



# RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 12 APRIL 2017

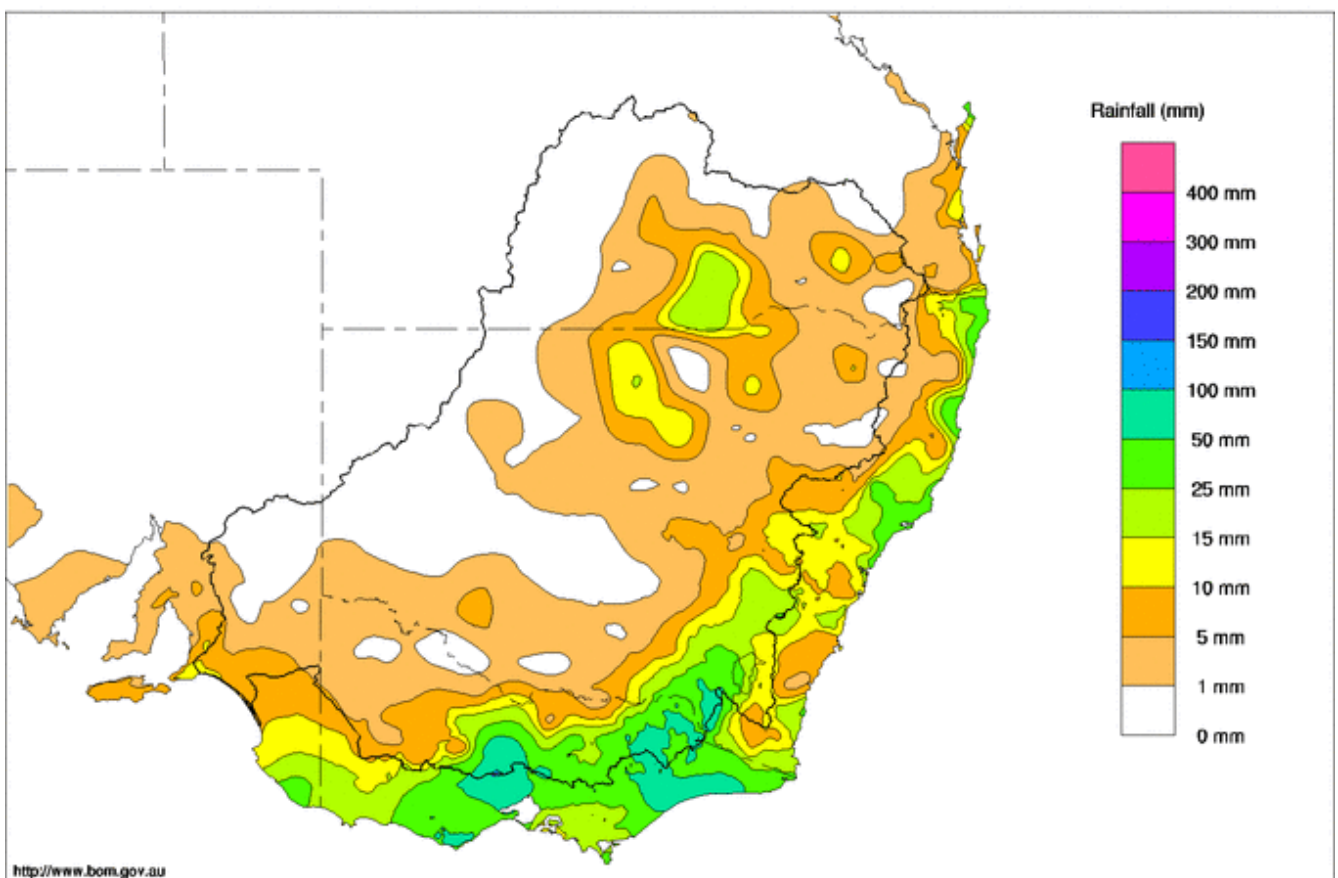
Trim Ref: D17/16421

## Rainfall and inflows

Early in the week, an inland surface trough over western Queensland and New South Wales was responsible for isolated thunderstorms which delivered rain across parts of northern New South Wales and southern Queensland. Later in the week a cold front and low pressure system with thunderstorms produced moderate to heavy falls across parts of central and north-eastern Victoria and south-eastern New South Wales.

