

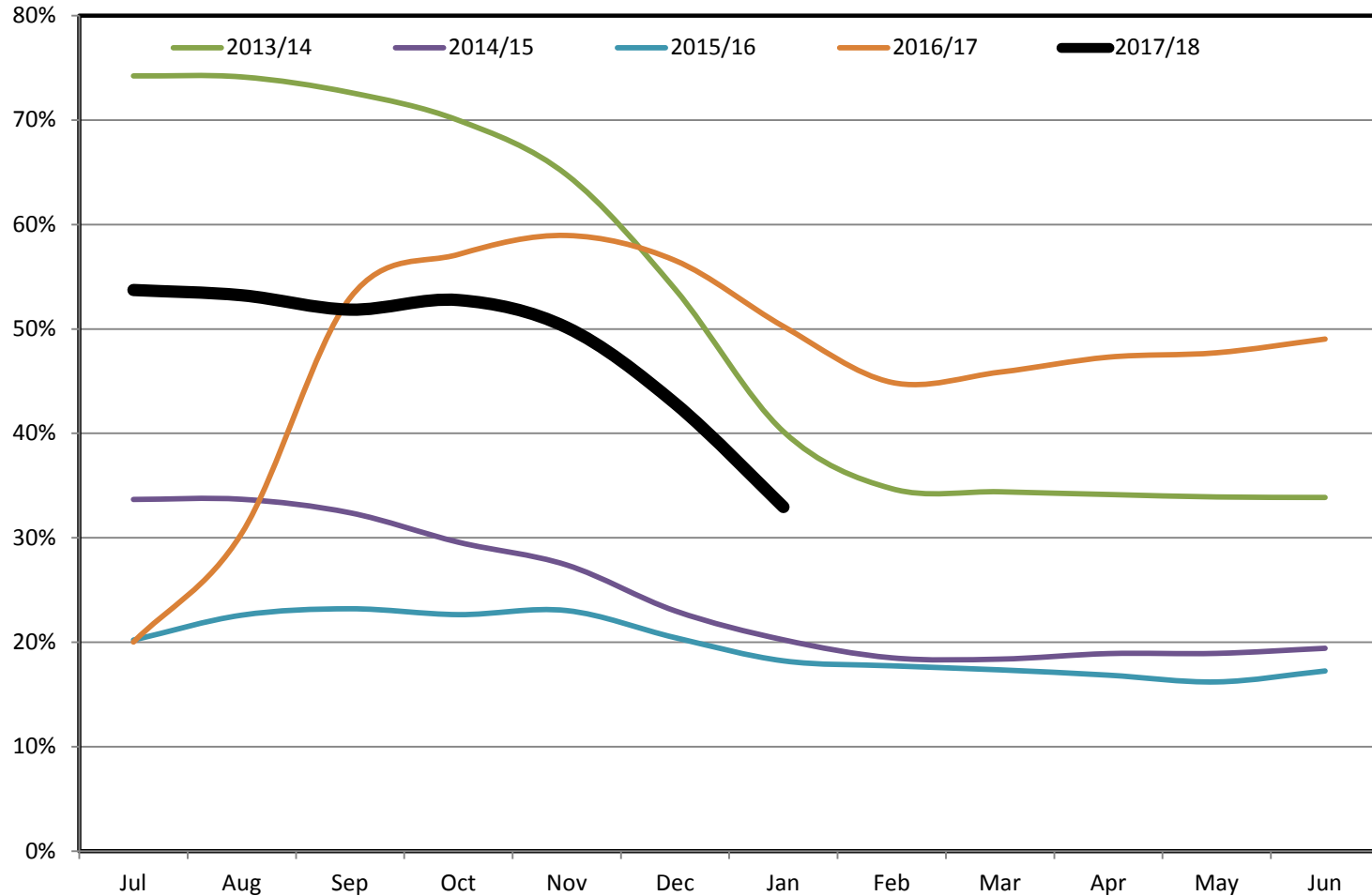
Water Operations Report

Gwydir Valley

February 2018

Dam Storages

Copeton Dam Storage



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	1,491.9	2,506	0	0	0	1014.1
DOMESTIC AND STOCK [DOMESTIC]	88	88	88	0	0	0	0
DOMESTIC AND STOCK [STOCK]	230	155	230	0	0	0	75
E C A	45,000	75,330	7,930	70,410	0	0	3,000
LOCAL WATER UTILITY	3,836	2,568.5	3,836	0	0	0	1,267.5
REGULATED RIVER (GENERAL SECURITY)	509,665	137,587.4	88,681.3	304,089.6	60,044.3	52,114.3	262,728.5
REGULATED RIVER (HIGH SECURITY)	20,199.9	4,464	20,199.9	0	432	8,362	7,795
