

# WaterSecure

## A new source of pure water

WaterSecure is providing safe and secure climate-resilient water sources for South East Queensland. Purified recycled water and desalinated water will be supplied to the South East Queensland Water Grid for distribution to power stations, industry, and Wivenhoe dam to supplement the region's drinking water supplies.

WaterSecure was established on 1 July 2008 as a statutory authority under the South East Queensland Water (Restructuring) Act 2007, to produce and supply purified recycled water and desalinated water.

WaterSecure is a sustainable water business providing a climate resilient water supply now and for the future. These new water sources will help to sustain the region's economic growth and reduce environmental impact on our waterways and Moreton Bay.

### Our water supply system

WaterSecure's water supply network includes:

- More than 200 km of large-diameter underground pipeline
- Three advanced water treatment plants located at Bundamba, Luggage Point and Gibson Island
- A reverse osmosis desalination plant at Tugun
- 12 storage tanks
- 9 pumping stations.

### Water supply system capacity

WaterSecure has the capacity to deliver up to 365 megalitres a day of water to the South East Queensland Water Grid. The table below details the capacity and water product from each of our treatment plants.

Treatment plant	Capacity	Water type
Bundamba Advanced Water Treatment Plant	66ML	Purified recycled water
Luggage Point Advanced Water Treatment Plant	66ML	
Gibson Island Advanced Water Treatment Plant	100ML	
Tugun Desalination Plant	133ML	Desalinated water



Luggage Point Advanced Water Treatment Plant

### Our water supply projects

#### Western Corridor Recycled Water Project

The \$2.5 billion Western Corridor Recycled Water Project is the largest recycled water scheme to be constructed in Australia and the third largest advanced water treatment project in the world. It has the capacity to provide up to 232 megalitres of purified recycled water a day to the region's supply.

The project includes more than 200 kilometres of pipeline and three advanced water treatment plants at Bundamba, Gibson Island and Luggage Point. The advanced water treatment plants use world-class advanced water treatment technology incorporating microfiltration, reverse osmosis, advanced oxidation and disinfection to produce purified recycled water. The Western Corridor Recycled Water Project will provide purified recycled water to power stations, industry and agriculture, as well as to the Wivenhoe system to supplement our drinking supplies once dam levels fall below the trigger point of 40 per cent.

The scheme has supplied on average 47 megalitres of purified recycled water each day in 2009. This means enough water for 235 000 people meeting Target 200 will stay in Wivenhoe Dam instead of being pumped to the power stations.



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Gold Coast  
Desalination Plant

## Gold Coast Desalination Plant

The Gold Coast Desalination Project provides up to 133 megalitres of safe drinking water a day to South East Queensland communities.

The Queensland Government has invested \$1.2 billion to construct the first large-scale water desalination plant on the eastern seaboard. The desalination project includes construction of a desalination plant, marine intake and outlet tunnels and a 25 kilometre pipeline to connect the plant to the South East Queensland Water Grid.

This project uses the most advanced reverse osmosis and tunnelling technology available in the world today. Desalination produces safe drinking water by removing dissolved salts and other minerals from seawater through a high level of filtration.

Desalination technologies have been used successfully for more than 20 years, with at least 20 smaller scale desalination plants in Queensland alone. As water supply from a desalination plant is not dependent on climate, a sustainable supply of water is available even when there is no rain.

## Water quality

New legislation, the *Water Supply (Safety and Reliability) Act 2008*, has been introduced to establish regulations to ensure the safe supply of recycled water and drinking water in Queensland. WaterSecure's purified recycled water and desalinated water will undergo a rigorous testing program supervised by Queensland Health and regulated by the Department of Natural Resources and Water.

## South East Queensland Water Grid

The South East Queensland Water Grid is a network of pipelines that moves water from areas of water surplus and transports it to areas that face a shortfall. The water grid allows the coordinated use of all major bulk water sources in the region.

The project includes about 450 kilometres of pipeline, two new dams, upgrades to existing dams, a desalination plant and three advanced water treatment plants.

To build the water grid, more than 4000 workers have worked at more than 80 sites across the region. This \$9 billion project is the largest urban drought response in Australia.

## Fast facts

- Based on current drought restricted water usage, the desalination plant will supply over a quarter of South East Queensland's water supply.
- Approximately 300 megalitres of seawater will be extracted in order to produce 133 megalitres of drinking water.
- Advanced water treatment processes have been used at plants around Australia and overseas for many years, with similar processes being used to provide drinking water in Singapore and Orange County in California.
- Recycling Brisbane and Ipswich's treated wastewater will significantly improve water quality in the Brisbane River and Moreton Bay.

## Contact us

For more information about WaterSecure and our projects:

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