Highest weekly rainfall totals were recorded in the Snowy Mountains and southern ranges (see Map 1). In Victoria the highest totals included 97 mm at Rocky Valley and 75 mm at Mount Hotham AWS in the north-east, and 62 mm at Lake Eppalock and 52 mm at Strathfieldsaye in the upper north. In NSW, 83 mm was recorded at Perisher Valley AWS and 74 mm at Thredbo in the southern tablelands (both just outside the south-eastern boundary of the Basin catchment) and 56 mm at Cabramurra AWS and 43 mm at Khancoban AWS on the southwest slopes. Notable totals in Queensland included 22 mm at St George airport in the Maranoa catchment and 20 mm at Whyenbah in the Warrego catchment.

Murray-Darling Rainfall Totals (mm) Week Ending 12th April 2017  
Australian Bureau of Meteorology



<http://www.bom.gov.au>

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Issued: 12/04/2017

Map 1 - Murray-Darling Basin rainfall week ending 12 April 2017 (Source: Bureau of Meteorology)



Stream flows in the upper Murray tributaries increased in response to the rainfall this week. On the Mitta Mitta River, the flow at Hinnomunjie Bridge reached its highest level since late January, peaking at 1,500 ML/day. On the upper Murray at Biggara the flow reached around 1,050 ML/day. Downstream of Hume Reservoir, the Kiewa River at Bandiana and the Ovens River at Wangaratta peaked around 850 ML/day and 1,100 ML/day respectively.

## River operations

- River Murray levels downstream of Hume Dam and Yarrawonga to remain relatively steady over Easter
- Inflows from the Goulburn River increasing

### *System Operations*

Similar to the last few weeks, operations continue to focus on releasing sufficient water from storage to meet system demands and steer towards targets at key locations, including Lake Victoria; while also aiming to conserve water for next season. The delivery of a small volume of inter valley transfer (IVT) water from the Goulburn to the Murray has commenced to meet end of system targets for Lake Victoria and to assist in maintaining minimum river levels throughout the mid-reaches of the Murray. Up to 20 GL is projected to be delivered throughout April.

River heights are likely to remain steady along the mid-reaches of the Murray over the coming days, including the Easter period (see attached media release). River users are advised to maintain a close eye on conditions and keep up to date via [livedata.mdba.gov.au](http://livedata.mdba.gov.au) when planning recreational or other activities.

### *River Operations*

Total MDBA storage decreased by 99 GL this week, with active storage now 5,320 GL (62% capacity).

The storage volume at **Dartmouth Reservoir** increased by 4 GL this week to 2,998 GL (78% capacity). The release from Dartmouth, measured at Coleman's, increased to 1,000 ML/day for two days over the weekend to maintain environmental condition in the lower Mitta Mitta River. The release is currently 300 ML/day and is expected to reduce to 200 ML/day in the coming week.

Storage in **Hume Reservoir** decreased this week by 70 GL and is currently 1,840 GL (61% capacity). Releases have varied throughout the week in response to fluctuating demands and losses in the Hume to Lake Mulwala reach and have averaged around 12,000 ML/day.

Diversions from **Lake Mulwala** have reduced over the last week in response to the rain and cooler conditions. Diversion to Mulwala Canal reduced from 4,900 ML/day to around 4,000 ML/day. Diversion to Yarrawonga Main Channel has decreased from 2,200 ML/day to around 1,300 ML/day. The water level at Lake Mulwala has remained fairly steady over the last week close to 124.8 m AHD, and is now sitting at 124.84 m AHD. The release downstream of **Yarrawonga Weir** has averaged around 8,000 ML/day and is likely to remain steady until after Easter.

