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Specialists in Community Discharges, Land Treatment and Nutrient Management

BIOSOLIDS MANAGEMENT SOLUTIONS

Are you sitting on a toxic time bomb…or a goldmine?

New Zealand produces thousands of tonnes of biosolids each year most of which is landfilled. Landfilling is becoming more difficult due to increased levies, lack of space and transportation distance. These factors make local treatment and re-use an attractive option. However, beneficial re-use comes with its own challenges, in terms of resource consent requirements, available land and community reluctance to sanction land application.

Lowe Environmental Impact can help you identify and implement an alternative solution for your biosolids management. We can take your project from the initial investigation stage, deal with all local and regional council resource consent requirements, and provide tailored biosolids solutions to meet the requirements of any site.

LEI has environmental and operational expertise in the management of biosolids that will:

- Be cost effective for both council and rate payers
- Reduce biosolids going to landfill
- Beneficially re-use valuable organic matter to rebuild soils
- Protect public health and avoid detrimental impacts on the environment
- Provide management of community consultation processes
- Manage the consenting and compliance process

We'll work with you from the initial assessment of alternatives to consenting and implementation of solutions to achieve your goals in a cost effective manner.

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LEI EXPERTISE AND SERVICES

LEI is a specialist science and engineering company with significant experience in biosolids research as well as practical experience. The solutions we provide include the recycling of different forms of biosolids, such as digested and dewatered solids, oxidation pond sludge, dried pellets, as well as all types of water and wastewater sludges. Specific biosolids expertise and services provided include:

- Sampling and characterisation
- Site assessments
- Risk analyses
- Identify suitable disposal sites
- Resource consent and assessment of environment effects
- Compliance applications
- Community consultation
- Management plans
- Sludge removal, dewatering, transport and application

REGULATORY REQUIREMENTS

Biosolids producers and managing councils need to comply with both the local and regional council regulations as well as the national biosolids guidelines. It is important to have a good understanding of all consent requirements and be aware that in most cases a resource consent will be required.

COMMUNITY CONSULTATION

Both the Local Government Act (2002) and the Resource Management Act (1991) recommend undertaking stakeholder and community consultation, especially for issues that involve large commitments of public money. LEI has developed a Community Consultation Strategy for biosolids management that is research based and grounded in industry best practice to help manage this often complex process.

A VALUABLE RESOURCE

Biosolids has value by virtue of its constituents which include:

- Nutrients
- Organic matter
- Inorganic matter
- Trace metals

Recycling of biosolids to land is now a very real option and can save up to 50% of landfilling costs while realising additional fertiliser value.

Unlike many other waste streams, there are good prospects for alternative, beneficial end-use options for biosolids. Some of the potential end-uses are:

- Topsoil/soil amendments for road and construction work.
- Landscape plantings in parks, reserves, cemeteries.
- Horticulture – e.g. growth medium for ornamentals and other non-food chain plants.
- Production of feed stock and bioenergy crops.
- Agriculture – e.g. organic fertiliser for improvements in crop growth.

WHAT BIOSOLIDS CAN DO

Biosolids can supply sufficient nutrients for plant growth without the need for mineral fertiliser application.

- Increases in soil P (total and plant available), N and K.
- Nutrient (N, P, K and S) build up in crops and increased crop yields.
- Increases in soil organic matter.
- Reconstruction of topsoil.
- Improved soil structure, aeration and moisture retention.
- Rapid re-growth of plant cover on degraded land.
- Protection from soil erosion.

Contact us to scope what is required and provide you with a proposal for your project

