TAKAKA FLAG MEETING 23 NOTES:
8 July 2016

Purpose:	Takaka Freshwater and Land Advisory Group (FLAG) – Meeting 23
Date:	Friday, 8 July 2016
Time:	9.30am - 3.00pm
Venue:	Takaka Fire Station
Present:	**FLAG members:** Graham Ball (GB) Mike Newman (MN) Mik Symmons (MS) Piers MacLaren (PM) Hika (Matt) Rountree (HR) Kirsty Joynt (KJ), Andrew Yuill (AY) (co-opted member) Margie Little (MLi- iwi representative on FLAG) Tony Reilly (TR), Martine Bouillir (MB - council representative on FLAG) **Staff:** Joseph Thomas (JT - Resource Scientist - Water & Special Projects) Steve Markham (SM – Environmental Policy Manager) Lisa McGlinchey (LM – Environmental Policy Planner) **Other** Rochelle Selby-Neal (RSN -Independent Facilitator) Andrew Fenemor (AF – Landcare Research) Roger Young (RY – Cawthron Institute) Cr Tim King (TK)
Apologies:	Neil Murray, Mirka Langford, Greg Anderson, Trevor James
Notes taken by:	Pam Meadows (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 TWS = Te Waikoropupu Springs l/s = litres per second FM= FLAG Member ..?.. = notes may have missed some content
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.	
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.	

NOTE about these meeting notes

These notes provide a summary of points raised by individuals at the FLAG meeting – they are not necessarily a representation of the views held by any or all members of FLAG and do not represent the views of Council. The comments cover the diversity of experiences and opinions on the group. The views expressed here are also open to develop and change at any time.

Purpose of meeting

- Clarify key steps and decision making approach for plan change
- AMA recharge zone – recap on the key information and make decisions on minimum flow limit, allocation limit, and approaches to water quality management

Welcome and Karakia

RSN welcomed the group. MLi led the group in the Karakia.

RSN advised outline of the day, etc, but also that it might not be possible to get through the programme planned. Expected to plan another meeting by the end of the month.

Check-in

No check-in issues raised by the group.

Thanks expressed for getting material out to the Group. RSN expressed concern at the amount of work involved and speed trying to work at to meet deadline; makes it difficult to keep a track of it all.

Session 1 – Approach – the pathway through decision-making

Where are we at – where to from here / Approach to achieving outputs today

LM and SM gave a presentation on recent staff discussions with the Mayor, revision of NPS-FM framework steps and recapping the approach and work through to September, along with questions to be answered on the day.

Key Points:

- Timeline discussed with Mayor – **acceptance of proposed solutions package as output for September rather than draft plan change**
- Update to EPC in July and workshop in August [now likely 1 Sept]
- Staff have refocused on process and gaps to be filled
- Need to recap AMA-TWS information and remaining decisions
- Need to identify desired attribute states – this NPSFM framework step has not been done yet – it was intended to be done through a sub-group, but this has not yet met and it is suggested this be done by the whole of FLAG instead
- Process to September includes:
  - Review of AMA-TWS info and decisions
  - Identifying desired attribute states
  - Receive Science panel feedback
  - Review the summary document
  - Review the water quality risk management
  - Meet with iwi
    - SM: Hui planned for August - may need more dates in September.
    - Not a complete package from FLAG - yet to have a useful meaningful exchange
  - Approve solutions package

- Workshop with EPC

Process considerations:

- FLAG recommendations will be tested and subject to enquiry – by EPC, Council or commissioners making planning decisions and courts if it goes to appeal
- FLAG need to identify their key desired changes for this plan change and ensure they are robust and defensible
- FLAG also need to consider what goes into the implementation plan, including allowance for future plan changes to complete desired changes
- Section 32 analysis will need to consider economic implications, and balance of costs and benefits of proposed changes

FM. **Sec 32 evaluation?:** Already an example in Golden Bay with landscapes discussion – lots of recommendations. Clearly set out what's agreed and what you just can't agree on. Relay both sides of argument to Council. Landscapes group couldn't get all to agree – this may well be the same. Focus on key points - what all generally agree on and leave minor things can't get agreement on.

