



# Case studies

Macquarie Marshes Nature Reserve, Warren NSW



## PROPERTY DETAILS

Location: Situated between Warren and Carinda, central west NSW.

Catchment: Macquarie River

Property area: 22,000 hectares

Main enterprises: Nature Reserve – environmental and biodiversity conservation

Where lippia is a problem: Across the whole reserve



This area was once all water couch and rushes. Since regular flooding ceased, these species have died out and replaced with lippia and a range of other weeds. This country has not been grazed since 1979

*(Photo by T. Woods)*

## General information and lippia infestation

Lippia was first noticed on the reserve in the mid 1980s, which coincided with an increase in the extraction of water for irrigation. The extent of the infestation is approximately 12,000 hectares, or over half of the entire reserve area.

Ranger, Ray Jones (NSW National Parks and Wildlife) believes that the problem will increase as the marsh continues to dry because the only method of control available at present is by flooding. The flooding regime has been affected by both extraction and prolonged drought conditions.





Ranger, Ray Jones at what is left of the Macquarie River. The river once spread out over many thousands of hectares. Note the 100% lippia cover

(Photo by T. Woods)

## Methods of lippia management

The only method available is flooding when water is available. The water flooding regime has decreased significantly since the river was regulated and this method is only available opportunistically. When flooding takes place, the natural vegetation successfully competes with the lippia and increased populations of water birds are found, as they are dependent on water couch and other natural vegetation for feed areas. Without flooding lippia continues to spread.



A view of flooded country in the Macquarie Marshes. Note the rushes in the background where regular flooding still occurs. There is no lippia here

(Photo by T. Woods)

## Future control options

It is hoped that strategies being introduced such as RiverBank and the buying back of water for the environment will see an increase in flooding in areas such as the Macquarie Marshes and thus a decrease in the spread of invasive weeds like lippia. The control of lippia by chemicals is very limited in wetlands due to the environmental concerns. The only way forward for the reserve is to increase water availability.

