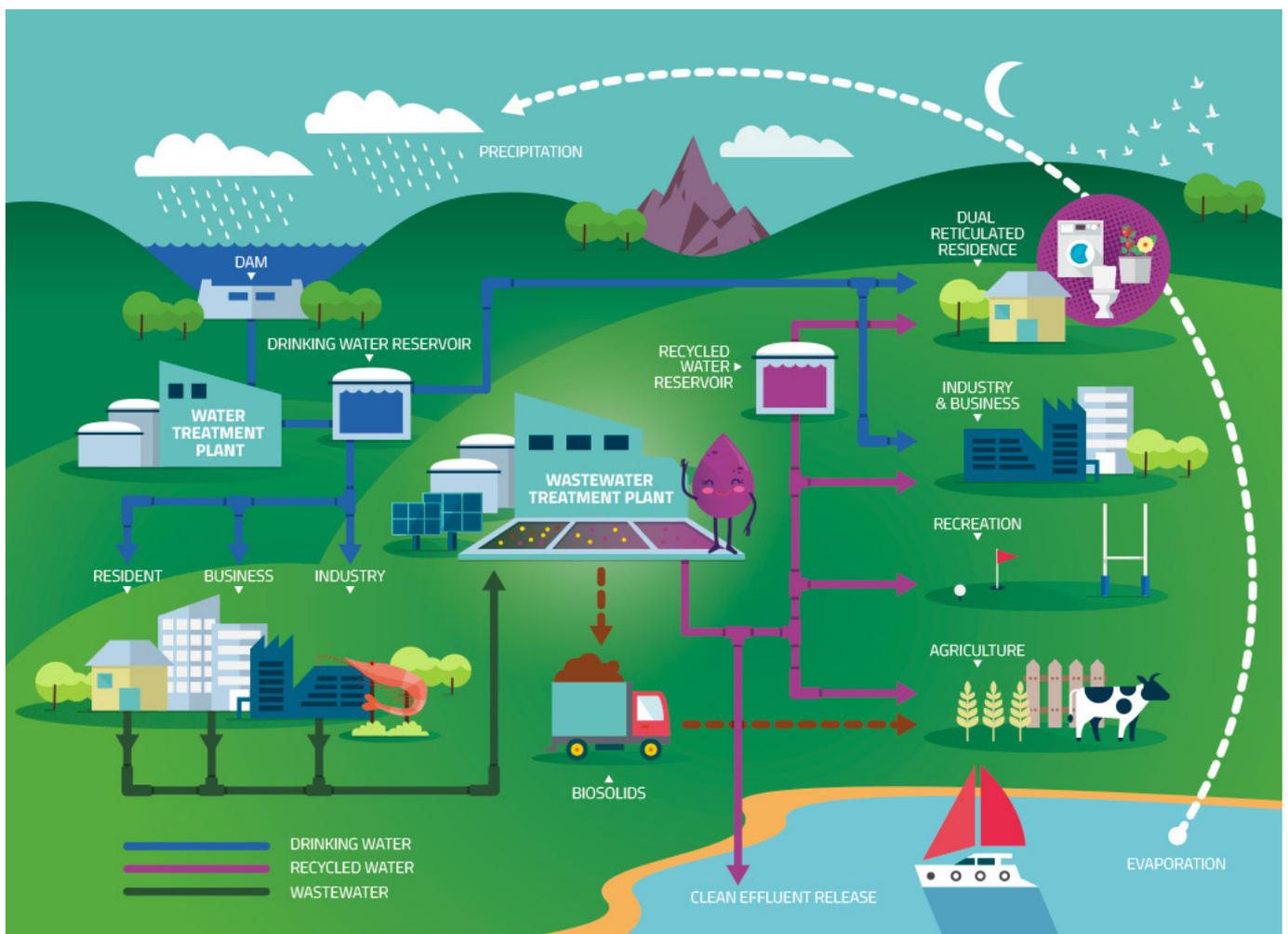


# » recycled water facts understanding the treatment of recycled water

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**Recycled water is clean and safe, cheaper to use and available 24/7. Recycled water costs only 80 per cent of the usual water rate and is being rolled out at new properties across Ballina Shire.**



## » Residential wastewater

Residential wastewater accounts for over 80 per cent of all wastewater that reaches the Lennox Head and Ballina Wastewater Treatment Plants. This water is generated from household laundries, kitchens, bathrooms and toilets.

