

## 2015-16 reporting to the MDBA on s71.

### 2015-16 Conditions

Based on Canberra Airport readings the ACT experienced a near average rainfall for the period 2015-16 (602.6 mm). The long term average rainfall at the Canberra Airport gauge is 618 mm. However, rainfall can be quite localised throughout the ACT with readings taken 4.7 km away in Ainslie receiving an additional 76 mm, 12.1 km away in Melba receiving 90 mm and 13.5 km away in Tuggeranong received an additional 134 mm as compared to the official gauge at the airport during the same period.

### Diversions and Returns

The ACT recorded a total net surface water diversion of 20.2 GL during 2015-16. This result provides an increase in water use within the Territory of 3.1 GL as compared to 2014-15. The 20.2 GL net consumed represents approximately half of the water available to the ACT under the current 40.5 GL Sustainable Diversion Limit. Note, the ACT has contributed a further 2 GL in 2015 to The Living Murray Initiative which needs to be reflected in MDBA accounting.

Surface Water		Annual Entitlement		Annual Diversion	
		GL	GL	GL	%
<b>Diversions</b>	Icon Water diversions		71.000	50.604	71
	Private diversions		1.529	1.363	92
	LBG diversions		1.467	1.186	77
	Combined SW/GW diversions		2.111	0.990	41
	Commonwealth diversions		1.369	1.186	87
	<b>Total Diversion</b>		<b>76.107</b>	<b>54.143</b>	<b>71</b>
<b>Returns</b>	LMWQCC return			30.545	
	QSTP return			3.380	
	<b>Total Returns</b>			<b>33.925</b>	
<b>Net Diversion</b>	(Diversions – Returns)	<b>40.5</b>		<b>20.218</b>	<b>42</b>
<b>Interceptions</b>	Runoff dams	1.0		1.0	100
	Commercial plantations	11.0		6.5	59
<b>Baseline Diversion Limit</b>		52.5			
<b>Sustainable Diversion Limit</b>		<b>49.6</b>		<b>27.760</b>	<b>58</b>

The table above shows the ACT's SDL of 49.6 GL, a slight increase from 47.6 GL last reported, to account for the 2.0 GL contributed to The Living Murray Initiative and the 4.9 GL of Shared Reduction amount. This adjustment results in an annual permitted take of 54.5 GL.

The ACT recorded a total net groundwater diversion of 0.841 GL consumed during the 2015-16 period. This result provides an increase in groundwater use within the territory of 0.215 GL as compared to 2014-15. The 0.841 GL consumed reflects the ACT's good management

practices to controls the consumption of available water in the ACT to 27% under the 3.16 GL Sustainable Diversion Limit.

<b>Groundwater</b>		<b>Annual</b>	<b>Annual</b>	<b>%</b>	
		<b>Entitlement</b>	<b>Diversion</b>		
		<b>GL</b>	<b>GL</b>	<b>GL</b>	
<b>Diversions</b>	Private diversions		0.913	0.636	70
	Commonwealth diversions		0.566	0.205	36
	<b>Total Diversion</b>		<b>1.479</b>	<b>0.841</b>	<b>57</b>
<b>Baseline Diversion Limit</b>			1.70		
<b>Sustainable Diversion Limit</b>			<b>3.16</b>	<b>0.841</b>	<b>27</b>

### Commonwealth water

A total of 1.369 GL of Commonwealth surface water entitlements are from the catchments of Central Molonglo (LBG), Paddys and Ginninderra. The Commonwealth surface water diversion was 1.186 GL or 87% against the Commonwealth entitlements available. In particular, the volume of Commonwealth surface water drawn from Lake Burley Griffin was 1.185 GL, or 95% of the 1.245 GL entitlements issues within the Central Molonglo catchment. The Commonwealth groundwater entitlements total 0.566 GL and Commonwealth groundwater use was .205 GL.

Note: the ACT considers that no allocation of Commonwealth surface water or groundwater was originally apportioned to the ACT SDL and appropriate volumes need to be added to the ACT's SDL.

### Entitlements

The ACT's Access Canberra (previously EPA) is now responsible for the management of all entitlements within the ACT after the responsibility to manage Commonwealth entitlements transferred from the National Capital Authority to the Access Canberra during 2014-15. This 2015-16 report cycle is the first complete year Access Canberra has managed and reported on all entitlements for a reporting period. There was no change in the number or volume of entitlements held by Icon Water and a small reduction of .999 GL of private entitlements across surface water, groundwater and combined surface/groundwater entitlements was recorded as compare to 2014-15. It must be noted that 16 surface water, 20 groundwater and 6 surviving allocation entitlements are owned but the owners have no licence to use the 1.1 GL of water associated with those entitlements.

