

*Dumaresq-Barwon Border
Rivers Commission*



*Annual Statistics
2013-14*

Dumaresq-Barwon Border Rivers Commission

2013-14 Annual Statistics

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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
DAMS							
Glenlyon Dam	Pike Creek	6.4	Stanthorpe Tenterfield Texas	Earth & rockfill	47.4	254,000	1976
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	2012-13	2013-14
July	244619	235572
August	247734	234890
September	245620	233700
October	237800	230826
November	229826	221070
December	215440	203942
January	186880	113110
February	187872	99588
March	229816	97764
April	228480	96860
May	226986	95870
June	229315	95600

(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	2012-13		2013-14	
	Release	Spillway flows	Release	Spillway flows
July	0	0	0	0
August	0	0	0	0
September	1223	0	0	0
October	6848	0	1317	0
November	7317	0	11073	0
December	13259	0	16651	0
January	34311	0	99901	0
February	0	0	13607	0
March	0	0	2954	0
April	0	0	0	0
May	0	0	369	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 12 – 30 June 13		1 July 13 – 30 June 14	
Visitors	Camp sites occupied	Visitors	Camp sites occupied
74089	8081	68618	8428

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	QLD	NSW(2)	QLD	NSW	QLD
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	5172	2,374	2,402	511		
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	6,529	5,329	2,937	626		
Texas Town		270				
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	2,122	5,377	534	3,846	400	6,300
Yelarbon Town		106				
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	61,390	22,719	27,685	35,526	29,150	125,850
Boggabilla Town	200					
Goondiwindi Town		1,800				
Macintyre River from Goondiwindi Weir to Boomi Weir	118,077	10,013	56,141	15,940	86,025	25,210
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	48,031	36,676	23,658	42,739	65,600	119,370
Mungindi Town	300					
Totals	241,821	84,664	113,357	99,188	181,175	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.

Table 6 - 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	58,480	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 7 - Water use from the Border Rivers 1 July 13 – 30 June 14 (megalitres)

	Supplemented/ regulated			Unsupplemented/ supplementary		
	NSW	QLD	Total	NSW	QLD	Total
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	3565	3,161	6,726	242	353	595
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	2942	2,382	5,324	292	193	485
Texas Town		169	169		N/A	0
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	1813	6,246	8,059	39	336	375
Yelarbon Town		99	99		N/A	0
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	53709	10,125	63,834	1868	2706	4,574
Boggabilla Town	175		175		N/A	0
Goondiwindi Town		1,800	1,800		N/A	0
Macintyre River from Goondiwindi Weir to Boomi Weir	87708	9,370	97,078	3701	1301	5,002
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	36029	13,847	49,876	1494	3100	4,594
Mungindi Town	269		269		N/A	0
Totals	186210	47,199	233,409	7636	7,989	15,625

(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 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 9 – Summary of resource assessments (Border Rivers) 1 July 13 – 30 June 14 (gigalitres)

Bulk Accounts	Queensland				New South Wales			
	Account balance 1/07/2013	Total use/loss for year	Total distribution for year	Account balance 1/07/2014	Account balance 1/07/2013	Total use/loss for year	Total distribution for year	Account balance 1/07/2014
	(a)	(b)	(c)	(a)-(b)+(c)	(a)	(b)	(c)	(a)-(b)+(c)
Storage Loss (Glenlyon Dam)	6.29	8.78	6.1	3.61	10.26	14.33	9.08	5.01
Storage Loss (Pindari Dam)				0	13.82	8.63	1.18	6.37
Essential Supplies (minimum release)	0	0	0	0	6.08	4	4	6.08
Essential Supplies (other)	6.95	2.27	1.66	6.34	24.71	5.34	5.28	24.65
Essential Supplies Delivery Loss	2.64	0.68	0.5	2.46	10.31	1.62	1.6	10.29
General Use	52.79	43.46	11.29	20.62	214.5	183.72	11.25	42.03
General Use Delivery Loss	15.85	13.05	3.37	6.17	64.35	55.13	3.38	12.6

