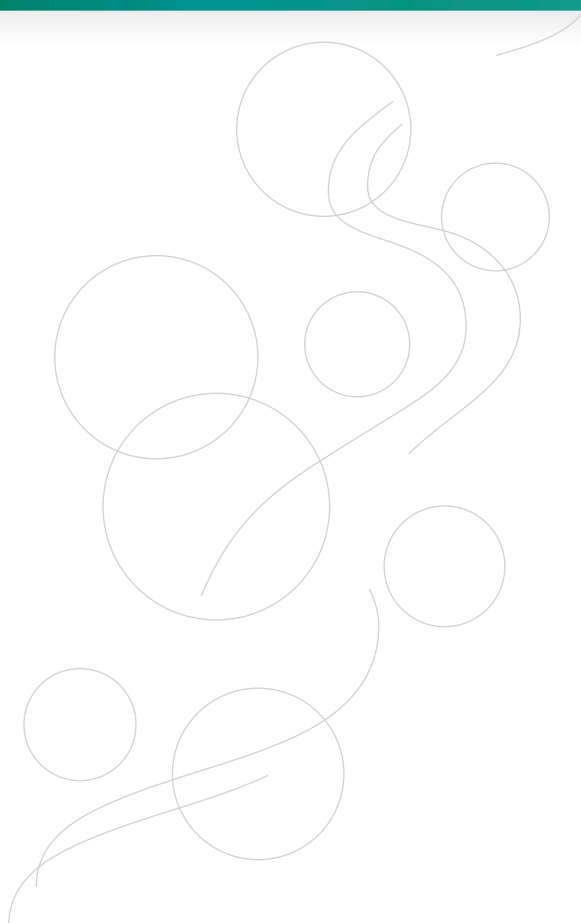




December 2006

# Central Queensland

## Regional water supply strategy



**Queensland**  
Government

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## Foreword

Secure, cost-effective water supplies underpin the lifestyle and prosperity all of us enjoy, no more so than in Central Queensland, one of the state's key growth regions. The regional economy and the many communities that are its backbone will continue to rely on adequate supplies of our most precious resource as a period of new opportunities unfolds.

Forward planning will play a paramount role in ensuring that secure water resources are available where and when they are needed, so that the regional community shares in the many gains that will be made. Advances will be led by expansion in the mining, industrial and agricultural sectors, confirming Central Queensland's place as a key contributor to the state's economy.

Particular challenges include the distances between urban centres, the apparent declining trends in rainfall and, in some areas, high competition for water supplies.

The Queensland Government, local government, industry, Indigenous and community representatives have worked closely to address the future water needs of Central Queensland. Through this partnership, the Central Queensland Regional Water Supply Strategy has sought to identify the most effective ways of equitably meeting the region's water supply challenges.

The mechanisms proposed to meet these challenges include new pipelines to link key water infrastructure within and outside the region to areas of greatest need. In this way, a regional water grid will be established, forming a first step towards a statewide water grid.

Key water infrastructure, which would form part of a statewide water grid, is located in and around the area covered by the Central Queensland Regional Water Supply Strategy. The Queensland Government has already committed to:

- raising Eden Bann Weir in the Fitzroy and Livingstone Shires
- constructing Rookwood Weir in the Fitzroy Shire
- developing the Connors River Dam in the Broadsound Shire
- undertaking design work on, and construction of, the Nathan Dam in the Taroom Shire (subject to obtaining Commonwealth approval under the *Environmental Protection and Biodiversity Conservation Act 1999*)
- pipelines to connect the new Connors River Dam with Broadsound and possibly Nebo and Belyando Shires
- pipelines to connect Rockhampton to Gladstone
- a pipeline for the Capricorn Coast connecting Rockhampton to Yeppoon
- a pipeline from the Burdekin River to Moranbah with potential other extensions.

New water infrastructure proposed for other areas of Queensland will be reflected in regional water supply strategies to be prepared for South East Queensland, Wide Bay Burnett, Mackay Whitsunday, Cairns Atherton Tablelands and Far North Queensland.

The strategy demonstrates the government's commitment to securing the region's future water supply, which is vital to its prosperity.

