

Te Waikoropupu Springs (TWS)

Water Allocation			
Zone Regimes / Area	Proposed & Existing Allocations	Assumed % contribution to TWS	Allocation (l/s) affecting TWS flows
Proposed Upper Takaka Surface Regime (70%:15%)	357	100%	357
Proposed Waingaro Regime (80%:20%)	550	8%	44
Proposed Anatoki Regime (90%:10%)	171	0%	0
Unconfined AMA remainder (existing takes)	142	100%	142
Middle Takaka	47.93		
Upper Takaka Tributaries	94.07		
Confined AMA (existing takes)	6.7	100%	6.7
TOTAL Allocation in AMA Recharge			550

Additional Waiting List and Future Use	Waiting List	Future Use
Middle Takaka	105.3	58.3
Upper Takaka Tributaries	0	0
Confined AMA	0	0
TOTALS	105	58

Flow Statistics and Default Allocations				
Statistic	Methodology	% of 5yrLF	l/s	Location
7 day MALF	correlated		7661	GW6013
1 in 5 Year Low Flow (7 day)	correlated		6806	GW6013
1 in 10 Year Low Flow (7 day)	correlated		6515	GW6013
Allocation default Lower Limit (AL)	10% of 5yr Low Flow	10%	681	GW6013
Allocation default Upper Limit (AL)	33% of 5yr Low Flow	33%	2246	GW6013

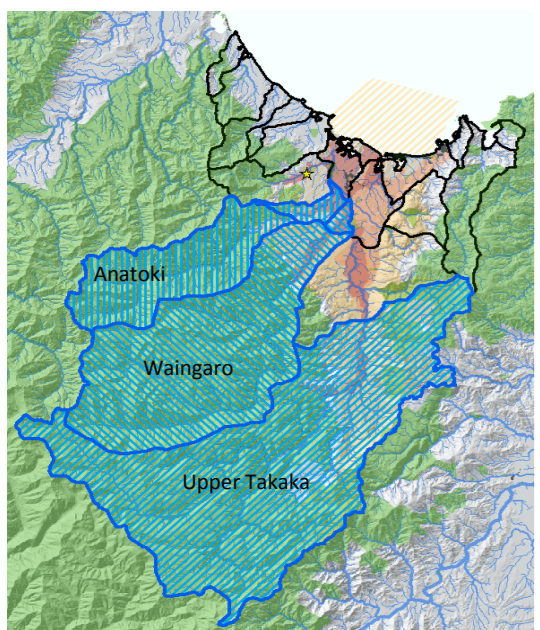
Significance of Ecological Values [#]			Mod-High
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as assessed by Dr. Roger Young (Freshwater Ecologist, Cawthron - Coastal and Freshwater Group Manager)

Available Water Agreed Option		
Regime Option (MF%-AL%)	90%-10%	status quo
Minimum Flow Percentage of MALF	90%	none
Minimum Flow l/s (MF)	6895	none
Allocation Percentage of MALF	10%	7%
Total allocation l/s (AL)	766	500
Allocation Limit Remaining (less existing and proposed takes)*	216	-50
% of demand met by allocation limit		
% of Existing/Proposed Regime met	100.0%	91.0%
% of Waiting List met	100.0%	0.0%
% of Future Use met	100.0%	0.0%
Water available beyond maximum demand (ALR - WL+FI)	53	none
Low Flow Management		
Regime option	90%-10%	status quo
Risk to instream values (Roger Young's advice)	Low	na
Rationing Trigger 50% cut (MF + AL)	7661	none
Cease Take Trigger l/s (MF + 50%AL)	7278	none
Average days below Minimum Flow per yr (1999-2015 data)	4 days	na

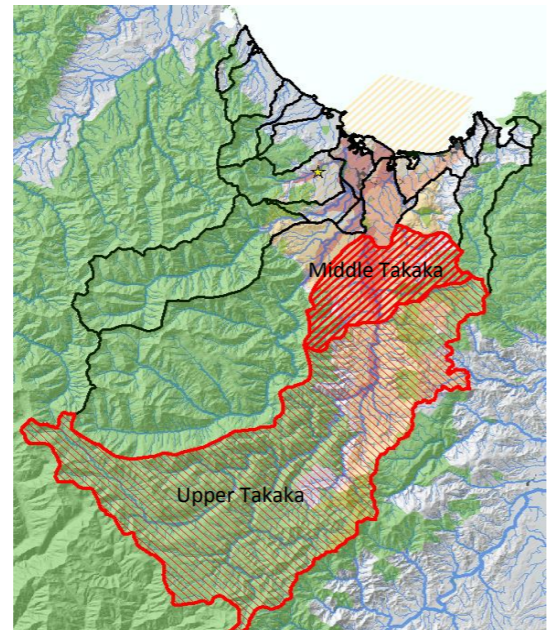
Security of Supply (based on data from 1999-2015 - Nov-April inclusive)		
Regime option	90%-10%	status quo
% of time flows are above cease trigger	98.0%	na
% of time flows are above rationing trigger	96.3%	na

Comparison to last 16 years data (from 1999/2000 to 2014/2015)		
Regime option	90%-10%	status quo
Average days of rationing per year	13	na
Average days of cease take per year	7 days	na
Number of years (and no. of events) with cease takes > 3 days	4yrs (6)	na
Number of years (and no. of events) with cease takes > 5 days	3yrs (5)	na



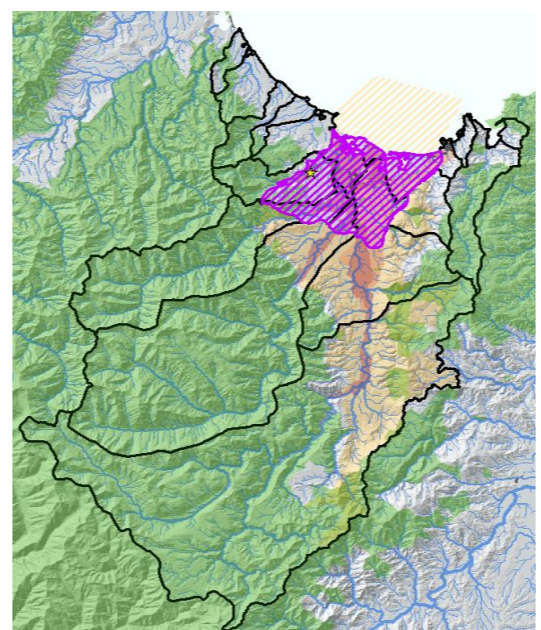
Waingaro, Anatoki and Upper Takaka River Regimes
For Upper Takaka this includes only those takes that affect river flows (As per FLAG agreed regimes)

For takes in these zones Rationing and Cease Takes triggered by respective zone regimes



Unconfined AMA Remainder
Includes:
All Middle Takaka Zone takes
Tributary takes in the Upper Takaka Zone that do not affect Takaka River low flows.

For takes in this zone Rationing and Cease Takes triggered by TWS Regime



Confined AMA
Includes all takes from the confined Arthur Marble Aquifer

For

*NOTE: It is recommended that any further takes from the waiting list or future use be limited to the confined or unconfined AMA.

