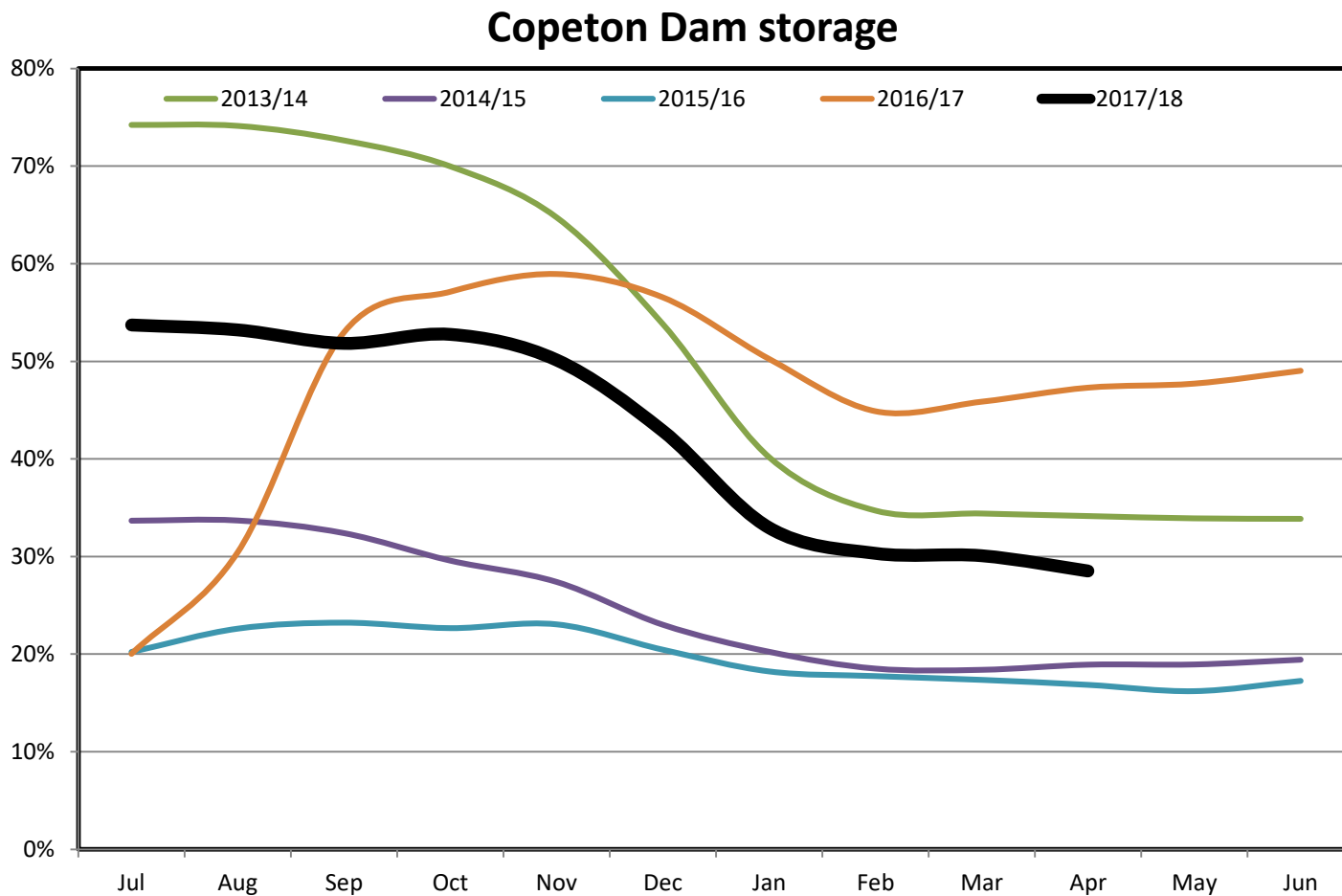


# Water Operations Report

Gwydir Valley

June 2018

# Dam storages



# Supplementary access



2017/2018 Supplementary Event 1 - July 2017	
Event Volume Calculations	ML
Gwydir @ Gravesend 30 June 2017 to 5 July 2017	9,763
Total Flow	9,763
Total Available Share	ML
Total Flow Volume	9,763
3T Rule (6 days)*	2,057
Fill Tarrelaroi Weir	2,000
D/S Orders/Requirements (riparian flows)	1,860
Available flow to be shared	3,846
50% Consumptive share	1,923
Previously approved	1,751
Additional Available Supplementary water	172
* not all days full 3T	

