



Department of
Primary Industries
Water

Resource Assessment & Allocations

NSW Murray Valley
July 2016

Murray – Shared Resource

- NSW and Victoria share storage airspace (50:50)
- NSW shares storage inflows (plus Kiewa River) (50:50)
- NSW and Victoria have own tributary inflows
- NSW and Victoria must equally meet SA share
- MDBA operates the Murray River on behalf of States

Legislative Framework

- Commonwealth Water Act 2007 (Basin Plan)
 - Murray Darling Basin Agreement

- Water Management Act 2000 (Water Sharing Plans)
 - Water Sharing Plan for the NSW Murray and Lower Darling Regulated River Water Sources
 - Water Sharing Plan for the Lower Murray Groundwater Source

Current Entitlements

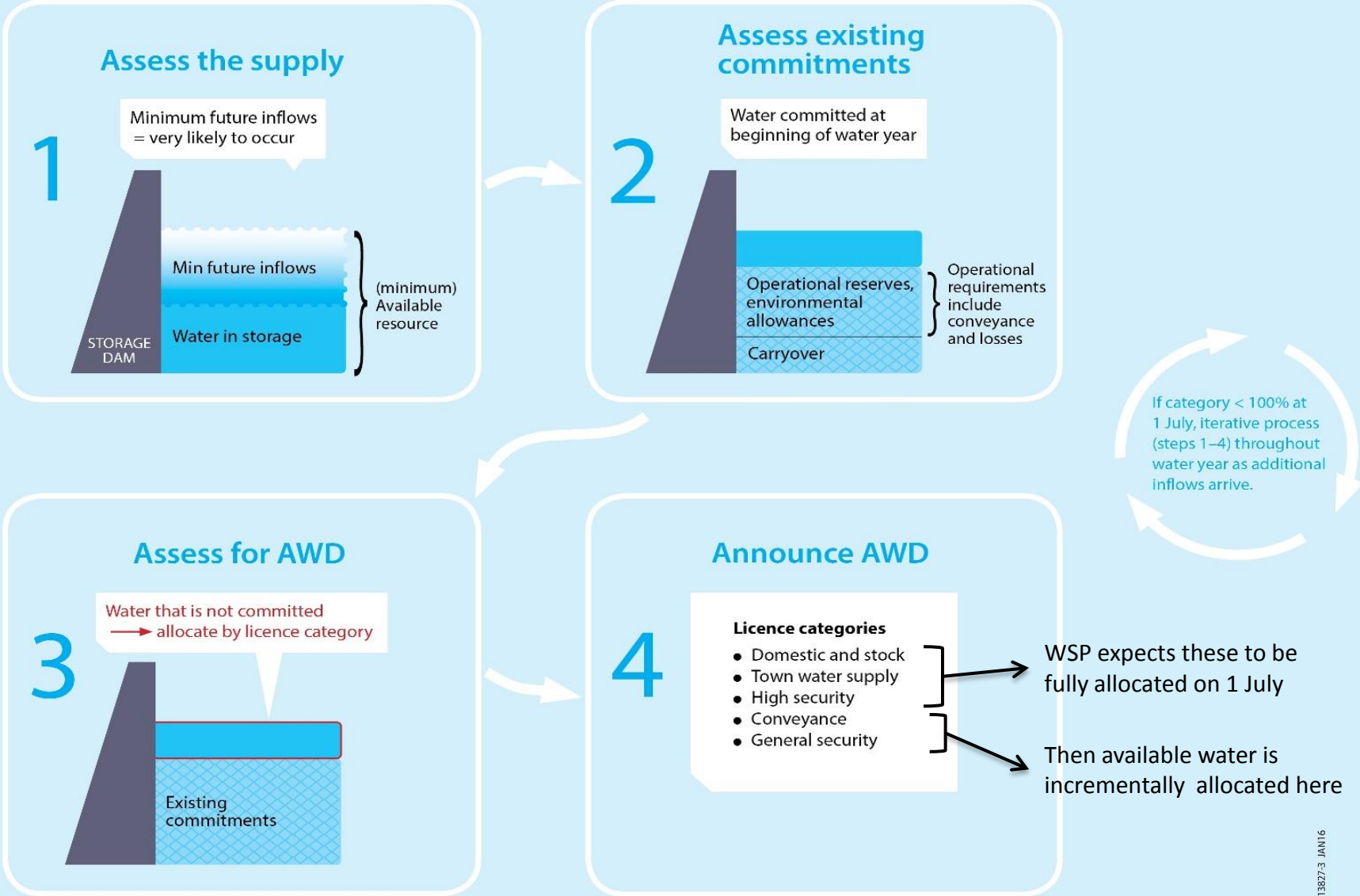
➤ NSW Murray Regulated River

– towns	36,700 shares
– domestic and stock	17,000 shares
– conveyance	330,000 shares
– high security	189,700 shares
– high security – subcategory (community and education, research)	1,000 shares
– general security	1,674,000 shares
– supplementary	252,500 shares

100% allocation equates to 1 ML per share

