

# GoldCoast Waterfuture

## Opportunities for release

Controlled management of the release of excess recycled water to the ocean and rivers will be an integral part of the Recycled Water Strategy.

This fact sheet provides a summary of the options for release being considered by the Recycled Water Strategy Advisory Committee.

### Why recycled water is released

Recycled water is released to the ocean and rivers for a number of reasons including:

- The volume of recycled water produced exceeds the demand for its re-use;
- Population growth continues to increase the amount of wastewater and recycled water being produced;
- There is not enough storage facilities to store excess recycled water for later use; and
- Climatic conditions such as wet or cool weather reduce demand (particularly for irrigation purposes) and therefore increase the amount of excess recycled water.

Every opportunity for using recycled water and storing it for later use is being explored. However, the ability to release excess recycled water to the ocean or rivers will still be required due to the quantities involved and the need to be able to manage variations in demand and supply. This is called 'normal release'.

Normal release currently takes place at the southern and northern sides of the Gold Coast Seaway and the Albert River. These systems are currently operating at or near capacity. New release opportunities and locations need to be considered to meet future demand.

### Possible locations for release

There are three general location groups for release options. These are listed below and are described in more detail overleaf:

- Rivers
- Estuarine
- Oceanic

### Recycled water by-products




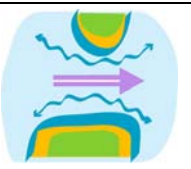



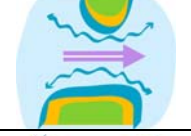

To treat recycled water to very high standards for uses requiring Class A+ or above, additional membrane treatment is required. These treatments result in a concentrated by-product or reject water called 'brine', which has higher concentrations of nutrients, some pathogens and salts. Locations for the release of brine, called 'by-product release', must be identified in order to implement this type of recycled water treatment in the future.

### Evaluating the different options

**Normal release options** will be reviewed taking into consideration:

- **Technical factors** - including requirements for additional treatment, the ability to maintain the quality of the recycled water and the impact on storage capacities;
- **Environmental factors** - including potential positive and negative impacts on the immediate ecosystem and greenhouse gas emissions from construction and operation of infrastructure;
- **Social and economic factors** - including any impacts on the community and the relative costs of the option.

**By-product release options** will be reviewed taking into consideration technical, environmental, social and economic factors. In particular, the environmental factors associated with this concentrated product and the levels of greenhouse gas emissions associated with the construction and operation of the associated infrastructure will be reviewed.

Symbol	Recycled Water Release Opportunity Normal and By-Product (Potential locations for by-product release are indicated in column to right)	By-product Release Potential
<b>River</b>		
	<b>Release to Albert River*</b> Recycled water is already released at this location. This option would increase the volume released from the Beenleigh Wastewater Treatment Plant (WWTP) storage lagoons and may provide a long-term release option for the future Stapylton WWTP. This option also has potential to augment the environmental flow within the Albert River potentially improving the health of the river.	Yes
	<b>Release to Pimpama River</b> Release to the Pimpama River is one option being investigated for Stages 2 & 3 of the Pimpama WWTP (not Stage 1). This is also a potential release location for the future Stapylton WWTP. This option also provides potential to augment natural river flows.	No
	<b>Nerang River – Environmental Flow Substitution</b> Potential release of highly treated recycled water to replace raw water currently released from the Hinze Dam to maintain environmental flows. This would increase available water in the Hinze Dam.	No
<b>Estuarine</b>		
	<b>Continuous Release at Gold Coast Seaway*</b> Continuous release from Coombabah, Pimpama, Merrimac and Elanora WWTP's using existing systems on the southern and northern side of the Seaway and increasing current release volumes. The timeframe for release would increase from current 10 hours per day on the outgoing (ebb) tide period to 24 hours per day. This would therefore require reduced capacity infrastructure due to 24-hour operation.	Yes
<b>Oceanic</b>		
	<b>Offshore Release near Elanora/Tugun</b> Continuous release from Elanora WWTP via an offshore release system, located approximately 2km from the coast at Tugun/Palm Beach and near the ocean's floor.	Yes
	<b>Offshore Release near Broadbeach</b> Continuous release from the Merrimac and Elanora WWTP's via an offshore release system located approximately 2km from the coast at Broadbeach and near the ocean's floor.	Yes
	<b>Offshore Release near Gold Coast Seaway</b> Continuous release from the Coombabah and Pimpama WWTP's, and potentially the Elanora and Merrimac WWTP's, via an offshore release system located approximately 2km from the Seaway and near the ocean's floor.	Yes
	<b>Ebb Tide Release at Gold Coast Seaway*</b> Release on the outgoing (ebb) tide only from the Pimpama, Coombabah, Merrimac and Elanora WWTP's to the entrance of Gold Coast Seaway on the northern and southern sides. This option would require an increase in capacity of the infrastructure to accommodate expected growth and the addition of the Pimpama WWTP.	Yes
	<b>Combined Release with Tugun Desalination Plant Brine</b> Continuous release from the Elanora WWTP via the brine release system associated with the Tugun Desalination Plant. The recycled water would be mixed with the desalination brine prior to release. The release point would be 2km from the coast at Tugun, near the ocean's floor.	Yes

\*These locations are already in use for the release of recycled water. No locations are currently used for by-product release.

#### By-product release:

All locations indicated for potential by-product release require significant technical and environmental investigation. By-product release would be mixed with the normal release.

Last updated 27 March 2007