Hon Craig Wallace MP  
Minister for Natural Resources and Water and  
Minister Assisting the Premier in North Queensland

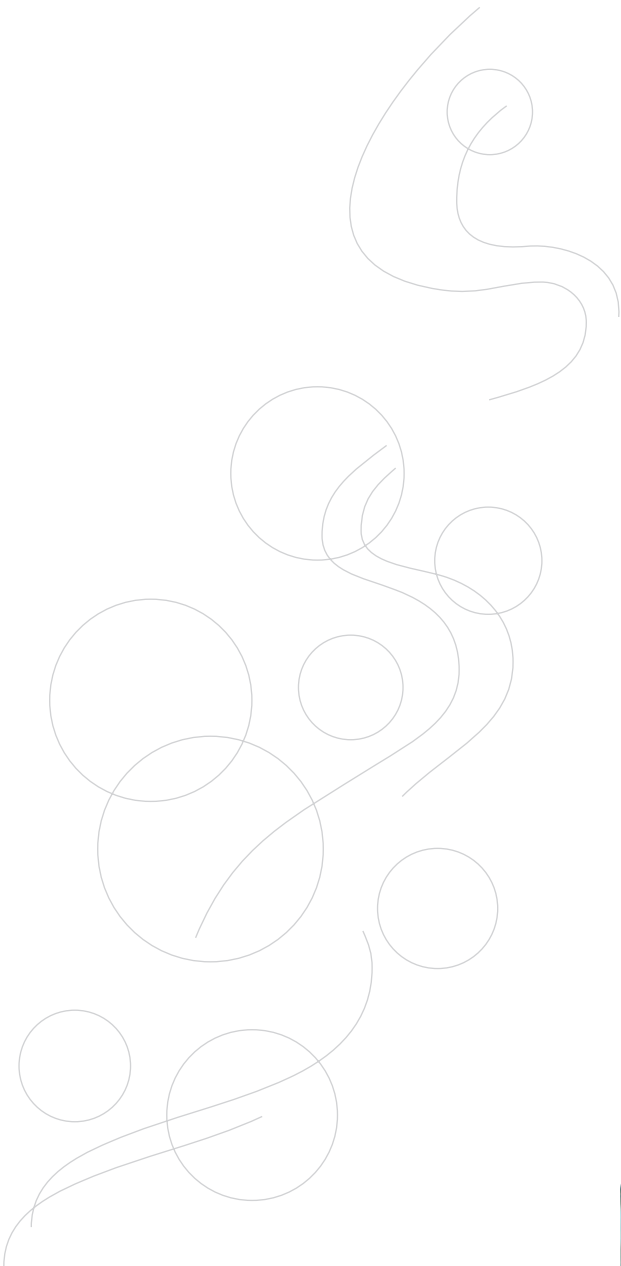


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# 1. Introduction





# Introduction

Secure, sustainable water supplies are integral to our way of life and continued growth and prosperity. For Queensland, particularly in times of drought, this presents a special challenge, and as we mature as a state, the need for careful forward planning and management of our water resources is becoming paramount.

Regional water supply planning is emerging as one of the most important tools at our disposal for ensuring that supplies are equitably shared in a way that brings the broadest community benefit, including providing protection for the natural ecosystems of the region. It allows us to match supply with growth and opportunity, reinforcing social, cultural and economic linkages that bind a region as a whole. While in the past, water supply planning has principally occurred at a local level, the case for regionally based strategies is gathering weight as we address the challenges of increasing growth, resource scarcity, and the need to protect natural ecosystems.

This strategy presents the preferred options for water supply, as developed through the Central Queensland Regional Water Supply Study.

The finite nature of our fresh water supplies does not necessarily equate to limited economic growth or environmental degradation. Rather, the fact that water resources are scarce and often highly variable means that water, like other limited inputs to economic production, needs to be used efficiently and allocated to its highest value uses in order to improve both economic and environmental outcomes.

## 1.1 Background to the strategy

The National Water Initiative Agreement, which commits Queensland to work with the Commonwealth and other states and territories to progress national water reforms, was signed in June 2004.

