



water ACT

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Why a Water Policy?

Water is fundamental to our existence. It underpins our lifestyle, our prosperity and our health. It is also a key determinant of how the ACT and surrounding region develops in the future. There are emerging and significant issues, including population growth and climate change, which can affect the quality and availability of water within the ACT and region.

The ACT has demonstrated national leadership in managing water, but we are facing significant challenges and more needs to be done.

The ACT is committed to the Council of Australian Governments' 1994-1995 water reforms as part of the National Competition Policy Agreement.

Since 1998, the ACT has participated with NSW, South Australia, Victoria, Queensland and Commonwealth governments in the *Murray-Darling Basin Initiative*. This has included a commitment to participate in a program to limit how much water is drawn from the Murray-Darling River system, known as the *Cap on Diversions*, and work towards the development of a water trading system within the Basin.

The ACT's prosperity is closely tied to the surrounding region as recognised in the recently released discussion paper, *Building Canberra's Economy*. The ACT already provides water to the City of Queanbeyan. The need for an integrated water supply strategy for the sub-region, as promoted by *Building Canberra's Economy*, has been previously agreed by the ACT, Commonwealth and NSW Governments.

Water sustains our ecological systems and provides aesthetic and spiritual enrichment. Cotter River downstream from Cotter Dam.

With the release of its sustainability policy, *People, Place, Prosperity*, the ACT Government has flagged its determination to develop and deliver policy that integrates economic, social and environmental issues. Water is a key sustainability issue and it will influence the development of *The Canberra Plan* and its elements – the *Spatial Plan*, the *Economic White Paper* and the *Social Plan*.

In December 2002, the Government announced that it would develop a comprehensive *Water Resources Strategy* to be formalised as a new *Water Resources Management Plan* under the *Water Resources Act 1998*. This strategy will guide day-to-day decision-making.

The Government is committed to a partnership with the community in the development of the *Water Resources Strategy*. This draft water policy outlines the broad direction, targets and objectives for the management of ACT water resources. It provides the framework for the preparation of the *Water Resources Strategy*, the negotiation of an integrated water supply strategy for the Canberra region and for our participation in the *Murray-Darling Basin Initiative*.



Our water supply is a key determinant of the Bush Capital's future.



Bendora Dam before the January 2003 bushfires. This pristine catchment has traditionally been the preferred supply for Canberra's drinking water.

Our Resources

Water played an important role in determining the location and boundaries of the national capital. The Commonwealth's chief surveyor, Charles Scrivener, was instructed by Prime Minister Andrew Fisher that the new Territory:

“should include a catchment for a large, reliable and pure water supply, the site should provide for a perfect sanitation system”, and that it should not be less than 900 square miles in area and contain scope for expansion and beautification.

The result was that the ACT is the only State or Territory to have boundaries that conform to water catchments and this continues to be important in protecting water quality.

