NSW Murray and Lower Darling

Water allocation update and outlook for 2016/17

Allocations

NSW Murray general security allocation has increased by 4 per cent to 23 per cent of entitlement. There is no change to Lower Darling allocations.

This improvement in the NSW Murray results from a number of factors:

- Actual river losses were significantly less than forecast due to recent rains.
- Improved inflows to the Snowy scheme produced an increase in assured Required Annual Release (RAR).
- A hydrographic update (meter readings) provided additional resource to NSW.
- Slightly better than forecast tributary inflows (NSW share) since the last assessment.

<table>
<thead>
<tr>
<th></th>
<th>High Security</th>
<th>General Security</th>
<th>Average Carryover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murray</td>
<td>97%</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>Lower Darling</td>
<td>75%</td>
<td>0%</td>
<td>Restricted access</td>
</tr>
</tbody>
</table>

Upper Murray storage levels (as at 12 February 2016)

- Dartmouth Dam is currently 45 per cent full, holding 1,745,000 megalitres (ML)
- Hume Dam is 36 per cent full, holding 1,086,000 ML

Outlook

The Bureau of Meteorology (BoM) seasonal outlook for February to April 2016 indicates above average rainfall conditions are likely across most of the region, with chances increasing from east to west across the catchment. Cooler than average temperatures are also expected.

It is too early to tell if widespread heavy rainfall affecting parts of northern Australia and Queensland last week will contribute flows to NSW. Currently no significant flows are expected to reach Menindee Lakes; however, conditions will continue to be monitored and forecasts updated.

The current outlook reflects a combination of influences - a strong El Niño now in decline, record-warm Indian Ocean temperatures and warm localised sea surface temperatures, particularly around Tasmania.

Trade

- In the Murray, trade across the Barmah choke is restricted to ‘no net trade downstream; however, there is currently capacity for downstream trade (by virtue of upstream trades).
- Trade is permitted within the Lower Darling water source, but inter-valley trade (IVT) is closed due to the water shortage.

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www.water.nsw.gov.au
• On 9 February 2016, DPI Water announced an imminent opening of trade out of the Murrumbidgee Valley and provided details about where to find information on trade procedures.

• Trade out of the Murrumbidgee valley subsequently opened on 12 February 2016 using new procedures that are based on IVT account balance trigger levels. Water users are encouraged to monitor the WaterNSW website at www.waternsw.com.au/customer-service/trading/Murrumbidgee to keep informed of the Murrumbidgee IVT account balance, the status of trade, and to become familiar with the new procedures.

• Trade into the Murrumbidgee valley remains open and unaffected.

Next announcements
The next allocation update for the NSW Murray will be on 1 March 2016.

Water availability forecasts for the start of next water year (1 July 2016) are also reported in this Statement and will continue to be updated on a monthly basis as the new water year approaches, with the next forecast to be provided on 15 March 2016.

NSW Murray Resource Assessment Data Sheet

<table>
<thead>
<tr>
<th>Resource Distribution (as at 15 February) for 2015-16</th>
<th>Volume (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Available Resource</td>
<td>1,452</td>
</tr>
<tr>
<td>less</td>
<td></td>
</tr>
<tr>
<td>Carryover</td>
<td>500</td>
</tr>
<tr>
<td>Rules based Environmental Water(^{(1)})</td>
<td>76</td>
</tr>
<tr>
<td>Towns, Stock, Domestic</td>
<td>54 (100%)</td>
</tr>
<tr>
<td>Reserves(^{(2)})</td>
<td>59</td>
</tr>
<tr>
<td>Conveyance(^{(3)})</td>
<td>194</td>
</tr>
<tr>
<td>Announced High Security</td>
<td>184 (97%)</td>
</tr>
<tr>
<td>Announced General Security</td>
<td>385 (23%)</td>
</tr>
</tbody>
</table>

*See notes below.
Resource Distribution 2015-16
NSW Murray - 15 February 2016

Total = 1,452 GL

Notes:

(1) Primarily rules-based environmental water – water required to be set aside under water sharing plans to provide for riverine environments. In the Murray this includes Additional Environmental Allowance (AEA) (6 GL), the Barmah Millewa Allowance (B-MA) (which is currently 100 per cent borrowed) and Wakool system requirements (50 GL). Excludes ‘licence-based’ environmental water.

