



RIVER MURRAY WEEKLY REPORT

FOR THE WEEK ENDING WEDNESDAY, 09 NOVEMBER 2011

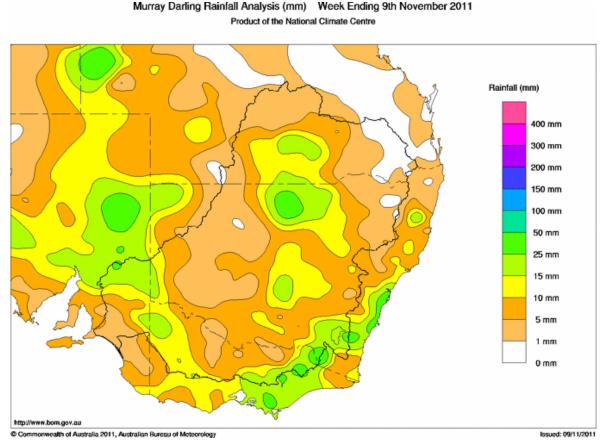
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Rainfall and Inflows

It was a mostly fine and dry start to the week across the Murray-Darling Basin, but became progressively more unsettled during the last few days as a broad trough approached from the west bringing increased humidity and scattered thunderstorms to the region. This unstable weather is forecast by the Bureau of Meteorology to intensify further over the coming day or two. With the potential for heavy rainfall, the Bureau has issued flood watches for a number of southern Basin tributaries including several in the upper Murray catchments.

The highest rainfall totals over the last seven days were mainly recorded over the south-east ranges including the upper Murrumbidgee, upper Murray, Ovens and Kiewa catchments (Map 1). The Victorian High Country was once again an area of rainfall focus, with 60 mm recorded at Rocky Valley and 38 mm at Mt Buller. North of the Murray, reasonable totals were recorded over the NSW Snowy Mountains as well as around Canberra, with 37 mm at Captains Flat and 35 mm at both Mt Ginini and Gungahlin. There were also isolated higher totals through central northern NSW and southern Queensland including 58 mm at Mulga Downs and 38 mm at Brewarrina; and 21 mm in the far west at Lake Victoria.

Stream flows in the upper Murray System tributaries receded during the first half of the week before renewed rises were observed after the weekend. For example, at Jingellic the upper Murray had receded to 3,700 ML/day by Sunday morning before increasing to its current flow of 8,100 ML/day. On the Ovens River, the flow at Rocky Point had eased to 1,250 ML/day over the weekend but is now flowing at 3,400 ML/day, due mostly to increased releases from Lake Buffalo ahead of the forecast rain.



Map 1 - Murray-Darling Basin rainfall for the week ending 9 November 2011 (Source: Bureau of Meteorology).

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River Operations

MDBA active storage decreased by 24 GL during the week to 7,489 GL (87% capacity). At Dartmouth Reservoir, the total storage increased by 5 GL to 2,859 GL, which is 74% capacity. The release remained steady at the normal minimum of 200 ML/day.

At Hume Reservoir, the release peaked at 16,300 ML/day earlier in the week but has since been reduced to 7,500 ML/day as both downstream demands and transmission losses dropped back. The storage is currently holding 2,784 GL (or 93% capacity), which is a decrease of 45 GL since last week.

At Lake Mulwala, the pool level is currently 124.78 m AHD. Diversions at both Mulwala Canal and the Yarrawonga Main Channel increased slightly early in the week but have both since dropped back. Release from Yarrawonga Weir is currently 12,100 ML/day after being at 11,000 ML/day for the majority of the past week. This release is being targeted to supply environmental entitlements that are maintaining over-bank flows to the Barmah-Millewa forest. With heavy rain forecast in the coming days, higher releases at Yarrawonga Weir may be required later in the week.

On the Edward River, inflows through the Edward and Gulpa offtakes have remained relatively steady over the past week and are currently at 1,660 and 755 ML/day respectively. At Stevens Weir, the flow has eased from 2,200 to 1,900 ML/day during the week and is expected to remain around this level over the coming days. Further downstream, the flows at most locations on the Edward-Wakool system are expected to continue receding slowly over the coming days.

On the Goulburn River, the flow at McCoys Bridge has averaged just under 1,200 ML/day over the past week with the flow elevated as a result of environmental releases. Higher flows are expected resulting from rainfall forecast over the coming days.

