

## Murray-Darling Basin Environmental Water Recovery

**TABLE 1. Verified and achieved environmental water entitlements since June 2004**

Entitlement owner	Project Title and Description (type of initiative) <sup>a</sup> (funding source e.g TLM) <sup>e</sup>	Volume of water recovered <sup>b</sup> (Itce in GL)	Security of entitlements <sup>c</sup>	Total cost of recovered water <sup>d</sup> (\$m)	Funding by source (\$m)							Date completed
					Cth	Qld	NSW	Vic	ACT	SA	Other	
NSW	Rivers Environment Restoration Program incorporating NSW RiverBank (purchase from market)	tba	41.2 GL entitlement General Security (Gwydir, Macquarie, Lachlan and M'bidgee) 5.6 GL entitlement Supplementary access (Gwydir, Macquarie and M'bidgee)	56.5	20.0		36.5					to 30/9/08
	Wetlands Recovery Program (purchase from market)	tba	6.5 GL entitlement General Security (Gwydir and Macquarie)  0.5 GL entitlement Supplementary access (Macquarie)	10.4	5.2		5.2					to 30/9/08
	Forest Creek Stage 1 - alternative stock and domestic supply (Water for Rivers <sup>g</sup> )	tba	11.3 GL High Security	4.6	0.92		1.84	1.84				2004/05
	Barren Box Swamp – works to reduce evaporation losses (Water for Rivers <sup>g</sup> )	tba	20 GL Conveyance	29.2	5.83		11.66	11.66				2006/07
	Coleambally Irrigation Co-op Ltd – channel automation	tba	3.5 GL Conveyance licence	4.9	0.98		1.96	1.96				2006/07

	(Water for Rivers <sup>g</sup> )											
	Forest Creek Stage 2 – extension of alternative domestic and stock supply (Water for Rivers <sup>g</sup> )	tba	23.4 GL High Security	16.8	3.36		6.72	6.72				2007/08
	On-Farm Reconfiguration (Water for Rivers <sup>g</sup> )	tba	21 GL General Security	24.2	4.83		9.66	9.66				2007/08
	Water Purchase (Water for Rivers <sup>g</sup> )	tba	39 GL General Security	35.3	7.07		14.13	14.13				2006/07 and 2007/08
Vic	Goulburn-Murray Water Recovery Package (Regulatory & Infrastructure) (TLM <sup>h</sup> )	120	Low reliability (Victorian Bulk Entitlement and Environmental Entitlement)	43.0 <sup>1</sup>	17.2		9.89	10.32		5.59		June 2009; interim listing 07/03/08
	Normanville Stock and Domestic Pipeline (Water for Rivers <sup>g</sup> )	3.9	High Reliability	3.9	0.78		1.56	1.56				2004
	Woorinen Stock and Domestic Pipeline (Water for Rivers <sup>g</sup> )	1.5	High Reliability	1.9	0.38		0.76	0.76				2004
	IMSVID (Improved Measurement of Small Volume Supplies in Irrigation Districts) - excluding Normanville and Woorinen (Water for Rivers <sup>g</sup> )	16.3	High Reliability	12.4	2.48		4.96	4.96				2005
SA	Securing Government Held Water for Environmental Use (Other -Transfer of Govt Water	13	High reliability (South Australian Water Licence endorsed with a	19.5	5.57		3.2	3.2		1.95	5.58 (MDBC)	07/03/08

	Asset) (TLM <sup>h</sup> )		high security allocation)									
ACT <sup>f</sup>	Nil											
Cwlth	Restoring the Balance in the Murray-Darling Basin (Water Entitlement Purchasing)	22.6	7.0 High 15.0 General 0.6 Low	32.3	32.3							as at 30/9/08
<b>Total at 30 September 2008</b>		<b>177.3<sup>b</sup></b>		<b>\$294.9</b>	106.9	0.0	108.04	66.77	0.0	7.54	5.58	

**Notes on both Tables:**

<sup>a</sup> Types of recovery initiatives include:

- purchasing from market,
- savings from infrastructure improvements, and
- other (for example, groundwater, land/water purchases).

<sup>b</sup> Entitlement expressed in long-term cap equivalent (where available) - expressed as 'tba' if the ltc has not been provided for this table.

<sup>c</sup> Description of actual entitlement (for example, high security/general security, et cetera).

<sup>d</sup> Expressed as a proportion of the total cost, determined by the proportion of water entitlements for the environment in total water savings.

