

EXECUTIVE SUMMARY

Environment and Recreation manages a water monitoring and assessment program for the Australian Capital Territory that includes water quality, streamflow, and biological monitoring. This program is part of maintaining up to date information on the water resources of the ACT, a statutory requirement of the *Water Resource Act 1998*. Additionally this information is used to assist in determining whether management strategies used to achieve or maintain the aquatic values set for ACT waters are appropriate.

The report is intended to provide the community with information regarding the state of water resource management in the ACT, including quality and quantity. The assessment approach adopted is designed to move towards a more holistic ecosystem health monitoring system as advocated by the Murray-Darling Basin Commission's Sustainable Rivers Audit. It uses biological data to ascertain ecosystem diversity, and water quality data to determine trends that may be present, and compares these results with the designated environmental and use values and standards set in the Territory Plan and the *Environment Protection Act 1997* and its regulations. Streamflow monitoring provides contextual information and is used to gauge the impact of removing water from the environment for other uses.

Water quality is monitored in the major urban lakes (with the exception of Lake Burley Griffin, a Commonwealth responsibility) and Burrinjuck Reservoir the first major water body downstream of the ACT. The major rivers and some urban streams are also monitored. River flow is measured at a number of sites throughout the ACT.

The report uses the biological information to report the biodiversity in the rivers and streams. The individual data points and mean values of water quality parameters for the year are considered with reference made to the standards set out in the Territory Plan and *Environment Protection Act 1997*.

Results for the 12-month reporting period (July 2006–June 2007) showed that rainfall in the urban area was 70% of the long-term average, and more than 150 mm below last year. Rainfall in the water supply catchments was 36% of the long-term average and consequently stream flow was extremely low. Environmental conditions in urban waterways remain at the degraded condition of previous years, continuing to suffer stress from drought and development. Environmental conditions in non-urban waterways have shown greater improvement since the bushfires than urban streams, with occasional elevated sediment and turbidity levels in response to rain storm events like that of New Years Eve 2006.

All the urban lakes are now showing water quality close to or within recommended limits. Lake Ginninderra and Gungahlin Pond both have good water quality, with occasional fluctuations in response to rain events. Lake Tuggeranong has fair water quality with a stabilising of turbidity and suspended sediment levels within the guideline value during this reporting period. Moderate to high levels of Cyanobacteria (blue-green algae) in Lake Tuggeranong over the summer period resulted in a single closure of the lake. Point Hut Pond water quality has improved so that in the reporting period all water quality indicators, except turbidity and dissolved oxygen, were within limits.

The *Water Resources Act 1998* came into full effect in December 1999 and required assessment of river flows, and licensing of water abstractions. Since that time and particularly since the recent drought, the demand for surface and groundwater has risen considerably. Consequently the water abstracted in many subcatchments has reached the sustainable limit. Licensed water use was previously given on a first in first served basis, however, given the limitations of the resource and demand across the community, a moratorium (effective 1 September 2005) on further access to water has been instigated.

On behalf of the ACT Government the Bureau of Rural Sciences has installed 12 groundwater monitoring bores in high demand subcatchments within the ACT. Pumping tests of these bores have been performed whilst monitoring continues of the aquifer recharge response to rainfall. Research continues on catchment processes and threatened fishes. Monitoring in April and July 2007 has demonstrated the recruitment of populations of Macquarie Perch above Vanity's Crossing on the Cotter River. Water related community programs, such as Waterwatch (including Frogwatch), continue to attract a high level of interest and support from the community.