

## Case Study

# Willow Tree Management on the Yanco Creek System

*Willow trees, particularly *Salix babylonica*, are a highly invasive species throughout Australia due to their rapid spread through seeds and broken branches. Along the Yanco Creek System, these trees were originally planted in the 1800s by landholders for erosion control and aesthetic purposes. Knowledge at the time was unknown about how detrimental of an impact the willows will have towards native species.*

*These invasive trees have a detrimental impact on creek ecosystems by displacing native vegetation, reducing biodiversity, and lowering oxygen levels in waterways because of their heavy autumn leaf drop. Additionally, willows contribute to the erosion of creekbanks and the expansion of channels by trapping sediment and altering water flow. Their dense root systems and extensive canopy can also disrupt aquatic habitats, reducing shelter for fish and limiting the availability of terrestrial insects, which are a critical food source. When willows grow directly in waterways, they consume large amounts of water, which can dry out smaller streams and wetlands, further stressing the surrounding ecosystem.*

Managed by the Yanco Creek and Tributaries Advisory Council Inc. (YACTAC), the Yanco Creek Natural Resources Levy was established in 2005 to help mitigate the financial costs of managing willows and support ongoing rehabilitation projects in the creek system.

This self-imposed levy has raised around \$2.3 million and ensures that all local landholders contribute financially to the management and restoration of the creek system, with landholders paying \$0.90 per megalitre (ML) of water entitlement to support and benefit from these conservation efforts.

This levy aligns with the region's Natural Resource Management Plan (NRMP) providing crucial funding for willow removal, riparian fencing, revegetation, and erosion control. In addition, the funds have supported ongoing monitoring, biodiversity assessments, and initiatives aimed at improving water quality and efficiency.

### **Project timeline:**

**2005:** levy was imposed

**2007/8:** 93km of Willows removed along the creek bed

**2011/12:** Vegetation Mapping

**2018:** Scientific monitoring of YCS waterways (ongoing)

**2022:** 95% of willow trees removed from the Yanco creek system

**2022:** Revegetation works planting understory tube stock



The program has been instrumental in enhancing water flow, promoting native species diversity, and restoring critical ecosystem services such as flood mitigation and erosion control. The removal of willows has also resulted in modest water savings, with an estimated 3.9 ML of water saved per hectare of willow canopy removed annually.

The long-term efforts to control willows and restore the Yanco Creek System continue to demonstrate the importance of community-driven, sustainable water management, and the collective responsibility of landholders, government agencies, and environmental organisations in protecting and enhancing Australia's fragile riparian ecosystems.

The willow removal program exemplifies the success of landholder funded natural resource management, addressing invasive species and improving environmental health. Through the combined efforts of local communities, government bodies, and environmental agencies, the creek's riparian zone is being restored, providing both ecological and economic benefits.

**Project Achievements:**

**13 riparian sites revegetated**

**18 properties undertaken protection and enhancement works**

**3600ha of remanent vegetation protected**

**100ha revegetated land**

**144km of streambank fenced off**

**95 % of willow trees removed from Yanco Creek system**