Inflows to the **Edward-Wakool** system were reduced during the week. Flow through the Edward River off-take decreased to 1,430 ML/day while the Gulpa Creek off-take decreased to around 310 ML/day. Inflows from the Edward escape averaged around 730 ML/day. Diversions from the **Stevens Weir** pool to the Wakool Main Canal averaged 760 ML/day. Downstream of Stevens Weir the release averaged around 850 ML/day. Continuing higher inflows from the Billabong Creek (currently around 500 ML/day) have resulted in a flow in the Edward River at Moulamein above 1,200 ML/day.

On the **Goulburn River** the flow at McCoys Bridge averaged around 900 ML/day. The flow will increase over the coming week to around 1,500 ML/day as Goulburn IVT water is delivered to the Murray during April to help meet system needs. A total of 20 GL of Goulburn IVT water is forecast to be delivered via Campaspe, Broken Creek and Goulburn systems.



Diversions from **Torrumbarry Weir** pool to National Channel have remained steady at around 3,200 ML/day. Due to diminished upstream inflows and steady irrigation demands, the release downstream of the weir reached a low of around 2,300 ML/day at the beginning of the week and has now increased to around 3,000 ML/day. As a result, the level further downstream at Swan Hill reached a minimum of 0.63m on the local gauge early this week and has since risen to 0.67m today. Levels are forecast to improve slightly over the coming days with the arrival of environmental flows from the Loddon River and Goulburn IVT water.



**Photo 2 – Sunrise on the Murray at Tooleybuc (Photo courtesy Will Lucardie)**

On the **Murrumbidgee River** at Balranald flows decreased steadily over recent days to a current rate of 2,750 ML/Day following a peak of 3,700 ML/Day over the weekend. Flows are forecast to decrease toward minimums over the coming weeks as the environmental flow pulse continues to recede.



At **Euston Weir**, the pool level is currently 47.42 m AHD (18 cm below full supply level). As part of the weir pool variability program it is expected that this level will vary to around 20 cm below FSL over the coming weeks. The flow rate downstream of the weir has averaged around 6,700 ML/day, but is expected to reduce over the coming week toward 4,000 ML/day.

On the **Darling River**, total storage volume in the **Menindee Lakes** fell by 33 GL, to the current volume of 831 GL (48% capacity). The release from Menindee Lakes to the lower Darling River has remained steady this week and is currently targeting 1,000 ML/day at Weir 32. Releases from **Lake Cawndilla** have remained at around 1,100 ML/day as environmental flows are provided to the Great Darling Anabranch. So far around 57 GL of environmental water has been released to the Anabranch. This water is slowly making its way downstream and is likely to reach the Murray by the end of April.

At the junction of the Darling and Murray rivers at **Wentworth**, flows have increased steadily over the week and are currently 7,400 ML/day.

Weir pool variability continues at **Locks 7 and 8** which are 86 cm and 93 cm below FSL respectively. Over the coming weeks Lock 7 and Lock 8 are expected to continue to vary at around these levels. In response to the lower pool level at Lock 7, the flow into Mullaroo Creek has reduced to around 400 ML/day.

**Lake Victoria** storage decreased by 1 GL this week to a storage volume of 325 GL (48% capacity). The flow to **South Australia** averaged 6,300 ML/day and is projected to decrease over the coming weeks. Downstream at **Lock 1** flows have decreased to around 4,500 ML/day.

At the **Lower Lakes**, the 5-day average water level in Lake Alexandrina decreased by 2 cm to 0.57 m AHD. The barrages were closed during the second half of the week because of large swells and high tides.