<sup>e</sup> Program, source of funds (for example, Commonwealth and New South Wales) and level of funding.

Water for the Future includes:

Water Smart Australia,  
Sustainable Rural Water Use and Infrastructure Program, and  
Restoring the Balance in the Murray-Darling Basin.

<sup>f</sup> The ACT up until now is not involved in any water recovery activities. This is mainly because the ACT has not and does not have an overallocation problem. The ACT only abstracts a small proportion of water that passes through and is generated within the ACT. The ACT maintains a well provided environmental flow regime under its Water Resources Act. To meet the ACT's Living Murray commitment the ACT is considering the purchase of Murrumbidgee River water from which a portion would leave the ACT border to then meet the ACT's recovered water for the TLM.

<sup>g</sup> Water for Rivers is a joint initiative between New South Wales (\$150 million), Victoria (\$150 million) and the Commonwealth (\$75 million) to recover 282 GL (70 GL for the River Murray and 212 GL for the Snowy River) for environmental flows. The entitlement is recovered within the Basin and is applied 1/3 to the River Murray and 2/3 to the Snowy River (outside the MDB).

<sup>h</sup> The Living Murray initiative (TLM) is aimed at recovering an annual average of 500 GL with a total budget of \$700 million. TLM investors are the Commonwealth Government (\$200 million), MDBC (\$200 million - sourced from Commonwealth funds), New South Wales (\$115 million), Victoria (\$115 million), South Australia (\$35 million) and the Australian Capital Territory (\$5 million). TLM partners invest in water recovery measures approved by the Murray-Darling Ministerial Council. Not all partners invest in every project.

**Notes on Table 1**

<sup>1</sup> The total GMW Water Recovery Package is \$93 million. This includes the GMW Reconfiguration Project (\$50 million - see table 2) and the Sales Deal (\$43 million).

**TABLE 2: Announced or budgeted commitments to deliver environmental water entitlements (water recovery estimates not verified)**

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
Qld	Gift of Queensland water announced by the Premier in September 2008 <sup>1</sup>	Qld Govt	NA								30/12/08
NSW	NSW Package B (Infrastructure)	TLM	60.7	17.37		10.39	9.96		5.65	17.37 (MDBC)	30/6/09
	Murray Irrigation Limited Supplementary Water Access Licence (Market-based)	TLM	20.1			3.3				16.77 (MDBC)	December 2008
	NSW Market Purchase Measure (Market-based)	TLM	205.8	58.79		33.8	33.8		19.1	60.26 (MDBC)	30/06/09
	Rivers Environment Restoration Program incorporating NSW RiverBank (purchase from market)	NSW/Cwlth	84.8	25.87		58.96					to 30/9/08
	Hay Private Irrigation District Stock and Domestic Pipeline	Water For Rivers <sup>g</sup>	1.4	0.29		0.57	0.57				2008/09
	Wetlands Recovery Program (purchase from market)	NSW/Cwlth	2.2	1.1		1.1					to 30/9/08
	Water Purchase	Water For Rivers <sup>g</sup>	10	2.0		4.0	4.0				2008/09
	NSW Wetlands Water Savings – Stage 1 (Infrastructure)	TLM (funding not yet allocated)	1.4								30/6/09

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
	Pipe It (Infrastructure)	TLM (funding not yet allocated)	0.4								30/6/09
	Pipeline NSW Stage 1 – 4 pilot stock and domestic pipeline projects	Cwlth / NSW Riverbank - Funding agreement still being finalised	7	3.5		3.5					June 2011 (Water for the Future component by 2010)
	Coleambally Water Smart Australia Project	Cwlth/ Colleambally Irrigation/CRCI F/CSU	26.2	12.53						13.69	(Water for the Future component by 2010)
	Lake Brewster Water Efficiency Program - Lachlan Catchment	Cwlth/ NSW Government and Lachlan CMA	12.4	7.5		2.64				2.23	(Water for the Future component by 2010)
	Murrumbidgee River Reach	Cwlth/ Murrumbidgee Irrigation and Murrumbidgee CMA	4.5	3.7						0.75	(Water for the Future component by 2010)
	Yanco Creek Water Efficiency Project – infrastructure to improve creek system efficiency	Water For Rivers <sup>g</sup> NSW, Vic and Cwlth	12	2.4		4.8	4.8				2010/11
	Murrumbidgee Water Efficiency Project – infrastructure to improve river efficiency	Water For Rivers <sup>g</sup> NSW, Vic and Cwlth	60	12.0		24.0	24.0				2011/12
	Wah Wah Stock and Domestic Pipeline	Water For Rivers <sup>g</sup> NSW, Vic and Cwlth	18	3.6		7.2	7.2				2011/12

