

TAKAKA FLAG MEETING 21 NOTES: 15 April 2016

Purpose:	Takaka Freshwater and Land Advisory Group (FLAG) – Meeting 21
Date:	Friday, 15 April 2016
Time:	9.30am - 3.00pm
Venue:	Takaka Fire Station
Present:	<p>FLAG members: Graham Ball (GB) Mike Newman (MN) Mik Symmons (MS) Neil Murray (NM) Kirsty Joynt (KJ) Greg Anderson (GA) Andrew Yuill (AY) (co-opted member) Margie Little (MLi- iwi representative on FLAG) Tony Reilly (TR) Kirsty Joynt (KJ) Martine Bouillir (MB- council representative on FLAG)</p> <p>Staff: Trevor James (TJ- Resource Scientist – Water Quality & Aquatic Ecology) Joseph Thomas (JT - Resource Scientist - Water & Special Projects) Steve Markham (SM – Environmental Policy Manager) Lisa McGlinchey (LM – Environmental Policy Planner)</p> <p>Other Rochelle Selby-Neal (RSN -Independent Facilitator) Roger Young (Cawthron Institute)</p>
Apologies:	Piers MacLaren (PM), Hika (Matt) Rountree (HR), Mirka Langford (MLa), Andrew Fenemor (AF – Landcare Research)
Notes taken by:	Lisa McGlinchey (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 FoGB = Friends of Golden Bay
<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>	

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

- Refine the decision making approach w.r.t. demand considerations and adaptive management
- Make decision on allocation limit for Takaka Township and Motupipi Zones
- Discuss adaptive management options that could be applied to water quality management and allocation limits in the AMA Recharge Zone (Te Waikoropupu Springs)
- Receive briefing from Roger Young on interim findings of the scientist panel re nitrates

Welcome and Karakia

RSN welcomed the group and MLI led the group in the Karakia. RSN advised the agenda has been modified and outlined the day.

Check-in

No check-in issues raised by the group.

FM: queries regarding letter from FoGB to GBCB and subsequent letter from GBCB to FLAG.

FM: good talk by Paul Williams – geology and water that flows through it – thoroughly uplifting evening.

FM: Paul still saying the same thing as staff – just got a realisation of how much the group has learned in this process. We have left the community behind somewhat in terms of knowledge of the system.

Updates

FLAG photo use in TJ video

TJ asked for FLAG approval to use some photos of the group in a video on the SOE for water quality.

FLAG members present agreed with use of the photos shown.

Iwi involvement

SM updated FLAG on GB Landscapes collaborative process progress and highlighted that there is to be an ongoing relationship between the GB Landscapes group and Council and that this could be useful in the FLAG project too, in terms of involvement of FLAG – particularly in community and iwi engagement – both before and after notification of the draft PC.

There is also a parallel agreement to liaise with iwi on the GB Landscapes project and SM will be meeting with iwi chairs and local iwi to discuss both Landscapes and FLAG projects on 6th May. A series of hui is expected to follow this initial meeting for FLAG and iwi to discuss water management.

Staff work behind the scenes and process management

LM outlined the various work streams going on behind the scenes and proposed cancelling the 29 April meeting to facilitate the process and use the 13 and 27 May meetings to

continue the remaining work prior to the PC drafting – with drafting occurring in June (ie no FLAG meetings).

FM: keen to have an update on the water clarity monitoring being undertaken at TWS.

Action: RY and TJ to provide update on monitoring and results being obtained. This will be covered in the afternoon discussions also.

Community consultation

RSN raised the issue of the need to progress consultation

Group discussion on options:

- Option to have more formal consultation during an extended submissions period following notification – this would need approval from council
- Option for FLAG members to hold briefing sessions at the library to allow people to come in and have discussions and provide feedback
- Need to initiate consultation now and continue it throughout the remainder of process
- Need for FLAG to start narrowing gap between FLAG and community knowledge level and get feedback from community into process
- Potential for FLAG to seek assistance from GBCB to help organise meeting venues etc
- FLAG keen to have a staff member present at consultations sessions and look at providing information zone by zone.

Action: Consultation subgroup to develop a consultation plan for May-June and bring back to FLAG.

Action: LM to follow up finalising of consultation summary document.

Action: LM to get webpage feedback system up and running!

LM updated the FLAG on a phone discussion with Carolyn on the GBCB regarding remaining concerns that have arisen following discussion of the KVW application. The GBCB are intending to clarify their concerns in writing to FLAG.

Subgroups

Suggestion that subgroup is formed - facilitated by Andrew Fenemor - to review the attribute bands for those attributes not in the NOF and the desired states for the attributes to meet the management objectives – ie creating numerical objectives.