REGULATED RIVER (HIGH SECURITY) [RESEARCH]	60	60	60	0	0	0	0
REPLENISHMENT	4,000	3,000	4,000	0	0	0	1,000
SUPPLEMENTARY WATER	181,397.5	217,885.2	226,748.4	0	10,613.1	10,613.1	8,862.4
GRAND TOTAL	766,982.4	442,630	354,279.6	374,499.4	71,089.6	71,089.6	285,742.5

General Security Available Water Determination		
Date	AWD ML/Share	Total %
7-Aug-17	0.1102	11.02%
7-Nov-17	0.0452	15.54%
7-Dec-17	0.0106	16.6%
10-Jan-18	0.0023	16.62%

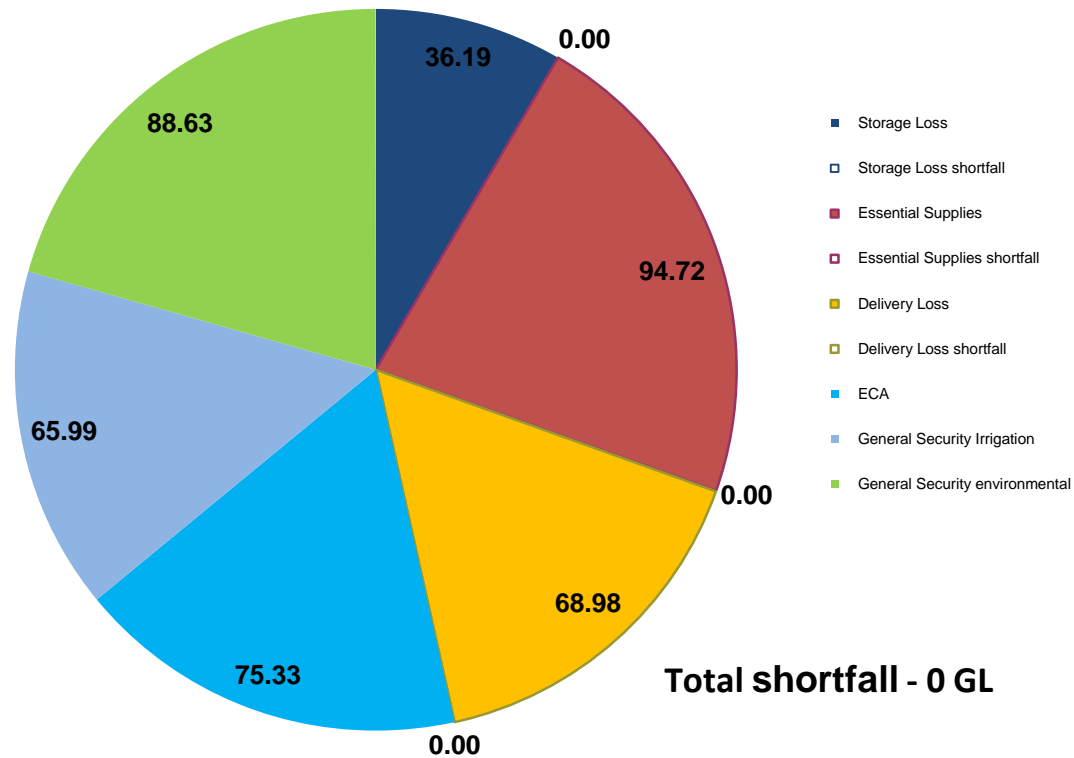
2017/18 Water Availability for Gwydir Valley



Copeton Dam - storage breakdown (GL)

