Living LAKE MACQUARIE
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Working to Revive, Renew and Protect the Ecology of Lake Macquarie NSW

Maintenance Dredging Continues At Channel Entrance

The Office of the Lake Macquarie & Catchment Coordinator has redirected $50,000 in funding from its project budget for dredging works in Swansea Channel.

Dredging has just been completed near Naru, in addition to $45,000 spent on maintenance dredging at the same location in December 2000.

Lake Macquarie & Catchment Coordinator Jeff Jansson, said the funding was made available from savings made on other areas of the Lake improvement program.

"The Project Management Committee decided that savings we have made in other aspects of the program should be redirected to ease navigation issues at the opening into Swan Bay."

"In order to maintain safe boating access it was decided to carry out the dredging which resulted in 7,000m^3 of sand being removed from the site."

The Office was established to implement the recommendations of the Premier's Task Force, which was charged with finding ways to improve the Lake Macquarie environment.

A previous study found that dredging of the channel has little impact on lake water quality, and therefore the issue should be assessed in relation to economic and recreational criteria.

While safe boating access is important, claims that dredging of the channel will result in environmental improvement misleads the debate. Informed community discussion is required to achieve the best result for the region.

The onset of warmer weather has seen an upsurge in debate around the dredging of Swansea Channel. Jeff Jansson said the Project Management Committee was investigating sustainable management strategies for key sites around Swansea Channel.

"Ideally a strategy can be developed that maintains safe boating access without the significant costs to the local community.

(Cont page 2)

Maintenance dredging work in progress to improve boating access

Peter Nelson, Chairman Lake Macquarie Project Management Committee

Welcome to the fourth edition of the Living Lake Macquarie newsletter.

We are now well into the warmer months of the year, the 'high season' for Lake Macquarie. As more people use the Lake, there has been an increase in debate about issues such as the dredging of Swansea Channel.

The Project Management Committeee was formed with the responsibility of implementing the recommendations of the Premier's Task Force Report. The over-riding objective of the entire program is to improve the environmental health of the Lake.

So while I share the view of many residents that dredging is required at some level to maintain boating access, the task falls outside the main brief of the Living Lake Macquarie program.

There has been some funding redirected by the Project Management Committee for the dredging of particular sites such as Swan Bay, where navigation is particularly tricky. But this funding has come from savings made in other areas of the program.

It is important that the community join in informed debate on the dredging issue. A previous study established that a 20% increase in the size of the entrance would equate to an exchange of just 0.2% in the total volume of water in the Lake. **(Cont page 3)**

IN THIS ISSUE

Caulerpa Update

The noxious seaweed *Caulerpa taxifolia* does not occur naturally in NSW.

However, in the last 18 months it has been found in several NSW estuaries including Lake Macquarie.

Infestations in the Mediterranean have reportedly reduced the productivity of marine ecosystems. Whether it will have similar impacts in NSW is not yet known, but Caulerpa does grow rapidly and can smother seagrass beds, which are important nursery areas for a variety of recreationally and commercially important fish species.

Caulerpa is easily spread. Small pieces can break off and start new plants. Even after a week out of water, if in a damp place, pieces can survive and re-grow.

Caulerpa is easy to recognise. It is a bright green seaweed with a 'creeping' stem. The stems can be over a metre long and they bear 'leaves' or fronds that are 5-65 cm long.

Caulerpa outbreaks in Lake Macquarie have been confirmed at Wangi Wangi Point, Pulbah Island and Vales Point. The map (see below) shows where commercial and recreational net fishing is prohibited (shaded green). Anchoring is prohibited near the yellow no anchoring buoys which mark the large Caulerpa beds (shaded blue).

NSW Fisheries is researching ways to control or eradicate the weed. A number of methods are being tested including:

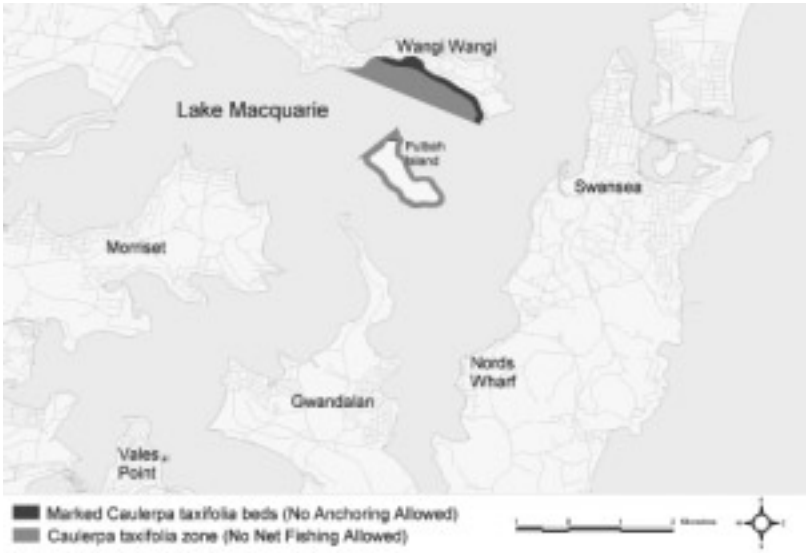
- Smothering with bio-degradable geo-textile matting or black polythene
- Smothering with conveyor belting (the idea of local schoolgirl Emma Lodge)
- Dredging using small diver operated air-lift or suction dredges
- Hand picking
- Applying household swimming pool salt