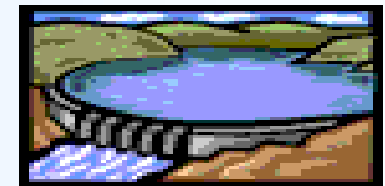
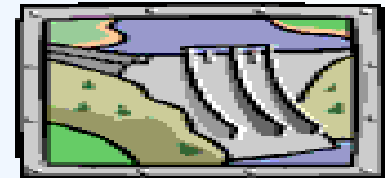
<http://www.water.nsw.gov.au/water-licensing/registers>

Overview of how water is allocated



Step 1: Assess the supply – in storage / in transit

- NSW share of active volume in Dartmouth, Hume, Menindee and Lake Victoria
- Usable volume in downstream (en-route) storages
- Useful flows within channel (excludes orders/diversions, supplementary access flows)



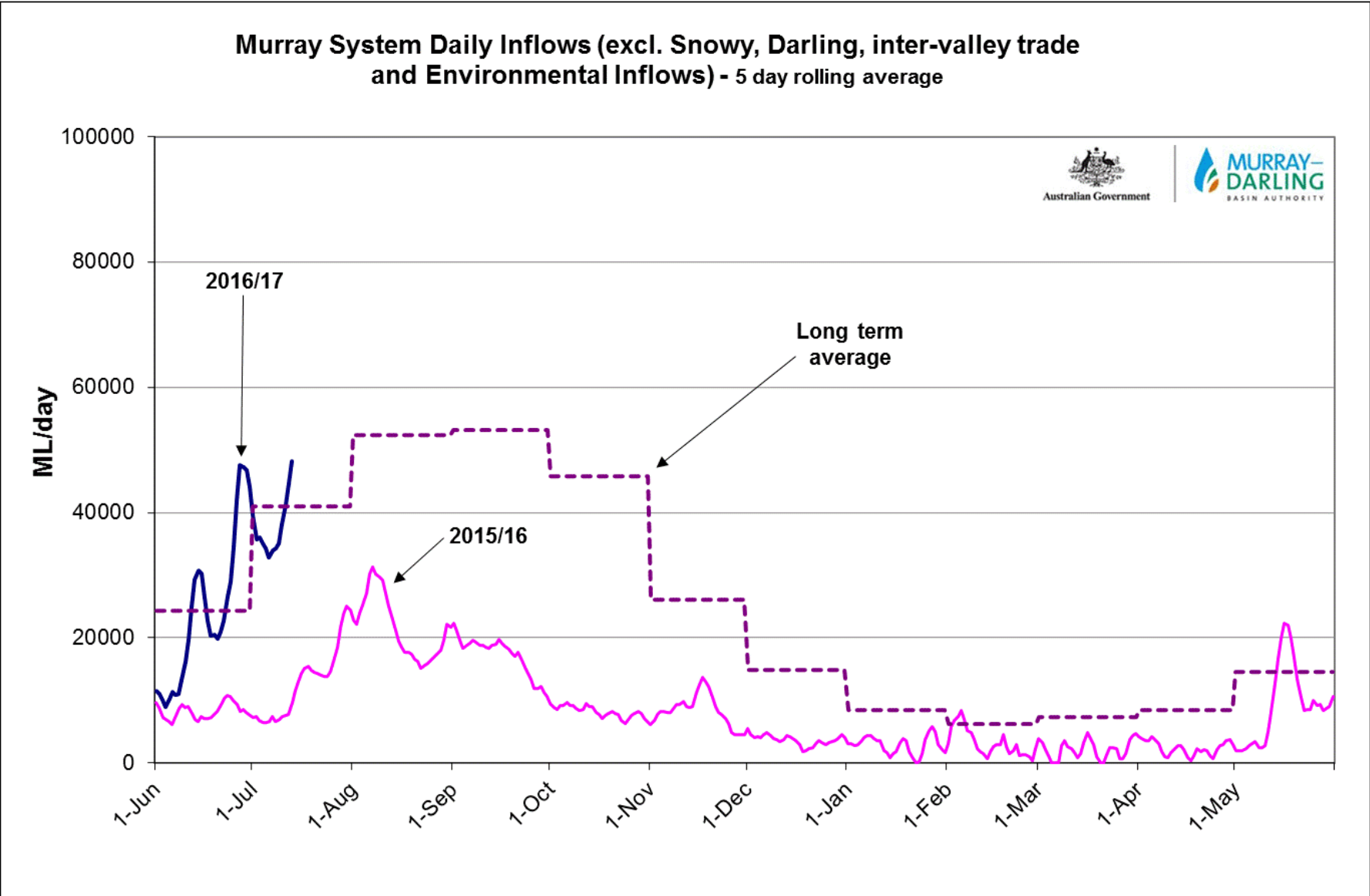
Step 1: Assess the supply – future resources

