



# ACT WATER STRATEGY 2020 **REPORT CARD**



**ACT**  
Government

### **Acknowledgement of Country**

The ACT Government acknowledges the Traditional Custodians of the ACT, the Ngunnawal people. We respect their continuing culture and the unique contribution they make to the life of this area.

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# FOREWORD

It is my pleasure to present the ACT Water Strategy 2020 Report Card.

This is the first annual report card for the Implementation Plan Two (IP2) of the ACT Water Strategy 2014–44: Striking the Balance (the ACT Water Strategy). IP2 marks the second phase in the delivery of the Water Strategy, and the ACT Government has prepared this report card to provide information to the community and stakeholders about the progress of IP2.

The release of the ACT Water Strategy in 2014 marked a new approach to water management for the ACT as many parts of Australia emerged from the Millennium Drought. The priority shifted from a single water security focus to addressing new challenges for water resource management, including deteriorating water quality related to urban development, maintaining ageing stormwater infrastructure and the need for enhanced stewardship of water resources and catchments.

Implementation Plan One (2014–18) was released with the ACT Water Strategy and set a course for putting the strategy into action. A report card for the plan was prepared in 2018 and showed good progress in implementing the strategy.

The release of IP2 in 2019 highlighted the ongoing commitment of the ACT Government to respond to long-term water management challenges in the Territory and provides the latest road map to achieving the outcomes of the ACT Water Strategy.

Since the release of IP2, the ACT has experienced unanticipated challenges, moving from the 2019–20 bushfire emergency to responding to the COVID-19 public health emergency. Despite these challenges, the ACT Government remains committed to achieving the outcomes of the ACT Water Strategy.

On 27 November 2019, the ACT Legislative Assembly called for the ACT Government and Icon Water to continue to implement and promote the ACT Water Strategy as the ongoing basis to support current and future population growth, achieve desired environmental outcomes and be responsive to climate change.

I trust that you consider the progress of IP2 as favourably as I do. I encourage your continued involvement in enhancing the health and values of our water resources and catchments for our community now and into the future.

**Ben Ponton**  
**Director General**

Environment, Planning and Sustainable Development Directorate





# CONTEXT

The ACT Water Strategy was launched in August 2014 with a vision of a community working together managing water wisely to support a lively, sustainable and thriving region. The Strategy is structured with three outcome areas:

- **Outcome 1: Healthy catchments and waterbodies**
- **Outcome 2: A sustainable water supply used efficiently**
- **Outcome 3: A community that values and enjoys clean, healthy catchments and waterways**

IP2 builds upon the success of IP1 and continues to guide the delivery of the ACT Water Strategy as it addresses the changing needs of the Territory, including the region’s water requirements and catchment management practices. Understanding changing drivers and circumstances allows the ACT Water Strategy to include adaptation to the variables of climate change, population growth, settlement patterns, and community priorities.

In 2019, Australia observed its driest year on record, marked by severe and protracted drought in parts of the country (Figure 1). Australia also observed its warmest year on record (Figure 2). The ACT received 40% less rainfall than its long-term average and observed its highest annual mean maximum temperature on record.

