



# Lake Macquarie Improvement Project

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# Lake Macquarie Map



# Background on Lake Macquarie

- Larger coastal lake (barrier lagoon) with surface area of 110km<sup>2</sup> and a catchment of 605 km<sup>2</sup>.
- Long constricted channel entrance with the ocean results in a 1% tidal exchange.
- Catchment supports a population of approximately 190,000 within the Local Government areas of Lake Macquarie and the northern end of Wyong.



# History of Deteriorating Health

- An investigation (Audit) in 1983 described the lake's condition as "incipient eutrophication."
- The NSW Premier appoints a Task Force in 1998 to develop a priority action plan, including funding arrangements to improve the health of Lake Macquarie.



# Task Force Report

- The Action Plan adopted a strong integrated approach, both across the physical environment and across the various management sectors and involved:
  - A program of physical works
  - Community involvement and awareness to change behaviour
  - Influencing the direction of catchment policy and management
  - Scientific monitoring programs
- All with environmental, social and economic considerations.



# Implementation Structure

- Based on 3 year stages identified within the action plan and jointly funded by Lake Macquarie City Council, Wyong Shire Council and State Government.
- Appointment of the Lake Macquarie Project Management Committee to oversee implementation.
- Establishment of the Office of the Lake Macquarie & Catchment Coordinator to undertake implementation activities.



# Major Physical Outputs

- Installation of 53 stormwater treatment devices (focus on wetlands).
- Rehabilitation of >26 km of Lake foreshore and estuarine creek bank.
- Rehabilitation of 13 state significant wetlands.
- Plus an additional 500,000 endemic plants through Landcare.



# Stormwater Treatment Booragul Constructed Wetland



Before



After





# Foreshore Stabilisation Warners Bay



Before



After



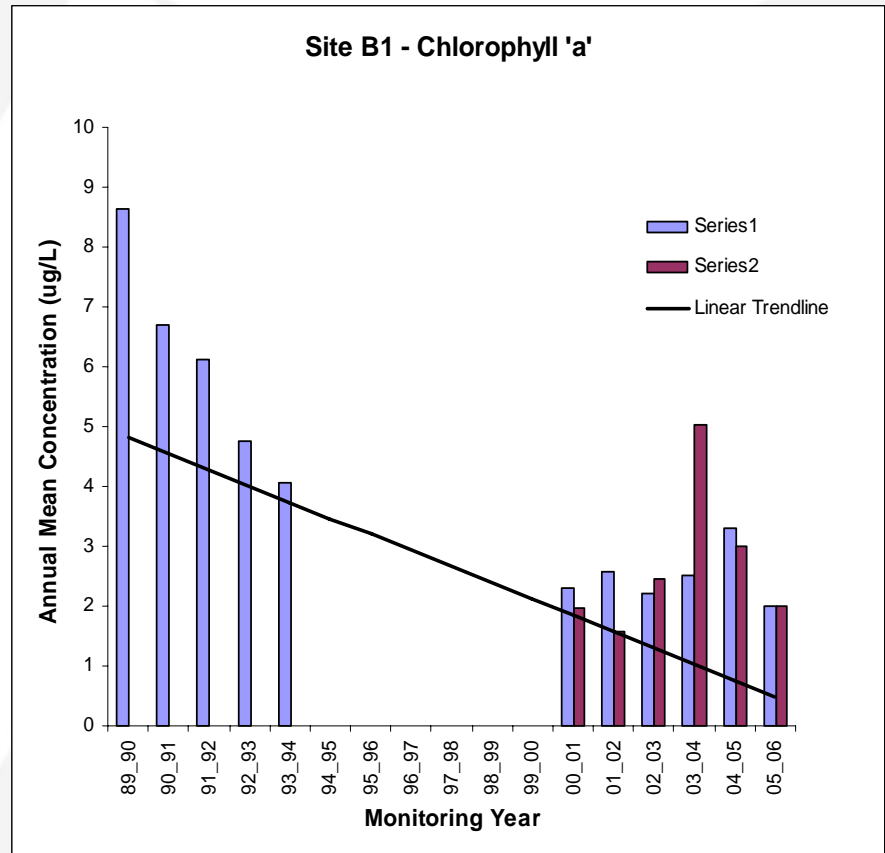
# Project Outcomes

- Project has seen unprecedented support and involvement from the local community.
- The number of registered Landcare Groups has grown from 22 to 250.
- Statistically based community survey indicated that 53.3% of respondents believe the health of the lake environment has improved over the last 5 years.



# Project Outcomes

- Significant improvements in water clarity and other key parameters over recent years.
- Annual (mean) Chlorophyll 'a' at site B1 reduced by 77% since 1990.



# Project Outcomes

43.6% increase in seagrass coverage between 2000 - 2007

**Improvements in Seagrass Coverage in Lake Macquarie**