- Conservative estimate of NSW share of future inflows for rest of year
 - Into upper storages and into river from tributaries
 - Minimum estimate based on about 110 years of historical records – pre Millennium Drought
- Snowy assured storage inflow
 - Required Annual Releases (RAR) – nominally 1062 GL.
 - Timing uncertain
- Calculated NSW inflow recession (from any recent rainfall)
- Murrumbidgee IVT balance

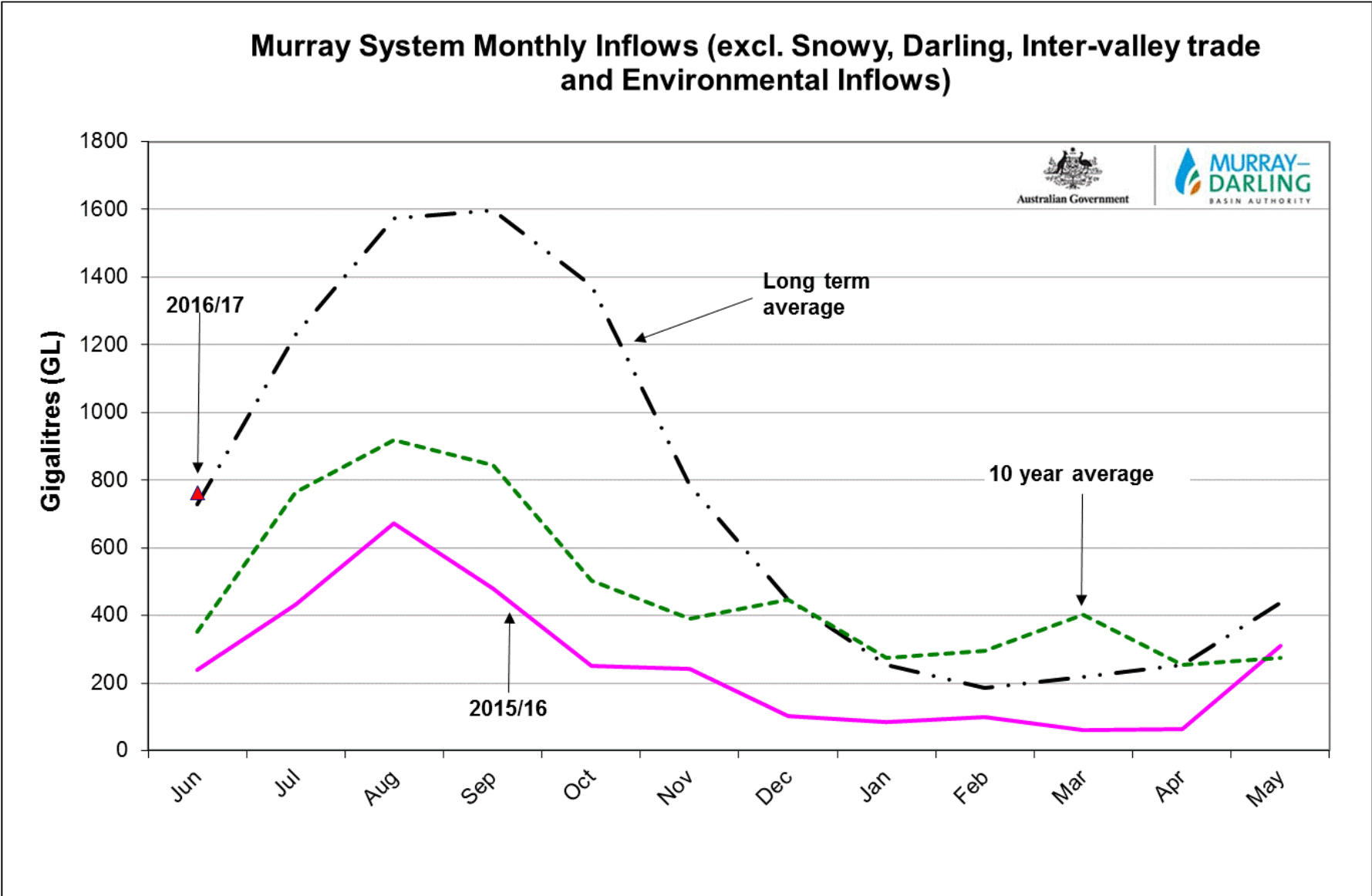
Step 2: Assess existing commitments

- Water subject to Agreement, WSP rules and already committed
 - Already allocated NSW volumes
 - NSW share of SA Entitlement Flow (dilution + non-dilution)
 - Planned Environmental Water
 - NSW share of reserves (e.g. for conveyance, CHWN)
 - NSW share of adjustments due to trade, meter reading updates, internal spills
- System Losses
 - Evaporation
 - Transmission
 - Operational (e.g. rain rejections, operator experience)

Murray Inflows (excluding Snowy) - Daily



Murray Inflows (excluding Snowy) - Monthly



Reservoir Storages

as of 20 July 2016

Murrumbidgee

- Burrinjuck 683 GL (66%)
- Blowering 1168 GL (71%)

