

Johns Environmental Group Effluent Irrigation Capability

MEDLI Hydraulic & Nutrient Balance Modelling

MEDLI is a specialist computer model for the design and analysis of effluent reuse systems for intensive rural industries, agri-industrial processors (e.g. abattoirs) and sewage treatment plants using land irrigation.

Justin Galloway is an expert in computer sustainability modelling, especially using MEDLI modelling. He has performed MEDLI scenarios for sustainability and development application reports on over 200 occasions. The modelling results and associated irrigation management or site based management plan report have been accepted by EPAs and Planning Authorities across Australia.

MEDLI services we can provide include:

- Determine appropriate wet weather storage sizes and acceptable overtopping frequencies.
- Determine evaporation, rainfall additions and seepage from the pond system.
- Determine sustainable nutrient and hydraulic loadings for effluent irrigation.
- Assess crop performance and suitability.
- Integration with wastewater treatment & recycling.

The professional team at Johns Environmental can perform MEDLI modelling for your specific effluent reuse system, whether it be abattoir, intensive livestock, sewage, brewery or other effluent generating operation.

Land Resource, Land Capability and Salinity/Sodicity Assessment

Most soil data is collected at a regional scale, which gives insufficient information for property scale planning, management or development applications. To provide a better understanding of the soil resource, more detailed assessment is essential as the soil physical and chemical properties play a major role in the success of any soil-based irrigation system.

Our certified professional soil scientist (CPSS), Justin Galloway, has 20 years' experience in land resource mapping, site specific soil assessments, soil sampling and interpretation of soil physical and chemical results.









Soil and land resource assessments provide data for:

- Understanding potential soil limitations.
- Determining landuse suitability (including GQAL assessments).
- Developing a soil map & appropriate property layout.
- Assessing soil salinity and sodicity.
- Designing, operating and managing irrigation systems.
- Developing an environmental monitoring framework.

Irrigation & Site Based Management Plans

The holder of an environmental licence is generally required to develop and implement an Irrigation Management Plan (IMP) or a site based management plan (SBMP). These plans describe the reasonable and practicable measures to ensure sustainable release of contaminants (liquid or solid) to land.

Justin Galloway has prepared and updated dozens of IMP and SBMP documents for sustainability and development application reports submitted to and accepted by EPAs and Planning Authorities across Australia.

On-site Field Work & Monitoring

We have extensive experience working on industrial sites & can supply specialised monitoring equipment to assist in onsite field evaluations & soil monitoring. Our team has:

- Specialised environmental sampling & monitoring instruments.
- Integrated expertise in interpreting complex wastewater & soil data sets.
- Worked with most laboratories across Australia.
- Good reputation with EPAs across Australia.
- Experience with environmental sampling of soils, ambient surface water, groundwater and wastewater.

Contact us at 07 3863 0051, or visit our website: www.johnsenv.com.au

Recent Clients

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