



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 16 OCTOBER 2013

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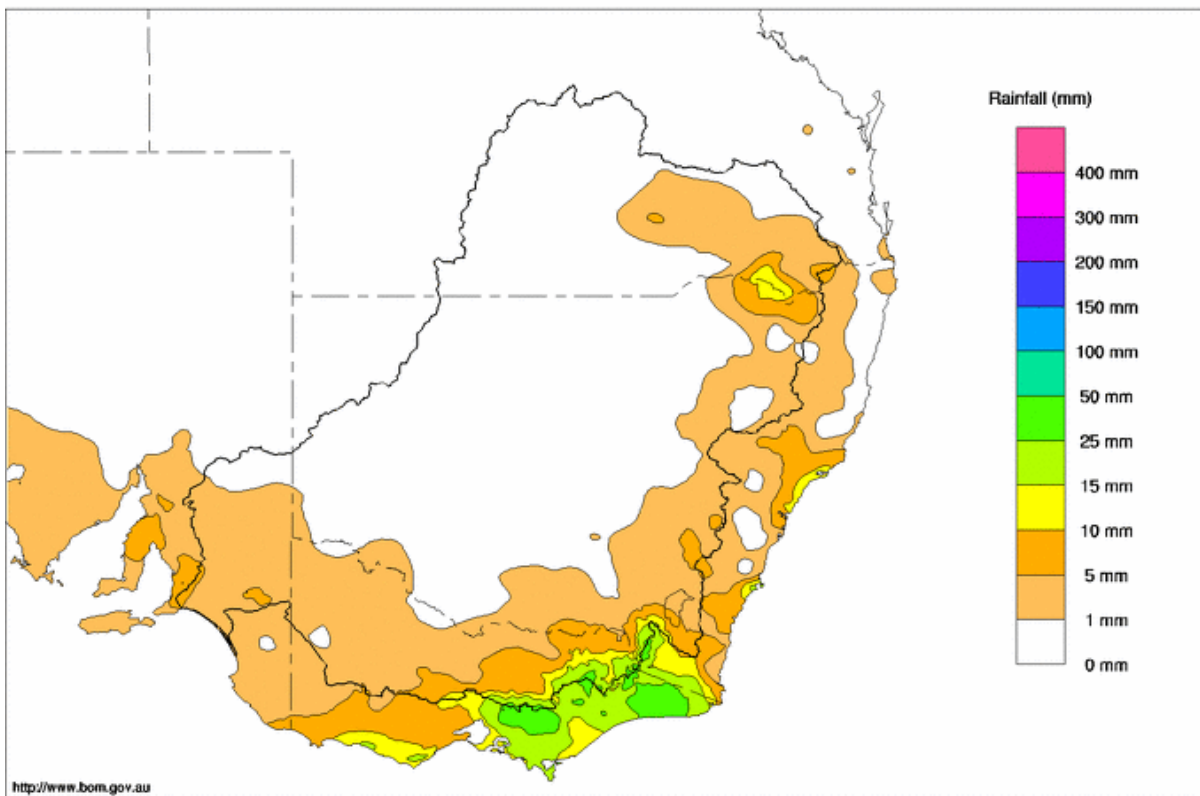
Rainfall and Inflows

Warm and mainly dry conditions continued throughout the Murray-Darling Basin this week (Map 1). Highest rainfalls were recorded in the Snowy Mountains and the Victorian Alps with 31 mm at Howitt Plains, 24 mm at Mt Hotham and at Rocky Valley near Falls Creek, and 22 mm at Cabramurra. In Queensland, 17 mm was recorded at Texas and Inglewood Forest.

Flows along the upper Murray tributaries were temporarily boosted by the rainfall during the week. The flow at Hinnomunjie, upstream of Dartmouth Dam, peaked at about 1,850 ML/day but has since receded to 1,150 ML/day. The flow at Biggara on the River Murray increased to 1,450 ML/day during the week but is now 1,240 ML/day. Further downstream, the flow at Jingellic has averaged 6,200 ML/day during the week.

On the Ovens River, the flow at Wangaratta has continued receding and is currently 2,950 ML/day. This is the lowest flow at this site since mid-July. It is possible that the rain forecast for early next week will boost this flow slightly or at least slow the recession.

Murray-Darling Rainfall Totals (mm) Week Ending 16th October 2013
Product of the National Climate Centre



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

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Issued: 16/10/2013

Map 1 - Murray-Darling Basin rainfall for the week ending 16 October 2013 (Source: Bureau of Meteorology).