Local government has a statutory role in the planning, management and day to day delivery of water to urban communities.

Implementation of water reforms by state and local government has been underway in Central Queensland for a number of years and has provided many users with a more secure water entitlement.

A water resource plan (WRP) was developed for the Fitzroy Basin in December 1999. The WRP provides a balance between environmental needs and consumptive use. The overview report to the WRP identified water potentially available for allocation, pending further investigations.

The resource operations plan (ROP) for the Fitzroy Basin, released in January 2004, acknowledged that the final determination of the quantities of unallocated water available for release in different catchments would be subject to the completion of a WRP amendment to include overland flow water and a Central Queensland Regional Water Supply Study.

Development of the Central Queensland Regional Water Supply Strategy (the strategy) was initiated through the Central Queensland Regional Water Supply Study (the study). Primary drivers for the study included:

- urban and industrial growth around the Capricorn and Curtis coasts
- mining and associated urban growth in the Bowen Basin and northern Surat coalfields
- performance of existing supply schemes in combination with dry conditions in recent years
- a call by local government to chart a cooperative approach towards the development of a long-term strategy for meeting the water needs of the region.

A Central Queensland Regional Water Forum was held in Yeppoon in May 2003. It provided an opportunity for local government and other stakeholders to identify and discuss key water supply issues, challenges and priorities and to provide initial input into the study. Discussions at this forum had a significant influence on the directions of the study.

The study assessed current water availability and future demands, and how they could best be met whilst at the same time protecting the natural values and ecosystems of the region.

The study involved:

- identification of the short, medium and long-term water supply aspirations for urban, rural and industrial communities
- review of the potential for measures such as water trading, demand management practices, efficiency gains, water reuse, substitution and desalination to meet the projected supply needs
- comparative assessment of potential infrastructure options to meet shortfalls, using environmental, social and economic criteria
- development of an integrated regional water supply strategy to optimise use of the available resources.

The study's findings have been refined to create a water supply strategy for the region that proposes a framework for sharing supplies into the future.

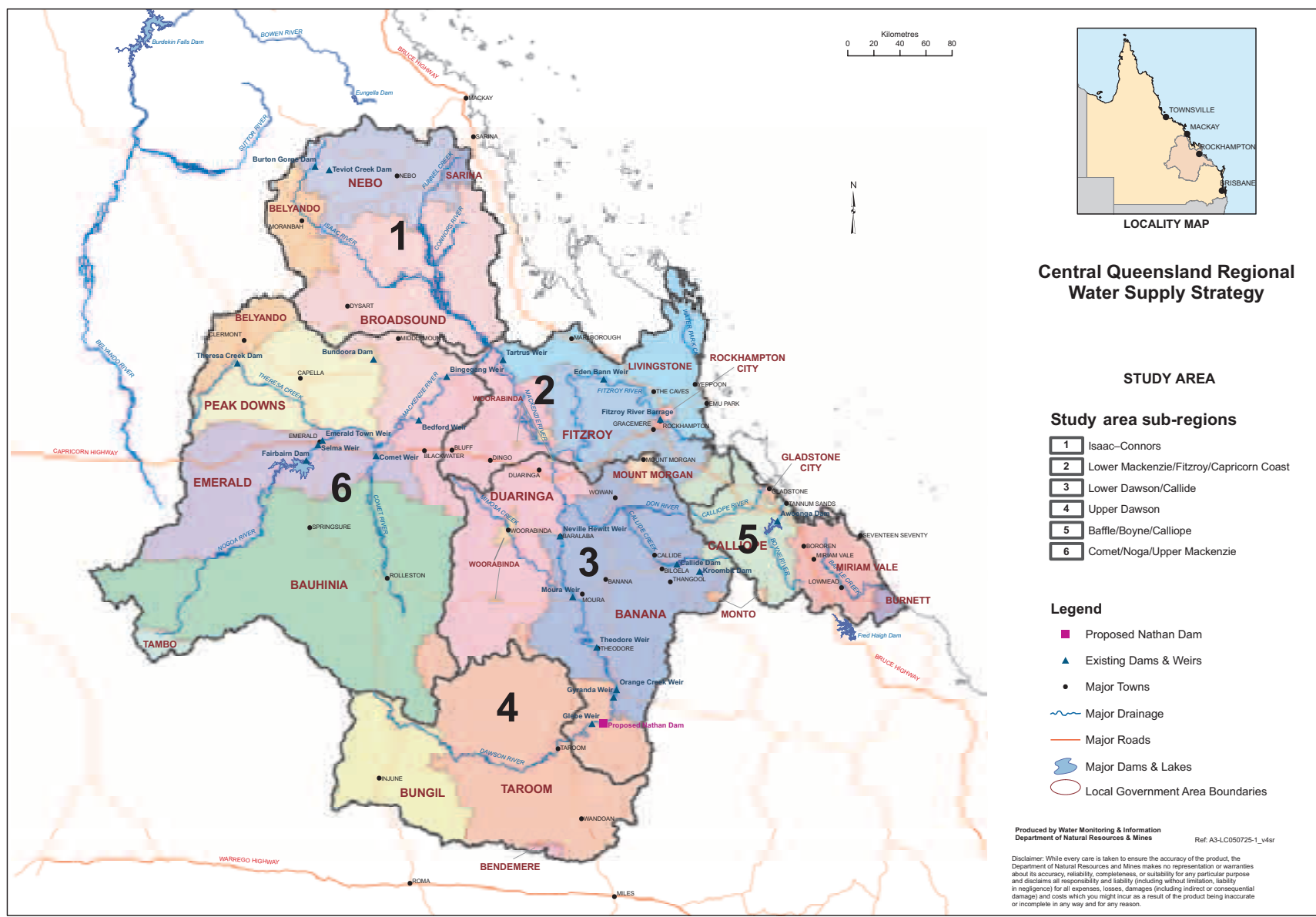
## 1.2 Where is the strategy area?

