

Takaka Irrigators Group

Tasman District Council

Trustpower

MEETING NOTES: 5TH March 2015

Purpose:	Meeting of the parties to discuss water management issues in the Takaka Valley
Date:	5 th March 2015
Time:	11.00am-2.00pm
Present:	<p>Irrigators/landowners Corrigan Sowman (Chair) Robert Chubb Robert Rosser Daphne and Steve Woods Arthur Balck Lindsay McLean Brian & Ann Jones Tyler Langford John Byrne Tony Reilly (Also FLAG member)</p> <p>FLAG Members Graham Ball Mirka Langford Piers McLaren Kirsty Joynt (also Trustpower)</p> <p>TDC Staff: Mary-Anne Baker - Environmental Policy Planner) Glen Stevens (– Resource Scientist) Joseph Thomas (-Resource Scientist - Water & Special Projects)</p> <p>Other Attendees Andrew Fenemor (Landcare Research) Peter Lilly (Trustpower)</p>
Notes taken by:	Mary-Anne Baker
<i>Note: records of discussion points have been grouped into similar topics and are not necessarily in the order discussed at the meeting.</i>	

Purpose of Meeting

The meeting was convened to enable a conversation about water management in the Takaka catchment with respect to:

- The TDC establishment of a community based advisory group – the Takaka FLAG (Freshwater and Land Advisory Group) work on developing the water quality and quantity provisions of the TRMP
- Existing and possible future water demand for irrigation
- Opportunities for working with Trustpower in managing flow release from the Cobb Reservoir to meet irrigation demand

Introduction and background

The history of FLAG and rationale for set up was explained. Some discussion about representation and brief for the FLAG output. Discussion also about current water allocation regime.

Note: information about FLAG on the [Council website here](#):

Action item; Convey to FLAG the need to ensure good communication about progress and outputs - using Golden Bay News in particular

Action item: Convey to FLAG need for on-going connection with irrigators group and willingness of the irrigators group to work with the FLAG

The WCO application status and outcomes sought were described. There is still some uncertainty as to the processes likely to be adopted in Takaka.

Water Demand

Water demand – It was felt there is a need to better understand current supplies/limits as well as irrigable land area.

The irrigators' group is starting to build data base of irrigated/non-irrigated – dependant on where water is available. Some power demand for irrigation may not be currently met, but improvements to the electricity network are planned.

Action point: Better mapping understanding where the current use and demand is. Council/irrigators are working on soils maps to show potentially irrigable areas.

Set up meeting with irrigators in next month or so to further refine understanding.

Days of use in Takaka – can be very variable from year to year. Different landowners will have different plans/hopes for irrigation.

Irrigation Efficiency

A brief discussion about what this means and where current practice is at.

Support for the 'collective' to support and advice for each other. Information and support being sought from the INZ.

Irrigators' group seeking to provide advice to FLAG on what is available and how it can be used.

Possibility of linked consents – other ways of sharing water to be considered, including taking at different times (previously taking at night to meet lower power prices).

Collective response from the irrigators group has so far identified two main issues:

- The need for efficient systems and
- The need to manage existing systems efficiently

Investment costs for different systems – is there a need to consider allowing improvement over time? Variable standards might be a response - Impact on existing investment for requiring upgrades needs to be accounted for.

Existing level of performance not known with certainty

System performance may also have impact on leaching rates.

Discussion about potential for flexibility to take different rates to allow average takes over week rather than instantaneous takes.

Action point (for irrigator group) – to get advice and better understanding about irrigation efficiency to assist FLAG in understanding issues and options.

The Cobb hydro-power scheme

Overview from Peter Lilley about how Trustpower operates and the nature of its role in managing and affecting Takaka River flows. Trustpower support multiple use of their infrastructure. Current Trustpower flow management enhances river especially in summer.

