Option 4: no cease take at springs (not considered suitable)
- Options 1 to 3 are expected to protect ecological values
- Option 2 provides a similar Nov-April security of supply as the existing Upper Takaka takes – however the occurrence of cease take events longer than 3 and 5 days are different.
- Staff recommend TWS cease take NOT apply to:
 - Anatoki Zone – as this system loses water to groundwater, but research shows no link to flows at TWS
 - Waingarō Zone – as only 8% (6% ± 6%) of flows are estimated to affect TWS
 - Upper Takaka Zone (main stem takes) as poor correlation between river flows and springs flows and a TWS cease take would prevent users from benefiting from Cobb fluctuations
 - Local regime cease takes would still apply in these zones
- Staff recommend TWS cease take should apply to:
 - Existing and new takes in the Middle Takaka Area
 - Existing takes from tributaries in the Upper Takaka Area
 - Groundwater takes from the unconfined AMA not covered by a local regime
 - These takes do not have local regimes with cease take
- Staff also recommending all new takes in these area are from AMA – ie no new surface water takes

[map showing areas where cease take should not apply (blue) and should apply (red) reproduced over page]



Discussion points following presentation:

MN: My cease take on ephemeral streams in Marlborough focused on when I could start taking water, not when I stopped – but as these streams are flowing into the aquifer to recharge this is not an option.

JT: That is why we are suggesting the cease take apply to the tributaries in the Upper Takaka and Middle Takaka areas.

AY: Where is 6100l/s on the [Main and Fish Creek Springs flow correlation] graph [refer slide 4]?

RY showed where it was on graph.

RY: because the relationship is not linear – there is a kink. If we are protecting MALF at the main spring, it is a different level of protection at Fish Creek.

AY: Where do you measure Fish Creek flows?

RY: At the bottom – the bottom end would be wetted longer than the top as it dries progressively downstream.

JT: Regarding the clarity measurements above the salmon farm - one of the problems is that stuff coming from upstream in the Fish Creek is coming down into this area.

GA: Roger is there anything about Fish Creek or Waitui or other streams that is a gem regarding diversity and value in your eyes?

RY: The Waitui is an important trout spawning river, and the Upper Takaka is dependent on this for recruitment, but the lower reaches are often dry. Drying is not an uncommon event for these tributaries and there wouldn't be species living there that are sensitive to drying.

JT: Since the bore was put adjacent to the springs – the pressure has never dropped below ground level – at that spot the aquifer is always hydrated – the water level never drops lower into the marble. Dewatering in aquifers can be an issue elsewhere, [but this is not an issue in Takaka]. In Hamama there can be a fluctuation in groundwater of 20-30m but there has never been a drop below the level of the marble.

GA: How did the other consents come about?

JT/SM: They were a whole bunch of ad hoc consents that left cease take management to the water plan. This is the first time we are looking at the catchment as a whole.

SM: We can write rules that can revisit the operating conditions of existing consents (s68(7) of the RMA).

AY: I think the graph [of Takaka River and Main Spring flows – refer slide 4] is an uninformative presentation of the relationship between flows at the river and the springs – I suspect further analysis would show a correlation.

JT: We have done this and it does not show a clear correlation because flows going into the aquifer are so dependent on conditions in the aquifer at the time.

[post meeting comment AF: I agree with AY on this – it's not a helpful plot]

MS: I would support continuance [of Upper Takaka river users using their current cease takes] my feel is they are harvesting releases from the Cobb so they are effectively taking from storage.

RY: If current takes in surface water have cease takes, but you don't have a cease take for groundwater – this would potentially result in takers switching from surface to groundwater.

RSN: FLAG do you want a cease take at the springs?

Group discussion occurred on the springs and benefit of a cease take.

FLAG member outcome: Cease take at the springs is a yes.

RSN: Does anyone disagree that the cease take should apply as recommended [to the red and not to the blue areas on the maps]

Flag members present: no disagreement

RSN: Does everyone agree with the recommendation?

FLAG members present: agree

RSN: Which option for level of cease take do you want?