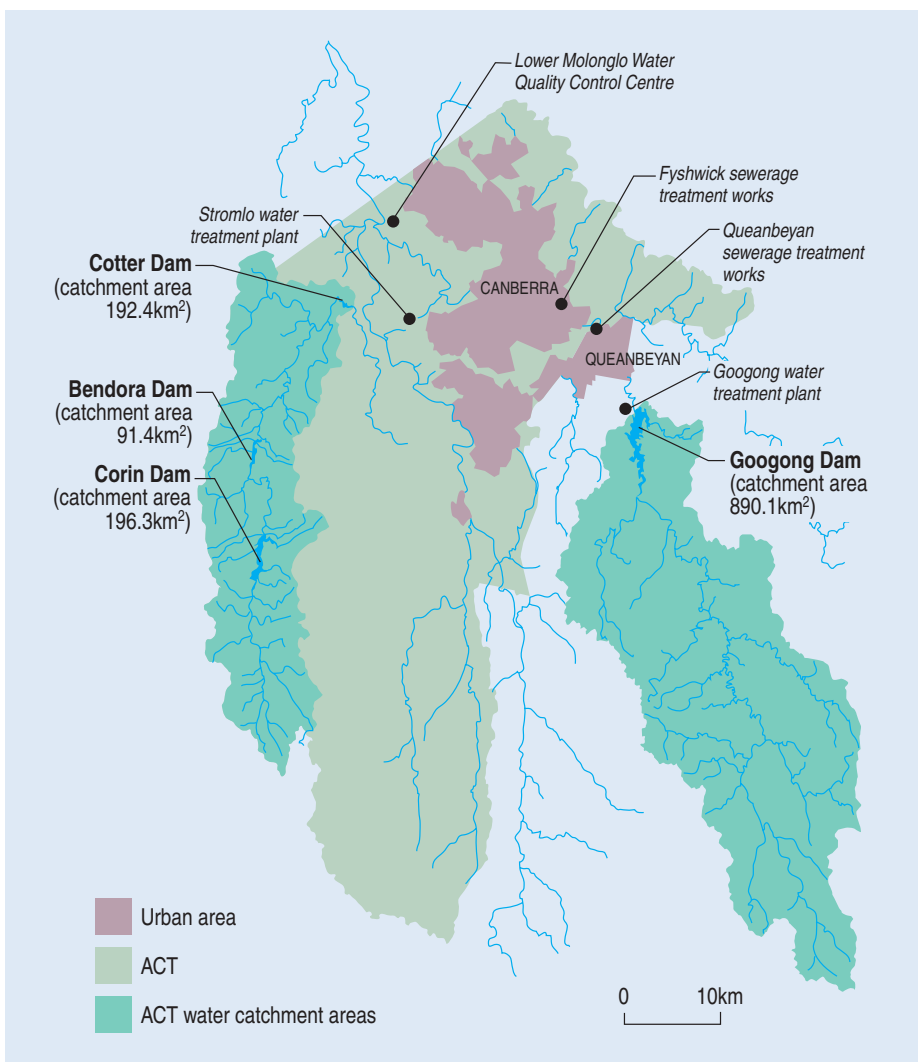
The importance of water was further reflected in Commonwealth legislation. The *Seat of Government Acceptance Act 1909* and the *Australian Capital Territory (Self Government) Act 1988* combine to give the Territory a clear right to the waters within the ACT, except those classified as National Land (eg Lake Burley Griffin). Under the *Canberra Water Supply (Googong Dam) Act 1974*, the Territory also exercises the Commonwealth's rights to the waters of the Googong Dam Area for use by the Territory.

ACT controlled water resources amount to approximately 460 gigalitres (GL) in terms of average annual flows. This includes water that runs off catchments within the ACT and the waters of the Queanbeyan River which enter the Googong Dam in NSW. As has been illustrated in the current drought, these flows can vary dramatically.

The ACT also controls groundwater under Territory land. However, its use is limited by its variable distribution and quality, small quantity, generally low rate of flow, and the cost of extraction.

Through the ACT *Environmental Flow Guidelines*, about 270 GL is dedicated to environmental flows, leaving a potential harvestable resource of about 190 GL.

Currently, average demand on the urban water supply network is 63 GL and total use outside of the urban water supply network, including groundwater, is



ACT water supply catchment areas. Water from Bendora Dam has been the preferred water source. It flows under gravity to the Stromlo Treatment Plant, after which it is reticulated to Canberra and Queanbeyan. Water from the larger Corin Dam is released as needed to maintain supply from Bendora. Googong Dam water is treated at the dam before distribution. Significant pumping is involved. The small Cotter Dam is the least preferred source.

estimated to be 5 GL per annum. This does not include use under Commonwealth control such as pumping from Lake Burley Griffin. An average of about 35 GL is returned to the Molonglo River as treated effluent from the Lower Molonglo Water Quality Control Centre and Queanbeyan Sewage Treatment Works.

1GL equals 1000 megalitres (ML), 1 ML equals 1000 kilolitres (KL) and 1KL equals 1000 litres. An olympic pool with an even depth of 2 metres contains 2 ML.



Lower Molonglo Water Quality Control Centre, which provides a high level of tertiary treatment for Canberra's waste water. Around 55% of water taken from our water supply catchments is returned to the environment.

Our Achievements

The ACT has achieved much in the stewardship of our water resources, demonstrating national leadership in many respects.