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

Month	1 July 12 – 30 June 13		1 July 13 – 30 June 14	
	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)
July	21 days	0	31 days	
August	30 days	0	31 days	
September		0		
October		0		
November		0		
December	3 days	0		
January	4 days	100%		
February	28 days	50%		
March	31 days		3 days	
April	30 days	0	17 days	6.50%
May	31 days	0		
June	30 days	6%		

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

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

Crop	2012-13			2013-14		
	NSW	Qld	TOTAL	NSW	Qld	TOTAL
Cotton	33448	10000	43,448	34513	12500	47013
Lucerne	675	800	1,475	710	750	1460
Cereals	1180	1500	2,680	700	2000	2700
Peanuts	300	100	400	250	100	350
Fodder crops	565	400	965	360	350	710
Horticultural crops	50	50	100	50	50	100
Other	250	100	350	50		50
Total	36,468	12,950	49,418	36,633	15,750	52,383

(1) The irrigated production statistics in this table include the crops grown on properties which take all or

(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 ⁽³⁾
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 ⁽⁵⁾
Number of applications outstanding	0	8 ⁽⁴⁾

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

(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

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 Border Rivers Upstream of Keetah Bridge Alluvial Groundwater Source.

The commencement of the plan turns on the Water Management Act 2000 in the area of the plan. This Act allows for trading of unit shares. You do not have to own land to own water. The number aquifer access licences can grow (if holders split share holdings) or reduce (if holders amalgamate share holdings) and the number of extraction points (bores) can also grow or reduce. The total number of shares will remain the same and usage will be restricted to the long term average extraction limit.

As of 1 August 2013 the following statics are in place:

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 12 – 30 June 13		1 July 13 – 30 June 14	
NSW	Qld	NSW	Qld
2587	3696	5347	6165

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

Month	2012-13			2013-14			
	Inflow (ML)	Release (ML)	Storage at end of month (ML)	Inflow (ML) (*)	Outflow / Release (ML) (**)	Storage at end of month (ML)	
July	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)	3500	3000	All inflows up to 730 ML/day were passed through the dam	
August	6600	5500		5900	5400		
September	0	0		0	0		
October	0	0		0	0		
November	0	0		0	0		
December	0	0		0	0		
January	4400	0		0	0	All inflows up to 730 ML/day were passed through the dam	
February	20400	17600		1300	0		1200
March	22600	22600		4600	700		4600
April	19200	18000		12500	16300		All inflows up to 730 ML/day were passed through the dam
May	6300	5700		0	400		
June	4100	2600		0	0		
Totals	102,300	88,300	27,800	25,800			

The first 730 megalitres per day of inflow to Beardmore Dam is accounted for as environmental, stock and
 * Beardmore Dam was at Full Supply Level during July and August. Inflow estimates are based on information
 * Beardmore Dam was near Minimum Operating Level from January to the end of March. Inflow estimates are
 * Inflow estimates from mid-April through to the end of June are based on unverified telemetry data from gauging stations 4222020A (Balonne River)
 ** Outflow/release estimates are based on unverified telemetry data from gauging station 422201F (Balonne River) and information provided by the Resource Operations License Holder

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	Above these levels excessive algal growth may occur
	Lowland rivers	0.05	
	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 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 17 - Summary of water quality 2013-14

