

# INTERIM REPORT **SUMMARY**





# Independent Chair's Introduction

On 10 March 2017, the Australian and Queensland Governments, along with the Townsville City Council, appointed an intergovernmental Taskforce to investigate short, medium and long-term solutions to water security for Townsville. The Townsville Water Security Taskforce (Taskforce) is a vital element of the historical Townsville City Deal.

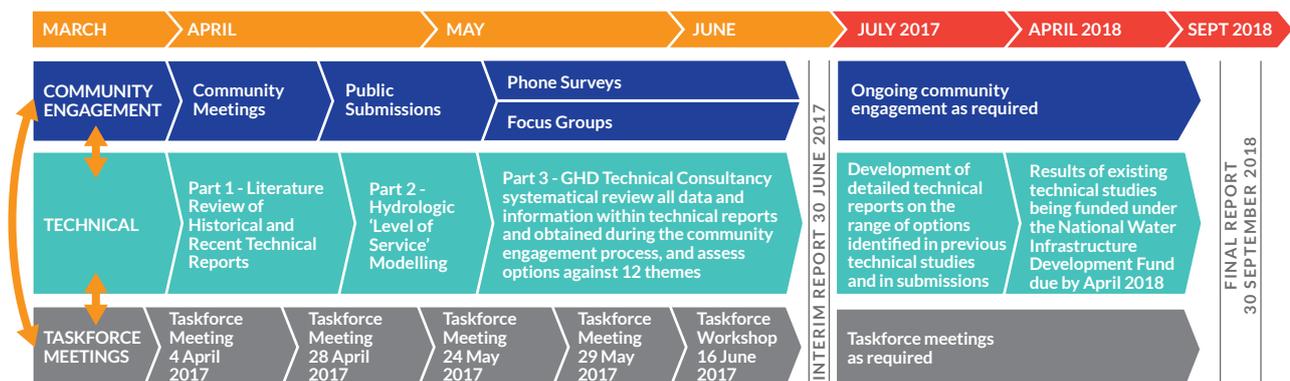
In order to put forward the best solutions to achieve a secure water supply, the Taskforce sought first to understand the factors contributing to the current water security problems being experienced by Townsville.

To do this, the Taskforce undertook extensive community consultations and commissioned a range of engineering and technical analyses. The Taskforce concluded there are a number of dimensions defining Townsville's water security problem including:

- Need for a clear plan to meet future growth in water demand;
- Constraints to investment and regional economic growth due to the uncertainty of water supply, and the associated stress of that uncertainty;

- Current frequency, duration and severity of restrictions (that is the level of service experienced by Townsville water users) leading to adverse economic and social impacts;
- Sufficient bulk water transport capacity and reliability;
- Water affordability and suitable pricing to accommodate the dry tropics;
- Greater consumer choice through a user pays system;
- High energy cost of pumping;
- Cost of water storage and transport infrastructure;
- Concerns about efficient and wise water use;
- Optimal use of alternative local water sources; and
- Long term regional water source reliability.

**Mr Brad Webb**  
Independent Chair



# Recommendations and Options

## Infrastructure and Non-Infrastructure Interim Report Recommendations and Options

The Taskforce has defined several short to medium term recommendations for immediate action. In addition, the Taskforce has identified a number of long term options requiring further investigation (for which detailed studies are currently underway by others). These recommendations and options are set out below.

### RECOMMENDATIONS TO COMMENCE IN THE SHORT TERM (0 - 3 YEARS)

#### A. INFRASTRUCTURE

A1. This recommendation requires the following works to commence immediately:

- Build an additional 1,800mm diameter steel pipeline and install additional pumps (of 234 ML/day capacity) from Haughton Pump Station to Ross River Dam;
- Increase the capacity by 234ML/day of the existing SunWater pump station and gravity channel from Clare to Haughton Pump Station; and
- All levels of government to work towards more appropriate energy solutions including:
  - » Sourcing cheaper energy by connecting new and existing pumps at the Haughton Pump Station to nearby high voltage lines; and
  - » Embracing green energy via the installation of battery-ready<sup>1</sup> 5MW solar energy array to offset energy costs and sell excess into the National Energy Market.

