

SECTION 3: RESEARCH AND COMMUNITY ACTIVITIES

Groundwater Resources in the ACT

Water Resources engaged the services of the Bureau of Rural Sciences in early 2006 to install 12 groundwater monitoring bores in high demand subcatchments within the ACT. The purpose of these monitoring bores is to gather information about the transmissivity, hydraulic conductivity, storativity and recharge rates of the various aquifer types within these subcatchments. This information will allow more informed management decisions to be made about the ACT's valuable groundwater resources. It is anticipated that the monitoring will continue for several years to enable the capture of information across a range of rainfall events.

Threatened Fish in the ACT

Monitoring of the effects of the January 2003 bushfires on threatened fish species continued in 2006. Populations of the threatened Two-spined Blackfish in the Cotter catchment were sampled between March and April 2006. Blackfish numbers recovered strongly in 2006 to be above pre-fire levels. The management of environmental flows in the Cotter River since the fires (see last year's report) has resulted in good recruitment of Macquarie perch in 2004, 2005 and 2006. The environmental flows included a series of flushes designed to remove sediment from riffles and maintain spawning habitats for threatened fish (Macquarie Perch and Two-spined Blackfish).

Macquarie Perch in the Cotter catchment are largely restricted to the Cotter Reservoir and approximately 1km of river upstream of the reservoir. Monitoring of the Cotter Reservoir in February 2006 again found that successful recruitment had occurred, with 109 Macquarie Perch captured, of which 53% were young-of-year. Further monitoring of both Macquarie Perch and Two-spined Blackfish will be conducted in 2007.

The impacts of the 2003 bushfires highlighted the precarious state of Macquarie Perch, with Cotter Reservoir containing the only long-term viable population of this species in the ACT. A one-off sampling for Macquarie Perch in the reservoir in May 2006 resulted in the highest-ever catch of this species recorded in the ACT. A total of 417 Macquarie Perch were captured, with 54 of these fish retained and then released in the upper Cotter River. This was part of a new program, which aims to establish a number of self-sustaining populations of this species outside of the Cotter Reservoir.

Restoration of the Lower Cotter Catchment

Since the 2003 bushfires there has been persistent water quality issues in the Lower Cotter Catchment. Scientists and the community have raised concerns about the management of the catchment, particularly the long-term implications of maintaining a commercial pine plantation operation within the catchment. A Lower Cotter Catchment Draft Strategic Management Plan has been prepared to set out a vision for the catchment. It was released for a two-month public comment period from the 26th May to 31 July 2006. The plan emphasises water as the primary value of the catchment. The Lower Cotter Catchment is currently an important part of Canberra's mains water supply and is likely to become increasingly important in the future as the impacts of climate change become more evident. The draft plan proposes a range of measures to address water quality issues including; a reduction in roads and improvement in design and maintenance standards of roads, rehabilitation of riparian areas, remedial measures for gullies and returning the catchment to native vegetation over a 50-100 year timeframe. The latter proposal involves the phasing out of pine plantations to establish a native vegetation cover that is resilient to natural events such as bushfires in order to achieve sustainable water quality outcomes for the catchment.

Upper Murrumbidgee Catchment Coordinating Committee

The *Upper Murrumbidgee Catchment Coordinating Committee (UMCCC)* is a community based organisation made up of agencies and groups that are responsible for, or contribute to, natural resource management in the upper Murrumbidgee catchment.

The UMCCC operates as a regional cross border network to promote communication, build awareness and disseminate knowledge between its members. These include agencies and groups in NSW and the Australian Capital Territory. The UMCCC actively participates in community forums and has received presentations and made submissions on numerous water resource policy initiatives including the ACT Water Allocations Draft Discussion Paper.

The UMCCC received funding under *Envirofund* to develop fact sheets about drought preparation for rural landholders in the upper catchment and has applied for funding to develop a fact sheet on groundwater issues for small landholders. Groundwater is a major issue for rural landholders and is a system few people fully understand. Fact sheets such as this are important to educate people on the importance of sustainable groundwater use.

The UMCCC has been successful in securing funding through Federal 'Defeating the Weed Menace' funding for the project *Refining and implementing the willow management strategy for the Upper Murrumbidgee Catchment*. This project will undertake research; mapping and survey work as well as develop awareness raising products and management strategies. This project will employ a full time project officer for 3 years.

Waterwatch

Waterwatch is a community water quality-monitoring program that aims to equip local communities with the skills and knowledge to become actively involved in the protection and management of their local waterways and catchments.

Waterwatch involves local community groups such as Landcare, Parkcare and Catchment Groups, as well as residents, schools and landowners who regularly monitor the water quality of local creeks, wetlands, lakes, rivers and stormwater drains.

Waterwatch groups have initiated many positive, community based conservation activities such as creek restoration, willow removal, removing litter from waterways eradicating weeds, drain stencilling, development of habitats, reducing the use of pesticides, fertilizers and other pollutants.

Waterwatch CAMPFIRE Program

In January 2003, bushfires scorched over 160,000 hectares or 70% of the ACT and impacted huge areas across the entire Upper Murrumbidgee region. A project that has had real success since these fires is affectionately known as CAMPFIRE (Community Assessment Monitoring Program For Fire Impacted River Ecology). CAMPFIRE volunteers collect water quality information from over 20 bushfire affected site across the ACT. Data collected as part of the CAMPFIRE project and the programs first year report can be found on the Environment ACT web site at:

www.environment.act.gov.au/yourenvironmenthwp/waterwatchact.html

Campfire was awarded the Murray Darling Basin Commission Rivercare Award in the 2005 ACT Landcare Awards.

Frogwatch

Frogwatch and Waterwatch volunteers undertake a yearly Upper Murrumbidgee Frogwatch Census as part of National Water Week activities. The Frogwatch Census involved an assessment of the types and abundance of frogs living in our environment. Frog species are widely recognised as indicators of environmental health and their presence can indicate the long term health of a catchment. Results of the Community Frogwatch Census are available on the Environment ACT website at: www.environment.act.gov.au/yourenvironmenthwp/waterwatchact.html

Getting Involved in Waterwatch

If you are interested in improving the health of your local waterway and meeting or forming a group of likeminded individuals please contact the Waterwatch Facilitator on 6207 2246.

Online information about Waterwatch is available on the website at: www.act.waterwatch.org.au and features Waterwatch resources, contact details and a library of relevant publications and fact sheets.

The Waterwatch Information Network (WIN) is a regular information e-mail, which promotes Waterwatch, and water quality issues in the Upper Murrumbidgee Catchment. Membership is free and open to all people with an interest in catchment health. Contact Waterwatch ACT on 6207 2246 for more information on WIN.