

Main Findings

Overall

Based on available information the health of the Catchment has not changed extensively since the last audit. There are large parts of the Catchment in very good condition while there are significant parts of the Catchment that remain in poor condition. The ongoing drought during the audit period has contributed to good water quality in the storages but has also caused additional stress to ecosystems within the Catchment.

Minimising contamination of raw water supply

Agriculture and sewage treatment plants (STPs) are major sources of nutrient pollution within the Catchment.

Significant re-use of grey water in Goulburn appears to be responsible for a significant reduction in nutrient loads from the Goulburn STP.

Raw drinking water generally meets the requirements of Sydney Water and NSW Health. There was however, an increase in the number of exceedences of the criteria in the Bulk Water Supply Agreement for some parameters.

The incidence of toxic Cyanobacteria blooms increased slightly from the previous audit.

There is continued high incidence and long duration of cyanobacteria blooms indicating high levels of nutrients in some parts of the storage system (i.e. upstream of the water filtration plants).

The incidence of *Cryptosporidium* and *Giardia* have not changed significantly from the previous audit and remains generally low with some exceptions.

There is continued high incidences of *Cryptosporidium* and *Giardia* at Gibbergunyah Creek.

Managing water resources

Very little information is available on surface or groundwater extraction upstream of the dams and their effect on the health of the Catchment.

Sydney Catchment Authority complied with environmental release requirements 99.7% of the time.

Environmental flow requirements within the Catchment need to be further developed.

The transfer of bulk water may be affecting the health of waterways within the Catchment.

Protecting and improving land condition

The large areas of agriculture, increases in intensive agriculture and increased urbanisation and rural residential development will all continue to put pressure on water quality within the Catchment.

Identification of potentially polluting sites has been undertaken. Risk assessment and management process for these sites needs to be progressed.

11% of the Catchment has very high or high estimated rill or sheet soil erosion, while 82% has low or very low estimated rill or sheet erosion.

Salinity is not a major problem in the Catchment. However, there are areas susceptible to salinity that require appropriate management.

Maintaining and enhancing ecosystem health

Current water quality within the Catchment has the potential to affect ecosystem health.

A 'low' AusRivAS health rating was found in 41% of locations sampled in the Catchment.

The diversity of fish species is generally poorer above the dams and characterised by a higher proportion of exotic species.

The extent of riparian vegetation within the Catchment ranges from large areas with almost intact native vegetation cover to areas such as the Upper Wollondilly River and Mulwaree River sub-catchments with little or no native vegetation in their riparian zones.

Native vegetation covers approximately 63% of the Catchment and has a similar pattern of distribution to native riparian vegetation. While almost half of this cover is protected within National Parks over 37% is dispersed across the Catchment on privately owned land.

Table 1 shows which sub-catchments are believed to be under pressure. A blue dot indicates a sub-catchment that was identified as being under pressure from a particular indicator or parameter. The table, however, does not take into account that some indicators may be more important than others. Therefore, no attempt has been made to indicate the relative importance of these pressures: their implications are discussed within the audit report. For these reasons the table should be used as a guide only.

The sub-catchments already determined by SCA as priority sub-catchments for action are highlighted in the table. The criteria used by SCA to determine priority sub-catchments included some that differed from audit indicators.

There are a number of sub-catchments which are under pressure from a large number of factors. They are the Kangaroo River, Mulwaree River, Wingecarribee River and Wollondilly River 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 Lower and Upper Coxs River, Nattai River, Upper Wollondilly River and Werriberri Creek.

Table 1: 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 Burrigorang	Little River	Lower Coffs River*	Mid Coffs River*	Mid Shoalhaven River	Mongarlowe River	Mulwaree River*	Natta Riveri	Nerrimunga River	O'Hares Creek	Reedy Creek	Upper Coffs 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	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	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 the presence of a blue dot are in Appendix A Table 1.

* Highlighted sub-catchments are those determined by SCA as a priority sub-catchment.