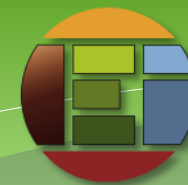


Why consent land treatment systems?

Hamish Lowe



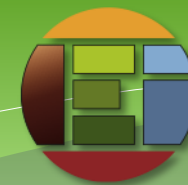


Definitions

**Land Disposal vs
Land Treatment**

Biosolids





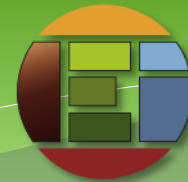
Example 1

- Land treatment – soils treat and add value to treatment process
- LT implies more ownership than disposal

Example 2

- Biosolids we assume to include those from municipal WWTPs
- HBRC biosolid definition excludes municipal WWTP solids





Compliance staff (consent holder/consultant) have to interpret

RMA Framework well defined to develop plans

Understanding the policy process

Staff – experienced and inexperienced – make plan recommendations

Councillors butcher or enhance draft plans

Staff pick up the pieces on decisions

Industry have to put up with



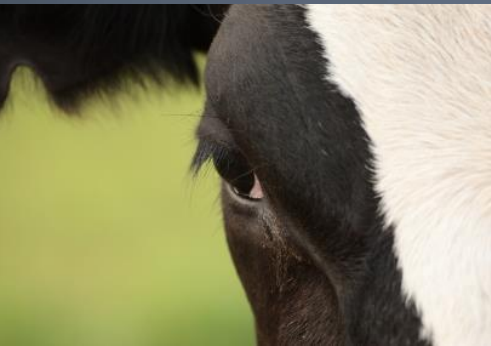


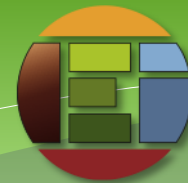
Example 3

- Ecan LWP which is not yet operative is already having Staff Interpretation Advice sent out to Consultants

Example 4

- Plan change hearing process has resulted in submitters convincing panel of need for 150 m WWTP LT buffer to property boundaries





**Applicant
- including
management and
team**

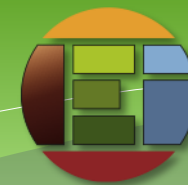
**Applicant
monitoring –
untrained staff or
third part
contractors**

**Availability
of skills**

**Council processing –
staff and
consultants**

**Compliance staff –
can cover range of
industry and
planning**

WE PROUDLY
USE THE
JOHNSTON COUNTY
RECLAIMED
WATER SYSTEM
FOR IRRIGATION



Example 5

- LT consent for Manawatu community produced by engineering company who did not include nutrient loading assessment in application

Example 6

- RC advisor (planner/compliance officer) in Wairarapa unaware of purple pipes we were walking over were 'the' drip irrigation lines



Conditions



Applicants provide

Role of draft conditions

RC responsible of accepting applicants proposal

And applicant responsible for accepting RC response

Ratcheting up of compliance levels

Comparison to PAs/other industry

Numerical numbers

Often reflection of application...and certainty

Why is monitoring data collected...difference between compliance monitoring and SOE

Compliance monitoring vs good management





Example 7

- PA/CA for dairy effluent typically 150kg N/ha/y
- Why does WWTP LT at 75 kg N/ha/y need consent?

Example 8

- Manawatu LT system requires groundwater monitoring for less drainage than adjacent irrigated dairy farm, why?

Example 9

- Southland meat company applying sludge at < 10 mm having to monitor surface water

Action

Reaction



Consistent people,
within company and RC

Taking action when
there is a breach, both
RC and consent holder

Why require monitoring
if not
limit/consequence

How many provide
information to the right
stakeholders

How many compare
proposed to actual

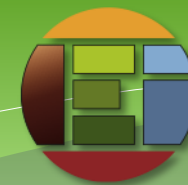
How to manage RC's
sudden change of
view/staff

At what time does
gentle coaxing require
a stick



Compliance





Example 10

- Manawatu meat processing plant served abatement notice from new compliance officer for monitoring at wrong site - **after 8 years**

Example 11

- Hawke's Bay school discharging to half the consented application area and having ponding issues





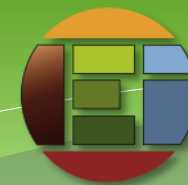
Changes

Biological systems

Seasonal variability

Consent variation

Better knowledge



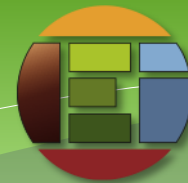
Example 12

- Hawkes Bay meat processing plant applying up to 650 kg N/ha/y
- Monitoring showed 450 kg N/ha/y more sustainable

Example 13

- Dairy farm increases number of cows milked
- Need to increase land application area





S330 Emergency discharges?

Emergencies

Design standard to be used, pragmatic and cost consequence

S107

Temporary

Exceptional circumstances





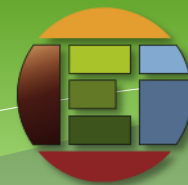
Example 14

- Dairy Farms now having to use Dairy Pond Calculator and put in ponds rather than having emergency runoff

Example 15

- All engineering is designed to fail, i.e. a certain seismic event, certain flood,
- Community are less accepting of failures: 20%AEP and now 10%AEP





Environmental Perfection

Change?

- Technology is improving.
- We are testing for things we couldn't test for before.

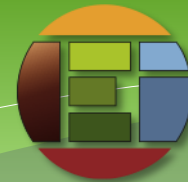
Possible?

- Driven by idealistic submitters, councillors and inexperienced applicants and RC staff.

Affordable?

- Who pays?
- What is the marginal gain or marginal benefit?





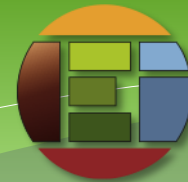
Example 16

- Wairarapa Council policies gave community undertaking to 100 % LT
- Costs likely to exceed 100 % of annual rate i.e. can't afford

Example 17

- Manawatu WWTP needs 140,000 m³ storage for 100 % LT
- Infrequent discharge to river and majority land requires 10,000 m³





Definitions

Are we talking about the same thing?

Environmental Perfection

Is there such a thing given dollars and technology available?

Are there skills

To design, regulate, manage, monitor, interpret

Land Application - Take Home Messages

Emergency

What can we plan for?
What should we plan for?

Conditions

We all need to take responsibility

Changes

How do we manage seasonal variability, greater information and more certainty

Compliance

Who takes action and leads the charge; is this risk management?