Upper Takaka Zone - A and B permit types example

Water Demand					
Existing Takes (ET)		**Waiting List (WL)**		**Future Irrigation (FI)**	
Surface	240	Surface	120		
Ground	0	Ground	0		
Total	**240**	**Total**	**120**	**Total**	**65**

(There is a further 105 l/s on the waiting list in the Middle Takaka zone)

ET & WL 360 WL+FI 185

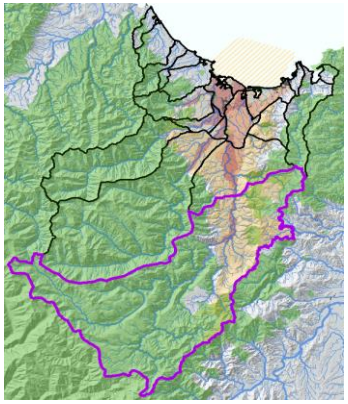
Max Demand (ET + WL + FI) 425

Flow Statistics and Default Allocations				
Statistic	**Methodology**	**% of 5yrLF**	**l/s**	**Location**
7 day MALF			2380	Harwoods
1 day MALF			*1669*	*Harwoods*
1 in 5 Year Low Flow (7 day)			1646	Harwoods
1 in 10 Year Low Flow (7 day)			1397	Harwoods
Allocation default Lower Limit (AL)	10% of 5yr Low Flow	10%	165	Harwoods
Allocation default Upper Limit (AL)	33% of 5yr Low Flow	33%	543	Harwoods

Opportunity for C type takes to storage (over last hydrological year)			
Median flow (l/s)			10100
% of time flow above median flow			52%
Volume of water above median flow for year (million m3)			298

Significance of Ecological Values#	Moderate

 # as assessed by Dr. Roger Young (Freshwater Ecologist, Cawthron - Coastal and Freshwater Group Manager)



Available Water			Suggested Option ⇩		Suggested Option ⇩
Regime Option (MF%-AL%)	**80%-30%**	**70%-20%**	**B Permits 70%-15%**	**70%-10%**	**A Permits 60%-10% (status quo*)**
Minimum Flow Percentage of MALF	80%	70%	70%	70%	60%
Minimum Flow l/s (MF)	1904	1666	1666	1666	1417
Allocation Percentage of MALF	30%	20%	15%	10%	10%
Total allocation l/s (AL)	714	476	357	238	240
Modified allocation for B permit (regime AL less A permits: 240l/s)	474	236	117	-2	na
% of demand met by allocation limit					
% of Existing met	na	na	na	na	100.0%
% of Waiting List met	100.0%	100.0%	97.5%	0.0%	0.0%
% of Future Irrigation met	100.0%	100.0%	0.0%	0.0%	0.0%
Water available beyound maximum demand (AL - WL+FI)	289	51	none	none	none

Low Flow Management					
Regime option	80%-30%	70%-20%	70%-15%	70%-10%	status quo
Risk to instream values (Roger Young's advice)	Low-Mod	Moderate	Moderate	Moderate	Mod-High
Rationing Trigger	none	none	none	none	none
Cease Take Trigger l/s (MF + AL)	2618	2142	2023	1904	1657
Average days below Minimum Flow per yr (1999-2015 data)	12	7	7	7	3
Change to extent of Drying Zone	←-----extent of drying zone reduces ----- (200-300m variation in drying zone upstream of Craigieburn)				
		B Permits			**A permits**
Security of Supply (based on data from 1975-2015 - Nov-April inclusive)					
Regime option	80%-30%	70%-20%	70%-15%	70%-10%	status quo*
% of time flows are above cease trigger	87.6%	91.9%	92.9%	93.9%	96.1%
Comparison to last 16 years data (from 1999/2000 to 2014/2015)					
Regime option	80%-30%	70%-20%	70%-15%	70%-10%	status quo*
Average days of cease take per year	25	16	14	12	7
Number of years (and no. of events) with cease takes > 3 days	9yrs (12)	8yrs (10)	5yrs (5)	4yrs (4)	2yrs (2)
Number of years (and no. of events) with cease takes > 5 days	4yrs (4)	1yr (1)	1yr (1)	1yrs (1)	1yrs (1)

nd = no data available

na = not applicable

** information for 3 large consented takes only*

Effect of the A and B regime:

Under the A and B regime the total allocation for the Upper Takaka would remain at 357 l/s as under the 70:15 regime. This allocation would be split between the existing takes (240l/s), with the remainder (117l/s) being available for new takes at a lower security of supply. In terms of minimum flow and effects on the extent of the river drying zone, the A and B regime would effectively remain with the current situation. There would be no change to the extent of the drying zone over the current situation and no changes to the minimum flow protection level.