



Office of
Environment
& Heritage

Hunter River Salinity Trading Scheme: 2009–10 performance

What's the scheme about?

The Hunter River Salinity Trading Scheme allows a range of industries, such as agriculture, mining and electricity generation, to operate side by side, sharing the use of the river's water while keeping it clean and fresh.

It does this by using a system of credits which industries can buy and trade in order to discharge their salty wastewater at times when the river has enough fresh water to dilute the salt and maintain water quality.

River flow is measured at a series of monitoring points along the Hunter River. When flows are low, no discharges are allowed; when they are high, limited discharges are permitted using salt credits; and when floods occur, unlimited salt discharges are allowed to an agreed salinity goal.

The NSW Office of Environment and Heritage (OEH) (formerly the Department of Environment, Climate Change and Water) administers the scheme, guided by an operations committee that includes representatives from the State Government, industry and the community.

Why was the scheme introduced?

The scheme is designed to balance the needs of water users for continuing good water quality in the Hunter with the needs of industry to discharge its salty by-product wastewater. Overall salinity in the river is managed by allowing discharges only during high flows or floods and balancing the amount of salt that industry can discharge with the naturally occurring salt levels in the river.

The Hunter River is inherently salty as a result of groundwater inflows and the scheme monitors these levels to ensure that industry only discharges when these natural salinity levels are low. This improves the health of the river and the surrounding environment and ensures that local primary producers are able to use the water for irrigation.

How did the scheme perform in 2009–10?

No salty wastewater discharges occurred under the scheme during 2009–10. Low rainfall levels in the catchment meant that flow in the Hunter River was insufficient to trigger any opportunities for industry to discharge.

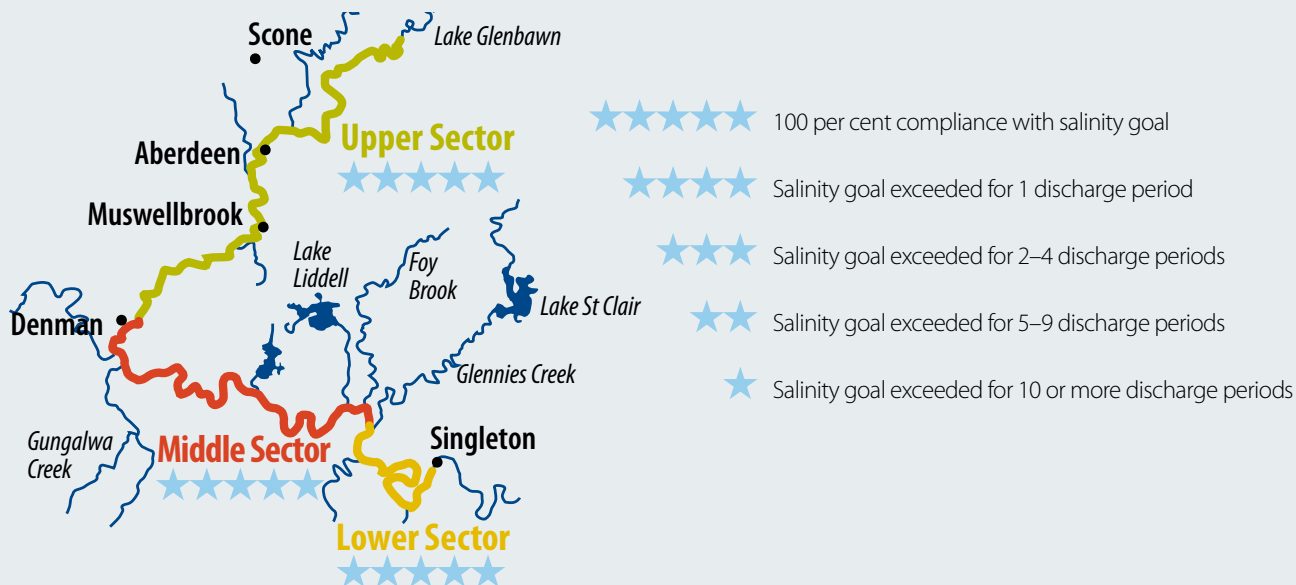


Figure 1: Compliance with salinity goals achieved by the three sectors of the Hunter River catchment

Salinity is measured by determining the electrical conductivity (EC) of water, which is measured in microSiemens per centimetre ($\mu\text{S}/\text{cm}$). EC estimates the amount of total dissolved salts (TDS) in the water. Salt water has an EC of around 55,000 $\mu\text{S}/\text{cm}$. Drinking quality water usually has an EC of between 600 and 1200 $\mu\text{S}/\text{cm}$.

The Hunter River contains naturally high levels of salt that sometimes peak above the scheme's high flow salinity goal as the graphs below show. This is a result of natural salty groundwater flow and is not related to industry discharges.

The following sections report on salinity levels in each of the scheme's sectors during 2009–10.

Upper Sector: Hunter River upstream of Denman

There were no discharges under the scheme during 2009–10 so any exceedance of the salinity goal in the Upper Sector of the river was naturally occurring and not related to discharges from the coal mining or power generation industries.