- In the 1970s, Canberra pioneered a stormwater treatment system. The system consists of gross pollutant traps, pollution control ponds and wetlands, with multi-function lakes, which treat stormwater to a very high standard and provide attractive urban features.
- Lower Molonglo Water Quality Control Centre was commissioned in 1978 to produce a very high standard of tertiary treated sewage effluent. Subsequent modifications have ensured that the facility continues as the best in Australia.
- In 1984, the ACT pioneered the requirement for erosion and sediment controls on building sites.
- In 1985, the retention of natural waterways and the construction of vegetated waterways were first used in Canberra in place of concrete stormwater channels.
- In 1993, the installation of dual flush toilets was made mandatory whenever complete toilet units are being installed or replaced.
- A strong community education program in the early 1990s resulted in a high level of community awareness of water conservation issues.
- In 1994-95, the ACT was the first jurisdiction to implement a two part, consumption based, user pays pricing regime for urban water which was not tied to land values.

- In 1998, the ACT introduced a comprehensive water allocation and licensing scheme; environmental flows based on the best available scientific advice; and an abstraction charge on the use of water, which signalled the scarcity value of the resource for the first time.
- In 2001, consumer protection was enhanced when the ACT became the first jurisdiction to formally regulate drinking water quality through the adoption of the national drinking water quality guidelines in a drinking water code of practice.
- Since the 1980s, the ACT has made significant progress in the re-use of treated wastewater. Currently 5% of wastewater effluent is treated and used for the irrigation of crops and turf, reducing demand for potable water.

Consistent with our sustainability commitments and in light of the future benefits, the Government intends to maintain the ACT at the forefront of best practice in the sustainable management of water resources.



Our lakes are important for protecting water quality and provide a valued recreation resource. The western foreshore of Lake Ginninderra.



Drought has an enormous impact on the water supply levels of our dams. Corin Dam.

Our Challenges

While the ACT is proud of its achievements relating to urban water management, there is a need to do more.

On the basis of current population projections and per capita consumption, existing water supply infrastructure is expected to meet demand until around 2020. This does not take uncertainties into account, such as any additional growth in demand from the City of Queanbeyan or Yarrowlunla Shire due to boundary changes; reduced rainfall and catchment yields due to climate change; reduced catchment yields due to bushfires; or unexpected population growth.

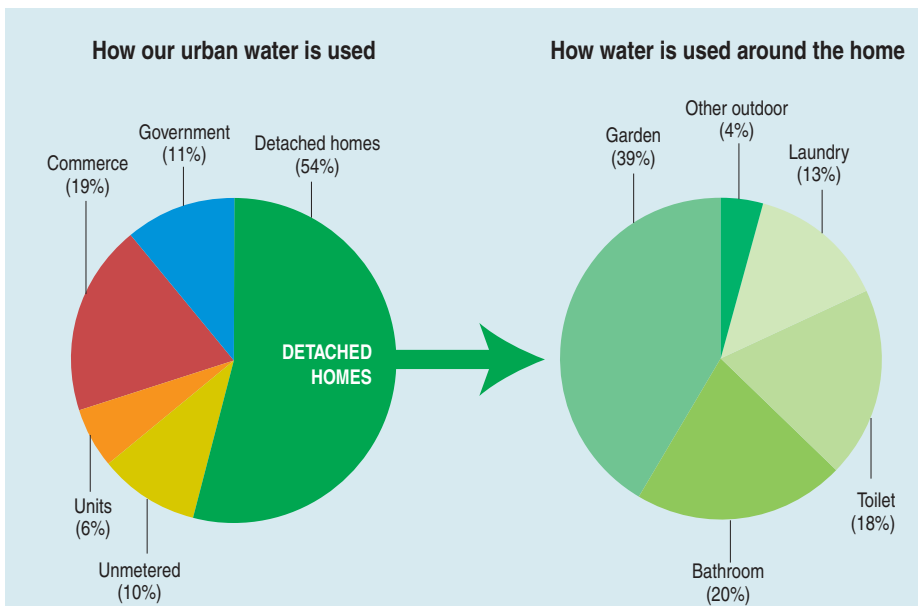
Water supply infrastructure is typically expensive to provide. Its provision includes long lead times for planning, investigations and construction, and it can potentially have significant negative social, economic and environmental impacts. The ACT must now seriously consider what infrastructure and water management arrangements are required to secure an adequate long-term water supply.

Continuation of traditional approaches to the management of stormwater and urban runoff will lead to significant water quality and ecological impacts on our urban waterways and lakes, involve increased costs, and a loss of recreational opportunities and amenity.

In order to avoid the associated social, economic and environmental impacts, the Government has made a commitment not to build a new water supply dam if at all possible. This commitment brings into sharper focus the need to carefully plan and manage our resources to meet the demands of an increasing population.

