

RIVER MURRAY FLOW REPORT and WATER RESOURCES UPDATE

Report #33/2013

Issued 10:00 am 16 August 2013

This supersedes the previous flow report issued by the Department of Environment, Water and Natural Resources (DEWNR) on 9 August 2013. The next flow report will be provided on Friday, 23 August 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 July 2013, the total River Murray System inflow was approximately 820 GL, compared to the July long-term average of 1 240 GL. Inflow to Menindee Lakes (from the Darling System) during July 2013 was approximately 30 GL, which is well below the July long-term average of 155 GL.

The flow to South Australia during July 2013 was approximately 142 GL (compared to 910 GL in July 2012), which comprised 108.5 GL of Entitlement Flow and approximately 33.5 GL of unregulated flow.

The flow to South Australia is currently around 15 000 ML/day, which comprises the August Entitlement Flow of 4 000 ML/day plus unregulated flow. The unregulated flow is a result of recent, and continuing, inflows from key tributaries in north-eastern Victoria (Ovens and Kiewa Rivers) and the operation of Lake Victoria. Last week the Murray-Darling Basin Authority commenced pre-releases from Hume Reservoir and this water will also contribute to unregulated flows along the River Murray. The major Murray-Darling Basin Authority controlled storages are holding around 90 per cent capacity.

STORAGE VOLUMES

Murray-Darling Basin Authority storage volumes at 14 August 2013 and 14 August 2012

Storage	Full Supply Volume (GL)	14/08/2013 (GL)	14/08/2012 (GL)	Long-term average (end of August)
Dartmouth	3 856	3 766 (98%)	3 526 (91%)	
Hume	3 003	2 703 (90%)	2 930 (98%)	
Lake Victoria	677	592 (87%)	426 (63%)	
Menindee Lakes	1 731*	1 246 (72%)	1 998 (115%)	
TOTAL	9 267	8 307 (90%)	8 880 (96%)	7 127 (77%)

*Menindee Lakes can be surcharged to 2 015 GL

RAINFALL AND TEMPERATURE OUTLOOK

The latest Bureau of Meteorology weather outlook for August to October 2013 indicates that a wetter than normal season is likely for most of Australia. Cooler days are more likely for south-eastern Australia.

The climate is being influenced by a negative Indian Ocean Dipole (IOD), a neutral-to-cool tropical Pacific, and warm sea surface temperatures around the coast of Australia. A negative IOD during winter-spring increases the chance of above-average rainfall over southern Australia.



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. Water is also being reserved under the Murray-Darling Basin Agreement clause 103 (minimum reserve) to assist with supplying South Australia's Entitlement Flow in 2014-15.

SOUTH AUSTRALIA'S STORAGE RIGHT

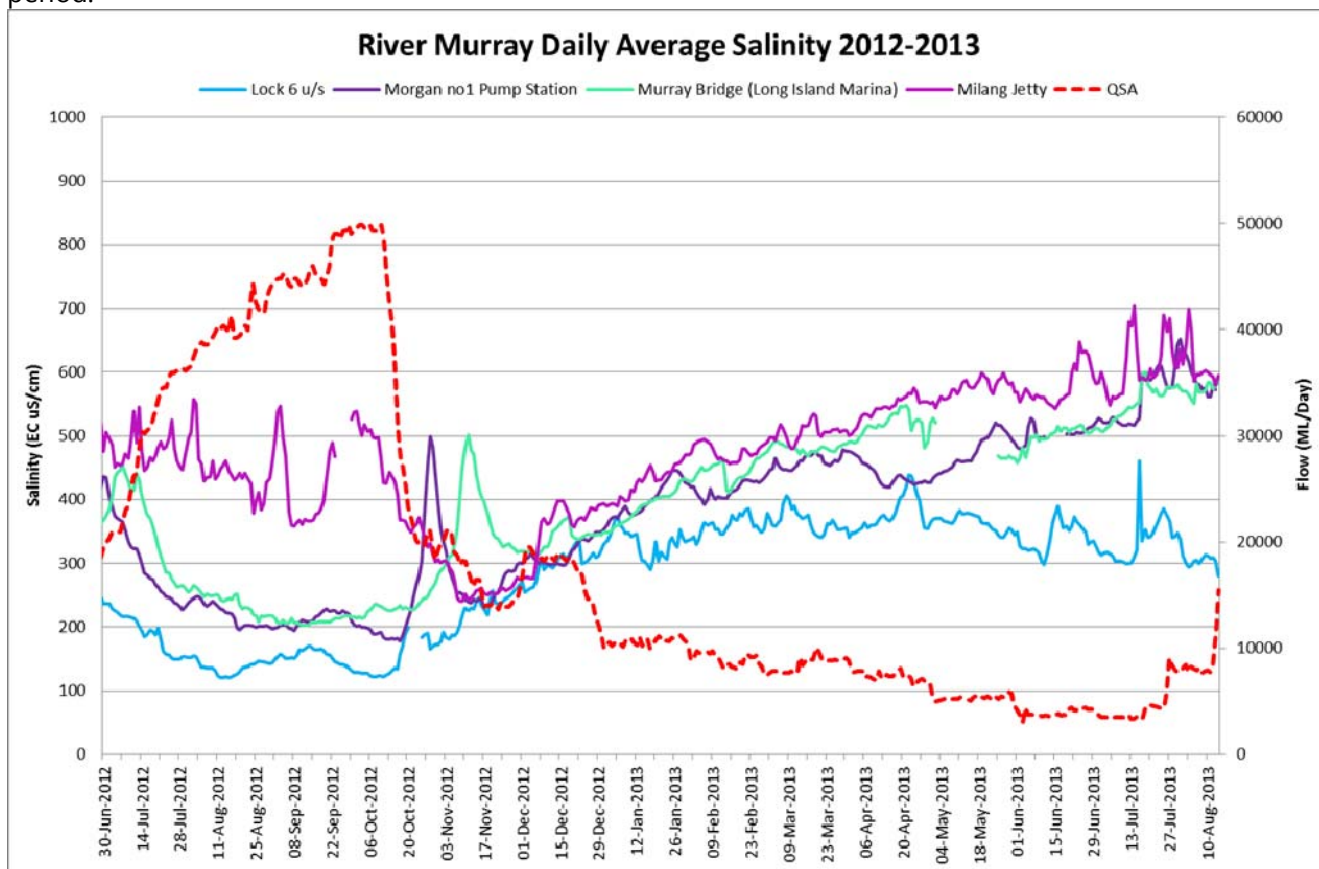
The Department of Environment, Water and Natural Resources is currently investigating opportunities to defer and store an amount of Entitlement Flow in 2013-14 for use in future years. However, the Murray-Darling Basin Authority has advised that pre-releases from Hume Reservoir have commenced and there is currently a high possibility of spill from the upstream storages, which limits South Australia's ability to defer and store water at this point in time. This situation will be reviewed on a monthly basis.

