



*Dumaresq-Barwon  
Border Rivers Commission*

*Annual Statistics  
2007-08*





## Dumaresq-Barwon Border Rivers Commission 2007-08 Annual Statistics

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The Border Rivers Commissioners would like to record their sincere thanks to the staff from SunWater, State Water, the Queensland Department of Natural Resources and Water and the New South Wales Department of Water and Energy who provided the information and statistics for this report.

Please note that as from 1 July 2003 the Commission's reporting period for statistics is 1 July to 30 June rather than the former reporting period of 1 October to 30 September.

# Water infrastructure

**Table 1 - Key features of Border Rivers Commission works**

Name	Stream	AMTD (km)	Nearest town/s	Description	F.S.L above bed (EL)	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	147.0	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	57.0	Yelarbon	Steel sheetpiling	2.7	353	1959
Goondiwindi Weir	Macintyre River	268.8	Goondiwindi	Timber crib (fish ladder 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	Dirranbandi	Steel sheetpiling with rock protection			1974
Regulator No 2	Balonne Minor	128.9	Dirranbandi	Steel sheetpiling with rock protection			1974
	Donnegri River	14.9	Dirranbandi	Steel sheetpiling with rock protection			1974
Regulator No 3	Ballandool River	91.4	Dirranbandi	Steel sheetpiling with rock protection			1974
	Bokhara River	79.8	Dirranbandi	Steel sheetpiling with rock protection			1974
Regulator No 4	Birrie River	274.7	Goodooga	Steel sheetpiling with rock protection			1974
	Bokhara River	276.2	Goodooga	Steel sheetpiling with rock protection			1974

**Table 2 - Glenlyon Dam monthly storage volumes (megalitres)**

End of month	2006-07	2007-08
July	69,603	34,807
August	68,493	40,831
September	67,640	40,856
October	63,624	41,816
November	69,693	47,699
December	53,881	56,825
January	40,070	83,197
February	34,587	98,558
March	36,489	96,723
April	34,374	93,909
May	33,107	87,796
June	33,898	87,631

(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)**

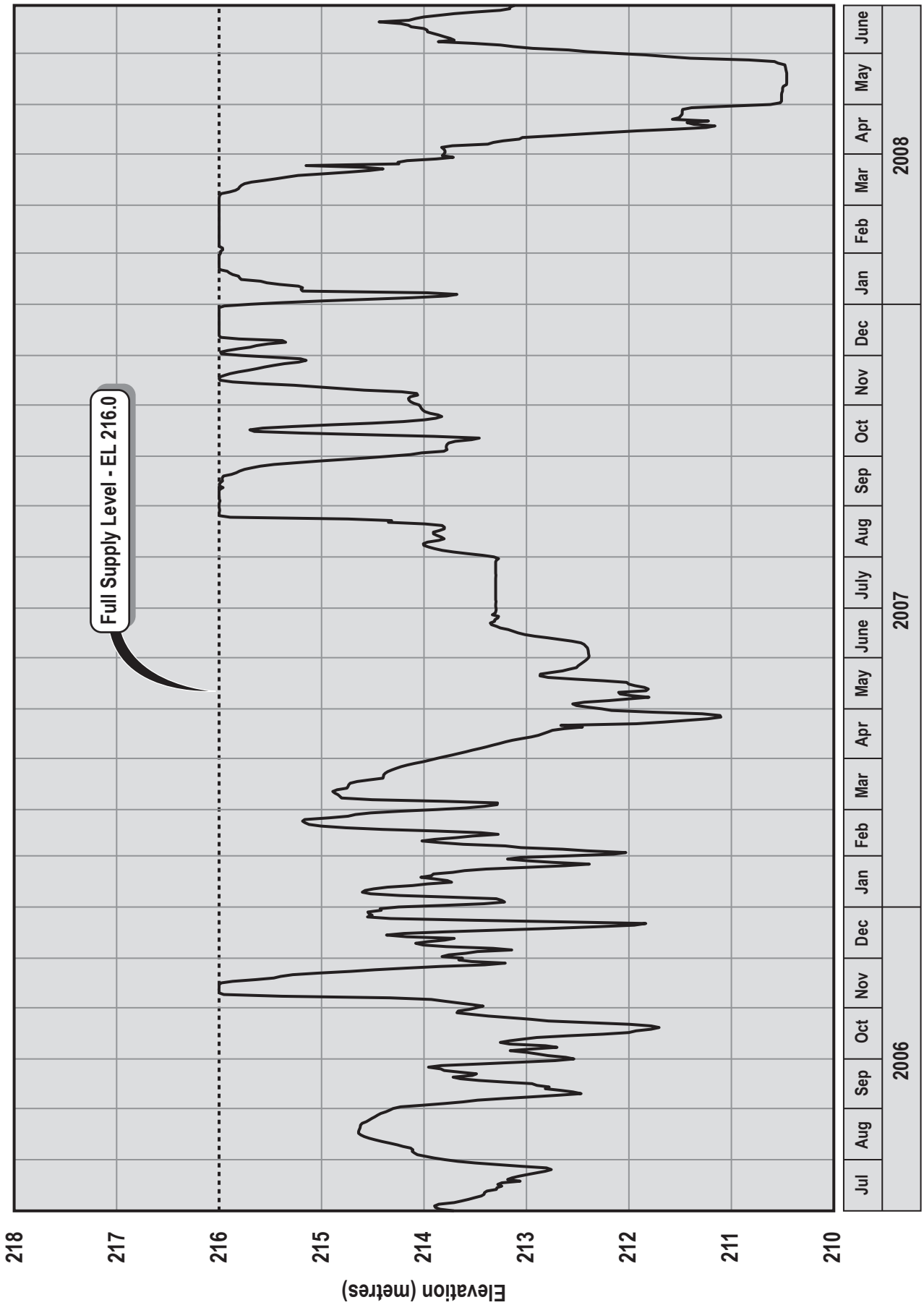
Month	2006-07		2007-08	
	Release	Spillway flows	Release	Spillway flows
July	364	0	0	0
August	909	0	0	0
September	726	0	0	0
October	3,850	0	654	0
November	713	0	374	0
December	18,274	0	286	0
January	14,773	0	0	0
February	4,984	0	0	0
March	844	0	817	0
April	1,709	0	1,731	0
May	836	0	5,365	0
June	57	0	174	0

