



# Perched wetlands of the Wheatbelt region with extensive stands of living swamp sheoak (*Casuarina obesa*) and paperbark (*Melaleuca strobophylla*) across the lake floor

## Summary description

The community occurs in large ephemeral wetlands in the inland Wheatbelt of south-west Western Australia. It comprises intact *Casuarina obesa* (swamp sheoak) and *Melaleuca strobophylla* (paperbark) dominated stands of vegetation over the lake floor. These wooded freshwater wetlands are some of the last examples of a once-widespread vegetation type. Toolibin Lake is the largest remaining example.



## Distribution

The community occurs across a 200km range between Dowerin and Toolibin in the Wheatbelt region.

Department of Biodiversity, Conservation and Attractions (DBCA) Region: Wheatbelt

Local Government Authorities: Shire of Beverley, Shire of Dowerin, Shire of Wickiepin

## Habitat requirements

This community occurs as perched lakes on clay or valley fill deposits. Perched wetlands are those that receive run-off and rainfall, but not groundwater. They have a layer of impermeable or low permeability rock or soil that retains the rainwater and prevents it from infiltrating deeper into the ground. A sufficiently thick layer of fine textured soils, such as clays, near the land surface can trap water on or close to the surface because they are less permeable and have a low capacity for water to move through them. Water in occurrences varies from brackish to fresh.

## Indigenous interests

Traditional Owner groups: Wilman and Ballardong Noongar

A register of Aboriginal cultural heritage sites kept by the Department of Planning, Lands and Heritage currently lists two sites of Aboriginal significance in the vicinity of this community's occurrences, including Toolibin Lake (Lake Torrbarn).



The area is covered by the Ballardong People Indigenous Land Use Agreement (ILUA) and Gnaala Karla Booja ILUA as part of the South West Native Title Settlement, which formally recognises Noongar people as the Traditional Owners of the south-west region. The ILUA regions are supported by the Ballardong Aboriginal Corporation, Gnaala Karla Booja Aboriginal Corporation and umbrella group, the South West Aboriginal Land and Sea Council.

## Conservation status

State: Listed as a critically endangered ecological community under the *Biodiversity Conservation Act 2016*. Threatened ecological communities are declared environmentally sensitive areas under the *Environmental Protection Act 1986*.

National: Listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* as 'Perched Wetlands of the Wheatbelt region with extensive stands of living sheoak and paperbark across the lake floor (Toolibin Lake)'.

## Threatening processes

The most significant threat to this community is altered hydrology. Rising groundwater due to clearing of over 90% of deep-rooted vegetation in the catchments of this community over the last 100 years has resulted in increased inundation and salinisation of the community's habitat. Other major threats to the community include weed invasion, altered fire regimes, and grazing by introduced herbivores (rabbits).

## Recovery plan

A recovery plan was developed for the Toolibin Lake catchment in 1994 and updated in 2015. Recommended actions include developing a hydrological model to guide management, improving water management infrastructure, implementing weed management programs, and developing a revegetation plan for the catchment. These actions are being progressively implemented to reduce threats and maintain or improve the overall condition of the community.

## Key references

Department of Biodiversity, Conservation and Attractions. (2017). *Toolibin Lake Catchment Recovery Plan 2015–35*.

Rutherford, J. (2020). *Hydrological conceptualisation of Toolibin Lake and catchment*. Department of Biodiversity, Conservation and Attractions.

Toolibin Lake Recovery Team. (1994). *Toolibin Lake Recovery Plan*. Prepared by the Toolibin Lake Recovery Team and Toolibin Lake Technical Advisory Group.

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