

Capability Statement

Water Quality



Capabilities

- Investigation of lake, river, wetland, estuary and ocean water quality
- State-of-the-Art numerical modelling of water quality processes such as hydrodynamics, pollutant mixing and transport, pollutant generation, pollutant decay and removal, biological processes
- Development of Water Quality Management Plans
- Design of urban water quality treatment measures (WSUD)
- Design of water-quality data collection and monitoring programs

Overview

Increasing community awareness of the key role of water as the life-blood of both urban and rural environments has placed a deserving focus on all aspects of waterway health. Water quality is a critical component influencing the health and sustainability of freshwater, estuarine and marine ecosystems. Poor water quality affects the health and biodiversity of our waterways. The physical and biological processes that determine water quality are inherently complex and challenging.



In Australia we commonly see the effect of increased nutrient loads to our waterways, with the production of toxic algal blooms, and the choking of our rivers and creeks with sediment. A whole-of-system appreciation of catchment management and water quality issues is required to provide appropriate solutions to water quality problems in the aquatic environment.

Water Technology is one of Australia's leading water sector consultancies offering a comprehensive range of services to both government and private industry clients. Our staff possess the specialist skills and experience required to meet the varied challenges and complexities of water quality investigations. We combine leading edge technology with outstanding project experience to deliver economic and environmentally sustainable solutions.

Selected Projects

Fairway Waters Pakenham

Client: Premier Places Pty Ltd

A stormwater management plan incorporating water quality treatment was provided in line with planning requirements. This included conceptual artificial wetland design in harmony with the development aesthetics as well as providing on-site stormwater detention and treatment.

Martha Cove Development

Client: Watsons Pty Ltd

Provided two-dimensional modelling of water circulation and water quality, within a large canal-type development.

Duck Bay Tidal Exchange Investigation

Client: Consulting Environmental Engineers

Provided detailed advice on tidal flushing and mixing for potential locations for a sewage treatment outfall. This included extensive numerical modelling of the tidal estuary and modelling of pollutant dispersion and long term concentration for a range of discharge scenarios.

Drainage Water Quality Scoping Studies

Client: Glenelg Hopkins CMA

Assessment of impacts of 4 rural drainage areas on water quality in receiving streams has been investigated including field work, hydrologic modelling and analysis of water quality and stream condition data.



Copper Cove Marina Development – Wallaroo

Client: Soil and Groundwater Consultants, Adelaide

Assessment of the likely impact of contaminated groundwater on water quality within a marina and along the adjacent sections of coastline. This involved detailed hydrodynamic, transport and dispersion modelling of a range of contaminants leached from adjacent groundwater bodies.