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

**Table 4 - Glenlyon Dam recreation statistics**

1 July 06 - 30 June 07		1 July 07 - 30 June 08	
Visitors	Camp sites occupied	Visitors	Camp sites occupied
53,960	4,965	77,153	5,942

**Figure 1 - Boggabilla Weir storage levels 2006-2008**



# Resource allocation, sharing and use

**Table 5 - Irrigation, off-allocation, waterharvesting, industrial & town water licences and offstream storages - Border Rivers regulated section**

	Number of licences		Allocations (Megalitres)		Off-stream Storages (Megalitres)	
	NSW	QLD	NSW	QLD	NSW	QLD
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	21	28	5,482	6,630		
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	17	16	6,978	6,046		
Texas Town		1		270		
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	13	24	2,831	5,828	400	6,300
Yelarbon Town		1		106		
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	12	66	60,386	32,502	29,150	125,850
Boggabilla Town	1		200			
Goondiwindi Town		1		1,800		
Macintyre River from Goondiwindi Weir to Boomi Weir	17	10	123,139	9,258	86,000	25,210
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	11	21	48,629	22,226	60,600	119,370
Mungindi Town	2		300			
<b>Totals</b>	<b>94</b>	<b>168</b>	<b>247,945</b>	<b>84,666</b>	<b>176,150</b>	<b>276,730</b>

**Table 6 - Water use from the Border Rivers 1 July 06 - 30 June 07 (megalitres)**

	On-allocation			Supplementary/Unregulated		
	NSW	QLD	Total	NSW	QLD	Total
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	2,682	1,296	3,978	0	0	0
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	3,084	3,512	6,596	0	0	0
Texas Town		214	214			
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	1,349	2,419	3,768	0	0	0
Yelarbon Town		109	109			
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	35,561	13,990	49,551	0	0	0
Boggabilla Town	184	0	184			
Goondiwindi Town		2,059	2,059			
Macintyre River from Goondiwindi Weir to Boomi Weir	56,185	6,492	62,677	0	0	0
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	24,861	13,406	38,267	0	0	0
Mungindi Town	298	0	298			
<b>Totals</b>	<b>124,204</b>	<b>43,497</b>	<b>167,701</b>	<b>0</b>	<b>0</b>	<b>0</b>

(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 tributaries 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) During 2006-07 Old water users took 402 megalitres of unregulated water under the trial water sharing rules permitting small enterprises upstream of the Macintyre/Dumaresq junction to pump from certain small unregulated inflows for direct irrigation. No water was taken in NSW under that same rule.

**Table 7 - Water use from the Border Rivers 1 July 07 – 30 June 08 (megalitres)**

	On-allocation			Supplementary/Unregulated		
	NSW	QLD	Total	NSW	QLD	Total
Pike Creek and Dumaresq River from Glenlyon Dam to Bonshaw Weir	1,683	1,578	3,261	834	123	957
Dumaresq River from Bonshaw Weir to Cunningham Weir (excluding Texas town)	1,315	881	2,196	691	217	908
Texas Town		212	212			
Dumaresq River from Cunningham Weir to Macintyre River junction (excluding Yelarbon town)	565	2,124	2,689	315	3,389	3,704
Yelarbon Town		107	107			
Macintyre River from Dumaresq River junction to Goondiwindi Weir (excluding Goondiwindi & Boggabilla towns)	14,367	3,719	18,086	11,041	22,608	33,649
Boggabilla Town	165		165			
Goondiwindi Town		2,156	2,156			
Macintyre River from Goondiwindi Weir to Boomi Weir	28,146	739	28,885	23,527	13,432	36,959
Macintyre River and Barwon River from Boomi Weir to Mungindi Weir (excluding Mungindi town)	6,464	1,168	7,632	15,560	33,011	48,571
Mungindi Town	254		254			
<b>Totals</b>	<b>52,959</b>	<b>12,684</b>	<b>65,643</b>	<b>51,968</b>	<b>72,780</b>	<b>124,748</b>

(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 tributaries 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) During 2007-08 Old water users took 1,589 megalitres of unregulated water under the trial water sharing rules permitting small enterprises upstream of the Macintyre/Dumaresq junction to pump from small unregulated inflows for direct irrigation. That water is accounted for as regulated water use. NSW water users also took water under that same rule after the embargo was lifted at the end of December 2007. That water is accounted for as supplementary water use. As no differentiation is made between that water and other supplementary water taken a figure for NSW's use under that rule is not available.



