

MANAGING WATER QUALITY

Importance of water quality

Deterioration of water quality is a major threat to our rivers, wetlands and lakes, and causes serious social, economic and environmental problems for regional communities. Poor water quality poses threats to:

- human and livestock health;
- the health of waterways;
- water supplies, resulting in high costs to ensure the provision of safe water;
- preservation of the quality of water resources for future generations;
- biodiversity;
- 'Clean and Green' agriculture and regional economic development; and
- recreation in and alongside waterbodies, including losses in tourist revenue.

It is important to maintain good quality water to protect agriculture, industry and domestic water supplies and the environment.

The main issues

Managing water quality is the most complex issue to be dealt with in the management of river health. This is primarily because of the nature of the pollutant sources and the implications this has for management.

Pollutant sources can be categorised into two types:

1. Point source where there is direct input of pollutants into a river system. These can include domestic wastewater from wastewater treatment plants, or industrial wastewater.
2. Diffuse sources where pollutants are carried in surface runoff or via groundwater to the river system. These can include:
 - erosion of farmland, roadsides and stream banks;
 - agricultural runoff;
 - runoff from forestry activities and construction sites;
 - septic tanks;
 - urban stormwater runoff;
 - irrigation drainage;
 - waste and litter;
 - intensive animal industry effluent; and
 - rising water tables.

The control of point sources is relatively straightforward as direct contributors can be targeted to change practice through awareness programs and the use of regulatory and market-based mechanisms. By contrast, the control of diffuse sources is much more difficult because it essentially involves every land use and/or activity taking place within a catchment. This means that as land uses and management practices change within a catchment, there will be impacts on water quality, either positive or negative. Moreover, whilst the impact of any one land manager in a particular land use in a catchment may be small, the cumulative impacts of all the land managers may be quite significant.

The implications of this are huge. It means that the management of water quality can only be successfully undertaken through an integrated catchment management approach, involving all of the land uses and land managers within a catchment, ensuring that they are aware of their impacts on water quality and river health and committed to reducing these impacts.

For water quality the VRHS:

- Describes an integrated framework for management of both point and non point source water quality problems. Management planning will occur through the regional planning process, which will provide for setting regional priorities and targets.
- Improves the current water quality action plans by:
 - expanding their scope;
 - ensuring that they:
 - undertake detailed analysis of the impacts of water quality on the ecological, economic and social community assets that are associated with rivers;
 - develop and evaluate management options which focus on sources rather than problems;
 - undertake cost-benefit analysis;
 - work through trade-offs;
 - set regional targets; and
 - identify clear management actions and roles and responsibilities.
- Improves the integration of salinity management plans with water quality action plans, and defining their scope so that they are comparable to water quality management plans in terms of consideration of all assets and threats.
- Provides for the establishment of acceptable standards for all activities within the catchment by setting further direction for development of codes of practice, best management practice guidelines, environmental management systems and statewide principles for various catchment management issues, especially those related to agriculture. Statewide principles will be developed for the management of rural drainage.
- Integrates water quality issues with other river health issues for the purposes of setting priorities.
- Requires increased focus on several emerging water quality issues, such as improving our understanding of groundwater pollution.