# RIVER MURRAY FLOW REPORT AND WATER RESOURCE UPDATE

**Report #24/2013**
**Issued 10:00 am 14 June 2013**

**This supersedes the previous flow report issued by the Department of Environment, Water and Natural Resources (DEWNR) on 7 June 2013. The next flow report will be provided on Friday, 21 June 2013.**

In this report, for ease of representation, large volumes of water are expressed in gigalitres (GL), while smaller volumes are expressed in megalitres (ML). One GL is equal to 1 000 ML.

## WATER RESOURCES UPDATE

During May 2013, the total River Murray System inflow was approximately 210 GL, which is about half the long-term May average of 445 GL. Inflow to Menindee Lakes (from the Darling System) during May 2013 was approximately 90 GL, which is about half the long-term May average of 200 GL.

The flow to South Australia during May 2013 was approximately 164 GL (compared to 1 523 GL in May 2012), which comprised 93 GL of Entitlement Flow and approximately 71 GL of environmental water. The flow to South Australia currently comprises the June Entitlement Flow and water provided through the Commonwealth Environmental Water Holder. The expected volume of water to South Australia in June 2013 is approximately 107 GL (90 GL of Entitlement Flow and approximately 17 GL of environmental water).

The major Murray-Darling Basin Authority controlled storages are holding around 75 per cent capacity.

## STORAGE VOLUMES

**Murray-Darling Basin Authority storage volumes at 12 June 2013 and 12 June 2012**

| Storage | Full Supply Volume (GL) | 12/06/2013 (GL) | 12/06/2012 (GL) | Long-term average (end of June) |
|---|---|---|---|---|
| Dartmouth | 3 856 | 3 620 (94%) | 3 301 (86%) | |
| Hume | 3 003 | 1 678 (56%) | 2 824 (94%) | |
| Lake Victoria | 677 | 422 (62%) | 399 (59%) | |
| Menindee Lakes | 1 731* | 1 248 (72%) | 1 901 (110%) | |
| TOTAL | 9 267 | 6 968 (75%) | 8 425 (91%) | 6 174 (67%) |

*Menindee Lakes can be surcharged to 2 015 GL

## RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for June to August 2013 indicates that a wetter than normal season is likely for most of Australia. Cooler days and warmer nights are more likely for south-eastern Australia. The climate influences include a warmer than normal eastern Indian Ocean, a neutral tropical Pacific Ocean and warm local sea surface temperatures.

**WATER ALLOCATION OUTLOOK**

South Australia will receive its full Entitlement Flow of 1 850 GL in 2013-14. As a result, on 30 May 2013, the Minister for Water and the River Murray, Hon Ian Hunter MLC, announced that South Australian River Murray Water Access Entitlement Holders will have access to 100 per cent water allocation in 2013-14.

**SOUTH AUSTRALIA'S STORAGE RIGHT**

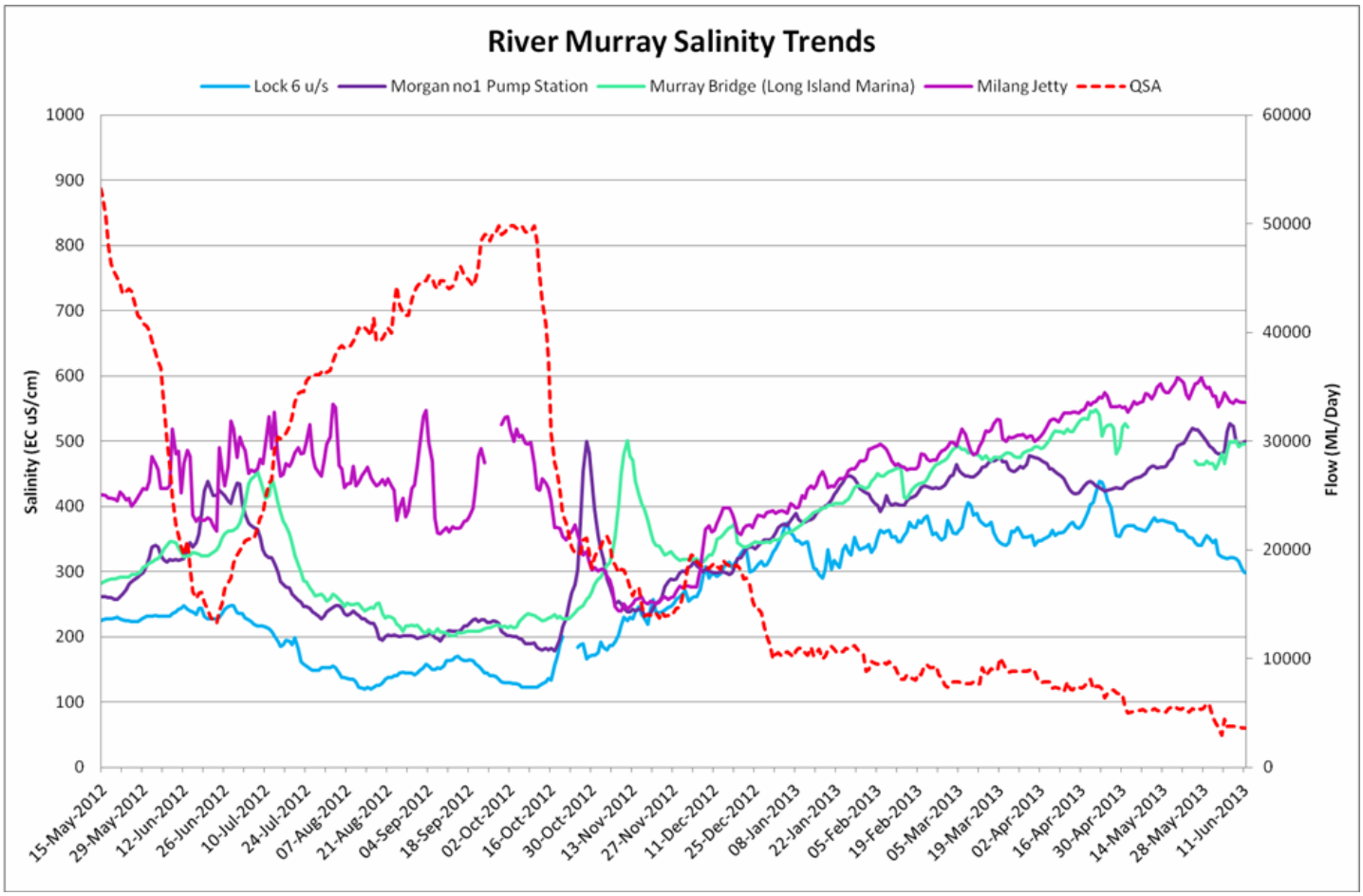
To date, South Australia has not deferred any Entitlement Flow for carryover into 2013-14. South Australian River Murray Water Access Entitlement Holders were informed in April 2013 (via letter) that no Entitlement Flow had been deferred for use in 2013-14.

