

Northern and Yorke Natural Resources News

THE BROUGHTON CATCHMENT – MEETING THE NEEDS OF THE COMMUNITY AND THE ENVIRONMENT

The Broughton catchment is located in the Mid North of South Australia, approximately 130 kilometres north of Adelaide. It is the major drainage system of the district and covers around 5761 square kilometres.

The Broughton River system is in a semi-arid climatic zone so watercourse flow is highly variable. The catchment supplies good quality water for agricultural, urban, domestic and industrial uses, leading to significant social and economic benefits for the district.

Natural Resources Northern and Yorke Water Officer Jennifer Munro said land and water within the catchment was used for a wide range of purposes including dryland agriculture, irrigated vineyards, forests and conservation.

"The river system in the Broughton catchment supports a wide variety of riverine environments, from ephemeral channels to continuously flowing watercourses," she said.

Sub-catchments within the Broughton catchment include the Hutt & Hill Rivers, Booborowie and Baldry Creeks, Freshwater and Bundaleer Creeks, Yackamoondie Creek, Rocky River, Crystal Brook Creek and the Lower and Mid Broughton River. Within the catchment, two large reservoirs – Beetaloo and Bundaleer – provide back up for the main supply of town water from the River Murray.

A River Management Plan for the Broughton Catchment published in 2004 reported that native vegetation had been modified on more than 90 per cent of the watercourses surveyed and was lacking or highly degraded along more than half of the watercourses.

"Native vegetation plays a crucial role in preventing erosion, trapping sediment and pollutants and providing food and habitat – all critical elements for maintaining water quality and river health," Ms Munro said.



"The catchment has several areas that are in near natural condition that have tremendous recreational, community and ecological value. Protecting and enhancing these key assets is a priority."

These areas include Appila Springs, Mary Springs, the Broughton River near Yacka and lignum swamp habitats along lower Broughton River.

The main threats to water quality and river health in the Broughton catchment include clearing of native vegetation; cropping and grazing pressure around river banks; invasion by exotic plants; channel modification; and altered flow regimes.

"Watercourse conditions in the Broughton catchment vary considerably from near natural to highly degraded. When a watercourse is highly degraded it can have a major impact on the biodiversity and ecological value of the river and its floodplains, wetland and estuarine systems as well as its future capacity to support the needs of the community and the environment."

The health of fish and frog populations in the system is reduced by a number of factors, including habitat degradation, lack of flow events suitable for breeding and migration, predation and competition from introduced species, man-made barriers to migration, and poor water quality. In terms of fish ecology, the Broughton River system is in a fair to poor condition.

"The natural water regime of the Broughton River system has been modified by dams, weirs, reservoirs, bores and levee banks," Ms Munro said.

"Restoring the entire river system to its pre-European settlement condition is outside the scope of management for the Broughton River system. But we can focus our rehabilitation efforts on returning the system's vegetation, structure, hydrology and water quality to a 'natural' state where possible.

"Maintaining permanent flows and pools in the river system is crucial to ensure populations are able to disperse, recruit, rebuild and survive drying phases. Without them there could be localised species loss."

The catchment is managed in accordance with The River Management Plan for the Broughton River Catchment which was published in 2004. Natural Resources Northern and Yorke is currently reviewing this plan and is calling for help from the community, landholders and volunteers.

"This plan identified many of the natural assets in our catchment as well as their main threats. We're now looking for confirmation from the community as to whether this information still holds true," Ms Munro said.

"Catchment care is an ongoing responsibility and we're encouraging people to continue to protect and preserve through the Four Catchments project."

The Four Catchments project, which was launched in 2012, encourages landholders, community groups and volunteers to take an active role in identifying the priorities for long term management by contributing to an action plan for the Broughton River catchment. An initial workshop was held at Bowman Park in April 2014 to discuss river care issues, review assets and identify threats and priorities. The project also includes targeted on-ground works including revegetation, weed management and fencing.

"The Four Catchments project is a great chance for people to help develop a sustainable and practical action plan for their catchment – a plan that protects the needs of the community, landholders and the environment," Ms Munro said.

"It's also a chance for people to find out what they can do on their own properties or in their community to help look after our catchments."

A survey has been developed to gather landholder's opinions on the key NRM assets and threats in their region as well as priorities and actions for those assets. This is available at <http://www.naturalresources.sa.gov.au/northernandyorke/get-involved/have-your-say> so that landholders can contribute to the project.

For more information on the Broughton River catchment or the Four Catchments project, contact Jennifer Munro on 0429 362 008 or jennifer.munro@sa.gov.au