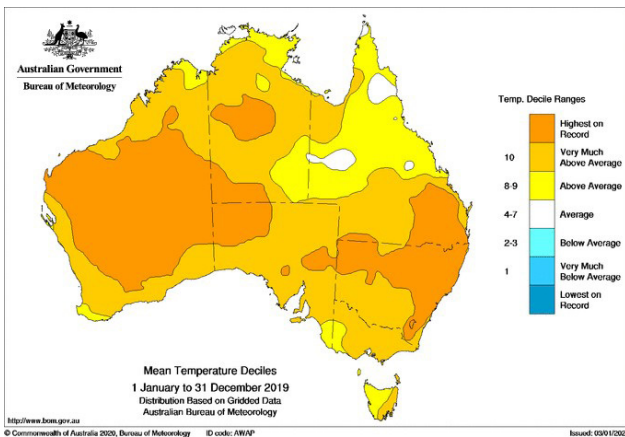


Figure 1. Annual rainfall in 2019 compared to historical rainfall observations

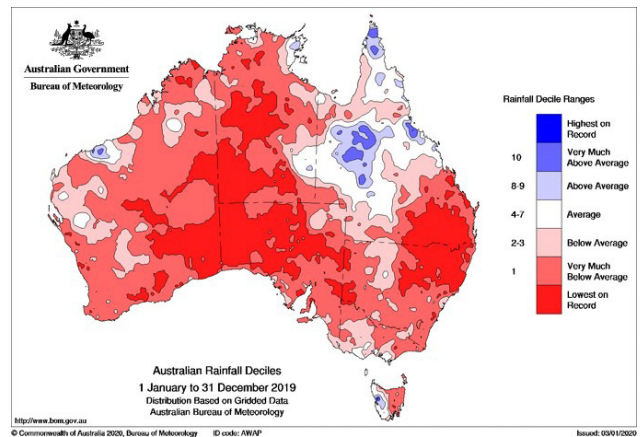


Figure 2. Annual mean temperatures in 2019 compared to historical temperature observations

Welcome rain from February contributed to a wetter start to 2020 that eased the severity of short-term rainfall deficiencies over much of eastern Australia. However, the longer term impact of lower rainfall over the previous three years on ACT water resources is still evident (Figure 3). While permanent water conservation measures have been in place for the ACT since 2010 (Figure 3), the rainfall over the first half of 2020 has reduced the prospect of temporary water restrictions being required in the short-term to manage low water availability.

## Historical Total Volume Levels

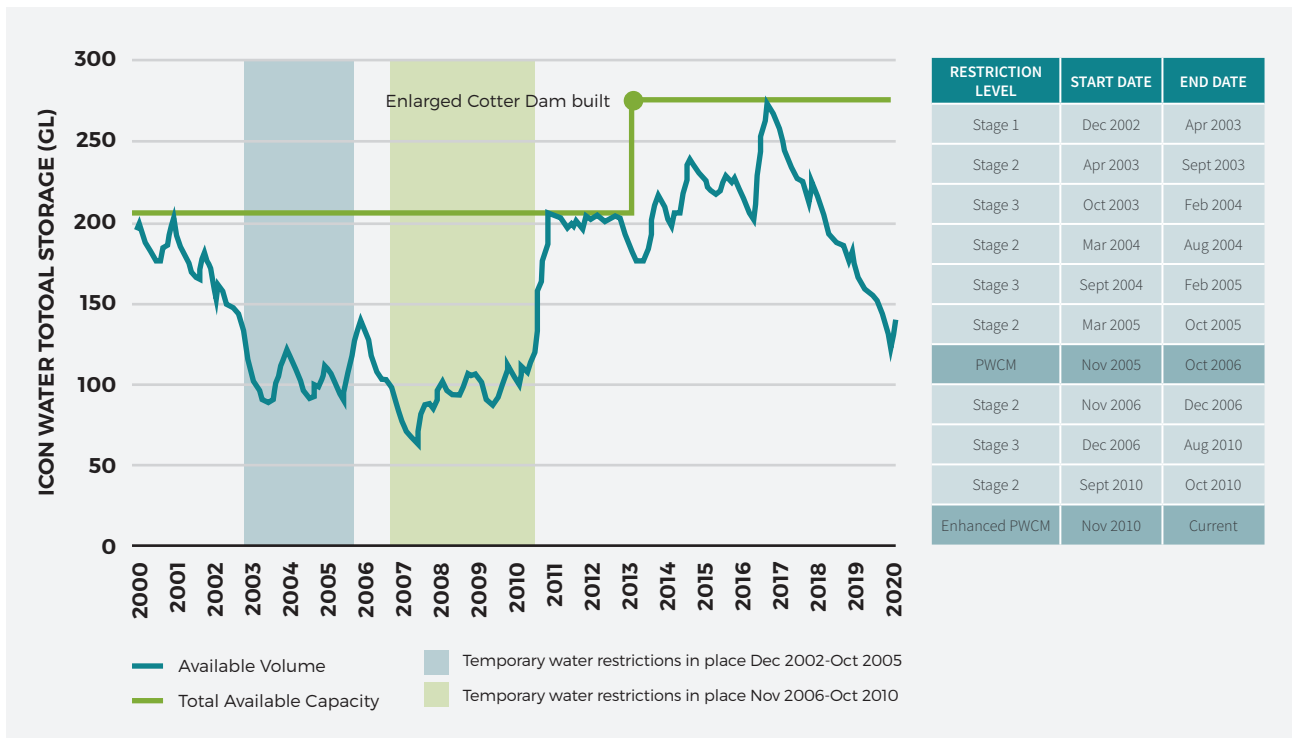


Figure 3. Historical total volume levels of ACT water storages

The dry conditions, combined with an increase in fire weather days in late 2019 and early 2020, was a major contributor to the devastating bushfires that impacted the ACT and its surrounding regions. The Orroral Valley Fire in southern ACT was one of the biggest ecological disasters in the Territory's history, threatening water quality and quantity in the Cotter River catchment.

