

Recycled Water

Our recycling and reuse programs aim to save our precious drinking water supplies and reduce the amount of waste entering our environment.

Water recycling involves treating wastewater from our homes and businesses to remove impurities so it can be used again. We can use recycled water at home to flush toilets and water gardens, in our community to irrigate parks and ovals, and for agricultural and industrial use. Recycled water must be treated to a level that is appropriate and safe for the particular end use.

There are currently 15 recycled water schemes linked to our system in the Lower Hunter which produce a total of around six billion litres of recycled water each year. This is about 10% of all wastewater generated. We are using recycled water as one approach in the long-term management of our water supply and the reliable delivery of water and wastewater services to the Lower Hunter region.

“Our recycled water schemes save over 1,200 swimming pools worth of drinking water each year.”



Kooragang Recycled Water Scheme

The Kooragang Recycled Water Scheme (KRWS) transfers up to 12 Megalitres (ML) of treated effluent each day from the Shortland Wastewater Treatment Works to an advanced water treatment plant which produces up to 9ML per day of highly treated recycled water for use by industrial customers on Kooragang Island. This scheme alone saves up to 3billion litres of drinking each year.

How the Kooragang Recycled Water Scheme Works

Treated effluent is transported from Shortland Waste Water Treatment Works to Steel River and held in raw water tank.

Effluent passes through microfiltration units. A porous membrane allows water molecules to pass through while trapping larger materials.

After microfiltration the effluent goes through reverse osmosis. Membranes with holes just half the size of DNA filter the effluent of all salts, viruses and bacteria. Fresh water passes through while the reject water is trapped

Clean, pure H2O is held in the product water tank before being sent to Orica Mining Services Kooragang Island facility via an 8km pipeline.

Reject water is sent back to sewer where it is eventually treated at Burwood Waste Water Treatment Works.

Residential Recycled Water

More than 1,100 homes were connected to recycled water in 2019 as part of our first residential recycled water scheme. It is estimated each household will use 40 per cent less drinking water, by instead using recycled wastewater for a range of non-drinking purposes.