Ballina STP Desalination Plant Options Analysis

Completed 2016

Ballina Shire Council's effluent reuse scheme is designed to provide recycled water to a portion of Ballina's residential customers, commercial customers and for open space irrigation. Due to the coastal location, elevated levels of total dissolved solids from salt water inflow into the sewerage system, were experienced. GANDEN was contracted by Council to develop, assess and compare a range of feasible options and recommendations for the on-site treatment of recycled water at Ballina WWTP to meet the TDS limit imposed by Council.

Highlights and Innovations

- Review of desalination options including reverse osmosis, nanofiltration, electrodialysis reversal, capacitive deionisation, ion exchange, thermal distillation and solar distillation.
- Multi-criteria analysis of several technologies, using a multi-gated methodology to assess quality objectives and implementation practicalities.
- NPV assessments of technologies.

Principal
Ballina Shire Council

GANDEN's Role
- Technical Advisor

Equivalent Population
- 30,000 EP