# Supplementary access



2017/2018 Supplementary Event 2 - Oct 2017	
Event Volume Calculations	ML
Gwydir @ Gravesend 13 Oct 2017 to 16 Oct 2017	22,825
Total Flow	22,825
Total Available Share	ML
Total Flow Volume	22,825
3T Rule (4 days)*	2,000
Fill Tarrelaroi Weir	0
D/S Orders/Requirements (riparian flows)	4,332
Available flow to be shared	16,493
50% Consumptive share	8,246
Previously approved	8,247
Additional Available Supplementary water	-1

# 2017/18 water availability for Gwydir Valley



Licence category	Share Component	Balance	AWD volume	Carryover in	Allocation assignments in	Allocation assignments out	Usage
DOMESTIC AND STOCK	2,506	1,210.1	2,506	0	0	0	1295.9
DOMESTIC AND STOCK [DOMESTIC]	88	87	88	0	0	0	1
DOMESTIC AND STOCK [STOCK]	230	132.8	230	0	0	0	97.2
E C A	45,000	75,330	7,930	70,410	0	0	3,000
LOCAL WATER UTILITY	3,836	1,661.9	3,836	0	45.6	20	2,219.7
REGULATED RIVER (GENERAL SECURITY)	509,665	110,718.3	89,649.8	304,089.6	83,118.1	73,984.7	290,837.2
REGULATED RIVER (HIGH SECURITY)	20,199.9	924.4	20,199.9	0	432	9,611	10,085.6
REGULATED RIVER (HIGH SECURITY) [RESEARCH]	60	60	60	0	0	0	0
REPLENISHMENT	4,000	0	4,000	0	0	0	4,000
SUPPLEMENTARY WATER	181,397.5	217,885.2	226,748.4	0	10,613.1	10,613.1	8,862.4
<b>GRAND TOTAL</b>	<b>766,982.4</b>	<b>408,009.7</b>	<b>355,248.1</b>	<b>374,499.6</b>	<b>94,208.8</b>	<b>94,228.8</b>	<b>320,399</b>

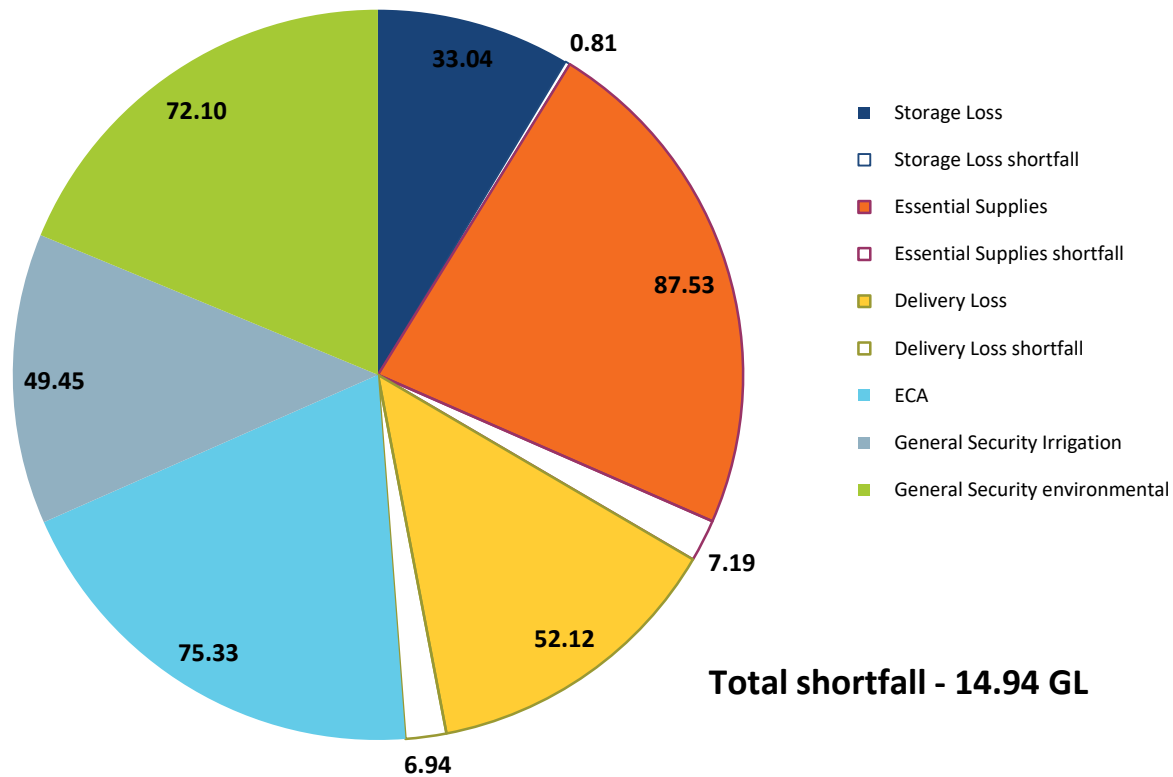
General security available water determination		
Date	AWD ML/Share	Total %
7-Aug-17	0.1102	11.02%
7-Sep-17	0.0057	11.59%
7-Nov-17	0.0452	16.11%
7-Dec-17	0.0106	17.17%
10-Jan-18	0.0023	17.40%
07-Feb-18	0.0019	17.59%

