



The Australian Coastal Society is dedicated to healthy ecosystems, vibrant communities, and sustainable use of coastal resources.

The Australian Coastal Society (NSW) supports adaptation planning for coastal communities

Australians have an enduring love affair with beaches and coastal lakes. They are the stuff of idyllic childhood holidays, teenage dreams, family escapes and retirement peace. Fresh salty air, sparkling water, accessible shorelines, boats to muck around in, the sound of the waves on the shore. These are both personal and national values that we all want to protect. They are threatened by severe weather events that temporarily raise water levels and damage shorelines (which could happen at any time) and by longer term changes to climate and sea level which have the potential to make matters worse.

Lake Macquarie is no different. One of Australia's largest estuarine waterways, the lake has historically been a haven for mining families seeking a seaside break and an escape from the pollution of old Newcastle and Sydney. Lake Macquarie now features extensive permanent residential development and infrastructure close to its shoreline. Its popular foreshore reserves contain picnic, walking and boating infrastructure for everyone to enjoy. The City was ranked as one of the most vulnerable to coastal flooding in the 2009 Australian Government review of climate change hazards. These risks are related to the value of private development and community infrastructure on low lying parts of the foreshore like Marks Point and Pelican, which are occasionally flooded now and are likely to be flooded more frequently as sea level rises.

As highlighted by Bob Carter in his opinion piece (Newcastle Herald 23 May 2013), the records from the best long term tide gauge in Eastern Australia, at Fort Denison in Sydney Harbour, are showing that sea level is rising. It has been rising, at variable rates, for most of the last century. Based on these historical trends and the best available science, it is reasonable to assume that sea level will continue to rise over the coming decades. The historical average rate of rise from Fort Denison provides a starting point for considering the potential impacts of higher sea levels on communities in the future. We can be certain that changes to sea level will continue. What is uncertain is the likely rate of these future rises and the timeframes over which impacts will be experienced. Consequently, continuing to monitor, analyse and report future changes to sea level is good practice.

It is also reasonable for a local council managing vulnerable and high value community assets to be thinking about other, higher and faster sea level rise scenarios than those we have experienced so far. Our national scientific advisors at CSIRO expect that the rate of sea level rise will increase in coming decades as thresholds are passed and step changes to icecap melting, oceanic circulation and other factors occur. There is strong agreement that coastal areas will experience increased flooding as sea level rises, posing an increasing hazard to those living and working around estuary shorelines like Lake Macquarie. This scenario would bring difficult choices for vulnerable low-lying communities in the years ahead, but the exact timing and cost of these choices is not yet clear. It is appropriate for a council as a prudent managing authority to plan for these impacts and to continue to monitor and reassess the rate at which changes are occurring into the future.

So Lake Macquarie City Council must engage in conversations with residents of the most vulnerable, low lying areas, like Swansea, Pelican and Marks Point, to talk through potential sea level rise scenarios, and the options that are available to manage impacts on assets, access, safety and lifestyles into the future. These are important issues for any community. Out of those community conversations can come shared understanding of the science of estuary processes; agreement about how best to monitor and report actual changes in sea level and storms; agreement on the degree of community or individual risk that might be “tolerable”; awareness of the implications for emergency management; and an understanding of what action to take and when to take it. These actions might include planning controls, changes to building design, protection works like levees, or any other innovation that provides the community a path to better adapt to a changing climate.

An appropriate response now will not necessarily be an effective response in another decade or two. Good councils work closely with local communities to make decisions together and to monitor progress. As with all hazard management, the rule of thumb is to prepare for the worst and hope for the best. At present the rate of sea level increase is low and some adaptation options to reduce risks affecting individual residents and the broader community that enjoys the lake shoreline may not be immediately justifiable. What is immediate is the need to plan for various future scenarios and then to monitor and review future impacts regularly. With this preparation, the adaptation responses favoured by the whole community can be implemented in a timely manner to minimise the risks from future sea level rise and coastal flooding.

The NSW Branch of the Australian Coastal Society commends Lake Macquarie City Council for commencing the adaptation conversation with its community. It is the beginning of an evolving planning and management pathway that will strengthen the capacity of local residents to deal with environmental change and promote locally developed solutions. It is the first step on a balanced pathway to the future protection of public and private assets while retaining whole of community access and use of our much loved foreshores for future generations.

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