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	10	249.5	366	515.6	10	0.037	0.136	0.194	10	0.457	1.09	1.71	10	3.48	8	31.1
	416310	Severn River at Farnbro	10	202	259.5	281.2	10	0.032	0.048	0.172	10	0.623	0.815	1.62	10	3.47	8.55	21.6
	416303	Pike Creek U/S Glenlyon Dam	9	231	320	442.6	9	0.033	0.047	0.065	9	0.432	0.6	0.818	9	2.68	5.7	11.2
	416309	Pike Creek at Glenlyon Dam Tailwater	10	201	260	551.2	10	0.025	0.038	0.097	10	0.312	0.67	0.919	10	3.41	5.9	15.7
	416032	Mole River at Donaldson	10	173.9	250.5	407.2	10	0.032	0.05	0.088	10	0.377	0.585	0.836	10	3.85	6.5	37.2
	416008	Beardy River at Haystack	9	155.4	182	416.8	9	0.029	0.04	0.067	9	0.34	0.44	0.766	9	2.4	5.5	35.8
	416312	Oaky Creek at Texas	5	641.6	660	733	5	0.025	0.044	0.084	5	0.134	0.31	0.642	5	4.6	7.5	9.26
	416415	Macintyre Brook at Booba Sands	10	290.2	514	651.4	10	0.042	0.074	0.113	10	0.548	0.875	1.27	10	7.24	9.35	41
Dumaresq River	416007	Macintyre River at Bonshaw Weir	10	201.8	221.5	272.8	10	0.038	0.043	0.064	10	0.507	0.595	0.76	10	2.71	7.15	45
	416049	Macintyre River at Mauro	10	202.6	235	321.9	10	0.04	0.047	0.06	10	0.458	0.525	0.61	10	3.7	7.55	22
Macintyre River	416012	Macintyre River at Holdfast	10	197.7	281.5	442.4	10	0.072	0.112	0.176	10	0.495	0.575	0.835	10	6.39	11.5	19.8
	4.2E+07	Salisbury Bridge (Boggabilla)	10	206.6	248.5	278.1	10	0.058	0.084	0.123	10	0.584	0.67	0.862	10	6.46	16	45.9
	416048	Macintyre River at Kanowna	10	211.7	247	345.9	10	0.067	0.101	0.151	10	0.573	0.77	1.03	10	43.9	60	109
Barwon River	416001	Barwon River at Mungindi	10	195.7	234	358.2	10	0.044	0.078	0.106	10	0.53	0.64	0.914	11	21	33	70
Weir River	416202	Weir River at Talwood	10	223.7	276.5	445.1	10	0.2	0.279	0.385	10	1.4	1.85	2.07	10	445	750	1110
Intersecting Streams	424002	Paroo at willara crossing	10	87.2	145	197.4	10	0.164	0.224	0.333	10	0.805	1	1.62	10	550	625	1030
	423002	Warrego River at Fords Bridge	1	92	92	92	1	0.279	0.279	0.279	1	0.94	0.94	0.94	1	500	500	500
	422015	Culgoa River at Brenda	10	242.6	340.5	567.3	10	0.234	0.291	0.309	10	0.827	0.985	1.32	10	128	250	320
	422014	Bokhara River at Goodooga	10	240.5	329.5	612.3	10	0.259	0.32	0.388	10	1.09	1.2	1.72	10	168	290	383
	422013	Birrie River near Goodooga	5	213.2	242	290.8	5	0.238	0.267	0.302	5	0.892	0.96	1.22	5	206	250	394
	422012	Narran River at New Angledool	9	233	257	351.2	9	0.215	0.329	0.379	9	0.99	1.2	1.54	9	225	450	550
Glenlyon Dam	416315	Glenlyon 1: Top	10	196.7	207.5	217.2	10	0.025	0.028	0.031	10	0.689	0.865	0.956	10	1.37	2.55	4.12
		Glenlyon 1: Middle	10	174.6	201	212.4	10	0.02	0.024	0.032	10	0.659	0.73	0.932	10	1.28	1.85	2.64
		Glenlyon 1: Bottom	10	196.8	203	219.2	10	0.018	0.03	0.068	10	0.708	0.845	0.982	10	1.47	2.3	3.12

(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
(2) The table above contains samples collected from the start of July 2013 to the end of May 2014.

Table 18 - Stream gauging stations (Border Rivers)