Jan 2018

448.84 GL 32.0%



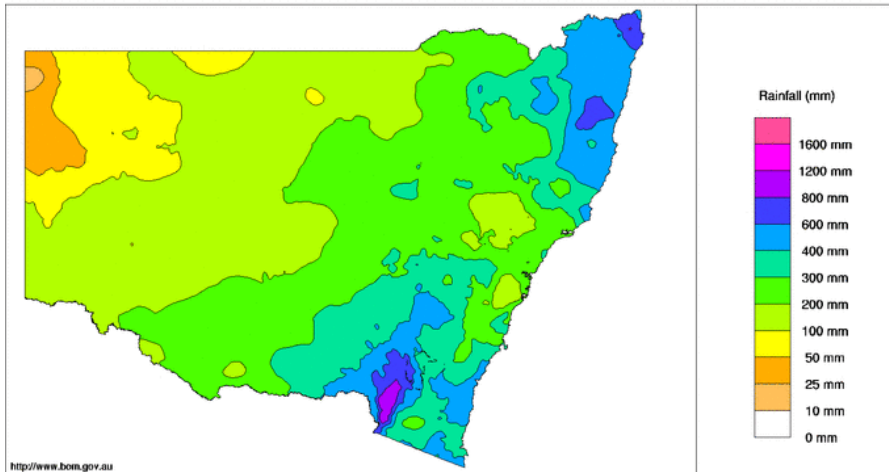
Resource Assessment



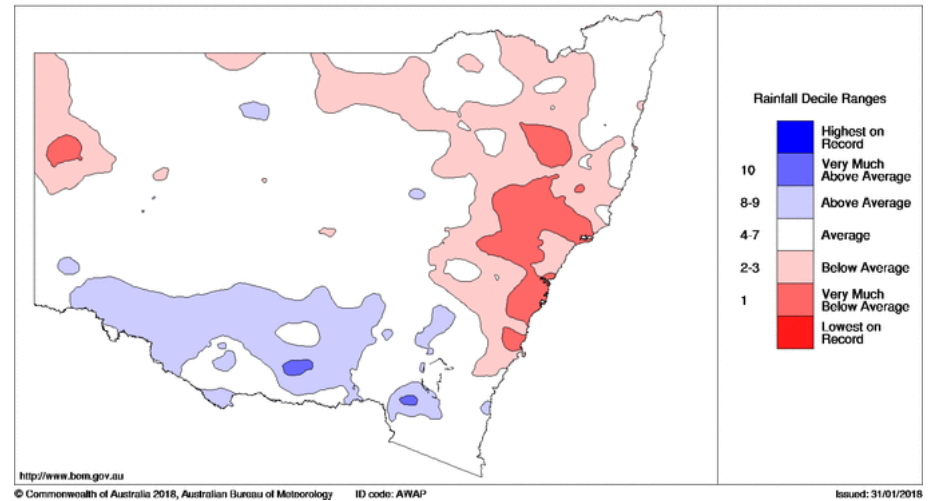
Gwydir Valley Resource Assessment - Copeton Dam	31-Jan-18	31-Dec-17	30-Nov-17	31-Oct-17	30-Sep-17	31-Aug-17	31-Jul-17	13-Jun-17	31-May-17	30-Apr-17	31-Mar-17	28-Feb-17	31-Jan-17
Storage volume	429.84	564.90	663.93	699.67	687.18	705.92	712.79	633.67	630.96	625.25	605.72	592.32	665.30
less dead storage	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
less Storage loss	36.19	42.36	46.36	47.72	47.25	47.96	48.21	45.17	45.07	44.84	44.05	43.50	46.41
less Essential supplies	94.72	94.72	94.72	94.72	89.97	94.72	94.72	93.53	94.72	94.72	94.72	94.72	94.72
less delivery loss	68.98	98.73	120.66	128.59	122.91	129.98	131.51	114.22	113.35	112.08	107.76	104.02	120.96
less ECA	75.33	75.24	75.14	74.66	72.62	72.62	75.36	70.41	70.41	70.05	68.68	67.81	67.81
less general security	154.62	253.85	327.05	353.98	354.42	360.64	362.99	310.33	307.42	303.56	290.51	282.27	335.40
Allocation %	0.19%	0.23%	1.06%	4.52%	0.00%	0.57%	11.02%	0.00%	0.79%	3.05%	1.92%	0.00%	0.44%

