

Dumaresq- Barwon Border Rivers Commission



**Annual Statistics
2012-13**

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Table 1 - Key features of Border Rivers Commission works

Name	Stream	AMTD (km)	Nearest town/s	Description	FSL above bed (m)	Storage capacity (ML)	Date completed
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DAMS

Glenlyon Dam	Pike Creek	6.4	Stanthorpe Tenterfield Texas	Earth & rockfill	47.4	254,000	1976
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WEIRS

Boggabilla Weir	Macintyre River	283.5	Boggabilla Goondiwindi	Reinforced concrete and earthfill	8.5	5,850	1991
Boomi Weir	Macintyre River	147	Boomi	Steel sheetpiling	4.1	354	1960
Bonshaw Weir	Dumaresq River	126.7	Texas	Steel sheetpiling	2.9	617	1953/58
Coomonga Weir	Coomonga Creek		Toobeah	Steel sheetpiling			1986
Cunningham Weir	Dumaresq River	67.9	Texas	Timber piled (written-off)	4.6	543	1954
Glenarbon Weir	Dumaresq River	57	Yelarbon	Steel sheetpiling	2.7	353	1959
Goondiwindi Weir	Macintyre River	268.8	Goondiwindi	Timber crib (fishway added)	2.8	1,800	1942
Mungindi Weir	Barwon River	4.8	Mungindi	Steel sheetpiling	3.6	730	1936/65

REGULATORS

Boomi Regulator	Boomi River		Boomi	Reinforced concrete with hardwood dropboards			1960
Newinga Regulator	Barwon to Weir River flood channel		Talwood	Reinforced concrete with aluminium dropboards			1993
Regulator No 1	Balonne Minor	163.5	Dirranbandi	Steel sheetpiling with rock protection			1974
	Culgoa River	162.6					
Regulator No 2	Balonne Minor	128.9	Dirranbandi	Steel sheetpiling with rock protection			1974
	Donnegri River	14.9					
Regulator No 3	Ballandool River	91.4	Dirranbandi	Steel sheetpiling with rock protection			1974
	Bokhara River	79.8					
Regulator No 4	Birrie River	274.7	Goodooga	Steel sheetpiling with rock protection			1974
	Bokhara River	276.2					

Table 2 - Glenlyon Dam monthly storage volumes (megalitres)

End of month	2011-12	2012-13
July	250,220	244619
August	250,750	247734
September	251,470	245620
October	255,220	237800
November	254,000	229826
December	252,350	215440
January	251,460	186880
February	250,930	187872
March	248,270	229816
April	246,150	228480
May	245,100	226986
June	244,920	229315

(1) Storage volumes in this table are at 24:00 hrs on the last day of each month as recorded at GS 416315A.

Table 3 - Glenlyon Dam monthly releases / spillway flows (megalitres)

Month	2011-12		2012-13	
	Release	Spillway flows	Release	Spillway flows
July	0	0	0	0
August	0	0	0	0
September	0	0	1223	0
October	0	7795	6848	0
November	0	769	7317	0
December	2376	29	13259	0
January	657	0	34311	0
February	0	0	0	0
March	0	0	0	0
April	2354	0	0	0
May	0	0	0	0
June	0	0	0	0

(1) The monthly releases in this table are the flow volumes as recorded at GS 416309B less any spillway flows.

(2) The monthly spillway flows are the flow volumes as recorded at GS416315A.

Table 4 - Glenlyon Dam recreation statistics

1 July 11 - 30 June 12		1 July 12 – 30 June 13	
Visitors	Camp sites occupied	Visitors	Camp sites occupied
80,604	7,928	74089	8081

Table 5 - Supplemented/regulated and unsupplemented/supplementary water entitlements and off-stream storages - Border Rivers

	Supplemented/regulated (megalitres) (1)		Unsupplemented/supplementary (megalitres)		Off-stream Storages (megalitres)	
	NSW(2)	QLD	NSW(2)	QLD	NSW	QLD
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	5682	2,614	2,546	511		
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	6,874	5,728	2,490	626		
Texas Town		270				
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	2,192	4,482	981	3,846	400	6,300
Yelarbon Town		106				
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	60,740	25,009	29,076	35,526	29,150	125,850
Boggabilla Town						
Goondiwindi Town		1,800				
Macintyre River from Goondiwindi Weir to Boomi Weir	121,393	8,403	55,618	15,940	86,000	25,210
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	51,057	36,252	23,030	42,739	60,600	119,370
Mungindi Town	300					
Totals	248,238	84,664	113,741	99,188	176,150	276,730

(1) The statistics for supplemented/regulated water entitlements in this table include all supplemented/regulated water entitlements including entitlements for irrigation, industrial, town water, high security, stock and domestic purposes but they do not include authorities/permits issued for the taking of stock and domestic water under rights granted to riparian landholders.

(2) NSW entitlement may be linked to multiple locations - volumes reported are total entitlement linked within each stream section. The total NSW entitlement for regulated (general security) is 254,438ML and supplementary is 120,001ML.