AWRC No	Stream	Station	Equipment	Telemetry	Established	Owned by	2012-13 Total	2013-14 Total	Historical		
									Min	Max	Median
416001	Barwon River	Mungindi	AR	Yes	1889	NOW	580	78.1	21 (1994-95)	3,131 (1950-51)	433
416002	Macintyre River	Boggabilla	AR	Yes	1895	NOW	868	326	29 (1919-20)	4,490 (1950-51)	622
416003	Tenterfield Creek	Clifton	AR	Yes	1921	NOW	58.2	11.4	1 (2002-03)	235 (1949-50)	38
416006	Severn River	Ashford	AR	Yes	1934	NOW	235	183	17 (1941-42)	1,389 (1950-51)	181
416007	Dumaresq River	Bonshaw Weir	AR	Yes	1934	NOW	419	201	54 (1993-94)	1,729 (2010-11)	266
416008	Beardy River	Haystack	AR	Yes	1934	NOW	52.4	11	5 (1941-42)	243 (2010-11)	31
416010	Macintyre River	Wallangra	AR	Yes	1937	NOW	41.7	10.3	6 (1941-42)	667 (1970-71)	80
416011	Dumaresq River	Roseneath	AR	Yes	1937	NOW	330	189	36 (1993-94)	1,608 (1955-56)	281
416012	Macintyre River	Holdfast	AR	Yes	1951	NOW	302	181	49 (1957-58)	1,686 (1955-56)	280
416020	Ottleys Creek	Coolatai	AR	Yes	1967	NOW	3.61	1.7	1 (2006-07)	65 (2000-01)	10
416032	Mole River	Donaldson	AR	Yes	1969	NOW	139	24.9	13 (1993-94)	493 (2010-11)	72
416037	Boomi River	Offtake	AR	Yes	1973	NOW	38.8	133	3 (1994-95)	146 (2011-11)	29
416040	Dumaresq River	Glenarbon Weir	AR	Yes	1996	NOW	445	180	74 (2006-07)	1,855 (2010-11)	169
416043	Macintyre River	Boomi Weir	AR	Yes	1976	NOW	293	155	21 (1994-95)	586 (2010-11)	160
416047	Macintyre River	Terrewah	AR	Yes	1985	NOW	532	213	31 (1994-95)	1,488 (2010-11)	226
416048	Macintyre River	Kanowna	AR	Yes	1988	NOW	310	121	25 (1994-95)	727 (1998-99)	135
416201A	Macintyre River	Goondiwindi	AR	Yes	1950	DNRM	737	297	61 (1994-95)	4,529 (1950-51)	757
416201B	Macintyre River	Goondiwindi Weir	AR	Yes	1997	DNRM	693	275	158 (2006-07)	2,421 (2010-11)	279
416202A	Weir River	Talwood	AR	Yes	1949	DNRM	452	15	0 (2006-07)	687 (1995-96)	66
416305B	Brush Creek	Beebo	AR	Yes	1950	DNRM	17	0	0 (Several)	55 (1995-96)	2.8
416309B	Pike Creek	Glenlyon Dam Tailwater	AR	Yes	1973	DNRM	59	150	4 (1976-77)	180 (1988-89)	60
416310A	Dumaresq River	Farnbro	AR	Yes	1962	DNRM	68	8	0.9 (2002-03)	433 (2010-11)	53
416312A	Oakey Creek	Texas	AR	Yes	1969	DNRM	26	0.4	0.01 (1973-74)	99 (1995-96)	6
416315A	Pike Creek	Glenlyon Dam Headwater	AR	Yes	1977	DNRM	0	0	0 (Several)	133 (2010-11)	0
416402C	Macintyre Brook	Inglewood	AR	Yes	1953	DNRM	83	32	6 (1994-95)	546 (1995-96)	37
416415A	Macintyre Brook	Booba Sands	AR	Yes	1987	DNRM	107	25	4 (1994-95)	630 (1995-96)	35