SM: Sec 32: reporting requirements mean focussing on collective preferences and mechanisms for resource management and means to achieve those preferences, reporting requires the evaluation of the merits as against other options.

SM: FLAG needs to think about how we assess economic implications of the management planning proposals. May need to do some economic analysis of specific management proposals.

FM: Benefit gained can be huge and cost a lot. Cost benefit and how it applies all comes into economics, etc.

FM: Important to have attribute to either nitrogen application or access of water. Also like to see robust discussion on economics and protection of environment, e.g. steps something like "If you don't allow this much it will have the following effects.

FM: Important to consider both ways around.

SM: Need to ask if we have an overall benefit in comparing different benefits and costs.

FM: It's economic activity which is driving impact on the environment. Got to be robust and coherent.

FM: It all comes back to effects. Implications and costs are often gigantic but quality and quantity are a lot closer than where you need to be as a starting point.

LM: If we can't reach consensus by September, what would FLAG prefer to put to EPC?

- **Majority choice or**
- **Preferred options?**

Group preference for the preferred options to go to Council for their decision.

FM: If can't agree, put to Council. Identify level of consensus or majority view.

FM: This has to go back to iwi.

FM: There was same challenge with landscape Plan change. Can only say what you, as an individual support through involvement in the Group. You aren't committing an organisation or binding them.

SM: Choice will not only go to EPC, but to several iwi.

FM: Comfortable with that, but still a different situation as a rep for iwi.

FM: It doesn't mean all iwi will agree.

RSN: If you take preferred options to EPC- are you comfortable with trying to narrow the range or number of options?

FM: Need to have significant amount of consensus
FM: Landscape group were 95% in agreement - rock solid on three points.
SM: Consensus is a good aim to strive for.

Session 2 – AMA Recharge Zone/Te Waikoropupu Springs – NPS steps

LM gave a presentation reviewing the values and management objectives for the AMA and TWS and the associated attributes that have been discussed by FLAG. She provided information on the current state of these attributes and suggested desired states that still needed to be discussed by FLAG at a separate meeting.

LM asked the group: Regarding the current state of the attributes - **is there a current problem to be addressed or are we in a maintain and monitor situation?**

LM: Do you agree with cultural and spiritual values definition?
Group agreed
LM: Staff are suggesting removal of "mauri" from 'ecosystem health', but retain this under "cultural/spiritual" as mauri has wider considerations than just ecological.

LM: Do you agree with values and management objectives? Any missed?
No additions raised by group. Group noted that they had been over the values and management objectives in detail previously.

LM: Do you agree with key attributes identified for the AMA Recharge area and TWS and the potential addition of an economic/livelihood indicator and water efficiency?
No objections raised by group.

Key Attributes and comparison with current and suggested desired status [refer presentation slides 9 to 11:

- ***Attributes in a 'maintain' state:***
  - *TWS flow (once minimum flows protected by cease take regime)*
  - *Surface water minimum flows (once protected by cease take regimes)*
  - *Nitrate for aquatic plant growth (pending science panel advice)*
  - *Phosphorus (DRP) for aquatic plant growth (pending science panel advice)*
  - *Nitrate:Phosphorus (N:P) ratio for aquatic plant growth*
  - Nitrate toxicity (this attribute level would be superseded by the nitrate for aquatic plant growth attribute assuming the desired state is at a lower level)
  - Macro-invertebrates (based on report by Stark 2015)
  - Aquatic plants (based on report by Stark 2015)
  - Temperature (sonde measurements have shown no change over time – consistent 11.7°C)
  - E.coli
  - Security of Supply

- ***Attributes in a 'monitor' state*** *– due to incomplete information on current state:*
  - ***Mauri*** *– this requires discussion with iwi – anticipated that aspects of mauri have improved due to recent enhancements to reserve and greater respect being shown to the area*
  - ***Water clarity in TWS*** *– staff looking at options for measurement of clarity. Recent attempts with two transmissometers have failed to yield reliable results due to the very high clarity. Advice from NIWA specialist is for a specially calibrated*

transmissometer to be installed for at least a year to provide a baseline, but funding is need for this – not covered by existing budgets.

