

DECEMBER 2006

INFORMATION RELATING TO THE PLEBISCITE ON PURIFIED RECYCLED WATER

What is the plebiscite about?

On Saturday 17 March 2007, a plebiscite will allow residents of South East Queensland to vote on the use of purified recycled water to replenish dams.

The plebiscite gives residents the opportunity to have their say on the use of purified recycled water as part of the ongoing water supply, in good times as well as bad. Regardless of the outcome, the Queensland Government has made it clear that it will consider the use of purified recycled water in emergency situations.

The plebiscite will take in 19 local government areas, including Cooloola Shire in the North and Toowoomba in the West, and may be extended to include other local government areas that access the Wivenhoe Dam system.

Voting will be compulsory with the outcome being determined by a majority of voters, being 50% plus one vote.

The specific wording of the plebiscite question will be determined by a vote of Parliament on 6 February 2007.

What is the role of the Queensland Water Commission?

The Queensland Government has asked the Queensland Water Commission to provide information to the community on purified recycled water prior to the plebiscite.

The Commission is an independent statutory authority responsible for ensuring a sustainable and secure water supply for South East Queensland.

The Commission will seek to ensure that the public has access to important facts. An information program will identify and address, in a fair and impartial way, the questions and



The map of local government areas currently participating in the plebiscite.

concerns of the community. Community information and feedback will be provided through public forums and the Commission's website.

What is purified recycled water?

Purified recycled water is wastewater that has been treated to the highest standard through a multi-barrier treatment system. In addition to current wastewater treatment standards, the water is subject to micro-filtration, reverse osmosis and advanced oxidation. This drinking-quality water is then injected into another water supply source such as a dam, flowing river or aquifer where natural processes provide an additional environmental and time buffer.

Finally, the blended water is subjected to the usual treatment process which currently applies to dam water at the existing water treatment plant before distribution to consumers.

At all stages of this process, the water is subject to water quality monitoring and testing. In Queensland, purified recycled water will be subject to a new regulatory regime to ensure it meets health and safety requirements.

Why is purified recycled water under consideration?

South East Queensland continues to experience the fastest growth rate of any urban region in Australia. Combined with increasing uncertainty regarding climate variability and change, this growth presents challenges for our water supply system. While the Government has already committed to a range of new initiatives including a regional Water Grid, we still need to secure additional supply sources over time and reduce our dependency on rainfall.

South East Queensland's climate is already highly variable and global climate change may adversely affect rainfall and performance of the dams. Currently, our water supply is almost totally dependent on dams, which are susceptible to long droughts, such as the one we are experiencing now.

This creates significant risks to our supply, particularly given the sustained levels of population growth in South East Queensland. Currently, almost 2.8 million people live in South East Queensland and this figure will almost double to 5.3 million over the next 50 years. Even with significant new efficiency measures to reduce water consumption, population growth is substantially increasing the region's demand for water.

Water is essential for our social, economic and environmental prosperity. That is why the Queensland Water Commission is developing the *South East Queensland Regional Water Supply Strategy* in conjunction with the State and local governments. The Strategy will secure long-term water supply for South East Queensland through a number of initiatives, based on the principles of using water more efficiently, diversifying sources from which we obtain water, and the construction of a regional Water Grid that will enable water to be shared across the region.

If approved in a plebiscite, purified recycled water would provide an option for a robust, climate independent source of water that would allow the continual replenishment of the region's dams. Such a major new source of supply would reduce the risk of severe water restrictions being imposed on households, businesses and industry in the future.

Other potential benefits to regional water supply management include:

- reducing vulnerability to climate change;
- improving water quality in Moreton Bay;
- maximising the benefits of the Western Corridor Recycled Water Scheme, currently under construction; and
- providing more flexible options to meet demand across the region in such a way as to minimise cost to consumers.

Prior to considering the plebiscite question, the community may wish to understand:

- the technical process by which purified recycled water will be used in our water supply;
- scientific research confirming that all health and safety requirements are achieved;
- the activities of our region's water service providers in the treatment process; and
- the enhanced regulatory framework which will govern the use of purified recycled water in our supply.

The Commission will play a significant role in providing public information on these issues and in identifying and addressing concerns.

When the outcome of the plebiscite is known, the Commission will finalise and publicise the long term plan, the *South East Queensland Regional Water Supply Strategy* to reflect the outcome of the vote.

What other options are being implemented and explored?

Purified recycled water is one of many initiatives being considered or underway. However, no single solution will be enough.

The Queensland Government and local authorities have offered rebates for water efficient appliances such as washing machines, and water saving devices such as dual flush toilets, pool covers, rainwater tanks and grey water reuse systems for households.

A two-pipe system is also being encouraged for new housing and industrial developments, enabling recycled water to be used for specific purposes such as toilet flushing. Water utilities are reducing the pressure in mains pipes and managing leakage.

The key alternative to purified recycled water is additional desalination, which is more expensive and requires more electricity to operate.

Additionally, significant water restrictions are now in place. The Queensland Water Commission is encouraging residential and business water efficiency through the implementation of the current Level 4 water restrictions and other initiatives.

Industry and businesses which use more than 10 million litres of water per year are required to implement Water Efficiency Management Plans.

A range of supply initiatives are also underway. These include:

- the regional Water Grid which will link existing and new dams and water storage facilities around South East Queensland, enabling the transfer of water across the region;
- a desalination plant being built at Tugun on the Gold Coast;
- the Western Corridor Recycled Water Scheme, which is capable of delivering up to 95 million litres of recycled water per day from Brisbane to the power stations. It has the capacity to provide another 115 million litres per day of treated wastewater for other uses, including replenishing the dams with purified recycled water;
- the development of new water storages – Traveston Crossing Dam and Wyaralong Dam; and
- reactivating old dams.

Is purified recycled water safe?

The key water authorities which would be involved in the management of purified recycled water, including the State Government, SEQWater and Brisbane City Council are confident it can be used as a safe and reliable source of supply.

Purified recycled water has been used to replenish drinking water supplies in many other parts of the world for up to 40 years, including the USA, UK, Singapore and Africa. The technology and associated management systems have advanced significantly over the past decade.

If implemented, purified recycled water would be delivered within a clear regulatory framework that would ensure all health and safety requirements were met.

If the proposal to replenish Wivenhoe Dam with purified recycled water proceeds, the introduced water would be treated to a higher quality than the water to which it was added. The dam would act as a time and environmental buffer.

After all this, it would still undergo the conventional water treatment that already delivers safe water supplies to homes, businesses and industry.

Nevertheless, the community will require answers to legitimate questions in order to be assured as to the safety of purified recycled water. The issue has been contentious in other jurisdictions and there are specific questions in relation to the treatment of impurities which must be addressed on the basis of science. The Commission's role will be to ensure that further information is presented addressing the questions raised.

The Queensland Water Commission will continue to provide facts about the technical process to the public.

More information?

For more information go to the Queensland Water Commission website at www.qwc.qld.gov.au. If you would like to share your views on recycled purified water with the Commission, click on 'Tell us what you think' or write to the Queensland Water Commission, PO Box 15087, City East Q 4002.