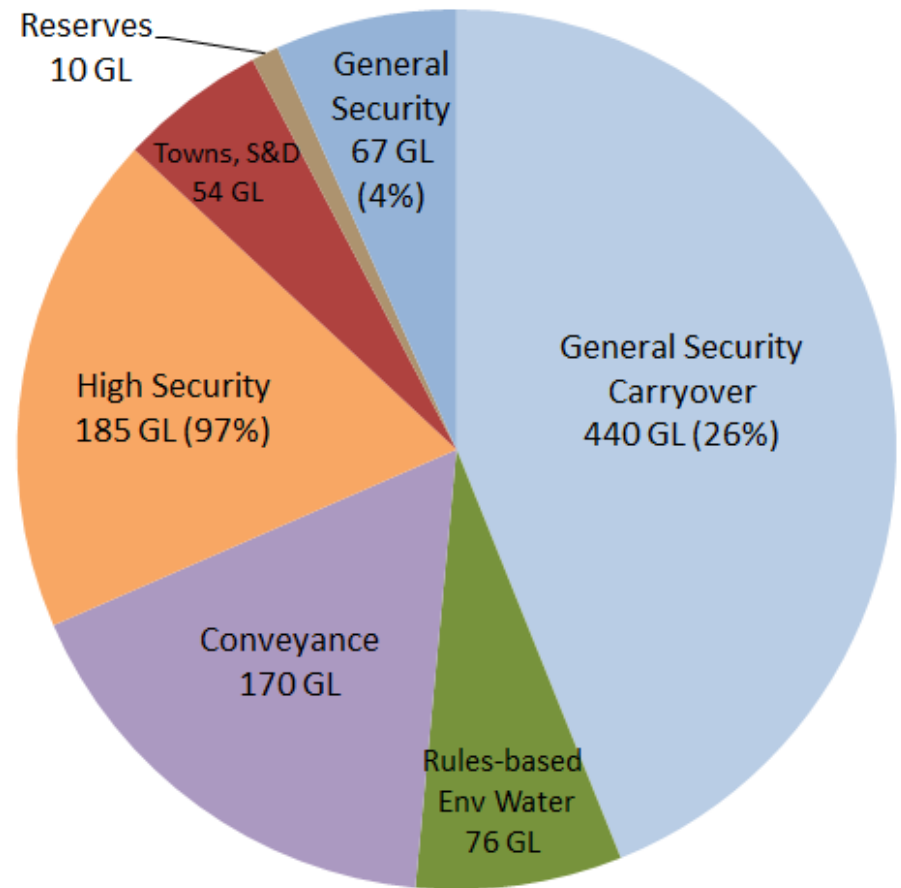
Murray

- Hume 1,568 GL (52%)
- Dartmouth 1,916 GL (50%)
- Lake Victoria 576 GL (85%)
- Menindee Lakes 95 GL (5%)
(combined storage)

15 July 2016 Announced Allocations

Total Allocations

- Town Water, D&S 100%
- High Security 97 %
- General security 4%
- Average GS carryover 26%
- Supplementary 100%

