

REPORT FOR THE WEEK ENDING

Wednesday, 14 May 2003

Our Ref : MDBC:269 :brc

16 May, 2003



Rainfall over Irrigation Areas as Irrigation Season Ends

The Victorian irrigation season officially ends on 15 May (NSW major channel offtakes typically close in early May, as was the case this season). During 14 May, rainfall totalling about 25-50 mm fell across most of the Murray Valley major gravity irrigation districts. As a result, the National Channel offtake was closed on 14 May, and Yarrowonga Main Channel closed early on 15 May.

Whilst the rainfall is very welcome, streamflows in the Upper Murray and tributaries have shown little or no response so far.

2002-03 Season in Perspective

Operation of the River Murray system, including the resultant State irrigation allocations, is dependant upon inflows to the system as a whole. Total System Inflows are here defined as inflows to Hume (excluding Snowy Scheme releases), Dartmouth and Menindee Lakes plus inflows to the River Murray from the tributaries of the Kiewa, Ovens, Goulburn-Broken, Campaspe, Loddon and Murrumbidgee-Billabong catchments.

Total System Inflows from June 2002 to April 2003 were the 4th lowest on record, as shown below. However, this drought effectively commenced in the previous season, which was also very dry. Total System Inflows from June 2001 to April 2003 (23 months) were the lowest since records began in 1890.

| 11 month sequence (June-April) | Total Inflow to River Murray System | 23 month sequence (June-April) | Total Inflow to River Murray System |
|---|--|---|--|
| 1982/83 | 1570 GL | 2001-2003 | 6,560 GL |
| 1914/15 | 1590 GL | 1901-1903 | 6,800 GL |
| 1902/03 | 1630 GL | 1944-1946 | 6,810 GL |
| 2002/03 | 2090 GL | 1913-1915 | 7,100 GL |
| 1944/45 | 2100 GL | (1981-1983) | 18,700 GL) |

Inflows during January, February and March 2003 also set new record lows, and this summer-autumn has had the lowest inflow on record.

The impacts of this drought are profound. Similar extended droughts occurred prior to the living memory of most irrigators, and prior to the expansion of irrigation districts through the 1970's and 1980's. Hence, NSW and Victorian Murray Valley irrigators have experienced the lowest allocations on record. It should be noted that some parts of the Murray-Darling Basin have been affected for even longer. The Goulburn system is effectively in the 7th year of drought, and in that time has experienced prolonged and record dry conditions.

Outlook for 2003-04

The impact of this drought is still very much in evidence. Major storages throughout the River Murray system are extremely low (as are storages on most tributary systems). As a result, current reserves in

River Murray system storages total just 19% of capacity, compared to the long term average for May of about 55%.

