

Upgrading existing and building new water treatment facilities to meet more stringent water quality criteria and population growth needs for the City of Townsville



TRILITY has upgraded an existing 232 ML/d Water Treatment Plant (WTP) and constructed a new 40 ML/d plant at Townsville and will operate both facilities under a 20 + 5 year contract.



Townsville City Council in North Queensland sought solutions that would guarantee long-term water quality, certainty and security of water supplies for the region.

TRILITY was contracted to provide robust and reliable water treatment facilities through the upgrade of one existing water treatment plant and the establishment of a new facility.

The scope of work comprised the Design and Construction (D&C) of:

- A new 40 ML/d Water Treatment Plant (WTP) and stabilisation facility, as well as upstream and downstream connections and cut-ins to the Mt Spec pipeline to treat water from Crystal Creek and Lake Paluma (Northern Facility)
- An augmentation of the existing 232 ML/d WTP to treat water from the Ross River Dam (Douglas facility)
- A new integrated 'SCADA/Telemetry System' across the facilities and delivery network, as well as other works in respect to workplace health and safety and redundancy upgrade

The Douglas facility upgrade was completed in September 2010 and the Northern facility was successfully commissioned into supply in May 2011.

Twenty plus five year Operations and Maintenance (O&M) comprises of:

- The Northern facility, the Douglas facility and the existing Haughton pipeline and Haughton pump station (Haughton Supply Facilities); and
- Provision of an integrated suite of management systems for the project, including financial and asset management.



Who

Townsville City Council, located in North Queensland. Townsville City Council was formed in March 2008 when the cities of Townsville and Thuringowa amalgamated to form the largest regional city council in Queensland.

What

An upgrade to the city's existing Douglas WTP, and the Design, Build, Operations and Maintenance of a new membrane filtration water treatment plant and associated stabilisation facility north of Townsville.

Where

The existing WTP is located at Douglas, Townsville, in North Queensland, and the new WTP is being built 60km north of Townsville at Rollingstone.

Why

To guarantee long-term security, increased capacity and ensure sustainable water quality improvements in the Townsville region for the next 20 years to support the fast-growing industrial centre, transport hub and port.

Awards

2013 Finalist, Infrastructure Partnerships Australia National Infrastructure Awards, Operator and Service Provider Excellence Award.

Snapshot

Client	Townsville City Council
Type of Contract	Design, Build, Operate and Maintain (DBOM)
Facilities	Two water treatment plants, one raw water intake facility, one stabilisation facility and two pumping stations
Technology	Douglas - direct filtration Northern - membrane filtration
Design Capacity	Douglas - 232 ML/d Northern - 40 ML/d
Term	20 + 5 years
Capital Cost	c. \$90m