You can help keep recycled water and the environment safe by never pouring hazardous waste liquids down the sewer or stormwater systems.

## » Commercial wastewater

The other 20 per cent is commercial and non-residential wastewater which is classified as liquid trade waste. All commercial premises connected to the Council's sewer system have liquid trade waste licenses registered with Council. This ensures that prohibited substances like hair bleach and other harmful amounts of commercial wastes are prevented from entering our sewerage system. Council must regulate liquid trade waste as part of its management of recycled water.

## » Treating wastewater

### Standard treatment

When wastewater reaches the treatment plants, unwanted solids are removed with the use of fine screens. The collected screenings are dropped straight into small bins for easy transport to a local waste facility. The screened water is then directed into a vortex chamber which uses gravity and friction to remove small grit and sand particles that managed to get through the screening process.

The collected water is then directed into a number of large tanks that are used to remove excess nutrients from the wastewater by encouraging the growth of bacteria that use those nutrients. To help this process air is intermittently pumped into the waters stored in the tanks to supply oxygen to these bacteria. As a result of this process a large amount of sludge settles to the bottom of these tanks. This sludge is pumped out into separate storage ponds and is eventually turned into biosolids for use in the agricultural industries as fertiliser.

### Ultra-filtration

Water is eventually decanted from the tanks and allowed to stand in a large pond which allows further settlement of the treated wastewater. From these storage and settlement ponds the wastewater is then passed through an ultra-filter. The pores on this filter are smaller than most human pathogens including bacteria, viruses and protozoa. The filter is tested daily to confirm it is operating effectively.

## Ultraviolet disinfection and chlorination

Once filtered, the treated water is subjected to ultraviolet disinfection. Ultraviolet disinfection kills microorganisms such as protozoa, bacteria and viruses. All recycled water intended for re-use is then chlorinated to fight any bacteria it may encounter along pipelines to your house.

### Zero pathogens

The whole process is designed to ensure recycled water is completely free of human pathogens, resulting in a very safe product that will not cause illnesses.

## » How is recycled water tested for quality?

The Ballina and Lennox Head water recycling plants both produce high quality recycled water that goes through a number of rigorous treatment processes in accordance with the Australian Guidelines for Water Recycling and the NSW DPI Water Guidelines for Recycled Water Management Systems. Council must operate the treatment plants in accordance with approvals from the Environment Protection Authority and DPI Water, with concurrence from NSW Health. Both facilities have 24 hour online monitoring equipment and follow HACCP principles for guaranteeing water quality. The facilities will automatically shut down if water quality cannot be guaranteed.

## » How is recycled water being used?

Recycled water is ideal for household uses such as washing cars, bikes and boats, flushing toilets, filling ornamental ponds, the cold water washing machine tap and irrigating gardens.

Recycled water is not recommended for some uses such as drinking, bathing and cooking but if you accidentally use recycled water in this way, it is unlikely you will fall ill. If you think you may have used recycled water in this way please contact Ballina Shire Council and seek medical advice.

Recycled water is a drought proof water source and there are no restrictions during droughts. It also helps to reduce the impact of wastewater discharge on our waterways.

**The information in this factsheet only applies to the Lennox Head and Ballina recycled water schemes.**

**For information about the Alstonville and Wardell recycled water schemes please refer to Factsheet No 8.**



**Need more info? Visit our water website [ballinawater.com.au](http://ballinawater.com.au)**

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