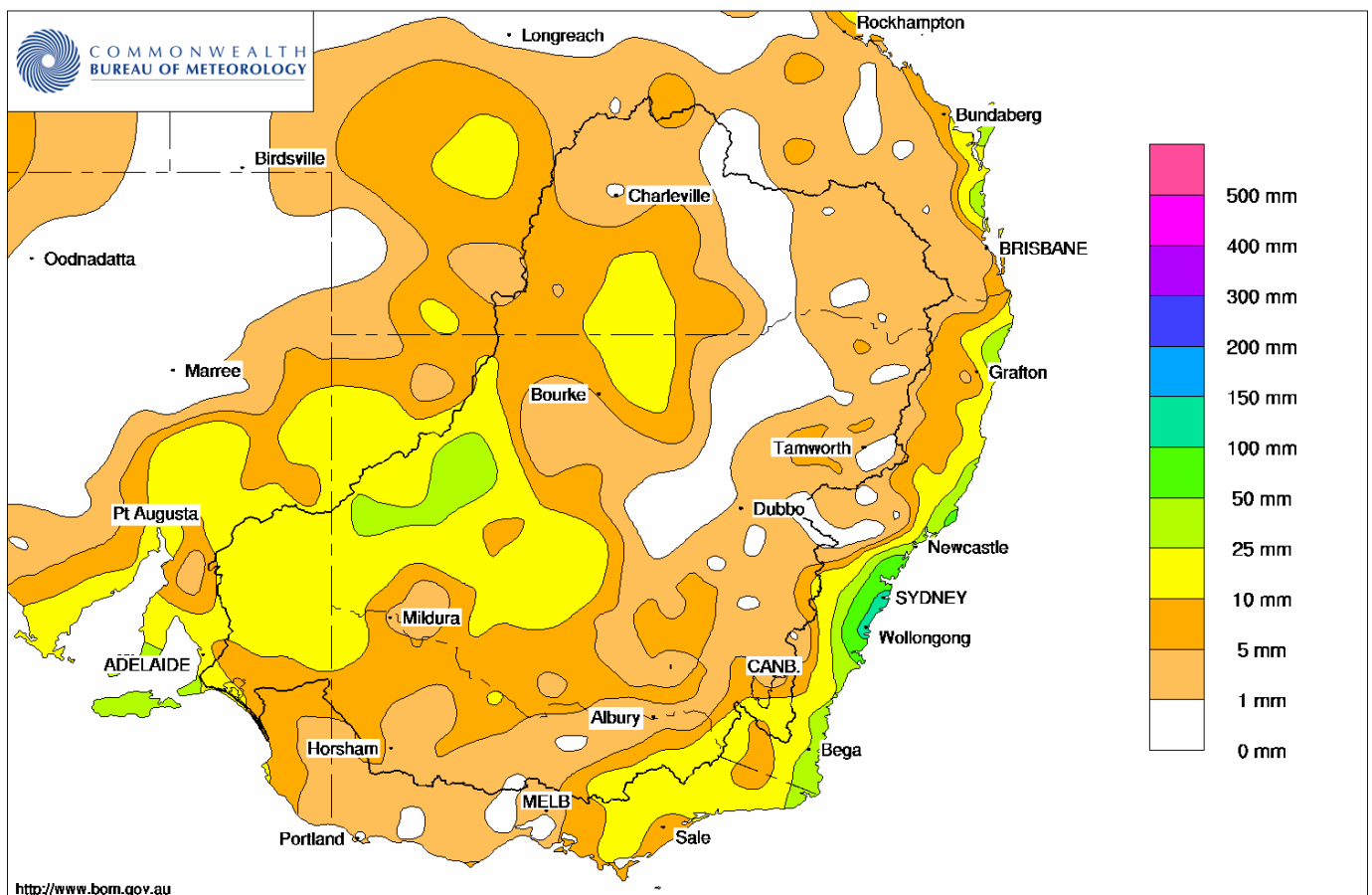
Given the current low reserves, next season's irrigation allocations will be critically dependant on inflows this winter-spring. Given that the highest inflows normally occur in September-October, there is a very real prospect that irrigation allocations at the beginning of next season in July-August will be low.

Even with average conditions through to the end of spring, there will be no water available from the Darling system to supplement supplies in the River Murray.

River Murray Water will be concentrating on managing through these dry conditions, including providing the States with the best possible information for business planning. Further information will be provided as conditions change over coming months. Information on water allocations for each State should be sought from State agencies.

DAVID DOLE
General Manager

Murray Darling Rainfall Analysis (mm) Week Ending 14th May 2003
Product of the National Climate Centre



Week ending Wednesday 14 May 2003

Water in Storage

| MDBC Storages | Full Supply Level (m AHD) | Full Supply Volume (GL) | Current Storage Level (m AHD) | Current Storage | | Dead Storage (GL) | Active Storage (GL) | Change in Storage for the week (GL) |
|---------------------|------------------------------|----------------------------|----------------------------------|-----------------|------------|----------------------|------------------------|--|
| | | | | (GL) | % | | | |
| Dartmouth Reservoir | 486.00 | 3 906 | 427.90 | 1 130 | 29% | 80 | 1 050 | +0 |
| Hume Reservoir | 192.00 | 3 038 | 169.58 | 251 | 8% | 30 | 221 | +22 |
| Lake Victoria | 27.00 | 680 | 22.96 | 259 | 38% | 100 | 159 | +0 |
| Menindee Lakes | | 1 682 * | | 117 | 7% | 640 # | 0 | +9 |
| Total | | 9 306 | | 1 757 | 19% | 850 | 1 430 | +31 |

* Menindee surcharge capacity 1999 GL

% of Total Active MDBC Storage = 17%

NSW Menindee Lakes Reserve

Major State Storages

| | | | | | | | |
|----------------------|-------|--|-----|----|-----|-----|-----|
| Burrinjuck Reservoir | 1 026 | | 51 | 5% | 3 | 48 | +1 |
| Blowering Reservoir | 1 631 | | 57 | 3% | 24 | 33 | -10 |
| Eildon Reservoir | 3 390 | | 289 | 9% | 100 | 189 | +1 |