**Table 8 – Summary of resource assessments (Border Rivers) 1 July 06 – 30 June 07 (gigalitres)**

Bulk Accounts	Queensland				New South Wales			
	Account balance 1/7/06	Total use/loss for year	Total distribution for year	Account balance 1/7/07	Account balance 1/7/06	Total use/loss for year	Total distribution for year	Account balance 1/7/07
	(a)	(b)	(c)	(a)-(b)+(c)	(a)	(b)	(c)	(a)-(b)+(c)
Storage Loss (Glenlyon Dam)	6.11	8.31	4.78	2.58	0.68	2.06	3.14	1.76
Storage Loss (Pindari Dam)	-	-	-	-	14.01	8.84	2.51	7.68
Essential Supplies (minimum release)	1.00	0.00	0.00	1.00	5.54	1.88	2.42	6.08
Essential Supplies (other)	6.90	2.49	2.79	7.20	24.70	16.18	16.19	24.71
Essential Supplies Delivery Loss	2.67	0.82	0.88	2.73	10.30	5.33	5.32	10.29
General Use	35.71	40.71	9.14	4.14	120.62	128.71	33.21	25.12
General Use Delivery Loss	10.70	12.22	2.76	1.24	36.18	38.63	9.99	7.54

**Table 9 – Summary of resource assessments (Border Rivers) 1 July 07 – 30 June 08 (gigalitres)**

Bulk Accounts	Queensland				New South Wales			
	Account balance 1/7/07	Total use/loss for year	Total distribution for year	Account balance 1/7/08	Account balance 1/7/07	Total use/loss for year	Total distribution for year	Account balance 1/7/08
	(a)	(b)	(c)	(a)-(b)+(c)	(a)	(b)	(c)	(a)-(b)+(c)
Storage Loss (Glenlyon Dam)	2.58	6.71	8.94	4.81	1.76	5.06	7.13	3.83
Storage Loss (Pindari Dam)	-	-	-	-	7.68	7.98	9.31	9.01
Essential Supplies (minimum release)	1.00	0.00	-1.00	0.00	6.08	11.32	11.32	6.08
Essential Supplies (other)	7.20	2.01	1.76	6.95	24.71	2.57	2.57	24.71
Essential Supplies Delivery Loss	2.76	0.70	0.58	2.64	10.31	0.79	0.72	10.24
General Use	4.14	8.23	31.04	26.95	25.12	58.58	97.91	64.45
General Use Delivery Loss	1.24	2.46	7.93	6.71	7.54	17.56	27.65	17.63

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

Month	Number of days and hours (Qld) / Percent of allocation (NSW) <sup>(1)</sup>			
	1 July 06 – 30 June 07		1 July 07 – 30 June 08	
	Glenlyon to Goondiwindi	Goondiwindi to Mungindi	Glenlyon to Goondiwindi	Goondiwindi to Mungindi
July				
August			1 day 4 hrs (Qld only)	1 day 4 hrs (Qld only)
September				
October				
November	(See Note 1)			
December			1 day (Qld only)	1 day (Qld only)
January			2 days 10 hrs / 8%	2 days 10 hrs / 8%
February			3 days 8 hrs / 11%	3 days 8 hrs / 11% <sup>(2)</sup>
March				
April				
May				
June	(See Note 1)			

(1) Qld water users were permitted to pump for 9 days in November 2006 and 15 days in June 2007 under the trial water sharing rules permitting small enterprises upstream of the Macintyre/Dumaresq junction to pump from certain small unregulated inflows for direct irrigation.

(2) Downstream of Newinga Qld water users were permitted to pump for 7 days 8 hours and NSW water users were permitted to take 23% of allocation.

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

Crop	2006-07			2007-08		
	NSW	Qld	TOTAL	NSW	Qld	TOTAL
Cotton	18,139	9,894	28,033	4,492	6,820	11,312
Lucerne	484	102	586	589	387	976
Cereals	2,385	1845	4,230	8,975	4,182	13,157
Peanuts	80	60	140	50	60	110
Fodder crops	570	276	846	580	282	862
Horticultural crops	55	43	98	55	35	90
Other	95	40	135	300	136	436
<b>Total</b>	<b>21,808</b>	<b>12,260</b>	<b>34,068</b>	<b>15,041</b>	<b>11,902</b>	<b>26,943</b>

(1) The irrigated production statistics in this table include the crops grown on properties which take regulated/supplemented water 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 <sup>(1)</sup>	Qld
Issued allocation/entitlement	15,402	14,421 <sup>(3)</sup>
Allocation/entitlement issued, bores constructed	15,402	14,421 <sup>(3)</sup>
Allocation/entitlement issued, bores not constructed	0	0
Number of entitlements	26	26
Number of bores constructed	47	38
Number of applications outstanding	2 <sup>(2)</sup>	7 <sup>(4)</sup>

(1) The figures provided for NSW are for the area defined as the Border Rivers Alluvium GWMA 022 Glenlyon Dam to Keetah Bridge..