# 2017/18 water availability for Gwydir Valley



## Copeton Dam - storage breakdown (GL)

April 2018      388.5 GL    27.5%

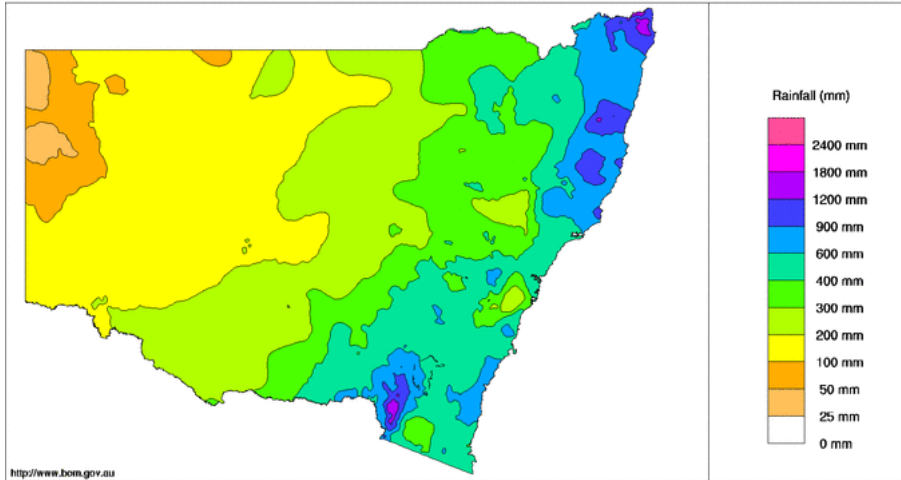


# Resource assessment

Gwydir Valley resource assessment - Copeton Dam	30-Apr-18	31-Mar-18	28-Feb-18	31-Jan-18	31-Dec-17	30-Nov-17	31-Oct-17	30-Sep-17	31-Aug-17	31-Jul-17	13-Jun-17
Storage volume	369.58	390.86	394.18	429.84	564.90	663.93	699.67	687.18	705.92	712.79	633.67
less dead storage	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
less Storage loss	33.04	34.19	34.36	36.19	42.36	46.36	47.72	47.25	47.96	48.21	45.17
less Essential supplies	87.53	89.65	91.48	94.72	94.72	94.72	94.72	89.97	94.72	94.72	93.53
less delivery loss	52.12	58.10	58.10	68.98	98.73	120.66	128.59	122.91	129.98	131.51	114.22
less ECA	75.33	75.33	75.33	75.33	75.24	75.14	74.66	72.62	72.62	75.36	70.41
less general security	121.55	133.59	134.91	154.62	253.85	327.05	353.98	354.42	360.64	362.99	310.33
Allocation %	0.00%	0.00%	0.00%	0.19%	0.23%	1.06%	4.52%	0.00%	0.57%	11.02%	0.00%

