

Executive Summary

The *Sydney Water Catchment Management Act 1998* requires that an audit of the state of the land of the Sydney Drinking Water Catchment area be undertaken every two years, and that a report on the audit be submitted to the Minister for the Environment. This is the fourth Audit Report with previous reports published by CSIRO in 1999 and 2001 and by DEC in 2003.

This audit examines the 16,000 square kilometres of the Sydney drinking water catchment, including the Special Areas around storages and the outer catchment areas. The audit has used a pressure-state-response model examining 16 indicators to provide a snapshot of the Catchment condition over the period 1 July 2003 to 30 June 2005. The audit also assesses change in Catchment condition and pressure since previous audit periods where data permits, and reports on responses to recommendations in the 2003 Audit Report.

The auditor found that:

- parts of the Catchment are in good condition especially around the Special Areas
- the Wingecarribee, Kangaroo and Wollondilly River sub-catchments are subject to the most pressures, causing poor conditions for some indicators
- the presence of pathogens is a concern at some locations
- the incidence of algal blooms is a concern at some locations
- better data is needed to determine the Catchment condition for surface and groundwater extraction, soil erosion, dryland salinity, fish communities, and condition of riparian and native vegetation
- catchment monitoring programs need to be better integrated to improve the potential to establish links between cause and Catchment condition
- the integration of management and response programs need to be continued to ensure efficiency.

The Audit Report makes 25 recommendations in response to these findings. The recommendations can be categorised as either general, specific to an indicator and sub-catchment, or related to data needs or better integration of monitoring programs.

The auditor acknowledges that the Catchment is in a state of prolonged drought conditions, and that the drought may have significant effects on several of the indicators reported in this audit. While there are no specific data to assist in quantifying these effects in the Catchment the Audit Report comments on this likely effect where appropriate.

The auditor found that there has been a response completed or initiated in relation to 19 of the 25 recommendations in the 2003 Audit Report. The 2005 Audit Report repeats the outstanding recommendations, or intent of these recommendations, where they remain relevant.

Importantly for future audits, the auditor considers there is significant scope to integrate this audit process with both the natural resource management auditing framework currently being established by the Natural Resources Commission and the existing NSW State of the Environment reporting process. In considering the potential to integrate these processes, the auditor also suggests that the frequency of the audits be extended so that changes in catchment state can be considered in the context of longer timeframes. Further, to improve the process for future audits, the auditor should be appointed as soon as possible to enable the audit methodology and indicators to be set, and arrangements for data collection and provision to be agreed with relevant organisations at the start of the audit period.

Table ES1 shows the sub-catchments that this Audit found to be under pressure. A blue dot indicates a sub-catchment identified as being under pressure as demonstrated by one or more indicators. No attempt has been made to rate the relative importance of these pressures: their implications are discussed within the Audit Report. The table should therefore be used as a guide only. The sub-catchments already determined by the SCA as priority sub-catchment for action are highlighted in the table (see also Chapter 1).

There are a number of sub-catchments that are under pressure from a large number of factors. They are the Kangaroo River (priority), Wingecarribee River (priority) and Wollondilly River (priority) sub-catchments. There are also a number of sub-catchments which are under less pressure than the above sub-catchments, but where there is still potential that the health of the ecosystem could be affected. These sub-catchments are Mulwaree River (priority), Upper Coxs River (priority), Nattai River, Upper Wollondilly River (priority) and Werriberri Creek (priority).

Table ES1 – Issues arising in each sub-catchment from the audit of available data for each indicator and issue in this Audit Report

Indicator number	Indicator or issue	Back & Round Mountain Creek	Blue Mountains	Boro Creek	Braidwood Creek	Bungonia Creek	Endrick Creek	Jerrabattgulla Creek	Kangaroo River*	Kowmung River	Lake Burragorang	Little River	Lower Cocks River*	Mid Cocks River*	Mid Shoalhaven River	Mongarlowe River	Mulwaree River*	Nattai River	Nerrimunga River	O'Hares Creek	Reedy Creek	Upper Cocks River*	Upper Nepean River	Upper Shoalhaven River	Upper Wollondilly River*	Werriberri Creek*	Wingecarribee River*	Wollondilly River*	Woronora River	
2.1	Phosphorus								●								●					●				●	●			
	Nitrogen																	●				●				●		●	●	
	STP																											●	●	
	Unsewered								●			●		●										●				●		
2.2	Water quality at WFPs							●						●									●				●			
2.3	Algal blooms	~	●	~	~		~	~	●	~	●	~		~	~	~	~	~	~	~	~	~	~	~	~	~	~	●	~	
2.4	Pathogens	~		~	~	~	~	~	~				●		~	~	~	●	~	~	~	~	~	~	~	~		●	~	
3.1	Extraction licences								●																	●	●	●	●	
	Farm dams			●	●	●												●		●			●			●	●	●	●	
3.2	Groundwater bores								●				●						●								●	●		
3.3	Weirs								●														●			●				
	Transfers																											●		
4.1	Increasing urbanisation								●																			●	●	
	Other developments																											●		
4.2	Sites of pollution or potential contamination					●			●			●		●				●					●	●			●	●	●	●
4.3	Soil erosion																						●						●	
4.4	Dryland salinity			●												●				●										
5.1	Ecosystem water quality	~		~			~	~	●								~	●	~	~	~	~	~		~	~		●		
5.2	Macroinvertebrates	●		●	●	●		●	●	●	●	●	●		●	●	●		●	~		●		●		●	●	●	●	●
5.3	Fish								●									●					●							
5.4	Riparian vegetation	●	~		●			●			~			●	~			●		~		●	●			●	~	●	●	●
5.5	Native vegetation																●									●				

Notes: ~ No data available.

● Criteria for a blue dot are in Appendix A Table 1.

* Determined by the SCA as a priority sub-catchment.