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

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

(4) Applications for proposed bores.

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

1 July 06 – 30 June 07		1 July 07 – 30 June 08	
NSW	Qld	NSW	Qld
6,927	8,048	5,958	7,375

# Resource management

**Table 14 - Beardmore Dam compensation inflow, storage and releases**

Month	2006-07			2007-08		
	Inflow (ML)	Release (ML)	Storage at end of month (ML)	Inflow (ML)	Release (ML)	Storage at end of month (ML)
June	0	0	720	0	0	300
July	0	0	700	4,600	0	4,800
August	0	0	670	700	200	5,100
September	0	0	630	7,300	7,500	4,100
October	0	0	470	1,000	3,600	1,300
November	3,200	0	3,500	6,800	2,300	5,300
December	90	2,900 <sup>(1)</sup>	380	22,200	27,400	0
January	11,370	1,220	9,980	16,600	16,500	0
February	6,160	8,900	6,580	20,900	20,800	0
March	10,460	15,500	1,560 <sup>(2)</sup>	4,600	3,900	0
April	0	1,520	30	0	0	0
May	0	0	30	0	0	0
June	260	0	290	0	0	0
<b>Totals</b>	<b>31,540</b>	<b>30,040</b>		<b>84,700</b>	<b>82,200</b>	

(1) Includes 2,350ML temporarily transferred to allocation water.

(2) Includes 480ML temporarily transferred from allocation water to compensation storage.

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

Water quality indicator		Default trigger value <sup>(1)</sup>	Notes
Salinity ( $\mu\text{Scm}^{-1}$ )	Upland rivers <sup>(2)</sup>	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 <sup>(2)</sup>	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 ( $\text{mgL}^{-1}$ )	Upland rivers <sup>(2)</sup>	0.20	
	Lowland rivers	0.60	
	Lakes and reservoirs	0.35	
Total Phosphorus ( $\text{mgL}^{-1}$ )	Upland rivers <sup>(2)</sup>	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 2006-07**

Basin	Site no	Location	Electrical Conductivity $\mu\text{S/cm}$				Total Phosphorus (mg/L)				Total Nitrogen (mg/L)				Turbidity (NTU)			
			N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile
Dumaresq Tributaries	416003	Tenterfield Creek at Clifton	12	170	251	489	10	0.021	0.193	0.314	10	0.410	0.820	1.100	12	1.7	4.5	16
	416310	Severn River at Farnbro	0				0				0				0			
	416303	Pike Creek at U/S Glenlyon Dam	3	183	208	253	3	0.021	0.031	0.034	3	0.230	0.43	0.540	3	1.0	9.0	9.1
	416309	Pike Creek at Glenlyon Dam Tailwater	12	219	255	318	10	0.018	0.045	0.120	10	0.500	0.675	0.995	12	2.2	4.6	11.0
	416032	Mole River at Donaldson	12	140	169	218	10	0.021	0.043	0.065	10	0.275	0.490	0.730	12	4.7	9.6	24.0
	416008	Beardy River at Haystack No. 4	12	153	206	221	10	0.018	0.039	0.054	10	0.255	0.380	0.545	12	5.2	7.2	24.0
	416312	Oaky Creek at Texas	2	370	433	495	2	0.070	0.126	0.182	2	0.500	0.850	1.200	2	12.0	15.0	18.0
	416415	Macintyre Brook at Booba Sands	12	290	354	376	10	0.027	0.036	0.046	10	0.600	0.670	0.720	12	5.4	12.0	15.0
Dumaresq River	416007	Bonshaw Weir	12	207	221	236	10	0.019	0.028	0.051	10	0.405	0.550	0.665	12	2.6	6.3	20.0
	416049	Mauro	12	201	229	238	10	0.022	0.027	0.072	10	0.395	0.520	0.930	12	3.4	5.5	10.0
Macintyre River	416012	Holdfast	12	197	228	339	10	0.025	0.056	0.123	10	0.360	0.520	0.910	12	10.0	14.5	23.0
	41610044	Salisbury Bridge (Boggabilla)	7	204	260	340	7	0.025	0.050	0.077	7	0.410	0.520	0.590	7	7.3	13.0	32.0
	416048	Kanowna	7	182	256	354	6	0.027	0.045	0.094	6	0.370	0.470	0.650	7	18.0	40.0	95.0
Barwon River	416001	Mungindi	7	219	233	326	7	0.022	0.035	0.082	7	0.430	0.470	0.670	7	16.0	37.0	85.0
Weir River	416202	Talwood	0				0				0				0			
Intersecting Streams	424002	Paroo River at Willara Crossing	8	38	70	111	7	0.1	0.1	0.2	7	0.4	0.5	0.8	8	500	700	1000
	423002	Warrego River at Fords Bridge Bywash	5	72	99	239	5	0.2	0.2	0.3	5	0.4	0.6	1.8	5	550	600	5500
	422015	Culgoa River at Brenda	8	168	219	496	7	0.1	0.2	0.2	7	0.5	0.9	1.5	8	390	625	700
	422014	Bokhara River at Goodooga	8	203	306	672	7	0.2	0.2	0.4	7	0.8	1.1	1.9	8	370	800	800
	422013	Birrie River at Near Goodooga	0				0				0				0			
	422012	Narran River at New Angledool	8	195	374	1960	7	0.1	0.2	0.5	7	0.7	0.9	1.9	8	140	335	1100
Glenlyon Dam	416315	Glenlyon 1: Top	12	212	220	233	10	0.023	0.039	0.045	10	0.715	0.900	1.200	12	2.3	4.1	5.6
		Glenlyon 1: Middle	12	214	224	236	10	0.015	0.029	0.043	10	0.575	0.740	1.250	12	2.1	4.6	7.2
		Glenlyon 1: Bottom	12	213	224	242	10	0.020	0.034	0.188	10	0.640	0.755	2.100	12	2.9	3.6	11.0