PM and MS: Favoured Option 2 with 96% - as this provides the same % security of supply for Upper Takaka as proposed for TWS

RSN: Anyone disagree?

FLAG members present: – no disagreement.

RSN: Everyone agree?

FLAG members present: agree

AF: Note that percentage security of supply is a blunt measurement. Consideration should be made of the security of supply columns in the table for cease takes longer than 5 days, as this means farmers needing to store water or bring in feed. The effects on water users are quite different based on the table, even though % SOS is the same.

[post meeting note: security numbers for the 3 and 5 day statistics differ by 1 cease take event between the 96:10 and the 90:10 regime at TWS]

Session 3 – Upper Takaka (main stem) cease take trigger

LM, JT and RY gave a presentation on options for cease take in the Upper Takaka Zone applying to surface water takes on the Takaka River main stem following concern expressed by the existing irrigators over the security of supply under the interim 70:15 regime.

Key points:

- There are several options for managing the existing cease takes:
 - Option 1: Use the 70:15 regime (2023 l/s trigger) for all existing and new takes which protects a minimum flow of 70% of MALF

- Option 2: Use an A-B tiered approach where existing (A) takes are grandfathered to their existing trigger (1657 l/s) which protects a minimum flow of 60% of MALF and new takes (B) use the 70:15 trigger of 2023 l/s
- Option 3: Use a modified A-B tiered approach where the existing (A) takes have a higher cease take than currently at 1900 l/s which protects a minimum flow of 70% of MALF and new takes (B) use the 70:15 trigger of 2023 l/s
- The Upper Takaka is an unusual river due to the Cobb influence:
 - Ecological effects are not as readily linked to flow metrics like MALF as with other rivers
 - Users can be cut off regularly, but typically only for short periods of time

Discussion following presentation:

MS: After the Cobb consenting – a commissioner hearing on the irrigators consents went through a very involved court process and their decision put a minimum flow in place – if we choose to change this, it could be difficult to challenge this.

JT: Yes - if we change [the current trigger of] 1657l/s it is likely we will get challenged on this by the irrigators as they have based their investment decisions on the court outcome.

MS: It is also the existing irrigators that would be applying for the B takes so this is like a rationing step for them.

MN: There is also the consideration of the migration of the drying zone to consider – we don't want to have this move and affect existing downstream users.

GA: What do the irrigators want?

JT: They want their status quo of a cease take of 1657 l/s.

GA: Are they happy with the class B takes?

JT: Yes.

RSN: The two considerations are which minimum flow is being protected and the effect on existing users security of supply.

MS: It is a very artificial system.

RSN: In terms of the difference in minimum flow, does this create an effect on the river?

RY: In terms of ecological risk I've suggested in the past in areas with high values that minimum flows of 90-100 % are used to protect values – in lesser values area 70-80% should be used, dropping below 60% then this is generally having effects, but the Takaka River is a very unusual river with lots of ups and downs – it is the bottom of the troughs that are important – but the highs are also important for things like mayflies – there is still fish in the river and fishing values.

GB: All the high reaches of our rivers are flushed really badly and it is only the lowland area that supports the higher fish values and the Upper Takaka is no different.

JT: This summer when the Cobb stopped releasing the river dropped from 8 to 1 cumecs.

RSN: FLAG what do you want to do with respect to the minimum flow being protected?

MS: I'd go with Option 2

AY: I think that 70% minimum flow is too low – and I'm uncomfortable with being asked to make a decision without having time to digest the information.

JT: FLAG have been provided this information previously.

RSN discussed the process – taking 70:15 as an interim decision – looking at the whole framework first and then review the specific numbers.

RSN: I acknowledge that there is some discomfort in the group with the 70:15 regime. However, I don't think further discussion of this, at this point, will help the process right now.

AF: Andrew what is the particular issue with the 70:15?

RSN: Is it that you don't have faith that the 70:15 will protect ecological values?

AY: My concern is running down the rivers, allowing more irrigation and more intensification – it is about looking at the rivers as a whole. I don't think it will satisfy my concerns to tweak the regime numbers – it is a more fundamental issue here.

