

Board Paper

June 2013

Title: BN Consents and Water Harvesting Above Dam

Purpose

This paper is provided in response to questions raised at the May 2013 Board meeting about the conditions that apply to the large storage ponds that have been constructed on Fox Peak Station which is located above/upstream of Lake Opuha. In particular, the questions related to the consent conditions and shareholding arrangements that apply to the installation.

The paper is presented for information and for the consideration of the Board as to whether an approach should be made to ECan regarding the relevant provisions in the Regional Plan.

Description

Two large water storage ponds have been constructed (2012/2013) on Fox Peak Station which is above the dam and Lake Opuha in the Ashwick Flat area. Laurie Williams is the owner and he holds 72 SCFIS shares under the name Mitcham Framing Company. The water for the ponds is sourced from Station Creek, a tributary stream that flows directly into Ribbonwood Creek just before it enters Lake Opuha.

From the information published in a recent newsletter of Rooney's Earthmoving Ltd, there are two ponds – one of 140,000m³ and a second of 60,000m³ (for comparison, Gardner's Pond is 83,000m³).

Fox Peak Water Storage Pond

REL Ashburton have just completed the first pond at Laurie Williams' Fox Peak property near Fairlie. Pond 1 has 140,000m³ capacity, required 75,000m³ of cut to fill and 1200m³ of stone wave protection. Stripping of topsoil has just begun on a second pond of 60,000m³ capacity and requiring 29,000m³ of cut to fill earthworks.

Andrew Rae designed both ponds, Ben Moore and Nathan Ede operating laser levelling Cat 627G and E scrapers respectively to construct the pond. Compaction was completed using a Hamm 18t Steel drum roller.



From a consent search on the ECan website, it appears that the relevant water consent is CRC110706 to divert, take and use water. The consent was awarded in July 2011 and provides for three water takes:

- an ‘A permit’ take of up to 21.3 litres/sec and 289,850m³ between September and April, and
- a ‘B permit’ take of up to 250 litres/sec and 900,000m³ taken only under certain flow conditions any time of the year, and.
- a small provision for stockwater of up to 1 litre/sec and 22,484m³ applicable year round.

There is a combined maximum annual allowable volume of 922,484m³.

Mitcham Farming also has another consent CRC012619.2 to take 8.3 litres per second from another waterway nearby.

The 72 shares held by Mitcham Farm provide for the 21.3 litres/sec ‘A permit’ take under CRC110706 and the smaller 8.3 litres/sec take under CRC012619.2. Both of these are ‘affiliated’ takes and have the usual provisions based on Saleyards Bridge flow but also have addition minimum flow restrictions based on the flow of the tributary they are abstracting from.

The larger ‘B permit’ take of up to 250 litres/sec is a ‘water harvesting’ consent which, in this case, is a BN consent under the Opihi River Regional Plan, i.e. no water shares are required to be held. The conditions where water can be taken under this consent are:

- the minimum flow in Station Creek (measured downstream of the take) must be greater than 353 litres/sec, and
- there must have been a flushing flow in Station Creek of at least 700 litres/sec for 6 hours within the four weeks prior, and
- the flow in the Opihi River at SH1 Bridge (Temuka) must be at least 15 cumecs

Without any historical data relating specifically to Station Creek, it is difficult to estimate or model how often the ‘B permit’ water could be accessed and how likely the 900,000m³ annual cap would be reached. I expect that Mr Williams carried out some assessment of this in determining the size of his storage ponds and the volume sought in his application consent.

Discussion

I have reviewed the Opihi Regional River Plan (ORRP) and I am of the view that the BN consent that has been awarded complies with the Plan which provides for water harvesting from tributaries of the Opihi River. I am also of the view that notion of BN consents ‘above dam’ may not have been specifically considered when the Plan was formulated as they have an adverse impact on the effectiveness of Opuha Dam in its function of storing water for controlled release. Regardless of whether Plan was intended to enable these consents above dam, I suggest that OWL needs to consider whether we should approach ECan to explain the adverse impact that these new consents above dam have on our operation and to investigate options that may discourage or stop any further new consents being awarded.

From my assessment of how these consents will work, I believe that volume of water that is ‘harvested’ under the BN consent represents a direct reduction in the water that flows into the lake and therefore reduces the storage water available to all Opuha shareholders as well as for environmental flows downstream. This directly impacts on water availability for all the ‘below dam’ shareholders and also has an

indirect impact on the above dam users by reducing our ability to maintain Saleyards Bridge flow. It also reduces the water available for generation which can be reasonably easily quantified.

If the full volume available under the BN consent was able to be harvested in a year, then, for this consent, $900,000 - 289,850 = 610,150\text{m}^3$ of water would be diverted from the dam. This represents approximately 75 MWh which, at an average price of \$70 - \$85/MWh, represents approximately \$5,200 - \$6,300 per annum (0.3% of our average annual generation income). This is not a large sum in the context of our operation.

This same volume of water harvested ($610,150\text{m}^3$) is equivalent to the annual volume provided by 108 shares (or 135 shares using the 80% entitlement).

There is some grounds for debating that the water stored above dam does not always represent lost lake storage and that is the situation where we spill from the dam. In January this year, we spilt approximately 1.2million m^3 over 4 days. It could be argued if Mr Williams had ‘harvested’ his full entitlement of BN water prior to this spill, then it would have had no adverse impact on our operation – it would only have reduced the amount of water we would have spilled. If he was to harvest after the spill then it does represent diverted water.

Another aspect of the construction of the storage ponds is that the BA consent, for 21.3 litres/sec, will be able to be operated fulltime. Under normal conditions, most irrigators only utilise 50 – 80% of their entitlement.

Another consideration of this issue is that the ‘above dam’ irrigators have always expressed the opinion that they do not enjoy the same benefit from the Opuha scheme as the ‘below dam’ irrigators ('above dam' irrigators are subject to minimum flow restrictions on the North and South Opuha tributaries and therefore a lower reliability) and yet pay the same water charges.

Mr Williams has invested considerable capital of his own to increase his reliability and has done it within the provisions of the ORRP.

There is presumably a limit to how much water could be allocated under more BA consents above dam and it seems to be a case of ‘first in best dressed’ as, normally, subsequent consents cannot be awarded if they disadvantage existing consent holders.

An approach to ECan is warranted to at least propose that we should be recognised as an interested party with regards any BN consent application above dam.

Conclusion and Recommendation

The ORRP provides for water harvesting on tributaries of the Opihi River and this has been interpreted to include the waterways above the dam that feed in to Lake Opuha.

The large storage ponds that have been constructed on Fox Peak Station are intended to harvest water from Station Creek and will therefore divert water that would otherwise be stored in Lake Opuha. A BN consent has been awarded by ECan for this new operation.

There is a demonstrable impact on OWL’s business from any such consent above dam.

An approach to ECan is warranted to ensure they are aware that there is an impact on our operation and that we ought be considered as interested parties in any new consent application.

The Board is requested to consider whether any stronger action or position should be taken to seek some way of discouraging or preventing any further BN consents above dam.



Tony McCormick
Chief Executive
23rd June 2013