The strategy area, covering about 153 000 square kilometres, includes Queensland's Fitzroy River Basin and the coastal streams of the Capricorn Coast and the Gladstone region (Figure 1).

For the purposes of the strategy the area was divided into the following six sub-regions, shown in Figure 1:

1. Isaac–Connors River system
2. Lower Mackenzie–Fitzroy River system, including Water Park Creek/Sandy Creek
3. Dawson–Callide River system (below Taroom) including the Dawson, Don and Dee Rivers and Callide Creek
4. Upper Dawson River system (above Taroom)
5. Boyne–Calliope River systems and Baffle Creek system
6. Comet–Nogoa–Upper Mackenzie River system.

Figure 1: Study area



## 1.3 Why do we need a strategy?

The Central Queensland Regional Water Supply Study was initiated in response to prolonged severe drought in Central Queensland, from which it became evident that a regional, whole-of-government approach was the most efficient way of meeting the water supply challenges.

A strategy was needed to address the following key issues:

- Urban growth and industrial development is continuing, particularly in the Lower Fitzroy and Gladstone areas, and mining development in the Bowen and Surat Coal Basins.
- Entitlements in some existing water supply systems in the region are at or approaching full usage.
- Some existing water supply schemes are performing below water users' requirements.
- Based on projections of water demands to meet urban, industrial, coal mining and agriculture requirements from 2005–20, supply shortfalls are predicted throughout much of the region.

Without a long term strategy to address future water supply issues in Central Queensland:

- further water restrictions may be needed to maintain adequate levels of water supply services
- industrial, urban and agricultural expansion and new development will be limited, affecting the economic prosperity of the region.

## 1.4 What is the strategy?

The strategy is an adaptive long-term statement, outlining equitable and timely solutions to the urban, industrial/mining and agricultural water needs of the Central Queensland region. Through a coordinated, regional approach, the strategy has been tailored to achieve optimum social, environmental and economic outcomes for the region.

Sustainable allocation and best use of water will be reached by adopting a hierarchy of three key principles:

- Facilitating the highest value and best use of water through trading of existing secure and well specified water entitlements.
- Promoting efficient use of water. For example, by improving demand management and by recycling water.
- Where demands cannot be met through the above measures, and where unallocated water is available, by the development of additional water supply sources.