The Orroral Valley fire burnt 87,923 hectares in the ACT, including extensive areas in Namadgi National Park (NNP) comprising the southern region of the

Cotter Catchment. Approximately 78% of NNP was burnt during the fire, totalling over 82,700 hectares. This included impacts across the Cotter River catchment, the ACT's primary water supply. The fire also spread into Tidbinbilla Nature Reserve (TNR) with 1444 hectares burnt, 22% of the reserve. The area overlapped with large areas burnt in 2003. Over the burn area, 22% was estimated to have burned at a high to very high fire severity resulting in impacts due to fire, smoke and earthworks, plus post-fire impacts including debris flows and soil erosion.



Sediment deposition adjacent to Cotter River following the Orroral Valley Fire – February 2020 (Julian Seddon)



Riparian vegetation adjacent to Cotter River following the Orroral Valley Fire – February 2020 (Julian Seddon)



In recent years, Lake Ginninderra, Lake Tuggeranong and Lake Burley Griffin have been closed to recreational use due to a reduced water quality caused by blue-green algae (Cyanobacteria) blooms and microbial contamination (measured using intestinal enterococci as the indicator organism).

Closures continued to impact the ACT’s waterways throughout the 2019–20 recreational season. Over 27 weeks of sampling, Lake Ginninderra was impacted by full or partial closures for 12 weeks (44% of the sampling period), Lake Tuggeranong for 16 weeks (59% of the sampling period) and Lake Burley Griffin

for 13 weeks (48% of the sampling period). Figures 4-6 show lake closures from the 2016-17 to 2019-20 recreational seasons.

Note: The ACT recreational 2019–20 swimming season sampling for Lake Ginninderra and Lake Tuggeranong was cut short due to the COVID-19 public health emergency, when the ACT Health Protection Service was required to divert resources away from some activities to respond to emerging demands. Sampling of Lake Burley Griffin by the National Capital Authority was able to continue through its planned period.

### Lake Ginninderra

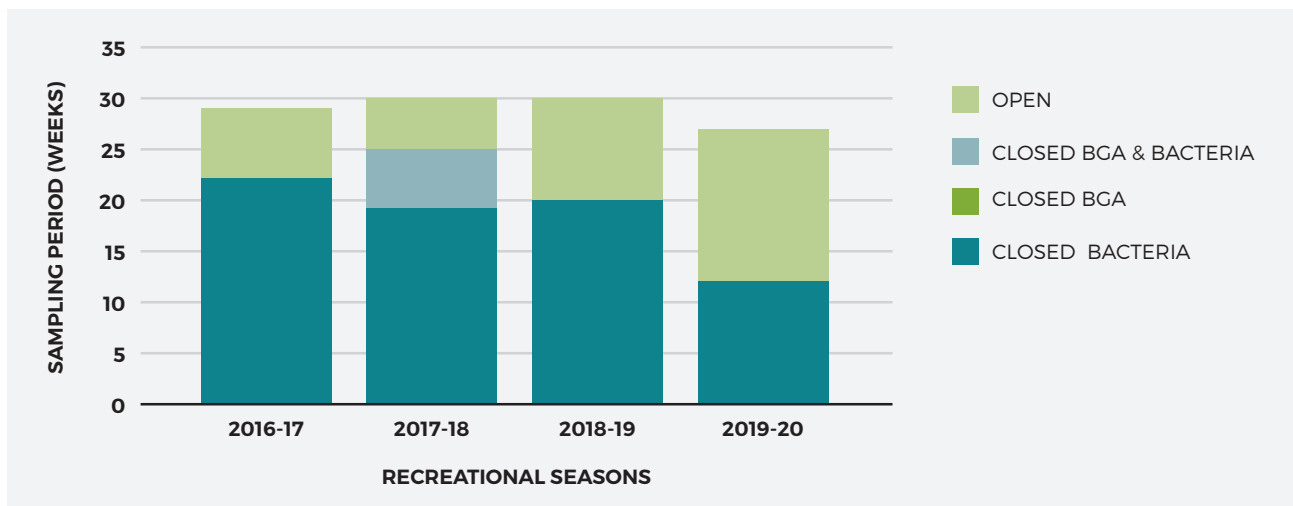


Figure 4. Full or partial closures of Lake Ginninderra from the 2016-17 to 2019-20 recreational seasons. BGA = Blue-green algae; Bacteria = microbial contamination