GA: I think Neil has some strong views about this aspect too.

GA: In terms of the movement of the wetted front – [there are pools present - what effects are we expecting?]

RY: There is a series of pools which we looked at in terms of ecological impacts – the wetted front extends and retracts and the pools don't last very long - fish caught in these areas would get dried out and die. If the area was rewetted more often there might be an issue in encouraging fish back into these pools.

PM: Farmers are unlikely to intensify in the current context and for the next ten years.

MS: People are looking at being more self-sufficient – not buying in feed etc. Irrigation is about security rather than increased production. Irrigation is being used as insurance for dry periods.

MN: Discussions with farmers are pointing towards change of grass species, etc as lower cost means of economic survival.

AY: Will all this be forgotten in times of good economy?

RSN: Does anyone else have a fundamental issue with allocation for future use?

MS: I would prefer rivers run in their natural state, but I understand the economic benefits of the water use.

LM ran through the MALF grid diagrams provided at the end of the presentation showing the relative difference between the median flows, MALF, minimum flows being protected and allocation amounts for the Anatoki, Waingarō and Upper Takaka regimes.

RSN: [Having seen the flow comparisons] - do you still feel there is an issue Andrew Y?

AY: Yes

RSN: If you could be “master of your universe” what would you do?

AY: Leave rivers at MALF and continue farming under good practice (e.g. tailored pasture species, brought in feed, water storage if needed).

RSN: So if all rivers had a minimum flow of 100% of MALF would you then be happy with allocation?

AY: Yes

GA: I've heard this same thing in discussion with the community.

MLi: I have too.

RSN: I'm wondering if we progress with a 70:15 regime, but acknowledge that there is an alternative of everything at 100% of MALF [a 100:15 regime] and look at the [security of supply] numbers for this and how it comes out...?

PM: I think that would be a good idea.

AY: It would not be fair to existing users to change their current situation in context of their infrastructure investment, but in terms of signalling a move in a specific direction - all the major long term issues point against [pushing the limits]. The issue of water allocation is only part of the issues we are facing.

PM: If we can't agree, we could put these two scenarios through Council.

PM: While I agree with AY's sentiment, I can't see that going through the Schedule 1 process unchallenged.

MS: Land use practices have vastly improved in the last 30yrs.

AY: But now there are greater volumes.

SM: I think the aggregate risk of contamination is vastly improved now over 30yrs ago.

GB: The farming community is moving forwards and governments only move forward so fast – the FLAG should only focus on what we can in this process.

AY: Perhaps we should identify what is defensible in court, but highlight the wider ecological issues that are still unaddressed.

JT: Whatever the numbers they will be evaluated within the Schedule 1 process.

PM: TDC should fund technology to automate the cease take process rather than having farmers sleeping with their phones under their pillows to control their infrastructure...

JT/MN: It is automated – [the farmer] is worried if his system fails that he would get prosecuted. Originally his site was not a TDC site.

AF: Talking to Corrigan Sowman last night, he is still concerned that the switching on and off is an issue. This is counterproductive from an irrigation point of view.

MS: But it is counter-productive from an ecological view.

PM: These are recommendations to the EPC – we could recommend that a link between Trustpower and irrigators be encouraged.

JT: This has already been done – Trustpower and irrigators have talked and they have a 6hr prediction of releases. Cobb is prepared to negotiate with irrigators if they want a commercial agreement.

GA: I'm happy with the 90% minimum flow protection levels, but less comfortable with the [minimum flows under the] Waingaro and Upper Takaka regimes [80% and 70% respectively].

GB: It won't be very popular with existing users if we are going to drop their security of supply.

JT: It will be a lot of extra work for staff to look at changes to security of supply for every zone and may not change the outcome – I suggest a few examples are looked at instead.

AY: Don't go to lots of more work based on my comments, but I just want to acknowledge this alternative approach.

Action: JT to work with AY to look at 2-3 river examples to look at the security of supply metrics for the past 17years [post meeting note: LM: I suggest this is done for Upper Takaka, Waingaro and TWS triggers].