- ***Dissolved oxygen*** *– sonde measurement done in April-May 2016 which showed levels comparable (within the sampling error) of 1970's measurements, however staff suggest a year long baseline would provide better understanding of potential seasonal variation*

- ***Attributes potentially in an 'improve' state***
  - Suggested attribute of **percentage of business demand for water met** – suggested as:
    - we have information in the form of waiting lists where there is unmet demand
    - it is a measure of current economic demand for water and can cover all end uses (although predominantly for dairy currently)

FLAG have previously discussed possible economic attributes – including numbers of cows and milk solids produced, however an attribute has not yet been settled on and further consideration is needed.

RSN: Think about what would be a good indicator of social health in relation to water management

FM. Had discussion around water wheel attributes. Very difficult to identify any attributes. Latent demand from local people who do want to use water. Not just about dairy.

FM: Only situation where seen desired state "as high as possible" – if one way of looking at it, is good.

LM: Not going to meet 100%.

RSN: Economic and social ones hard to define. Trying to get something robust.

LM: Recognise there is a gap. Only got security of supply at present.

RSN: If don't have social and economic attributes, what are the implications?

SM: NPSFM framework requires recognition of both types of values – socio-economic as well as biophysical environment; and resource state values as attributes, and use values. If attributes that describe values are realised, through abstracting or using water, they have a place.

RSN: Do you need [social and economic] attributes?

SM: Abstraction values are as relevant as others. "Abstractive demand met within sustainable limits" is perfectly adequate. The state attribute required to realise this use value is a flow regime attribute.

FM: RMA covers other two bases.

FM: Need to hear from irrigator groups etc and have to address these.

LM: Are you happy these [economic and social indicators] are looked at by Attribute Sub Group?

Yes from group.

..?..

FM: We can decide how we are going to use our resources.

FM: Can't set water allocation on a current economic model. It's got to be a case of sustainable limit as lots of things could change in the future. Can't take too much into account – need to come up with comprehensive list of social indicators of water availability and how it influences the community.

RSN: The consenting process can require more information on cost and benefit of a particular activity. This group's task is to get the framework right then, at consenting stage, the onus goes on the applicant for the detail.

SM: Expect subgroup to be reliable and efficient. Not to overthink the issues.

- *Security of supply* – Suggested "Maintain". Subgroup review this indicator.
- *Water efficiency* – Status not clarified. Wondered if this could be met if all other indicators of use value could be.

Action: LM to email presentation to FLAG members.
Action: FLAG members review attributes and identify threats and risks, establish rationale and provide feedback to LM.

Session 3 – AMA Recharge Zone – Water Quality Management

Re AMA Recharge Zone Status, is there a current problem to be addressed? Or are we in a maintain and monitor situation?

LM: In terms of regulatory side, if there's a problem, have a clawback situation - different than a maintain situation. **Do you think we're in a maintain situation in terms of attributes just reviewed?**

Round table of views:

MS: Agreed
HR: Happy
KJ: Maintain
TR: Maintain
MLi: Generally happy
PM: Maintain, but improve swimming at Paynes Ford where there is an *E.coli* and periphyton problem.
MN: Maintain for situation now. Not sure about future.
GB: Maintain, but also monitor
AY: Good enough at the moment. Maintain but could be better.
MB: Agree with comment on Paynes Ford.

RSN: If in a maintain situation now, what do you see as the future risks? What do you need to manage?