### Lake Tuggeranong

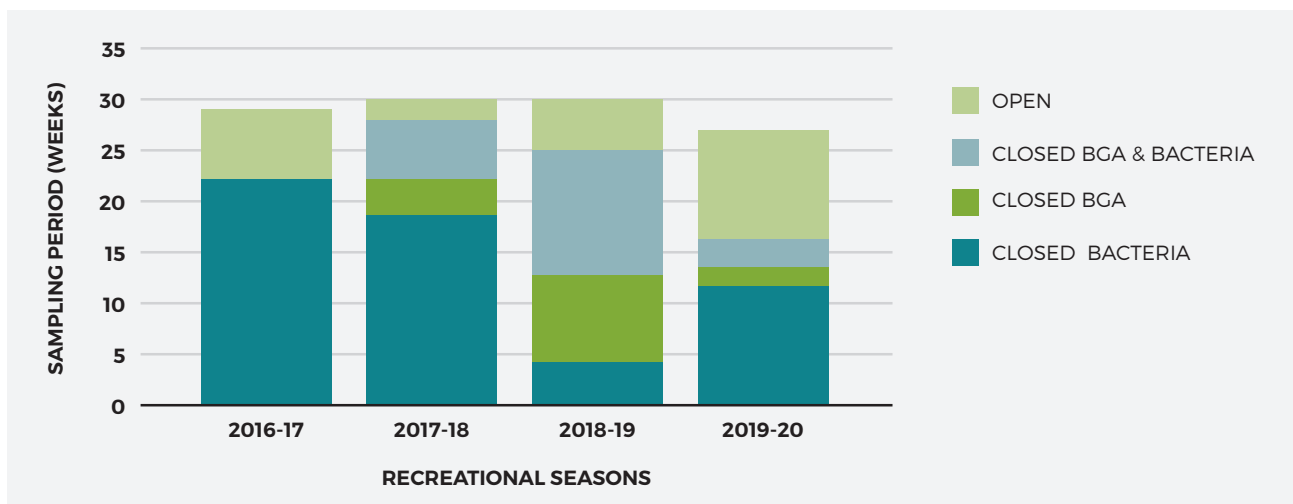


Figure 5. Full or partial closures of Lake Tuggeranong from the 2016-17 to 2019-20 recreational seasons (BGA = Blue-green algae; Bacteria = microbial contamination)