River Operations

MDBA active storage decreased by 108 GL this week to 7,748 GL (90% capacity). At Dartmouth Reservoir, storage has been steady at about 3,818 GL (99% capacity). The release at Colemans has also been steady at 2,500 ML/day but this flow may be varied slightly in coming days depending on inflow responses to any rainfall.

At Hume Reservoir, the storage volume fell by 81 GL to 2,849 GL (95% capacity). Inflows averaged about 9,100 ML/day during the week while releases averaged 20,300 ML/day. Releases in the coming week are also expected to average about 20,000 ML/day.

At Yarrawonga Weir, the release has been steady at 18,000 ML/day for nearly two weeks. This flow will be reduced gradually over the weekend to 15,000 ML/day. A release of about 15,000 ML/day from Yarrawonga is expected to be maintained until late November. These high flows include environmental water for the benefit of the Barmah-Millewa Forest. The water level in Lake Mulwala is currently 124.80 m AHD which is within the usual operating range. The diversion into Mulwala Canal is 5,500 ML/day while 2,050 ML/day is flowing into Yarrawonga Main Channel.

Flow into the Edward River system has been steady at about 700 ML/day through the Gulpa Creek offtake and 2,100 ML/day through the Edward River offtake. The flow in Bullatale Creek has reduced from 490 to 250 ML/day during the week with further reductions expected as the release from Yarrawonga Weir is decreased. The diversion to Wakool Main Canal is about 1,500 ML/day while the flow downstream of Stevens Weir has reduced to 2,500 ML/day. Flows downstream on the Edward-Wakool system at Moulamein, Liewah and Stoney Crossing are all expected to continue receding.

On the Goulburn River at McCoys Bridge, elevated flows of about 1,000 ML/day continue due to an environmental release. This flow is expected to climb towards 2,000 ML/day during the next week.

On the River Murray at Torrumbarry Weir, the diversion into National Channel has been steady at about 2,500 ML/day, which includes some environmental water for Gunbower Creek. The release from the weir has reduced from 15,400 to 12,300 ML/day during the week; however, this flow is expected to steady when the higher flows arrive from the Goulburn River.

Downstream at Euston Weir, the pool level has returned below full supply level (FSL) as inflows have receded. The pool level is expected to be maintained at about 0–10 cm below FSL for the coming months. The flow at Euston has receded from 25,200 to 24,000 ML/day during the week, with daily flow reductions of 500–1,000 ML/day expected to continue for the next couple of weeks. Similar steep recessions are also expected at Mildura and Wentworth over the coming weeks.

At the Menindee Lakes, the total storage volume decreased by 21 GL this week to 1,128 GL (65% capacity) and the flow at Weir 32 has been maintained at 250 ML/day. Flow through the Lake Cawndilla outlet into the Great Darling Anabranch, which includes environmental water, has been steady at 1,500 ML/day.

At Lake Victoria, the storage fell by 6 GL to 627 GL (93% capacity). However, operations over the next couple of weeks will aim to fill the lake as the upstream flows recede. The flow to South Australia has reduced from 25,000 to 21,900 ML/day this week, and reductions are planned to continue over the coming weeks.



The flow at Lock 1 is currently 22,100 ML/day and, at the Lower Lakes, the 5-day average water level in Lake Alexandrina is 0.77 m AHD. Adverse wind and tide conditions over spring have continued to force the periodic closure of barrage openings to reduce the flow of seawater into the Lake Alexandrina (see photo). Some closure of barrage openings is expected in the coming days, and possibly over the weekend.



Photo 1 - Strong winds and high tides lash Tauwitchere Barrage recently (Photo courtesy Michael Shelton, SA Water).

For media inquiries contact the Media Officer on 02 6279 0141

DAVID DREVERMAN
Executive Director, River Management



Water in Storage

Week ending Wednesday 16 Oct 2013

| MDBA Storages | Full Supply Level | Full Supply Volume (GL) | Current Storage Level | Current Storage | | Dead Storage (GL) | Active Storage (GL) | Change in Total Storage for the Week (GL) |
|---------------------------|-------------------|----------------------------|-----------------------|-----------------|------------|----------------------|------------------------|--|
| | (m AHD) | | (m AHD) | (GL) | % | | | |
| Dartmouth Reservoir | 486.00 | 3 856 | 485.42 | 3 818 | 99% | 71 | 3 747 | -1 |
| Hume Reservoir | 192.00 | 3 005 | 191.21 | 2 849 | 95% | 23 | 2 826 | -81 |
| Lake Victoria | 27.00 | 677 | 26.59 | 627 | 93% | 100 | 527 | -6 |
| Menindee Lakes | | 1 731* | | 1 128 | 65% | (480 #) | 648 | -21 |
| Total | | 9 269 | | 8 422 | 91% | -- | 7 748 | -108 |
| Total Active MDBA Storage | | | | | | | 90% ^ | |