**For media inquiries contact the Media Officer on 02 6279 0141**

DAVID DREVERMAN  
Executive Director, River Management



**Water in Storage**

**Week ending Wednesday 12 Apr 2017**

| MDBA Storages             | Full Supply Level<br>(m AHD) | Full Supply Volume<br>(GL) | Current Storage Level<br>(m AHD) | Current Storage |            | Dead Storage<br>(GL) | Active Storage<br>(GL) | Change in Total Storage for the Week<br>(GL) |
|---------------------------|------------------------------|----------------------------|----------------------------------|-----------------|------------|----------------------|------------------------|--|
|                           |                              |                            |                                  | (GL)            | %          |                      |                        |  |
| Dartmouth Reservoir       | 486.00                       | 3 856                      | 471.89                           | 2 998           | 78%        | 71                   | 2 927                  | +4   |
| Hume Reservoir            | 192.00                       | 3 005                      | 185.36                           | 1 840           | 61%        | 23                   | 1 817                  | -70  |
| Lake Victoria             | 27.00                        | 677                        | 23.81                            | 325             | 48%        | 100                  | 225                    | -1   |
| Menindee Lakes            |                              | 1 731*                     |                                  | 831             | 48%        | (480 #)              | 351                    | -33  |
| <b>Total</b>              |                              | <b>9 269</b>               |                                  | <b>5 994</b>    | <b>65%</b> | - -                  | <b>5 320</b>           | <b>-99</b>                                   |
| Total Active MDBA Storage |                              |                            |                                  |                 |            |                      | 62% ^                  |  |

**Major State Storages**

|                      |       |       |     |     |       |     |
|----------------------|-------|-------|-----|-----|-------|-----|
| Burrinjuck Reservoir | 1 026 | 674   | 66% | 3   | 671   | -13 |
| Blowering Reservoir  | 1 631 | 1 080 | 66% | 24  | 1 056 | -6  |
| Eldon Reservoir      | 3 334 | 2 215 | 66% | 100 | 2 115 | -20 |

\* Menindee surcharge capacity – 2050 GL

\*\* All Data is rounded to nearest GL \*\*

# NSW has sole access to water when the storage falls below 480 GL. MDBA regains access to water when the storage next reaches 640 GL.

^ % of total active MDBA storage

**Snowy Mountains Scheme**

Snowy diversions for week ending 11 Apr 2017

| Storage                | Active Storage (GL) | Weekly Change (GL) | Diversion (GL)   | This Week | From 1 May 2016 |
|------------------------|---------------------|--------------------|------------------|-----------|-----------------|
| Lake Eucumbene - Total | 1 791               | -5                 | Snowy-Murray     | +2        | 1 014           |
| Snowy-Murray Component | 786                 | 7                  | Tooma-Tumut      | +2        | 337             |
| Target Storage         | 1 340               |                    | Net Diversion    | -1        | 677             |
|                        |                     |                    | Murray 1 Release | +2        | 1 425           |

**Major Diversions from Murray and Lower Darling (GL) \***

| New South Wales           | This Week   | From 1 July 2016 | Victoria                        | This Week | From 1 July 2016 |
|---------------------------|-------------|------------------|---------------------------------|-----------|------------------|
| Murray Irrig. Ltd (Net)   | 28.8        | 855              | Yarrowonga Main Channel (net)   | 10.3      | 223              |
| Wakool Sys Allowance      | 2.3         | 28               | Torrumbarry System+ Nyah (net)  | 20.8      | 403              |
| Western Murray Irrigation | 1.4         | 24               | Sunraysia Pumped Districts      | 2         | 92               |
| Licensed Pumps            | 8.7         | 228              | Licensed pumps - GMW (Nyah+u/s) | 1.4       | 29               |
| Lower Darling             | 7.9         | 73               | Licensed pumps - LMW            | 2.5       | 274              |
| <b>TOTAL</b>              | <b>49.1</b> | <b>1208</b>      | <b>TOTAL</b>                    | <b>37</b> | <b>1021</b>      |

\* Figures are derived from actual and estimates where data is unavailable. Please note that not all data may have been available at the time of creating this report.