Our challenges include the need to:

- ensure that the ACT and region has a secure and reliable supply of water for both current and future needs;
- continue to protect the ecological and social values of our waterways for our needs and the needs of future generations;
- take account of climate change, including scientific predictions for higher temperatures and lower and variable rainfall, in assessing the future sustainability of our resources;
- improve urban, housing and landscape design to fit with emerging water resource constraints;
- integrate an holistic approach to water cycle management with economic, spatial and infrastructure planning; and
- ensure water supply and management practices are consistent with protecting public health.



Managing our supply for uncertainties. Bendora Dam after the January 2003 bushfires. A boom and curtain are in place to reduce sediment impacts.



Increasing the efficiency of our water usage will help maintain higher storage levels and defer or avoid the need for a new dam. Googong Dam spillway.

Our Goal

The ACT Government is committed to the sustainable use and management of ACT water resources, and will implement best practice water resource management strategies.

In pursuit of this goal, the ACT Government will:

1. Provide a long-term, reliable source of water for the ACT and region by:

- negotiating a fair and appropriate water diversion cap for the ACT with the Commonwealth and the other States participating in the *Murray-Darling Basin Initiative*;
- assessing and developing alternative sources such as stormwater and treated effluent;
- developing the necessary infrastructure to capture, deliver and treat water efficiently (including deferring and if possible avoiding a new dam);
- implementing a range of appropriate demand management measures; and
- optimising catchment management for protection of water supply and yield and relevant land use management objectives.

We will do this by:

- negotiating an ACT Water Cap as soon as possible, and encouraging other States to consider a water cap for the ACT. An ACT Water Cap will help to manage the water resources of the region while appropriately recognising the ACT's rights to water as the Nation's Capital. If negotiations can be completed with other States, it is our goal to have an ACT Water Cap in place by 2004;
- reviewing and updating hydrological models for the ACT and region in order to ensure sound management practices and more accurately determine future water needs for the ACT and region;

- investigating alternative water supply options other than a new dam (for example to more effectively utilise the Cotter Dam), to ensure that the necessary infrastructure is developed to secure water supply to the ACT and region in the longer term (ie 50 years);
- developing a plan to increase the use of treated effluent – from the current 5% to 20% by 2013;
- investigating the adequacy of water treatment facilities for present and future needs; and
- negotiating with the NSW Government and relevant local governments to ensure regional water supply catchments are managed to secure yield and environmental flows.

2. Increase the efficiency of water usage by:

- maintaining and enhancing water related infrastructure to achieve highest possible performance standards;
- increasing the use of water efficient fixtures and appliances in buildings;
- decreasing per capita usage;
- reusing water wherever possible;
- raising awareness across the community of the importance and value of water;
- being responsive to changing circumstances, including the need for water restrictions;
- providing the appropriate pricing signals to consumers, which reflect the scarcity value of water; and
- optimising the allocation, measurement and trading of our water resources.



Residential Gardens can use a large amount of water. Xeriscape garden at Weston features a range of plants, paving and lawn that demonstrate water conservation techniques.



Retaining and using water on-site reduces demand. Residential rainwater tanks can be used for garden irrigation, ponds and swimming pools, household washing and toilet flushing.

We will do this by:

- challenging the community to decrease per capita potable water use – by 12% by 2013 and by 25% by 2023 (in addition to the 20 percent reduction obtained since 1993);
- fostering community involvement and partnerships; and
- valuing water as a limited resource by adjusting the Water Abstraction Charge.

3. Promote the development and implementation of an integrated regional approach to ACT/NSW cross-border water supply and management by:

- providing a resource management framework within which regional water supply can be considered; and
- engaging with the Commonwealth, NSW and relevant local government authorities.

We will do this by:

- taking a leading role in the development of a water supply strategy for the region which is based on, or is consistent with:
 - sustainability principles as expressed in the ACT sustainability policy, *People, Place, Prosperity*;
 - an agreed regional settlement strategy;
 - a best practice approach to water quality protection and the provision of environmental flows;
 - the 1994-95 Council of Australian Governments' water reforms;
 - an agreed ACT Water Cap;
 - full-cost user pays pricing, including provision for infrastructure;
 - protecting and securing the yield from water supply catchments and flows in regional streams;
 - agreed targets for water use efficiency and the use of treated effluent and stormwater;
 - best practice demand management and water restrictions; and
 - ACT water supply security, and ACT residents not being disadvantaged in comparison with NSW residents.