## Lake Burley Griffin

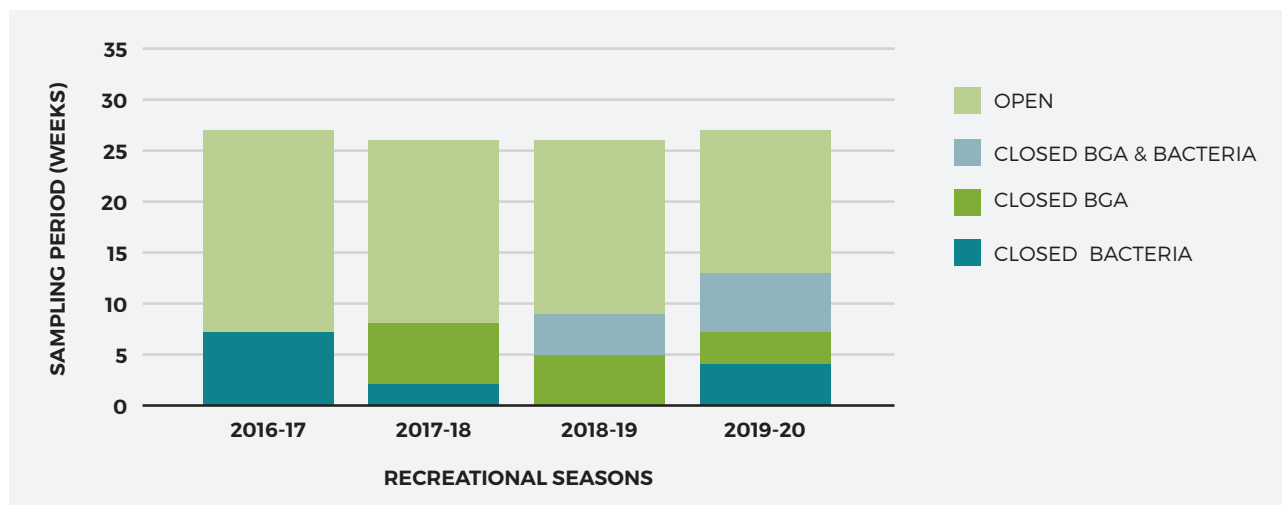


Figure 6. Full or partial closures of Lake Burley Griffin from the 2016-17 to 2019-20 recreational seasons (BGA = Blue-green algae; Bacteria = microbial contamination)

## PROGRESS SNAPSHOT

### OUTCOME 1: HEALTHY CATCHMENTS AND WATERBODIES

**TARGET: The ACT will maintain or improve the quality of water across all sub-catchments within the ACT**

Strategy 1: Achieve integrated catchment management across the ACT and region

Strategy 2: Protect and restore aquatic ecosystems in urban and non-urban areas

Strategy 3: Manage stormwater and flooding

#### Key achievements during 2019/2020

- Collaboration by the ACT Government and Icon Water to manage threats to water quality in the Upper Cotter catchment following the Orroral Valley Fire. The fire burnt 99% of the Corin Dam catchment and 29% of the Bendora Dam catchment.
- With the aid of the Australian Defence Force, silt curtains were installed across the Corin and Bendora Dam reservoirs to slow and trap sediment

and small debris from the Orroral Valley Fire. Large debris was also trapped in Corin Dam reservoir, which was then manually 'lassoed' and removed. Coir logs and sediment traps were installed in main catchment tributaries.

- A Bushfire Rapid Risk Assessment Team (RRAT) delivered an initial assessment report to the ACT Government following the Orroral Valley Fire. The report outlined key priorities and risks in the bushfire recovery, including impacts on water quality from sediments and nutrients in the water catchments and impacts on threatened ecological communities including our alpine bogs, along with other risks including damage to park and rural landholder assets such as fencing and visitor infrastructure.
- The ACT Government announced funding and commenced implementation on a series of 'screwdriver-ready' projects to assist with bushfire recovery:
  - » To repair and replace rural fences damaged by bushfire and undertake critical Lower Cotter Catchment restoration works. This work included boundary fences between Namadgi National Park and rural properties being rebuilt.
  - » To support land restoration and improve water quality in the Lower Cotter catchment, employees and contractors planted native seedlings, removed invasive weed infestations, and controlled soil erosion in targeted areas.



One of three silt curtains installed in Corin Dam reservoir during the Orroral Valley Fire — February 2020



The ACT Parks and Conservation Service and the Australian Defence Force worked to install coir logs in the Upper Cotter catchment following the Orroral Valley Fire — February 2020

- » In addition, 26 temporary jobs have been created in the ACT Parks and Conservation Service as part of the Jobs for Canberrans initiative to help with bushfire recovery efforts to make our parks and reserves safe for visitors to return following COVID-19 restrictions.
  - » The 23 new temporary positions include five Ngunnawal ranger positions to care for Country as part of the bushfire recovery program, as well as ranger and field officer positions to support bushfire recovery and catchment restoration and to upgrade damaged or degraded tracks and trails across the ACT.
- Accreditation of the ACT Water Resource Plans for Surface Water and Groundwater (June 2020) (the Water Resource Plan) by the Murray–Darling Basin Authority. The accreditation of the Water Resource Plan is a significant milestone. The plan sets out the water management arrangements for both surface water resources and groundwater in the ACT to share water for consumptive use and to meet environmental and water quality objectives, along with other commitments including increased Aboriginal involvement in water planning in partnership with the Ngunnawal Traditional Custodians.

- ACT Healthy Waterways is a \$93.5 million joint initiative of the Australian and ACT governments to protect and improve long-term water quality in the ACT and the Murrumbidgee River system by reducing the level of sediment and nutrients entering ACT lakes and waterways. Following the successful completion of the planning and implementation phases of the project in June 2019, the 20 new water quality assets have entered a final two-year macrophytes (water quality plants) establishment period. The establishment period refers to the process by which a plant becomes established in a new habitat. Once wetland plants are fully established, they will intercept



A silt curtain slowed and trapped sediment and small debris in the Corin Dam reservoir following the Orroral Valley Fire. Large debris that was trapped by the curtain was manually removed from the reservoir — April 2020.