\*\* All data above is rounded to nearest 100 ML for weekly data and nearest GL for cumulative data\*\*

**Flow to South Australia (GL)**

\* Flow to SA will be greater than normal entitlement for this month due to unregulated flows.

|                        |         |
|------------------------|---------|
| Entitlement this month | 135.0 * |
| Flow this week         | 44.2    |
| Flow so far this month | 81.4    |
| Flow last month        | 289.2   |

(6 300 ML/day)

**Salinity (EC) (microSiemens/cm at 25° C)**

|                         | Current | Average over the last week | Average since 1 August 2016 |
|-------------------------|---------|----------------------------|-----------------------------|
| Swan Hill               | 80      | 80                         | 110                         |
| Euston                  | 120     | 120                        | -                           |
| Red Cliffs              | 150     | 160                        | 170                         |
| Merbein                 | 170     | 170                        | 170                         |
| Burtundy (Darling)      | 570     | 560                        | 590                         |
| Lock 9                  | 270     | 270                        | 220                         |
| Lake Victoria           | 210     | 220                        | 200                         |
| Berri                   | 410     | 400                        | 260                         |
| Waikerie                | 410     | 430                        | 330                         |
| Morgan                  | 450     | 450                        | 330                         |
| Mannum                  | 540     | 540                        | 340                         |
| Murray Bridge           | 400     | 390                        | 300                         |
| Milang (Lake Alex.)     | 520     | 510                        | 500                         |
| Poltalloch (Lake Alex.) | 540     | 540                        | 370                         |
| Meningie (Lake Alb.)    | 1 830   | 1 820                      | 1 760                       |
| Goolwa Barrages         | 2 050   | 1 810                      | 1 070                       |



**River Levels and Flows**

**Week ending Wednesday 12 Apr 2017**

| River Murray                     | Minor Flood Stage (m) | Gauge Height |         | Flow (ML/day) | Trend | Average Flow this Week (ML/day) | Average Flow last Week (ML/day) |
|----------------------------------|-----------------------|--------------|---------|---------------|-------|---------------------------------|---------------------------------|
|                                  |                       | local (m)    | (m AHD) |               |       |                                 |                                 |
| Khancoban                        | -                     | -            | -       | 1 280         | F     | 570                             | 1 010                           |
| Jingellic                        | 4.0                   | 1.49         | 208.01  | 2 720         | R     | 1 440                           | 1 850                           |
| Tallandoon ( Mitta Mitta River ) | 4.2                   | 1.46         | 218.35  | 700           | F     | 930                             | 610                             |
| Heywoods                         | 5.5                   | 2.80         | 156.43  | 11 010        | S     | 12 000                          | 14 080                          |
| Doctors Point                    | 5.5                   | 2.77         | 151.24  | 12 050        | F     | 12 660                          | 14 500                          |
| Albury                           | 4.3                   | 1.77         | 149.21  | -             | -     | -                               | -                               |
| Corowa                           | 4.6                   | 2.60         | 128.62  | 11 500        | F     | 13 090                          | 14 650                          |
| Yarrowonga Weir (d/s)            | 6.4                   | 1.36         | 116.40  | 7 990         | S     | 8 200                           | 7 910                           |
| Tocumwal                         | 6.4                   | 2.05         | 105.89  | 7 090         | F     | 7 250                           | 6 980                           |
| Torrumbarry Weir (d/s)           | 7.3                   | 1.28         | 79.83   | 3 040         | R     | 2 690                           | 3 560                           |
| Swan Hill                        | 4.5                   | 0.67         | 63.59   | 2 540         | R     | 2 560                           | 4 690                           |
| Wakool Junction                  | 8.8                   | 2.01         | 51.13   | 3 490         | S     | 4 120                           | 5 800                           |
| Euston Weir (d/s)                | 9.1                   | 1.41         | 43.25   | 6 240         | F     | 6 750                           | 5 870                           |
| Mildura Weir (d/s)               | -                     | -            | -       | 7 200         | F     | 6 610                           | 6 020                           |
| Wentworth Weir (d/s)             | 7.3                   | 2.92         | 27.68   | 7 430         | R     | 6 910                           | 6 420                           |
| Rufus Junction                   | -                     | 3.42         | 20.35   | 6 050         | S     | 6 020                           | 7 330                           |
| Blanchetown (Lock 1 d/s)         | -                     | 0.61         | -       | 4 530         | S     | 4 320                           | 6 580                           |
| <b>Tributaries</b>               |                       |              |         |               |       |                                 |                                 |
| Kiewa at Bandiana                | 2.8                   | 1.22         | 154.45  | 840           | R     | 520                             | 420                             |
| Ovens at Wangaratta              | 11.9                  | 8.19         | 145.87  | 1 100         | R     | 700                             | 590                             |
| Goulburn at McCoy's Bridge       | 9.0                   | 1.44         | 92.86   | 870           | R     | 890                             | 1 300                           |
| Edward at Stevens Weir (d/s)     | 5.5                   | 1.16         | 80.93   | 830           | F     | 860                             | 790                             |
| Edward at Liewah                 | -                     | 1.86         | 57.24   | 1 150         | F     | 1 160                           | 1 010                           |
| Wakool at Stoney Crossing        | -                     | 1.48         | 54.97   | 550           | F     | 660                             | 730                             |
| Murrumbidgee at Balranald        | 5.0                   | 2.92         | 58.88   | 2 750         | F     | 3 390                           | 2 200                           |
| Barwon at Mungindi               | 6.1                   | 3.98         | -       | 2 660         | R     | 1 380                           | 670                             |
| Darling at Bourke                | 9.0                   | 4.16         | -       | 590           | S     | 480                             | 390                             |
| Darling at Burtundy Rocks        | -                     | 1.07         | -       | 1 230         | F     | 1 260                           | 1 380                           |

