FLAG MEETING NOTES: 22 August 2014

Purpose:	Takaka Freshwater and Land Advisory Group (FLAG)– Meeting 2
Date:	22 August 2014
Time:	9.30am-3.00pm
Venue:	Takaka Fire Station
Present:	**FLAG members:** Graham Ball Greg Anderson Mirka Langford Neil Murray Tony Reilly Mik Symmons Mike Newman Matt Rountree Margie Little (iwi representative on FLAG) Martine Bouillir (council representative on FLAG) **Staff:** Mary-Anne Baker (Environmental Policy Planner) Lisa McGlinchey (Environmental Policy Planner) Joseph Thomas (Resource Scientist - Water & Special Projects) Trevor James (Resource Scientist – Freshwater and Environmental Quality) Andrew Burton (Resource Scientist - Land) Andrew Fenemor (Landcare Research) Rochelle Selby-Neal (Independent Facilitator)
Apologies:	Piers MacLaren, Kirsty Joynt
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 TRMP = Tasman Resource Management Plan TWMC = Takaka Water Management Catchments **Unconfined aquifer** = are those where permeable strata are open to the ground surface. Surface water (rainfall and/or river flow) is able to seep from the ground surface directly to the aquifer. **Confined aquifer** = are those where permeable groundwater bearing strata are separated from the land's surface by an impermeable layer (such as silt or clay) that prevents surface water from directly seeping into the aquifer. Groundwater migrates to confined aquifers from an unconfined recharge area located elsewhere.
Note: records of discussion points have been grouped into similar topics and are not necessarily in the order discussed at the meeting.	

Purpose of Meeting

- *Gain a better understanding of the Takaka fresh water resource*
- *Project Management - Agree work plan for remaining 2014 meetings*
- *Preparatory work for meeting three on values: what we are managing the catchment for?*

Session 1 – The Changing Takaka Catchment

Group Task 1 – The Changing Takaka Catchment

Following the welcome and karakia, Joseph Thomas went over a map of the extent of Takaka Water Management Catchments (TWMC) that the FLAG must consider.

Qn. Can the FLAG focus on the Takaka valley rather than coastal catchments?
The FLAG still needs to have provisions for the coastal catchments, but in terms of groundwater quantity the focus will be on the Takaka Valley area.
The coastal catchments have high stream diversity and potential for large impacts on this. Effects on the coast/sea/moana must also be considered.

The group then had a break-out session in three groups to review key questions on how the Takaka catchment has changed over time regarding land use, water usage, economy, social make-up, cultural characteristics, recreational uses and the implications for each of these for the management of the Takaka catchment and its water. The key findings were reported back and discussed amongst the group.

Key findings from group task report back:

Land use - changes

- *Stock units per ha increase, but overall in Takaka Valley hasn't changed – become more intensive on better-productive lowland flats, but less on less-productive hill country*
- *More cows, more land under cultivation. Now 2.8 stock units per hectare.*
- *1980s forestry burst is just coming through first rotation*
- *Seen the end of burning in hill country - now reversion. Less sediment loss as hills stabilised*
- *More regrowth of bush in national parks*
- *1984 largest dairy was ~300 cows and start of irrigation*
- *Lots of farm amalgamation rather than extra dairy conversions*
- *Concerns about clearing of lowland totara for irrigators*
- *More cropping of maize and now fodder beet*
- *Housing increasing*

Land use – implications for water

- *Not much land left for further dairy conversions – unless dairy prices skyrocket*
- *Land use pretty much static from here on regarding dairying etc*
- *Is expensive to bring dairy feed over Takaka hill*
- *Housing increases have flow on effects – more people=more discharges*
- *Some land not yet irrigated so some potential for intensification rather than conversion*

Water – changes

- *More demand, big volumes for irrigation demand – driven by dry spells – investment available. Concern over 'missing out' on allocations rather than on actual need; 'gold rush mentality'*
- *Move from sheep/beef to dairying – but limited by land type/slope etc*
- *Sources of water change – households collecting from springs changed to reticulation/bought changed to water in bottles (big $$$ - economic value, comparatively low volumes). Water is "oil of the future"*
- *Farmers more economic*
- *Population increases creating increased demand for water – especially with summer tourist numbers and their expectations to be able to use water.*
- *Recreational use increasing with population*
- *Intensification of land use and amalgamation of properties*

