

## Water – water quality

### What are we monitoring?

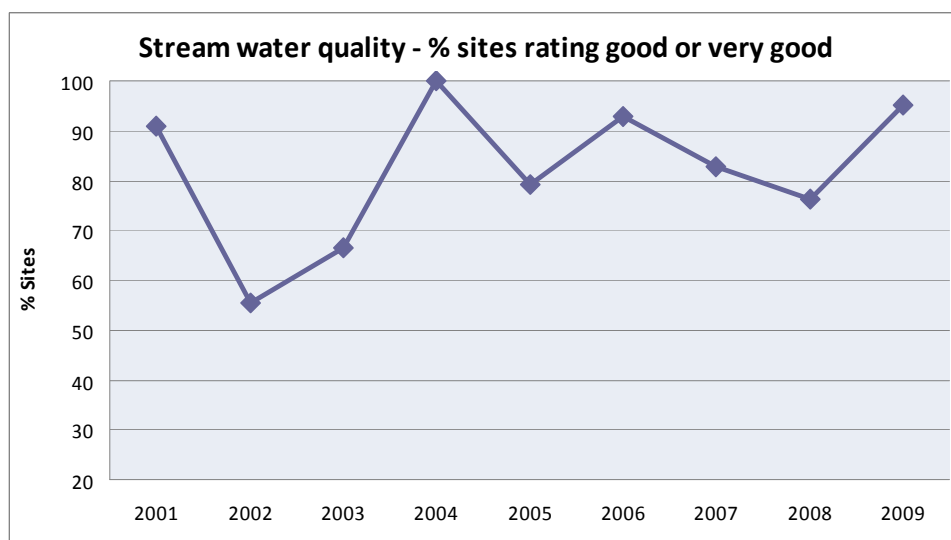
***The percentage of urban water monitoring sites with quality ratings of ‘very good’ and ‘good’***

### What is the trend?

In 2009 95.2% of ‘urban’ sites had ‘good’ to ‘very good’ SIGNAL-SF scores. 4.8% of urban sites had ‘fair’ SIGNAL-SF scores, while 0% recorded ‘poor’ or ‘very poor’ SIGNAL-SF scores. 100% of reference sites sampled recorded ‘good’ to ‘very good’ SIGNAL-SF scores.

The majority of ‘urban’ sites have fallen within the ‘good’ or ‘very good’ categories each year since 1999. These results suggest that most of the waterways sampled exhibit consistently good water quality.

Blue Mountains City Council conducts annual audits of stream water quality using aquatic macroinvertebrates as biological indicators. Macroinvertebrates include beetles, dragonflies, worms, freshwater mussels, snails and crayfish. The types of macroinvertebrates found in a system reflect the quality of the stream water and the health of the aquatic ecosystem. Sites are scored using the SIGNAL SF system and then categorised as ‘very good’, ‘good’, ‘fair’, ‘poor’ or ‘very poor’ depending on the scores recorded.



URBAN STREAM WATER QUALITY RATINGS - SITES RATED GOOD OR VERY GOOD									
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Sites	11	9	12	8	29	41	41	21	42
%	90.9	55.6	66.6	100	79.3	92.7	82.9	76.2	95.2

### Why is monitoring this trend important?

Monitoring the type and diversity of aquatic macroinvertebrates present in Blue Mountains urban streams is an indicator of how well we are progressing in looking after our water resources. Changes in the type and diversity of macroinvertebrate families can indicate declining water quality and negative changes in physical habitats – including factors such as pollution, sediment deposition and the presence of pest plant and animal species. Ideally, the proportion of monitored streams rated good or very good will increase – indicating improvements in water quality and the health of aquatic ecosystems.

**Source:** State of Environment Reports - City of Blue Mountains. Under the SIGNAL-SF system, each family of macroinvertebrates is allocated a score that represents its sensitivity to or tolerance of pollution and

disturbance. The most sensitive families score 10 and the most tolerant families score 1. The overall SIGNAL-SF score attributed to a site is the average grade of all the families present at that site. Sites are then categorised as 'very good', 'good', 'fair', 'poor' or 'very poor', based on their SIGNAL-SF scores.