Snowy Mountains Scheme

Snowy diversions for week ending 13-May-2003

| Storage (GL) | Current storage | Weekly change | Diversions | This week | From 1 May 2003 |
|------------------------|-----------------|---------------|------------------|-----------|-----------------|
| Lake Eucumbene - Total | 2 055 | -66 | Snowy-Murray | +35 | 46 |
| Snowy-Murray Component | 888 | - | Tooma-Tumut | +0 | 3 |
| Target Storage | 1 290 | | Nett Diversion | 34.8 | 43 |
| | | | Murray 1 Release | +35 | 46 |

Major Diversions from Murray and Lower Darling (GL)

| New South Wales | This week | From 1 July 2002 |
|-------------------------|------------|------------------|
| Murray Irrig. Ltd (Net) | - 3.5 | 524.2 |
| Wakool System loss | 1.4 | 53.9 |
| Western Murray Irrig. | 0.3 | 29.1 |
| Licensed Pumps | 1.7 | 199.2 |
| Lower Darling | 0.3 | 121.9 |
| TOTAL | 0.2 | 928.3 |

| Victoria | This week | From 1 July 2002 |
|---------------------------------|-------------|------------------|
| Yarrawonga Main Channel (net) | 8.4 | 483 |
| Torrumbarry System + Nyah (net) | 6.5 | 798 |
| Sunraysia Pumped Districts | 1.4 | 156 |
| Licensed pumps - GMW (Nyah+u/s) | 0.3 | 70 |
| Licensed pumps - SRW | 2.4 | 185 |
| TOTAL | 18.9 | 1 692 |

Flow to South Australia (GL)

| | | |
|------------------------|------|----------------|
| Entitlement this month | 93 | (3 000 ML/day) |
| Flow this week | 21.2 | |
| Flow so far this month | 42 | |
| Flow last month | 135 | |

Salinity (EC)

(microsiemens/cm @ 25° C)

| | Current | Average over the last week | Average since 1 August 2002 |
|-------------------------|---------|----------------------------|-----------------------------|
| Swan Hill | 110 | 110 | 80 |
| Euston | 140 | 140 | 120 |
| Red Cliffs | 130 | 130 | 130 |
| Merbein | 150 | 140 | 150 |
| Burtundy (Darling) | 1 440 | 1 420 | 1 180 |
| Lock 9 | 200 | 210 | 170 |
| Lake Victoria | 230 | 240 | 290 |
| Berri | 330 | 340 | 320 |
| Waikerie | - | 410 | 400 |
| Morgan | 400 | 390 | 480 |
| Mannum | 440 | 420 | 550 |
| Murray Bridge | 470 | 460 | 630 |
| Milang (Lake Alex.) | 1 090 | 1 130 | 1 160 |
| Poltalloch (Lake Alex.) | 990 | 1 000 | 1 160 |
| Meningie (Lake Alb.) | 1 530 | 1 570 | 1 630 |
| Goolwa Barrages | 2 860 | 3 040 | 3 260 |



