

## 2.0 INTRODUCTION

This report is aimed at assessing the most appropriate means of ensuring water can continue to be supplied to the Capricorn Coast during periods of local drought. The report presents the results of investigations into the future water requirements of the Capricorn Coast, confirms the reliability that can be ascribed to the Waterpark and Sandy Creeks source and examines two alternative sources of water supply, namely the desalination of sea water and the piping of Fitzroy River water from the Barrage to the Coast.

The most economic and efficient way to supply water to Yeppoon and the other communities, which form the Capricorn Coast conurbation, has been a matter of some contention and debate since 1889 when the construction of a public water supply to serve Yeppoon was initially considered. A brief summary of the issues and difficulties encountered since 1937, in planning and constructing the area's water supply, is presented in this report.

The overall problem confronting the Capricorn Coast is that no suitable source water exists within the immediate environs of the urban area and that in order to source and convey adequate supplies to the conurbation substantial monies have needed to be committed to providing and maintaining infrastructure. The existing Waterpark Creek source is some 30 kilometres north of Yeppoon's central business area.

In recent years there has been a gradual reduction in the annual rainfall at the Capricorn Coast with the result that doubts have been raised in relation to the longer term reliability of the existing Waterpark Creek source. These doubts combined with possible climate change and continuing population increase on the Capricorn Coast require that the long term sourcing needs of the Coast be confirmed.

Urban water sources serving reasonable sized communities, and particularly where the population continues to increase, must be reliable and able to supply, at least a minimum quantum of water sufficient to meet the community's needs, during the most severe drought. Failure of the supply, even for a relatively short period, is unacceptable.

This report assesses the following water supply schemes including associated infrastructural requirements having regard to economic, financial and environmental assessments. The primary aim of the investigation is to determine the most appropriate means of securing the Capricorn Coast's water supply needs until the year 2056.

1. Augmentation of the existing Waterpark Creek source with flows from Sandy Creek;
2. Augmentation of the existing Waterpark Creek source with flows produced from the desalination of sea water;
3. Augmentation of the existing Waterpark Creek source with flows from the Fitzroy River;
4. Augmentation of the combined Waterpark Creek and Sandy Creek sources with flows produced from the desalination of sea water;
5. Augmentation of the combined Waterpark Creek and Sandy Creek source with flows from the Fitzroy River; and
6. Augmentation of the combined Waterpark Creek and Sandy Creek source with flows from the Fitzroy River and by desalination.