



Water Allocation in the Takaka WMC

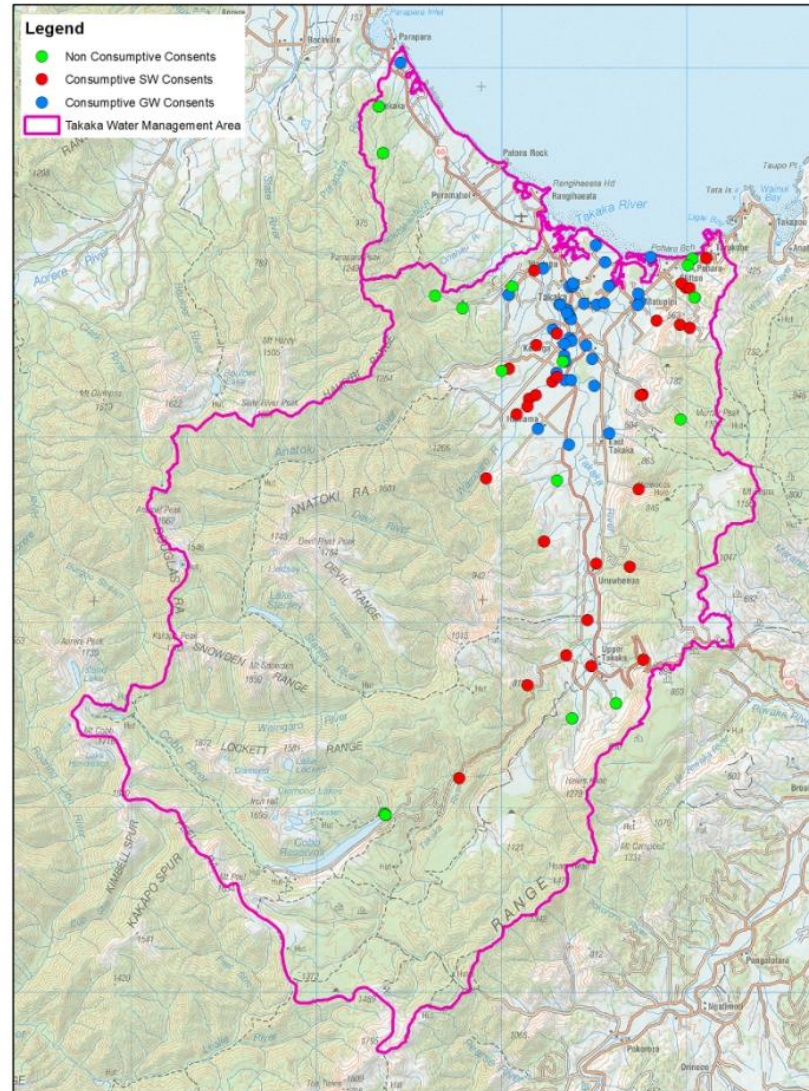
J Thomas

19 September 2014

Location of Current Permits

Non Consumptive permits include:

- Hydro-generation
- Salmon Farm diversion
- Storm water diversion
- Frost protection



Total Allocated Consumptive Water Takes

Source	Number of Permits	Total Allocated (l/s)
Surface Water	44	800.3
Groundwater	40	448
Total:	84	1248.3

Total Allocated Consumptive Water Takes (updated Sep-14)

Since the April 2013 Water Resource Summary there have been four new Surface Water Permits granted:

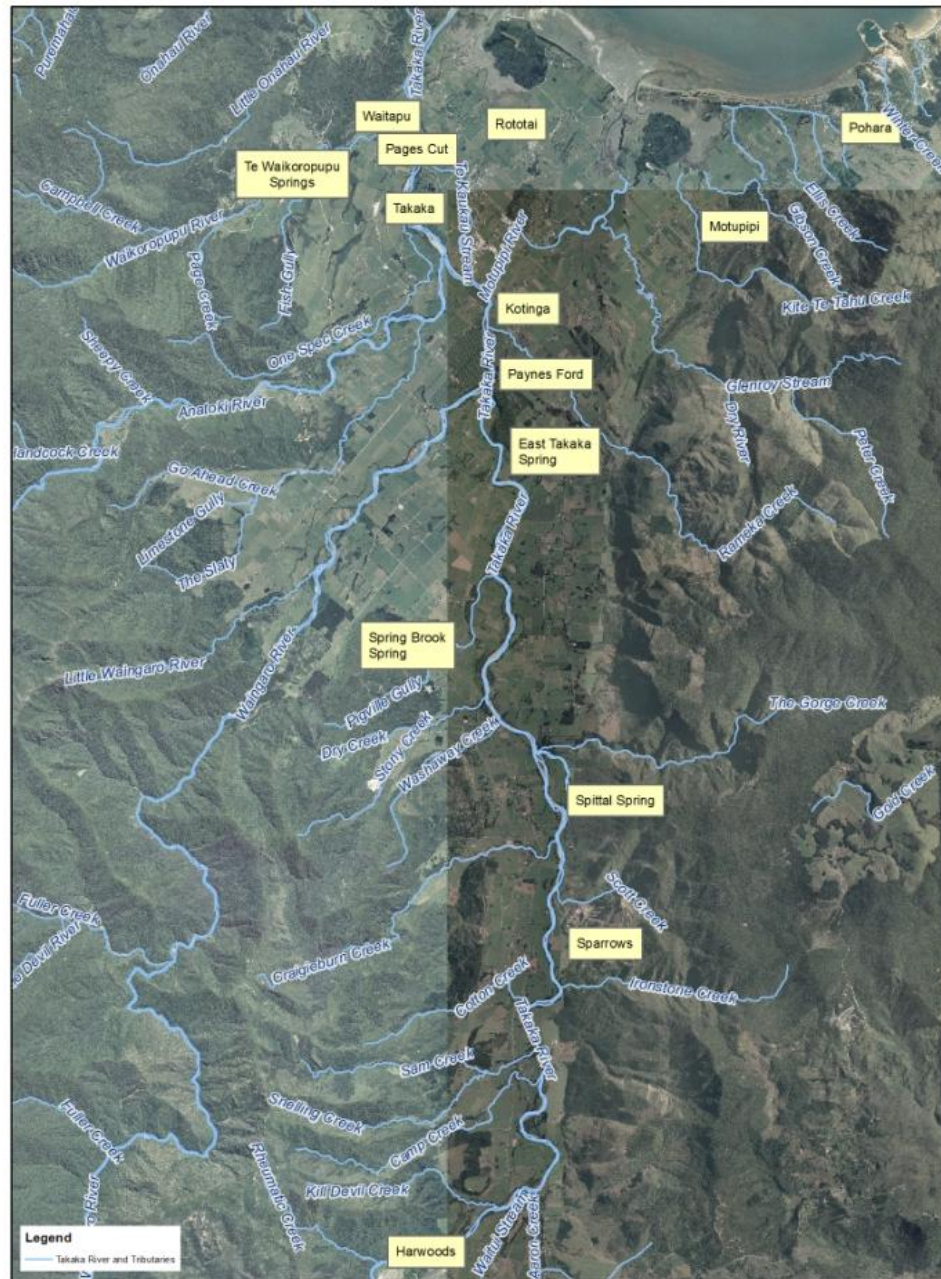
Kite Te Tahu Creek (0.7 l/s)

Balck Stream (42.2 l/s)

Waingaro River (49.6 l/s) this is outside the recharge stretch of the Waingaro

Onekaka River (13.9 l/s)