Week ending Wednesday 14 May 2003

River Levels and Flows

| 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 | - | - | - | 4 690 | F | 5 420 | 1 920 |
| Jingellic | 4.0 | 1.73 | 208.25 | 5 120 | F | 5 410 | 2 670 |
| Tallandoon (Mitta Mitta River) | 4.2 | 1.18 | 218.07 | 360 | F | 490 | 710 |
| Heywoods | 5.5 | 1.50 | 155.13 | 1 710 | S | 1 900 | 2 250 |
| Doctors Point | 5.5 | 1.69 | 150.16 | 1 950 | S | 2 130 | 2 460 |
| Albury | 4.3 | - | - | - | - | - | - |
| Corowa | 7.0 | 0.83 | 126.85 | 2 200 | F | 2 330 | 3 610 |
| Yarrowonga Weir (d/s) | 6.4 | 0.37 | 115.41 | 1 820 | S | 1 890 | 3 090 |
| Tocumwal | 6.4 | 0.82 | 104.66 | 1 880 | S | 2 160 | 3 190 |
| Torrumbarry Weir (d/s) | 7.3 | 0.74 | 79.29 | 1 340 | F | 1 780 | 2 630 |
| Swan Hill | 4.5 | 0.62 | 63.54 | 1 940 | F | 2 350 | 3 070 |
| Wakool Junction | 8.8 | 1.66 | 50.78 | 2 770 | F | 3 210 | 3 770 |
| Euston Weir (d/s) | 8.8 | 0.76 | 42.60 | 3 190 | F | 3 680 | 3 870 |
| Mildura Weir (d/s) | - | - | 30.80 | 3 720 | F | 3 820 | 3 330 |
| Wentworth Weir (d/s) | 7.3 | 2.96 | 27.72 | 3 120 | R | 3 340 | 2 740 |
| Rufus Junction | - | 2.77 | 19.70 | 2 720 | F | 2 700 | 2 670 |
| Blanchetown (Lock 1 d/s) | - | - | - | 2 440 | R | 1 870 | 2 120 |
| Tributaries | | | | | | | |
| Kiewa at Bandiana | 2.7 | 0.64 | 153.87 | 160 | R | 190 | 200 |
| Ovens at Wangaratta | 11.9 | 7.67 | 145.35 | 232 | R | 190 | 200 |
| Goulburn at McCoys Bridge | 9.0 | 1.15 | 92.57 | 349 | F | 400 | 500 |
| Edward at Stevens Weir (d/s) | - | - | - | 850 | F | 830 | 220 |
| Edward at Liewah | - | 0.72 | 56.10 | 320 | F | 370 | 530 |
| Wakool at Stoney Crossing | - | 0.41 | 54.90 | 308 | R | 300 | 380 |
| Murrumbidgee at Balranald | 5.0 | 0.53 | 56.49 | 215 | S | 220 | 230 |
| Barwon at Mungindi | - | 3.34 | - | 320 | R | 260 | 490 |
| Darling at Bourke | - | 4.25 | - | 1 290 | S | 1 380 | 1 440 |
| Darling at Burtundy Rocks | - | 0.71 | - | 130 | S | 140 | 130 |

| | | |
|---|-----|-------|
| Natural Inflow to Hume (ie pre Dartmouth & Snowy Mountains scheme) | 170 | 2 460 |
|---|-----|-------|

Weirs and Locks

Pool levels above or below design level

| Murray | FSL (m AHD) | u/s | d/s | | FSL (m AHD) | u/s | d/s |
|-------------------|-------------|-------|-------|----------------------|-------------|-------|-------|
| Yarrowonga | 124.90 | -0.31 | - | No. 7 Rufus River | 22.10 | +0.05 | +0.41 |
| No 26 Torrumbarry | 86.05 | -0.02 | - | No. 6 Murtho | 19.25 | +0.00 | -0.02 |
| No. 15 Euston | 47.60 | +0.00 | - | No. 5 Renmark | 16.30 | +0.04 | +0.06 |
| No. 11 Mildura | 34.40 | -0.01 | +0.00 | No. 4 Bookpurnong | 13.20 | +0.01 | +0.29 |
| No. 10 Wentworth | 30.80 | +0.00 | +0.32 | No.3 Overland Corner | 9.80 | +0.04 | +0.12 |
| No. 9 Kulnine | 27.40 | +0.16 | +0.00 | No. 2 Waikerie | 6.10 | +0.04 | +0.09 |
| No. 8 Wangumma | 24.60 | +0.02 | +0.05 | No 1. Blanchetown | 3.20 | +0.04 | -0.36 |

| Murrumbidgee | FSL (m AHD) | relation to FSL | d/s gauge ht. | | Flow (ML/day) |
|---------------|-------------|-----------------|---------------|---------|---------------|
| | | | local (m) | (m AHD) | |
| No. 7 Maude | 75.40 | -1.17 | 0.44 | 69.79 | 168 |
| No. 5 Redbank | 66.90 | -1.54 | 0.14 | 61.44 | 261 |

Barrages

FSL = 0.75 m AHD

| | Openings | Level | Status |
|----------------|--------------|-------|------------|
| Goolwa | 128 openings | 0.44 | All closed |
| Mundoo | 26 openings | - | All closed |
| Boundary Creek | 6 openings | - | All closed |
| Ewe Island | 111 gates | - | All closed |
| Tauwichee | 322 gates | 0.46 | All closed |

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