(2) Reserves – required primarily under statutory plans; used for emergency purposes and critical needs.

(3) Conveyance entitlement – a category of access licence originally issued to Irrigation Corporations to facilitate delivery of water through their channel systems. Allocation to this category is prescribed in the water sharing plans and is a function of current high and general security allocations.
NSW Murray outlook for 2016/17

Key information

- This preliminary forecast is a month earlier than usual to keep water users informed so that business decisions can be made in the lead up to the new water year on 1 July.
- This outlook is based on extremely dry, 99th percentile, inflows for the remainder of the year - meaning that 99 years in 100 will provide more water than this outlook.
- In the highly unlikely event of the 99th percentile scenario eventuating, emergency management type activities and allocations would be required.
- Actual future conditions are almost certain to be better and outlooks will be updated monthly.
- The recent BoM forecast for February to April 2016 indicates improved chances of favourable rainfall conditions and cooler temperatures, which would assist water availability.
- Storage in Hume and Dartmouth is about 1,524 gigalitres (GL) lower than this time last year.
- System inflows this water year have been very dry, about 91 per cent Annual Exceedance Probability (AEP) - well below the long-term average and also below the average for the last 10 years.
- It is difficult to reliably predict end-of-year carryover, as it is highly dependent on weather conditions over the next few months and individual decisions by water users. However it is estimated that carryover could be 500 GL, which is similar to the last two years.
- Once the commencing allocation is announced on 1 July 2016, regular assessments will be undertaken and allocation announcements made fortnightly on the 1st and 15th of each month, or next working day following, for the remainder of the water year.
- DPI water will commit to monthly outlooks from this point on in the lead up to the commencement of the new water year on 1 July 2016.

Indicative allocations on 1 July 2016 – Lower Darling

- In the absence of significant inflows, surface water will continued to be managed adaptively in the Lower Darling ensuring the available water is prioritised for critical purposes. Access to water will also be regulated through statutory water restrictions, meaning that only those water-use purposes that meet exemption criteria are allowed to pump and use raw water.
- Allocations will be made to ensure town, domestic, stock and high security access licences held by those allowed to take water, have enough account balance to ensure continued use of water while surface water supplies remain.
- It is expected that opening general security allocation will be zero (0) per cent of entitlement in the Lower Darling unless there is significant rainfall.

Indicative allocations on 1 July 2016 - Murray

- Security of water for towns, and domestic and stock access licences, is assured.
- Full allocations for supplementary access licence holders, which is available subject to announced periods of supplementary flows.
- Based on an extremely dry inflow scenario for the remainder of this year, full high security allocation in the NSW Murray may be delayed, but it is anticipated this scenario will be improved by 1 July 2016, based on the BoM forecast.
- It is likely that general security allocation will commence at zero (0) per cent of entitlement unless there is significant rainfall. Carryover will be available during the water year.
• Under the water sharing plan, the NSW share of the Barmah-Millewa Forest account water may be borrowed for allocations when the general security is less than 30 per cent. This account, fully borrowed this year, will continue to be borrowed in 2016/17 as required.

• At least 80 GL of water will be available for allocation to conveyance entitlements on 1 July.

Chances of improvement

The chances of improved general security allocation in the NSW Murray, based on different inflow conditions, are as follows:

Forecast General Security allocation (per cent)\#  

<table>
<thead>
<tr>
<th>Potential Inflow Conditions</th>
<th>1 Sept 2016</th>
<th>1 Nov 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>99 chances in 100 (extreme) (99%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9 chances in 10 (very dry) (90%)^</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>3 chances in 4 (dry) (75%)</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>1 chance in 2 (mean) (50%)</td>
<td>17</td>
<td>31**</td>
</tr>
<tr>
<td>1 chance in 4 (wet) (25%)</td>
<td>30*</td>
<td>53</td>
</tr>
</tbody>
</table>

\* Currently tracking in 2015/16 in this (very dry) vicinity.  
\# Assumes extreme dry inflow for the remainder of the water year and an average general security carryover of 30% (500 GL).  
\^ Multi-history modelling using all years.  
* Commence pay-back of borrow from B-M Allowance.  
** Borrow from B-M Allowance is fully repaid.