Four lines of work that could be progressed through subgroups throughout April and May:

Topics	Subgroup Members (subgroup coordinator)	
Iwi engagement	(SteveM), Margie,	6 May -?
Plan drafting	(Lisa), Steve, (Rochelle -reviewing existing plan to ensure that areas of concern to FLAG are highlighted for consideration during drafting)	May - June
Consultation	(Mik), Martine, Mirka, Kirsty, Margie, Andrew Y	April-June
Attribute levels and desired states	(AndrewF), Greg, Tony, Margie, AndrewY, Piers,	29 April?
Monitoring framework	(TrevorJ), Neil, Mike, AndrewY, Greg, Mirka,	late May-June
Nitrate sources	(Mirka), AndrewY, Piers, Graham, AndrewF?	Week of 18? April

Subgroups are to work behinds the scenes and sent out any summary emails to all of FLAG.

Session 1 – Takaka Township zone and allocation below sustainable levels

FM: In news, shock horror water right sold and water used for projects that no longer give much benefit to the community. If we say 80:10 then up for grabs for 1st applicant. If rule will be discretionary then there is a risk that gigantic water take (eg a tanker ships for overseas export) could come in and take the lot with no community consultation. Council has to accept application unless it is prohibited. Applicant should have to put a case to the community and justify it well.

SM: Need to be more explicit about future water demand proposals. Currently, application needs to prove the need for the water, benefit and used efficiently.

FM: Can we have some control of “style of use” eg bottling. What is the outcome of these controls - policy or rule level. Chose preferred use of water.

FM: If there is community benefit of a future water take then I’m happy with 80:20. Otherwise the water could be squandered for takes that provide little value to the community.

Other FMs also have these concerns.

FM: Irrigation for agriculture and horticulture has community benefit as profits stay in GB. They should be allowed.

Priority of use for reservation of water in drought: Growth in community water supply, animal drinking water,

RY: Where does permitted, discretionary vs controlled regime come in?

FM: People speak a lot about whole of footprint or life-cycle approach is as important at the effect of the take. People don’t want the water leaving NZ.

SM: What is the form of benefit you are wanting?

FM: This future demand happening now.

FM: Can we legally defend 90:05 over 80:10? Should have off-set – ie give back to the environment.

FM: The focus needs to be on the use of the water and its effects on the river.

SM: Implications of take and use.

FM: Where demand is low we can set a conservative limit. Could have a rule that water needs to be used within the catchment otherwise a different set of rules apply. For the benefit of the community. Drummonds and Knights are exporting water (bottled water).

FM: That sort of rule worked well in Marlborough.

FM: Future generations need choice. Should not allocate too much at this stage, only for reasonable needs as the next generation can make those decisions.

FM: Demand estimations seem too low – not sure I believe it. Need a large reservation to make sure we don’t get it wrong.

FM: Don’t want to see this water wasted by going out to sea. There is social and economic benefits to GB (jobs) even with exporting so we don’t want to restrict unduly. Adaptive management – the land use controls are ongoing and getting better.

SM: Golden Bay is unusual in NZ. There is a lot of available water.

FM: Allocation 80:10 is OK but any consents need to show benefit to the community.

JT: Need consistency [and justification] across all the zones.

RSN: Do you need to know more about the consenting options before making a decision on allocation?

FM: RMA allows use of resources in a way, or at rate, that doesn't compromise future generations. Providing for future needs to be dealt with directly. The word squander the resource means that

FM: Lack of good data or planning of future estimate.

RSN: I am hearing concerns around the potential opportunity costs for future generations: "Are we taking away the choice to secure value in the future? Is this wise? Should we reserve a proportion for future generations? e.g. at a future date. What of this is within the scope of local government and RMA management?"

SM: Can have allocation set at a certain level and consent conditions within this allocation limit. Rule: If you export water out of the catchment is the social and economic benefits in the region

FM: Can Council and community benefit financially if can't charge for the water.

FM: Policy about allocation limits where demand is low – this only for security of supply.

SM: There must be defensible reasons for different allocation decisions. Taharoa example – iwi got stream of benefit from the iron sands export.

FM: Still uncomfortable about taking the flow lower than MALF. There is no tipping point but a slope or slow decline so we are talking about ecological effects.

FM: Still need to provide for the economic

RY: This is a framework as we have to draw the line somewhere. The rivers naturally go below the MALF during extended dry periods, but I am suggesting that the rivers should only be allowed to artificially drop below the MALF by a small amount to maintain instream values. Once the cease take flow is reached then any further drop in river flows will be natural. As long as there's a relatively small allocation limit the occurrence of the minimum flow will be relatively rare. The reason you would allow flows to artificially go below MALF at all is to provide for a more acceptable security of supply for economic values. If you were just thinking of ecological concerns then MALF could be the default limit.

