



Leslie Harrison Dam is part of the SEQ Water Grid and supplies about 25 per cent of Redland City's drinking water.



The spillway gates were removed in 2014-15 for the ongoing safety of the dam.

HISTORY OF THE DAM

- 1967-68** Un-gated dam is built
 - 1984** Dam spillway gates are installed
 - 1990** Pipeline built between the mainland and North Stradbroke Island to supplement local supply
 - 2007** SEQ Water Grid is built during the Millennium Drought to connect SEQ's water supply
 - 2008** Eastern Pipeline Interconnector is built to connect Redlands to the grid
- Dam ownership is transferred to Seqwater**
- 2011-14** Dam safety review
 - 2014-15** Water levels are lowered and the spillway gates are removed for dam safety
- Dam upgrade investigations begin**
- 2016** Investigations continue to determine the scope and timing of the upgrade
 - 2017** Seqwater Board approves decision to upgrade the dam in 2018-19 and maintain its current water supply level
 - 2018-19** Future upgrade

HOW THE DAM WORKS

Today as an un-gated dam

All un-gated dams help mitigate flooding to some extent. At its most basic level, flood mitigation is capturing water in the dam and releasing it at a slower rate than creek flows into the dam, with the aim of reducing river levels downstream of the dam. Leslie Harrison was originally designed as an un-gated dam and is operating as one today.

When rainfall in the catchment results in water flowing into (inflows) an un-gated dam and it fills up beyond the dam's full supply level (FSL), water will begin to flow out (outflows) over the dam's spillway.

The peak outflow from an un-gated dam during a flood event is less than the peak inflow that would have occurred had the dam not been built because some of the flood water is held in the dam and released over a longer period of time while it is spilling.

SPILLWAY GATES

In 1984, four vertical gates were installed on the spillway crest to increase the drinking water storage available in the dam, but the height of the main dam embankment (22.25m AHD) remained the same.

With gates on, the dam could store additional water for drinking supply, but this meant there was limited space available to temporarily store excess water during a flood event.

To maintain the dam's structural safety, operating rules were developed for the spillway gates, which required the water released from the dam to closely match the water flowing in.



Leslie Harrison Dam spilling water following ex-Tropical Cyclone Debbie - 31 March 2017.

WATER LEVELS

In 2014, the water level was lowered and the gates at Leslie Harrison Dam were removed for the ongoing safety of the dam.

Lowering water levels is an industry-accepted practice to best manage the safety of dams either temporarily or long term.

PREVIOUS FULL SUPPLY LEVEL 1984 to 2014	NEW FULL SUPPLY LEVEL
24,800 ML	13,200 ML

DAM SAFETY

In Queensland, dam owners are responsible for the safety of dams in accordance with the Water Supply (Safety and Reliability) Act 2008. Like all dam operators across the country, we also seek to meet the national guidelines set by the Australian National Committee on Large Dams (ANCOLD).

Just like cars, dams need regular checks and maintenance to keep them in good working order. We regularly monitor and assess our 26 referable dams throughout the year. Through this work, dams may be identified for upgrades to meet changes to the safety guidelines.

SEQWATER'S DAM IMPROVEMENT PROGRAM

Dams are long-life assets and require continual assessment, monitoring and maintenance. In 2012-13, Seqwater commissioned an independent review of its 26 referable (regulated) dams, which found improvements were needed at a number of dams to meet the Queensland Dam Safety Guidelines into the future.

Every dam upgrade is different. Some may take a few months, while others take years.

Once a dam has been identified for upgrade, investigations and planning are needed to determine the scope, estimated cost and timing of work.

Upgrades take time, but it's what we must do to keep our dams operating safely.

2012-14	DAM SAFETY REVIEW	✓
2015	OPTION ANALYSIS & CONCEPT DESIGN	✓
2016	PRELIMINARY DESIGN & APPROVALS	✓
2017	DETAILED DESIGN & APPROVALS	←
2017-18	PROJECT PLANNING	🔍
2018-19	CONSTRUCTION	🔍

About Leslie Harrison Dam

Leslie Harrison Dam is an earth fill dam on Tingalpa Creek and supplies about 25 per cent of Redland City's drinking water.

It is one of a number of dams in South East Queensland to be upgraded within the next six years, as part of Seqwater's Dam Improvement Program.

FAST FACTS

Name: Leslie Harrison Dam (Tingalpa Reservoir)

Watercourse: Tingalpa Creek

Catchment area: 87.0km²

Length of dam wall: 535m

Type of construction: Zoned earth fill embankment

Full supply capacity: 13,200ML