

waterwatch
NEW SOUTH WALES
Communities Caring for Catchments

**Lake Macquarie
City Council**

Local Partnerships For Monitoring Aquatic Health

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LMCC Adopt-a-SQID & Waterwatch Program

	2003/ 4	2004/ 5	2005/ 6	2006/ 7	2007/ 8	2008/ 9	2009/ 10
Registered Groups	40	39	56	63	67	71	73
Sites registered	55	60	91	116	122	133	162
Data Uploads		93	226	263	227	381	453
Active Groups			40	40	44	43	43



partnerships



catchment education



Catchment Crawls





stormwater
education



recognition of
achievements







opportunities



opportunities

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Carp Catch



Carp Catch

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The Phosphate Problem

Phosphates in stormwater can be naturally derived from the weathering of rocks, the decomposition of organic material, but it can also enter waterbodies in runoff or discharges and from soil and fertilisers. Sewage and liquids containing laundry cleaning detergents are generally very rich in phosphates. All detergents are harmful to animals.

A number of recent water samples have contained extremely high concentrations of phosphate. The guidelines recommend phosphate concentrations should be less than 0.06 mg/litre. Some recent samples have been as high as 11 mg/litre.

What are the consequences of phosphate and rubbish entering Lake Macquarie?

Phosphate is a nutrient and when it enters waterways it can trigger algal blooms and increase aquatic weed growth that starves the water of oxygen, killing fish and other marine species. Rubbish collects in drainage areas and can cause blockages. Plastic bags can cause injury to birds and other wildlife.

How can you help to eliminate the problem?

- ✓ Do not tip cleaning solutions or cleaning waste into stormwater drains
- ✓ If you use a detergent look for and use products labelled with **NP** (no phosphorus)
- ✓ Make sure the waste water is discharged to the sewer
- ✓ Wash your car on the lawn
- ✓ Dry sweep footpaths and driveways
- ✓ Use sand or kitty litter to absorb grease and oil and bin it. Do not hose to the drain
- ✓ Do not throw rubbish on the roads or public areas - Don't be a tosser
- ✓ Bin your cigarette butts

This public awareness campaign aims to inform local businesses and residents of the problems associated with the discharge of pollutants into stormwater drains. It has been initiated by:

St Alban's Godly Play
Waterwatch Team



with assistance from



We would like to thank all who have cooperated in this program

For further information or details of this project, please contact:

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Caring for our
Winding Creek Environment

St Alban's Gully Restoration and Rainwater Harvesting Project

St Alban's Anglican Church
Charlestown

Help us eliminate
the phosphate problem

Supported by an Australian Government
Water Fund Community Water Grant

Project Overview

This project commenced in January 2006 and involved the installation of three 3000 litre bladder tanks under St Alban's hall to harvest rainwater from the hall roof, supply water to the toilets and wash basins and provide for watering the church garden and gully restoration area.

It is estimated that up to 130,000 litres of water per year will be available for use.

In addition the gully adjacent to the church has been rehabilitated by removing lantana, mulching the whole area and replanting with a variety of native plants and tree ferns to stabilise the steep bank and create an attractive peaceful area for use by the community as a quiet haven.

The eroded creek bed has been reshaped and lined with rocks and Pyramat[®] to overcome the erosion problem and improve water quality in the creek.



Lantana covered bank before restoration

Rehabilitated creek bed with native plants becoming established



Water Monitoring Program

A Waterwatch program has been established by the young people from St Alban's to monitor, on a regular basis, the quality of runoff water from the surrounding commercial and residential properties in the area and identify any contaminants that may enter the creek. Results are available on www.waterwatch.nsw.gov.au

Some of the St Alban's Godly Play Waterwatch team being trained to analyse the water samples from the gully



The Winding Creek Tributary System

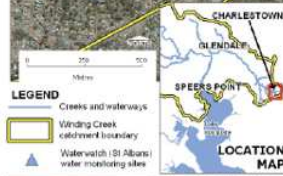
St Alban's gully is a small tributary of Winding Creek which flows from the Charlestown retail and residential area through Hillsborough, Cardiff, Glendale, Cockle Creek and into Lake Macquarie near Speers Point. This catchment is the most urbanised within the City of Lake Macquarie and efficient management of the runoff water is crucial to Lake Macquarie's health.