Table 6 - Water use from the Border Rivers 1 July 11 – 30 June 12 (megalitres)

	Supplemented/ regulated			Unsupplemented/ supplementary		
	NSW	QLD	Total	NSW	QLD	Total
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	1,502	770	2,272	844	5,150	5,994
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	1,027	230	1,257	989	7,470	8,459
Texas Town		190	190			
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	229	1,190	1,419	200	4,080	4,280
Yelarbon Town		80	80			
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	35,181	8,980	44,161	9,632	23,910	33,542
Boggabilla Town	142		142			
Goondiwindi Town		1,670	1,670			
Macintyre River from Goondiwindi Weir to Boomi Weir	35,360	2,360	37,720	28,380	18,390	46,770
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	22,990	780	23,770	19,226	9,250	28,476
Mungindi Town	216		216			
Totals	96,647	16,250	112,897	59,271	68,250	127,521

(1) The above water use statistics only include water diverted from the Border Rivers under the authority of Border Rivers water entitlements. Water transferred from a tributary (eg the Macintyre Brook) to the Border Rivers and then diverted from the Border Rivers is not included in these statistics. Water temporarily transferred from one state to the other is reported as being use in the state of origin not the state of destination.

(2) Water taken by both Qld and NSW irrigators under the water sharing rules permitting small enterprises upstream of Goondiwindi Weir to pump from small unregulated inflows for direct irrigation, is included in the states' supplementary/unregulated water use statistics.

Table 7 - Water use from the Border Rivers 1 July 12 – 30 June 13 (megalitres)

	Supplemented/ regulated			Unsupplemented/ supplementary		
	NSW	QLD	Total	NSW	QLD	Total
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	1,047	1,350	2,397	723	510	1,233
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	1,208	1,970	3,178	933	230	1,163
Texas Town		190	190		N/A	0
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	389	2,150	2,539	139	950	1,089
Yelarbon Town		70	70		N/A	0
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	35,587	15,250	50,837	7,282	17530	24,812
Boggabilla Town	168		168		N/A	0
Goondiwindi Town		1,790	1,790		N/A	0
Macintyre River from Goondiwindi Weir to Boomi Weir	66,416	5,360	71,776	14,855	12340	27,195
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	45,060	20,900	65,960	14,652	26920	41,572
Mungindi Town	265		265		N/A	0
Totals	150,140	49,030	199,170	38,584	58480	97,064

(1) The above water use statistics only include water diverted from the Border Rivers under the authority of Border Rivers water entitlements. Water transferred from a tributary (eg the Macintyre Brook) to the Border Rivers and then diverted from the Border Rivers is not included in these statistics. Water temporarily transferred from one state to the other is reported as being use in the state of origin not the state of destination.

(2) Water taken by both Qld and NSW irrigators under the water sharing rules permitting small enterprises upstream of Goondiwindi Weir to pump from small unregulated inflows for direct irrigation, is included in the states' supplementary/unregulated water use statistics.

Table 8 – Summary of resource assessments (Border Rivers) 1 July 11 – 30 June 12 (gigalitres)

Bulk Accounts	Queensland				New South Wales			
	Account balance 1/07/2011	Total use/loss for year	Total distribution for year	Account balance 1/07/2012	Account balance 1/07/2011	Total use/loss for year	Total distribution for year	Account balance 1/07/2012
	(a)	(b)	(c)	(a)-(b)+(c)	(a)	(b)	(c)	(a)-(b)+(c)
Storage Loss (Glenlyon Dam)	7.74	13.39	13.39	7.74	10.09	17.42	17.1	9.77
Storage Loss (Pindari Dam)				0	18	15.64	14.79	17.15
Essential Supplies (minimum release)	0	0	0	0	6.08	1.19	1.19	6.08
Essential Supplies (other)	6.95	1.72	1.72	6.95	24.71	0.48	0.48	24.71
Essential Supplies Delivery Loss	2.64	0.53	0.53	2.64	10.31	0.18	0.18	10.31
General Use	70.12	13.58	13.58	70.12	292.89	106.37	77.74	264.26
General Use Delivery Loss	21.04	4.09	4.09	21.04	87.87	31.92	23.32	79.27

Table 9 – Summary of resource assessments (Border Rivers) 1 July 12 – 30 June 13 (gigalitres)

Bulk Accounts	Queensland				New South Wales			
	Account balance 1/07/2012	Total use/loss for year	Total distribution for year	Account balance 1/07/2013	Account balance 1/07/2012	Total use/loss for year	Total distribution for year	Account balance 1/07/2013
	(a)	(b)	(c)	(a)-(b)+(c)	(a)	(b)	(c)	(a)-(b)+(c)
Storage Loss (Glenlyon Dam)	7.74	11.43	9.98	6.29	9.77	16.78	17.27	10.26
Storage Loss (Pindari Dam)				0	17.15	12.48	9.15	13.82
Essential Supplies (minimum release)	0	0	0	0	6.08	8.7	8.7	6.08
Essential Supplies (other)	6.95	2.06	2.06	6.95	24.71	4.27	4.27	24.71
Essential Supplies Delivery Loss	2.64	0.64	0.64	2.64	10.31	1.3	1.3	10.31
General Use	70.12	46.32	28.99	52.79	264.26	175.99	126.23	214.5
General Use Delivery Loss	21.04	13.9	8.71	15.85	79.27	52.79	37.87	64.35