Murrumbidgee River from Tharwa Bridge (south view)

on average 1900 tons of sediment and nutrient pollution every year across Canberra, including 20% of the pollution that is currently entering Lake Tuggeranong.

- Development and implementation of a comprehensive open access data management system for water quality and catchment health in the ACT. As part of this, stream flow and rainfall data were added to the ACT Government Open Data Portal.
- Advancement of the ACT’s hydrological modelling capability through monitoring of pollution in Canberra’s catchments to improve the Territory’s models for catchment and development-scale water quality. This in turn will inform future planning and development decisions through the ACT Healthy Waterways project.

## OUTCOME 2: A SUSTAINABLE WATER SUPPLY USED EFFICIENTLY

**TARGET: Live within the Sustainable Diversion Limits set for the ACT**

Strategy 4: Secure long-term water supplies

Strategy 5: Manage and promote efficient and sustainable use of water

### Key achievements during 2019/2020

- Completion of major feasibility studies as part of the Murray–Darling Basin Water Efficiency Program to assess options for improving water efficiency for the Territory, including strengthening the Water Sensitive Urban Design (WSUD) General Code, implementing systems in residential and commercial buildings to decrease water use, stormwater harvesting, and upgrading of infrastructure for the irrigation of key urban parks. If found to be feasible, water savings could help



Care for Water campaign launch, Mick Gentleman MLA, Minister for the Environment and Heritage, Cr Tim Overall, Mayor Queanbeyan Palerang Regional Council and Ray Hezkial, Managing Director Icon Water

contribute to environmental flows in the ACT and the broader Murray–Darling Basin in conjunction with ACT waterway improvement efforts.

- Completion of the Revision of the WSUD Code require all new housing developments to incorporate water-saving measures such as water-efficient appliances, dual-flush toilets and rainwater tanks.
- Icon Water, the ACT Government and Queanbeyan Palerang Regional Council jointly launched the Care for Water campaign in early December 2019, asking Canberrans to take personal responsibility for their water consumption for the good of the whole community. The launch included students from Canberra and district schools including Gowrie Primary School and Kingsford Smith School in Canberra, and St Gregory’s Primary School in Queanbeyan, all of which had been working on their own water-saving ideas.
- Delivery of the Icon Water summer 2019–20 Water Conservation Communications Campaign Care for Water to inform and educate Canberra and

Queanbeyan residents that Permanent Water Conservation Measures are in place and of the need to reduce water usage. A post-campaign survey of ACT residential customers showed an 18% increase in customers claiming to be aware of the rules in place for water usage in Canberra, from 49% in December 2019 to 67% in March 2020. ACT households who claimed to be very committed or greater to actively conserving water increased by 10%, from 62% in December 2019 to 72% in March 2020.

- The efforts of the ACT community in saving water over the last decade continue with per capita water use remaining below levels seen prior to the Millennium Drought and below the ACT Water Strategy 25% per capita reduction target (Figure 7 is missing from the pdf and one of the photos of the 3 VIPs).