Takaka River & Tributaries

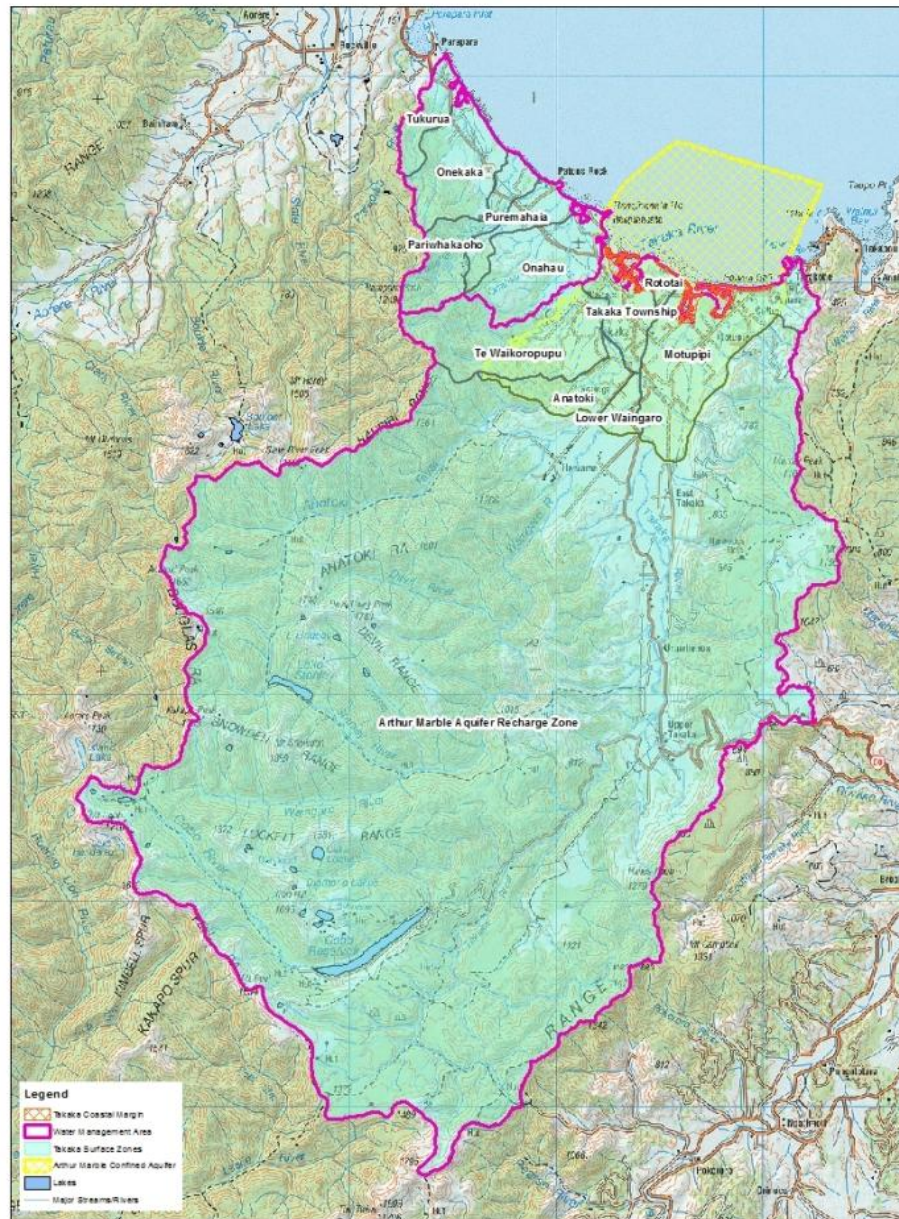


Takaka North Rivers & Tributaries



Arthur Marble Aquifer Recharge Zone (Unconfined & Confined)