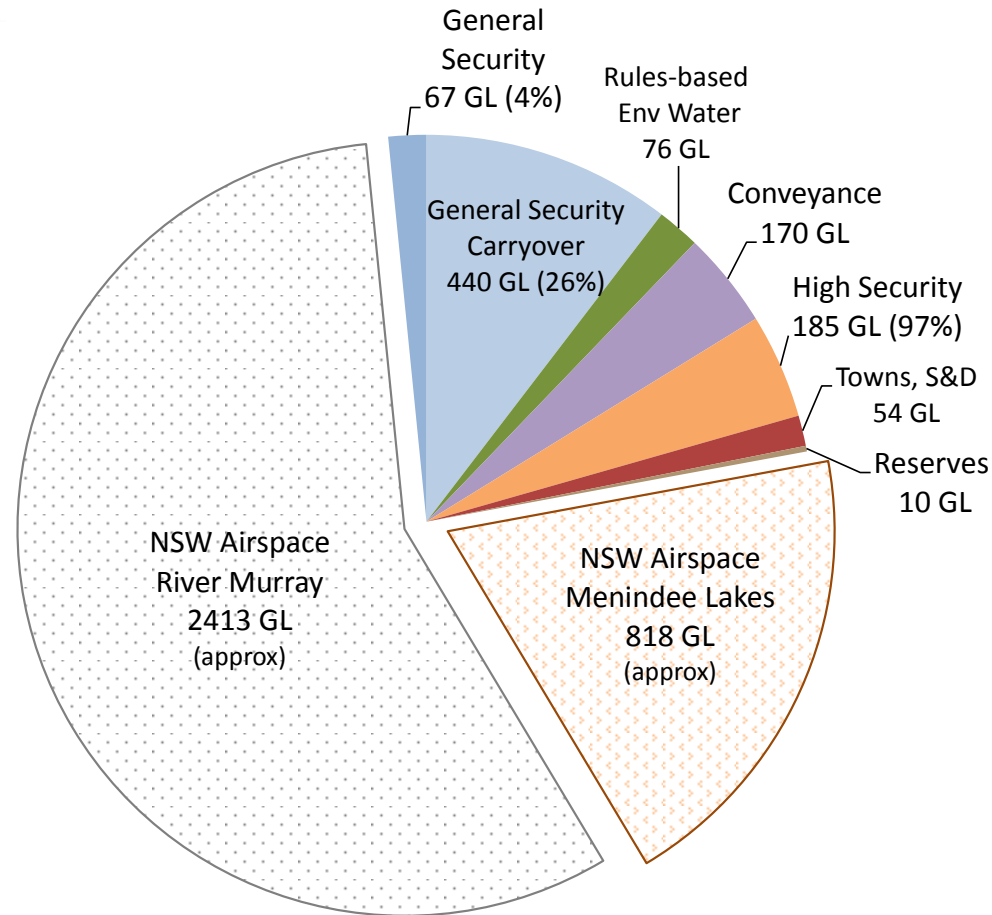


Total = 1,002 GL

15 July 2016 Announced Allocations

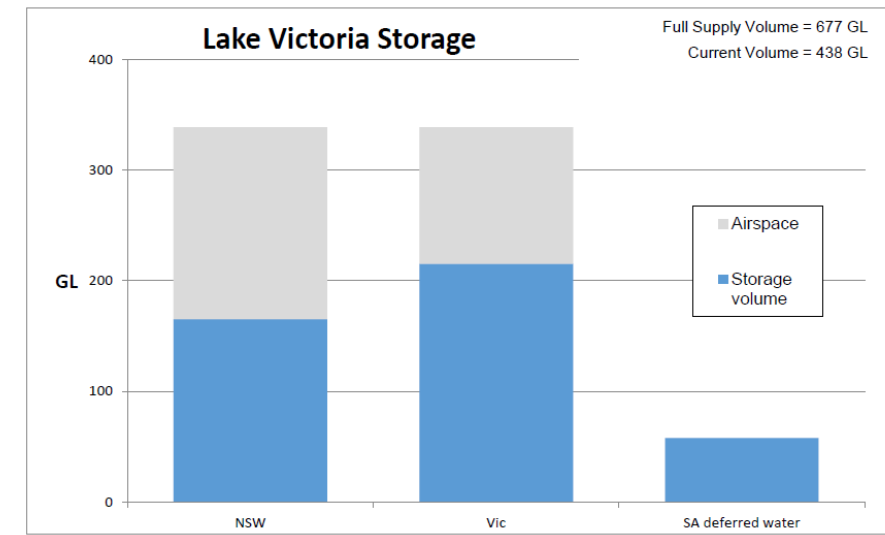