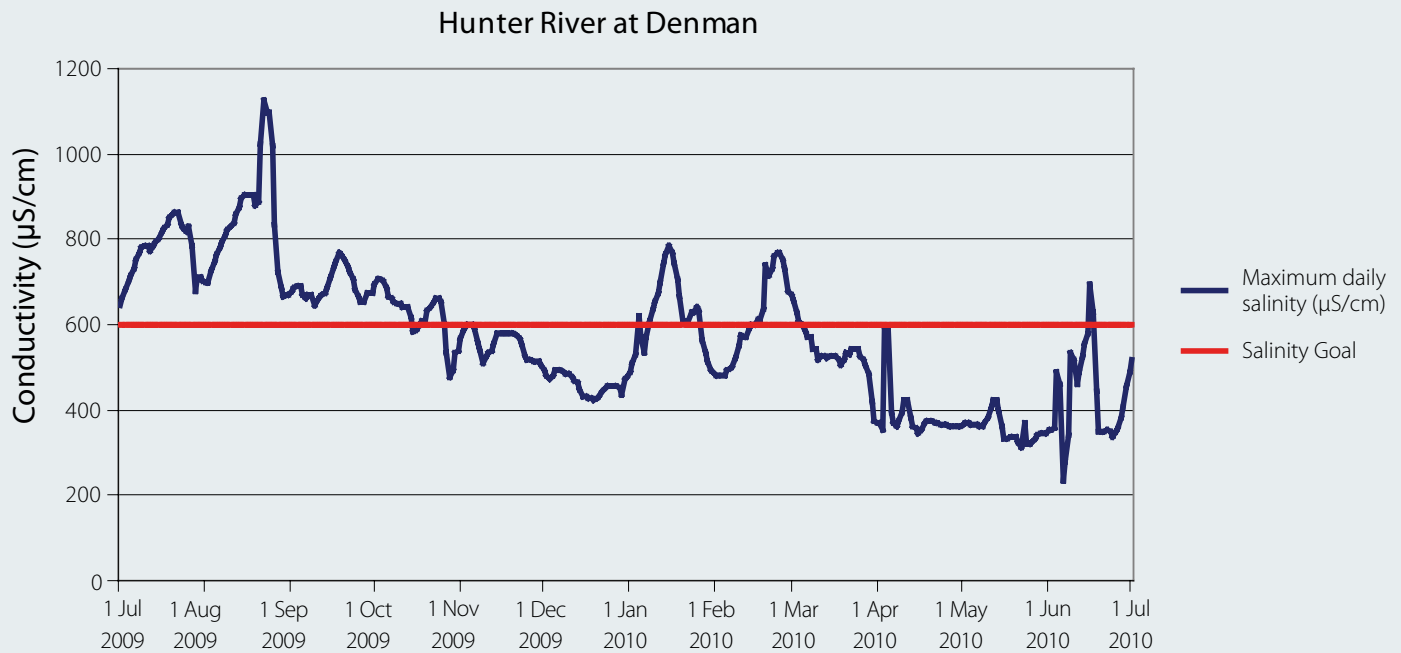


Figure 2: Scheme performance 2009–10 – Hunter River at Denman (Upper Sector)

Middle Sector: Denman to the junction of the Hunter River and Glennies Creek

No discharges under the scheme during 2009–10 meant any exceedance of the salinity goal in the Middle Sector was a natural occurrence and unrelated to discharges from the coal mining or power generation industries.

