

Water Treatment



Areas of expertise include:

- Coagulation and filtration
- Membrane filtration
- Disinfection
- Removal of contaminants
- Desalination
- On line monitoring and control
- Reuse

The AWQC provides a range of investigatory and advisory services associated with water treatment processes to improve drinking water quality. A team of specialists is available for onsite evaluation of efficiency of existing treatment processes or desktop study of proposed plants.

Services Offered

- Determining coagulant and coagulant aids required for effective treatment using sedimentation or flotation jar tests.
- Characterisation of water quality, particularly natural organic matter, to assess impact on treatment.
- Optimisation of treatment processes for pathogen control, particularly Cryptosporidium.
- Evaluation of treatment options such as oxidation and activated carbon for removal of soluble micro pollutants such as algal toxins, taste and odour compounds, pesticides, pharmaceuticals and emerging contaminants of concern.





- Determining disinfectant demand and disinfection by-products for a range of disinfectants, including chlorine, chloramine, chlorine dioxide, ozone and ultra violet irradiation
- Evaluation of the potential for bacterial regrowth in a distribution system by measuring biodegradable organic carbon (BDOC)
- Assessing the effectiveness of “point of use” devices for treatment of water at the customer tap
- Evaluation of water treatment processes using bench scale or pilot plant facilities
- Predicting issues and determining impact of blending waters, such as surface, desalinated and/or recycled.

The water treatment research expertise of the AWQC has a recognised world standing. This is strengthened by established links with other research facilities in the United States, France, Germany, Netherlands and China.

Consultancy Projects

- Study into impact of blending desalinated water with surface water for SA Water and Melbourne Water
- Review and optimisation
- Feasibility of chloramination for the Menindee to Stephens Creek pipeline for the Broken Hill Water Board and for the Mildura WTP for Lower Murray Region
- Evaluation of proposed Moorabool WTP design for the removal of Cryptosporidium and Giardia for Barwon Region Water Authority.