Round table over views:

MB: Wait to hear others answers
AY: If go ahead with planned irrigation, will have a problem.
GB: As long as we keep monitoring, I don't have AY's concern. As long as we are monitoring, maintaining and managing risk going forward, we should be right.
MN: Fine tuning will take place at consent stage – just have broad brush approach. Every farm will be treated within the framework, but with its own particular advantages and disadvantages.
PM: Biggest irk is Sam's Creek with the mining of gold. Hope it never happens.
SM: What's the nature of the risk?
PM: Sediment and chemical contamination.
MLi: Agree with Andrew about levels left in rivers of low flow. There should be a commercial area where water is getting out to sea. If come in, go to a specific zone to get water. Risk is to the AMA recharge zone. Where water is getting out to sea is a more efficient use of the resource.
SM: Are they flow risks or both?
MLi: Both
RSN: Take from where more abundant?

MLi: Unlimited abundance of water heading out to sea.

GB: Probably 95% of the time it's not taken where it's abundant.

TR: Security of supply with introduction of cease takes and availability of water over period of irrigation, plus irrigation efficiency. Could have effect on totaras, etc. if you want ultra-high efficient irrigation, be careful what you are asking for. I don't share AY's view. It's overstating the impact that dairy has on this catchment.

SM: I detect two concerns: sufficient availability and security of that availability of authorised takes within a limit.

FM: If we over-allocate, we've got a concern.

FM: Agrees. There are a lot of unknowns.

LM: Is secure water more important than more water?

FM: Need capacity to take more water but security is the concern.

FM: People should be looking at storage.

FM: Actual plan framework is about getting the balance right.

RSN: Where process is now, - are we at a point to get some space for staff to draft up a framework and then FLAG critique. Keen to have drafting work happening so FLAG have something more tangible to work from.

LM: Need ability of flexibility to adapt and change.

FM: Reasonably happy. Water under us rushing off to sea is not wasted. Scallop fishery in dire need - sediments settling in bay - not being dispersed as in past. River mouths etc are suffering - not got water flow going. Water going to sea is simply not the case.

FM: Got a robust system and what we are proposing is conservative and I don't see nitrogen as a risk. Concern is more sediment and making sure rules are right. Climate change is the biggest risk and impacts on security of supply with more dry spells. More intense impact through highs and lows which will affect security of supply.

FM: Concerns about having a buffer zone and time lapse of things we haven't yet seen effects of. Are we putting in enough of a buffer zone? There are unknown consequences.

General Adaptive Management Approach

LM: How do we fit adaptive management into a regulatory framework e.g. good land management, focus on nitrates? What are the risk factors and what are the farming types and specific factors? Does what we do result in sediment runoffs?

LM: MLa talked about good management practices in Canterbury - what are the risk she sees across those key attributes - what is happening now rather than how it is going to change.

RSN: Suggest staff drawing up a framework and bring it back to you, For example, consent status – is it defined as a Controlled activity or Non-Complying [or any other status] where applicant has to prove the activity is okay. Lisa needs time to go away and work on this. There seems to be a lot of comments about coupling allocation to water quality risks. When talking about water, 'take' and 'use' gets considered together. Type of activity applied for determines if there is a need for a discharge consent etc. Can determine whether a water permit, land use consent, etc., is needed to manage the risk. Using allocation to manage [water quality] may not be the most effective or appropriate place to manage that risk – more at the 'take' and 'use'

situation, or via land use, discharge management. Coupling together may be more risk than separating out. There are a range of tools we can use.

FM: In the landscape process, the group identified what they wanted to achieve and then it was developed by staff to make it work and Council adopted it and put the draft Plan Change out to the public…

SM: There was no decision made by that group on rules. The group didn't get to deliver the draft Plan Change, only the resources to be subject to the (protection) management objective.

FM: Getting a consensus was relatively straight forward. If needing a consensus on rules, it would've taken a lot of extra time and resources.
Most said "maintain" but not sure how you maintain with a mix of rules and regulations and different consent requirements. Is your intention to try to get the group around all that?