Table 10 - Access to unsupplemented/supplementary water from the Border Rivers

Month	1 July 11 – 30 June 12		1 July 12 – 30 June 13	
	Access by small irrigation enterprises u/s of Goondiwindi Weir	General access to unregulated flows(1)	Access by small irrigation enterprises u/s of Goondiwindi Weir	General access to unregulated flows(1) ML
July	31 days		21 days	0
August	31 days		30 days	0
September	24 days			0
October	31 days	60 hours / 100%		0
November	19 days	23 hours / 26%		0
December	31 days	282 hours / 100%	3 days	0
January	2 days	29 hours / 22%	4 days	122332
February	29 days	364 hours / 25%	28 days	156443
March	15 days	113 hours / 100%	31 days	196507
April			30 days	0
May	11 days		31 days	0
June			30 days	12804

(1) General access to unregulated flows is authorised in hours and days in Queensland and as a percentage in NSW

(2) General access to unregulated flows is authorised in volume shared 50/50 between the states in megalitres

Table 11 – Irrigated production in the Border Rivers (hectares)

Crop	2011-12			2012-13		
	NSW	Qld	TOTAL	NSW	Qld	TOTAL
Cotton	37,600	8,000	45,600	33448	10000	43448
Lucerne	590	600	1,190	675	800	1475
Cereals	350	1,200	1,550	1180	1500	2680
Peanuts	55	0	55	300	100	400
Fodder crops	700	250	950	565	400	965
Horticultural crops	50	30	80	50	50	100
Other	300	100	400	250	100	350
Total	39,645	10,180	49,825	36,468	12,950	49,418

(1) The irrigated production statistics in this table include the crops grown on properties which take all or part of their irrigation water supplies from the Border Rivers. Crops grown on properties not supplied at least in part from the Border Rivers are not included in this table.

(2) The statistics for each year include the winter crop areas planted during the year

Table 12 - Groundwater allocation/entitlements in the Border Rivers Groundwater Area

	NSW ⁽¹⁾	Qld
Issued allocation/entitlement	15,402	14,421
Allocation/entitlement issued, bores constructed	15,402	14,421
Allocation/entitlement issued, bores not constructed	0	0
Number of entitlements	26	26
Number of bores constructed	49	41
Number of applications outstanding	0	8

(1) The figures provided for NSW are for the area defined as the NSW Border Rivers Upstream Keetah Bridge Alluvial Groundwater Source

(2) Applications are for replacement bores. No additional allocation will be granted.

(3) The Queensland figures do not include the allocation issued in the shallow aquifer, which is about 3,500 ML

(4) Applications for proposed bores

(5) 5 of the 41 bores constructed but not equipped

Note: on the 1 June 2012 the "Water Sharing Plan for the NSW Border Rivers Unregulated and Alluvial Water Sources (the plan)" commenced.

In the plan, the area of the NSW alluvium that is part of the NSW/QLD Border Rivers Commission agreement is the NSW

Total amount of Local Water Utility Access ML	10
Total number of Local Water Utility Access extraction points	1
Total number of Aquifer Access Licence unit shares	15,392 ⁽⁵⁾
Long term average extraction limit ML	8,085
Total number of Aquifer Access Licences	25
Total number of Aquifer Access Licence extraction points completed	49
Total number of Aquifer Access Licences extraction points not completed	1

(5) At the commencement of the plan the available water determination is one ML per unit share

Table 13 - Groundwater use in the Border Rivers Groundwater Area (megalitres)

1 July 11 – 30 June 12		1 July 12 – 30 June 13	
NSW	Qld	NSW	Qld
3,242	3,015	2587	3696

Table 14 - Beardmore Dam environmental, stock and domestic water inflow, storage and outflow / releases (#)

Month	2011-12			2012-13		
	Inflow (ML)	Release (ML)	Storage at end of month (ML)	Inflow (ML) (*)	Outflow / Release (ML) (**)	Storage at end of month (ML)
July	8900	All inflows up to 730 ML/day were passed through the dam	0	18700	16300	All inflows up to 730 ML/day were passed through the dam (with the exception of temporary storage at the end of January)
August	4400		0	6600	5500	
September	10400		0	0	0	
October	15600		0	0	0	
November	21900		0	0	0	
December	22600		0	0	0	
January	22600		0	4400	0	
February	21200		0	20400	17600	
March	22100		0	22600	22600	
April	14800		0	19200	18000	
May	9600		0	6300	5700	
June	13600		0	4100	2600	
Totals	187,700			102,300	88,300	