Potential other
hydrological zones

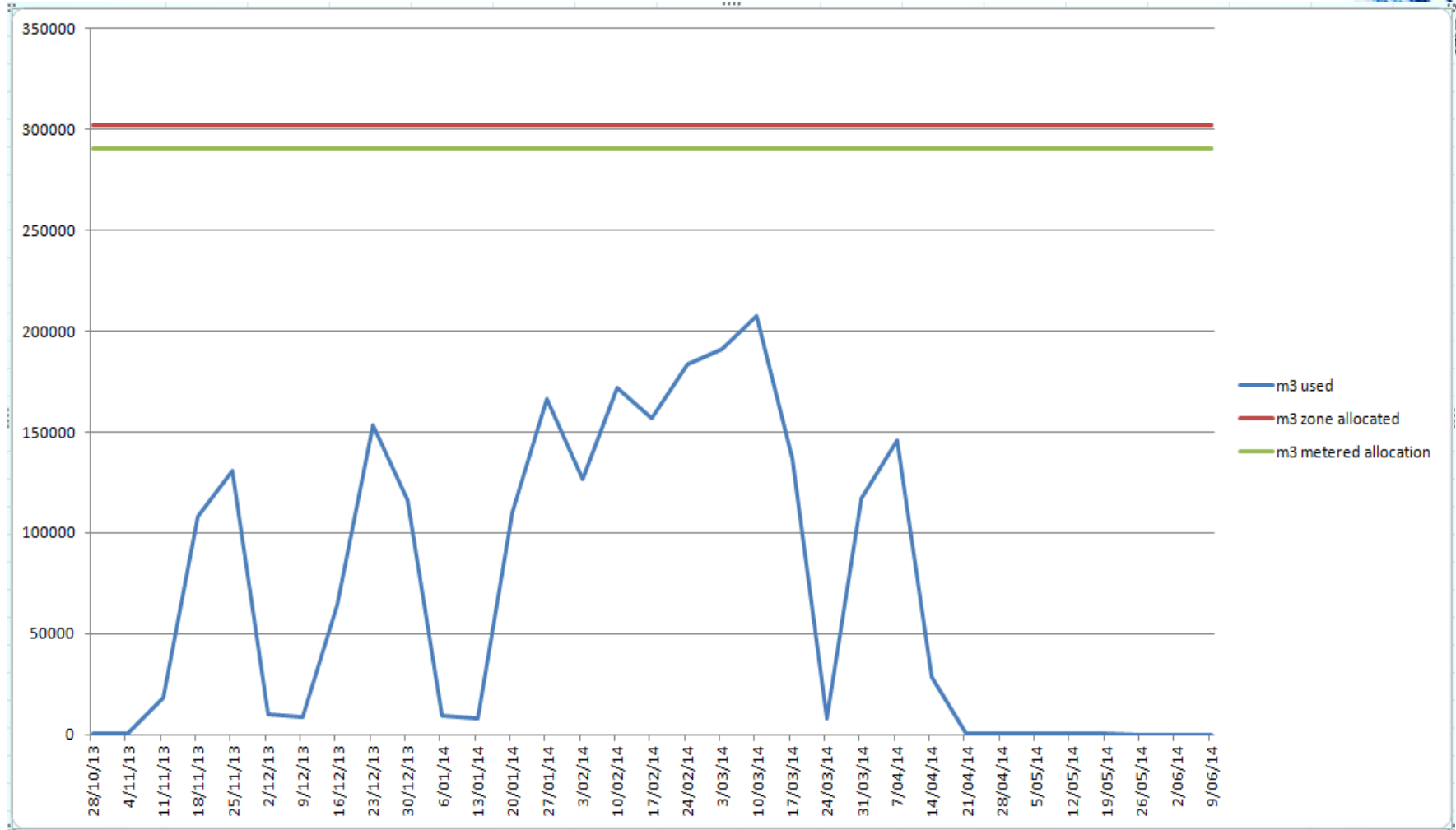


Recharge Zone Allocated Consumptive Water Takes

Source	Number of Permits	Total Allocated (l/s)
Groundwater	3	41
Takaka River	3	239.4
Waingaro River	4	105.4
Other rivers	13	114.2
Total:	23	500

Recharge Zone Allocated Consumptive Water Takes (at Apr-13)

Arthur Marble Recharge Zone Water Usage 13/14 summer – m3/week 500 l/s is 302,400 m3/week