RSN: I believe we need to know what the problem is, what you want to manage, before any recommendation goes to EPC.

LM: We need a minimum of good practice and how that is to be achieved.

SM Yes, within task of Plan Change, deliver on aims, bearing in mind expert process in designing the Plan Change. Need preferences from FLAG as to how to achieve the objectives.

FM: I'm puzzled about how much we're asked to get involved, e.g. where a farm is rented out and rain causes sediment to go down into the river or sea. It's not intentional, but tenant doesn't care or not aware when topsoil removed. Is it best practice?

FM: It will be delivered by staff based on feedback. Not an 'edit by committee' requirement. That would take too much time.

FM: When something like this appears to become an issue, can we put 'hooks' into the TRMP so that if happens, Council can do something about it?

RSN: This is partly the role of monitoring.

SM: Not only that, but it is some signal to adaptively respond.

FM: If something becomes an issue can it be dealt with?

SM: Yes, in principle.

Lisa: As per screen of examples with different options, can do at a specific trigger by reviewing conditions of consents.

FM: Our role is to recommend, not put in the numbers. We're not qualified for that.

SM: The screen is a good indication of the level of risks.

RSN: So Lisa will put together *[note taker didn't capture preceding points or the concluding action...]*

Session 4 – AMA Recharge Zone – Allocation Regime

Roger Young and Joseph Thomas gave a presentation reviewing the AMA allocation regime and cease take limits and aspects on the Upper Takaka and Waingaro Zones.

JT: This only covers springs systems and rest of AMA, which are all linked. It looks at options and what it would mean in terms of supply. The two react variably. Need to think about the whole concept of how the system works.

RY: Need to be thinking about the aquifer itself, plus the water itself. Two drivers of AMA, also queries from FLAG and upper Takaka irrigators.

Joseph encouraged FLAG to think about the tables over lunch.

Options for FLAG to consider

- Minimum flow based on Fish Creek
- Minimum flow based on Main Spring
- Triggers for both Main Spring and Fish Creek (MS 7660; FC 200)
- No minimum flow for AMA

Recommendation:

RSN: Is a cease take needed to protect a spring flow, plus instream values? What would you do?

RY: [*With the proposed cease takes on the upper Takaka and Waingaro rivers, there is no need for a further cease take based at the springs for these catchments, as the cease takes will kick in before a potential cease take based at the springs. The relationship between flow at the springs and the upper Takaka River is weak and it would be hard to justify that takes in the upper Takaka cannot be enabled if there are large flows being released from Cobb dam at the time.*]

<lunch>

Upper Takaka Zone options

7-day v 1-day MALF for the Upper Takaka Zone

- 7-day MALF fits in with compliance practice
- **Recommendation:** Stick with 7-day MALF. The least tenable is a mixture of the two – either whole lot or none at all.

Ecological Values

- Better to base ecological values on continuous flows rather than daily average flows

Flow Recorder

- No benefits – affected by groundwater flows

Options for Upper Takaka Zone to consider:

- Stick with interim FLAG decision
    - Min flow 70% 7-day MALF (1666 l/s)
    - Allocation limit 15% of 7-day MALF (357 l/s)
    - Cease take trigger for river takes (2023 l/s = MF + AL)
- Grandfathering existing Takaka River takes using status quo conditions
    - Cease take 1657 l/s (Class A)
    - Current allocation 239 l/s (Class A)
    - Any other takes from river subject to new cease take trigger (Class B)
- Spring trigger will apply to all river takes (and other AMA takes) as well

FM: Recording discomfort of 70% and 15% - bit too much to be taking.

RSN: Is it ok if staff write up the interim decisions and draft proposed plan framework with the 70:15 figures and then FLAG review this, giving you another opportunity to consider whether or not it meets the management objectives and values you're concerned about?

FM: Okay, but I don't want it to slide through without being noticed.