(1) The table provides information on the median value (middle value), the 10<sup>th</sup> percentile (10% of the samples are below this value) and the 90<sup>th</sup> percentile (90% of the samples are below this value: v.v. 10% of the samples are greater than this value). N=No. of samples collected and analysed.

**Table 17 - Summary of water quality 2007-08**

Basin	Site no	Location	Electrical Conductivity $\mu\text{S/cm}$				Total Phosphorus (mg/L)				Total Nitrogen (mg/L)				Turbidity (NTU)			
			N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile	N	10th %ile	Med	90th %ile
Dumaresq Tributaries	416003	Tenterfield Creek at Clifton	10	167	229	301	10	0.08	0.15	0.20	10	0.69	0.80	1.32	10	4.4	9.6	25.7
	416310	Severn River at Farnbro	8	150	181	241	8	0.03	0.03	0.06	8	0.44	0.57	1.00	8	9.8	16.0	21.2
	416303	Pike Creek at U/S Glenlyon Dam	9	184	206	238	9	0.02	0.03	0.06	9	0.31	0.43	0.95	9	2.7	19.0	44.2
	416309	Pike Creek at Glenlyon Dam Tailwater	9	296	396	516	9	0.03	0.04	0.10	9	0.37	0.41	0.87	9	4.1	6.1	13.4
	416032	Mole River at Donaldson	10	99	173	208	10	0.03	0.05	0.13	10	0.41	0.48	1.04	10	8.5	21.0	80.0
	416008	Beardy River at Haystack No. 4	10	141	159	189	10	0.02	0.03	0.12	10	0.35	0.42	0.90	10	4.9	17.5	60.5
	416312	Oaky Creek at Texas	5	284	373	451	5	0.04	0.09	0.11	5	0.38	0.60	0.73	5	9.2	17.0	230.4
	416415	Macintyre Brook at Booba Sands	11	160	327	511	11	0.02	0.04	0.12	11	0.59	0.69	0.88	11	3.8	15.0	132.0
Dumaresq River	416007	Bonshaw Weir	10	154	196	225	10	0.03	0.05	0.09	10	0.46	0.52	0.99	10	4.7	16.5	43.7
	416049	Mauro	10	163	200	256	10	0.03	0.04	0.09	10	0.53	0.63	0.83	10	5.1	10.5	40.5
Macintyre River	416012	Holdfast	10	207	297	352	10	0.08	0.12	0.28	10	0.45	0.71	1.01	10	10.5	31.5	215.0
	41610044	Salisbury Bridge (Boggabilla)	17	186	244	311	8	0.06	0.08	0.11	8	0.56	0.65	0.92	12	13.2	22.9	62.3
	416048	Kanowna	7	185	237	266	7	0.05	0.08	0.12	7	0.49	0.59	0.83	7	50.4	90.0	460.0
Barwon River	416001	Mungindi	11	106	230	283	11	0.04	0.08	0.17	11	0.51	0.62	1.10	11	39.0	100.0	1800.0
Weir River	416202	Talwood	5	94	142	179	5	0.14	0.16	0.20	5	0.93	1.00	1.12	5	370.0	500.0	1380.0
Intersecting Streams	424002	Paroo River at Willara Crossing	2	72	84	102	0	0.11	0.12	0.20	0	0.55	0.58	0.84	0	266.0	450.0	810.0
	423002	Warrego River at Fords Bridge Bywash	3	111	143	254	2	0.20	0.27	0.34	2	1.00	1.67	2.33	2	1140.0	3700.0	6260.0
	422015	Culgoa River at Brenda	5	95	178	191	3	0.15	0.26	0.34	3	0.54	0.56	0.76	3	450.0	450.0	1210.0
	422014	Bokhara River at Goodooga	7	90	130	172	3	0.28	0.35	0.43	3	0.66	0.70	0.74	3	835.0	1175.0	1515.0
	422013	Birrie River at Near Goodooga	6	100	110	121	3	0.30	0.34	0.39	3	0.68	0.69	0.70	3	850.0	1050.0	1250.0
	422012	Narran River at New Angledool	4	130	306	1662	2	0.25	0.41	0.43	2	0.94	1.90	2.78	2	111.2	500.0	900.0
Glenlyon Dam	416315	Glenlyon 1: Top	9	184	237	241	9	0.021	0.030	0.036	9	0.946	1.200	1.300	9	2.0	3.1	7.3
		Glenlyon 1: Middle	9	188	237	239	9	0.018	0.023	0.033	9	0.770	1.000	1.220	9	2.4	3.9	9.2
		Glenlyon 1: Bottom	9	231	240	243	9	0.024	0.040	0.064	9	0.950	1.200	1.300	9	4.3	7.1	12.8

(1) The table provides information on the median value (middle value), the 10<sup>th</sup> percentile (10% of the samples are below this value) and the 90<sup>th</sup> percentile (90% of the samples are below this value; v.v. 10% of the samples are greater than this value). N=No. of samples collected and analysed.