**WATER QUALITY**

Under the Basin Plan a number of targets are identified, which all Basin States must have regard to in managing River Murray flows. The targets for real-time salinity are identified as follows and salinity must not exceed these values for 95 per cent of the time:

- 580 EC at Lock 6
- 800 EC at Morgan
- 830 EC at Murray Bridge
- 1 000 EC at Milang

The following graph shows the salinity at these locations and the flow to South Australia (QSA) for the past twelve months. It also confirms that salinity has not exceeded the target at any of these four locations during this period.




Note: Data gaps are due to technical issues experienced at the site

**FLOW OUTLOOK**

The flow at the South Australian border is approximately 3 700 ML/day and is likely to remain around this rate during the coming week, depending on upstream operations and rainfall events. It comprises the June Entitlement Flow of 3 000 ML/day and environmental water provided to South Australia from the Goulburn River and River Murray System storages.

Lake Victoria storage is at 62 per cent capacity.

The flow over Lock 1 is approximately 3 000 ML/day and is likely to remain around this rate during the coming week, depending on weather conditions, irrigation demand and environmental water delivery.

It is important to note that flow forecasts in this advice are based on the information available at the time of preparation. They may change as new gauging information becomes available, or due to rainfall events or changed operations upstream. Flow forecasts are dependent on predictions made by the Bureau of Meteorology, Murray-Darling Basin Authority and water management agencies in upstream jurisdictions. They will be revised as new information becomes available.

**BARRAGE OPERATIONS AND WATER LEVELS IN THE LOWER LAKES**

The water level in Lake Alexandrina is approximately 0.65 m AHD and approximately 0.61 m AHD in Lake Albert. During the coming week, barrage operations will target a water level between 0.60 m AHD and 0.65 m AHD in both Lakes. All barrage fishways are in operation and are being supplemented with attractant flows in adjacent bays. Barrage releases are prioritising environmental water flow at Goolwa and Tauwitchere Barrages. SA Water will continue to operate the barrages to minimise any negative impacts from reverse flow events during high tide or swell conditions.

To see live salinity data at various locations on the River Murray and in the Lower Lakes please refer to the following website: http://www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx

Water levels and barrage operations are monitored closely by various agencies of the South Australian Government, Murray-Darling Basin Authority and the Commonwealth Environmental Water Office.

**NAVIGATION ISSUES**

Under current flow, seasonal conditions and tidal activity, sand is being deposited inside the Murray Mouth and may present navigation hazards. Mariners are advised to navigate with caution when operating in the vicinity of the Murray Mouth.

As the River Murray is under regulated flow conditions, pool water levels are near normal. All river users should be aware of the risk of submerged navigation hazards such as sandbars, particularly downstream of Locks 7 and 8.

**CONSTRUCTION WORKS**

*Morgan River Vessel Waste Disposal Station*

The Morgan River Vessel Waste Disposal Station remains closed for improvements to the onshore plant, including replacement of the electrical control system, septic tank and concrete structure. This work complements the improvements made in 2012, which replaced the pontoon, gangway and offshore plant. The work will be completed by the end of June 2013. During this period, vessels should divert to the Foxtale Marina to dispose of waste. Foxtale Marina is approximately 1.5 kilometres downstream of Morgan.