Flow Outputs Arthur Marble Aquifer

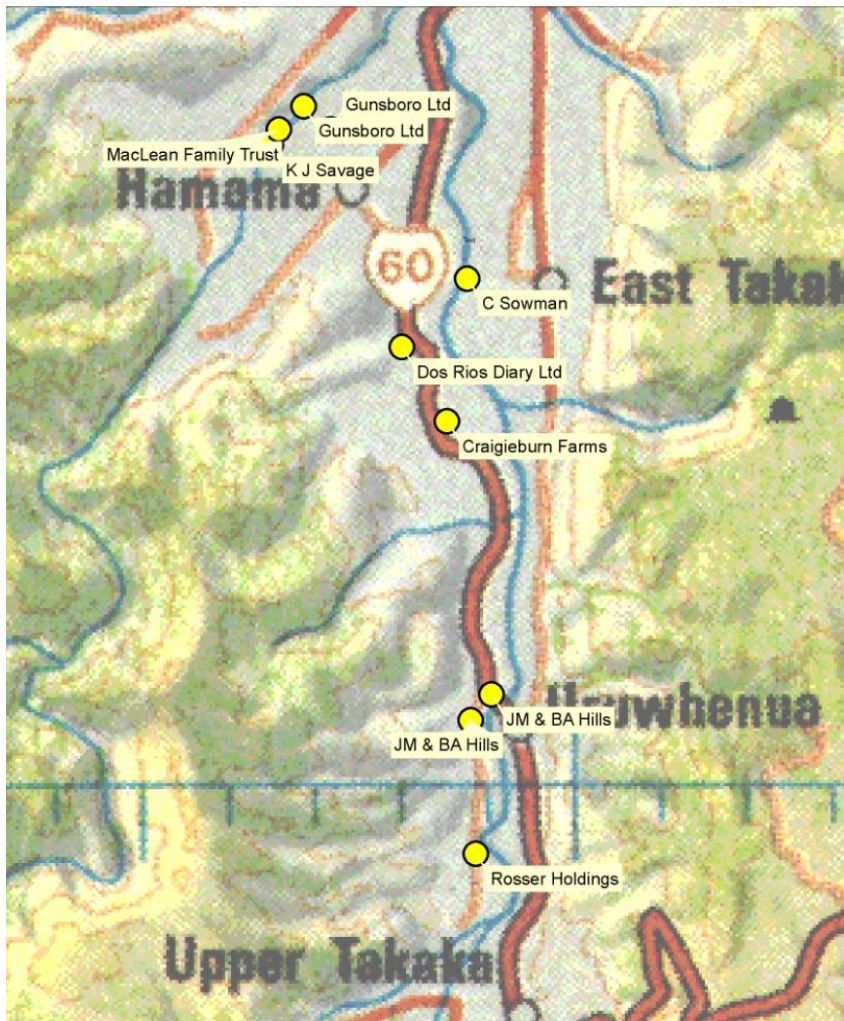
Recorder Site	Mean	Median	7 day flow (l/s)				Analysis Period
			MALF	5 yr	10 yr	20 yr	
Fish Creek Spring	3476	3546	665	127	-	-	1985-2013
GW 6013 Te Waikoropupu Spring	9890	9940	7717	6718	6379	6129	1999-2013

Flow Statistics for Fish Creek and Te Waikoropupu Springs

Recharge Source	Mean Flow (l/s)				% of Total Flow
	Main Spring	Fish Springs	Offshore Springs	Total	
Karst Uplands	7,400	830	970	9,200	46.6%
Upper Takaka River	1,850	1,650	4,850	8,350	42.3%
Takaka Valley Rain	750	820	630	2,200	11.1%
Total mean flow	10,000	3,300	6,450	19,750	

Mean Flows to and from the Arthur Marble Aquifer

Location of waiting list permits



Waiting List for Groundwater Allocation from Fully Allocated Marble Aquifers (Waikoropupu Springs) Recharge Zone

Priority Order	Name	Quantity (l/s)
1	K J Savage	4.0
2	JM & BA Hills	32.2
3	Gunsboro Ltd	40.4
4	MacLean Family Trust	23.8
5	JM & BA Hills	17.4
6	Craigieburn Farms	49.6
7	Gunsboro Ltd	29.5
8	A D Harwood Ltd	29.8
9	Rosser Holdings	10.4
10	C Sowman	45.0
11	Dos Rios Dairy Ltd	9.9
Total:		291.9

Allocated Consumptive Direct Surface Water Takes of Major Rivers

River	Number of Permits	Total Allocated (l/s)	7 Day Average Low Flow (l/s)			
			Annual	5 Year	10 Year	20 Year
Anatoki at Happy Sams	2	74.7	2204	1828	1681	1570
Anatoki at One Spec Br			1778	1348	1180	1053
Takaka at Harwoods	3	239.4	2380	1646	1397	1213
Takaka at Kotinga			3347	2626	2352	2147
Takaka at Pages Cut			3780	3045	2766	2557
Waingaro at Hanging Rock	7	270.7	3601	3096	2897	2746
Waingaro at u-s Confl.			2678	2070	1830	1649
Total:	12	584.8				