Table 15 - Guidelines for physical and chemical stressors - ANZECC (2000)

Water quality indicator		Default trigger value (1)	Notes
Salinity (μScm^{-1})	Upland rivers (2)	350	Conductivity may be higher during low flow periods
	Lowland rivers	300	
	Lakes and reservoirs	20 - 30	Conductivity in lakes and reservoirs is generally low but will vary depending on catchment geology
Turbidity (NTU)	Upland rivers (2)	25	High turbidities may be observed during high flow events
	Lowland rivers	50	
	Lakes and reservoirs	1 - 20	Deep reservoirs will generally have a lower turbidity than shallow reservoirs
Total Nitrogen (mgL^{-1})	Upland rivers (2)	0.2	
	Lowland rivers	0.6	
	Lakes and reservoirs	0.35	
Total Phosphorus (mgL^{-1})	Upland rivers (2)	0.02	
	Lowland rivers	0.05	Above these levels excessive algal growth may occur
	Lakes and reservoirs	0.01	

(1) The default trigger values provide a guide to the value or range of values of the specific water quality indicator, which, if exceeded, may indicate conditions detrimental to the health of the ecosystem which may require management action.

(2) Upland rivers are those above 150m altitude

Table 16 - Summary of water quality 2011-12

Basin	Site no	Location	Electrical				Total Phosphorus				Total Nitrogen				Turbidity			
			N	10th %ile	Med	90th	N	10th %ile	Med	90th	N	10th %ile	Med	90th	N	10th %ile	Med	90th
Dumaresq Tributaries	416003	Tenterfield Creek at Clifton	12	165.9	341.5	399.3	12	0.024	0.048	0.071	12	0.385	0.58	0.746	12	3.92	6.85	17.41
	416310	Severn River at Farnbro	12	175.2	245	271.3	12	0.022	0.028	0.049	12	0.551	0.62	0.858	12	4.01	6.7	9.79
	416303	Pike Creek at U/S Glenlyon Dam	12	216.4	263	365.7	12	0.035	0.041	0.08	12	0.602	0.725	1.07	12	3.11	5.1	7.66
	416309	Pike Creek at Glenlyon Dam Tailwater	12	171.7	462	610.9	12	0.021	0.03	0.05	12	0.293	0.405	0.818	12	5.21	8.55	25.7
	416032	Mole River at Donaldson	12	116.3	212.5	245.3	12	0.029	0.038	0.052	12	0.268	0.39	0.509	12	7.75	11	25.06
	416008	Beardy River at Haystack No. 4	12	113.2	180.5	209.8	12	0.018	0.029	0.084	12	0.261	0.33	0.9	12	3.85	16	49.1
	416312	Oaky Creek at Texas	7	464.8	525	550.4	7	0.054	0.062	0.096	7	0.246	0.44	0.774	7	5.18	10.5	53.6
	416415	Macintyre Brook at Booba Sands	12	314.5	419.5	508.9	12	0.049	0.072	0.098	12	0.763	0.855	0.979	12	11.04	19.1	50.7
Dumaresq River	416007	Bonshaw Weir	12	139.9	219	293.8	12	0.023	0.04	0.058	12	0.497	0.62	0.995	12	4.28	9	28.5
	416049	Mauro	12	185.2	260.5	308	12	0.031	0.046	0.081	12	0.433	0.63	1.09	12	6.04	13.95	88.13
Macintyre River	416012	Holdfast	12	171.5	299	335.8	12	0.089	0.137	0.173	12	0.532	0.63	0.892	12	13.76	28.5	97.99
	4.2E+07	Salisbury Bridge (Boggabilla)	12	204.8	281	344.5	12	0.077	0.11	0.176	12	0.557	0.72	0.967	12	15.93	29.8	47.41
	416048	Kanowna	10	238.9	280	350.2	10	0.097	0.117	0.2	10	0.548	0.78	0.993	10	47.47	75.7	186.5
Barwon River	416001	Mungindi	9	240.4	274	379.2	9	0.077	0.086	0.121	9	0.518	0.66	0.918	9	68.18	95.1	150.4
Weir River	416202	Talwood	12	138.4	195	226	12	0.173	0.207	0.245	12	1.11	1.45	1.59	12	250.1	287.5	573.5
Intersecting Streams	424002	Paroo River at Willara Crossing	6	69	133.5	184.5	6	0.187	0.255	0.599	6	0.695	1.4	1.75	6	370	700	1400
	423002	Warrego River at Fords Bridge Bywash	6	117	229	287.5	6	0.169	0.259	0.491	6	0.64	1.2	1.95	6	140	395	3250
	422015	Culgoa River at Brenda	6	168	257.5	376	6	0.165	0.264	0.333	6	0.675	1.07	1.55	6	125	295	775
	422014	Bokhara River at Goodooga	6	155.5	214.5	351	6	0.125	0.277	0.36	6	0.61	0.985	1.4	6	92.5	315	650
	422013	Birrie River near Goodooga	4	148.4	257.5	361.7	4	0.141	0.24	0.315	4	0.607	0.71	1.205	4	134	220	425
	422012	Narran River at New Angledool	6	164	209.5	363	6	0.155	0.251	0.311	6	0.695	1.045	1.55	6	135	300	700
Glenlyon Dam	416315	Glenlyon 1: Top	12	157.5	180	188.7	12	0.022	0.034	0.057	12	0.684	0.89	1	12	1.71	2.6	5.26
		Glenlyon 1: Middle	12	158.2	166.8	181.8	12	0.021	0.03	0.047	12	0.593	0.795	0.947	12	2.91	3.55	4.94
		Glenlyon 1: Bottom	12	158.2	164.7	171	12	0.047	0.051	0.078	12	0.71	0.875	0.96	12	2.51	4.15	5.7