6 Month Rainfall

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

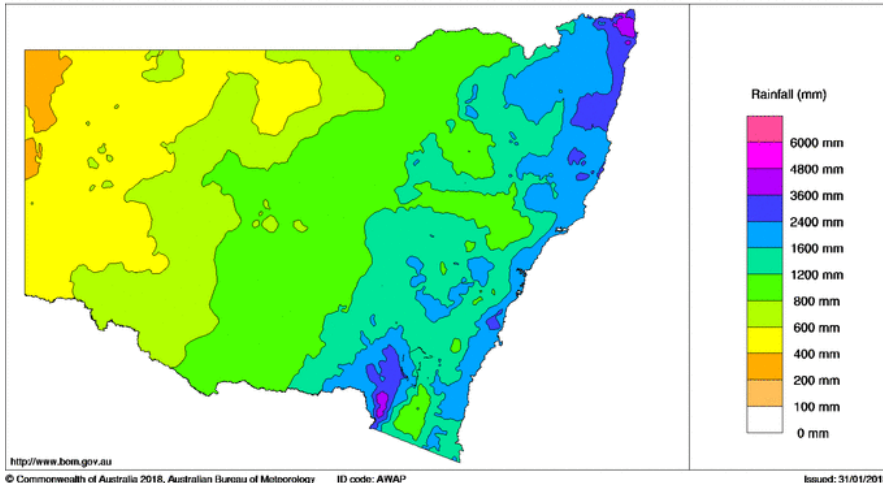


New South Wales Rainfall Deciles 1 August 2017 to 31 January 2018
Distribution Based on Gridded Data
Australian Bureau of Meteorology

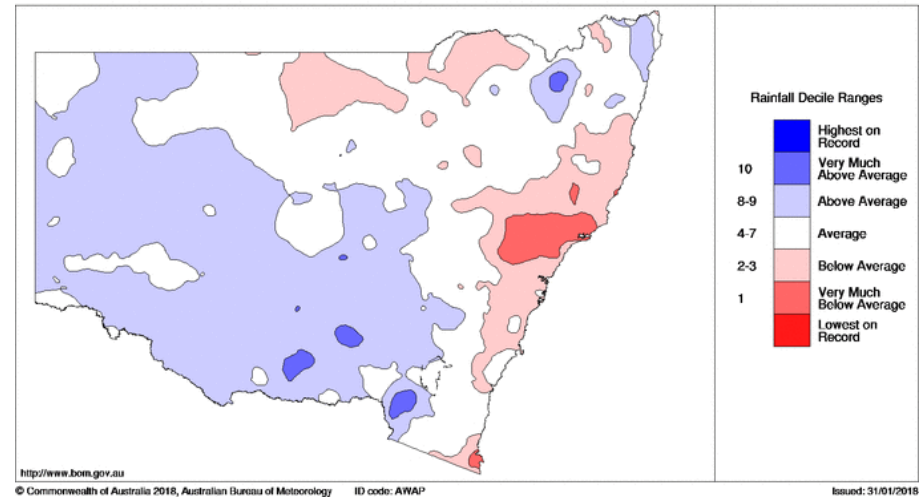


24 Month Rainfall

New South Wales Rainfall totals (mm) 1 February 2016 to 31 January 2018
Australian Bureau of Meteorology



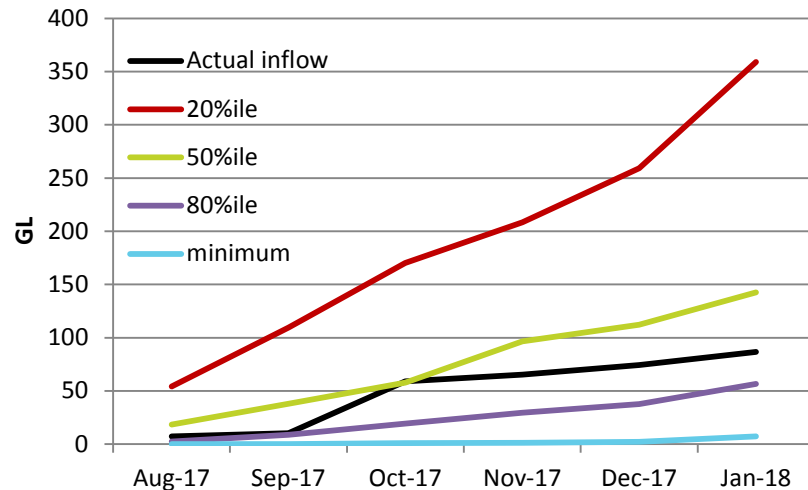
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Copeton Dam Inflows



