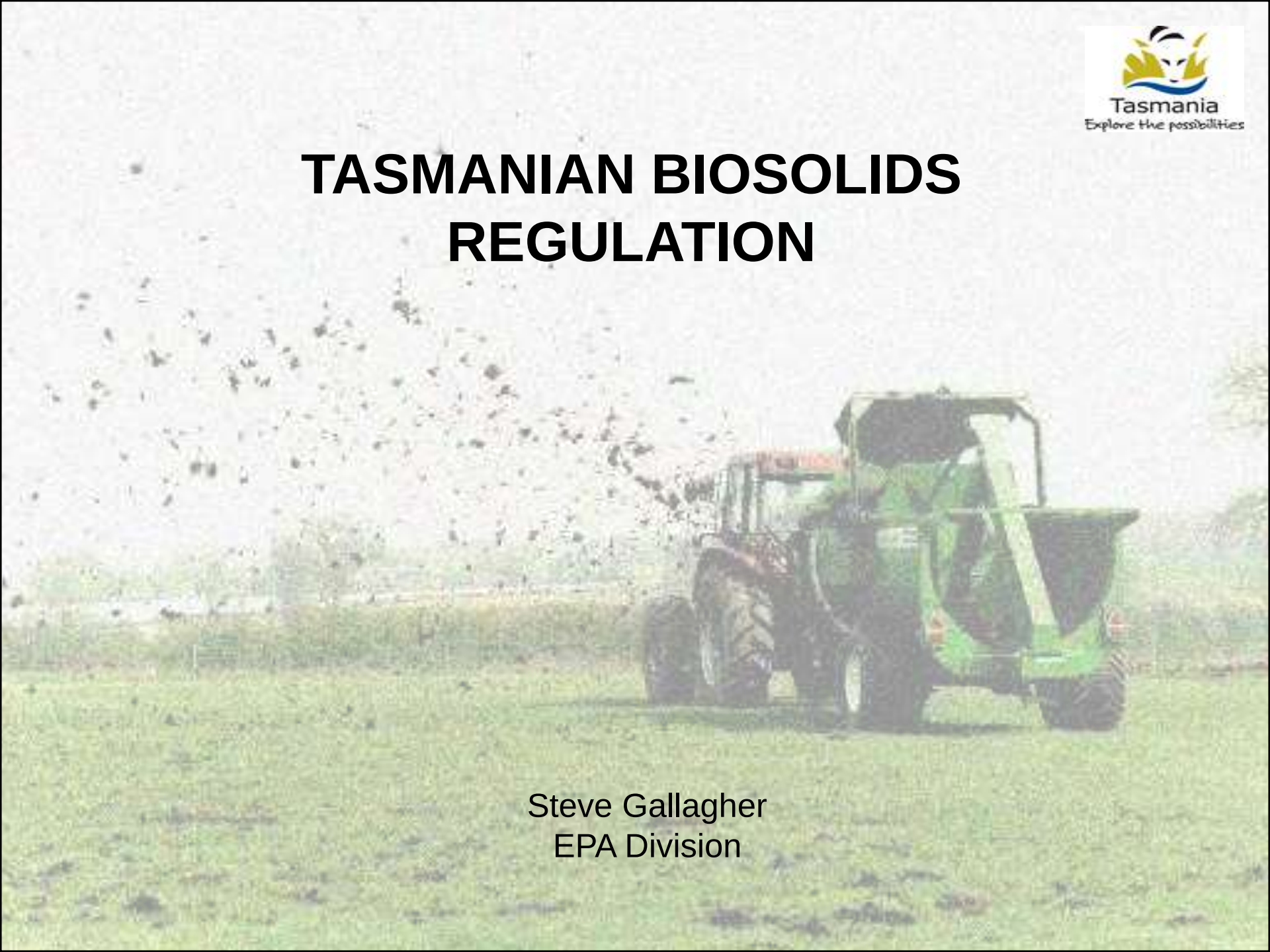
TASMANIAN BIOSOLIDS REGULATION



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Biosolids are nutrient rich organic material resulting from the treatment of wastewater or sewage.

Biosolids are not sewage or faeces. It is sludge that has been further treated (stabilised) to make it suitable for beneficial use.

Biosolids are

- water (digestion & dewatering)
- dead micro-organisms
- a small portion of active micro-organisms
- inert solids such as sand or dirt

The quality and type of biosolid is a product of the wastes entering the sewer and the type of sewage treatment process.

