2014 State Report Card

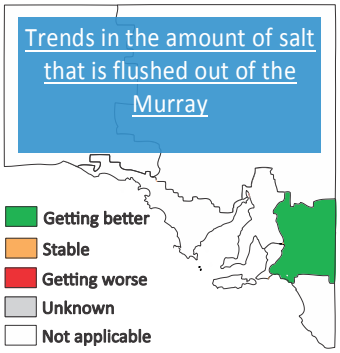
Are water flows in the Murray flushing sufficient salt?

The River Murray provides water for human communities, agriculture and fishing, and supports cultural heritage, recreation and tourism. The river also provides habitats for native plants, including floodplain trees, and animals such as birds, fish, frogs and invertebrates. They all depend on fresh (rather than saline) water for their survival.

The catchment of the River Murray naturally contains salts from ancient marine sediments. Rainfall and weathering of rocks cause salt to accumulate in the soil. The process is exacerbated by irrigation and clearance of deep-rooted native vegetation, bringing saline groundwater nearer the surface.

Salt from the land enters the Murray through surface water run-off and groundwater seepage, and is flushed to the ocean through the Murray Mouth. Without adequate flows and an open Murray Mouth, salt accumulates in the lower sections of the Murray impacting water quality, agricultural productivity, and plant and animal communities.

This report should be read alongside others on flows in the River Murray, its ecological condition and water quality for recreation, irrigation and domestic supply.



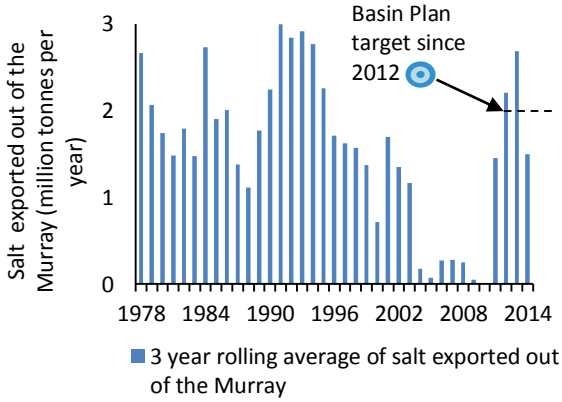
State target

Improve the condition of terrestrial aquatic ecosystems

Trend (2010–14)	Getting better	In 2010 salt export was negligible. The amount of salt flushed out of the Murray (at the barrages of the Lower Lakes) has improved since the drought broke in 2010.

To maintain the water quality of the river and the health of the plants and animals it supports, 2 million tonnes of salt (averaged per year over the preceding 3 years) should be flushed from the Murray–Darling Basin into the Southern Ocean each year (graph on right).

Between 1996–2011, the amount of salt flushed was less than 2 million tonnes each year (graph on right) due to very low flows. Salt export was negligible during the worst years of the Millennium Drought, when almost no flow reached the sea. In 2012-13, water flows flushed sufficient salt (more than 2 million tonnes each year) to the ocean, but in 2014 flows decreased slightly and only 1.5 million tonnes of salt (provisional estimate) was flushed out of the Murray.



Where we are at (2014)	Fair	Recent flows have flushed 75 per cent of the required amount of salt out of the Murray

State governments, the SA Murray–Darling Basin NRM Board, SA Water and the Murray–Darling Basin Authority are working to manage water flows and salinity to ensure that water is suitable for drinking, recreation and irrigation, and to maintain ecosystems. The Water Act 2007- Basin Plan 2012 increased the target for environmental flows in 2012. Depending on how much water is required to support industries, the target is to recover up to 3200 gigalitres each year. These water flows will assist in keeping the Murray Mouth open.

In drier years, the Murray Mouth may still require dredging to maintain a connection between the Murray-Darling Basin, Coorong and Southern Ocean. Salt is also managed in the Murray-Darling Basin by intercepting and pumping saline groundwater into disposal basins, where the salt is temporarily contained. There are 8 salt interception schemes in South Australia and these contained a total of more than 180,000 tonnes of salt in 2013.

Reliability of information	★★★★☆	Very good

Further information: Technical information for this report card, Water Act 2007- Basin Plan 2012

This report is a work in progress. As resource monitoring improves, so too will our ability to describe trends in condition.

Government of South Australia