|                        |       |     |
|------------------------|-------|-----|
| Natural Inflow to Hume | 1 420 | 970 |
|------------------------|-------|-----|

(i.e. Pre Dartmouth & Snowy Mountains scheme)

**Weirs and Locks** Pool levels above or below Full Supply Level (FSL)

| Murray             | FSL (m AHD) | u/s   | d/s   |                       | FSL (m AHD) | u/s   | d/s   |
|--------------------|-------------|-------|-------|-----------------------|-------------|-------|-------|
| Yarrowonga         | 124.90      | -0.06 | -     | No. 7 Rufus River     | 22.10       | -0.86 | +1.08 |
| No. 26 Torrumbarry | 86.05       | +0.00 | -     | No. 6 Murtho          | 19.25       | +0.00 | +0.07 |
| No. 15 Euston      | 47.60       | -0.18 | -     | No. 5 Renmark         | 16.30       | +0.02 | +0.19 |
| No. 11 Mildura     | 34.40       | +0.09 | +0.18 | No. 4 Bookpurnong     | 13.20       | +0.05 | +0.69 |
| No. 10 Wentworth   | 30.80       | +0.07 | +0.28 | No. 3 Overland Corner | 9.80        | +0.03 | +0.25 |
| No. 9 Kulnine      | 27.40       | -0.03 | -0.88 | No. 2 Waikerie        | 6.10        | +0.06 | +0.14 |
| No. 8 Wangumma     | 24.60       | -0.93 | -0.61 | No. 1 Blanchetown     | 3.20        | -0.04 | -0.14 |