WATER QUALITY

A number of targets are identified under the Basin Plan, 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 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

Catchments remain saturated from recent rainfall events and high inflows are now occurring from the Ovens and Kiewa Rivers (flood warnings are in place for these rivers). Further rainfall over the next few weeks may result in higher inflows, extended duration of pre-releases and physical spill of water from Hume and Dartmouth Reservoirs. These factors may extend the current period of unregulated flow along the River Murray.

The flow at the South Australian border is approximately 15 000 ML/day and will remain around this rate during the coming week, depending on upstream operations and rainfall events. The flow comprises the August Entitlement Flow of 4 000 ML/day plus unregulated flow. Due to recent rainfall events and the current operation of Lake Victoria, South Australia will receive unregulated flow until at least mid September 2013.

The flow over Lock 1 is approximately 13 500 ML/day and will remain around this rate during the coming week, depending on weather conditions and extractions.

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 0.74 m AHD and approximately 0.84 m AHD in Lake Albert. During the coming week, barrage operations will target a water level between 0.70 m AHD and 0.75 m AHD in both Lakes and a minimum barrage release of 7 500 ML/day. Barrage releases are being prioritised through the Goolwa and Tauwichee barrages to maintain an open and functioning Murray Mouth. All barrage fishways are in operation and are being supplemented with attractant flows in adjacent bays. SA Water will continue to operate the barrages to minimise any negative salinity 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 Commonwealth Environmental Water Office.

NAVIGATION ISSUES

Sandbars in the vicinity of the Murray Mouth may cause navigation hazards. Mariners are advised to navigate with caution when operating in the area. Sandbars are also present along sections of the River Murray in South Australia and all watercraft should be aware and regularly check the river depth. The high flows during 2011-12 and 2012-13 have resulted in the deposition of sediments at some locations creating new sandbars.

CONSTRUCTION WORKS

Currency Creek

The Currency Creek Regulator is being removed by Maritime Constructions Pty Ltd. The removal works are progressing well, with the dredging component of the project now complete. The water based works are continuing and should be complete in August 2013.

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. Works are also underway on the upgrade of the weir on Pipeclay Creek at Chowilla to improve the management of flows into the Chowilla anabranch and to enable fish passage. Public access around the weir will be restricted during this construction program.

RIVER MURRAY IRRIGATORS - update your email address for improved service

If you would like quicker, easier and more efficient communication with DEWNR regarding water licensing matters, please phone (08) 8595 2053 or send details of your email or updated email address to DEWNRWatertrade@sa.gov.au

Benefits include:

- Irrigation reports sent direct to you
- Report returns can be submitted online
- Less paper in your in-tray
- Correspondence is quicker than traditional mail

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 14 August 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	30.88	33.81	33.32
Lock 9 Kulnine	764.8	27.40	27.56	30.03	29.44
Lock 8 Wangumma	725.7	24.60	24.86	27.60	27.19
Lock 7 Rufus River	696.6	22.10	22.17	25.70	25.24
Lock 6 Murtho	619.8	19.25	19.20	21.03	20.50
Renmark	567.4	-	16.31	18.54	18.04
Lock 5	562.4	16.30	16.29	18.07	17.50
Lyrup	537.8	-	13.24	16.85	16.26
Berri	525.9	-	13.18	15.81	15.74
Lock 4	516.2	13.20	13.17	15.65	15.08
Loxton	489.9	-	10.34	15.05	14.12
Cobdogla	446.9	-	-	13.44	12.38
Lock 3	431.4	9.80	9.81	13.16	12.02
Overland Corner	425.9	-	6.40	12.73	11.58
Waikerie	383.6	-	6.29	11.26	10.24
Lock 2	362.1	6.10	6.04	10.28	9.30
Cadell	332.6	-	3.40	9.17	8.08
Morgan	321.7	-	3.36	8.85	7.65
Lock 1 Blanchetown	274.2	3.20	3.19	6.81	5.38
Swan Reach	245.0	0.75	0.75	6.06	4.51
Mannum PS	149.8	0.75	0.77	3.15	1.90
Murray Bridge	115.3	0.75	0.84	2.06	1.26

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

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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: http://www.epa.sa.gov.au/environmental_info/water_quality/acid_sulfate_soils_ass/lower_river_murray_reclaimed_irrigation_area_lmria

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>