

BALLINA MAKES WAVES IN NATIONAL WATER SCENE

Ballina Shire Council is making waves in the national water scene, with its admirable water services being rated by experts in the field and even in the Parliamentary Inquiry into Water Augmentation.

In fact, the latest Water Journal produced by the Australian Water Association (AWA) features an article with Dr Nanda Altavilla, the DPI's Recycled Water Specialist.

When asked by the AWA what she thought were the most exciting recycled water projects currently being undertaken, Dr Altavilla replied: "The one I'm most proud of that DPI Water and I were both involved with is the dual-pipe reticulation scheme operated by Ballina Shire Council, in Lennox Head."

"That's the first one in a Regional area to be approved in NSW," Dr Altavilla told the AWA.

"Initially it's small but it will be rolled out to 3700 homes over 30 years in Ballina Shire. The good thing about this one is that they're a small utility. They're not Sydney Water or another utility that has had wide experience and I think that they prove that small utilities can do this and do this well. They were independently audited and the auditor said it was one of the best schemes she had seen," she said.

Council is thrilled to be receiving recognition for its service on a national stage and thanks its dedicated Civil Services team for the implementation and operation of the recycled water service.



Community gives recycled water thumbs up

"I think the quality is excellent and I support the inclusion of recycled water into our shire over the long term." This was one of a number of similar responses obtained from a recent survey conducted by Council to gauge the level of satisfaction of local residents who were turned on to recycled water during the service's initial roll out phase in July this year.

According to the survey, a majority of recycled water users were satisfied with the quality of the service, which included its pressure, clarity and convenience.

Strategic Engineer Water and Wastewater Andrew Swan said that he was happy with the level of satisfaction depicted in the survey results but said the level of understanding could be improved.

"Two thirds of survey respondents understood that recycled water was safe for use in homes, however, results indicate that users were predominantly expending their recycled water outdoors only, and we want to emphasise that the quality of recycled water is absolutely safe for some indoor use at home, including washing clothes," Mr Swan said.

The recycled water survey not only sought feedback from local recycled water users, but from the entire community in regards to its general knowledge of recycled water to understand in some measure, how effective its community engagement on the subject had been.

"It was pleasing to see that a majority of all survey respondents agreed that the main benefits of recycled water included reducing discharge into the ocean and river, saving water, protecting the environment, planning for the future, drought, and treating wastewater as a valuable resource," Mr Swan said.

Despite Council's efforts to educate the community about recycled water, more than 70 per cent of locals surveyed reported they would like to know more.

Mr Swan said that while Council had undertaken community consultation, developed a dedicated Ballina Water website, published a regular Water Talk feature in the newspaper, distributed service updates to the local media, and had provided information kits and spoken one-on-one to residents receiving the service, "Council would listen to its stakeholders and strive to do more in this space."



WHO WOULDN'T APPRECIATE RECYCLED WATER?

Coastal Grove Estate in Lennox Head was turned on to recycled water in July this year, around the same time that Glen and Tina Davies moved in to their new home within the estate.

Glen and Tina said they couldn't understand why anyone wouldn't appreciate the service.

"It's great for the environment, good for the community and it serves its purpose of providing our home with ample quality water," Mr Davies said.

The Davies' use their recycled water for washing their car, pressure cleaning, have it hooked up to their washing machine and toilet, and use it a lot for gardening.

"We turfed the front lawn a few weeks ago and there hasn't been much rain, so we've been using the recycled water on it every day and it's looking phenomenal," Mr Davies said.

Mrs Davies said that they'd received a pack from Council about recycled water when they moved into their new home which helped them to understand more about the service.

"The pipes were all fitted before we moved in and there are purple taps to indicate where the recycled water is connected" Mrs Davies said.

Recycled water is a drought-proof source, which means it can be used during a drought. "And while the community isn't in drought at the moment, it's reassuring to know that recycled water will heavily assist if a drought transpires in the future."

According to DPI's Recycled Water Assessment Specialist Dr Nanda Altavilla in a recent interview with the Australian Water Association: "The right time to invest in water infrastructure is not when we're in crisis, but at a point when we can have a long-term vision of integrating the whole water cycle and looking at all options" – which is what Ballina Shire Council has done.