The Cobb Reservoir stores 25 million cubic meters of water, enough for the station to operate at full output for 35 – 40 days if no inflow. The volume in storage equates to about 20% of the total flow that passes through the lake (as an annual average). The Station operates above 50% (ie between ½ to full output) of its maximum output two thirds of time, and only operates below ¼ of maximum output 15% of the time. In modern terms the capacity of the Cobb station would be considered undersized for the resource available.

On average, when compared with a natural situation, 1/3 of the time the Takaka River flow is decreased and 2/3 of the time it is increased due to Station discharge. During median and lower river flows, it increases flow 82% of the time and decreases it 18% of the time

The Cobb has “storage” and provides grid support – the operators respond to “must run” dispatches irrespective of prices. ToS pay higher prices because of losses along the transmission line (5% - or more if Cobb not here).

The Cobb scheme has the highest head in New Zealand (difference in elevation between the lake and the station) and is the most efficient converter of water to energy. Storage utilisation very high – and fairly low spill rate. Very efficient. The operation of Cobb is more about what is in storage now rather than anticipated future inflow – inflow comes in pulses not gradually or as often as with Coleridge.

(The current low flow situation was driven by need for maintenance works on gates - the reservoir was emptied to allow for this and the programmed work coincided with drought conditions in the valley)

The Coleridge hydro-power and irrigation scheme

Peter described the development of the Lake Coleridge water management design - Coleridge works in relation to irrigators booking "storage space" in reservoir and having that water made available when irrigator wants it. Irrigators send e-mail day before water needed

The Lake is being managed for generation but contracted space not available for generation. It means there is a charge for volume of space (per cubic meter).

During winter when not being taken for irrigation, Trustpower fills the irrigators' storage space. Trustpower can generate power when water is released but may not be at best price.

Volume booked for irrigation is potentially 4 -5 times the operational lake volume – this means supply can balance storage over several years. Scheme allows for 95% security of supply to irrigators. Ecan has a register of consents that are allowed to access storage and consent holders must have a contract with Trustpower. Contracts are for 20 years – and CPI fixed. Currently 50% of the available space is allocated.

The Lake Coleridge operators need to know how much was actually used....and keep the "water bank balance" current. Currently the lake operators would credit farmers back for unused water if they were unable to abstract, as it is a small proportion of released water.

Lake Coleridge also releases to the "Lower Rakaia River Irrigators" (RRIA) scheme – which is an accumulation of smaller existing consents.

Water use efficiency is a key issue – security of water availability now means less water is actually used. Because irrigators have a high certainty of supply, they don't over use on any given rotation.

The two uses are compatible most of the time – perhaps a couple of days when generation not also desirable. Good year this year for inflows to lake.

Here in Takaka there is probably a need for a one off booking approach in response depends on level of irrigation demand as proportion of total storage. Holding back storage for irrigation provides more issues in wet years (than dry years) for hydro-gen as more gets spilled.

In Coleridge don't have losses from the river while here there is loss to groundwater..

If storage was significant compared to total vol – then lake level would be higher – and would have risk in rain. If for example 5 million as volume to provide for, then it might not make much of a difference to lake operation at all.

Can also release from dam to other storage in lower catchment (Will be doing this in Coleridge later).

Nutrient Management

IMP – or farm environment plans – likely response to manage risk of nutrient losses

Technical expertise to provide quality budgeting advice is limited throughout NZ.

A request made not to add burdens to landowners if none are required. Better understanding about current level of good practices needed by rest of the community – but there is a question about what the level of current practice is.

A brief discussion about current water quality and trends in Te Waikoropupu Springs and also Motupipi R and FLAG work to better understand pathways and sources – especially of nitrogen.

Overseer reports – different quality reports and different results for different land. Limitations of overseer discussed.

Saltwater intrusion effect in coastal catchments noted.

Action Point (irrigators group) to get advice from industry groups (Dairy NZ) about nutrient management, options and practices. Ensure FLAG gets good information.