

Tuckean Swamp Project

OPTIONS STUDY



WHY TUCKEAN?

The Tuckean Swamp is one of the biggest wetlands in coastal New South Wales. Once dubbed 'Kakadu of the South' for its abundant wildlife, the Tuckean was an engine room for fisheries productivity throughout Northern NSW.

What's the Issue?

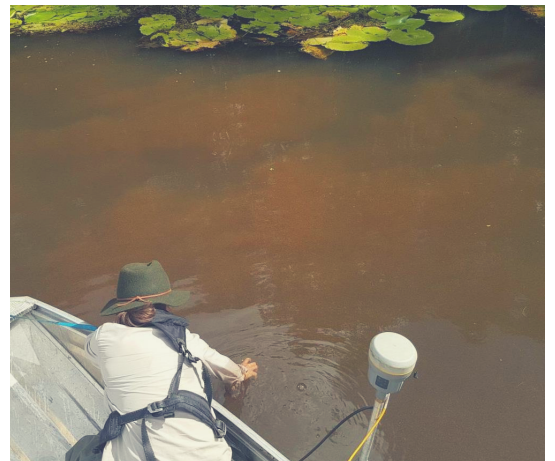
We now know that the past modifications to the hydrology of the Tuckean Swamp, largely through floodplain drainage works, has resulted in poor water quality across its lower catchment. Despite previous attempts, only small-scale improvements have occurred and poor water quality still occurs regularly. Previous natural values remain compromised and diminished.

What's the Good News?

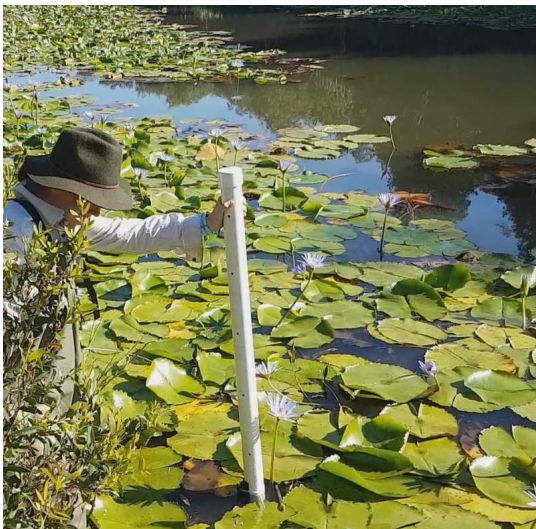
Several large coastal wetland restorations in NSW have now proven successful in reducing poor water quality being exported from drained swamp situations similar to the Tuckean Swamp. A partnership* of organisations has formed to use this new knowledge toward implementing actions for the improvement of water quality at the Tuckean Swamp.

Project Partners

National Parks and Wildlife Service | Office of Environment and Heritage | Local Land Services | Dept. Primary Industries - Fisheries | Rous County Council | Ballina Shire Council | Lismore City Council | Richmond Valley Council | The Nature Conservancy | OzFish



Tuckean Swamp Project: Options Study



What is the Options Study?

The first step in determining possible options to improve water quality is to perform a hydrologic and hydrodynamic study of the area. This will build upon our existing understanding of the Tuckean, using new technology and scientific knowledge. The study will develop possible options for change to the Tuckean Swamp hydrology including water flow dynamics that will improve water quality.

How is it done?

Water Research Laboratories at the University of NSW will undertake the Study using the same methodology they have used to improve water quality in other large coastal swamps. The method includes:

- * Past studies, reports and data collected are all gathered for consideration. These are supported by and added to by gathering data from the Swamp for 12 months.
- * Several water quality monitoring points are installed around the Swamp catchment, particularly at the inflow points, where water comes into the lower part of the Swamp. The points monitor flow rate and water level, and also water quality, in particular pH (for acidity) and dissolved oxygen (for available oxygen in the water).
- * Flow control structures such as floodgates, culverts and pipes are surveyed for their invert height, elevation and dimensions.
- * The drains themselves are surveyed to determine their size and capacity for water movement.

These, along with highly accurate digital elevation data will be used to model a range of different water control scenarios and their impact on water quality and surrounding lands.

What then?

The data gained from the study will be considered collaboratively with all Tuckean landholders to determine a way forward, that does not impact their land, but does improve the water quality and natural values of the Tuckean Nature Reserve and lower catchment.

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