(1) The table provides information on the median value (middle value), the 10th percentile (10% of the samples are below this value) and the 90th percentile (90% of the samples are below this value; v.v. 10% of the samples are greater than this value). N = number of samples collected and analysed.

Table 17 - Summary of water quality 2012-13

Basin	Site no	Location	Electrical				Total Phosphorus				Total Nitrogen				Turbidity			
			N	10th %ile	Med	90th	N	10th %ile	Med	90th	N	10th %ile	Med	90th	N	10th %ile	Med	90th
Dumaresq Tributaries	416003	Tenterfield Creek at Clifton	12	185	318	395	12	0.03	0.06	0.12	12	0.33	0.6	0.96	12	2.1	4	21.5
	416310	Severn River at Farnbro	12	164	192	254	12	0.02	0.03	0.05	12	0.43	0.63	0.98	12	4.1	6.6	11.8
	416303	Pike Creek at U/S Glenlyon Dam	12	221	256	439	12	0.03	0.04	0.04	12	0.5	0.68	0.81	12	2.5	3.6	7.5
	416309	Pike Creek at Glenlyon Dam Tailwater	12	190	433	627	12	0.02	0.03	0.04	12	0.32	0.47	0.75	12	1.7	8.9	15.8
	416032	Mole River at Donaldson	12	127	184	233	12	0.03	0.03	0.06	12	0.24	0.42	0.78	12	4.6	8.1	11.9
	416008	Beardy River at Haystack No. 4	12	136	198	253	12	0.02	0.03	0.13	12	0.31	0.43	0.8	12	2.4	14	119.2
	416312	Oaky Creek at Texas	5	468	555	585	5	0.03	0.03	0.03	5	0.22	0.27	0.34	5	3.9	5.1	7.3
	416415	Macintyre Brook at Booba Sands	12	293	465	568	12	0.04	0.06	0.13	12	0.67	0.84	1.28	12	5.1	11.5	59.5
Dumaresq River	416007	Bonshaw Weir	12	173	209	251	12	0.02	0.03	0.06	12	0.45	0.53	0.78	12	3.7	6.7	15.9
	416049	Mauro	12	180	234	308	12	0.03	0.05	0.07	12	0.38	0.55	0.8	12	6.4	9.3	20.8
Macintyre River	416012	Holdfast	12	195	279	397	12	0.07	0.11	0.16	12	0.51	0.62	0.84	12	7.2	11	32.2
	4.2E+07	Salisbury Bridge (Boggabilla)	12	183	218	351	12	0.06	0.09	0.13	12	0.47	0.66	0.96	12	14.2	18	39.4
	416048	Kanowna	9	219	285	378	9	0.08	0.1	0.14	9	0.51	0.75	0.83	9	38.2	50	88
Barwon River	416001	Mungindi	11	157	319	426	11	0.06	0.08	0.18	11	0.53	0.67	1.1	11	20	50	360
Weir River	416202	Talwood	11	118	193	218	11	0.18	0.21	0.28	11	1.3	1.6	1.8	11	280	400	700
Intersecting Streams	424002	Paroo River at Willara Crossing	6	91	116	225	6	0.18	0.19	0.3	6	0.89	0.98	1.25	6	450	650	875
	423002	Warrego River at Fords Bridge Bywash	4	146	326	383	4	0.13	0.17	0.41	4	0.55	0.75	2.29	4	116	160	687
	422015	Culgoa River at Brenda	9	215	457	622	8	0.12	0.2	0.45	8	0.7	1.3	1.86	9	62	120	414
	422014	Bokhara River at Goodooga	10	221	467	667	10	0.11	0.23	0.48	10	0.57	1.1	1.53	10	35.5	85	610
	422013	Birrie River near Goodooga	7	217	229	485	7	0.14	0.36	0.52	7	0.66	1.2	1.52	7	120	330	680
	422012	Narran River at New Angledool	10	202	455	515	10	0.1	0.26	0.41	10	0.63	1.15	1.74	10	84	115	565
Glenlyon Dam	416315	Glenlyon 1: Top	12	190.2	196.5	201	12	0.018	0.024	0.041	12	0.724	0.81	0.907	12	1.7	2.3	4.74
		Glenlyon 1: Middle	12	190.1	193.5	195.9	12	0.015	0.022	0.029	12	0.552	0.67	0.773	12	1.21	2.15	4.8
		Glenlyon 1: Bottom	12	188.3	195	201.8	12	0.023	0.031	0.037	12	0.66	0.735	0.865	12	1.6	2	4.67

(1) The table provides information on the median value (middle value), the 10th percentile (10% of the samples are below this value) and the 90th percentile (90% of the samples are below this value; v.v. 10% of the samples are greater than this value). N = number of samples collected and analysed.