JT: There will be cease takes. The take is not unfettered.

FM: National Parks are 100% natural. I think rivers should be natural. Get some reassurance from Roger's statements.

FM: Main concern is that we are being precautionary as we don't really know the effects.

FM: Cease takes only have benefit for 5-10 days/year (depending on river). We may get a situation with a large number of rivers pulled below MALF for long periods every year. Ecological effects kick in gradually. If you look at recent agricultural activity, farming is now intensive dairying, but now is economically unsustainable. Not our business to save farmers from themselves. Produced a system that is no longer stable. How can we

manage capital gain from speculative buying – ie buying land and selling on after getting water take consent. This should not happen.

FM: Consensus is that allocation limit on its own is a blunt tool.

FM: Waingaro – natural variation is amazing. This allocation is like ants. We are not going to be flat-lining rivers because they are so dynamic. A lot of buffer.

FM: Disagree – can't believe that there is so little river in the lower Takaka River when I go across. Paul Williams said – everyone owns the water. Future generations should have the choice. We are not here for a long time. We should leave it better. Tourism values. Need to save water for that. Less water going to the sea is not good. Everyone wants to get it right and yet we are being so rushed. If we took longer, then everyone will be more comfortable.

RSN: Great work - It is important you keep working through any divergent thinking – we will need to come back to this discussion. Now need to break for lunch, and whilst Roger is here use the time left to get an update on the science panel work.

LM: most of the allocation regimes drafted so far are not going to take river below MALF.

FM: Shouldn't be comparing ourselves to the rest of NZ.

SM: It just provides context.

<Lunch>

Session 2 – Motupipi Zone allocation

FM: What is the security of supply [SOS]?

JT: 95%. Saltwater intrusion not a problem

FM: 3 days and 5 days restriction form the band on acceptability of SOS. Farmers say that <3 days is not an adverse economic effect.

FM: Length of cease take also a problem.

FM: The moment you set an allocation limit, SOS reduces.

All comfortable with 80:20. AY In principle not comfortable to take below MALF, but does not want to reduce existing take. So OK to proceed.

FM: Water quality – enough direction

Flood over Bridges Hollow a couple of weeks ago has cleaned out weed and sediment.

FM: Flood bank – was there any progress?

LM: CMP work to start in [2017 -current date unclear]. Options will be looked at then.

Session 3 – Managing effects of land-use on water

TWS water quality science panel update– Roger Young

Key Points

- Water quality scientists met on 31 March 2016
- Focus on health of the springs, not just about nitrate
- **Invertebrates**
 - MCI is used by John Stark – 3 sites below springs and above effect of salmon farm – these sites are considered representative of springs health – been measured since 1996

- **No noticeable change** in MCI from 1986 to 2012 (26yrs)
- Water quality parameters – various monitored since 1990
- **Nitrate nitrogen**
 - Data being reviewed for data quality
 - Occasional high spikes in data – unclear why these are occurring – no evidence at this stage to disbelieve this data
 - All of low data in 1990s appears to be linked to the lab used at the time
 - **Long term increasing trend** – and this is not affected by outliers
 - Key message is that slope of line is important and if trend continues, at what point do levels reach a level of concern (what is this level of concern)
 - Looking at different periods of data there is a flat line between 1990-2005 and a **declining trend since around 2010 – 2015**
 - Samples sent to separate labs showed a 17% difference - a larger difference than expected – unclear if this is due to sample handling or lab testing
 - the FoGB data collected is not showing the expected relationship of nitrate in the fish creek spring to the main spring – with the levels being higher in the main spring than the fish creek spring [*JT the water in the aquifer is not horizontally or vertically the same – there is different mixing across the aquifer*]
- **Dissolved reactive phosphorus**
 - **No change over time?**
- **Dissolved oxygen**
 - **No evidence of change**, but limited data as not regularly collected as part of national groundwater program
 - Planning to put a continuous DO logger in the springs in a few weeks to get better understanding
- **Temperature**
 - Continuous temperature logger since Nov 2015 – sitting around 11.5°C – little blips on daily basis – Michaelis sampling in 1971 showed temperature stable at 11.7°C, so **no change over time**
 - JT – daily spikes are likely due to position of meter and sunshine on the meter, and large peaks from rainwater preferentially flowing by meter site.
- **Chloride**
 - Unusual in that more flow gives more chloride – thought to be due to a venturi effect bringing up salty water from lower
- **Trigger values**
 - ANZECC guidelines – parameters below guidelines – except for DO, but this is expected for a groundwater spring flow
 - NOF banding – parameters with data all meet A bands, except DO, but again this is expected for a groundwater spring flow
 - Drinking water standard – elevated compared to hardness and chloride
 - Ecoli – no data
 - **NM: I've taken data around Fish Creek area which are around 1-4 E.coli/100ml**
 - RY: 1-4 is a very low number – guidelines at 256Ecoli/100ml
- **Potential risks to springs**
 - *Sediment – water clarity*
 - *Nutrients – periphyton growth*
 - *Pathogens*
 - *Organic waste – lower dissolved oxygen*
 - *Climate change – temperature, flow fluctuations*
 - *Invasive species – didymo, aquatic weeds*
 - *Flow abstraction*
 - *Cobb Hydro scheme – flow fluctuations*

