



CAPABILITY STATEMENT

Landfill Leachate Management and Treatment

Earth Systems has specialist expertise in the management and treatment of landfill leachate and other contaminated effluent streams. We offer an integrated range of water treatment and management solutions, from site assessment and development of effective and cost-efficient treatment strategies, to water quality monitoring, treatment equipment and regulatory approvals.

Earth Systems has a dedicated Water Management Team that has been providing cost-effective and innovative solutions for water quality issues for over 20 years. Our experienced specialists have extensive experience in the development of landfill leachate treatment and management strategies that fulfill compliance requirements while maximising cost-effectiveness and the use of passive treatment and management processes compatible with long-term goals of eventual rehabilitation and closure.

SERVICES PROVIDED

- Evaluation of site water quality issues and development of integrated water management and treatment strategies.
- Comprehensive risk assessment including environmental, operational, technical, social and financial risks.
- Development of effective and cost-efficient water quality monitoring programs with a focus on cost-saving and compliance-improving monitoring approaches and technologies.
- Site water balance and hydrological modelling.
- Holistic site water management and leachate minimisation strategies aimed at minimising the long-term cost of leachate treatment and management.
- Specialist passive bioremediation treatment system design including wetlands and anaerobic and aerobic treatment cells.

THE EARTH SYSTEMS ADVANTAGE

- A positive working relationship with environmental regulators and government departments in many jurisdictions of Australia.
- Comprehensive understanding of leachate chemistry and treatment mechanics.
- Focus on a scientific basis for treatment system design supported by field testwork and monitoring in order to achieve tailored solutions offering effective results at lowest cost and with high reliability.
- Easy to understand management advice and recommendations.
- Access to the latest in water quality monitoring technologies and innovative treatment strategies.



EXPERIENCE

Recent Earth Systems projects involving leachate treatment/management and/or effluent treatment strategy design include:

- Investigation and design of an innovative waste-to-resource and passive wetland-based landfill leachate management and treatment strategy for the Port Latta Landfill in northern Tasmania.
- Design of landfill leachate treatment wetlands for the Baretta Landfill in southern Tasmania.
- Long-term landfill leachate management for the Nudgee Landfill in Queensland.
- Odour and leachate management and treatment for a landfill site in Canberra.
- Design of stormwater treatment wetlands for Whitewater Creek, southern Tasmania.
- Assessing and improving the performance of a wetland system at the Henty Gold Mine in western Tasmania.
- Concept design of a water treatment plant for the Rosebery Mine in western Tasmania.
- Acid sulfate soil and water quality management in the Lower Murray Lakes, South Australia.