FM: How many really need the water or how many just banking the supply?

RSN: Would they have to prove they need the water?

FM: It means its maxed out. In the future, they may not be able to have it.
JT: Only 2 of 10-11 on waiting list, so not spending money putting wells down. Those who cannot access water have to drill.
JT: Allocation limit is only to a certain amount of security of supply.

FM: I recommend we adopt these recommendations. Clawback would buy an expensive challenge to the process
SM: Could add a class of takes that could last until next generational expiry/renewal of consent and then bring cease take back to proposed trigger (7-day) of 2023 l/s.

RSN: So if you take away the right of renewal, no-one can be guaranteed to keep their water take?
SM We can bring in a different measurement basis either next time or the one after that. It would be so entrenched it would be hard to get back to the regular regime.

FM: For Upper Takaka irrigators - probably prefer security of supply and then look at Class B water.
LM: Current regime is 60/10. Lower than 70/15. Only now protecting minimum flow of ~1430l/s.
SM: We would be lowering security for existing users, but not new ones.

FM: What other opportunities come up for farmers if they get additional water and an increase of security of supply. Can they build a dam and store? What are they going to do with it?
FM: In short term, it'll be dairy farming.

TK: The question is, is it available? If it is then you need to adequately protect all these other values without having adverse effects. If used badly, that's a second thing to be managed.
FM: I take TK's point but didn't mean "using badly", but just using does have impacts. If we allocate more it will have an effect on the environment. How much benefit do we get from taking that risk?
FM: It could get back to silting up of the bay and having an effect on aquaculture. Not just one aspect of water on farms. We want to make right decision and feel we've done the best we could and that's going to be better.
SM: First approach of rationalising is to look to the source of risk. First step is to control risk without trying to set a control over *one* risk as a way of controlling *all* the risks. Because linking may only be effective only so far. There may well be some other effects such as contaminants and site quality. First duty is to see what tools you have to deal with risk in the different categories and how you can combine and deal with the risks.
FM: It takes a bit more to tackle. Need to focus on trade-offs of security of supply, economics, etc.
SM: If FLAG can only go so far, might want to look at interplay between various control methods.
FM: Going to put quantity beside quality.
SM: The RMA does require you to integrate. Task is to identify risks and deal with them as effectively as you can.

FM: Is cease takes an unintended consequence of setting minimum flow?
JT: Come a drought, environment gets 100%, irrigators get 0.

RSN: Do we tweak above matters or sort AMA allocation?

LM: If no more water with AMA allocation – this affects the other catchment allocation regimes, so we need to address this first.

Options for AMA Recharge Zone– Initial Recommendation?

FM: Can accept allocation limit, but not sure about cease take limit.

FM: How often does it go below cease take now?
JT: It changes dramatically. If below 6100 l/s, you know it's dry.

LM: What we are suggesting is a new allocation. Cut off at MALF. Put forward as an ecologically sustainable level.

RSN: Why are we getting stuck on this matter?
LM: There has been a reluctance in past when this has been discussed as seen as an attempt to control quality using allocation.

LM: Are you happy to go with the ecologically sustainable allocation?

JT: Got to be conscious that some can access through bores.

FM: Could we have cease take on bores?
JT: What would you use? Can work metrics for different triggers in springs.
RSN: Where would you set the minimum flow limits – a regime that will work?
AF: It is not a strong case to have any cease take based on spring flows. The losses for the community are greater than the ecology.

RSN: Are you happy as long as ecological effects are taken care of?

RSN: We need a decision for recommendation to Council. What is stopping you from making a decision? ... Is it confusion? ...something else?

RSN: Can someone offer a possible decision?
FM: I'm happy go with 766l/s allocation limit for AMA.
FM: Don't have confidence on the effects on the aquifer. Reluctant to pick a figure out of the air.