Major State Storages

| | | | | | | |
|----------------------|-------|-------|-----|-----|-------|-----|
| Burrinjuck Reservoir | 1 026 | 679 | 66% | 3 | 676 | -20 |
| Blowering Reservoir | 1 631 | 1 479 | 91% | 24 | 1 455 | -3 |
| Eildon Reservoir | 3 334 | 3 169 | 95% | 100 | 3 069 | +10 |

* Menindee surcharge capacity – 2050 GL

** All Data is rounded to nearest GL **

NSW takes control of Menindee Lakes when storage falls below 480 GL, and control reverts to MDBA when storage next reaches 640 GL

^ % of total active MDBA storage

Snowy Mountains Scheme

Snowy diversions for week ending 15 Oct 2013

| Storage | Active Storage (GL) | Weekly Change (GL) | Diversions (GL) | This Week | From 1 May 2013 |
|------------------------|---------------------|--------------------|------------------|-----------|-----------------|
| Lake Eucumbene - Total | 1 879 | +2 | Snowy-Murray | +2 | 494 |
| Snowy-Murray Component | 742 | +15 | Tooma-Tumut | +6 | 187 |
| Target Storage | 1 400 | | Net Diversion | -4 | 307 |
| | | | Murray 1 Release | +9 | 725 |

Major Diversions from Murray and Lower Darling (GL) *

| New South Wales | This Week | From 1 July 2013 | Victoria | This Week | From 1 July 2013 |
|---------------------------|-------------|------------------|---------------------------------|-----------|------------------|
| Murray Irrig. Ltd (Net) | 43.8 | 244 | Yarrowonga Main Channel (net) | 14.5 | 71 |
| Wakool Sys Allowance | 0.0 | -1 | Torrumbarry System + Nyah (net) | 17 | 110 |
| Western Murray Irrigation | 0.6 | 3 | Sunraysia Pumped Districts | 2.7 | 17 |
| Licensed Pumps | 6.8 | 43 | Licensed pumps - GMW (Nyah+u/s) | 0.8 | 5 |
| Lower Darling | 10.8 | 63 | Licensed pumps - LMW | 5 | 44 |
| TOTAL | 62.0 | 352 | TOTAL | 40 | 247 |

* Figures derived from estimates and monthly data. 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 the commencement of unregulated flows.

| | | |
|------------------------|---------|-----------------|
| Entitlement this month | 170.0 * | |
| Flow this week | 173.0 | (24 700 ML/day) |
| Flow so far this month | 397.7 | |
| Flow last month | 584.8 | |

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

| | Current | Average over the last week | Average since 1 August 2013 |
|-------------------------|---------|----------------------------|-----------------------------|
| Swan Hill | 80 | 90 | 100 |
| Euston | 90 | 100 | 110 |
| Red Cliffs | 100 | 100 | 120 |
| Merbein | 100 | 100 | 130 |
| Burtundy (Darling) | 550 | 570 | 470 |
| Lock 9 | 110 | 120 | 140 |
| Lake Victoria | 290 | 290 | 310 |
| Berri | 210 | 180 | 300 |
| Waikerie | 190 | 200 | 360 |
| Morgan | 170 | 180 | 370 |
| Mannum | 200 | 230 | 450 |
| Murray Bridge | 250 | 250 | 480 |
| Milang (Lake Alex.) | 690 | 680 | 640 |
| Poltalloch (Lake Alex.) | 360 | 380 | 640 |
| Meningie (Lake Alb.) | 2 440 | 2 540 | 2 610 |
| Goolwa Barrages | 780 | 840 | 2 090 |