(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	Telemetry	Established	Owned by	2012-13 Total	2013-14 Total	Historical		
									Min	Max	Median
417001	Moonie River	Gundablouie	AR	Yes	1945	NOW	177	18	0 (1951-52)	655 (2011-12)	66
417204A	Moonie River	Fenton	AR	Yes	1971	DNRM	198	16	0.5 (1979-80)	670 (1975-76)	70
422005	Bokhara River	Goodwin's	AR	Yes	1944	NOW	32	0.502	0 (Sever)	652 (1955-56)	26
422006	Culgoa River	Downstream Collerina	SG	No	1944	NOW	207	27.9	7 (2001-02)	2,341 (1989-90)	294
422010	Birrie River	Talawanta	SG	No	1964	NOW	49.4	0.144	0 (Sever)	379 (1975-76)	26
422011	Culgoa River	Upstream Collerina	AR	Yes	1964	NOW	167	29.4	6 (2001-02)	1,898 (2010-11)	178
422012	Narran River	Angledool	Discontinued	No	1959	NOW	132	7.74	0 (Sever)	697 (2010-11)	110
422013	Birrie River	Near Goodooga	AR	No	1964	NOW	57.3	1.23	0 (1992-93)	510 (2010-11)	31
422014	Bokhara River	Goodooga	SG	No	1915	NOW	43	1.76	0 (Sever)	446 (2010-11)	15
400030	Culgoa River	Brenda	AR	Yes	1960	NOW	197	33.1	0 (1992-93)	2530 (2010-11)	237
422016	Narran River	Wilby Wilby	AR	No	1964	NOW	124	4.78	0 (2006-07)	622 (2010-11)	105
422017	Culgoa River	Weilmoringle	SG	No	1964	NOW	166	30.6	0 (1992-93)	1911 (2010-11)	218
422204A	Culgoa River	Whyenbah	AR	Yes	1965	DNRM	624	79	2.7 (1992-93)	2,247 (2010-11)	329
422206A	Narran River	Dirranbandi-Hebel Road	AR	Yes	1965	DNRM	165	18	0.2 (1992-93)	1,993 (2010-11)	112
422207A	Ballando River	Hebel-Bollon Road	AR	Yes	1965	DNRM	27	3	0 (1992-93)	390 (2010-11)	16
422209A	Bokhara River	Hebel	AR	Yes	1967	DNRM	35	3.5	0.5 (1992-93)	372 (2010-11)	22
422211A	Briarie Creek	Woolerbilla-Hebel Road	AR	Yes	1992	DNRM	98	0	0 (Sever)	953 (2010-11)	7
423001	Warrego River	Fords Bridge	AR	Yes	1921	NOW	0.018		1 (Sever)	344 (1989-90)	7
423002	Warrego River	Fords Bridge (Bywash)	AR	Yes	1921	NOW	6.12	3.58	0 (1957-58)	249 (1955-56)	37
423202C	Warrego River	Cunnamulla Weir	AR	Yes	1992	DNRM	5	0	0 (2013-14)	1,832 (2009-10)	205
424002	Paroo River	Willara Crossing	AR	Yes	1975	NOW	7.8	88.3	7.8 (2012-13)	2,072 (1975-76)	185
424201A	Paroo River	Caiwarro	AR	Yes	1967	DNRM	12	134	13 (2012-13)	2,041 (2009-10)	323
11202	Bulloo River	Autumnvale	AR	Yes	1967	DNRM	48	136	19 (1976-77)	3,241 (1973-74)	411