At Torrumbarry Weir, diversions to the National Channel have been averaging around 2,000 ML/day during the past week but are expected to decrease over the coming days. Flow downstream of the Weir has decreased from 9,200 to 7,200 ML/day during the week and is expected to remain around 8,000 ML/day over the coming days. Downstream at Euston, the flow has decreased from 16,000 to 10,000 ML/day and is expected to recede only slightly in the coming week.

The release from Menindee Lakes—currently surcharged at 107% capacity—continues to vary between 300 and 700 ML/day at Weir 32. Higher releases are expected to commence in late November. These higher releases will be required to transfer water from the Menindee Lakes to reduce the rate of fall at Lake Victoria and to contribute to the delivery of entitlement flows and trade to South Australia. Further information will be provided in a flow advice in the near future.

Lake Victoria is now effectively full with a water level of 26.95 m AHD (99% capacity). The lake is expected to remain close to full supply level for the next week before higher releases are required which will draw the lake level down. The flow into South Australia has averaged 11,200 ML/day during the week and is expected to be fully regulated by early next week.

The water level in the Lower Lakes has varied between 0.75 and 0.8 m AHD during the last couple of weeks. Flow from the River Murray into the sea continues through the barrages at Goolwa, Boundary Creek, Ewe Island and Tauwitchere and the fishways remain open.

For media inquiries contact the Media Officer on 02 6279 0141

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Water in Storage

Week ending Wednesday 09 Nov 2011

| MDBA Storages | Full Supply Level | Full Supply Volume | Current Storage Level Current Storage | | Dead Storage | Active Storage | Change in Total Storage for the Week | |
|---------------------------|-------------------------|-----------------------|---|-------|-----------------|-------------------|--|------|
| | (m AHD) | (GL) | (m AHD) | (GL) | % | (GL) | (GL) | (GL) |
| Dartmouth Reservoir | 486.00 | 3 856 | 469.38 | 2 859 | 74% | 71 | 2 788 | +5 |
| Hume Reservoir | 192.00 | 3 005 | 190.88 | 2 784 | 93% | 23 | 2 761 | -45 |
| Lake Victoria | 27.00 | 677 | 26.95 | 672 | 99% | 100 | 572 | +21 |
| Menindee Lakes | | 1 731* | | 1 848 | 107% | (480 #) | 1 368 | -5 |
| Total | | 9 269 | | 8 163 | 88% | - | 7 489 | -24 |
| Total Active MDBA Storage | | | | | | • | 87% ^ | |

Major State Storages

| Burrinjuck | Reservoir | 1 026 | 920 | 90% | 3 | 917 | -7 |
|------------|-----------|-------|-------|-----|-----|-------|-----|
| Blowering | Reservoir | 1 631 | 1 499 | 92% | 24 | 1 475 | -15 |
| Eildon Res | ervoir | 3 334 | 3 314 | 99% | 100 | 3 214 | -14 |

^{*} Menindee surcharge capacity - 2050 GL

Snowy Mountains Scheme

Snowy diversions for week ending 08 Nov 2011

| <i>,</i> | | | | | |
|------------------------|------------------------|-----------------------|------------------|-----------|--------------------|
| Storage | Active Storage (GL) | Weekly Change (GL) | Diversion (GL) | This Week | From 1 May 2011 |
| Lake Eucumbene - Total | 1 863 | +19 | Snowy-Murray | +0 | 274 |
| Snowy-Murray Component | 595 | +17 | Tooma-Tumut | +3 | 188 |
| Target Storage | 1 450 | | Net Diversion | -3 | 86 |
| | | | Murray 1 Release | +14 | 519 |

Major Diversions from Murray and Lower Darling (GL) *

| New South Wales | This Week | From 1 July 2011 | Victoria | This Week | From 1 July 2011 |
|---------------------------|-----------|---------------------|---------------------------------|-----------|---------------------|
| Murray Irrig. Ltd (Net) | 33.1 | 373 | Yarrawonga Main Channel (net) | 10.7 | 84 |
| Wakool Sys Allowance | -0.2 | -2 | Torrumbarry System + Nyah (net) | 17.5 | 163 |
| Western Murray Irrigation | 0.8 | 5 | Sunraysia Pumped Districts | 3.7 | 22 |
| Licensed Pumps | 4.7 | 59 | Licensed pumps - GMW (Nyah+u/s) | 0.5 | 9 |
| Lower Darling | 1.7 | 18 | Licensed pumps - LMW | 6 | 63 |
| TOTAL | 40.1 | 453 | TOTAL | 38.4 | 341 |

^{*} Figures derived from estimates and monthly data. Please note that not all data may have been available at the time of creating this report.

