



Central NSW Councils **Regional**
Water
Security



CENTRAL NSW
COUNCILS

Heartland

Central New South Wales Councils (Centroc) represents over 236,000 people, spanning more than 70,000 square kilometres and comprising the local government areas of Bathurst, Blayney, Boorowa, Cabonne, Cowra, Forbes, Harden, Lachlan, Lithgow, Oberon, Orange, Parkes, Upper Lachlan, Weddin, Wellington, Young and Central Tablelands Water.

Our role is to foster the prosperity and growth of Central New South Wales. We do this by advocating on agreed positions and priorities for the region, and by facilitating cooperation and the sharing of knowledge, expertise and resources.

We work collaboratively with our local council members, as well as stakeholders from government, industry and the community, to create an environment where present and future generations can thrive.

As a consequence of the impact of the worst drought on record, and in response to climate change, our priority is to improve water supply security across the region.



Tourism NSW / Susan Wright



Water for life

The Lachlan and Macquarie river systems are the lifeblood of our region. Supplemented by groundwater resources, these river systems support significant agricultural, mining, industrial and commercial activity, and sustain dozens of healthy and growing communities.

Our region's water resources also maintain some of the state's most important environmental and cultural assets, including the Booligal Wetlands, Macquarie Marshes and Lachlan Swamp. These wetlands provide a home to countless protected and endangered species of flora and fauna, hold both historical and indigenous significance, and attract millions of tourism dollars to the region each year.

United we stand

In November 2008, Centroc embarked upon a study of our region's water supplies. At the time, while the need for improved water security was widely accepted, the extent of the threat was unknown. How serious was the situation? Were we at risk of running out of water? If so, when?

Our investigation included sophisticated modelling to forecast urban demand from the dozens of towns within our remit, for a 50-year horizon through to 2059. These forecasts took into account projected population growth tempered by the necessity that we become more efficient in our urban water usage. We also modelled our surface and groundwater resources and considered the impact of both the current climate sequence and a climate change scenario.

Our Strategy for Sustainable Success

- ◆ **Share** – improve and secure water supply for all users
- ◆ **Save** – reduce water loss and increase efficiency of usage
- ◆ **Diversify** – adapt to the threat of climate change by putting in place less climate-dependant water supply measures
- ◆ **Optimise** – improve the operational efficiency of our existing water supply network
- ◆ **Organise** – combine forces and resources for the benefit of the region.

What we learned was alarming: 29 towns were at risk and required substantial improvements to be made to their water security.

We then, in consultation with our 17 local government members and our many other external stakeholders, set about understanding and evaluating the available options. Ultimately, we settled upon an integrated program of water conservation and demand management measures, coupled with new and upgraded water supply and storage infrastructure.



Lachlan River, Cowra. Geoko Photographic, Tourism NSW

Major Competitive Advantages*

The region:

- Has extensive freight and commuter road and rail infrastructure
- Is rich in natural resources including gold, copper and timber
- Is close to the major population and market centres of Sydney, Newcastle, Wollongong and Canberra
- Is one of the most diverse regional economies
- Has strong education and service sectors.

*NSW Department of State and Regional Development

Town and Country

Central New South Wales is a region that is rich in natural resources and environmental assets, providing a solid foundation for a diverse mix of industries, including mining (coal, gold, copper), manufacturing (food and beverage processing, equipment manufacturing), and agribusiness (wool, cattle, wheat, horticulture, dairy farming, viticulture).

In fact, the region's non-urban economy is worth more than the entire economy of the State of Tasmania. And growing.

However, sustainability is a critical issue for the region.

The region's business plan highlights the necessary growth in skilled and flexible labour in order to support projected industry expansion. Meeting these labour needs means an increase in the urban population and subsequently results in more demand for water. Simultaneously, the three sectors that underpin the region's economy - namely mining, manufacturing and agriculture - are all heavily reliant on water for their economic viability. Their sustainability continues to be compromised by consecutive years of drought and subsequent water restrictions. Given that drought is an intrinsic part of the Australian landscape, water planning and management strategies play a vital role in sustainable long-term growth and development of the communities, industries and environments within Centroc's realm.

