

Interstate Water Trade



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FACT SHEET 6
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Interstate Water Trade and Salinity

INTERSTATE WATER TRADE AND SALINITY

Rising salinity levels in the River Murray and increasing land salinisation and waterlogging as a result of irrigation were important elements in the establishment of the Murray-Darling Basin Agreement in 1987.

Salinity was one of the first major issues considered by the then new Murray-Darling Basin Ministerial Council and Murray-Darling Basin Commission (MDBC). The outcome was the Salinity and Drainage Strategy (SDS) signed by the Commonwealth, South Australian, Victorian and New South Wales governments in 1989.

River Murray salinity continues to be a major issue for the Ministerial Council. In 2001 the Council endorsed a revised Basin Salinity Management Strategy (BSMS) that incorporated the earlier decisions regarding salinity, drainage and salt interception programs and addressed the emerging threat to the River Murray of dryland salinity. End-of-Valley salinity targets were established for dryland catchments.

The transfer of water entitlements to different locations and new irrigation developments has the potential to affect salinity levels in the River Murray.

Basin Salinity Management Strategy

The BSMS provides the framework for the co-ordinated management of salinity in the River Murray and land salinisation and waterlogging in the Murray-Darling Basin, especially in the Goulburn, Murray and Murrumbidgee valleys. A specific objective of the Strategy is the reduction of River Murray salinity as measured at Morgan in South Australia.

The BSMS balances engineering solutions (salt interception schemes) and non-engineering solutions (land and water management plans). Salt interception schemes have been built at Waikerie, Woolpunda and Bookpurnong in South Australia, Mildura-Merbein in Victoria, and Mallee Cliffs in New South Wales. These schemes reduce flows of highly saline groundwaters to the River Murray, diverting the water to disposal basins away from the river. They have reduced average salinity levels in the Murray at Morgan by 63.7 EC units.

In return for contributing to the costs of the four interception schemes, New South Wales and Victoria received a number of salinity credits which have enabled them to undertake drainage works in a number of irrigation areas. Drainage schemes are essential for the continued viability of irrigation areas along the upper and middle reaches of the Murray and Murrumbidgee. The result of the drainage works has been some additions to river salinity. The net result of the actions, however, is an improvement of river water quality.

Longer-term measures include changes to land and water management, especially through the rehabilitation of irrigation schemes and improved irrigation efficiency.

Under the BSMS, states cannot construct or approve any proposal that would have an adverse significant impact on the salinity of the River Murray unless it has previously earned 'salinity credits' by contributing to salinity mitigation works.

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The MDBC maintains a register of salinity credits and debits available to New South Wales, Victoria and South Australia resulting from projects that decrease or increase river salinity. The register is also used to record changes to operational policies and works jointly funded by two or more states which have an impact on river salinity. A 'significant impact' is one that increases or decreases average salinity in the Murray, as measured at Morgan by 0.1 EC or more.

Water Trading and Basin Salinity Management

An essential condition of permanent interstate water trading is that it must not lead to significant increased levels of salinity in the River Murray. The transfer of a water entitlement from one location to another has the potential to affect salinity levels in the River Murray in three ways:

New irrigation developments can result in increased salt loads in the River Murray, either through discharge of irrigation drainage waters or through the increased pressure on groundwater systems causing saline groundwater to discharge directly into the River Murray. Both actions result in a salinity debit for the state of destination of the water trade on the salinity register.

Removal of irrigation water from highly saline areas can reduce the River Murray salinity impact from those areas. This results in a salinity credit for the state of origin of the water trade on the salinity register.

Transferring water entitlements changes the volume of water in the river at different locations. This affects the river's dilution capacity and so changes the salinity level of the water. Under the current arrangements:

- salinity debits or credits resulting from the dilution effects brought about by the transfer of entitlements to or from South Australia will be assigned to the upstream state involved in the transfer, i.e: New South Wales or Victoria;
- salinity debits and credits resulting from the dilution effects brought about by transfers of entitlements between New South Wales and Victoria will be shared equally by the two states.

The states are responsible for the internal management of salinity impacts from individual transfers of entitlements. For example, in Victoria it is necessary for an individual to pay a salinity levy prior to receiving approval to trade into the Nyah and to the South Australia Border region.

Photo credits:

Dairy Cows grazing at Woodlands Dairy (photo: Regional Reach Advertising, May 2006)

Hattah Lakes (photo: Andrew Keogh)

Forage Sorghum field at Wylarah (photo: Regional Reach Advertising, May 2006)