(2) At the time this table was compiled not all the results from the sampling season (2007-2008) had been analysed. Consequently, the values shown here may change when all the results for that sampling season have been analysed.

**Table 18 - Stream gauging stations (Border Rivers)**

AWRC No	Stream	Station	Equipment (see note)	Telemetry	Established Date	Maintained By	2006-07 Total Flow (MLx10 <sup>3</sup> )	2007-08 Total Flow (MLx10 <sup>3</sup> )	Historical Annual Totals & (Year) (MLx10 <sup>3</sup> )		
									Min	Max	Median
416001	Barwon River	Mungindi	AR	Yes	1889	DWE	28	140	21 (1994-95)	3,131 (1950-51)	433
416002	Macintyre River	Boggabilla	AR	Yes	1895	DWE	187	295	29 (1919-20)	4510 (1950-51)	622
416003	Tenterfield Creek	Clifton	AR	Yes	1921	DWE	6	31	1 (2002-03)	235 (1949-50)	38
416006	Severn River	Ashford	AR	Yes	1970	DWE	180	74	17 (1941-42)	1,389 (1950-51)	190
416007	Dumaresq River	Bonshaw Weir	AR	Yes	1934	DWE	94	182	54 (1993-94)	1,327 (1975-76)	285
416008	Beardy River	Haystack	AR	Yes	1970	DWE	16	15	5 (1941-42)	149 (1974-75)	31
416010	Macintyre River	Wallangra	AR	Yes	1973	DWE	18	87	6 (1941-42)	667 (1970-71)	80
416011	Dumaresq River	Roseneath	AR	Yes	1972	DWE	91	181	36 (1993-94)	1,603 (1955-56)	308
416012	Macintyre River	Holdfast	AR	Yes	1951	DWE	172	151	49 (1957-58)	1,682 (1955-56)	286
416020	Ottdleys Creek	Coolatai	AR	Yes	1967	DWE	1	1	1 (2006-07)	65 (2000-01)	10
416032	Mole River	Donaldson	AR	Yes	1969	DWE	25	42	13 (1993-94)	465 (1975-76)	72
416037	Boomi River	Offtake	AR	Yes	1973	DWE	9	20	3 (1994-95)	143 (1983-84)	41
416040	Dumaresq River	Glenarbon Weir	AR	Yes	1996	DWE	74	190	74 (2006-07)	871 (1998-99)	1701
416043	Macintyre River	Boomi Weir	AR	Yes	1976	DWE	91	150	21 (1994-95)	460 (1998-99)	160
416047	Macintyre River	Terrewah	AR	Yes	1985	DWE	118	214	31 (1994-95)	1,144 (1998-99)	260
416048	Macintyre River	Kanowna	AR	Yes	1988	DWE	52	143	25 (1994-95)	727 (1998-99)	146
416201A	Macintyre River	Goondiwindi	AR	Yes	1950	NRW	168	282	61 (1994-95)	4,529 (1955-56)	757
416201B	Macintyre River	Goondiwindi Weir	AR	Yes	1997	NRW	158	249	158 (2004-05)	1,885 (1998-99)	279
416202A	Weir River	Talwood	AR	Yes	1949	NRW	0	101	0 (2006-07)	688 (1995-96)	60
416305B	Brush Creek	Beebo	AR	Yes	1950	NRW	0	6	0 (Several)	55 (1995-96)	3
416309B	Pike Creek	Glenlyon Dam Tailwater	AR	Yes	1973	NRW	48	9	4 (1976-77)	180 (1989-90)	60
416310A	Dumaresq River	Farnbro	AR	Yes	1962	NRW	2.3	71	0.9 (2002-03)	375 (1975-76)	53
416312A	Oakey Creek	Texas	AR	Yes	1969	NRW	2.3	15	0.01 (1973-74)	99 (1995-96)	6
416315A	Pike Creek	Glenlyon Dam Headwater	AR	Yes	1977	NRW	0	0	0 (Several)	100 (1984-85)	0
416402C	Macintyre Brook	Inglewood	AR	Yes	1953	NRW	28	37	6 (1994-95)	546 (1995-96)	36
416415A	Macintyre Brook	Booba Sands	AR	Yes	1987	NRW	14	31	4 (1994-95)	630 (1995-96)	38

(1) AR = automatic recorder; SG = staff gauge, Established date = HYDSYS period of record (from which all long term calculations are made).  
DWE = NSW Department of Water and Energy, NRW = Qld Department of Natural Resources and Water