A2. Invest in bulk water meters within Townsville's reticulation system to allow detection and reduction of water losses within that system. Council to continue to undertake distribution system leakage reduction as part of its existing asset renewal program.

A3. Commence a non-potable waste water re-use program to supply industrial users, irrigate Townsville's parks and gardens, and examine possible changes required in the regulatory framework.

A4. This recommendation requires the following works to take place in 15 years (subject to water demand, water savings, population growth and additional water-using industries coming on line and further detailed investigation by Townsville City Council prior to implementation):

- Continue the works outlined in Recommendation A1 by building a new 1,800mm diameter steel pipeline from the Haughton Pipeline to Clare plus building a new dedicated 364ML/day capacity pump station at Clare;
- Install battery-ready 6.8MW solar energy array for the new pump station at Clare; and
- Transfer the TCC's 364ML/day share of the SunWater Clare pump capacity and channel system to irrigation.

A5. Install batteries and additional solar energy arrays at Clare and Haughton to allow an increase to 24/7 solar powered pump operation<sup>2</sup>.

A6. Long term water supply options to be considered, with timing subject to water demand, water savings, population growth and additional water-using industries coming online. These options include raising Burdekin Falls Dam and construction of Hell's Gate Dam. Townsville City Council will continue to provide input on future water demands into investigations on these regional bulk water supply projects.

#### B. NON-INFRASTRUCTURE

B1. Townsville City Council to initiate and implement a wise water use program (including community subsidies for transitioning to water efficient practices and devices).

B2. Townsville City Council to review and adjust as appropriate, the existing water tariff scheme.

B3. Re-negotiate Townsville City Council's water allocation portfolio from the Burdekin River to:

- Increase their high priority water allocation from SunWater by 15,000ML/annum;
- Consider a reduction in the volume of the long term medium priority water allocation from SunWater and renegotiate the water agreement accordingly; and
- Secure opportunistic water harvesting from the Burdekin River (that is, when the Burdekin Falls Dam is overflowing).

B4. Townsville City Council to review the water restriction regime, following the implementation of Recommendation A1.

B5. Review the operations and maintenance contract between Townsville City Council and Trility with the aim of reducing current infrastructure management costs for the existing Haughton Pump Station and pipeline.

B6. Implement outcomes of the review of the Trility operations and maintenance contract contained in Recommendation B5 above.

B7. Continue and refine wise water use programs in collaboration with Townsville water consumers.

### RECOMMENDATIONS TO COMMENCE IN THE MEDIUM TERM (3-15 YEARS)

### LONG TERM OPTIONS (15 - 50+ YEARS)

<sup>1</sup> Note that batteries and additional solar energy arrays may be installed at Haughton to allow increase to 24/7 pump operation (timing would be between 15 years subject to water demands, water savings, population growth and additional water-using industries coming on line).

<sup>2</sup> Note that efficient large-scale battery technology is considered likely to become a cost-effective option within the 15 year time horizon.

## Independent Chair's Commentary on Recommendations and Options

Separate and distinct from the Taskforce, the Independent Chair provides the following further commentary to be read in conjunction with the Recommendations and Options.

Recommendations A1 and A4 collectively will provide a water supply that is fully independent of others' water infrastructure to the Townsville community, and will allow Townsville's primary water source to be the Burdekin River as opposed to the Ross River Dam.

Construction of the new pipeline detailed in Recommendation A1 must be completed within two (2) years after the date of this Report regardless of any major rainfall events. Redundancy in case of pipeline breakdown or other major failure has never been in place. This is a significant risk to Townsville. The urgent completion of the new pipeline, will provide such redundancy.

The new pipelines and solar farms should be tied together, and preferably be owned by the Queensland Government and/or Townsville City Council.

Townsville and the surrounding areas have suitably qualified contractors. I recommend splitting the new infrastructure construction contract into smaller contracts (for example, over three (3) or four (4) contracts) suitable for those contractors. The flow on effect to our North Queensland economy would be immense, and prove to be substantially more cost-effective to the taxpayer.