Rubbish and other contaminants collected in stormwater from the roads in the area

"The Lake starts here"

Upper Winding Creek catchment at Charlestown



LEGEND

- Creeks and waterways
- Winding Creek catchment boundary
- ▲ Waterwatch (St Alban's) water monitoring sites



"The Lake starts here"
Stormwater drains in the area will be identified like this

Changing perceptions



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Reap the rewards of that riparian respect

Waterways often go unrecognised, writes Margo Smith.

THESE are few who would argue that Lake Macquarie is a special place – with the Watian Mountains lake, and coast all within a reasonable distance.

Lake Macquarie is an amazing catchment with numerous creeks and waterways. Our creek systems, and the natural bushland that surrounds them, are vital to the health of our local environment.

Creeks prevent soil erosion by slowing stormwater run-off, filter nutrients and litter, and stop streambank erosion.

The bushland, or riparian vegetation, also acts as a filter and provides shade: wood debris slows water flow; it provides habitat for plants, insects and animals, assists in adding oxygen to the water and stabilises the creek banks.

As our smaller catchment areas that feed into Lake Macquarie or the Pacific Ocean become more populated, there is a tendency for these creeks and native bush to come under pressure from humans.

Many people don't even realise these waterways are creeks as few remain in their natural condition.

The creeks may be traped underground, lined with concrete, covered or wood infilled, which may cause some of them to be unrecognisable.

It is all very well to spend thousands of dollars upgrading stormwater pipes, but the water quality in a catchment will not improve unless we take notice of what is still flowing into our waterways as run off from our roads, drains, gutters, and properties.

"The drain is just for rain" slogan that we see shielded around drains still applies. If we all think it is OK to sweep a few grass clippings into the drain, allow detergents and dog poo to enter waterways, or three rubbish into the bush, it all adds up to large volumes entering our creeks.

The result of this is an unhealthy and often smelly waterway that provides nutrients for weeds to compete with native species for space.

Lake Macquarie City Council has a number of programs in place to



WHAT'S IN A NAME: Naming creeks gives them an identity, making people more aware of their existence, and gives local communities a sense of ownership of their creek.

help protect our natural assets in partnership with local community groups and residents.

We have more than 200 Landcare groups active in the area, protecting their local patch through weeding, replanting, and representing local bushland areas. There are also more than 60 Adopt-a-Stream and Waterwatch groups monitoring water quality in their local catchments.

This valuable water quality information is provided to council and the Hunter-Central Rivers Catchment Management Authority to assist in highlighting areas of concern.

Council also runs the biennial Creek Rediscovers Program, which provides an opportunity for residents, community groups, and schools to propose a name for unnamed creeks in their area.

Naming creeks gives them an identity, making people more aware of their existence, and gives local

communities a sense of ownership of their creek.

By recognizing our waterways are creeks, rather than drainages channels, people are more likely to prevent stormwater pollution entering them. Plus we have many enthusiastic volunteers who take part in Clean Up Australia Day every year.

Council has conducted studies of our catchment areas to investigate the best way to manage them. These management plans highlight areas of concern and look at how we can improve the area through projects such as installation of litter baskets, maintenance and upgrading of stormwater infrastructure, restoration of riparian vegetation, and education programs.

Many community groups have been outstanding in their efforts to improve the health of our natural assets, applying for grants to provide extra finance to create

walking tracks through their sites, publishing brochures on the health of their waterway and better backyard habits, contacting council when pollution events occur, and acting as local co-ordinators for local community partnerships.

Any funds council spends in on behalf of residents. We all like to see our money stretch as far as possible while getting the best outcome for our investment.

Continued and expanded support from the community to protect our natural bushland and waterways results in more funding being available for other areas of council's operations.

Most of us would never consider polluting our lake or beaches, and I'm sure we respected our creeks too?

Margo Smith is Lake Macquarie City Council's sustainability project co-ordinator.



Community eyes and ears

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EVOLUTION - Estuary watch
Identification of community needs
CMA Environmental Education Grant
NSW Waterwatch Manual





Seagrass Walk awareness raising

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Future directions

Continued support for volunteers

Networking & partnership opportunities
government, education institutions & NGOs

DECCW Grant: routine & event monitoring

Aquatic ecosystem health indicators for
LMCC waterways

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Questions

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