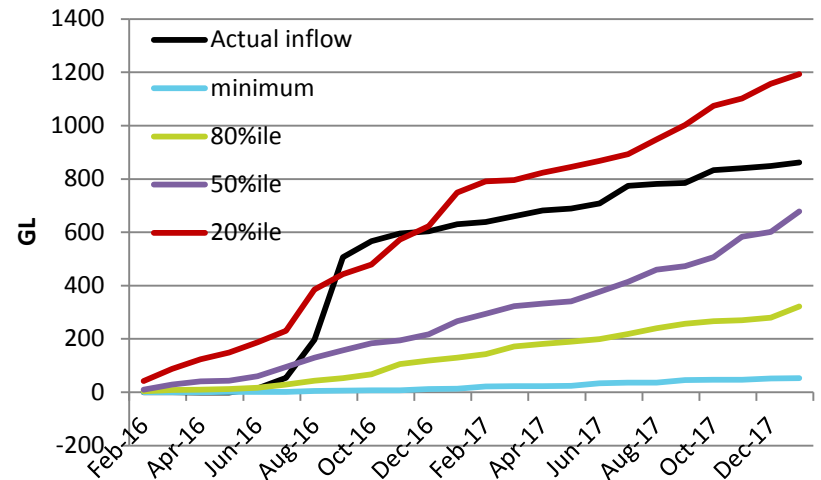
Copeton Past 6 months cumulative inflow/statistical inflows



Inflows are consistent with rainfall over the past 6 month period. Actual inflow for the 6 months is 87GL above 70th percentile inflows (72GL); while the minimum is 7GL.

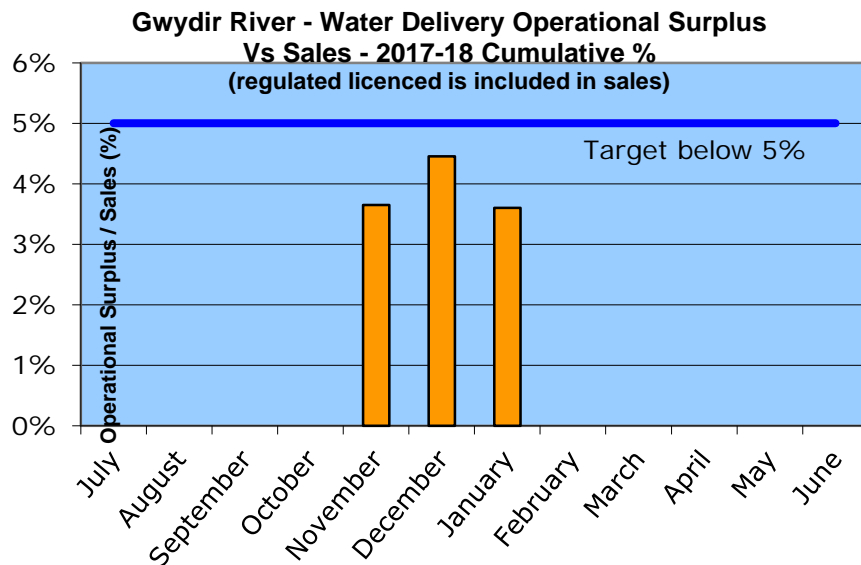
Inflows are consistent with rainfall over the past 24 month period. Actual inflow for the 24 months is 861GL in line with 40th percentile inflows (829GL) while the minimum is 53GL.