Table 18 - Stream gauging stations (Border Rivers)

AWRC No	Stream	Station	Equipment (see note)	Telemetry	Established date	Owned by	2011-12 Total Flow (MLx103)	2012-13 Total Flow (MLx103)	Historical Annual Totals & (Year) (MLx103)		
									Min	Max	Median
416001	Barwon River	Mungindi	AR	Yes	1889	NOW	845	580	21 (1994-95)	3,131 (1950-51)	433
416002	Macintyre River	Boggabilla	AR	Yes	1895	NOW	942	875	29 (1919-20)	4,490 (1950-51)	622
416003	Tenterfield Creek	Clifton	AR	Yes	1921	NOW	27	58.6	1 (2002-03)	235 (1949-50)	38
416006	Severn River	Ashford	AR	Yes	1934	NOW	315	235	17 (1941-42)	1,389 (1950-51)	181
416007	Dumaresq River	Bonshaw Weir	AR	Yes	1934	NOW	200	392	54 (1993-94)	1,729 (2010-11)	266
416008	Beardy River	Haystack	AR	Yes	1934	NOW	48	52.4	5 (1941-42)	243 (2010-11)	31
416010	Macintyre River	Wallangra	AR	Yes	1937	NOW	250	41.7	6 (1941-42)	667 (1970-71)	80
416011	Dumaresq River	Roseneath	AR	Yes	1937	NOW	159	326	36 (1993-94)	1,608 (1955-56)	281
416012	Macintyre River	Holdfast	AR	Yes	1951	NOW	615	306	49 (1957-58)	1,686 (1955-56)	280
416020	Ottleys Creek	Coolatai	AR	Yes	1967	NOW	11	2.8	1 (2006-07)	65 (2000-01)	10
416032	Mole River	Donaldson	AR	Yes	1969	NOW	84	141	13 (1993-94)	493 (2010-11)	72
416037	Boomi River	Offtake	AR	Yes	1973	NOW	60	38.8	3 (1994-95)	146 (2011-11)	29
416040	Dumaresq River	Glenarbon Weir	AR	Yes	1996	NOW	243	445	74 (2006-07)	1,855 (2010-11)	169
416043	Macintyre River	Boomi Weir	AR	Yes	1976	NOW	330	285	21 (1994-95)	586 (2010-11)	160
416047	Macintyre River	Terrewah	AR	Yes	1985	NOW	660	532	31 (1994-95)	1,488 (2010-11)	226
416048	Macintyre River	Kanowna	AR	Yes	1988	NOW	399	146	25 (1994-95)	727 (1998-99)	135
416201A	Macintyre River	Goondiwindi	AR	Yes	1950	DNRM	857	737	61 (1994-95)	4,529 (1950-51)	517
416201B	Macintyre River	Goondiwindi Weir	AR	Yes	1997	DNRM	810	693	60 (2006-07)	2,580 (2010-11)	279
416202A	Weir River	Talwood	AR	Yes	1949	DNRM	266	452	0 (2006-07)	687 (1995-96)	60
416305B	Brush Creek	Beebo	AR	Yes	1950	DNRM	1.8	17	0 (Several)	55 (1995-96)	2.5
416309B	Pike Creek	Glenlyon Dam Tailwater	AR	Yes	1973	DNRM	14	59	5 (1976-77)	180 (1988-89)	49
416310A	Dumaresq River	Farnbro	AR	Yes	1962	DNRM	29	68	0.9 (2002-03)	433 (1975-76)	53
416312A	Oakey Creek	Texas	AR	Yes	1969	DNRM	3.5	26	0.01 (1973-74)	99 (1995-96)	6
416315A	Pike Creek	Glenlyon Dam Headwater	AR	Yes	1977	DNRM	8.7	0	0 (Several)	133 (2010-11)	0
416402C	Macintyre Brook	Inglewood	AR	Yes	1953	DNRM	19	83	6 (1994-95)	546 (1995-96)	37
416415A	Macintyre Brook	Booba Sands	AR	Yes	1987	DNRM	18	107	4 (1994-95)	630 (1995-96)	33

(1) AR = automatic recorder; SG = staff gauge, Established date = commencement date of Hydstra data records, NOW = NSW Office of Water, DNRM = Queensland Department of Natural Resources and Mines

Table 19 - Stream gauging stations (Intersecting Streams)