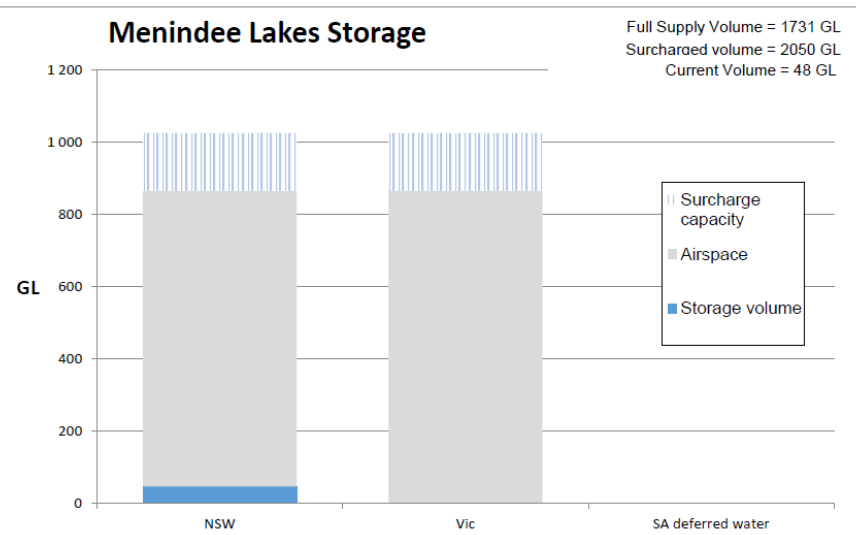
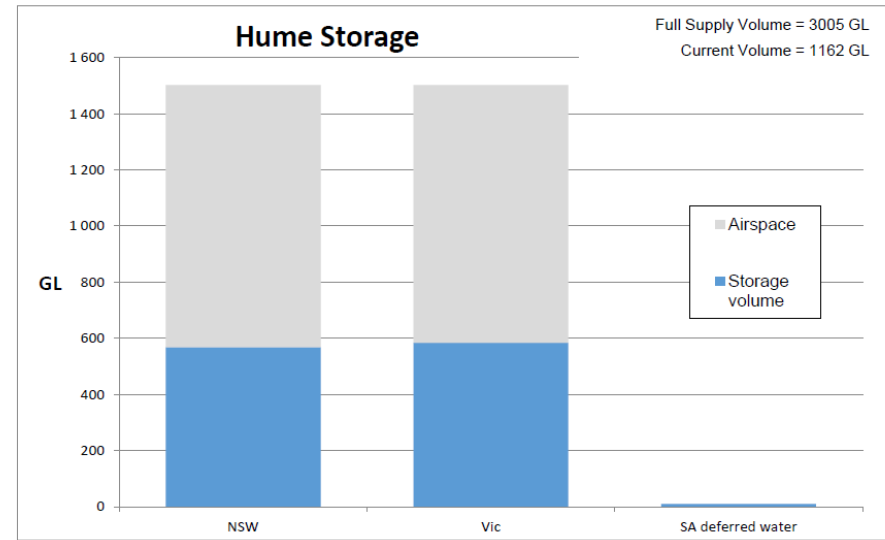
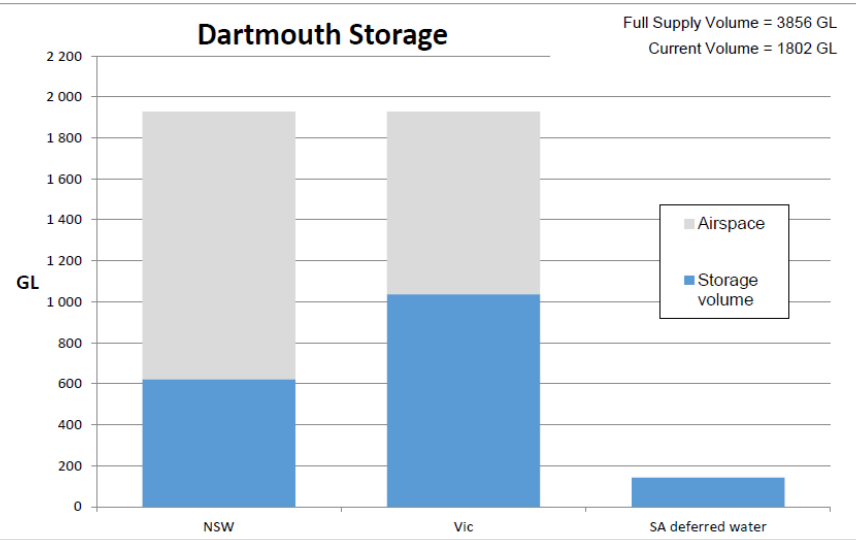
Total Allocations