Copeton Past 24 months cumulative inflow/statistical inflows



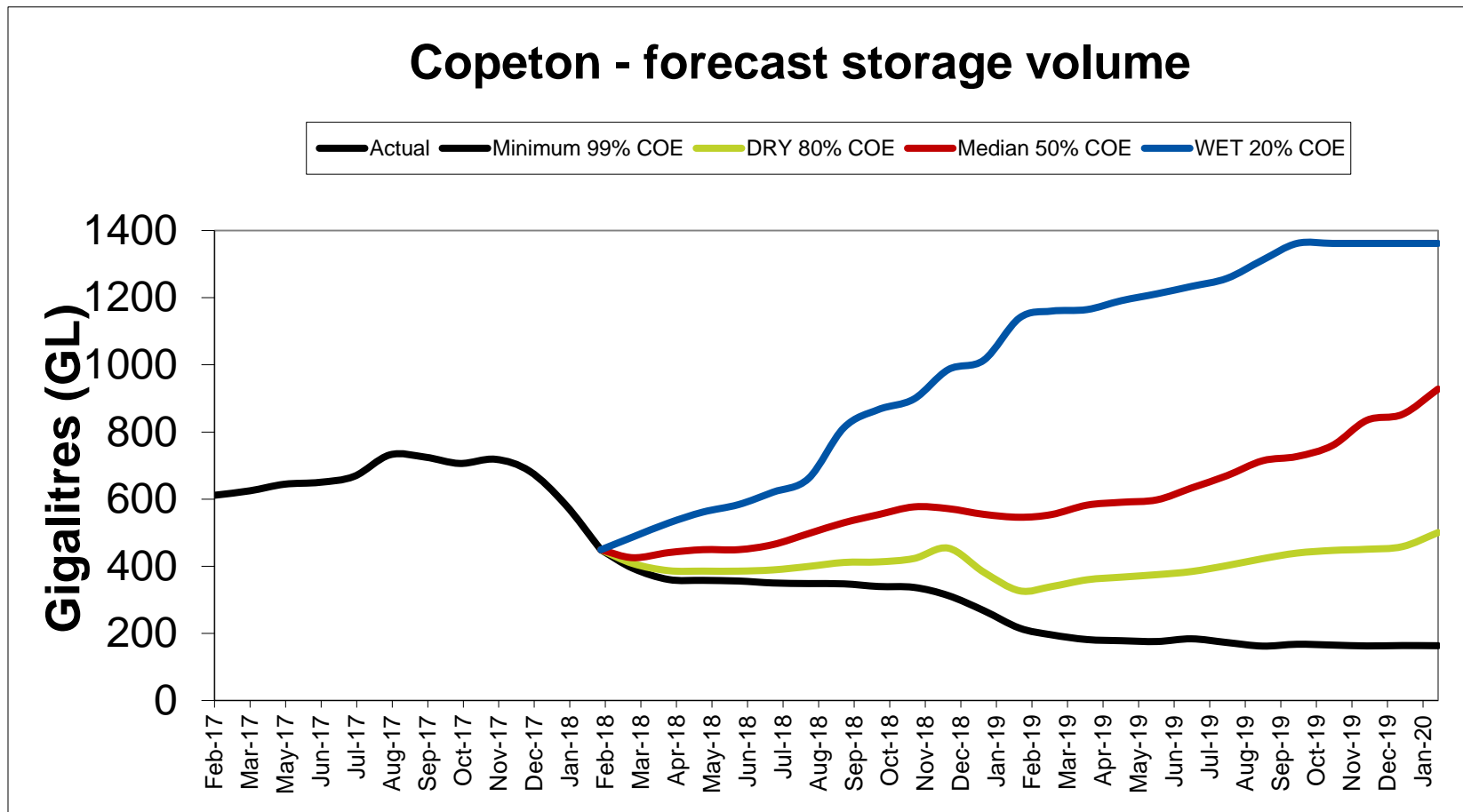
Operational Loss

Operational surplus is water above that which could reasonably be expected (*flow about 20ML/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 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			0%	5%
July-Mar			0%	5%
July-Apr			0%	5%
July-May			0%	5%
July-Jun			0%	5%

Storage Forecast



Expected deliveries of 290GL throughout 2017/18 under minimum and dry conditions.

System Operations Plan



Water order on demand will continue until end March.

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

Dependant on location of remaining volumes, a partial block release strategy will be utilised throughout 2018-19 to deliver remaining account volumes.

System Outage Plan

Copeton Dam Maintenance

Planned outage – No planned outages. No disruption to regular service expected.

Weirs

Planned outage – No planned outages.

Regulators

Planned outage – No planned outages.

Prognosis

Chances Of Improvement

The probability quoted for each allocation is the likelihood of that allocation being reached or exceeded by date indicated.

The following forecasts are based on statistical inflows to Copeton Dam, and for the major tributaries below the dam. They start from February 2018 and are based on sequences of twenty four months.

These allocations are in addition to remaining carryover from previous seasons - The average carryover from last water year into 2017-18 is about 60%.

Prognosis

	Extremely dry	Dry	Average	Wet
	Minimum inflows	80th percentile inflows	50th percentile inflows	20th percentile inflows
3 month forecast to 30-Apr-18	0.0%	0.3%	4.6%	18%
6 month forecast to 31-Jul-18	0.0%	2.1%	10.9%	31%