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
	Koraleigh Stock and Domestic Pipeline	Water For Rivers <sup>8</sup> NSW, Vic and Cwlth	4.2	0.84		1.68	1.68				2009/10
Vic	Goulburn-Murray Water Recovery Package (Infrastructure & Regulatory)	TLM	50 <sup>2</sup>	20		11.5	12		6.5		30/6/09
	Lake Mokoan Water Recovery Package <sup>3</sup> (Infrastructure)	TLM/Water for Rivers/Vic	Total – 108 (TLM – 39.2, WfR – 38.1, Vic – balance)	18.83		15.26	58.81		4	11.2 (MDBC)	30/6/09
	Shepparton IA Modernisation Project <sup>4</sup> (Infrastructure)	TLM/Vic	Total - 148 (TLM – 85.6, Vic – balance)	24.63		14.16	76.56		8.0	24.63 (MDBC)	2009-10 (TLM portion completed by 30/06/09)
	Wimmera Mallee Pipeline <sup>5</sup>	Vic / Cwlth / Grampians Wimmera Mallee Water	554	216			216			122	2010
	CG1234	Water for Rivers <sup>8</sup>	48	9.6		19.2	19.2				2011
	NVIRP (Northern Victoria Irrigation Renewal Project ) Stage 1 <sup>6</sup>	GMW / Melbourne Water / Vic Govt	1,000				1,000				2013

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
SA	Securing Government Held Water and Purchase from Willing Sellers (Other -Transfer of Govt Water Asset & Market-based)	TLM	39.2	11.21					20.2	7.8	30/6/09
	Purchase from Willing Sellers – Stage 1 (Market-based)	TLM	11.9			1.95	1.95		4.58	3.39	March 2009
ACT	Nil										
Cwlth	Australian Govt Water Through Efficiency Tender (Market-based)	TLM	0.3 (purchase price of water entitlement only)	0.08		0.04	0.04		0.03	0.08 (MDBC)	Completed March 2008; Pending Council approval for listing on EWR
	Purchase of Toorale water entitlements	Cwlth	16.1	16.1							23 December 2008
	Qld State Priority Project <sup>7</sup> – various elements, including : Healthy Headwaters Program – On-farm Infrastructure Investments and Sunwater modernisation (up to \$150 million)	Cwlth	Cwlth in-principle commitment of up to 160 (subject to due diligence)	160							

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
	NSW State Priority Project <sup>7</sup> – various elements, including: <ul style="list-style-type: none"> <li>• Basin Pipe– piping stock and domestic supply (up to \$137million)</li> <li>• Irrigated Farm Modernisation – farm infrastructure to improve water use efficiency (up to \$300million)</li> <li>• Regulated River Metering – replace existing meters (up to \$90million)</li> <li>• Groundwater and Unregulated River metering – install and upgrade meters (up to \$131million)</li> <li>• Healthy Floodplains – improve management of water on floodplains (up to \$50million)</li> </ul>	Cwlth	Cwlth in-principle commitment of up to 708 (subject to due diligence)	708							unknown
	Vic State Priority Project – Northern Victoria Irrigation Renewal Project Stage 2 (Food Bowl) <sup>7</sup>	Cwlth	Cwlth in-principle commitment of up to 1,000 (subject to due diligence) <sup>8</sup>	1,000							unknown
	Vic State Priority Project – Sunraysia Modernisation Project <sup>7</sup>	Cwlth	Cwlth in-principle commitment of up to \$103 million (subject to due diligence)	103							unknown