*Currency Creek*

The Currency Creek Regulator is being removed by Maritime Constructions Pty Ltd. A dredge commenced operations on 24 April 2013, with removal of the regulator estimated to take 4 months to complete. Maritime Constructions Pty Ltd will be operating 24 hours a day, 7 days a week until the work is completed.

*Mildura Weir Pool Lowering (upstream of South Australia)*

On 27 May 2013, the Mildura Weir pool was drawn down for essential maintenance work on the weir's underwater concrete base. The work is expected to take up to eleven weeks to complete. Boat access through the weir will not be possible during this period.

The lower river level at this location could lead to an increase in saline groundwater entering the river. Any salinity spikes in downstream flows will be diverted through Lake Victoria to be diluted before flowing into South Australia.

*Chowilla*

Construction of the Chowilla Creek Environmental Regulator and associated structures is ongoing. For public safety reasons the Chowilla Creek remains closed to navigation at the construction site.

**RIVER MURRAY WATER LEVELS**

Below is a table of River Murray water levels at a number of locations from Lock 10 (near Wentworth) to Murray Bridge.

**River Murray Water Levels as at 12 June 2013**

| Location | River Km | Normal Pool Level | Current Level (m AHD) | 1974 Flood Level (m AHD) | 1993 Flood Level (m AHD) |
|---|---|---|---|---|---|
| Lock 10 | 825.0 | 30.80 | 30.80 | 33.81 | 33.32 |
| Lock 9 Kulnine | 764.8 | 27.40 | 27.55 | 30.03 | 29.44 |
| Lock 8 Wangumma | 725.7 | 24.60 | 24.87 | 27.60 | 27.19 |
| Lock 7 Rufus River | 696.6 | 22.10 | 22.14 | 25.70 | 25.24 |
| Lock 6 Murtho | 619.8 | 19.25 | 19.25 | 21.03 | 20.50 |
| Renmark | 567.4 | - | - | 18.54 | 18.04 |
| Lock 5 | 562.4 | 16.30 | 16.32 | 18.07 | 17.50 |
| Lyrup | 537.8 | - | - | 16.85 | 16.26 |
| Berri | 525.9 | - | 13.29 | 15.81 | 15.74 |
| Lock 4 | 516.2 | 13.20 | 13.28 | 15.65 | 15.08 |
| Loxton | 489.9 | - | 10.02 | 15.05 | 14.12 |
| Cobdogla | 446.9 | - | - | 13.44 | 12.38 |
| Lock 3 | 431.4 | 9.80 | 9.84 | 13.16 | 12.02 |
| Overland Corner | 425.9 | - | 6.24 | 12.73 | 11.58 |
| Waikerie | 383.6 | - | 6.27 | 11.26 | 10.24 |
| Lock 2 | 362.1 | 6.10 | 6.14 | 10.28 | 9.30 |
| Cadell | 332.6 | - | 3.34 | 9.17 | 8.08 |
| Morgan | 321.7 | - | 3.32 | 8.85 | 7.65 |
| Lock 1 Blanchetown | 274.2 | 3.20 | 3.26 | 6.81 | 5.38 |
| Swan Reach | 245.0 | 0.75 | 0.60 | 6.06 | 4.51 |
| Mannum PS | 149.8 | 0.75 | 0.67 | 3.15 | 1.90 |
| Murray Bridge | 115.3 | 0.75 | 0.63 | 2.06 | 1.26 |

Note that the above water levels may be affected by local wind conditions.

**FURTHER INFORMATION**

The Department of Environment, Water and Natural Resources has published a series of inundation maps for the River Murray. They are available at: www.waterconnect.sa.gov.au/RMIM/

Up-to-date River Murray flow and water level information can be accessed at the Department of Environment, Water and Natural Resources, SA Water and Murray-Darling Basin Authority websites:
www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx
www.sawater.com.au/SAWater/Environment/TheRiverMurray/River+Murray+Levels.htm
www.mdba.gov.au/water/live-river-data

Details of river height and rainfall information in the River Murray within Victoria and New South Wales are available at the Bureau of Meteorology website: http://www.bom.gov.au/vic/flood

Information on the discharge of acid drainage water into the Lower River Murray can be accessed online at:
www.waterforgood.sa.gov.au/rivers-reservoirs-aquifers/river-murray/acid-drainage-water/

Information provided by the Commonwealth Environmental Water Office can be accessed at:
www.environment.gov.au/ewater/southern/murray/lower-murray.html

Information on The Living Murray can be accessed at:
www.mdba.gov.au/programs/tlm/

Regularly updated daily water level information can be found at the following websites:

SA Water
www.sawater.com.au/SAWater/Environment/TheRiverMurray/River+Murray+Levels.htm

Information is also available from the SA Water Hotline on **08 8595 2299**

Department of Environment, Water and Natural Resources
www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx

http://www.environment.sa.gov.au/Home