Volume of sludge and/or biosolids produced annually in Tasmania

2011-12 State of Industry Report - Biosolids - volume removed, end use and reuse percentage by corporation

Corporation	Biosolids removed (dry solid tonnes/year)	Comments	End use / purpose	Biosolids reused (%)
Ben Lomond Water	~ 10 000	Large volumes are stored in sludge drying beds at Ti-Tree Bend WWTP	Landfill capping at Remount Road and agricultural use.	7%
Cradle Mountain Water	~ 5 815	Sludge from several WWTPs transferred to Ulverstone (composting) or Wynyard sludge lagoon. Large quantity stored at Smithton	Composting (Dulverton) and agricultural reuse.	66%
Southern Water	~ 3 600	Some biosolids stored at reuse sites (in bundled areas)	Various agricultural reuse applications, incorporation into commercial composting, and some landfill disposal.	85%

Approved Management Method (AMM) for Biosolids Reuse 2006

- Provides the minimum legal requirements for the classification & reuse of biosolids in Tasmania
- Guide as to whether the Director, EPA is to be notified.
- *Environmental Management and Pollution Control (Waste Management) Regulations 2000*

Tasmanian Biosolids Reuse Guidelines 1999

- Broader, on-ground implementation guidelines

Environmental Management and Pollution Control Act 1994

- A producer or end-user of biosolids must not cause environmental harm.

US EPA Part 503 Biosolids Rule

Key first step to satisfy AMM

Analysis of biosolids

1. Contaminant grade A, B or C (heavy metals, pesticides etc)
2. Stabilisation grade A, B or C (pathogens, vector attraction, odour)

Classification as Biosolids

Class 1

Class 2

Class 3 not for reuse

Records must be retained for 5 years

Class 1 Biosolids

- Meets Contaminant Grade A requirements and Stabilisation Grade A requirements.
- Not a controlled waste, do not require an approved waste transporter to transport the material.
- May be used for all beneficial reuse land applications (subject to local planning scheme).
- Nitrogen Limited Application Rate does apply.
- Do not need to notify EPA Division.

Class 2 Biosolids deemed suitable for reuse

- Is a controlled waste (transport EPN)
- Prior agreement with landowner required
- Biosolids owner must verify sufficient suitable land available.
- Check requirements of local planning scheme with council.