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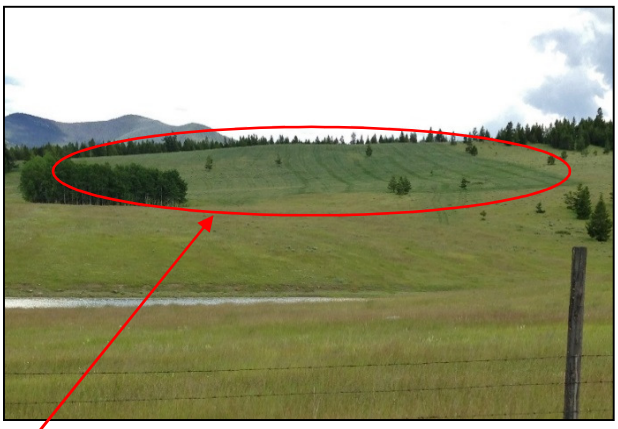
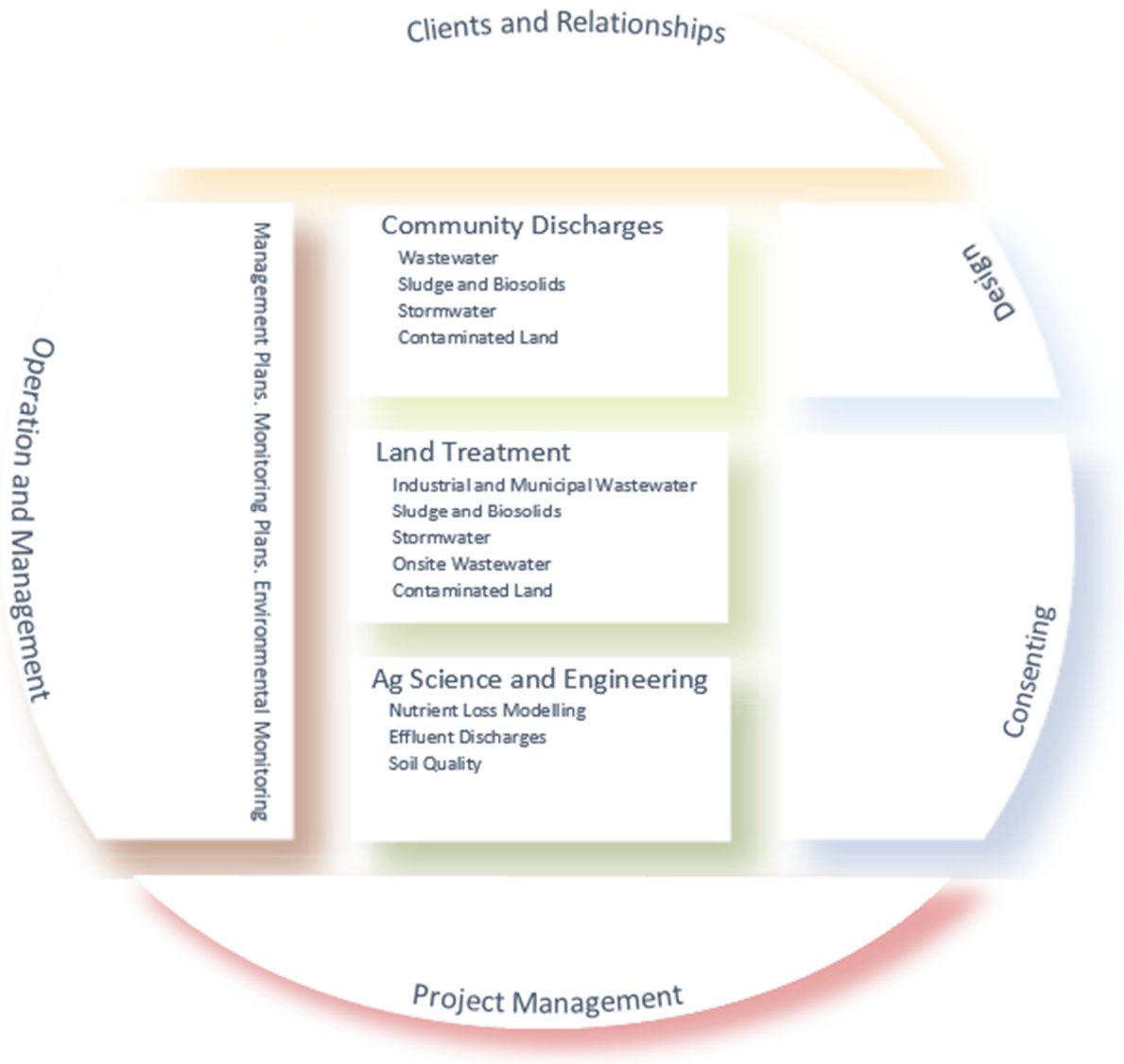
Rehabilitation of degraded land – mine site before (left) and after (right) biosolids application

Agricultural land application – increased pasture growth


Biosolids applied to poplar plantation


Clients and Relationships
Community Discharges
Wastewater
Sludge and Biosolids
Stormwater
Contaminated Land
Land Treatment
Industrial and Municipal Wastewater
Sludge and Biosolids
Stormwater
Onsite Wastewater
Contaminated Land
Ag Science and Engineering
Nutrient Loss Modelling
Effluent Discharges
Soil Quality
Design
Consenting
Project Management
Operation and Management
Management Plans, Monitoring Plans, Environmental Monitoring