Each of these methods works to some degree, and different methods will be more suited to some areas than others. Early indications are that salt treatment may be the best way to control Caulerpa in Lake Macquarie. Covering beds with around 2 cm of salt kills Caulerpa while seagrasses and most benthic animals survive. Further work will see if the weed will re-grow, and whether single or multiple salt treatments are needed. Future research will find out if Caulerpa has similar impacts on marine systems in NSW to those reported in European waters, or whether the NSW strains are more benign.

Caulerpa taxifolia

What you can do to help:

1. Avoid boating near *Caulerpa taxifolia* outbreaks.
2. Inspect anchors, ropes and chains before leaving an area.
3. Inspect fishing equipment and dive gear before use.
4. Collect fragments of Caulerpa you have accidentally picked up and dispose of them by sealing them in a plastic bag and putting them in a bin.
5. Report sightings of Caulerpa taxifolia to NSW Fisheries on (02) 4982 1232 or by email: tsadmin@fisheries.nsw.gov.au Be sure to record where you found the weed.



Article contributed by Bill Talbot, Principal Conservation Manager (Threatened Species) NSW Fisheries.

Maintenance Dredging

cont'd from page 1 - The Office has engaged consultants to prepare an investigation into the upstream portion of Swansea Channel and in particular in the vicinity of the southern constructed opening into Swan Bay.

The study involves developing an understanding of the processes of water movement and its effects on sedimentation specific to the area along Swansea Channel. Modelling work will be used to find a longer term solution to the problem at this site."

As part of the project, the consultant will meet with sailing clubs, other recreational and commercial boating users of Swansea Channel and Waterways Authority to determine the location and extent of navigation difficulties. It is anticipated that the study will be completed by May 2002.

Special Thanks... The Office of the Lake Macquarie & Catchment Coordinator would like to thank Rafferty's Resort for their generous support of the recent advertising series and web site promotion run through the Newcastle Star.

One lucky reader and visitor will win a weekend for up to six people in one of Rafferty's wonderful cabins on the shores of Lake Macquarie.

Lake Tops List of Community Concerns

The environmental health of Lake Macquarie is the most important issue on the current agenda in the local community, according to the results of second 'Living Lake Macquarie Community Survey' published in October.

The Living Lake Macquarie Community Survey involved random telephone surveys of 600 homes from the Lake Macquarie and catchment area and included a range of questions on Lake issues and perceptions of the environmental health of the Lake.

When asked to list the top three issues affecting the local community, 27.1% of respondents included the Lake, beach and waterways. The result was considerably different from the identical study carried out in 2000, where the Lake ranked third at just 10%.

Lake Macquarie & Catchment Coordinator Jeff Jansson said the results of the survey suggested that the local community were becoming increasingly aware of the issues effecting Lake health.

"I think it is good that people are so concerned. The local community are major stakeholders in the Lake and one of our key objectives was to raise interest and awareness about the issues which threaten its long term future."

The Office of the Lake Macquarie & Catchment Coordinator was established in 1999 to implement the recommendations of the Premier's Taskforce Report on Lake Macquarie, published in the same year.

The survey also found that the Lake is by far the most important environmental issue of concern in the community, with 76% of respondents including it in their top three list.

But while community concern is increasing, the study found that there is also increasing optimism about the long-term future of the Lake.

"We asked people to give the Lake a rating from one to ten, with one being poor and ten being excellent. The average mark was 6.24, a marginal increase on the 2000 result where the mean rating was 6.13."

"Even more encouraging is the fact that the younger respondents (18-24) are seeing the work in progress and becoming more positive in their outlook. In 2000 the average rating given from this age group was 5.85, and this year that figure jumped to 6.37."

"Next we asked people whether they thought the Lake would get better, remain the same or get worse in the next five years. It was encouraging that 56% said they thought the state of the Lake would improve and only 21% feared it would get worse."

Jeff Jansson said the results of the survey would be used to assist in the future planning of community education and reporting programs. Comparisons with the 2000 survey results also provided a way of measuring shifts in perceptions and awareness within the local community.

Pump-Out Facilities Give Lake the Jump on Marine Waste

Funding has been committed and approvals are in place for the construction of 'marine waste reception facilities' at various locations around Lake Macquarie, including five 'pump-out' units and a number of 'slop-hoppers'.

Marine waste pump-out facilities are specially designed pump units which extract sewerage from vessels by attaching a hose to the holding tank on-board the boat.

The peculiarly named 'slop-hoppers' are stainless steel cabinets where chemical toilet waste collected on vessels can be deposited and rinsed into the sewerage system.

Under the proposal, marine waste pump-out facilities and slop-hoppers will be installed at selected locations around Lake Macquarie, making responsible management of waste an easier task for boat owners and operators alike.