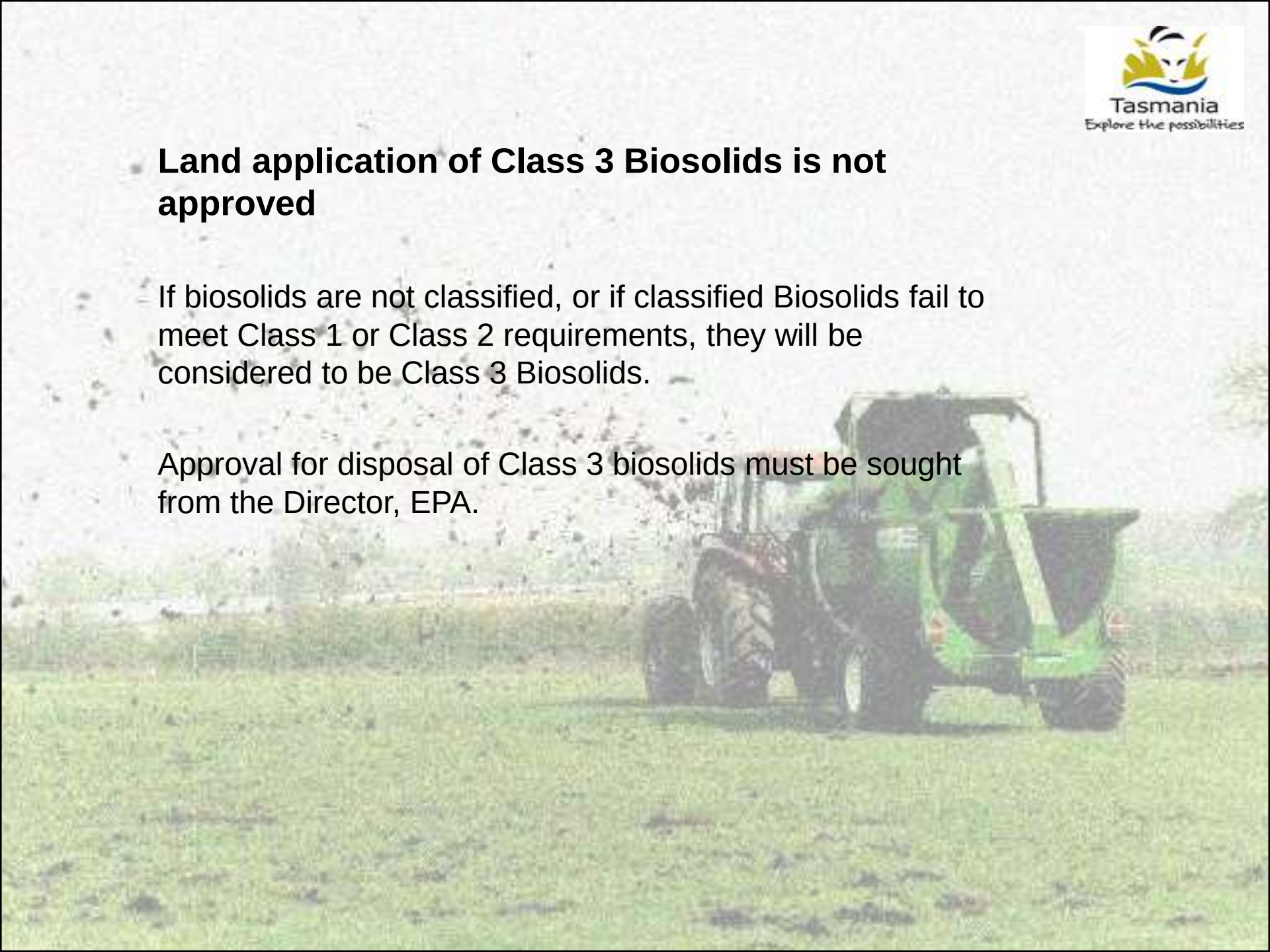
EPA does not need to be notified where

- application rate per 3 year period <50% of the NLAR or <50 wet t/ha (whichever is the lesser)
- application rate complies with the low-rate procedural requirements (Sec 7.4 TBRG), and
- application complies with the site, activity and management requirements (Sec 6 of the TBRG).

Land application of Class 3 Biosolids is not approved

If biosolids are not classified, or if classified Biosolids fail to meet Class 1 or Class 2 requirements, they will be considered to be Class 3 Biosolids.

Approval for disposal of Class 3 biosolids must be sought from the Director, EPA.



Observations on the last decade of sludge/biosolids management in Tas:

1. Need better reporting on volumes of sewage sludge produced at a site and, where transported off site, information regarding its destination and end use.

2. Delays in lagoon de-sludging impacting operational capacity (ie achievement of compliance).

3. Sludge to landfill has been fairly entrenched part of the wastewater scene

4. Significance of trade waste inputs with focus on complications arising from Class 3 contaminated waste.

5. Producer responsibility can't stop at the farm gate

6. Truck drivers 1, Biosolids producers 0

7. Multiple handling of biosolids is a significant risk factor for any proposal

8. We live in a more informed, networked community

So what's the solution?

~~MORE REGULATION~~

1. Reducing quantity of sludge produced
2. Carry out disposal/reuse as effectively as possible.

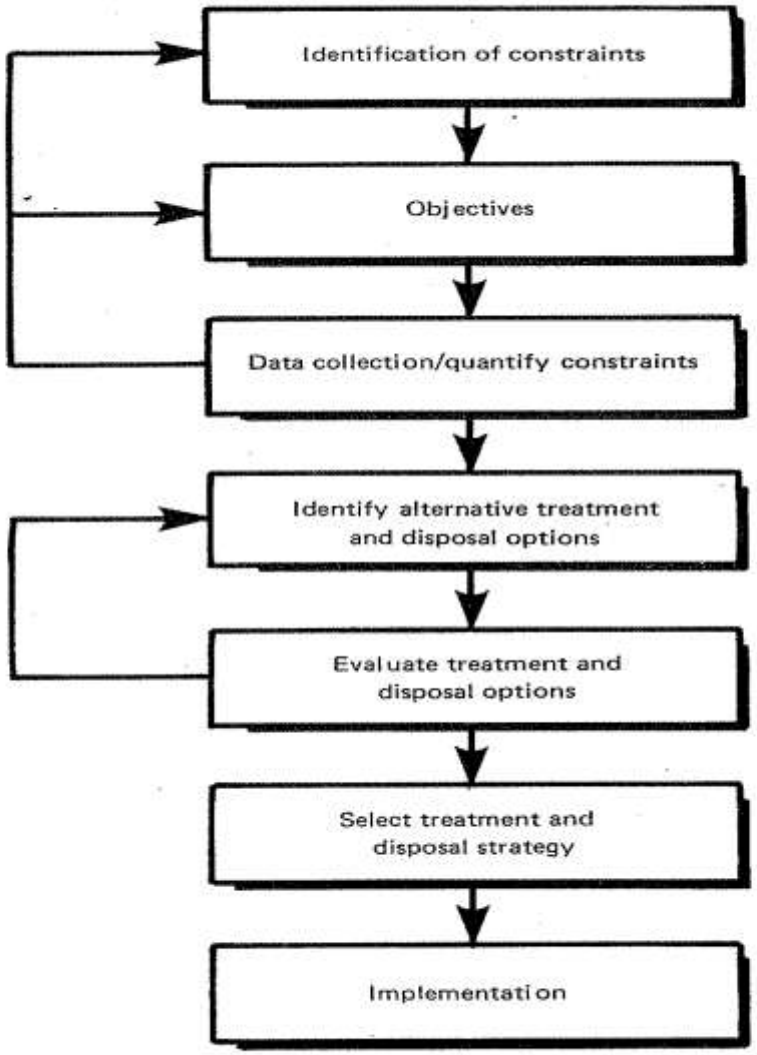


Fig. 2. Development of a sludge treatment and disposal strategy.

Alternatives for Uses for Sewage Sludge, 1991. Hall, J.E.