

**In the Matter of
the Resource Management Act 1991
and**

In the Matter of

Various Applications

by the Central Plains Water Trust to the
Canterbury Regional Council.

1. My name is Garth Brookland. In august 2008 I presented evidence as an individual. I wish to respond to further evidence produced by CPW. I am mindful of the fact that Commissioners are only interested in Expert evidence. My evidence relates to concerns I still have.

Waimakariri Flows/Time-line Data.

2. Mr. Tipler introduces new evidence by way of Figure 5, page 15 Table 6. from the Duncan 2008 report for E-can on the Proposed Plan Change 1 WRRP.
3. Mr. Duncan's Table 6. goes some way to show a need addressed by commissioners in minute 9 6:13; *"to determine the likely impacts that the proposed CPW abstraction will have on the hydrology of the Waimakariri River it is necessary to first derive a time series of "unmodified" flows from which the effects of historic abstractions have been removed"*..
4. The time-line in this table is 1967-2007, Sept-April period. I believe Mr. Duncan's figures reflect, although not specifically stated, that very important time-line post the large increase in the A Block allocation, namely 1999-2007. This date is a significant one for the Waimakariri River as can be seen from Mr. De Joux's Table below.

Fig 1:

Table 1: Total irrigation demand.

season start	max rate m ³ /s
Pre 1968	NIL
1969-87	1.6
1988-92	1.8
1993-98	2.7
1999-07	2.7 + WIL+

- Mr. Duncan's response (Duncan 12-16 Oct 2009) to Mr. Tiplers evidence seems a bit unclear though in the fact that he says that he was not able to confirm Mr. Tiplers figures. Whether he means the annotations to his Table 6. or the comparing of Tiplers evidence pre paragraph 42 (1967-2001 time-lines) is not clear on.
- In any case, both seem to refer to 1999-2007 when it comes to this Table 6. A time-scale not analyzed before during this hearing, but now seems appropriate for the betterment scenario. It is certainly not a betterment of the Waimakariri River.
- While on the subject of clever wording, I note how preferred has become popular. Being a keen Jet boater, trout and salmon fisherman, so-called preferred flows where the ones experienced pre 1999. Not the unnatural ones experienced over summer post 1999. The whole Waimakariri experience for many is about enjoying its natural character, natural flows over summer (already decimated) and its ever changing dynamic moods.
- The relevance of time-scales over the course of this hearing has always left me wondering what relevance they have. The 1967-2001 is important in the fact that it gives us a historical picture of what we had pre 1999. But it has disguised or hidden the effects of the A Block take post 1999.
- Fig 2 below simple shows those effects, an average 20.2% drop in medium flows over summer.

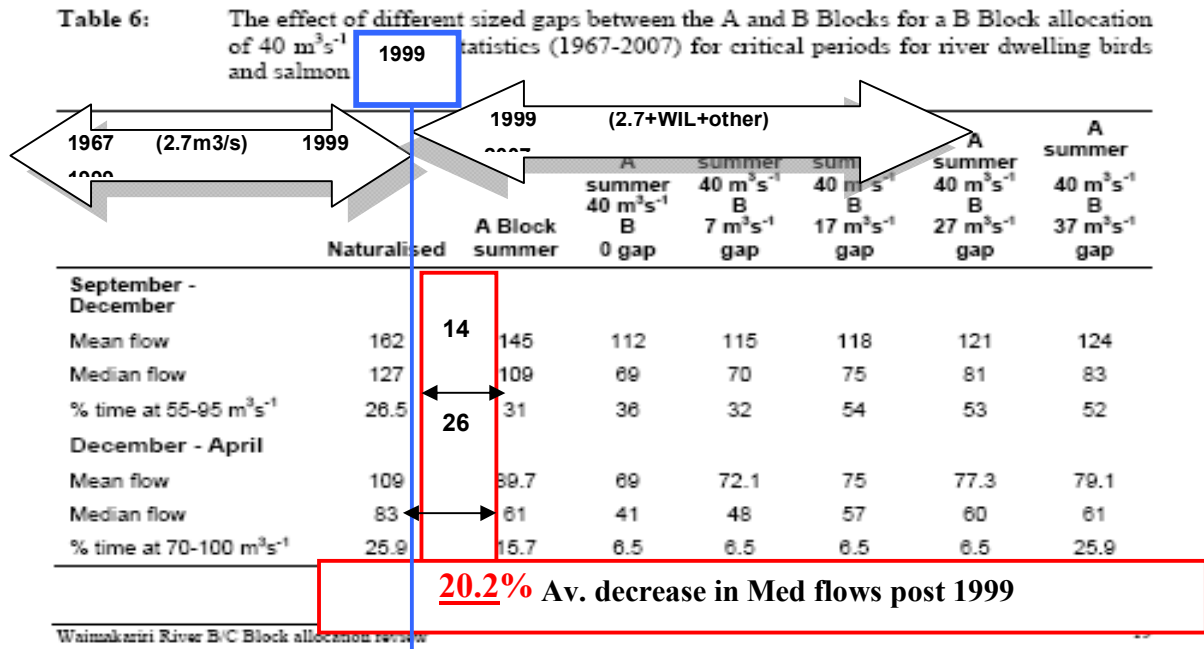


Fig 2: % decrease in Medium flows post 1999 current "A" block (Status quo) effect: Sept-April

10. Fig 3 below I show the reality over summer for river users, and what has been happening post 1999 in relationship to that 20% drop.

