Gwydir Drought
Operations update
19th November

Adrian Langdon
Executive Manager System Operation
NSW Temperatures

Maximum Temperature Anomaly (°C) 1 October 2018 to 30 September 2019

Australian Bureau of Meteorology

http://www.bom.gov.au
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ID code: AWAP
Issued: 03/10/2019
Soil moisture deficiencies
August 2019
System inflows & water allocations

Northern Valleys Inflow vs Allocation (GL)

Last 10 year avg. inflow 3,435 GL
System inflows & water allocations

Murrumbidgee + Murray Inflow vs Allocation (GL)

Last 10 year avg. inflow 8,636 GL
**Water Availability**

**Red Number** – water available in accounts

**Blue Number** – water available in storage
### Drought of Record – 24 Months

<table>
<thead>
<tr>
<th>Valley</th>
<th>Previous Drought of Record Inflows (GL)</th>
<th>Period</th>
<th>Last 24 months Inflows (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Lyon</td>
<td>7</td>
<td>1992-94</td>
<td>33</td>
</tr>
<tr>
<td>Pindari</td>
<td>45</td>
<td>1918-20</td>
<td>37</td>
</tr>
<tr>
<td><strong>Copeton</strong></td>
<td><strong>53</strong></td>
<td><strong>1918-20</strong></td>
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<tr>
<td>Keepit</td>
<td>57</td>
<td>2001-03</td>
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<tr>
<td>Split Rock</td>
<td>8</td>
<td>1956-58</td>
<td>5</td>
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<tr>
<td>Chaffey</td>
<td>13</td>
<td>1964-66</td>
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<td><strong>Burrendong</strong></td>
<td><strong>169</strong></td>
<td><strong>1945-47</strong></td>
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<td>Wyangala</td>
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<td>Burrinjuck</td>
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<td>571</td>
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<tr>
<td>Blowering</td>
<td>124</td>
<td>2006-08</td>
<td>421</td>
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</table>
## Drought of Record – 36 Months

<table>
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<tr>
<th>Valley</th>
<th>Previous Drought of Record Inflows (GL)</th>
<th>Drought Period</th>
<th>Current Drought Inflows (GL)</th>
<th>Current Drought Period Months (GL)</th>
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<tr>
<td>Glen Lyon</td>
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<td>1992-95</td>
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<td>Pindari</td>
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<td><strong>1992-95</strong></td>
<td><strong>209</strong></td>
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<tr>
<td>Keepit</td>
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<td>1992-95</td>
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<td>1925-28</td>
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<td>Chaffey</td>
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<td>1964-67</td>
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<td>Blowering</td>
<td>240</td>
<td>2006-09</td>
<td>599</td>
<td>34</td>
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</tbody>
</table>
Comparison of Gwydir Drought of Record – 36 Months
Gwydir Flows without Copeton

November 2017 onwards, almost no inflow
Critical Human water needs is supplying towns, S&D, High Security, Basic Landholder Rights and running river.

If there was no dam, trouble would have started early 2018 to meet critical needs, which is around 24 months.
Copeton Dam Situation

Actual Releases

- Actual releases
- Inflows

Jan-16 Feb March April May June July Aug Sept Oct Nov Dec
Jan-17 Feb March April May June July Aug Sept Oct Nov Dec
Jan-18 Feb March April May June July Aug Sept Oct Nov Dec
Jan-19 Feb March April May June July Aug Sept Oct Nov

WaterNSW
An additional 57,470ML is required prior to making any new AWD.
If it does not rain again and critical drought works are not completed – there could be a day zero for the region.

Measures being undertaken by WaterNSW in conjunction with Local Councils are planned extend supplies.
## Day Zero – What is the Forecast?

### Cease to supply from Copeton Dam

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Jul</td>
<td>Aug</td>
<td>Sep</td>
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</tr>
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<td></td>
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</tbody>
</table>

#### Base Case - until reach to Dead Storage

- [ ]

#### Stage 1 - Realise Deep Storage (19GL)

1. [ ]

#### Impact of Stage 1 on cease to flow

- [ ]

#### Alternatives for High security and BLR need in place

- Users to have alternate source in place.

- [ ]

### Key:

- Zero inflow
- Recent observed inflow - past two years repeated (SDR 1)
- Drought of Record

- 7 Months Min Benefit
- Acceptable Serviceability Criteria against lowest recorded inflow 2 years
- Current availability with approach against lowest recorded inflow >2 years

### Updated on 15 Nov 2019

- Assessment based on 31st Oct data

### Gwydir Supply Risk

- Key risk is to manage water operations to extend supply
Storage Depletion Curve
Based on End of October 2019 Assessment

Gwydir Valley forecast storage volume

Storage capacity (G.L.)


- Dead Storage
- Zero Inflow
- Actual

17 WaterNSW
• Continue to deliver water high security use through to July 2020

• High security delivery in early January of Orange Orchards near Moree

• Further fish refuge flow in January to Mehi to Combadello, Gwydir to Tyreel, small volume into Corale creek.

• Continuation of worst case scenario- critical human needs and high security
Principles for managing tributary flows

- Distribution of tributary flows to downstream users will be managed as follows:
  - Deliver current restricted regulated demands by reducing dam releases.
  - Restore flows in regulated sections that are stopped to allow access to Basic Landholder Rights (BLR) and to meet the critical needs of the environment in those locations.
  - Divert flows to ‘dam-supported’ Stock & Domestic (S&D) replenishments.
  - Deliver supplementary events when triggered as per Water Sharing Plan rules after allowing for higher priority requirements.
To keep updated

Visit the website at:
waternsw.com.au/drought

For information on the Macquarie Valley including water availability reports and drought reports go to:

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