The study shows water security improvements will be required over the 50-year planning horizon for several towns, including Bogan Gate, Condobolin, Cowra, Cumnock, Forbes, Guerie, Koorawatha, Lake Cargelligo, Lithgow, Mumbil, Oberon, Orange, Parkes, Peak Hill, Portland, Tottenham, Trundle, Tullamore, Tullibigeal, Wattamondara, Wellington and Yeoval.

To survive and thrive, the region needs water.



LAKE
CARGELLIGO



Mining \$550M



Tourism NSW

Tourism \$878M



Services



Agribusiness \$600M



Manufacturing \$1.1B

Future proofed

When implemented, our two-pronged water security strategy will deliver both regional and local outcomes.

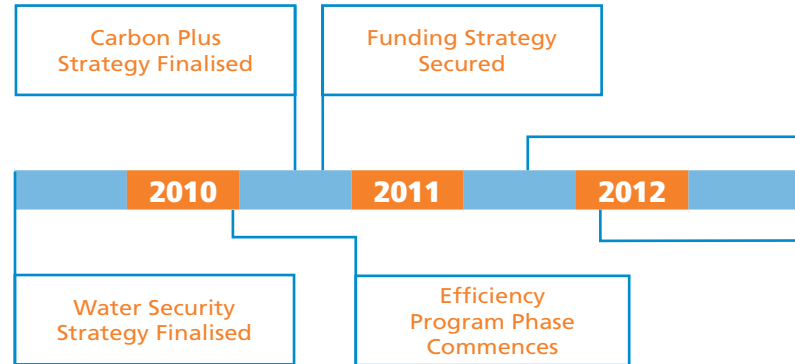
Phase 1 – Demand Management and Conservation

An extensive and integrated program of water conservation measures is being adopted, including the:

- Residential retrofit of inefficient water fixtures
- Continuation of the Water Efficiency Labelling and Standards scheme (WELS)
- Continuation of the BASIX program for new residential developments
- Continuation or expansion of water conservation education programs
- Audit of non-residential water users to identify leaks and potential areas for improvement in efficiency
- System Water Loss Management which aims to identify and repair leaks in water supply and distribution systems
- Review of water supply and sewerage services pricing structure to follow the best-practice guideline.

Water Security Strategy Benefits

- Almost 5,000 mega litres of water will be saved per year (equal to the approximate combined annual needs of Forbes and Lithgow), as compared to traditional approaches
- Water storage will be increased by 22,000 mega litres following the augmentation of Lake Rowlands
- Water security will be improved to assure storage facilities are not emptied more than once every 1,000 years
- Reliability of water will be improved to reduce the occurrence of water restrictions to less than 10% of the time
- Reliance on major dams will be reduced through the provision of new town water storage and supplies.



Phase 2 – Additional Infrastructure

The additional infrastructure elements of the strategy are pending funding from federal, state and local government. The funds, once available, will be used to:

- Augment Lake Rowlands which is located at high altitude at the head of the Lachlan River system.
- Build new and upgraded pipelines and additional minor storage and water treatment facilities. These infrastructure solutions will connect existing and new storage dams, resulting in a more effective water grid for the region, particularly during dry periods. Some of the network could be built in partnership with other water users, including the mining sector.
- Put in place a capital investment scheme to improve irrigation water use efficiency in return for a share of the water saved, which will be used to secure water for urban applications.
- Incorporate localised options into the water security strategy to complement regional solutions. These include effluent and stormwater recycling and sourcing groundwater from bores, where appropriate.
- Allow for emergency development of groundwater resources in Forbes, Wellington, Condobolin and Lake Cargelligo, as well as the construction of a pipeline connection between Orange and the Macquarie River.