AWRC No	Stream	Station	Equipment (see note)	Telemetry	Established date	Owned by	2011-12 Total Flow (MLx103)	2012-13 Total Flow (MLx103)	Historical Annual Totals & (Year) (MLx103)		
									Min	Max	Median
417001	Moonie River	Gundablouie	AR	Yes	1945	NOW	658	177	0 (1951-52)	596 (1975-76)	61
417204A	Moonie River	Fenton	AR	Yes	1971	DNRM	618	198	0.5 (1979-80)	670 (1975-76)	70
422005	Bokhara River	Goodwin's	AR	Yes	1944	NOW	238 / 210	32	0 (Several)	652 (1955-56)	22
422006	Culgoa River	Downstream Collerina (Kopahra)	AR	Yes	1944	NOW	1360/ 1340	207	7 (2001-02)	2,341 (1989-90)	294
422010	Birrie River	Talawanta	AR	Yes	1964	NOW	239 (est)	49.4	0 (Several)	379 (1975-76)	26
422011	Culgoa River	Upstream Collerina (Mundiva)	AR	Yes	1964	NOW	953	166	6 (2001-02)	1,895 (2010-11)	178
422012	Narran River	Angledool	Discontinued/ AR	Yes	1959	NOW	331/329	132	0 (1992-93)	687 (2010-11)	106
422030											
422013	Birrie River	Near Goodooga	AR	Yes	1964	NOW	245/247	57.3	0 (1992-93)	504/510 (2010-11)	29
422014	Bokhara River	Goodooga	Discontinued/ AR	Yes	1915	NOW	201	43	0 (Several)	407/446 (2010-11)	15
422032											
422015	Culgoa River	Brenda	AR	Yes	1960	NOW	1,315	197	0 (1992-93)	2.53 (2010-11)	135
422016	Narran River	Wilby Wilby	AR	Yes	1964	NOW	310/317	125	0 (2006-07)	621 (2010-11)	103
422017	Culgoa River	Weilmoringle	AR	Yes	1964	NOW	857	175	0 (1992-93)	999 (1983-84)	218
422204A	Culgoa River	Whyenbah	AR	Yes	1965	DNRM	965	624	2.7 (1992-93)	2,247 (2010-11)	329
422206A	Narran River	Dirranbandi- Hebel Road	AR	Yes	1965	DNRM	886	165	0.2 (1992-93)	1,993 (2010-11)	112
422207A	Ballandool River	Hebel-Bollon Road	AR	Yes	1965	DNRM	196	27	0 (1992-93)	390 (2010-11)	16
422209A	Bokhara River	Hebel	AR	Yes	1967	DNRM	179	35	0.5 (1992-93)	372 (2010-11)	22
422211A	Briarie Creek	Woolerbilla- Hebel Road	AR	Yes	1992	DNRM	376	98	0 (Several)	953 (2010-11)	7
423001	Warrego River	Fords Bridge	AR	Yes	1921	NOW	78/120	0.018	1 (Several)	344 (1989-90)	7
423002	Warrego River	Fords Bridge (Bywash)	AR	Yes	1921	NOW	116	6.12	0 (1957-58)	249 (1955-56)	36
423202C	Warrego River	Cunnamulla Weir	AR	Yes	1992	DNRM	1,474	5	5 (2012-13)	1,832 (2009-10)	218
424002	Paroo River	Willara Crossing	AR	Yes	1975	NOW	747	8.02	26 (1979-80)	2,072 (1975-76)	185
424201A	Paroo River	Caiwarro	AR	Yes	1967	DNRM	1104	12	0.6 (2005-06)	2,040 (2009-10)	323
11202	Bulloo River	Autumnvale	AR	Yes	1967	DNRM	873	48	0.9 (1976-77)	3,241 (1973-74)	412

(1) AR = automatic recorder; SG = staff gauge, Established date = commencement date of Hydstra data records, NOW = NSW Office of Water, DNRM = Queensland Department of Natural Resources and Mines

