

# River Murray: salinity



Water | Surface water

South Australia's environmental trend and condition report cards 2023



Trend  
**Getting better**



Condition  
**Good**



Reliability  
**Very good**

STATE

## Trend

The average salinity of River Murray water in South Australia is getting better.

The salinity at Lock 6, Morgan, and Murray Bridge has declined on average over time, with Lock 6 and Morgan remaining below their respective Basin Plan targets of 580 and 800 electrical conductivity (EC) (top figure). The salinity target of 830 EC at Murray Bridge was considerably exceeded during the Millennium Drought but has been maintained below the target since 2010 (bottom figure).

This improvement can be attributed to salinity management actions, such as salt interception schemes, the adoption of more efficient irrigation practices, and river dilution flows.

Managing salinity is one of the biggest challenges in the Murray–Darling Basin, particularly within the South Australian River Murray. For this reason, the Basin Plan sets salinity targets at several sites in South Australia. Salinity has been actively managed since the establishment of the Salinity and Drainage Strategy in 1988.

## Condition

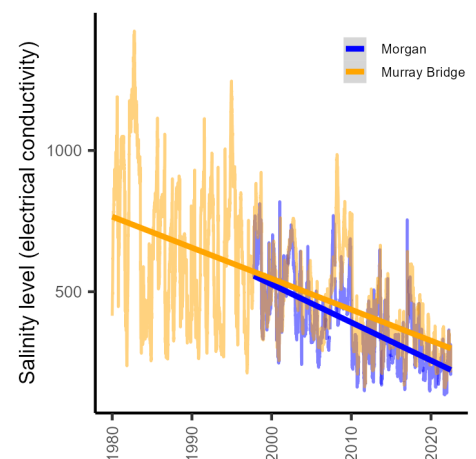
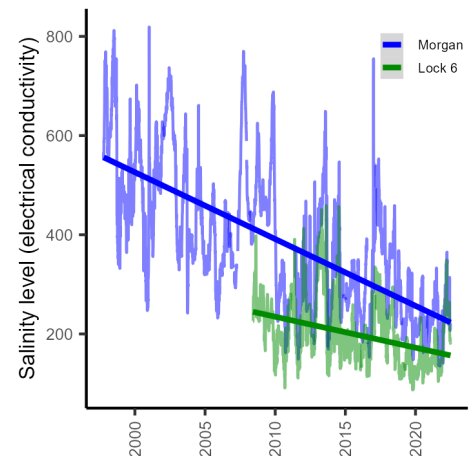
The condition of River Murray salinity was assessed as good.

Salinity remained below Basin Plan target levels at Lock 6, Morgan and Murray Bridge in 2021–22. This was due to a dilution effect from higher River Murray flows and the use of responsive salt interception schemes. In 2021–22, the 7 salt interception schemes in South Australia intercepted more than 270,000 tonnes of salt.

Environmental site operations such as weir pool manipulation and water delivery are managed to minimise salinity impacts on the River Murray in South Australia.

This includes maintaining sufficient passing flows when floodplain infrastructure is operated.

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## Why is River Murray salinity important?

The Murray–Darling Basin has a naturally salty landscape, particularly in its southern parts. Water in the Basin's river systems carries these salt contributions from the ground and surface water sources. Some salt in fresh water and soil is normal and can be tolerated by the plants and animals in the River Murray, but long periods of high salinity can harm the natural environment as well as crops and livestock.

## What are the drivers?

Salinity levels in the River Murray are influenced by natural salt-generating processes as well as human activities. River regulation and increased water extraction, in conjunction with the clearance of native vegetation and the development of agriculture across the Basin, has increased salinity levels in the River Murray.

## What is being done?

Actions are being taken to try and reduce the effects of salinity on the Murray–Darling Basin. These include introducing more efficient irrigation, returning more water to the environment, and operating salt interception schemes.

Salt interception schemes pump saline groundwater into salt management basins. The water slowly evaporates, concentrating the salt or gradually leaking it back into the groundwater systems. South Australia's 7 salt interception schemes move tonnes of salt away from the River Murray each year.

For further information see: [technical information](#)



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