



ACT Water Report

2004–2005



ACT Government

environment ACT



FURTHER INFORMATION

Should you require further information in relation to this report, please contact:

- Water Resources
Environment ACT
Telephone: 6207 5728
Facsimile: 6207 6084
Email: environment@act.gov.au

© Australian Capital Territory, Canberra 2005

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without the written permission from Customer Services and Information, Chief Ministers Department, ACT Government, GPO Box 158, Canberra City ACT 2601.

Disclaimer: Environment ACT does not warrant that the data is free from errors.

Published by Arts, Heritage and Environment (MCA 05/1559)

Front cover photos:

Top: Scrivener Dam releasing water (CRCFE 2002)
Middle: Erosion gully on rural property in the ACT (Environment ACT 2005)
Bottom: Murrumbidgee River circa 1999

Website: www.cmd.act.gov.au

General enquiries: Phone Canberra Connect on 13 22 81

Contents

Executive Summary	1
Introduction.....	2
Purpose.....	2
Scope	2
Land Use.....	2
Rivers in the ACT Region.....	2
Bushfires	4
Protection of Water Resources	4
The Territory Plan Environmental and Use Values	4
Water Quality Standards	4
Section 1: Water Resources	5
Water Resource Use	5
Climate and Water Resources	9
Section 2: Water Quality Condition	12
Water Quality Monitoring Program	12
Sampling Sites	12
Lakes.....	12
Rivers	12
Biological Assessment of Ecosystem Condition	13
Condition of ACT Waters 2004-2005.....	13
Indicators.....	15
Nutrient Levels (Phosphorus and Nitrogen)	15
Total Phosphorus.....	15
Total Nitrogen	16
Suspended Solids.....	17
Turbidity	18
Faecal Coliforms.....	19
Conductivity	20
pH (Acidity)	21
Dissolved Oxygen.....	22
Algae Monitoring of Lake Recreation Areas	23
AUSRIVAS (Biological assessment using benthic macroinvertebrates)	24
Lakes.....	26
Lake Tuggeranong.....	26
Point Hut Pond.....	27
Gungahlin Pond	27
Lake Ginninderra	28
Rivers	29
Ginninderra Creek	29
Gudgenby River (901)	30
Murrumbidgee River	31
Molonglo River.....	32
Queanbeyan River (769)	33
Tidbinbilla River (15).....	33
Jerrabomberra Creek (246)	34
Yarralumla Creek (189)	34
Tuggeranong Creek (58)	35
Section 3: Research and Community activities	36
Monitoring of Threatened Fish in the ACT and Re-introduction of Trout Cod to the Murrumbidgee and Cotter Rivers	36
Effects of Commercial Forest and Native Forest Restoration in the Lower Cotter River Catchment on Fauna	37
ACT Natural Resource Management Plan.....	37
Upper Murrumbidgee Catchment Coordinating Committee.....	37

Waterwatch	38
Waterwatch CAMPFIRE Program	38
Frogwatch	38
Getting Involved in Waterwatch.....	38

List of Figures

<i>Figure 1: Land Use and Main Rivers of the ACT</i>	3
<i>Figure 2: Boundaries of Water Management Catchments Under the Water Resources Act 1998.</i>	6
<i>Figure 3: Comparison of 2004-2005 Average Monthly Rainfall in Belconnen near Charnwood Road and Cotter Hut in the Corin Reservoir Catchment with the Long Term Average Monthly Rainfall</i>	9
<i>Figure 4: Average Monthly Flow July 2004 to June 3005 in Ginninderra Creek Upstream of Charnwood Road Compared with the Long Term Average Monthly Flow for that Site</i>	10
<i>Figure 5: Average Monthly Flow July 2004 to June 3005 in the Cotter River Upstream of Corin Reservoir Compared with the Long Term Average Monthly Flow for that Site</i>	12
<i>Figure 6: A Comparison of Combined Monthly River Flow (Murrumbidgee, Molonglo and Queanbeyan rivers) into the ACT with the Monthly Flow of the Murrumbidgee River, just after the Downstream Exit of the ACT Border, at Halls Crossing for the July 2004 to June 2005 period</i>	11
<i>Figure 7: Locations of Water Quality and Biological (AUSRIVAS) Sampling Sites in the ACT Water Quality Monitoring Program</i>	14