Table 20 - Groundwater monitoring network

Bore number	Location	State	Piezometer	Depth (m)	Automatic WL Recorder (Yes/No)	Year Installed	Depth to WL 2011-12		Depth to WL 2012-13	
							Max (m)	Min (m)	Max (m)	Min (m)
41640001	Keetah Crossing	Qld	A	87.3	No	1985	4.56	4.37	Not on network	
41640001	Keetah Crossing	Qld	B	46.8	No	1985	5.76	5.6	5.72	5.62
41640002	Keetah Crossing	Qld	A	17.8	No	1985	8.38	7.8	8.38	8.37
41640003	Yelarbon Desert	Qld	A	92.4	No	1985	3.87	3.75	4.00	3.66
41640003	Yelarbon Desert	Qld	B	47.9	No	1985	5.86	5.35	5.76	5.42
41630009	Glenarbon	Qld	A	93	No	1996	27.61	26.95	Not on network	
41630042	David Muggleton	Qld	A	13.3	No	1959	7.25	7.16	7.42	7.13
41630039	'Eldorado'	Qld	A	16.7	No	1959	Note (1)	Note (1)	Not on network	
41630072	Cunningham Weir	Qld	A	90.4	Yes	1985	39.91	32.19	> 43.13	30.99
41630072	Cunningham Weir	Qld	B	41.4	Yes	1985	37.68	31.78	38.86	31.15
41630072	Cunningham Weir	Qld	C	10.4	Yes	1985	5.31	4.84	5.57	4.57
41630064	Texas	Qld	A	52.5	No	1985	16.93	13.35	21.33	13.55
41630064	Texas	Qld	B	28.5	No	1985	12.86	10.36	16.13	11.55
41630066	Bill & Tater	Qld	A	90.4	Yes	1985	21.46	15.17	30.20	13.95
41630066	Bill & Tater	Qld	B	45.9	Yes	1985	20.36	15.1	21.72	13.90
41630067	Bill & Tater	Qld	A	12.2	Yes	1985	4.66	4.01	5.19	4.50
41630063	Finlay's	Qld	A	100.6	No	1983	21.9	5.74	11.59	6.77
41630063	Finlay's	Qld	B	64.6	No	1983	22.13	5.72	11.40	6.73
41630062	Finlay's	Qld	A	17.4	No	1985	6.05	5.15	6.72	5.13
41630071	Finlay's	Qld	A	48.2	No	1985	10.76	4.97	Not on network	
41630071	Finlay's	Qld	B	41.2	No	1985	10.05	4.99	Not on network	
41630059	John Moore	Qld	A	101.7	No	1985	5.64	4.88	6.17	5.81
41630069	John Moore	Qld	A	92	No	1985	15.44	6.48	14.65	7.38
41630069	John Moore	Qld	B	35.9	No	1985	11.69	5.83	11.32	6.60
41630069	John Moore	Qld	C	15.4	No	1985	7.03	5.08	7.04	5.83
41630060	John Moore	Qld	A	12.1	No	1985	7.62	7.07	Not on network	
41630058	John Moore	Qld	A	10.6	No	1985	6.54	6.11	Not on network	
41630070	Phillip Harpham	Qld	A	9.2	No	1985	4.62	4.28	4.70	4.30
41630004	V and E Sattolo	Qld	A	11.8	No	1960	10.34	9.37	Not on network	
41630003	V and E Sattolo	Qld	A	27.1	No	1961	Note (2)	Note (2)	4.00	3.66
41630002	V and E Sattolo	Qld	A	29.9	No	1961	Note (2)	Note (2)	9.25	6.06
GW036697	Keetah Bridge	NSW	1	20	Yes	1987	8.85	8.81	8.83	8.77
GW036697	Keetah Bridge	NSW	2	64	Yes	1987	6.72	6.69	6.74	6.72
GW036697	Keetah Bridge	NSW	3	83.5	Yes	1987	4.74	4.36	4.91	4.3
GW040635	Smithfield Section	NSW	1	15.9	No	1960	8.53	8.02	8.78	7.78
GW040636	Smithfield Section	NSW	1	11.3	No	1960	6.98	6.31	7.32	6.85
GW040637	Smithfield Section	NSW	1	7.9	No	1960	5.49	4.66	8.87	5.58
GW040638	Smithfield Section	NSW	1	11.9	No	1960	8.31	8.02	9.12	8.53
GW40771	Smithfield Section	NSW	1	30	Yes	1994	29.87	29.56	29.69	29.24
GW40771	Smithfield Section	NSW	2	37	Yes	1994	30.81	30.14	31.56	29.93
GW40771	Smithfield Section	NSW	3	50	Yes	1994	32.35	31.23	33.44	31.33
GW040641	Riverstone Section	NSW	1	35	No	1960	8.98	6.62	8.93	5.51
GW040644	Riverstone Section	NSW	1	9.5	No	1960	7.55	7.23	8.12	7.83
GW040646	Riverstone Section	NSW	1	7.7	No	1960	5.69	4.99	6.18	6.02
GW040647	Hopwood Section	NSW	1	12.8	No	1959	8.03	7.73	flood damaged	WL 7.11 below NS on 26.02.13
GW040649	Hopwood Section	NSW	1	28.9	No	1959	6.56	6.25	6.92	6.73
GW040652	Hopwood Section	NSW	1	12.2	No	1959	6.85	6.25	7.31	7.07
GW40829	Lochiel Section	NSW	1	12	No	1996	8.59	8.16	8.79	8.62
GW40829	Lochiel Section	NSW	2	42	No	1996	8.66	8.22	8.91	8.73
GW40830	Lochiel Section	NSW	1	27	No	1996	8.78	8.69	8.98	8.84
GW40831	Lochiel Section	NSW	1	44	Yes	1996	35.28	33.06	35.72	32.38
GW40831	Lochiel Section	NSW	2	96	Yes	1996	36.64	33.52	36.62	32.45