## ACT and Queanbeyan Historical Per Capita Water Use

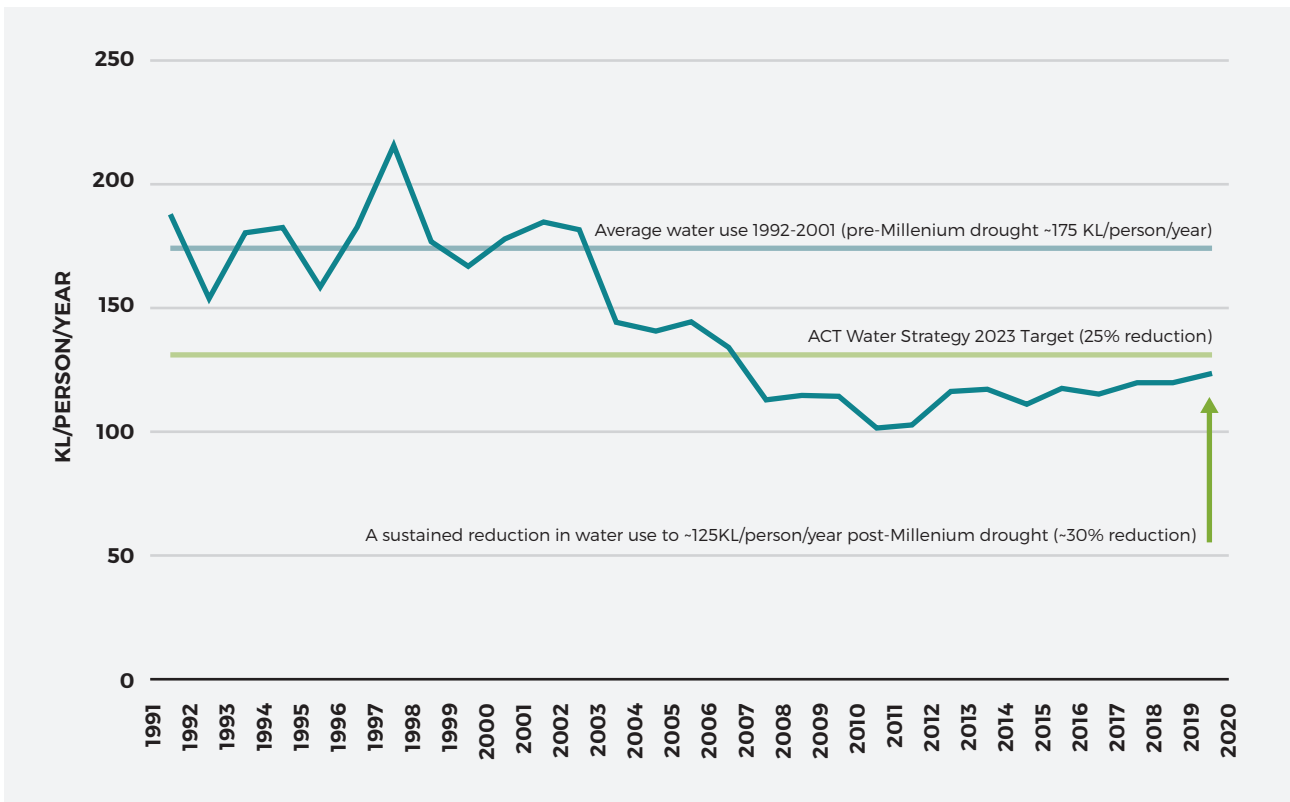


Figure 7. Historical water use in the ACT and Queanbeyan



Care for Water campaign launch, Mick Gentleman MLA, Minister for the Environment and Heritage, Cr Tim Overall, Mayor Queanbeyan Palerang Regional Council and Ray Hezkial, Managing Director Icon Water



Drain art has been installed in Canberra's urban open spaces as part of the H2OK: Keeping our Waterways Healthy project

### OUTCOME 3: A COMMUNITY THAT VALUES AND ENJOYS CLEAN, HEALTHY CATCHMENTS AND WATERWAYS

**TARGET:** Increased community understanding and participation in managing and improving waterways in the ACT

Strategy 6: Provide clean and safe water for the ACT

Strategy 7: Engage the community on understanding and contributing to a more sustainable city

#### Key achievements during 2019/2020

- Improvements towards water quality and ecosystem health in the ACT and region's rivers, lakes, aquifers, ponds and wetlands through continued compliance, enforcement and education for sediment and erosion control measures on development sites and rural and broadacre lands.
- Continuation of the Upper Murrumbidgee Waterwatch and Frogwatch citizen science programs to collect data, engage the community and foster stewardship of waterways.

- Release of the Waterwatch Catchment Health Indicator Program (CHIP) Report 2019. The CHIP report provides the ACT with an early warning system for ecosystem health issues through its surveys of water quality, waterbugs and the condition of riverbank vegetation. More than 200 volunteers conducted over 2000 water quality surveys to make the 2019 CHIP Report possible.
- Continuing support for community education and behaviour change through the H2OK: Keeping Our Waterways Healthy program. This includes ongoing management of the H2OK website, social media engagement and other communication platforms, face-to-face community education activities, and collaboration with the ACT's catchment groups (Ginninderra, Southern ACT and Molonglo Conservation Group) to foster stewardship of waterways and educate the community to help prevent waterway pollution.