**Lower Lakes** FSL = 0.75 m AHD

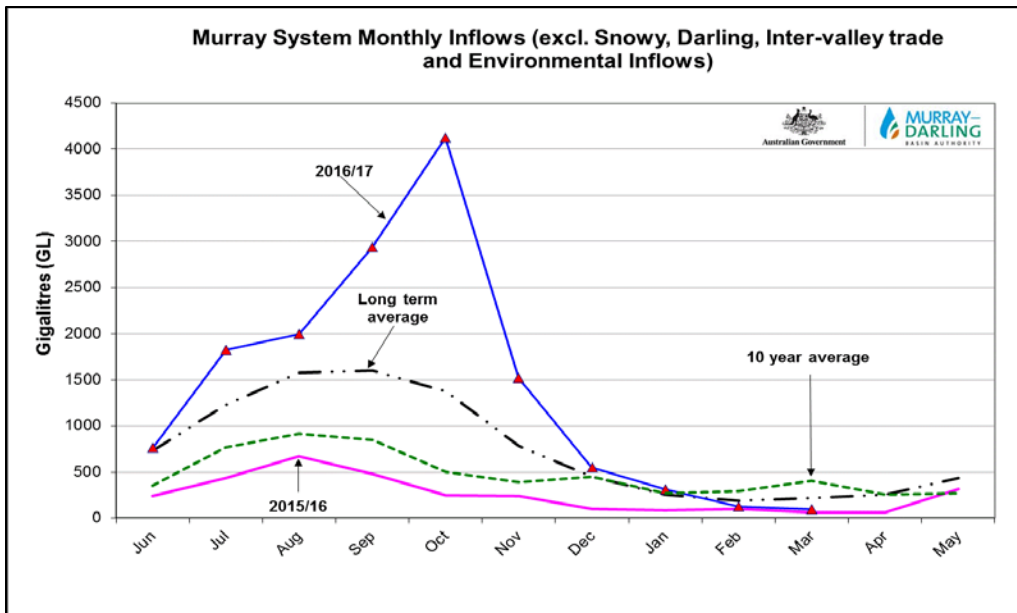
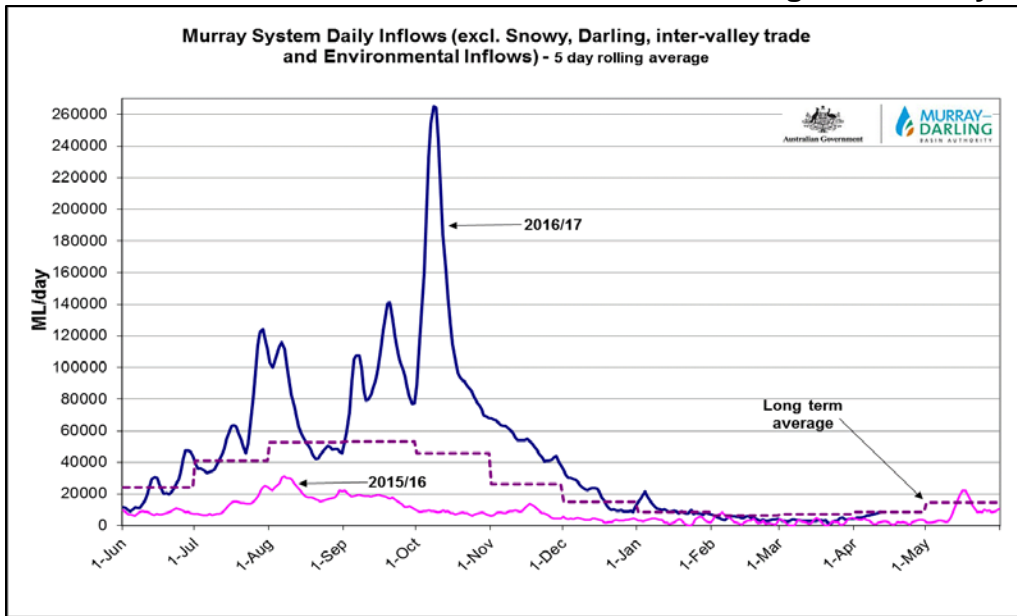
|  |      |
|--|------|
| Lake Alexandrina average level for the past 5 days (m AHD) | 0.57 |
|--|------|