Aquifers Allocated Consumptive Water Takes

Source	Number of Permits	Total Allocated (l/s)
Takaka Limestone Aquifer	6	50.3
Takaka Valley Unconfined Gravel Aquifer	30	359.7
Arthur Marble Aquifer	2	34.5
Takaka Misc (Takaka North & Coastal)	2	3.3
Total:	40	447.8

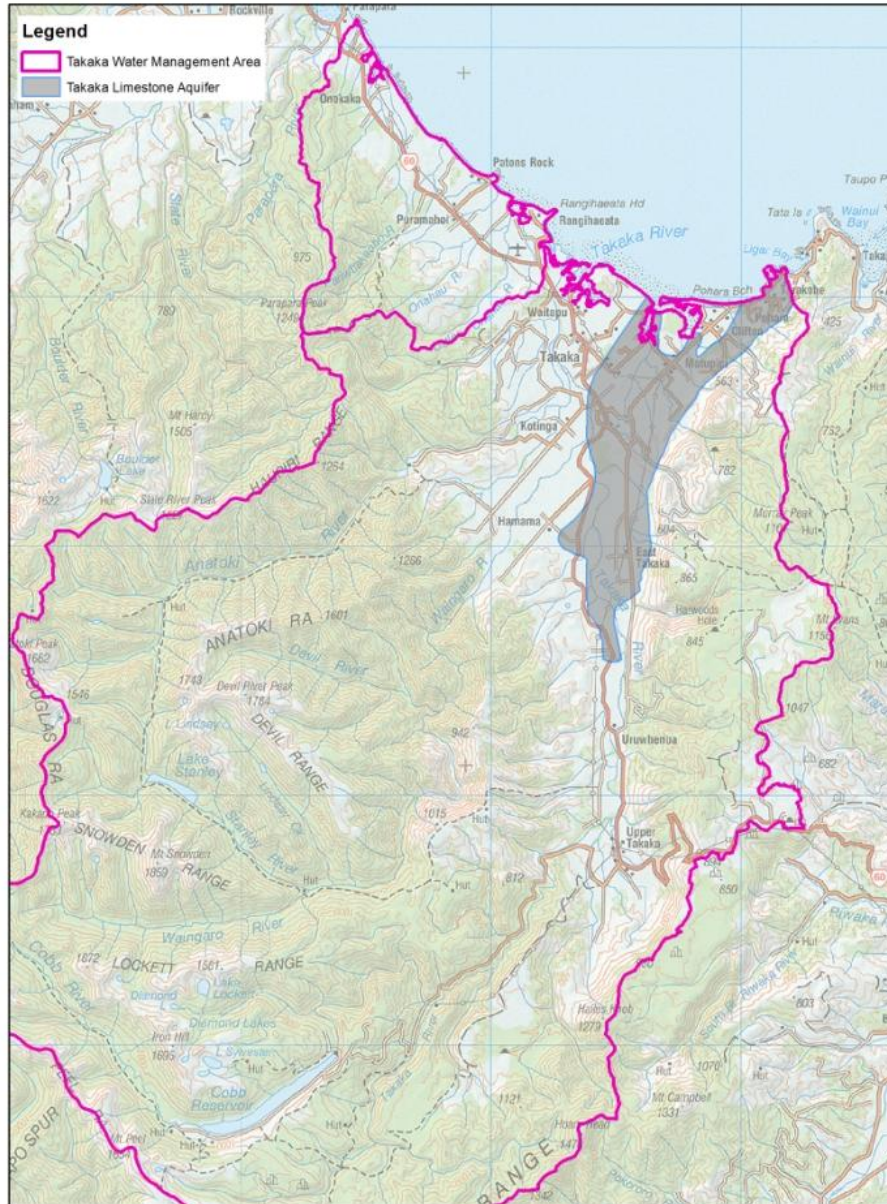
Aquifers Allocated Consumptive Water Takes (as at April 2013)

Where does the water Come from and go - AMA

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Background Map:

Takaka Limestone Aquifer



Background Map:

Takaka Unconfined Gravel Aquifer