- **Te Waikoropupu River** is an A band river – except for DO which is expected for a spring fed system
- **Potential attributes:**
 - DO
 - Clarity
 - Periphyton?
 - NO₃-N toxicity
 - NH₄-N toxicity
 - MCI
 - Macrophyte cover
 - Manganese
 - DRP?
 - Manganese and phosphorus could be early warning signs for decreases in DO as these would be released if this occurred
- **Science group looking for feedback from FLAG**

Group can look also at clarity data.

FM: Could the occasional peaks be from freshes in particular locations?
[this topic parked for consideration by staff later]

FM: Are there any dissolved oxygen data take for Fish Creek?
 RY: I can have a look

FM: Why are you looking at DO – it is from an aquifer so we can't do anything to change it – why is it measured?

RY: DO is really important, if we see this dropping, this would signal potential ecological effects in the aquifers, as well as the spring fed rivers.

FM: What could cause a drop?

RY: There is no evidence of a drop, but if water going into aquifer took organic matter (eg dead leaves etc) the carbon would be broken down by organisms in the aquifer and this process would consume oxygen

FM: So the oxygen is needed for the organisms to remove the 'brown stuff'

RY: Yes

FM: This is really important for the unique qualities of the spring. Risks to the aquifer are discharges that would cause the use of oxygen in the aquifer

FM: The Irish found this in one of their karst aquifers and the oxygen levels crashed and they had to change their supplement and silage practices

LM: Would it be useful to generate a trigger or band for dissolved oxygen for the TWS?

SM/RY: Yes this could be done.

FM: Clarity is also needed –the transmissometer used at the salmon springs could not cope

TJ: we are persevering with the transmissometer – there has been some adjustment and measures are in the ~60s meter. If everything is constant, then this could still be used to measure trends.

Group discussion: What would be an appropriate trigger limit for nitrate and clarity?

Comment on validity of a nitrate for periphyton attribute, rather than nitrate toxicity.

Comment on use of trends metrics as attribute rather than bands of nitrate level or specific trigger level.

TJ: There is a water clarity site below where Fish Creek springs joins the system and this has good historic data.

RY: Still debate amongst scientist on toxicity effects of nitrates – there are two studies internationally on effects on aquifer ecology, but they are conflicting

FM: So is the nitrate level you are concerned about 1 mg/L?

RY: Yes – and this is the limit defining NOF A band.

RSN: So if the scientists could agree on trigger levels for nitrates – that would be useful to the group?

SM: Perhaps there needs to be some expansion of the NOF to create an A+ band in the NOF?

JT: One of the discussions still to have is a discussion of anthropogenic vs natural sources of nitrate - the literature says when you have systems less than 1mg/L it is extremely difficult to attribute nitrate to anthropogenic sources.

FM: Aquifer health and the carbon oxygen balance

Water quality management options - attribution and assumptions around nitrates

LM went over slides on adaptive management and black box for attribution.

[no time left for discussion of this]

<meeting finish>

Action Points – Council Staff/Facilitator/Advisor

No	What	Who
1.	RY and TJ to provide update on monitoring and results being obtained. This will be covered in the afternoon discussions also.	RY/ JT
2.	LM to follow up finalising of consultation summary document.	LM
3.	LM to get webpage feedback system up and running!	LM

Action Points – FLAG Sub-groups

No	What	Who
4.	Consultation subgroup to develop a consultation plan for May-June and bring back to FLAG.	

Scheduled FLAG and FLAG Subgroup meetings

Date	29 April 2016 (FLAG Meeting 22)
Time	9.30am -3pm
Venue	Takaka Fire Station
Agenda Items	Interim decision review

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'.*