Earth Systems has specialist expertise in the management and treatment of landfill leachate and other contaminated effluent streams. We offer and 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
Some of the services provide by Earth Systems for management of landfill leachate include:

- 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.

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 a municipal landfill in northern Tasmania.
- Design of landfill leachate treatment wetlands for a municipal landfill in southern Tasmania.
- Long-term landfill leachate management for a landfill site in Queensland.
- Odour and leachate management and treatment for a landfill site in Canberra.
- Design of stormwater treatment wetlands for a creek in southern Tasmania.
- Assessment and improvement of the performance of a wetland system at a gold mine in western Tasmania.
- Conceptual design of a water treatment plant for a base metal mine in western Tasmania.