# 9 month rainfall

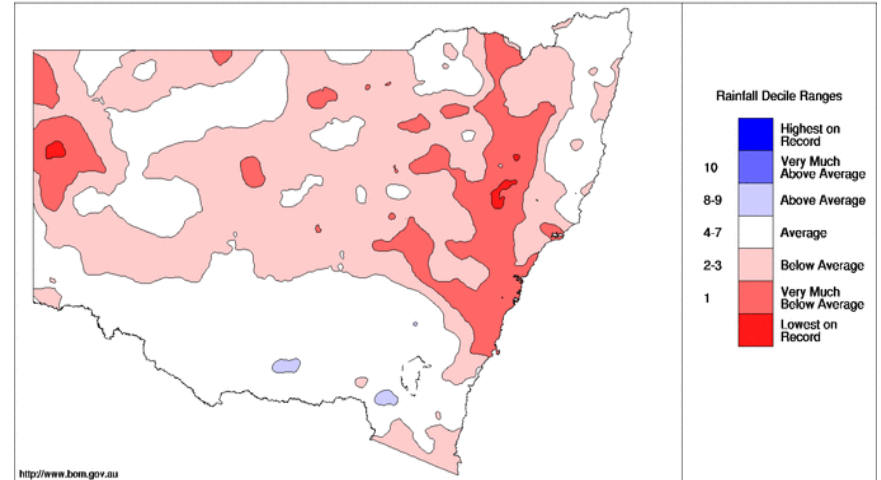
New South Wales Rainfall totals (mm) 1 July 2017 to 31 March 2018  
Australian Bureau of Meteorology



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Issued: 27/04/2018

New South Wales Rainfall Deciles 1 July 2017 to 31 March 2018  
Distribution Based on Gridded Data  
Australian Bureau of Meteorology



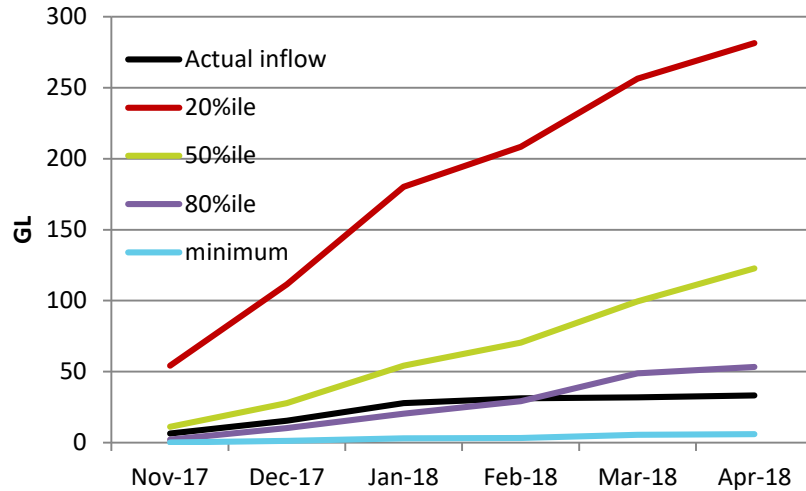
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Issued: 27/04/2018



# Copeton Dam inflows

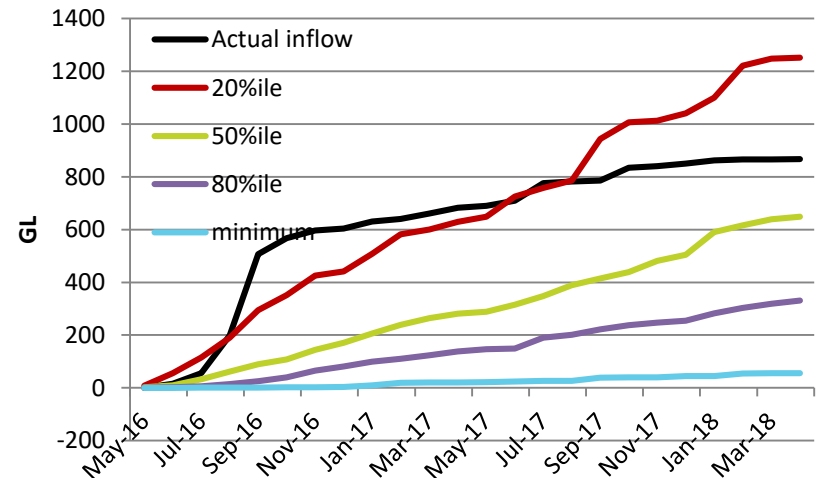
**Copeton Past 6 months cumulative inflow/statistical inflows**