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
	SA State Priority Project – Various elements, including: <sup>7</sup> <ul style="list-style-type: none"> <li>• Murray Futures Program – Lower Lakes (up to \$200 million)</li> <li>• Murray Futures Program – Wetlands and Pump Relocation (up to \$100 million)</li> </ul>	Cwlth	Cwlth in-principle commitment of up to 420 (subject to due diligence)	420							unknown
	ACT State Priority Project <sup>7</sup>	Cwlth	Cwlth in principle commitment of up to 85 (subject to due diligence)	85							unknown
	Warren to Nyngan Pipeline election Commitment (election commitment was announced, however Minister is yet to approve expenditure)	Cwlth	Cwlth in-principle contribution of 12	12							unknown
	Private Irrigation Infrastructure Operators program, including: <sup>7</sup> <ul style="list-style-type: none"> <li>• up to \$650 million in NSW</li> <li>• up to \$110 million in the Riverland of SA</li> </ul>	Cwlth	Notional funding of up to 760 (subject to due diligence)	760							unknown
	Restoring the Balance in the Murray-Darling Basin – Australian Government Water Purchase Program (including State Priority Project commitments for purchasing in Qld and SA)	Cwlth	2973.5	2973.5							2016–17
	Assist Water for Rivers recover 215 ANF in the Snowy River by 2012 <sup>8</sup>	Cwlth	50	50							2012
	Menindee Lakes Upgrade	Cwlth	400	400							To be

Lead Jurisdiction	Project Title and Description (type of initiative)	Funding source	Total funding announced (\$m)	Funding by source (\$m)							Expected date completed
				Cth	Qld	NSW	Vic	ACT	SA	Other	
	Lithgow Recycled Water Project Election Commitment (requires further Ministerial approval before project commences) <sup>9</sup>	Cwlth/ Lithgow City Council	Cwlth in-principle commitment of 4	4							determined 2011
MDBC	Pilot Market Purchase Measure (Market-based)	TLM <sup>h</sup>	21.6	6.16		3.56		2.00	9.9 (MDBC)		Completed; pending Council approval for listing on EWR December 2008
	RiceGrowers' Association On-Farm Water Efficiencies_A1 (On-farm Infrastructure)	TLM <sup>h</sup>	3.1					0.15	2.98 (MDBC)		30/6/09
	Environmental Water Purchase Project (Market-based)	TLM <sup>h</sup> (funding not yet allocated)	90								30/6/09
	Sustainable Dairy Farms On-farm Reconfiguration Demonstration (Market-based)	TLM <sup>h</sup> (funding not yet allocated)	7.2								30/6/09
	Ricegrowers' Association On-Farm Efficiency Project Round 2 (On farm Infrastructure)	TLM <sup>h</sup> (funding not yet allocated)	30								30/6/09
<b>Total</b>			<b>9331</b>								

**Notes on Table 2:**

<sup>1</sup> Average annual yield is 10.6 GL.

<sup>2</sup> The total GMW Water Recovery Package is \$93 million. This includes the GMW Reconfiguration Project (\$50 million) and the Sales Deal (\$43 million - see table 1).

<sup>3</sup> Total water savings for the Lake Mokoan Decommissioning project includes 27 GL for TLM (\$39.2 million) and 19 GL for Water for Rivers (\$38.1 million). Other portions of investment are being funded by the Victorian Government.

<sup>4</sup> Total water savings for the Shepparton Modernisation project includes 30 GL for TLM (22.3 GL High reliability and 7.7 GL Low reliability) for an investment of \$85.58 million. The balance of savings and funds are for the Victorian Government.

<sup>5</sup> Total water savings are expected to be 103 GL, of which 20GL is for new development. 83 GL is for increasing environmental flows and is to be transferred to the Environmental Water Reserve. Part of the 83 GL will be delivered to the Glenelg River catchment (not in the MDB) with the volume being in proportion to the Glenelg Basin's contribution to the Wimmera-Mallee system (about 40 per cent). The full cost of the pipeline project is \$688 million of which \$554 million is the proportional cost of saving 83 GL for the environment.

<sup>6</sup> Total project water savings for NVIRP Stage 1 is 225 GL LTCE with 75 GL for the environment, 75 GL for irrigators and 75 GL for Melbourne. The project's budget is \$1,000 million. Budget contributions are \$300 million. Melbourne Water, \$100 million for GMW and \$600 million from Victorian Government.

<sup>7</sup> At COAG in March and July 2008, the Commonwealth agreed in principle to provide funds for significant water projects in Murray-Darling Basin States, subject to a due diligence assessment of the social, economic, environmental, financial and technical aspects of the projects. These projects will improve the efficiency of irrigation water management and use, and will assist irrigation communities to adjust to a future with less water. The amount of environmental water to be recovered will not be known until the projects are through due diligence and agreed with the States.

<sup>8</sup> The commitment of \$50 million by the Commonwealth is additional to the \$75 million already committed to Water for Rivers by the Commonwealth. Savings from this commitment will contribute to Snowy River increased flows.

<sup>9</sup> Environmental water savings to be provided to the Commonwealth Government from the Lithgow project will be sourced from the MDB.