Who knew a treatment plant could be so interesting?

Council is encouraging the community to visit and receive a tour of either the Lennox Head or Ballina wastewater treatment facilities to learn how recycled water is treated into high quality water, and why.

Eddie Lee is a Year 11 student from Xavier Catholic College in Ballina who recently visited the Ballina Water Treatment Plant with his class on an excursion in relation to their environmental health studies.

Eddie said that he learnt the entire treatment process of recycled water that he'd never have known without visiting the site.

Eddie said that he learnt how recycled water is good for the community because it renews resources, particularly during periods of unsustained rainfall or drought periods.

"I really enjoyed seeing the inner functions of the treatment plant," Eddie said.

Eddie's teacher, Tanya Pearson, said the site tour was very successful and that students learnt a lot about recycled water. As a teacher, it's Tanya's job to think about her students and their futures.

"Water conservation (especially drinking water) is essential for the future of our community," Tanya said.

"It's fantastic that we are able to utilise recycled wastewater for sports fields and reticulated domestic supply rather than it being released into an estuary environment," she said.

Site tours to Ballina Shire Council's wastewater treatment facilities are available for community groups and senior students upon request. Group sizes are 10 to 15 people. For more information please email council@ballina.nsw.gov.au or phone 02 6686 4444.



A gardener's secret

Jennifer Brewley waters her vegetable garden with recycled water and says the garden is growing tremendously.

"I've had spinach, lettuce, parsley and tomatoes in there and they've grown far and wide across the span of our garden bank," Jennifer said.

Jennifer and her husband built their home in Aspects Estate in Lennox Head and part of the requirements of the new house in the estate was a connection to recycled water.

"It was required by Council and we knew it was good for the environment so didn't hesitate," Jennifer said.

"I now use it in the garden, to wash the car, and for other approved uses – and the pressure is fantastic."

Jennifer is one of many satisfied recycled water users in the community using the service after its initial launch in July, and Council is pleased that it's been such a success.

The recycled water service in the Ballina Shire originated when the community expressed a desire to reduce the amount of treated effluent being discharged into our estuaries and the ocean. Council listened, devising a plan which now uses effluent as a resource rather than something needing to be disposed of. It's no longer a problem to deal with, but a huge benefit to the community.

WATER HARDNESS

Water hardness is the measure of predominantly calcium and magnesium carbonates in water. The term results from the fact that increased levels of calcium and magnesium ions in water make it "hard" to get soap suds to form.

Hard water is formed when water passes through or over limestone and chalk deposits prior to the treatment process. The minerals are naturally occurring in all water sources. The minerals are also important components in the development of bones or shells of aquatic organisms (calcium) and nutrient for plant growth (magnesium).

The Total Hardness of the drinking water supplied within the Ballina Shire is typically in the region of 60 mg/l (there is a small variance according to the season and rainfall received). This water is classified on the border of moderately soft and moderately hard. Ideal drinking water quality should have no more than 80mg/l. The recycled water currently supplied out of the Lennox Head Treatment Plant has a water hardness of approximately 90mg/l. The hardness in the recycled water also fluctuates due to the varying weather conditions.

The table below indicates the classification levels of water hardness.

TOTAL HARDNESS CLASSIFICATION	
(mg/l as calcium carbonate CaCO ₃)	SOFT 0-30
	← MELBOURNE (26)
	← WARDELL (30)
	← CANBERRA (40)
	← SYDNEY (60)
	MODERATELY SOFT 30-60
	MODERATELY HARD 60-120
	← BRISBANE (100)A
	HARD 120-180
	← ADELAIDE (150)

The evidence left in the home from hard water includes deposited off-white solids on the inside surfaces of pipes and heat exchangers (eg kettles, hot water system etc). It is usually visible on elements in kettles and can occasionally break free leaving small off-white flakes in the water. This is completely harmless to drink (and in fact the magnesium and calcium have been shown to have health benefits). The water supplied within the Ballina Shire has little detrimental effect on domestic hot water systems, dishwashers, kettles and the like, with little scaling occurring. White scale marks will also be visible on windows and other surfaces (eg your car after washing) if not wiped dry after cleaning.

Note: Wardell's water source is Marom Creek.