- *Key drivers – economics, population, diverse community, education and increasing awareness of issues. People want to make a change for water sustainability*
- *Future – storage options likely to be future management on farms – changing/developing – more important to consider for meeting all needs*

Water - implications

- *Low flows in high demand times*
- *Loss of quality*
- *Security of supply poor*
- *Managing conflicting end uses – eg sustainability of Cobb flow releases*
- *Impact on springs*
- *Impact of climate change on quantity – driver for irrigation*
- *More sustainable economically to grow grass well than to bring in feed over the hill – but unsure which has greatest overall environmental impact*
- *Climate change suggests greater rainfall in west – could provide for greater potential for grass growth here*

Recreation - changes

- *Fishing (not a large use) and whitebaiting – observed that trout populations declined drastically over last 30yrs – causes unknown, but likely didymo has had an additional impact. Whitebait also thought to be declining.*
- *Swimming and coastal recreation key and increasing – swimming water quality not an issue in the past – now more awareness of problem nationally – high expectation for good quality to enable swimming. Algal blooms and didymo also an issue for swimming.*
- *Tramping is decreasing – increase in camping and mountain biking – especially amongst NZ users*
- *Some kayaking (including heli-kayaking) – didymo risks*
- *Biggest increase in tourism – tourists have expectation to be able to swim in clean water (rivers and coast) – expect to be able to swim in any stream /beach in region – water quality worst at most popular times*
- *Coastal contamination – Pohara beach gets quite brown after rain – siltation/runoff perhaps from logging and farming? No obvious changes over time to land, but still changes to rivers.*
- *Used to swim and whitebait in the Motupipi – now we can't and there have been signs saying don't recreate there*

Recreation - implications

- *Seasonal pressures – both tourism and farmers time of pressure coincide*
- *Fishing/swimming creating further risk of didymo spread*
- *Big increase in global media/communications*
- *Question on pollution - are expectations matching actual situations?*
- *Question on algal blooms – how big is this issue?*
- *Takaka River – goes to ground and exacerbates pollution issues.*

Cultural - changes

- *More retired people – young people leaving area*
- *Seasonal changes of population*
- *Different demographic – overseas perspectives different*
- *Overseas tourists – expectations to use/do what they want to do*
- *Cultural views about some activities affected by current practices - effluent and wastewater discharges*
- *Changes in population support environmental / integrated management*
- *High awareness of specialness of valley - and of links of land, water and sea*
- *Not just about $$$, but about sustainability*

- *More future focus (difficult to do in practice)*
- *More awareness of effects and the need to manage them*
- *Specialness important to locals – awareness of FLAG to manage issues*
- *Knowledge and awareness of how farms work and what they bring to community – not that good in non-farm communities - some do have good understanding of this, some don't*
- *More reliance on research and good information (dairy industry especially).*
- *Big $$ investment into managing effects on dairy farms*
- *"affluent northern hemisphere refugees" not necessarily understanding the communities they are moving into or communicating with landowners – dividing the community – need to bring together*

Cultural - implications

- *Population increase in summer has effects on water, as well as local business*
- *Need to address/manage demand within limits*
- *Need to sort out equity issues for those with and without access to water (allocation and reallocation)*
- *Looking at storage options for water – storage options important - water is there but not at right times*
- *Intensification has associated water demand*
- *Need to remember connection to the coast, the environment,the aquaculture industry and recreational uses*
- *Waikoropupu Springs our biggest tourist attraction - Maori have a saying: water reflects the well being of the people – if the spring were to dry up it would have big meaning – impacts on springs need to be avoided*
- *Good quality drinking water should be protected at all costs*

Social - changes

- *Were more pioneers early on – lower population now than at gold rush time*
- *Coal mines/cement – cement shut in 1980 which led to a big change*
- *In earlier times development was promoted – lobbying for infrastructure – roads, power, river control etc. Now not wanted by some sections of the community.*
- *Now more alternative lifestylers, including "affluent refugees" who now want things to stay as they were when they arrived. More European and US immigrants.*
- *Amalgamations of farms – smaller family farms have become larger networks. More immigrant labour (dairying).*
- *Building in coastal settlements*
- *Community predominantly white and foreign*
- *Changes to benefit system (last 6 years) has prevented people on the unemployment benefit moving into GB (sole parents and sickness beneficiaries still can) – affects demographics. This has been a driver in making some people more entrepreneurial as they have to be responsible for creating their own income.*
- *More contested changes in environment and more awareness*

