

# Tuckean Swamp Project

## OPTIONS STUDY

### UPDATE - OCT 2019

The Tuckean Swamp is one of the most complex coastal wetlands and drainage systems in New South Wales. The current Options Study will identify a range of management options to improve water quality within and leaving the Swamp and drainage system. The Study is ongoing and this update is to share what's been achieved so far.



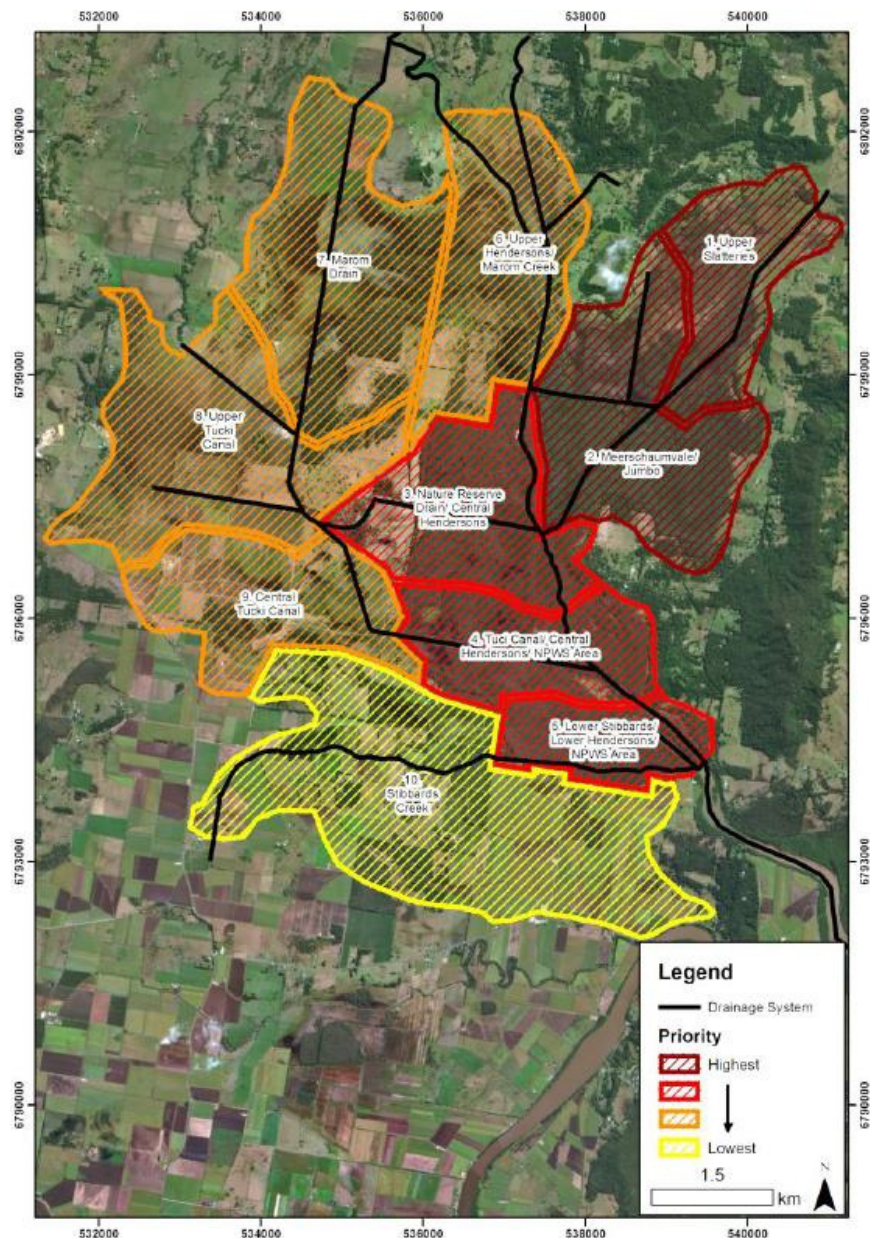
### Latest on Water Quality

Water quality leaving the system over 2018 was largely dependent on the timing, frequency and magnitude of rainfall events. Acid discharge increases when low-lying areas dry out and gradients between groundwater and drains are greatest. During June and July pH of water leaving the system dropped down to below 4. Mid-year samples by the UNSW Water Research Lab team recorded a field pH of 2.08, one of the lowest readings they have ever recorded in NSW. Once groundwater levels recede below drain level, tidal flushing improves water quality again in the lower reaches of the Swamp. Similarly, after significant rain and flooding, deoxygenated water can dominate the system until surface water flows ceases and tidal flushing resumes. Dissolved oxygen levels leaving the system were below optimal levels of 6mg/L all year, except for June, July, August and September, which are the driest months of the year. "

### What happens to the data?

The researchers from UNSW Water Research Labs spent time over 2018 collecting information in the Swamp and setting up monitoring loggers to continue monitoring while they headed back to the lab. The information from past reports, plus the data they collected, was firstly used to determine the current conditions of the Swamp. The map (right) shows the priority areas within the Swamp that solutions need to focus on for the most effective water quality improvement. This data collected forms the basis for any proposed solutions to improve the water quality of the Swamp.

For a full copy of the current conditions report, please contact Cassie on 0402 408 791 or [cassieprice@ozfish.org.au](mailto:cassieprice@ozfish.org.au).



# Tuckean Swamp Project: Options Study



## What happens next?

### Water Quality Solution Suggestions:

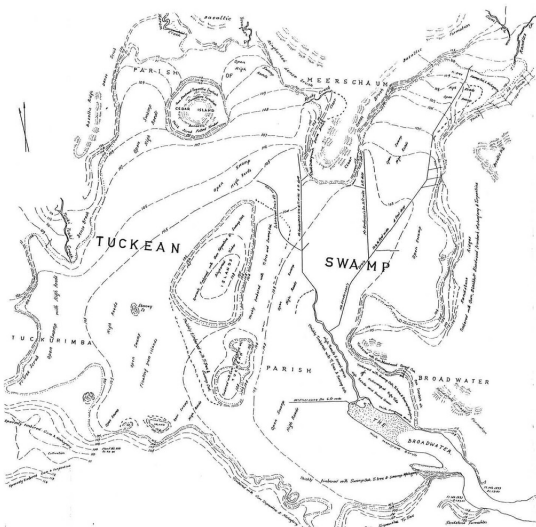
The next stage for the UNSW Water Research Lab team is to test, 4-6 solutions that they suggest for improving the water quality.

For a copy of the suggested solutions please contact Cassie on 0402 408 791 or [cassieprice@ozfish.org.au](mailto:cassieprice@ozfish.org.au).

### Story of the environmental history of Tuckean Swamp:

The project includes a complete look across the environmental history of the Tuckean Swamp to see what we can learn from past management to make improvements going forward.

For a full copy of the history is provided with this update.



### Still to come:

- Results of solutions for better water quality documented by UNSW Water Research Laboratories
- Landholders kept informed of the results of UNSW work - no solutions will be implemented without landholder agreement
- Social, economic and environmental impact studies to be considered in conjunction with water quality solutions

### Communication:

We know the project has moved very slowly, as these very complex projects often do. We would like to thank you for your patience and encourage you to get in contact with Cassie on 0402 408 791 or [cassieprice@ozfish.org.au](mailto:cassieprice@ozfish.org.au) at any time if you have any questions or are wondering about the progress of the project. We look forward to hearing from you.

## CONTACT

Cassie Price

OzFish - Habitat Programs

P. 0402 408 791

E. [cassieprice@ozfish.org.au](mailto:cassieprice@ozfish.org.au)

## Project Partners

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