**Table 19 - Stream gauging stations (Intersecting Streams)**

AWRC No	Stream	Station	Equipment (see note)	Telemetry	Established Date	Maintained By	2006-07 Total Flow (MLx10 <sup>3</sup> )	2007-08 Total Flow (MLx10 <sup>3</sup> )	Historical Annual Totals & (Year) (MLx10 <sup>3</sup> )		
									Min.	Max.	Median
417001	Moonie River	Gundablouie	AR	Yes	1945	DWE	7	136	0 (1951-52)	596 (1975-76)	61
417204A	Moonie River	Fenton	AR	Yes	1971	NRW	10	133	0.5	670 (1955-56)	69
422005	Bokhara River	Goodwin's	AR	Yes	1944	DWE	3	46	0 (Several)	652 (1955-56)	26
422006	Culgoa River	Downstream Collerina (Kenebree)	SG	No	1944	DWE	18	242	7 (2001-02)	2,341 (1989-90)	294
422010	Birrie River	Talawanta	SG	No	1964	DWE	5	12	0 (Several)	379 (1975-76)	26
422011	Culgoa River	Upstream Collerina (Mundiwa)	AR	Yes	1964	DWE	11	183	6 (2001-02)	1,002 (1970-71)	169
422012	Narran River	Angledool	SG	No	1959	DWE	1	54	0 (1992-93)	574 (1970-71)	110
422013	Birrie River	Near Goodooga	SG	No	1964	DWE	1	23	0 (1992-93)	441 (1982-83)	29
422014	Bokhara River	Goodooga	SG	No	1915	DWE	1	19	0 (Several)	306 (1982-83)	15
422015	Culgoa River	Brenda	AR	Yes	1960	DWE	2	101	0 (1992-93)	1,619 (1970-71)	135
422016	Narran River	Wilby Wilby	SG	No	1964	DWE	1	57	0 (2006-07)	519 (1983-84)	48
422017	Culgoa River	Weilmoringle	SG	No	1964	DWE	14	110	0 (1992-93)	999 (1983-84)	218
422204A	Culgoa River	Whyenbah	AR	Yes	1965	NRW	9	320	2.7 (1992-93)	1,614 (1970-71)	322
422206A	Narran River	Dirranbandi-Hebel Road	AR	Yes	1965	NRW	0.8	87	0.2 (1992-93)	826 (1982-83)	105
422207A	Ballandool River	Hebel-Bollon Road	AR	Yes	1965	NRW	0	15	0 (1992-93)	378 (1982-83)	16
422209A	Bokhara River	Hebel	AR	Yes	1967	NRW	1	20	0.5 (1992-93)	288 (1982-83)	22
422211A	Briarie Creek	Woolerbilla-Hebel Road	AR	Yes	1992	NRW	0.02	9	0 (several)	489 (1982-83)	8
423001	Warrego River	Fords Bridge	AR	Yes	1921	DWE	1	121	1 (Several)	344 (1989-90)	7
423002	Warrego River	Fords Bridge (Bywash)	AR	Yes	1921	DWE	28	121	0 (1957-58)	249 (1955-56)	36
423202C	Warrego River	Cunnamulla Weir	AR	Yes	1992	NRW	87	1,765	34 (1999-00)	1,765 (2007-08)	219
424002	Paroo River	Willara Crossing	AR	Yes	1975	DWE	185	1,096	26 (1979-80)	2,072 (1975-76)	185
424201A	Paroo River	Caiwarro	AR	Yes	1967	NRW	252	1,449	36 (1977-78)	2,028 (1989-90)	323
011202	Bulloo River	Autumnvale	AR	Yes	1967	NRW	772	793	19 (1976-77)	3,243 (1973-74)	411

(1) AR = automatic recorder; SG = staff gauge, Established date = HYDSYS period of record (from which all long term calculations are made).  
DWE = NSW Department of Water and Energy, NRW = Old Department of Natural Resources and Water