Inflows are consistent with rainfall over the past 6 month period. Actual inflow for the 6 months is 33 GL below 80<sup>th</sup> percentile inflows (53 GL); while the minimum is 6 GL.

Inflows are consistent with rainfall over the past 24 month period. Actual inflow for the 24 months is 868 GL just above 40<sup>th</sup> percentile inflows (766 GL) while the minimum is 55 GL.

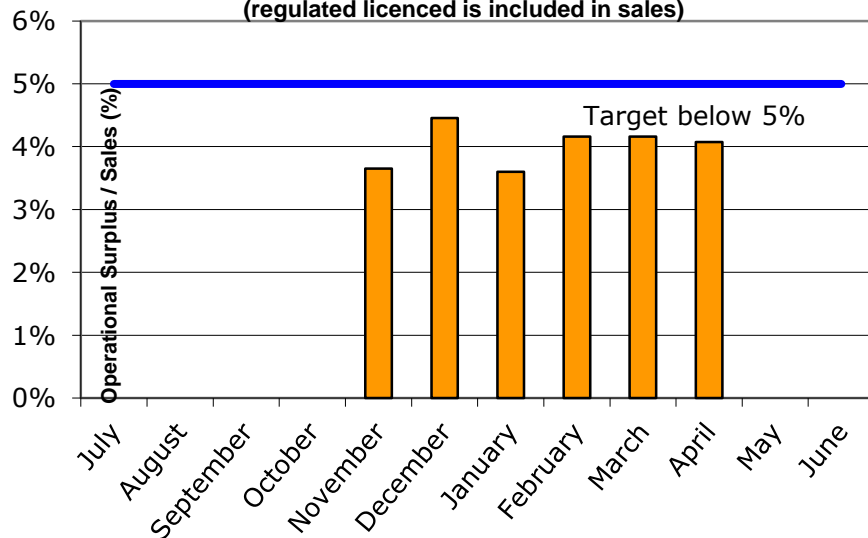
**Copeton Past 24 months cumulative inflow/statistical inflows**