**Barrages**

**Fishways at Barrages**

|                | Openings     | Level (m AHD) | No. Open   | Rock Ramp | Vertical Slot 1 | Vertical Slot 2 | Dual Vertical Slots |
|----------------|--------------|---------------|------------|-----------|-----------------|-----------------|---------------------|
| Goolwa         | 128 openings | 0.61          | All closed | -         | Open            | Open            | -                   |
| Mundoo         | 26 openings  | 0.56          | All closed | -         | -               | -               | Open                |
| Hunters Creek  | -            | -             | -          | -         | Open            | -               | -                   |
| Boundary Creek | 6 openings   | -             | All closed | -         | Open            | -               | -                   |
| Ewe Island     | 111 gates    | -             | All closed | -         | -               | -               | Open                |
| Tauwichee      | 322 gates    | 0.57          | All closed | Open      | Open            | Open            | -                   |

AHD = Level relative to Australian Height Datum, i.e. height above sea level



**State Allocations (as at 12 Apr 2017)**

**NSW - Murray Valley**

|                  |      |
|------------------|------|
| High security    | 100% |
| General security | 100% |

**Victorian - Murray Valley**

|                  |      |
|------------------|------|
| High reliability | 100% |
| Low reliability  | 5%   |

**NSW - Murrumbidgee Valley**

|                  |      |
|------------------|------|
| High security    | 100% |
| General security | 100% |

**Victorian - Goulburn Valley**

|                  |      |
|------------------|------|
| High reliability | 100% |
| Low reliability  | 0%   |

**NSW - Lower Darling**

|                  |      |
|------------------|------|
| High security    | 100% |
| General security | 100% |

**South Australia - Murray Valley**

|               |      |
|---------------|------|
| High security | 100% |
|---------------|------|

NSW : <http://www.water.nsw.gov.au/water-management/water-availability>  
 VIC : <http://nvrn.net.au/seasonal-determinations/current>  
 SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>

11 April 2017

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## Steady river heights likely this Easter

Local communities and visitors to the River Murray downstream of Hume Dam and Yarrawonga are advised that flows and river heights are likely to remain steady over the Easter weekend.

MDBA head of River Operations David Dreverman said river managers at this time of year monitor and adjust releases from Hume Dam daily, based on weather forecasts from the Bureau of Meteorology and demand from downstream entitlement holders, including irrigators and environmental water users.

“Most of the water moving through the system at the moment is meeting irrigation demand, with about 10 per cent being environmental water. With irrigation demand steady, we expect the river to remain around the levels experienced during the last couple of weeks,” Mr Dreverman said.

“The Murray downstream of Hume Dam is expected to be about 13,000 megalitres per day during Easter, resulting in flow depths about 40cm below the peak recorded so far this year.

“In the reach downstream of Yarrawonga the flow rate has been largely unchanged in 2017, and will continue at around 8000 megalitres per day over Easter.”

Mr Dreverman said that while flows in these reaches would be lower than those during Easter in the past couple of years, they were not expected to fall to levels experienced in 2014 when sudden and extensive rain halted orders for water by irrigators.

“The water currently being released at Torrumbarry weir is about 2800 megalitres per day, having been as low as about 2500 megalitres per day over the past week. It is expected to hold at about 3000 megalitres per day over Easter.

“Further downstream at Swan Hill, river levels have been gradually dropping towards 0.6m but are expected to rise slightly over Easter.

“We’re conscious that the Easter holiday period is an important time on the tourism calendar, so we recommend that visitors and people with boats on the river continue to keep an eye on river heights and use the river safely and responsibly regardless of the activity, whether swimming, canoeing, fishing or water skiing.

“Those wishing to do activities that require deeper water could take advantage of the weir pools on the Murray. The important thing to remember is that the river might not be the same as the last time you visited.”

Mr Dreverman said releases from Hume Dam in 2017 had been relatively low due to the availability of water from downstream tributaries. Combined with a wet 2016 winter and spring, this meant Hume Dam would end the water year at about 60% capacity, compared with 20% last year, while Dartmouth had recovered to 78% from 44% last year.

For more information subscribe to the [River Murray weekly report](#) and visit [livedata.mdba.gov.au](http://livedata.mdba.gov.au)  
ENDS

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