The strategy provides the basis for water supply planning over the next 15 years and beyond.

Together, the elements of the strategy will provide a basis for allocating and managing the regions' water resources—and for planning for infrastructure developments—for the next 15 years and beyond.

The strategy is intended to be a flexible document that will be monitored and reviewed to ensure it remains relevant in the years ahead.

The strategy identifies a mix of options for meeting future water demands, including water trading, improved water use efficiency and reuse and potential additional water infrastructure supply sources. The first two elements are largely concerned with optimising potential gains from within the existing water resource base. The third element addresses the supply needs that are not likely to be met from the first two.

Assessments of the infrastructure options have been conducted at a pre-feasibility level and should not be regarded as formal impact assessments or as the government's endorsement of particular projects. It is expected that any potential infrastructure options identified would be progressed at the appropriate time on a commercial basis as is provided for in the *Queensland Government Guidelines for Financial and Economic Evaluation of New Water Infrastructure in Queensland* and the *Water and Sewerage Program*.

The strategy also identifies volumes of water that can be made available in future for direct extraction, for example, through water harvesting entitlements.

If all of the proposed water supply options identified in this strategy are developed, the total volume of unallocated water available for release under the Fitzroy Basin Water Resource Plan would be fully allocated.

## 1.5 How was the strategy prepared?

Preparation of the strategy was a community/industry/government partnership. The Department of Natural Resources and Water (NRW) was the lead agency and project manager.

The strategy was developed under the following management arrangements:

- A steering committee comprising representatives from state government, local government, water service providers and key stakeholder bodies provided direction to the project team on the conduct of the study and development of a preferred strategy.
- A technical committee, comprising technical experts from state agencies, local government, water service providers, industry and community organisations provided technical review.
- A project team comprising officers from the Department of Natural Resources and Water, the Coordinator General (formerly part of the Department of State Development and Innovation), the Department of Primary Industries and Fisheries and the Environmental Protection Agency (EPA) was responsible for undertaking the study's components.

The steps in developing the strategy included:

1. identifying existing water use
2. estimating future short, medium and long-term water supply requirements
3. identifying shortfalls in existing supply systems to meet existing and future water requirements for each sector
4. identifying potential for making better use of existing supplies, for example, water trading, improved demand management measures and enhanced water reuse
5. identifying potential options for new water supply sources to meet shortfalls
6. preliminary evaluation of potential infrastructure options on the basis of economic, social and environmental criteria
7. combining measures identified in steps 4 and 6 above to provide a supply strategy for the region
8. assessing risks associated with the supply strategy
9. identifying actions required to implement the strategy.

The strategy has been prepared through a partnership process including state government agencies, local government, industry and community organisations.

## 1.6 Where does the strategy fit in the regional planning context?

There are a number of regional planning initiatives in the study region that provide a broader context for the strategy, including three plans prepared by Regional Planning Advisory Committees under the *Integrated Planning Act 1997*. These regional planning projects are, CQ A New Millennium; Wide Bay 2020; and Whitsunday Hinterland and Mackay.

These three regional growth management frameworks are endorsed as the principle long term integrated regional planning strategies for the areas concerned. As well as providing an overall vision for the region, the plans offer information and policy direction to all spheres of government and community sectors, and identify specific actions to guide planning and development across a range of resource areas.

Regionally significant topics covered in these plans include resource use, conservation and management; economic development; infrastructure and transport; social and cultural development; education, training and research; planning and governance and regional identity and leadership.

Other regional planning documents include the Gladstone Growth Management Initiative and the Curtis Coast Regional Coastal Management Plan established under the *Coastal Protection and Management Act 1995*.

Additionally, the acknowledged plan for the future management of natural resources in the region is the Strategy for Sustainability 2004 and Beyond 2nd edition produced by the Fitzroy Basin Association. The strategy provides a framework to address critical pressures on the region's natural resources.

The strategy has been developed having regard to the information, policies, strategies and actions that relate to the planning and management of the region's water resources contained in these regional plans. Further details relating to this regional planning context is provided in the Central Queensland Regional Water Supply Strategy – Study Report.