River Levels and Flows

Week ending Wednesday 16 Oct 2013

| 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 | - | - | - | 3 410 | F | 3 100 | 2 960 |
| Jingellic | 4.0 | 2.01 | 208.53 | 6 750 | R | 6 170 | 7 640 |
| Tallandoon (Mitta Mitta River) | 4.2 | 2.23 | 219.12 | 3 110 | F | 3 190 | 3 650 |
| Heywoods | 5.5 | 3.37 | 157.00 | 19 920 | F | 20 330 | 15 550 |
| Doctors Point | 5.5 | 3.53 | 152.00 | 21 350 | F | 22 310 | 17 920 |
| Albury | 4.3 | 2.63 | 150.07 | - | - | - | - |
| Corowa | 3.8 | 4.08 | 130.10 | 22 030 | F | 21 870 | 16 620 |
| Yarrowonga Weir (d/s) | 6.4 | 2.62 | 117.66 | 17 930 | S | 17 930 | 18 350 |
| Tocumwal | 6.4 | 3.30 | 107.14 | 17 940 | S | 17 910 | 19 610 |
| Torrumbarry Weir (d/s) | 7.3 | 3.77 | 82.32 | 12 270 | F | 13 510 | 17 000 |
| Swan Hill | 4.5 | 2.36 | 65.28 | 12 960 | F | 14 840 | 18 910 |
| Wakool Junction | 8.8 | 5.72 | 54.84 | 20 700 | F | 22 340 | 24 230 |
| Euston Weir (d/s) | 8.8 | 3.63 | 45.47 | 24 010 | F | 25 000 | 25 080 |
| Mildura Weir (d/s) | - | - | - | - | - | - | - |
| Wentworth Weir (d/s) | 7.3 | 4.18 | 28.94 | 24 040 | R | 24 380 | 25 750 |
| Rufus Junction | - | 5.30 | 22.23 | 20 620 | F | 23 250 | 23 470 |
| Blanchetown (Lock 1 d/s) | - | 1.64 | - | 22 140 | F | 22 970 | 23 390 |
| Tributaries | | | | | | | |
| Kiewa at Bandiana | 2.7 | 1.82 | 155.05 | 1 720 | R | 1 790 | 2 370 |
| Ovens at Wangaratta | 11.9 | 8.89 | 146.57 | 2 950 | F | 3 600 | 4 780 |
| Goulburn at McCoys Bridge | 9.0 | 1.49 | 92.91 | 910 | F | 1 050 | 1 510 |
| Edward at Stevens Weir (d/s) | - | 2.31 | 82.08 | 2 480 | F | 3 490 | 6 380 |
| Edward at Liewah | - | 3.70 | 59.08 | 3 770 | F | 3 940 | 3 640 |
| Wakool at Stoney Crossing | - | 2.69 | 56.18 | 3 410 | F | 3 740 | 4 090 |
| Murrumbidgee at Balranald | 5.0 | 1.46 | 57.42 | 1 050 | F | 1 040 | 1 070 |
| Barwon at Mungindi | - | 3.14 | - | 30 | S | 70 | 40 |
| Darling at Bourke | - | 4.05 | - | 190 | S | 210 | 270 |
| Darling at Burtundy Rocks | - | 0.75 | - | 160 | S | 160 | 150 |

| | | |
|---|-------|--------|
| Natural Inflow to Hume (i.e. Pre Dartmouth & Snowy Mountains scheme) | 9 060 | 12 420 |
|---|-------|--------|

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 | -0.10 | - | No. 7 Rufus River | 22.10 | +0.20 | +3.00 |
| No. 26 Torrumbarry | 86.05 | +0.00 | - | No. 6 Murtho | 19.25 | +0.06 | +1.26 |
| No. 15 Euston | 47.60 | -0.05 | - | No. 5 Renmark | 16.30 | +0.04 | +1.14 |
| No. 11 Mildura | 34.40 | +0.00 | +1.25 | No. 4 Bookpurnong | 13.20 | -0.02 | +2.13 |
| No. 10 Wentworth | 30.80 | -0.01 | +1.54 | No. 3 Overland Corner | 9.80 | -0.04 | +1.39 |
| No. 9 Kulnine | 27.40 | +0.19 | +0.87 | No. 2 Waikerie | 6.10 | -0.02 | +1.46 |
| No. 8 Wangumma | 24.60 | +0.46 | +1.11 | No. 1 Blanchetown | 3.20 | +0.04 | +0.89 |

Lower Lakes FSL = 0.75 m AHD

| | |
|--|------|
| Lake Alexandrina average level for the past 5 days (m AHD) | 0.77 |
|--|------|