# Operational loss

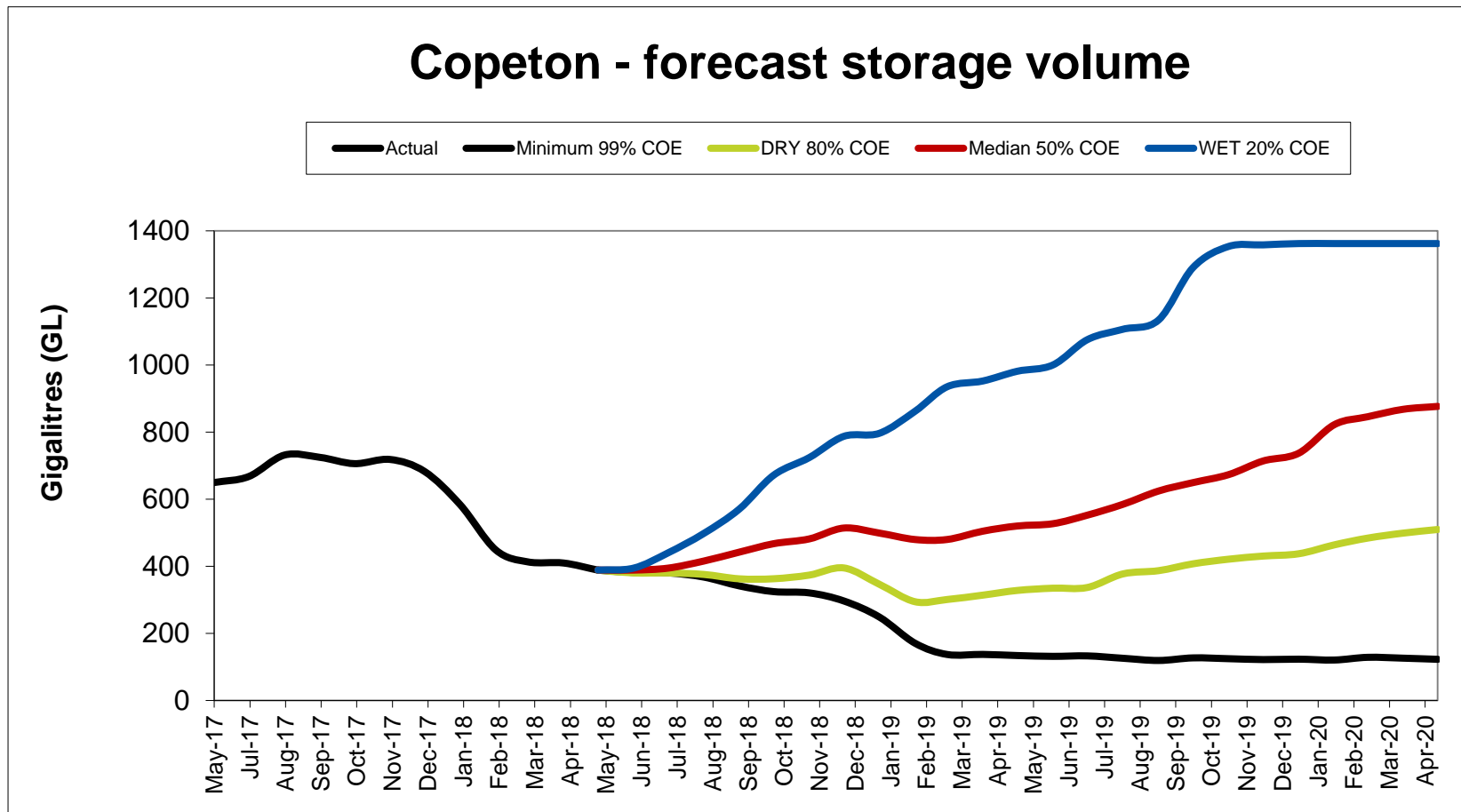
Operational surplus is water above that which could reasonably be expected (flow about 20 ML/day) to pass the last extraction point on each given river/creek being supplied with regulated flow (dam releases and controlled tributary inflows – not supplementary flows).

**Gwydir River - water delivery operational surplus vs sales - 2017-18 cumulative %**  
(regulated licenced is included in sales)



Gwydir cumulative totals				
	Sales + environmental delivery	Operational surplus	Actual	Target
July	2,470	0	0%	5%
July-Aug	13,000	0	0%	5%
July-Sep	22,730	0	0%	5%
July-Oct	43,400	0	0%	5%
July-Nov	80,305	2,932	4%	5%
July-Dec	157,228	7,002	4%	5%
July-Jan	261,828	9,424	4%	5%
July-Feb	286,390	11,919	4%	5%
July-Mar	286,390	11,919	4%	5%
July-Apr	292,722	11,919	4%	5%
July-May			0%	5%
July-Jun			0%	5%

# Storage forecast



**Expected deliveries of 290 GL throughout 2017/18.**

**Expected deliveries of 70 GL throughout 2018/19 under minimum and dry conditions.**

# System operations plan

On completion of environmental deliveries throughout May, no further water will be delivered until mid/late July when environmental deliveries from ECA and commonwealth accounts is likely to be requested.

Releases for high security will continue in consultation with individual users.

A partial block release strategy will be utilised throughout 2018-19 to deliver remaining irrigation account volumes.

Effluent streams, the Carole/Moomin and bottom sections of the Mehi will likely be restricted to three separate take opportunities of roughly 10 to 14 days.

Users on the main trunk Gwydir and mid Mehi will have additional take opportunities in conjunction with expected environmental deliveries.

# Prognosis

	Extremely dry	Dry	Average	Wet
	Minimum inflows	80th percentile inflows	50th percentile inflows	20th percentile inflows
3 month forecast to 31-Jul-18	0.0%	0.0%	0.1%	11%
6 month forecast to 31-Oct-18	0.0%	0.9%	8.9%	41%