Upper Takaka Cease Take

RSN: PM/MS said Option 2 was good – what do the other FLAG members think?

MN and GB agreed with Option 2.

GA – I'd like to have a look at the data on drying first.

MLi: With the status quo (~60:10 regime) – will that be forever?

RSN: If FLAG adopt the A+B approach [Option 2 or 3] – will the existing A permits switch over at consent renewal to the higher level?

SM/JT: Yes they will change to the higher value upon consent renewal.

SM: Even with renewal of the consent – there is no presumption that the renewed consent will have the same conditions – given the current controlled activity status – (the consents will be granted) the degree of historic investment is a consideration in the consent assessment.

MLi: Does this encourage storage? This plan will come in when everyone is renewed. Council should be doing more to encourage storage uptake.

AF: In terms of Margie's question – at 2019 consent expiry of current A consents, the plan could signal that upon renewal they change to the B triggers...

MLi – that makes sense

SM: Option 1 sends this signal.

MS: Cobb is an option for gaining more access to water for the irrigators.

RSN: So am I understanding the situation in Tasman is that the existing consent holders can continue under their current consents - there is a guarantee of grant of consent as it is a controlled consent, but no guarantee of operating conditions...?

GB: So why are you suggesting we need to raise the bar here [ie raise the existing cease take trigger]?

SM: Because I'm hearing around the table that a 60:10 regime is not acceptable.

MS: But the minimum flow here is so artificial due to the Cobb – the irrigators are vulnerable to changes by Trustpower and so a commercial agreement would be beneficial for them.

JT: If you raise the cease take and lower the security of supply then for consistency of security we will also need to revisit the TWS cease take value agreed earlier today, which will have a flow on effect in reducing security of supply.

GA: Can we revisit Margie's suggestion of greater promotion of storage – this would resolve a lot of the issues we are discussing...

GB: If the economics prove suitable they will do this – but arguably they have one of the best storage systems [the Cobb Dam] already available. If it was economic to do this, they would have done so.

MS: I'm still fine with Option 2 - the ecological impact is more from the Cobb fluctuations than from the allocations.

AY: Are the two different cease takes practical to implement?

JT: Yes.

GA: What are we protecting at 70:15?

JT: It is about the drying zone extent and the flowing parts of the river.

LM: We have looked at this originally on the Upper Takaka and the difference between the various regimes was a difference of around 200-300m in the drying extent.

GB: Margie we are not changing anything from present [in the Upper Takaka River] – do you want things to improve?

MLi: Yes, I'd like to see things improve.

MLi: I agree with grandfathering [of the existing consents], but for how long?

SM: You could send a signal that there will be termination date for their grandfathering under Option 2.

MLi: I don't think there should be grandfathering forever.

MS: I'd support this approach.

JT: This would mean in the future that they would end up with lower security than that in TWS cease take trigger provides.

AF: This would encourage takes from groundwater, which don't have the same degree of ecological effects as the river takes.

SM: This could be a good thing.

JT: It depends on how this was set up – the groundwater is always recharging the aquifer while the surface water is not.

AY: What is the cost of groundwater? I've heard it is 'on' if it costs 6c, but off at 8c per litre...

MN: Now I'm hearing it is not economic if it costs 1c per litre – due to dairy prices.

AY: So this is suggesting storage will not be economic currently.

JT: Pumping groundwater isn't cheap. We are trying to forecast with lots of uncertainty.

MS: I propose to give staff some certainty, to work with Option 2 while recognising some differing opinions exist.

JT: For Option 1 - we can provide the level at the spring cease take to achieve a 92.6% of security of supply at TWS – but the cut offs would be much longer.

AF: I'd like to point out that on slide 6 – this is a peaky shut off – for those subject to the TWS cease take, they would be cut off particularly hard compared to the Upper Takaka Zone takers – we need to focus on the 3 and 5 days statistics rather than the Nov-April security of supply %

JT: If we drop it to 92.6% then this would get even worse.

Action: LM to note Option 2 in the summary document and identify possible other options and the option to provide a time limit on grandfathering.