There are no further surviving allocations entitlements (combined surface water/groundwater) to be issued. These entitlements are being phased out on transfer or sale of property. The change during the 2015-16 included a reduction of four surviving allocations (15.5 ML) which now total 26 in number.



Entitlements		Entitlements held for 2015-16	Entitlement volume GL
<b>Surface water</b>	Icon Water entitlements	7	71.00
	Private entitlements	69	1.529
	Commonwealth entitlements	8	1.369
	<b>Total Entitlements</b>	<b>84</b>	<b>73.989</b>
<b>Groundwater</b>	Icon Water entitlements	0	0
	Private entitlements	153	0.925
	Commonwealth entitlements	6	0.566
	<b>Total Entitlements</b>	<b>169</b>	<b>1.491</b>
<b>SW/GW</b>	Private entitlements	26	2.38
	<b>Total Entitlements</b>	<b>26</b>	<b>2.38</b>

**Trade**

There was 1 surface water entitlement totalling 3 ML and 3 groundwater entitlements totalling 20 ML traded during 2015-16. The trade of surface water increased the number of entitlements issued within the ACT from 79 to 83. These 3 entitlements increased the, however, the entitlement volume attached to those decreased by 87 ML.

Trade (within ACT)		Entitlements exchanged 2015-16	Entitlement volume GL
<b>Surface water</b>	Icon Water	0	0
	Private	+1	0.003
	Commonwealth	N/A	N/A
	<b>Entitlements exchanged</b>	<b>+1</b>	<b>0.003</b>
<b>Groundwater</b>	Icon Water	0	0
	Private	+3	0.002
	Commonwealth	N/A	N/A
	<b>Entitlements exchanged</b>	<b>+3</b>	<b>0.020</b>
<b>SW/GW</b>	Private	-4	-0.0015
	<b>Entitlements exchanged</b>	<b>-4</b>	<b>-0.0015</b>

There was no interstate water entitlements traded during the 2015-16 period.

<b>Interstate Trade</b>		<b>Entitlements exchanged 2015-16</b>	<b>Entitlement volume</b>
			GL
<b>Surface water</b>	Icon Water	0	0
	Private	0	0
	Commonwealth	N/A	N/A
	<b>Entitlements exchanged</b>	<b>0</b>	<b>0</b>
<b>Groundwater</b>	Icon Water	0	0
	Private	0	0
	Commonwealth	0	0
	<b>Entitlements exchanged</b>	<b>0</b>	<b>0</b>

### Storages

The capacity of the ACT's four dams, Googong, Corin, Bendora and the Cotter Dam, combines to a total of 277.841 GL. With the increase in storage capacity at Cotter Dam and receiving near average rainfall the storage was recorded on 30 June 2016 at 229,663 ML which equates to 83% storage capacity.

### ACT Model

Water restrictions have not been imposed throughout the years 2011-2015 and there were also no water restrictions imposed during 2015-16 period. Therefore, the ACT's mandatory regime of permanent water conservation measures continues to apply.

The model output, climate adjusted cap and net abstraction have been reliable throughout the last four reporting cycles. This demonstrates that the ACT continues the practice of good water planning and water management by using only 27% of allocated water within the ACT valley. It also demonstrates that the cultural shift in the behaviour of the ACT community continues to manage a changing climate.

### Held Environmental Water

The ACT did not hold any environmental water during the 2015-16. However, it must be noted that the ACT's contribution to The Living Murray (2 GL) and the SDL Shared Reduction Amount (4.9 GL) were fulfilled by providing water entitlements to the Commonwealth.

### Planned Environmental Water

Environmental flows are a mandatory requirement under entitlement licence held by Icon Water in the Cotter catchment to enable flushing of sediment from pools between Corin Dam and Bendora Dam and between Bendora Dam and the Cotter Dam. An environmental flow of 1.1 GL was planned and released over a one week period in July 2014 between and throughout these two reaches.

Similarly, Icon Water is required under licence to provide environmental baseflows from the four dams to replicate natural flows throughout the year. The Icon Water licence stipulates that 12.8 GL of environmental flow be released from Corin Dam during 2015-16 to maintain and improve river health, 19.1 GL from Bendora Dam, 15.0 GL from Cotter Dam and 4.2 GL from Googong Dam. For 2015-16 Icon Water meet all environmental watering requirements under licence.

The major change throughout the ACT is -

- An additional 3,284 ML has been drawn from Googong Dam, however the 6,574 ML in 2014-15 was a low point as compared with 2013-14 volume of 9,427
- The Icon water use, which Googong is a major part of, increased to 50,604 ML from 47,447 in 2014-15
- There were small increases of 225 ML in the Private Surface Water Irrigation Diversions for the 2015-16 period
- There was also an increase of 667 ML in SW Diversions from Lake Burley Griffin to 1,186 ML but this follows a low of 518 ML in 2014-15.