



## Monitoring and testing

The quality of water in the town supply is constantly monitored and tested.

Water samples are taken from seven creeks that flow into the Hastings River. The water flow in the Hastings River and turbidity is constantly monitored.

The AquaLab at Koree Island runs regular tests on the water and shuts down the pumps if water quality drops. This means clean and clear water is pumped into the town water supply at Koree Island.

This means that only crystal clear water makes it into our reservoirs and dams.

The water continues to be monitored as it makes its way from the dams and reservoirs to your home. There are 47 monitoring taps around the Hastings and 130 samples are taken and tested every month.

To make sure that the tests are accurate some of the water is tested twice, once in Port Macquarie and once in Newcastle.



## "Alternative water sources - looking to the future"

### Rainwater tanks

Rainwater tanks are now compulsory in all new homes. The Hastings Council recommends their use for car washing, toilet flushing and watering the garden.

## What we do

The Hastings Council Water Supply team takes its role as environmental manager and water provider seriously. Council manages the Hastings' water resources carefully to protect this precious resource for all future generations.

Council is committed to providing a sustainable and drought-secure water supply to the rapidly growing Hastings district. It has been identified as one of the top five regional growth centers in Australia and its population is expected to reach 120,000 by the year 2040.

The Drought Management Plan outlines plans to keep the water supply safe and secure. The plan can be viewed at your Council offices or local libraries.

Council promotes the WaterWise message that water is a precious resource and must be conserved. The WaterWise message appears in regular television radio and newspaper advertising and Council newsletters.

People are encouraged to install rain-water tanks to use in the garden, laundry and toilet. It also suggests that people have their homes fitted with flow control devices in their taps and install water saving showerheads and toilets which have the half-flush feature.

The WaterWise team takes people on free tours of the Hastings Water supply. They visit local shopping centres, shows and skills and talk to people about saving water.



from  
catchment  
to the  
tap



### Reclaimed water

Making old water new again... About 10 percent of Port Macquarie's waste water will be diverted to an advanced water treatment plant and re-used as clean reclaimed water for irrigation, car washing, pool filling and toilet flushing.

### Greywater reuse

Used water from the washing machine, kitchen sink, bath and shower is called "grey water". It might not look good to you, but the lawn and your plants will love it! Grey water is better than no water at all!

### Desalinisation

At the moment the technology is too expensive and we don't need it. But one day the Council may need to build a plant which takes the salt out of sea water.

Community consultation is a top priority for the Hastings Water Supply Team. The public is notified of any plans to build or renovate water facilities through newspaper and radio advertising. They are encouraged to have their say about the water supply.

Council worked closely with members of the local Aboriginal population in the planning, construction and maintenance of the Cowarra Dam.



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HASTINGS WATER SUPPLY SYSTEM





### The journey from catchment to tap

The journey begins in the catchment when the clouds burst and rain falls and flows into the Hastings River. (See map).

The Hastings Council pumps water from the Hastings River at Koree Island 5km south-west of Wauchope. When the river flow meets strict environmental guidelines the pumps have a combined capacity to draw 120 ML/day out of the river.

The water is tested in a fully automated Aqua Lab at Koree Island before it is pumped to the Rosewood Reservoir. The Aqua Lab can sense when the water quality drops and switches off the pumps automatically.

For example, after heavy rain falls the river's turbidity (amount of solid particles floating in the water) increases. The Aqua Lab tells the pumps only to take water when it is clear and turbidity is low.

The water in the Rosewood Reservoir is gravity fed to the Cowarra and the Port Macquarie dams. To keep the water fresh in the dams, giant propellers slowly circulate the water and aerators blow bubbles. The added oxygen and the currents in the water help to reduce the risk of algae building up.



Another way that the Council keeps down algal growth is through restricting pumping during times of heavy rainfall. This minimizes the amount of water run-off from farms which might be loaded with nitrates and phosphates, which promote algal growth.