AY: At what point do we tell farmers they have to farm to their local conditions – do we have to smooth out the implications for everybody?

MS: It is the irrigators request to have a similar security of supply.

MLi: Are they aware of the implications of this?

JT: Yes, they have been given all the cease takes statistics for the other regimes.

RY: What is the status of the Cobb consent – will the plan change trump the Cobb consent?

SM: The existing Cobb consent creates the current environment that the FLAG are considering – if the Cobb operation were to change or cease we would have to re-examine the management choices and undertake another plan change – the risk of these is considered relatively remote.

JT: Cobb is considered critical infrastructure – Cobb has an agreement with the government over how they generate power and if we start trying to affect how they generate power we will be picking a fight with Trustpower and the government.

SM: We also have a renewable energy NPS – which supports Cobb operating as it does.

AF: Elsewhere a court case has decided hydro operation does not trump flow controls under plan changes. Also early in the FLAG process the FLAG assumed the Cobb would continue operating as is.

SM: FLAG could consider some intervention into the current Cobb regimes to smooth out flows from the Cobb.

LM: One of the FLAG objectives for the hydroelectric power generation value is to allow existing schemes to continue operating.

Session 4 – Project management

Future meetings

On the 1 Sept there will be a workshop with the EPC – held at council [Richmond offices] – there is an open invite to FLAG members.

Pencilled in date for next FLAG meeting of Friday 26th August - if needed prior to EPC for FLAG discussion of summary and information to go to EPC.

Action: LM to book fire station, etc for 26th August and confirm EPC workshop for the 1Sept.

JT: It might be worth inviting key councillors to the FLAG meeting on the 26th so they are better informed for the EPC workshop.

Action: Staff to send out invite to FLAG and Councillors once EPC workshop and FLAG meeting confirmed.

RSN: Does the attribute subgroup work need to be progressed before September?

LM: Attribute subgroup outputs are not needed for EPC, but will be needed for plan change. I will use the steer from FLAG from the previous meeting for drafting the plan change – that we are in a “maintain state, with future risks to manage”, rather than “improve with claw back required”.

RSN: What about the remaining Takaka Township regime allocation question?

LM: This can wait until after plan drafting as it is dependent on whether we can find a method that will achieve the desired outcomes or not.

GA: What was the situation on cost recovery or resource rental [in the Next Steps document]?

SM: Under the MfE Next Steps document there was no resource rental proposed, but there was better recovery of monitoring/compliance costs that may need to be enabled. The Next Steps document feedback will probably feed into the next review of the NPS-FM. It may also result in amendments to RMA legislation.

<End of meeting>

Action Points – Council Staff/Facilitator/Advisor

No.	What	Who
1.	SM to continue working with iwi and councillors to find suitable dates for hui.	
2.	SM to send response to Ngati Tama on cultural and social impact assessment.	
3.	LM and SM to get written response to GBCB asap.	
4.	LM to add further monitoring of nitrates to implementation programme draft.	
5.	JT to work with AY to look at 2-3 river examples to look at the security of supply metrics for the past 17years [suggest this is done for Upper Takaka, Waingaro and TWS?].	
6.	LM: to note Option 2 in the summary document and identify possible other options and the option to provide a time limit on grandfathering.	
7.	LM to book fire station, etc for 26 th August and confirm EPC workshop for the 1Sept.	
8.	Staff to send out invite to FLAG and Councillors once EPC workshop and FLAG meeting confirmed.	

Action Points – FLAG members

No.	What	Who
9.	None	

Action Points – FLAG Sub-groups

No.	What	Who
10.	None	

Scheduled FLAG and FLAG Subgroup meetings

Date	Friday 26 August 2016 (FLAG Meeting 25)
Time	9.30am -3pm
Venue	Takaka Fire Station
Agenda Items	Summary report review and discuss EPC update

Date	1 September
Time	starting after EPC meeting – 1pm (most likely)
Venue	Richmond TDC office – Council chambers
Agenda Items	EPC workshop update on FLAG progress

Information and resource documents identified during meeting

Date	Title	Author/Source
	None	

**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
None	

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