4. Protect the water quality in ACT rivers, lakes and aquifers, to maintain and enhance environmental, amenity, recreational and designated use values and to protect the health of people in the ACT and down river by:

- optimising environmental flows;
- ensuring that the water quality of lakes and streams is suitable to maintain the uses designated for those areas;
- ensuring that water meets standards appropriate for its intended use; and
- ensuring that water leaving the ACT is of equivalent quality to that entering the ACT.

We will do this by:

- reviewing, and if necessary revising, the *Environmental Flow Guidelines* by December 2004 to ensure that an appropriate level of protection is given to ACT water dependent ecosystems with the minimum necessary impact on water supply capacity;
- ensuring that the level of nutrients and sediment entering ACT waterways is no greater than that entering from a well-managed rural landscape; and
- monitoring water quality and river condition and instigating planning, management, education or regulatory responses to ensure that water quality requirements for designated uses are met; and
- maintaining best practice sewage treatment and ensuring nutrient and sediment loads do not increase beyond current provisions, despite an increasing population.



The quality of water in our rivers has an impact on our recreation opportunities. Murrumbidgee River at Casuarina Sands.



Water sensitive urban design at O'Connor. This partnership between community, business and government retains stormwater, enhances biodiversity and creates a peaceful urban environment.

5. Facilitate the incorporation of water sensitive urban design (WSUD) principles into urban, commercial and industrial development by:

- improving the quality and reducing the flow impacts of stormwater runoff;
- negotiating with regional councils to ensure comparable levels of water quality protection and stormwater management through a regional integrated approach to cross-border water supply (refer 3 above);
- minimising the overall cost of water related infrastructure and treatment;
- improving protection of urban areas from the risk of flooding;
- reducing the per capita consumption of potable water supplied through the urban water supply network;
- improving the amenity value of the landscape and protection of the natural environment; and
- reducing the risk of bushfire damage.

We will do this by:

- incorporating measures to improve water runoff quality and reduce consumption of potable mains water in all new developments and significant re-developments;
- reducing the intensity and volume of urban stormwater flows in all new developments and significant re-developments, so that the runoff event which occurs on average once every 3 months is no more than predevelopment size;
- providing guidance to designers and developers on appropriate approaches;
- seeking opportunities to incorporate water sensitive urban design measures into existing developments, through community, industry and Government partnerships;

- taking a leadership role by ensuring that ACT Government building, development and re-development, including tenancies, will incorporate appropriate water sensitive urban design measures;
- reviewing the role of incentives, mandatory requirements and developer charges in the delivery of water sensitive urban design; and
- developing strategies to encourage the retrofitting of existing dwellings, commercial space and landscapes for more effective water utilisation.

6. Promote and provide for community involvement and partnership in the management of the ACT Water Resources Strategy by:

- engaging with the community to tap expertise, gain support and share ownership.

We will do this by:

- encouraging and assisting communities to contribute to water resources management in the ACT, particularly through the development and implementation of the *Water Resources Strategy*;
- providing information to enable the community to be more informed of the choices and trade-offs in water resource management; and
- ensuring that we have appropriate arrangements, partnerships, monitoring and reporting in place to provide the data and information necessary to sustainably manage ACT water resources.



Managing the quality of our water supply is everyone's responsibility. Waterwatch is an environmental education and awareness program that encourages and supports community involvement.



Clean Canberra treated effluent returning to the Molonglo River at the Lower Molonglo Water Quality Control Centre. Around 90 megalitres per day is returned.

Where to from here?

This draft policy sets a direction and creates challenges for the Government and the community. Where we have set targets we will not be content to accept that we have achieved all we can. We will continually strive to do better, to be leaders in water resource management and developers of ‘best practice models’ for the rest of Australia.

Contacts

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References

- ACT Government 2003. *People, Place, Prosperity: a policy for sustainability in the ACT*. ACT Government, Canberra.
- ACT Government 2003. *Building Canberra’s Economy: A discussion paper for the Economic White Paper*. ACT Government, Canberra.
- ACT Government 2002. *Your Canberra Your Say: a report to the community of Canberra on issues and ideas for the future of Canberra*. ACT Government, Canberra.