The fresh clean water in the 2,500 mega litre Port Macquarie Dam and the 10,000 ML Cowarra Dam is pumped to reservoirs throughout the Hastings.



### A Tasty Drop

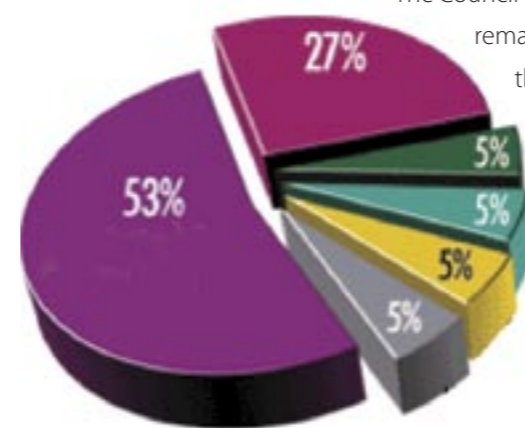
What makes good drinking water is not an easy question to answer.

Water is an excellent solvent so its taste depends on the substances dissolved in it. Although generally the purer the water, the better the taste, distilled water can have a bitter taste.

Hastings water tastes so good and is of such a high quality that the Council bottles it.

The Hastings Council is required under the New South Wales Health Act to treat the water with a small amount of chlorine before it is piped to people's homes and businesses. Adding chlorine is a cheap, safe and effective way of protecting drinking water from bacteria and parasites.

The Council tries to use as little chlorine as it can, while ensuring enough remains in the system to protect the water during its journey to the tap and that can be a long way in the Hastings.



It is a delicate balance that is checked and adjusted regularly, but the cleaner the source of water, the less the need for chlorine. That is why the Aqua Lab at the Koree Island Pumping Station is programmed to turn off the pumps when the river water is not clear.



### Working with nature

The Hastings Council is leading the way in water conservation and alternative water supplies.

The Environmental Protection Agency commended the Hastings Council for their successful research projects aimed at protecting the Hastings River. This ongoing research is being undertaken by scientists and Honours research students from the University of New England and the University of New South Wales.

Scientists are employed to do ongoing research into fish, aquatic plants and platypus.

Council is involved in an annual restocking programme for Australian Bass. Bass is not only popular with recreational fishers, the scientists like to study it too. The Bass is yet another way that the health of the river can be measured. A healthy fish means a healthy river!

Replanting of the Hastings river bank is ongoing and helps to cut down on the amount of dirt and fertilizers that get washed into the river.

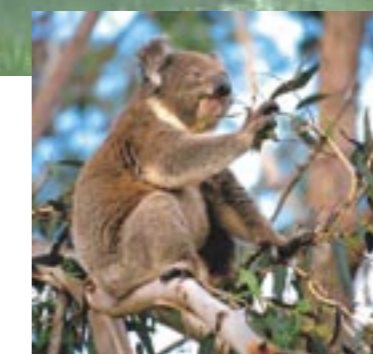
The trees in the protected Port Macquarie Dam area are home to koalas and many important species of birds and bats. Trees which were removed to build the Cowarra Dam have been replanted for the benefit of the birds and wildlife.



People sometimes complain that tap water smells like chlorine. What they actually smell is the result of a chemical reaction between the iron in the water and the chlorine.

To fix this, the Hastings Council built a lime and CO2 dosing plant, which raises the PH of the water. This makes it more difficult for the chlorine to react with the iron in the water.

The plumbing in people's homes and appliances like electric jugs can also affect the taste of water.



The Council likes to support the good work of the Koala Hospital in Port Macquarie. The land around the Port Macquarie Dam has lots of koala feed gum trees and hospital volunteers collect fresh branches to feed the sick koalas.

When koalas are well enough to leave the hospital they are released into the trees around the Port Macquarie Dam. There they are protected from predators and are able to get used to the idea of living in the wild again.