Social - implications

- *Small communities not as important as they once were, more global connections, people mix and mingle more*
- *Potential for neighbour conflict – when newcomers don't understand the community they are buying in to*
- *Economic gap seems to be widening*

Economy - changes

- *Population increase – demographic makeup is more diverse*
- *Housing increase*

- *Ways of making income have changed: Industry types changing – coal/flax/timber/cement/asbestos/steel/iron ore/gold/pubs have changed to fishing/aquaculture (scallops/salmon), agriculture (sheep-beef to dairying), increase in tourism (esp. with national parks), e-commerce (especially with new technologies) and electricity generation*
- *Future potential for eco-tourism and art industry*
- *Main driver is "following the dollars", using up of small resources and off-shore competition*
- *Changes having flow-on effects for schools, transport, centralisation of populations and loss of small communities and local government representation, etc*

Economy - implications

- *Increasing demand on limited resource (aspirational vs actual)*
- *Competing uses/demands (recreation and commercial) and seasonal pressures*
- *Greater awareness of water quality and quantity issues*
- *Other proposals for electricity generation*
- *Water quality needs for current and future uses (aquaculture and eco-tourism)*
- *Population changes – both demand for water and waste discharges increase*
- *Non-point discharges increasing (eg from roads)*

Presentation 1: Andrew Burton (TDC) – Land features, soils and land use

Andrew Burton (Resource Scientist - Land) gave a presentation in two parts on the soil resources and the land use information held by Council.

Key points from Soils Resources Section:

- Past information from the Fundamental Soils Layer (FSL) maps (1950s-1968), updated in 1977 by the desk-top Land Resource Inventory (LRI) project
- In 2005 Council began more detailed soil mapping for the Takaka Valley and Puramahoi Plains. This showed much more variability of soil types (going from 7 to 20 soil types).
- The new data is to a 1:10,000 scale suitable for property level use and allows for remapping of land productivity classifications and soil versatility mapping – also have water holding capacity and plant rooting depths for use in irrigation management
- Areas outside of Council mapped area still use the FSL/LRI data
- Council data is available through Landcare Research's SMap online – also available through SMap is information on N/P leaching vulnerability, pugging vulnerability, dairy effluent risk category and a number of other useful aspects
- Soil quality monitoring done since 2001-2009, 8 sites in Takaka valley, 2 added in 2010 covering dairy, beef, horticulture and lifestyle land uses
- Results of monitoring show Takaka soils in a pretty good state – some areas have very low macroporosity (few large pore spaces in soils, so reduced drainage but also reduced leaching risk) however this is possibly natural or some due to soil pugging. N levels elevated but not yet at 'excessive' levels. Takaka has no reference sites available to determine natural background (unmodified) conditions.
- Visual soil assessments done at Glendale farm 2006-2011 – results good with no significant change over time

Key points from Land Use Section:

- Landuse data primarily from Land Cover Data Base (1,2,3 and 4), other sources include Statistics NZ
- Information is fairly rough, trends include a decrease in sheep/beef farming and an increase in forestry and dairy. The area of irrigated land has increased significantly (91ha in 1987 to 1021ha in 2012 - based on consent records for water takes). *However the typically dairy herd size in Takaka is below the national average and irrigation is*

generally used to achieve consistent grass growth throughout the year, rather than to increase stocking density.

Questions and topics of discussion arising from Andrew's presentation:

What is Olsen P?

- *This is the level of phosphate in soil measured using a particular kind of test (the Olsen P test). It is an indicator of soil fertility. Too low and the soil fertility is poor, too high and there are environmental effects. An optimum Olsen P value is identified for each soil type which balances soil fertility and environmental effects. Farmers use these tests at regular intervals.*

Where is soil porosity measured? – in some areas there seems to be a lot of stone just below the surface.

- *Porosity (a measure of the pore spaces within soils and its resulting drainage capacity) only looks at the root zone – the top 30cm.*

What does the new soil mapping mean for on farm soil management?