Twice daily fluctuations are due to tidal influence.

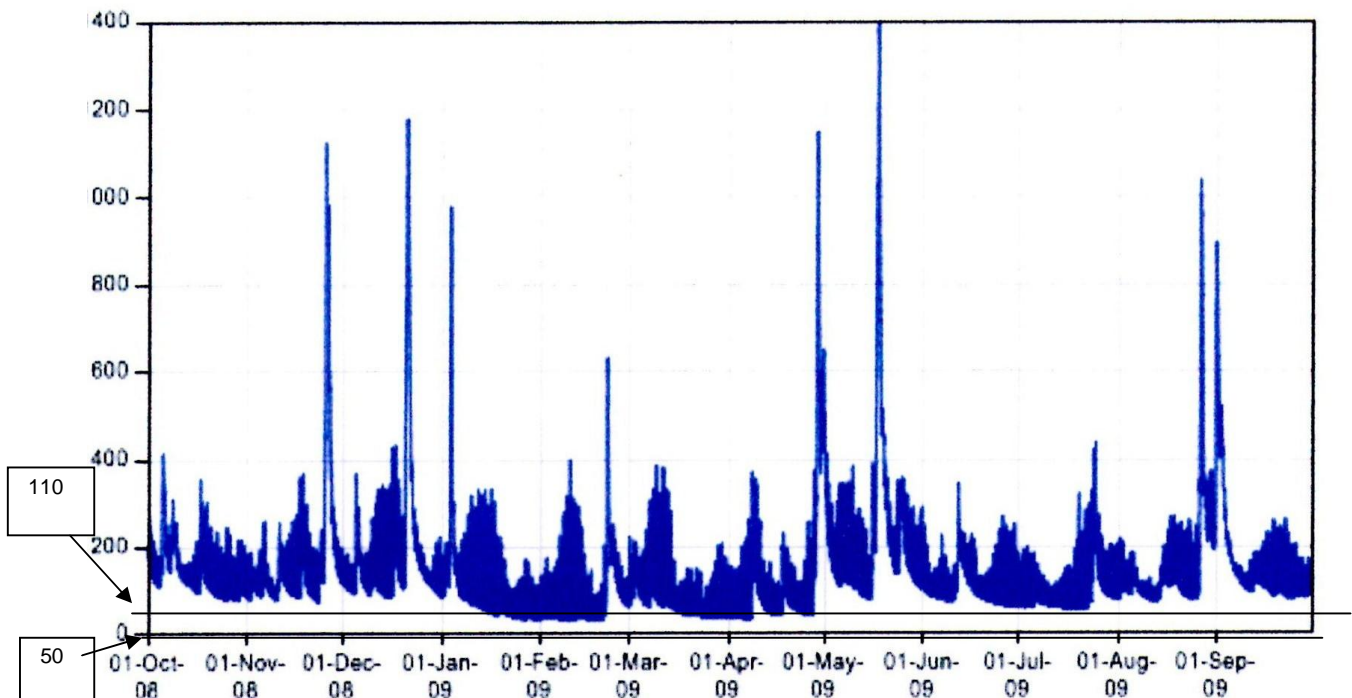


Fig 3: Waimakariri OHB Oct 08 to Sept 09

11. A 20% decrease in flows over the summer period may seem insignificant to the casual observer but for one who is on the river for any amount of time during the period of highest irrigation demand it has been unacceptable. I believe that in reality it is a far bigger drop than the figures are telling us. The A Block is already causing major stress to the Waimakariri River. It is my opinion that the Waimakariri River is giving enough to private interests and any further take without significant %Gaps+ of 37+ will be unsustainable. The period depicted Jan-May in fig 3 above is simply the Waimakariri River under extreme stress. Its natural flows; natural character, ecology and amenity values are being stripped.

12. The blue below the 50m³/s line that I have added is the river being flat lined well below 40m³/s on occasions. In my opinion any large allocation will wipe out the white peaks to 150 m³/s.

13. The graph shows in May how the river suddenly catches its breath with the shutting down of irrigation takes and tries to resume her natural flow pattern. The question is how long will this prevail?

14. I have lived with the Waimakariri River for a number of years on an intimate basis. The information transmitted by data doesn't stack up at times in relation to what one experiences on the water over summer. I am suspicious of unmeasured takes, current water measuring equipment and its

positioning. I urge Commissioners, to take note of the Proposed Plan Change 1, and to why it has suddenly needed review and the information it alludes to regard the outstanding %uncertainties+etc.

15. I hope Expert evidence from the likes of; (De Joux, table 6, 2008) which you have based your table 2 on in minute 9 can be produced with reference to the 25:1:1 proposal, data from 1999-2007. It provides clear understanding as to what the effects are, and what they very well maybe.
16. It is my opinion that there should be no new water allocation for irrigation from the Waimakariri River until more comprehensive, concurrent and more conclusive data (gathered over an irrigation season) as to the relationship and as to what is truly happening in stream on the Waimakariri River between Otarama and the OHB. I believe a substantive Plan Change has to be in operation before that can be obtained.

G. Brookland 2009.