Flow to South Australia (GL)

* Flow to SA will be greater than entitlement for November due to Additional Dilution Flow and Unregulated Flows.

| Entitlement this month | 180.0 * | |
|------------------------|---------|-----------------|
| Flow this week | 78.6 | (11 200 ML/day) |
| Flow so far this month | 105.3 | |
| Flow last month | 502.6 | |

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

| | Current | Average over the last week | Average since 1 August 2011 |
|-------------------------|---------|----------------------------|-----------------------------|
| Swan Hill | 160 | 150 | 140 |
| Euston | 130 | 130 | 130 |
| Red Cliffs | - | - | 110 |
| Merbein | 140 | 130 | 110 |
| Burtundy (Darling) | 410 | 410 | 360 |
| Lock 9 | 150 | 150 | 130 |
| Lake Victoria | 200 | 200 | 200 |
| Berri | 270 | 250 | 210 |
| Waikerie | - | - | - |
| Morgan | 290 | 310 | 240 |
| Mannum | 290 | 290 | 230 |
| Murray Bridge | 300 | 290 | 220 |
| Milang (Lake Alex.) | 510 | 490 | 530 |
| Poltalloch (Lake Alex.) | 300 | 290 | 260 |
| Meningie (Lake Alb.) | 5 380 | 5 320 | 5 540 |
| Goolwa Barrages | 540 | 560 | 1 410 |

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^{**} 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

^{**} All data above is rounded to nearest 100 ML for weekly data and nearest GL for cumulative data**





River Levels and Flows

Week ending Wednesday 09 Nov 2011

| | Minor Flood Stage | Gauge | Height | Flow | Trend | Average Flow this Week | Average Flow last Week |
|----------------------------------|----------------------|-----------|---------|----------|-------|---------------------------|------------------------------|
| River Murray | (m) | local (m) | (m AHD) | (ML/day) | | (ML/day) | (ML/day) |
| Khancoban | - | = | - | 3 650 | F | 3 210 | 2 300 |
| Jingellic | 4.0 | 2.13 | 208.65 | 8 140 | R | 5 390 | 6 090 |
| Tallandoon (Mitta Mitta River) | 4.2 | 1.53 | 218.42 | 780 | S | 780 | 890 |
| Heywoods | 5.5 | 2.24 | 155.87 | 7 500 | F | 12 700 | 11 390 |
| Doctors Point | 5.5 | 2.46 | 150.93 | 8 480 | F | 13 980 | 12 740 |
| Albury | 4.3 | 1.43 | 148.87 | - | - | - | - |
| Corowa | 3.8 | 2.93 | 128.95 | 12 900 | F | 14 210 | 13 410 |
| Yarrawonga Weir (d/s) | 6.4 | 1.93 | 116.97 | 12 110 | R | 11 200 | 12 290 |
| Tocumwal | 6.4 | 2.49 | 106.33 | 10 930 | R | 10 880 | 12 200 |
| Torrumbarry Weir (d/s) | 7.3 | 2.32 | 80.87 | 7 240 | F | 7 950 | 9 280 |
| Swan Hill | 4.5 | 1.51 | 64.43 | 6 850 | F | 7 150 | 8 650 |
| Wakool Junction | 8.8 | 3.68 | 52.80 | 11 450 | F | 12 410 | 17 510 |
| Euston Weir (d/s) | 8.8 | 2.01 | 43.85 | 9 970 | R | 11 870 | 18 360 |
| Mildura Weir (d/s) | | - | - | 12 700 | F | 14 390 | 20 320 |
| Wentworth Weir (d/s) | 7.3 | 3.32 | 28.08 | 10 950 | F | 12 810 | 17 860 |
| Rufus Junction | - | 4.15 | 21.08 | 10 520 | R | 10 450 | 12 960 |
| Blanchetown (Lock 1 d/s) | - | 1.00 | - | 10 900 | F | 12 110 | 12 400 |
| Tributaries | | | | | | | |
| Kiewa at Bandiana | 2.7 | 1.60 | 154.83 | 1 430 | F | 1 490 | 1 440 |
| Ovens at Wangaratta | 11.9 | 8.49 | 146.17 | 1 880 | R | 1 800 | 2 160 |
| Goulburn at McCoys Bridge | 9.0 | 1.60 | 93.02 | 1 120 | F | 1 170 | 810 |
| Edward at Stevens Weir (d/s) | - | 1.91 | 81.68 | 1 870 | F | 2 050 | 2 330 |
| Edward at Liewah | - | 2.85 | 58.23 | 2 370 | S | 2 410 | 3 260 |
| Wakool at Stoney Crossing | - | 1.64 | 55.13 | 880 | S | 970 | 2 250 |
| Murrumbidgee at Balranald | 5.0 | 0.95 | 56.91 | 590 | R | 630 | 920 |
| Barwon at Mungindi | - | 3.63 | - | 1 320 | R | 1 100 | 1 360 |
| Darling at Bourke | - | 4.35 | - | 1 800 | F | 2 250 | 2 480 |
| Darling at Burtundy Rocks | - | 0.91 | - | 610 | F | 520 | 370 |