RSN: Others: What are the other options?
FM: No alternative suggestions
LM: Not going to have it overnight re adaptive aspect to it. We have got the ability to monitor those things that have key concerns.
FM: I would like to see allocation held where it is at moment
FM: We're not setting effects, only allocation. We've got a good process to go through. I would like to go forward.
FM: I agree with [FM], also with [FM], but would like to move forward with 766l/s.
FM: We're talking about adding 200+ l/s additional take.
FM: There's a link between extra water and efficiency. It's better to grow grass rather than taking in material.
FM: Stocking rates are going downwards at present.

RSN: Who agrees with 766l/s limit for water take?
FM: As long as if it goes wrong, we can go back down to 500.
SM: We can review the allocation limit at any time. We don't have to wait 10 years.
SM: What would be relevant land use requirements in reducing risks? If 766l/s, it would take up several years of demand.

FM: It might never be taken up.

Agreed: On interim allocation limit of 766 l/s - for whole of the AMA. All surface and groundwater takes in these areas. Mik, Hika, Piers, Tony, Mike and Graham.

Margie and Martine still thinking about it.

FM: What do we do about it, if nitrates still go up and we can't control effects?
LM: Once we get an idea of risk, we target those practices, clawback can still be an option.
SM: Focus on exacerbator first.
FM: I would be more comfortable if there was a plausible likelihood of feedback. I want to feel confident that if we start observing problems, we don't have to keep on the backs of irrigators.
SM: Future control measures are important.
FM: I'm more comfortable on that basis. Also, if monitoring showed up something of real concern we then had some mechanism to stop things.
RSN: Acknowledging that this Assumes, that if stop uptake of allocation, take and use is having the effect.
LM: There might be certain practices we might like to restrict.

Agreed: Interim decision of 766 l/s allocation limit, plus use of adaptive management

Cease Takes at Springs [should this apply in addition to Upper Takaka and Waingaro cease takes]

FM: Iwi will not agree to it.
FM: If cease take for rivers, but none on bores, rivers will dry out at greater depth. We've got to control these things.
JT: If preserving security of supply of river takes, start looking at different trigger at springs, e.g. 7400l/s.
SM: A grand trigger for the whole system at an equivalent degree.
RSN: Does it achieve the purpose [of protecting flow at springs]?
RSN: Sounds like there is a need to do another piece of work. Some are saying yes, but others are saying no.
JT: We can't put in a water level trigger *[this could apply to confined AMA takes].*
LM: Takes from deep bores need considering. A portion of this allocation will be coming from the aquifer.
RSN: Joseph and Lisa will discuss together and come back to FLAG.

FM: I would like to have irrigators come and say what they want.
LM: Will look at options A and B.

RSN: Does FLAG want to look further at options for Upper Takaka?
FM: Only two options for Upper Takaka: A & B and modified B (Yes)..
Action: LM to send two options out to FLAG to look at.

Ecosystem Health of Te Waikoropupu Springs - Update

Roger gave presentation on ecosystems.
Action: RY to email out presentation.

Next meetings:

- FLAG to meet with Science Panel and irrigator group: **Thursday 28 July**, 7.00pm to 9.00pm
- Next FLAG meeting to wrap up: **Friday 29 July**, 9.30 to 3.00 pm

Action Points – Council Staff/Facilitator/Advisor

No.	What	Who
1.	LM to email attribute presentation to FLAG members.	LM
2.	LM to send two upper Takaka options out to FLAG to look at.	LM
3.	RY to email out presentation	LM/ RY

Action Points – FLAG members

No.	What	Who
4.	FLAG members review attributes and identify threats and risks, establish rationale and provide feedback to LM.	

Action Points – FLAG Sub-groups

No.	What	Who
5.	none	

Scheduled FLAG and FLAG Subgroup meetings

Date	28 July 2016
Time	7-9pm
Venue	TBC
Agenda Items	Science Panel update

Date	29 July 2016
Time	9.30 – 3pm
Venue	TBC
Agenda Items	