- *There was lots of diversity found, often right next to each other – this challenges land owners as there is lots of variability across farms, including big age differences – there are some very recent soils (200-300 years old).*

What aspects need to be considered by the FLAG – is leaching a key aspect?

- *The leaching information we now have is recent so this could be looked at further. Leaching of N on recent soils is probably not high. P (phosphorus) leaching may occur in places, but soils in Takaka are 'reasonably safe'. Onsite management of these aspects will be key though.*
- *P leaching is a potential issue in Pakahi soils, especially on hill slopes, however Trevor J noted that sampling of streams in Takaka areas with Pakahi soils are not showing P issues – unlike areas such as Burton Ale Creek (also on Pakahi soils) near Collingwood which had P values five times the ANZECC guidelines. Mirka noted that fertiliser provision for such soils would be very different to other soil types to account for leaching risk. Part of the management response needed in these areas was accepting that the optimum Olsen P value was lower than that on other soils and managing land to suit this.*

There seems to be more intensive maize growing vs pasture?

- *Takaka soils are pretty robust to cultivation. Maize is especially good at soaking up nitrogen. It tends to be associated with dairying for winter fodder and dairy farmers rotate grass with maize as part of pasture improvement. However the amount of maize seems to be dropping based on the amount of seed being sold, probably due to the lower cost of alternative foods brought in from Asia. 'Fodder beet' is also being grown in the winter period which could have potential issues.*

Presentation 2: Joseph Thomas (TDC) – Water Resources

Joseph Thomas (Resource Scientist - Water & Special Projects) gave a presentation on the water resources in the Takaka catchment. This included a 15min digital Google Earth based 'flyover' from the upper Cobb River and dam, down the Takaka River Valley, along the coast from Port Tarakohe to Tukurua and around the Waikoropupu Springs, Waingaro and Anatoki Rivers, finishing at Takaka township.

Key points from the flyover:

- The Cobb reservoir is a very long narrow reservoir

- The Council flow recorder site at Harwoods on the Takaka River is the location where flow recordings are taken that are used for water rationing triggers which initiate water restrictions in the main Takaka Valley
- Many of the smaller streams feed into the karst aquifers and go dry as groundwater levels fall. Groundwater levels affect water loss from these rivers – when groundwater is low the rivers will go dry at higher flows
- Sinkholes are common in the valley and present a connection into underlying geologies and aquifers. Sinkholes tend to be less visible lower down the catchment as they are filled with gravel.
- Springs are present at several sites along the valley including Springbrook and EastTakaka (eg Spitall's Spring) and the largest at Waikoropupu
- The marble and limestone aquifers extend out under the sea
- There is quite a bit of flat land in the northern coastal catchments

Key points from the water resources overview:

- Key features of the Takaka water management catchments:
  - 63.5% of area is Department of Conservation land
  - Below 160m elevation, 12% of area is grassland
  - Rainfall is very variable with 2500 at the upper Cobb and 1500mm at coast
  - Groundwater-river links are very complex

- There are lots of permanent monitoring stations, as well as spot measurements taken
- Council holds good rainfall distribution and river flow data records

- Three of the local geologies hold groundwater – the gravels on the valley floor, the limestone, and the marble.
- The Takaka River flows into the gravels underlying the Takaka township and essentially flows under the town, for example the water bore at the Takaka fire station is 50m deep and is located in these gravels.
- Karst limestone and marble aquifers are very susceptible to pollutants getting into them quickly
- Marble aquifers contain large volumes of water – they are porous and fractured – likely holey cheese. The marble extends under the Takaka township and out to sea, but is sealed in these lower areas by a layer of papa. Modelling suggests a large volume exits into the sea, probably as a diffuse outflows rather than at specific spring vent sites.

- Te Waikoropupu Springs is one of the main upwellings of water from the marble aquifer. Nearby Fish Spring has different water quality due to shallower recharge of the aquifer and dries up in dry summers. These different aquifer sources have been modelled for both of these spring systems.
- The main spring is linked to the sea deep down. When spring flow is high, salt levels in the water increase as the higher flows suck up more sea water (venturi effect).
- Generation of power at the Cobb dam can influence flows at Waikoropupu Springs – when power is generated the flows at the springs become more stable. The Takaka River would be dry longer and the spring flows would not be as stable without the Cobb dam releases.