Barrages

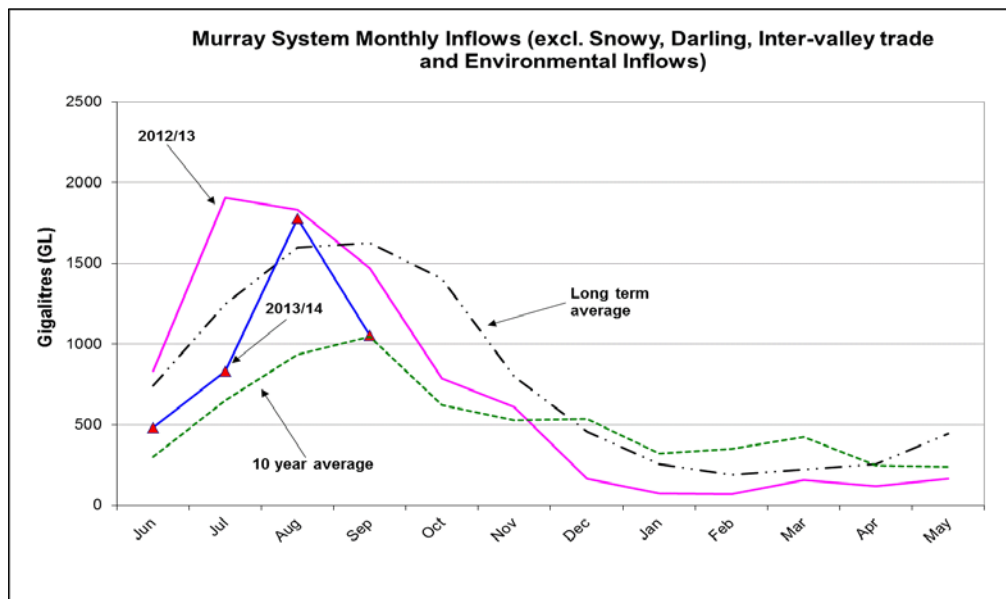
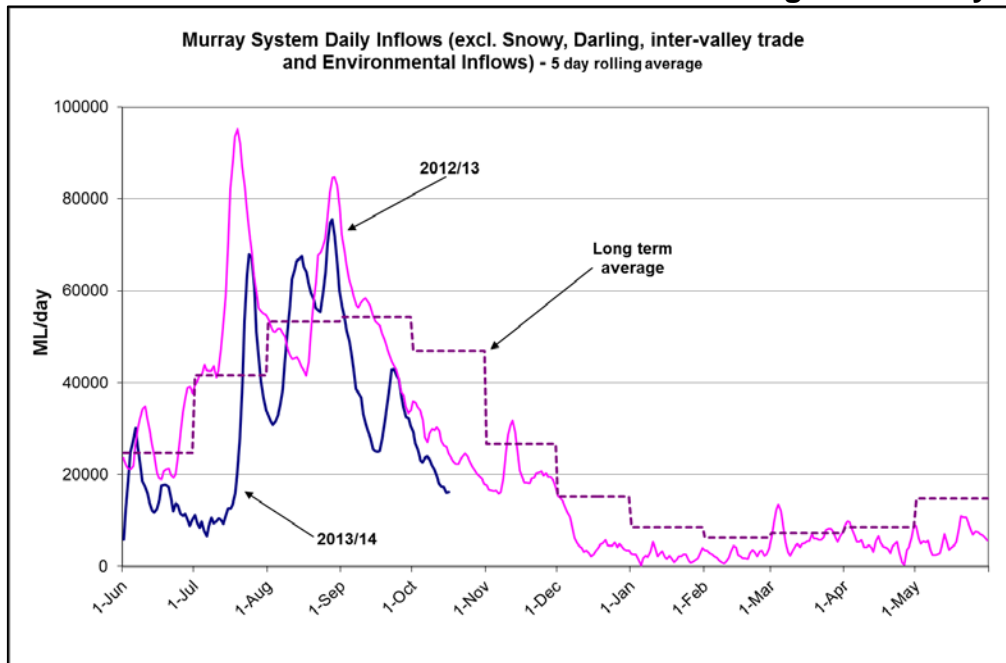
Fishways at Barrages

| | Openings | Level (m AHD) | No. Open | Rock Ramp | Vertical Slot |
|----------------|--------------|---------------|----------|-----------|---------------|
| Goolwa | 128 openings | 0.75 | 40 | - | Open |
| Mundoo | 26 openings | 0.72 | 5 | - | - |
| Boundary Creek | 6 openings | - | 0.1 | - | - |
| Ewe Island | 111 gates | - | 12 | - | - |
| Tauwichee | 322 gates | 0.77 | 90 | Open | Open |

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



Week ending Wednesday 16 Oct 2013



State Allocations (as at 16 Oct 2013)

NSW - Murray Valley

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

Victorian - Murray Valley

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

NSW - Murrumbidgee Valley

| | |
|------------------|-----|
| High security | 95% |
| General security | 43% |

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/Water-allocations/Water-allocations-summary/water-allocations-summary/default.aspx>

VIC : <http://www.g-mwater.com.au/water-resources/allocations/current.asp>

SA : <http://www.environment.sa.gov.au/managing-natural-resources/river-murray>