Natural Inflow to Hume 10 010 11 400

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 |
|--------------------|-------------|-------|-------|-----------------------|-------------|-------|-------|
| Yarrawonga | 124.90 | -0.12 | - | No. 7 Rufus River | 22.10 | +0.12 | +1.85 |
| No. 26 Torrumbarry | 86.05 | -0.04 | - | No. 6 Murtho | 19.25 | +0.09 | +0.43 |
| No. 15 Euston | 47.60 | +0.03 | - | No. 5 Renmark | 16.30 | +0.05 | +0.38 |
| No. 11 Mildura | 34.40 | +0.03 | +0.46 | No. 4 Bookpurnong | 13.20 | +0.05 | +1.09 |
| No. 10 Wentworth | 30.80 | +0.05 | +0.68 | No. 3 Overland Corner | 9.80 | +0.03 | +0.49 |
| No. 9 Kulnine | 27.40 | +0.06 | +0.21 | No. 2 Waikerie | 6.10 | +0.04 | +0.54 |
| No. 8 Wangumma | 24.60 | +0.04 | +0.49 | No. 1 Blanchetown | 3.20 | -0.01 | +0.25 |

Lower Lakes FSL = 0.75 m AHD

Lake Alexandrina average level for the past 5 days (m AHD) 0.78

Barrages Fishways at Barrages

| | | | | , | |
|----------------|--------------|---------------|------------|-----------|---------------|
| | Openings | Level (m AHD) | No. Open | Rock Ramp | Vertical Slot |
| Goolwa | 128 openings | 0.84 | 3 | - | Open |
| Mundoo | 26 openings | 0.83 | All closed | - | - |
| Boundary Creek | 6 openings | - | 1 | - | - |
| Ewe Island | 111 gates | - | 3 | - | - |
| Tauwitchere | 322 gates | 0.87 | 7 | Open | Open |

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

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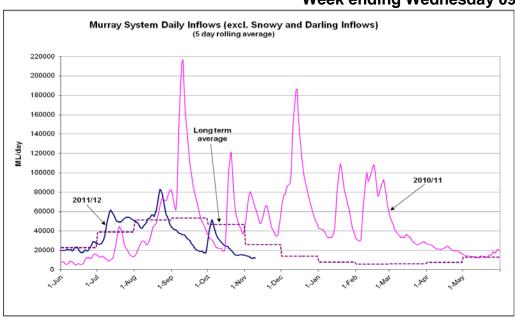
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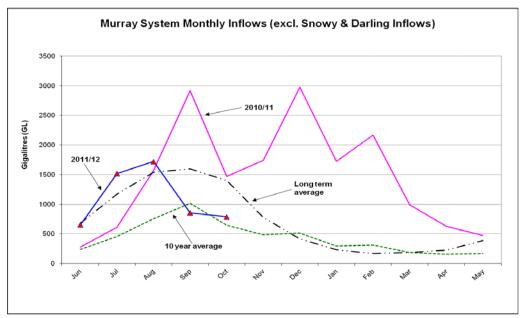
⁽i.e. Pre Dartmouth & Snowy Mountains scheme)





Week ending Wednesday 09 Nov 2011





State Allocations (as at 09 Nov 2011)

NSW - Murray Valley

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

NSW - Murrumbidgee Valley

| | | <u> </u> | _ |
|------------|---------|----------|---|
| High secur | ity | 95% | 6 |
| General se | ecurity | 69% | 6 |

NSW - Lower Darling

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

Victorian - Murray Valley

| Violoman marray | t and y |
|------------------|-----------------------|
| High reliability | 95% |
| Low reliability | 0% |

Victorian - Goulburn Valley

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

South Australia - Murray Valley

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

NSW: http://www.water.nsw.gov.au/About-us/Media-releases/media/default.aspx
VIC: http://www.g-mwater.com.au/water-resources/allocations/current.asp

SA: http://www.waterforgood.sa.gov.au/category/news/

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