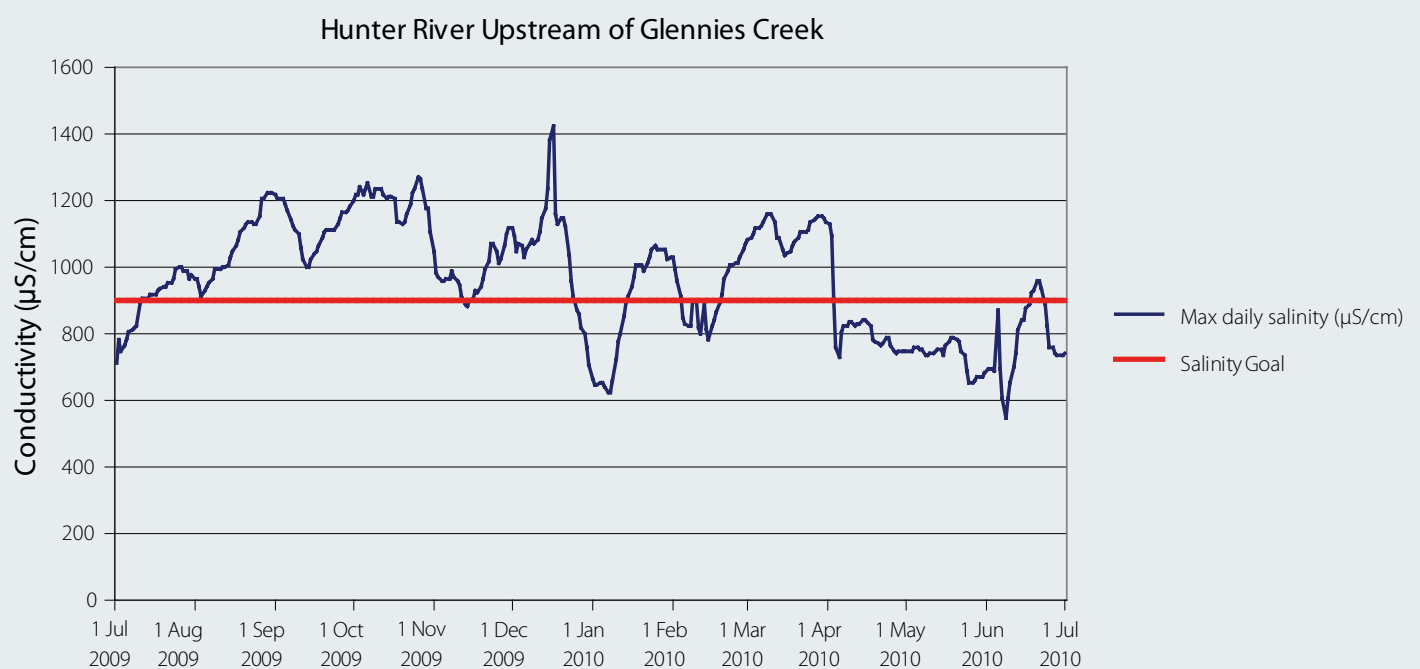


Figure 3: Scheme performance 2009–10 – Hunter River upstream of Glennies Creek (Middle Sector)

Lower Sector: Junction of the Hunter River and Glennies Creek to Singleton

With no discharges under the scheme during 2009–10, any exceedance of the salinity goal in the Lower Sector of the river was naturally occurring and not related to discharges from the coal mining or power generation industries.

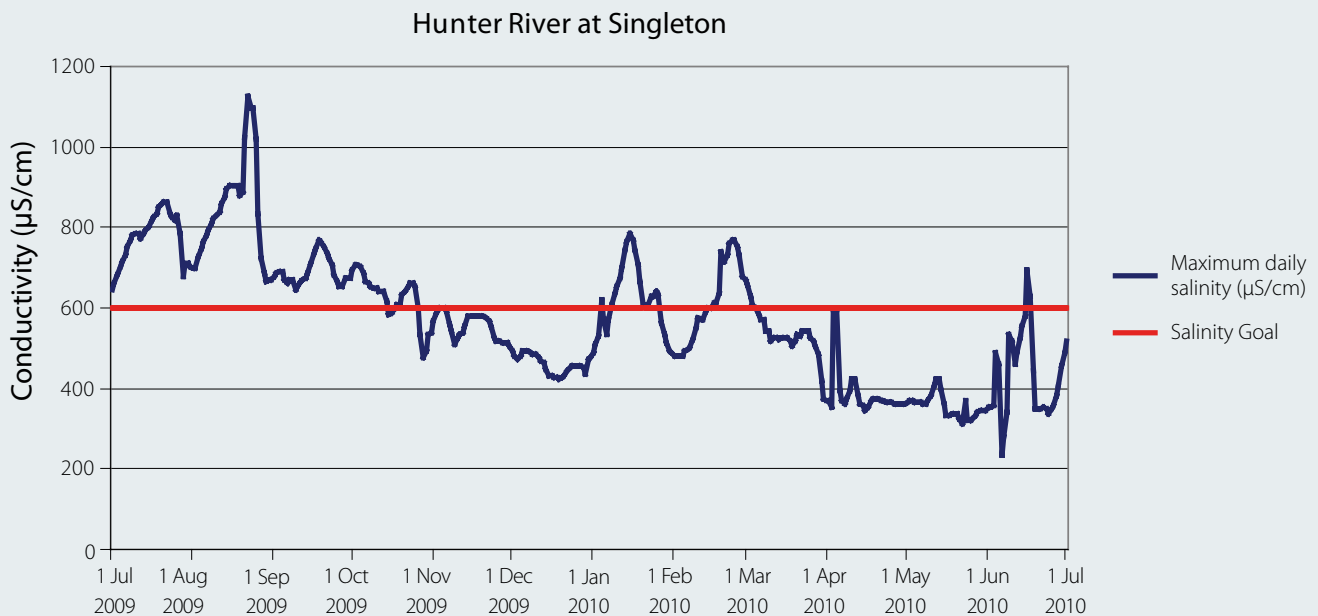


Figure 4: Scheme performance 2009–10 – Hunter River at Singleton (Lower Sector)

Improvements to the scheme

No potential improvements to the operation of the scheme were identified during 2009–10.

Further information

Further information on the operation of the Hunter River Salinity Trading Scheme is available from the OEH website at www.environment.nsw.gov.au/licensing/hrsts/index.htm. Follow the links from this web page for information on river flow and electrical conductivity conditions in the Hunter River.

Inquiries about the operation the scheme may also be directed to the OEH Newcastle office by phoning (02) 4908 6800 or by email to hrsts@environment.nsw.gov.au.

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