Environmental Approvals, Concept and Detailed Design

Central NSW population estimated to top 250,000

Full 50 years of water security realised

2013

2014

2015

2030

2059

Infrastructure Delivery Phase Commences

The Centroc Water Security Study represents an Australian first. Never before has a comprehensive, integrated, regional approach to water security been adopted. Then again, never before has Australia been as exposed to the impacts of drought and climate change as we now are.

The work that Centroc has already completed, and seeks to continue, will achieve water security for our urban communities, for the industrial sectors that support our livelihoods, and for our unique and precious natural environment. Centroc is currently undertaking the Carbon Plus Study, which will ensure Centroc manages the carbon footprint of its water security strategy.

Achieving water security for Central New South Wales will require significant investment in both infrastructure and demand management programs.

Through Centroc, the 17 local government councils within the region have demonstrated their capability to unite, collaborate and work toward a common goal. Already our collective efforts have successfully developed a long-term sustainable water supply strategy which significantly improves the water supply security of our region whilst balancing social, environmental and economic outcomes.

The most notable benefit of our study is not just quality of life, but life itself – the sustainability of the region's urban, rural and industrial economies will be assured through the achievement of water security for the next 50 years.



Acknowledgements

Special thanks to

The NSW Government as funding partner

The Project Reference Group

James Williams	Central West CMA
Diana Kureen	Central West CMA
John Blunt	Central West CMA
Norm Mann	Community Representative
Miles Naude	Rio Tinto Northparkes Mine
Russell Hill	Lachlan CMA
Angus Arnott	Lachlan CMA
Martin Prestidge	Lachlan CMA
Mary Ewing	Lachlan Valley Water
Alister Lockhart	Lachlan Valley Water
Dennis Moxey	Lachlan Valley Water
Robert McCutcheon	Macquarie Food and Fibre
Andrew Wannan	Newcrest Mining

In Memorium

We remember the contribution of Robert Wilson, Community Representative.

The Project Technical Committee

David Swan	Bathurst Regional Council
Russell Deans	Bathurst Regional Council
Grant Baker	Blayney Shire Council
Kevin Howell	Cabonne Council
Darrell Sligar	Central Tablelands Water
Jenny Bennett	Centroc
Carl Berry	Cowra Shire Council
Ray Graham	Forbes Shire Council
Dave Tinlin	Forbes Shire Council
Brian Burge	Harden Shire Council
Ben Falconer	Lachlan Shire Council
Phil Newham	Lachlan Shire Council
Daniel Buckens	Lithgow City Council
Stephen Palmer	NSW Office of Water
Matt Parmeter	NSW Office of Water
Shyamala Manorthan	NSW Office of Water
Leigh Robins	Oberon Council
Chris Devitt	Orange City Council
Wayne Beatty	Orange City Council
John Marshall	Orange City Council
Kent Boyd	Parkes Shire Council
Andrew Francis	Parkes Shire Council
Luke Moloney	Upper Lachlan Council
Bill Twohill	Weddin Shire Council
Eric Poga	Wellington Council
Philip Glover	Young Shire Council
Dirk Wymer	Young Shire Council

The Project Steering Committee

Russell Deans	Bathurst Regional Council
Tony Perry	Central Tablelands Water
Jenny Bennett	Centroc
Stephen Palmer	NSW Office of Water
Chris Devitt	Orange City Council
Kent Boyd	Parkes Shire Council
Owen Johns	Wellington Council

Principal Consultants

MWH

Sub-consultants

Bonnacci Water
Pavel Kozarovski
Chris Jewel & Associates
Cullen Capital

For more information contact:

Jenny Bennett
Chief Executive Officer
Central NSW Councils (Centroc)
0428 690 935
www.centroc.com.au

Note: The technical documents supporting Centroc's water security strategy are available at the Web address above. Please reference the 'Centroc Water Security Study' housed under the 'Publications' tab.

July 2010




CENTRAL NSW
COUNCILS

Backing the region