**Table 20 - Groundwater monitoring network**

Bore number	Location	State	Piezometer	Depth (m)	Automatic WL Recorder (Yes/No)	Year Installed	Depth to WL 2006-07		Depth to WL 2007-08	
							Max (m)	Min (m)	Max (m)	Min (m)
41640001	Keetah Crossing	Q	A	87.3	No	1985	-4.66	-4.26	-5.05	-4.71
41640001	Keetah Crossing	Q	B	46.8	No	1985	-6.24	-5.95	-6.45	-6.27
41640002	Keetah Crossing	Q	A	17.8	No	1985	-8.81	-8.80	Dry -8.8	Dry -8.8
41640003	Yelarbon Desert	Q	A	92.4	No	1985	-4.05	-3.60	-4.39	-3.97
41640003	Yelarbon Desert	Q	B	47.9	No	1985	-5.54	-5.26	-5.83	-5.50
41630009	Glenarbon	Q	A	93	No	1996	Note (1)	Note (1)	Note (1)	Note (1)
41630042	David Muggleton	Q	A	13.3	No	1959	-7.72	-7.46	-8.75	-7.75
41630039	'Eldorado'	Q	A	16.7	No	1959	Note (1)	Note (1)	Note (1)	Note (1)
41630072	Cunningham Weir	Q	A	90.4	Yes	1985	-45.50	-37.00	-47.88	-37.22
41630072	Cunningham Weir	Q	B	41.4	Yes	1985	-35.25	-32.80	-35.11	-32.41
41630072	Cunningham Weir	Q	C	10.4	Yes	1985	-6.18	-6.07	-6.22	-5.49
41630064	Texas	Q	A	52.5	No	1985	-23.88	-18.21	-21.68	-17.16
41630064	Texas	Q	B	28.5	No	1985	-17.95	-14.40	-16.96	-14.59
41630066	Bill & Tater	Q	A	90.4	Yes	1985	-37.77	-23.85	-35.85	-23.00
41630066	Bill & Tater	Q	B	45.9	Yes	1985	-35.13	-22.24	-30.25	-23.25
41630067	Bill & Tater	Q	A	12.2	Yes	1985	-5.85	-5.14	-5.98	-5.80
41630063	Finlay's	Q	A	100.6	No	1983	-30.21	-10.23	-22.22	-14.55
41630063	Finlay's	Q	B	64.6	No	1983	-30.12	-10.06	-21.27	-14.42
41630062	Finlay's	Q	A	17.4	No	1985	-7.91	-6.59	-9.71	-7.03
41630071	Finlay's	Q	A	48.2	No	1985	-15.59	-7.66	-11.14	-8.25
41630071	Finlay's	Q	B	41.2	No	1985	-14.73	-7.55	-10.67	-8.03
41630059	John Moore	Q	A	101.7	No	1985	-7.67	-7.13	-8.02	-7.55
41630069	John Moore	Q	A	92	No	1985	-24.52	-9.66	-21.53	-12.89
41630069	John Moore	Q	B	35.9	No	1985	-21.26	-8.51	-19.10	-10.85
41630069	John Moore	Q	C	15.4	No	1985	-8.76	-6.80	-8.35	-7.46
41630060	John Moore	Q	A	12.1	No	1985	-8.97	-7.69	-8.81	-7.47
41630058	John Moore	Q	A	10.6	No	1985	-8.92	-7.62	-8.80	-7.69
41630070	Phillip Harpham	Q	A	9.2	No	1985	-5.00	-4.77	-5.42	-4.88
41630004	V and E Sattolo	Q	A	11.8	No	1960	-11.82	-10.81	Dry-11.8	Dry-11.8
41630003	V and E Sattolo	Q	A	27.1	No	1961	-18.26	-10.92	-20.04	-15.55
41630002	V and E Sattolo	Q	A	29.9	No	1961	-15.17	-9.93	-16.21	-13.95
GW036697	Keetah Bridge	NSW	1	20	Yes	1987	-8.78	-8.72	-8.82	-8.71
GW036697	Keetah Bridge	NSW	2	64	Yes	1987	-6.51	-4.71	-6.62	-5.73
GW036697	Keetah Bridge	NSW	3	83.5	Yes	1987	-6.50	-4.40	-6.55	-4.91
GW040635	Smithfield Section	NSW	1	15.9	No	1960	-8.76	-8.37	-8.57	-7.95
GW040636	Smithfield Section	NSW	1	11.3	No	1960	-8.36	-8.21	-8.37	-7.86
GW040637	Smithfield Section	NSW	1	7.9	No	1960	-7.80	-7.65	-7.85	-7.23
GW040638	Smithfield Section	NSW	1	11.9	No	1960	Dry	Dry	Dry	Dry
GW40771	Smithfield Section	NSW	1	30	Yes	1994	-27.10	-25.77	-26.94	-26.04
GW40771	Smithfield Section	NSW	2	37	Yes	1994	-30.07	-28.58	-30.04	-26.66
GW40771	Smithfield Section	NSW	3	50	Yes	1994	-34.03	-31.91	-34.12	-32.39
GW040641	Riverstone Section	NSW	1	35	No	1960	-23.96	-13.40	-22.06	-10.11
GW040644	Riverstone Section	NSW	1	9.5	No	1960	-8.47	-8.34	-8.51	-8.31
GW040646	Riverstone Section	NSW	1	7.7	No	1960	-7.31	-6.94	-7.43	-7.26
GW040647	Hopwood Section	NSW	1	12.8	No	1959	-10.64	-9.36	-9.74	8.59
GW040649	Hopwood Section	NSW	1	28.9	No	1959	-8.45	-8.26	-8.78	-8.13
GW040652	Hopwood Section	NSW	1	12.2	No	1959	-8.99	-8.88	-9.07	-8.74
GW40829	Lochiel Section	NSW	1	12	No	1996	-10.75	-9.82	-10.35	-10.22
GW40829	Lochiel Section	NSW	2	42	No	1996	-10.21	-10.05	-10.37	-10.24
GW40830	Lochiel Section	NSW	1	27	No	1996	-10.56	-10.23	-11.11	-10.80
GW40831	Lochiel Section	NSW	1	44	Yes	1996	-40.41	-36.89	-39.10	-35.88
GW40831	Lochiel Section	NSW	2	96	Yes	1996	-42.81	-38.38	-41.64	-36.85

(1) Monitoring bores have been abandoned.