- Groundwater is generally good quality – except where wells are not well constructed.
- Nitrate/Nitrogen levels are generally less than 4mg/m3 and well below drinking water standards at 11.3mg/m3. Recent results also show a drop in levels in the marble aquifer.
- There are 80 water takes consented in the TWMC (40 for groundwater, 40 for surface water). In total 1142 L/sec is allocated.

- The Takaka water resources report identifies some potential management zones within the TWMC including a coastal zone and the marble recharge zone*. [refer Takaka FLAG bibliography online via www.tasman.govt.nz/link/flag]*
- The Arthur Marble recharge zone is larger than just the area of marble geology – it includes all waters that flow to recharge the marble aquifer system.

Questions and topics of discussion arising from Joseph's presentation:

Why are there two hills at the Motupipi Estuary?

These are different geologies called intrusives that are harder than the surrounding rock.

When water flows down into the aquifers, will it all pop back up again?

No. The water that comes out at the springs can be very different in water chemistry having come from different groundwater sources. Some of the water is discharged out at sea.

How important are sinkholes in water management?

Very important – all are connections to the underlying geology, although some are sealed and won't change much in water level (eg Lake Killarney), while some are well linked and won't hold water. Those that don't hold water are more of an issue for water pollution being able to more readily enter the underlying aquifers.

How good are the lines on the maps? – ie if a property is on one side of the line or the other?

This is an issue with every water management area. The lines are placed using the best hydro-geological information we have and provide the best method for management.

In terms of allocation, what is working and what is not?

Need to compare source flows vs takes allocated to understand this better. As an example river losses to groundwater can be huge compared to allocation amounts.
Need to consider by zones for all water sources.
Need also to look at what it is you are aiming for before looking at solutions.
Time aspects are also important in considering allocation, restrictions and reliability of supply.
The modelled example for Te Waikoropupu Springs could be done for other rivers.

Action: staff to look at ways of presenting allocation data as a percentage of river flow/groundwater that reflects the different sources of water within each allocation area.

In discussions the FLAG members agreed they were keen for the scientist to express their professional opinions in providing guidance to the group.

We don't currently have cutbacks in the Plan – would we be looking to formalise when restrictions would happen?

Currently restrictions only occur as a result of conditions on water permit consents and there are currently three consents in the Arthur Marble recharge area – the triggers for restrictions in these consents are based on the Mean Annual Low Flow (MALF) for the Takaka River.

If the marble aquifer is diffusing into the sea, why is there artesian pressure higher up at the Waikoropupu Springs?

The Waikoropupu Springs are driven by the hydraulic pressure from the upper catchment. The lower areas of the marble aquifer are overlain by fine sediments and the sea also puts tidal pressure on the aquifer flows. [so it is like a hose under pressure, but still leaking]

Are the takes from the Takaka gravel aquifer putting pressure on the marble aquifer?

No – the marble aquifer is sealed below Takaka – the water in the gravels comes from rainfall and Takaka River flows from around Kotinga. Bores in town will be tapping into the gravel aquifer.

Are flows in the Waikoropupu Springs a key aspect to consider? – you mentioned there is 3.4km^3 of storage in the marble aquifer – if there is 1000l/sec extraction, what sort of effect would that have on the spring flows?

Very little – if coming from all of the catchment [but localised effects are important]. This is why we need to consider both flow and storage. There is lots of water stored in the system.

Presentation 3: Trevor James (TDC) – River Health (water quality and ecology)

Trevor James (Resource Scientist - Freshwater and Environmental Quality) gave a presentation on river health in the TMWC.

Key points from the river health presentation:

- Golden Bay streams are some of the best in the district - eg Onekaka River has had 13 species of fish recorded in one reach – many of the coastal streams similar
- Sampling at several sites for a variety of attributes – using reference sites in upper catchments as reference sites. Sampling mostly of low flows, but doing some sampling at higher flows at three sites.
- Key issues for river health are:
  - Disease organisms (eg. Pathogens and E.coli bacteria from human and animal wastes)
  - Fine sediment: water clarity and bed load
  - Stream temperature
  - Ammonia and nitrate
  - Dissolved oxygen
  - Nuisance algae (periphyton and planktonic)
  - Habitat modification – especially stream straightening, loss of instream habitat diversity and removal of stream side vegetation
  - Fish passage barriers
- Key areas with issues include:
  - The Motupipi catchment is noted as a ‘standout’ in the catchment for having problems with all of the issues listed above. Flushing from flood flows from the Takaka River are important - improvement in algal blooms for a few years following 2008 flush.
  - Te Kakau stream has issues with dissolved oxygen (DO) due to excessive aquatic plant growth – DO drops to almost 0% at night when should be above 80% - relatively simple to resolve with shading of the waterway
  - Issues with E.coli in the Onahau catchment
  - Takaka River at Paynes Ford has some issues with filamentous green algae growth due to the elevated nitrate in the groundwater in this area
  - Motupipi and Tata Estuaries have some issues with sediment and macroalgae – sea grass areas also being affected by sediment
- There has been quite a bit of fencing and stock crossing work done in some catchments
- Management of nitrates for nitrate toxicity vs periphyton management have very different requirements
- Many smaller streams in the area still have good channel form and meander – they just need to have stream side trees added to improve – lots of opportunity to improve
- Some practices such as stream side herbicide spraying and root raking exacerbating problems
- Wetland creation at key low points in farm drainage patterns would help improve water quality coming off farms

Questions and topics of discussion arising from Trevor's presentation:

Why isn't planting/shading happening in the Te Kakau Stream?

It's a legacy issue – Council has recommended to landowners that they do this -some are keen, but not all. Council has done trials with artificial means of shading in the upper Te Kakau stream with good results.

What causes macroalgae growth in estuaries?

Nutrients.

What about toxic algae – are there issues with cyanobacteria?

Not really widespread in the TWMC. There is some in the Anatoki due to fine sediment loads (the cyanobacteria 'mine' nutrients from sediment giving them a competitive edge over other species). The guidelines for cyanobacteria are <20% coverage. Rates in the TWMC rarely get above 5% - cyanobacteria blooms are a relatively recent phenomena – still a lot of questions on causes. Elevated (moderate) levels of Nitrate, plus really low Phosphorus levels, plus sediment tends to result in blooms.

Presentation 4: Lisa McGlinchey (TDC) – Point Source Discharges

Lisa McGlinchey (Environmental Policy Planner) gave a presentation over viewing the point discharges in the TMWC.

Key points from Lisa's presentation:

- The TRMP includes two 'Special Domestic Wastewater Disposal Areas' at Tukurua and Patons Rock which require higher effluent standards for onsite wastewater discharges after 1998
- There are a variety of discharges permitted to land, water and coastal water in the TRMP
- There are ~70 consented discharges (43 to land, 27 to water) in the TWMC – mostly in the valley floor and coastal catchments
- Most on-site wastewater systems are permitted activities so Council only holds limited information. Data investigated suggest potentially up to 923 on-site wastewater systems within the TWMC with ~500 of these lying over an unconfined aquifer.
- Using on-site wastewater nitrate removal and leaching data from Environment Waikato, Bay of Plenty and the US, the onsite systems are estimated to contribute less than 0.6kg/ha/yr to the unconfined aquifer area.
- There is potential for cumulative and localised effects on water quality.

Questions and topics of discussion arising from Lisa's presentation:

Nitrates are very water soluble – can we assume this is getting into groundwater?

JT: this depends on the distance between the discharge and the ground water level. What gets into groundwater vs what will migrate through the aquifer a temporal effect – migration though aquifers depend on the flow rates in the aquifer.
AF: Surface discharge rates vs discharge to underlying soils is not really comparable as the soil profile removes some of the surface discharged nitrate.

What is the typical dairy N leaching rate to land?

MLa: the national average dairy leaching from the soil profile is 30-50 kg/ha/yr – but it is very dependent on soil type. The 200kg/ha/yr value of nutrients applied to land used in the TRMP is likely to have come from 1950s research that showed that above 200kg/ha/yr the increased stocking exacerbates nitrate leaching so levels rise at a higher rate above this point.

Is there a significant difference to stock management over time?

MLa: yes when figuring out nitrate leaching Overseer takes into account seasonal variations in management and stocking. Most farmers will see 200kg/ha/yr as an upper limit.

TJ noted that high levels of E.coli in the Tukurua River were traced back to 3 of 20 septic tanks that were failing and causing a problem. 'Warrant of Fitness' systems for septic tanks could resolve such issues.

