




Lake Macquarie's History of Constant Change


Natural Change v Human Impacts


 Natural changes take place constantly in the Lake Macquarie environment. Often they are so subtle that we do not notice at the time. These changes are the result of the interaction of the many elements which make up the catchment and they help to maintain a sense of balance within the ecosystem.

 In contrast, the changes imposed on the Lake by humans are dramatic and effect the environmental balance of the ecosystem. These impacts and changes include excessive sedimentation and ineffective stormwater management strategies, like the introduction of concrete drainage channels.

 This stress gradually speeds up the natural process of change to a point where the Lake can no longer cope, resulting in 'flashpoints' like algal blooms. These danger signs are often most obvious in small enclosed bays and inlets, where confined areas are more reactive to changing conditions and changes are more noticeable to the local community.

Environmental Stability

 Many people think of Lake Macquarie as a giant swimming pool – a constant, stable environment. But we do not have the same chemical and physical filtering controls over the Lake, which is a much more complex system of interacting life forms.


 When we upset the balance of the ecosystem, by interfering with natural change, we indirectly cause problems such as algal blooms and decreases in water quality, seagrasses and bio-diversity.




Cockle Creek 1901 (above) and Cockle Creek as it is in 2001. Note the stump in the foreground (right), a support for the original footbridge which provided access between Five Islands. Human and natural changes have lead to a dramatic loss of shoreline through erosion.




The Interactive Lake System

 Lake Macquarie is made up of many independent physical parts including the upper catchment area of the Wattagan Mountains, the catchment, wetlands, creeks, the channel and ocean and the Lake itself. The effects of changes to one part of this system are felt throughout the environment because the overall balance has been effected.


 Healthy environments typically have high levels of bio-diversity. This means that many different species of plants and animals thrive in the one ecosystem. The loss of many fish species and the high pollution levels recorded in monitoring results show how the acceleration of natural processes has stressed the Lake environment.


The Future

 Gradual infilling of the Lake is a natural process. But, the former Soil Conservation Service of NSW estimated that if the rate of sedimentation continued at annual levels reported in the early 1990s, Lake Macquarie would be completely silted up in approximately 1,000 years.

 Pre-European settlement, sedimentation rates were approximately 6,000 tonnes, today it is around 60,000 tonnes per year

Slowing Down For A Brighter Future

 We can solve the issues effecting the Lake's environmental health because we now have the knowledge to appreciate how natural systems work. Where once we thought concrete drainage lines and hard engineering were the only solutions, we now have the ability to develop and remediate land without destroying these systems.

 As ordinary citizens, we can help create a more harmonious relationship between man and the environment. Elderly citizens who have observed the many changes over time can contribute to the education of current generations and indigenous people can also help illustrate many aspects of the Lake and its history.