- Town Water, D&S **100%**
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- Average GS carryover **26%**
- Supplementary **100%**



Total = 1,002 GL
(excludes airspace)

State shares in MDBA Storages at end of June 2016



State shares includes system reserves, environmental, town and irrigation entitlements.

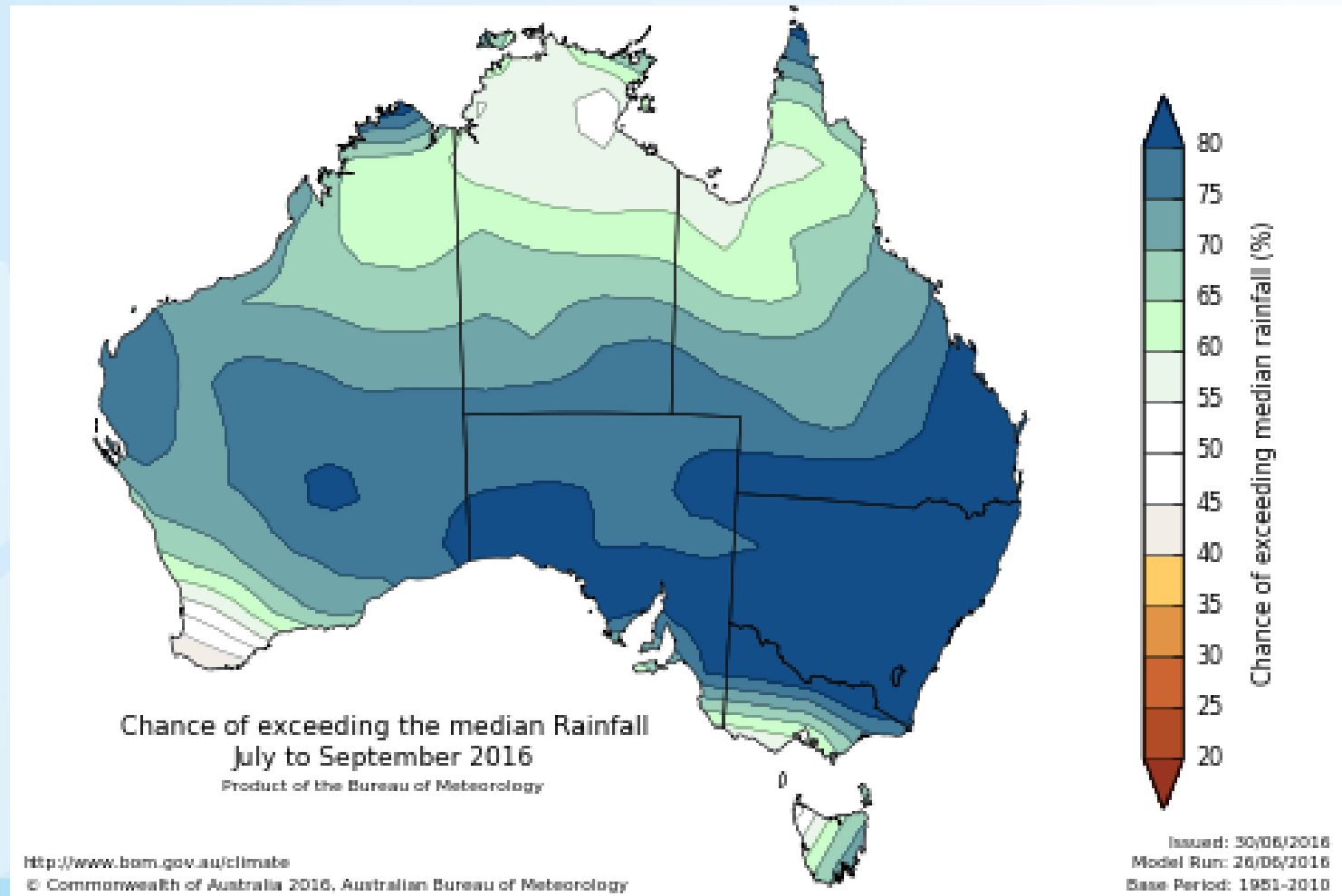
Menindee Lakes graph includes surcharge volume when applicable.

NSW Murray Resource Distribution

(as at mid July 2016)

<u>NSW Share</u>	<u>1002 GL</u>	
Carryover	440 GL	(estimated)
Environmental	76 GL	(B-M, Wakool, ECA, AEA)
Towns, Stock, Domestic	54 GL	(100% allocation)
Conveyance	170 GL	(for 4% GS)
Reserves	10 GL	(CHWN 2017-18)
High Security	185 GL	(97% allocation)
General Security	67 GL	(4% allocation)

Seasonal Rainfall Outlook : July to September



Source : Bureau of Meteorology

Key Changes in Water Management

Year	Water Management Changes	
1996	MDBMC Cap on diversion limits	Maximum 100% GS allocations
		No re-allocation of underuse
1997	Environmental Flow Rules	Translucent
		Transparent
		ECA
1998/99	Carryover introduced	
2004	Water Sharing Plan commenced	
2006/07	New record minimum inflows & River Losses	
2014	Revision of Minimum inflows (back to 2004)	
2016	Replacement Water Sharing Plan (WSP)	
2019	<i>Water Resource Plans (WRP)</i>	

Key messages

- Consistency
- Conservatism
- Confidence