Western Corridor Recycled Water Project Australia

April 2008





Project need



- Unprecedented demand has been placed on South East Queensland's water supplies due to a growing population and a dynamic economy
- Worst drought in recorded history
- Water levels in the dams, which supply the region with drinking water, fell to historically low levels. (July 2007 - 17% of the total capacity, less than 18 months of supply)
- Water restrictions imposed to the public by Queensland Government (level 6 – Residential water use - no outdoor watering - electricity production reduction...)
- Implementation of long term water supply strategies:
 - Creation of a water grid
 - Desalination facility
 - Treated wastewater recycling
 - Demand management



Project objectives

- The Western Corridor Recycled Water Project is an important part of the Queensland Government's \$9 billion South East Queensland Water Grid the largest urban drought response in Australia.
- The objective of this project is to enhance the security of water supply in South East Queensland through:
 - Increasing available water supplies that are less dependent on climate trends
 - Providing a system to supply purified recycled water to power stations, industry and agriculture and to replenish drinking water reserves
 - Delivering in accordance with the community's expected best practice mainly in terms of environmental impact.





Aerial view





Project scheme



Key project figures

Most important recycled water project in the Southern Hemisphere, world's third largest

- Project cost : € 1.5 billion
- Construction time : 2.5 years
- 200 km of pipeline
- Height storage reservoirs
- Nine pumping stations
- Three water treatment plants

Water Treatment Plant	Capacity m3 per day	Delivery date
Bundamba 1A	20,000 m3	August 2007
Phases 1A & 1B combined	66,000 m3	June 2008
Luggage Point 2A	66,000 m3	October 2008
Gibson Island 2A	50,000 m3	October 2008
Gibson Island 2B	50,000 m3	December 2008



The advanced water treatment process

WCRW project will further process the treated water produced by six Wastewater Treatment Plants (Brisbane and Ipswich).





The main treatment steps are

- Wastewater transfer
- Microfiltration
- Reverse osmosis
- Nutrient removal
- Advanced oxidation
- Stabilisation and disinfection



Companies involved in the project

The infrastructure will be delivered by 5 alliances between the Queensland Government, engineering and local construction companies.

Bundamba AWT Plant	Thiess & Black & Veatch	
Luggage Point AWT Plant	CH2M Hill & Laing O'Rourke	
Gibson Island AWT Plant	Montgomery Watson Harza, Baulderstone Hornibrook & United Group Infrastructure	
Western Pipeline Alliance	McConnell Dowell, Abigroup & GHD	
Eastern Pipeline Alliance	AJ Lucas, Transfield Services, GHD, Sunwater & McCalls	

Veolia Water Australia has been appointed as scheme operator and adviser to the asset owner during the delivery phase.



Technology



Micro filtration membranes



Advanced oxydation



Reverse osmosis membranes