List of Tables

<i>Table 1: Water Quality Standards (Ref: Environment Protection Regulations 1997)</i>	4
<i>Table 2: Licences to take water by subcatchment and type of use</i>	7
<i>Table 3: Number and Volume of Allocations by Subcatchment</i>	8
<i>Table 4: Flow Percentiles for River Sampling</i>	13
<i>Table 5: Summary of Total Phosphorus (mg/L) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	15
<i>Table 6: Summary of Total Nitrogen (mg/L) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	16
<i>Table 7: Summary of Suspended Solids (mg/L) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	17
<i>Table 8: Summary of Turbidity (NTU) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	18
<i>Table 9: Summary of Faecal Coliforms (cfu/100mL) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	19
<i>Table 10: Summary of Conductivity (uS/cm) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	20
<i>Table 11: Summary of pH Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	21
<i>Table 12: Summary of DO (mg/L) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	22
<i>Table 13: Summary of Chlorophyll-a (µg/L) Measurements for Lake and River Water Quality Sampling Sites in the ACT 2004-2005</i>	23
<i>Table 14: Algae Alert Levels for ACT Urban Lakes</i>	24
<i>Table 15: AUSRIVAS Bands and their O/E Taxa Scores for the ACT Autumn Edge Model and Some Interpretations for Reporting (Ball et al. 2001)</i>	25
<i>Table 16: Summary of AUSRIVAS Band Scores for Sites in the ACT from Autumn 2002 to Autumn 2005</i>	25
<i>Table 17: Site 248 Lake Tuggeranong Kambah Wetland</i>	26
<i>Table 18: Site 249 Lake Tuggeranong Dam Wall</i>	26
<i>Table 19: Site 270 Point Hut Pond</i>	27
<i>Table 20: Site 246 Gungahlin Pond</i>	27
<i>Table 21: Site 318 Lake Ginninderra East Arm</i>	28
<i>Table 22: Site 321 Lake Ginninderra Dam Wall</i>	28

<i>Table 23: Values of Indicators Sampled at Sites 301, 195, 196 and 64 Along Ginninderra Creek 2004-2005.....</i>	<i>29</i>
<i>Table 24: Values of Indicators Sampled on Sites 842 and 10 Along Paddys River 2004-2005.....</i>	<i>30</i>
<i>Table 25: Values of Indicators Sampled on Sites 901 and 20 Along the Gudgenby River 2004-2005.....</i>	<i>30</i>
<i>Table 26: Values of Indicators Sampled on Site 213 on the Murrumbidgee River at Angle Crossing 2004-2005.....</i>	<i>31</i>
<i>Table 27: Values of Indicators Sampled on Site 209 on the Murrumbidgee River at Kambah Pool 2004-2005.....</i>	<i>31</i>
<i>Table 28: Values of Indicators Sampled on Site 204 on the Murrumbidgee River at Halls Crossing 2004-2005.....</i>	<i>31</i>
<i>Table 29: Values of Indicators Sampled on Site 601 on the Molonglo River at Dairy Flat Bridge 2004-2005.....</i>	<i>32</i>
<i>Table 30: Values Indicators Sampled on Site 608 on the Molonglo River at Sutton Road 2004-2005.....</i>	<i>32</i>
<i>Table 31: Values Indicators Sampled on Site 769 on the Queanbeyan River at the ACT Border 2004-2005.....</i>	<i>33</i>
<i>Table 32: Values Indicators Sampled on Site 15 on the Tidbinbilla River 2004-2005.....</i>	<i>33</i>
<i>Table 33: Values of Indicators Sampled on Site 246 on Jerrabomberra Creek near Hindmarsh Drive 2004-2005.....</i>	<i>34</i>
<i>Table 34: Values of Indicators Sampled on Site 769 on Yarralumla Creek Downstream Curtain 2004-2005.....</i>	<i>34</i>
<i>Table 35: Values of Indicators Sampled on Site 58 on Tuggeranong Creek downstream of lake Tuggeranong 2004-2005.....</i>	<i>35</i>