The need was identified in the Premier's Taskforce report and funding for the initiative has been secured from a variety of sources. The Department of Land and Water Conservation ($450,000), Waterways Authority ($200,000) and the Commonwealth Government's Environment Australia ($103,500) have all contributed to the project, which also includes two timber jetties where some of the units will be housed.

Tenders have closed for the construction works with the scope of works to be finalised early in 2002. The approved works are scheduled to be completed this year.

Example of a typical 'pump-out' (left) facility and 'slop-hopper'

Chairman's Column

Cont'd from page 1 - Not only would the cost of this exercise be prohibitive, but because of the massive volume of water in the Lake there would be little improvement in water quality. In fact, such an increase could cause further environmental problems for the Lake.

The merits of further dredging of Swansea Channel should therefore be conducted according to the recreational and economic benefits to the region. Few would argue against these benefits, but it is clear that extensive expansion and costly dredging programs are of little value to water quality and the environment.

With the second year of the program now complete, we have made considerable progress in implementing the Premier's Task Force recommendations.

During the year to 30 June 2001, in excess of $1.6 million was allocated to physical works throughout the catchment. These works include foreshore stabilisation projects such as Salts Bay and Warners Bay, construction of wetlands at Blackalls Park and Aurora Court and revegetation schemes, many in association with the Landcare organisation, which continues to contribute to the improvements around the Lake.

Peter Nelson - Chairman

Lake Macquarie Project Management Committee

Lake Latest

Further foreshore stabilisation works at Pelican Reserve, Shingle Splitters Point and Rathmines Reserve were approved in October to a combined value of $109,500.

• The construction of a commercial Gross Pollutant Trap (GPT) with a vegetated drainage swale has been completed at Ridley Street, Edgeworth at a cost of $50,000.

• Southern Cross University (Centre for Coastal Management) has been engaged to review all water monitoring data obtained since 1994. The University will report on the health status of the Lake and any major trends with the work scheduled for completion in January.

• The Office has committed a further $55,390 in funding for maintenance dredging at a number of sites including Eleebana, Bonnells Bay, Brightwaters, Kilaben Bay, Speers Point and Warners Bay.

• Quotations have been called to conduct modelling of the main upstream channel at Swansea. The objective is to develop long-term options to address navigation problems caused by the construction of the second opening into Swan Bay.

• Sydney-based consultants Webb McKeown have been engaged to prepare a management plan for Coon Island improvements at a cost of $33,000.

• Foreshore stabilisation work valued at $157,000 was approved in July for Flaggy Creek, Warners Bay and Balmoral.

• A construction program valued at $373,000 involving mainly stormwater treatment devices (wetlands) was approved in Wyong Shire.

• Approval was recently given for a wetland valued at $149,865 at Lake Street, Bolton Point.

Vegetated drainage swale at Ridley Street, Edgeworth

Protect the Foreshore, Protect the Lake.

There is approximately 173km of foreshore around Lake Macquarie. It provides a pleasant place for recreation, stabilises soil and filters stormwater run-off.

Here's ten steps to being a responsible foreshore citizen:

1. Some of the foreshore areas are cared for by water-front land owners. It is important that native vegetation is not mown to the water's edge. This decreases filtration of stormwater run-off, increasing sedimentation and nutrient enrichment which is bad for the Lake.
2. Where possible we should replant native species to restore and strengthen the buffer zone that filters pollutants from the Lake.
3. Garden waste like grass clippings should be composted and kept well away from foreshore reserves.
4. Privately-owned equipment such as boats and building materials should always be stored within your property boundary.
5. Exotic plants can make your garden look great, but they are not always welcome amongst native shoreline vegetation. Always keep any introduced species within your property boundary.
6. Boats should only ever be launched from authorised boat ramps as dragging them over foreshore areas can destroy native vegetation.
7. Even dead seagrasses are important to the Lake, providing food for many small animals and preventing erosion. Council does clear excess dead seagrass (wrack) where necessary in areas of high public usage, but otherwise it should be left alone.
8. Native vegetation including logs and dead trees should be left as they provide shelter for native wildlife.
9. Avoid taking vehicles onto foreshore reserves. Tyre tracks can change surface run-off areas and increase sedimentation levels.
10. Join a Landcare group or another community based activity that protects the environment.

Some water-front landowners like to protect their property from erosion by constructing seawalls. But these structures often do more harm than good. Here's why:

1. Dead seagrasses cannot be washed up onto the beach. So instead, they accumulate and rot in the water, contributing to the black 'ooze' that many Lake users are familiar with.
2. Instead of wave movements being absorbed along the shoreline, water is reverberated and pushed toward neighbouring properties. So while your property is protected, your neighbours land might be eroding at a more rapid rate.
3. They can damage seagrasses and prevent aquatic wildlife from moving between water and land, endangering life and eventually limiting bio-diversity.

The Office of the Lake Macquarie & Catchment Coordinator supports programs to develop more sustainable approaches to protect shorelines from erosion.

For more information, visit our web site, www.livinglakemacquarie.org

A reconstructed sloping beach at Warners Bay. Note the dead seagrasses washed up onto the shoreline.

The Office of The Lake Macquarie and Catchment Coordinator

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