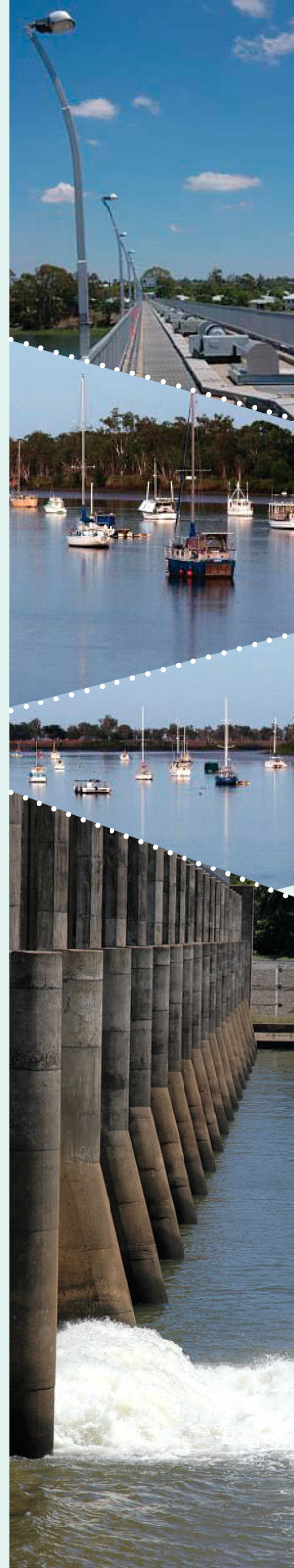


operation

Fitzroy River Water is the Resource Operations Licence Holder for the Barrage and is required to operate the storage in accordance with the requirements of the Fitzroy Resource Operations Plan (January 2004). This requires releases to be made at certain times to meet environmental flow requirements (including operation of the fish ladder). Monitoring of water quality, including blue green algae, and management of certain issues regarding medium priority water allocation holders (mainly irrigators) is also required.

Fresh water is separated from salt water by 18 vertical lift gates on the Barrage. The Barrage is remotely controlled and monitored by a System Control and Data Acquisition (SCADA) system. Operation of the gates is carried out automatically in response to rises in river height. The Barrage was constructed with liftable gates to keep the upstream river levels as close as practical to prevent the river level rising above its natural flood levels.

A fish ladder operates at the southern bank of the river when the water level is within 600mm of full supply level. The original pool and weir fishway was modified to a more effective vertical slot design in the late 1990s and allows connectivity between the fresh and salt-water environs of the river. It is estimated that well over 500 000 fish successfully negotiate the fish way each year.



- The lake created behind the Barrage is used for recreational purposes such as water skiing and rowing.
- Access is restricted on the river within 400 metres of the Barrage.

Tours of the Barrage for school groups can be arranged by calling Fitzroy River Water on 4936 8777.



Fitzroy River Water
(a commercial business activity of Rockhampton City Council)

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fitzroy river barrage



history of the barrage

Prior to the commissioning of the Fitzroy River Barrage and the new water treatment plant at Glenmore in 1971, a pump station was built at Yaamba above the tidal influences of the river. Raw water was pumped from Yaamba to Mount Charlton near The Caves township for treatment and from there the water gravitated to Rockhampton. In later years, the water was also booster pumped to Rockhampton. This process expanded over the following years. However due to the limited supply of water at Yaamba, a temporary water storage was annually created at Eden Bann upstream of Yaamba, possibly by the natural rock bar on which the current weir is built.

By the 1960s because of population growth it became clear that Rockhampton could not survive on the 30ML (30 million litres) a day supplied by Yaamba. This caused the Barrage concept, originally canvassed in the 1920s, to be revisited.

Work began on site preparation in September 1966 with construction of the Barrage completed in early 1970. In March 1970, the Premier of Queensland, Joh Bjelke-Petersen, opened the Fitzroy River Barrage.

did you know?

- The Barrage is approximately 15m from the spillway crest to the top deck and a further 8m to the river bed.
- The Barrage is approximately 400 metres long.

purpose of the barrage

The Fitzroy River Barrage was built to meet the long-term water supply needs of Rockhampton.

It separates the fresh water upstream from the tidal salt water downstream. It enables the City to draw fresh water 30 river miles (48km) closer to Rockhampton than was previously available, and results in greatly reduced pumping costs.

water source & allocation

Rockhampton City Council holds a 50,383ML high reliability allocation within the Fitzroy River Barrage of which up to 50% is currently used in any given year to supply Rockhampton and surrounding areas. An additional 11,735ML of medium priority water from the Barrage is allocated to approximately 150 rural users.

High priority and medium priority water allocations have different performance objectives under the Fitzroy Basin Water Resource Plan. High priority water, used for urban and industrial applications, is required to be 95%-100% reliable and medium priority water, often used for irrigation, 82% – 88% reliable.

The reliability figures are based on the % of months over a modelled period where full allocation would be available. At present the full 50,383ML RCC allocation is considered to be 99.2 % (99.2 months out of every 100) reliable but under current consumption patterns it would be 100%.

The Barrage has a storage volume of 81,300ML (of which approximately 21,900ML is dead storage or water that is not available for use or diversion) . If water allocations are drawn from the Barrage at the maximum approved amounts, the Barrage holds sufficient water to supply the Rockhampton area for nine months without refill.

The Stanwell Power Station draws approximately 20,000ML of high priority water from the Barrage pondage each year . This 20,000ML is stored in the upstream Eden Bann Weir, approximately 80km upstream of the Barrage , as part of a 24,000ML allocation held by Stanwell Corporation. Water is released from Eden Bann Weir as required to keep the Barrage close to full supply level.

did you know?

- The catchment area of the river at the Barrage is about 139,000 square kilometres. The catchment area extends north to Nebo, west to Clermont and south to Wandoan.
- At full supply level, the fish ladder discharges 18 megalitres per day, as part of its normal operation.
- Water from behind the Barrage is treated at the Glenmore Water Treatment Plant to make it suitable for drinking.
- The Barrage holds about 80,000 megalitres of water in a 55km long lake confined to the river and some tributary creeks.
- There are 18 gates on the Barrage each weighing approximately 14 tonnes.
- Each gate is 3.35m (11ft) high 12.19m (40ft) long.