(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	Year Installed	Depth to WL		Depth to WL	
							Max (m)	Min (m)	Max (m)	Min (m)
41640001	Keetah Crossing	Qld	A	87.3	No	1985	Not on network		Not on network	
41640001	Keetah Crossing	Qld	B	46.8	No	1985	5.72	5.62	5.98	5.66
41640002	Keetah Crossing	Qld	A	17.8	No	1985	8.38	8.37	Dry (8.37)	
41640003	Yelarbon Desert	Qld	A	92.4	No	1985	4.00	3.66	4.17	3.61
41640003	Yelarbon Desert	Qld	B	47.9	No	1985	5.76	5.42	5.58	5.36
41630009	Glenarbon	Qld	A	93	No	1996	Not on network		Not on network	
41630042	David Muggleton	Qld	A	13.3	No	1959	7.42	7.13	7.28	6.22
41630039	'Eldorado'	Qld	A	16.7	No	1959	Not on network		Not on network	
41630072	Cunningham Weir	Qld	A	90.4	Yes	1985	> 43.13	30.99	48.16	30.99
41630072	Cunningham Weir	Qld	B	41.4	Yes	1985	38.86	31.15	38.87	31.01
41630072	Cunningham Weir	Qld	C	10.4	Yes	1985	5.57	4.57	5.69	5.22
41630064	Texas	Qld	A	52.5	No	1985	21.33	13.55	29.4	15.04
41630064	Texas	Qld	B	28.5	No	1985	16.13	11.55	20.76	13.12
41630066	Bill & Tater	Qld	A	90.4	Yes	1985	30.20	13.95	35.66	13.03
41630066	Bill & Tater	Qld	B	45.9	Yes	1985	21.72	13.90	29.97	13.77
41630067	Bill & Tater	Qld	A	12.2	Yes	1985	5.19	4.50	4.41	5.39
41630063	Finlay's	Qld	A	100.6	No	1983	11.59	6.77	26.36	6.40
41630063	Finlay's	Qld	B	64.6	No	1983	11.40	6.73	27.10	6.34
41630062	Finlay's	Qld	A	17.4	No	1985	6.72	5.13	6.36	5.03
41630071	Finlay's	Qld	A	48.2	No	1985	Not on network		Not on network	
41630071	Finlay's	Qld	B	41.2	No	1985	Not on network		Not on network	
41630059	John Moore	Qld	A	101.7	No	1985	6.17	5.81	6.50	6.06
41630069	John Moore	Qld	A	92	No	1985	14.65	7.38	18.69	8.51
41630069	John Moore	Qld	B	35.9	No	1985	11.32	6.60	13.47	7.06
41630069	John Moore	Qld	C	15.4	No	1985	7.04	5.83	7.87	6.01
41630060	John Moore	Qld	A	12.1	No	1985	Not on network		Not on network	
41630058	John Moore	Qld	A	10.6	No	1985	Not on network		Not on network	
41630070	Phillip Harpham	Qld	A	9.2	No	1985	4.70	4.30	4.91	2.93
41630004	V and E Sattolo	Qld	A	11.8	No	1960	Not on network		Not on network	
41630003	V and E Sattolo	Qld	A	27.1	No	1961	4.00	3.66	Not on network	
41630002	V and E Sattolo	Qld	A	29.9	No	1961	9.25	6.06	11.38	8.06
GW036697	Keetah Bridge	NSW	1	20	Yes	1987	8.83	8.77	8.83	8.80
GW036697	Keetah Bridge	NSW	2	64	Yes	1987	6.74	6.72	6.79	6.71
GW036697	Keetah Bridge	NSW	3	83.5	Yes	1987	4.91	4.3	4.98	4.39
GW040635	Smithfield Section	NSW	1	15.9	No	1960	8.78	7.78	8.85	8.25
GW040636	Smithfield Section	NSW	1	11.3	No	1960	7.32	6.85	7.45	7.03
GW040637	Smithfield Section	NSW	1	7.9	No	1960	8.87	5.58	6.11	5.71
GW040638	Smithfield Section	NSW	1	11.9	No	1960	9.12	8.53	9.59	9.15
GW40771	Smithfield Section	NSW	1	30	Yes	1994	29.69	29.24	29.79	29.62
GW40771	Smithfield Section	NSW	2	37	Yes	1994	31.56	29.93	32.73	31.18

Table 20 - Groundwater monitoring network

Bore number	Location	State	Piezometer	Depth (m)	Automatic WL Recorder	Year Installed	Depth to WL		Depth to WL	
							Max (m)	Min (m)	Max (m)	Min (m)
GW40771	Smithfield Section	NSW	3	50	Yes	1994	33.44	31.33	35.09	32.33
GW040641	Riverstone Section	NSW	1	35	No	1960	8.93	5.51	9.88	7.56
GW040644	Riverstone Section	NSW	1	9.5	No	1960	8.12	7.83	8.19	8.01
GW040646	Riverstone Section	NSW	1	7.7	No	1960	6.18	6.02	6.58	6.13
GW040647	Hopwood Section	NSW	1	12.8	No	1959	flood damaged	WL 7.11 below NS on 26.02.13	8.78	8.40
GW040649	Hopwood Section	NSW	1	28.9	No	1959	6.92	6.73	7.31	6.91
GW040652	Hopwood Section	NSW	1	12.2	No	1959	7.31	7.07	7.79	7.36
GW40829	Lochiel Section	NSW	1	12	No	1996	8.79	8.62	9.03	8.82
GW40829	Lochiel Section	NSW	2	42	No	1996	8.91	8.73	9.18	8.92
GW40830	Lochiel Section	NSW	1	27	No	1996	8.98	8.84	9.27	9.04
GW40831	Lochiel Section	NSW	1	44	Yes	1996	35.72	32.38	38.12	32.53
GW40831	Lochiel Section	NSW	2	96	Yes	1996	36.62	32.45	40.32	33.58

(1) Monitoring bore has no information available.