Session 2: Discussion, Project Management and Values

Discussion on Session 1 outcomes: Rochelle Selby-Neal

Rochelle asked the FLAG what issues stood out for them from the morning session on the state of the TWMC and how things had changed.

Key points identified by members:

The water resources are in relatively good health – there is some wriggle room – the FLAG is not having to respond to a crisis situation - we could have sustainability in action.

We have a large water resource – but assume there will be some key parts that will be important for setting management objectives.

Has groundwater quality changed? – for values such as swimming in rivers, do we have information on the use and water quality monitoring?

TJ: yes – 97% of the time in dry weather sites comply with the guidelines for swimming water quality. Council has only had to put up warning signage three times in the area – once at Paynes Ford (2006-7) and two years running at Pohara Beach which is being monitored more closely as a result.

We need more information on water allocation details – in particular percentage of allocation compared to recharge aspects and different water sources.

Staff noted it would be good for FLAG members to bring any information they have or questions to staff for inclusion in future discussions. MLi identified the Management Plan for Te Waikoropupu Springs as a resource to consider.

Action: staff to add Te Waikoropupu Management Plan to online bibliography

Regarding the duration of low flow and impact on temperature – has this been taken into account in determining the percentage of exceedances for rivers with flow quality issues?

TJ: yes.

There is not much change in stocking rates in the catchment – irrigation has increased, but is used to consistently grow grass and provide more consistent milk production, rather than to increase stock rates.

What information is available on catchment effects on the coastal environments?

TJ: There is a Tasman Coast report (Tasman Coast: Waimea Inlet to Kahurangi Point, Habitat Mapping, Ecological Risk Assessment and Monitoring Recommendations, August 2012) – this is available on Council's website.

Action: Staff to add link to online bibliography

Project Management: Mary-Anne Baker

Three project outline resources where provided to the group for review and discussion:

- Outline of FLAG process
- Draft Gantt chart of project parts and tasks with estimated time frames
- Project Task summary chart based on gantt chart

MAB identified that there were still questions to answer over when and how public consultation/engagement would occur – placeholders have been included in the draft project timeline for these aspects.

Group Task 2 - Values Exercise: Rochelle Selby-Neal

Rochelle provided the FLAG members with an exercise to help identify what values where important to them, what attributes where important for these values, what areas were being well or poorly managed for these and what the potential threats were.

Action: FLAG members to fill out additional copies of values exercise at home and either drop them in to the Takaka service centre or give to Martine Bouillir to bring Richmond offices.
Action: Staff to collate values exercise outcomes for discussion at next meeting.

Suggested Agenda Items for Next Meeting

- Revisit spokes person for FLAG to feed back to Council
- Water Values – outcomes from take-home values exercise
- Water Values and National Objectives Framework – what the TRMP/NOF says
- Look at potential future modelling requirements (Andrew Fenemor)

Action: Staff to draft up agenda with focus on values and management objectives

Action Points – Council Staff/Facilitator/Advisor

No.	What	Who
1	Staff (Joseph Thomas) to look at ways of presenting allocation data as a percentage of river flow / groundwater that reflects the different sources of water within each allocation area.	JT
2	Staff to add Te Waikoropupu Management Plan to online bibliography	LM
3	Staff to add Tasman Coastal report to online bibliography	LM
4	Staff to collate values exercise outcomes for discussion at next meeting.	LM
5	Staff to draft agenda for next meeting	MAB

Action Points – FLAG members

No.	What	Who
1	Read New Zealand Coastal Policy Statement (see online bibliography for link)	All
2	FLAG members to fill out additional copies of the values exercise and either drop them in to the Takaka service centre or give to Martine Bouillir to bring over to the Richmond offices.	All

Next meeting

Date	Friday 19th September 2014 (Meeting 3)
Time	9.30am - 3pm
Venue	Takaka Fire Station
Draft Agenda Items	TBC
Preparation	See FLAG action points above. You will be sent any additional meeting prep once the agenda is finalised.

Subsequent meeting

Date	Friday 17th October 2014 (Meeting 4)
Time	9.30am -3pm
Venue	Takaka Fire Station

FLAG MEMBERS PLEASE NOTE: If you have any questions or need anything between meetings, then please contact Mary-Anne Baker by email: marya@tasman.govt.nz or by phone ddi 03 543 8486.