



TIMBERLANDS

Waikato Healthy Rivers

Plan Change 1
Hearing 2

Timberlands Limited



PC1 Giving effect to the Vision and Strategy

Legend		Waikato river sampling sites									
😊	Important improvement	Taupo	Ohaaki	Ohakuri	Whakamaru	Waipapa	Narrows	Horotiu	Huntly	Mercer	Tuakau
😊	Slight improvement	😞	😊	😞	—	—	—	—	—	😊	😊
—	Uncertain	—	😊	—	—	😞	😞	😞	—	😞	😞
😞	Slight deterioration	nd	😞	😞	😞	😞	😊	😊	—	nd	😞
😞	Important deterioration	😞	😞	😞	—	—	😊	—	—	😞	😞
		😞	😊	—	—	—	😊	😊	😊	😊	😊
		—	—	—	—	—	😊	😊	😊	—	—
		—	—	—	—	—	😊	😊	😊	😊	😊
		—	—	—	nd	—	😊	😊	😊	😊	😊
		—	😊	—	😞	—	—	—	—	—	—
		😊	😊	—	—	—	😊	😊	😊	😊	😊
		—	—	—	nd	—	😊	😊	😊	😊	😊
		—	😊	—	😞	—	—	—	—	—	—

Water quality issues strongly correlated:

Leaching N p land use intensity

Overland of P, N, sediment and pathogens p Critical Source Areas



1st principles plan design

Focus on the 80:20 issues

Issue #1 - N-leach

- Define high intensity land use.
Plenty of studies identify land uses, stocking rates and land use practices with a strong correlation with N leach.
- Actively target high intensity activities with responses known to avoid, remedy and mitigate the effects of high intensity,
- Use tools appropriate for compliance for: land uses, land use practices and stocking rates.



1st principles plan design cont.

Issue #2 - Critical Source Areas

- Characterise these
- Develop responses to avoid, remedy and mitigate
- Keep performance requirements consistent (e.g. effluent pond size, irrigation effluent load, setbacks from cultivation, culvert diameters)
- Provide for specifics at the enterprise level through priority and sequencing of actions in the Farm Environment Plans



PC1 Giving effect to the Vision and Strategy

Will allocation give effect?

No it will distract attention and thus impede progress

There is no compliance-grade numeric mechanism to assess and attribute actual N leach to a property.

A full numeric stocktake of all sources will take a huge amount of resourcing and time:

to set up, to do, to check, and then

to resolve all the arguments over the accuracy of the input numbers and the output numbers, the attenuation numbers...

Using overseer for accounting and compliance would be major and expensive distraction from active pursuit of N leach reduction

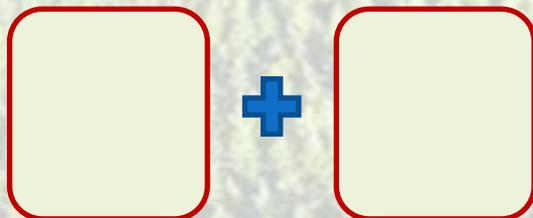


Overseer

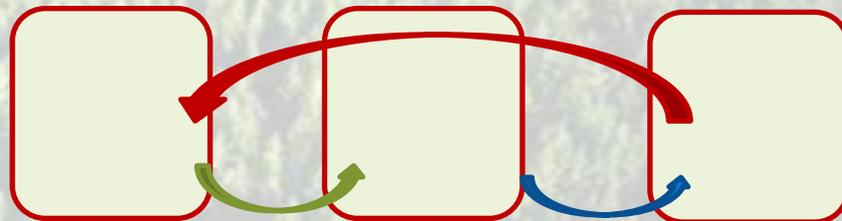
Not verified above 1200mm

Not verified for most soils (other than silt loams).

Thought to use additive processes to represent soil processes,



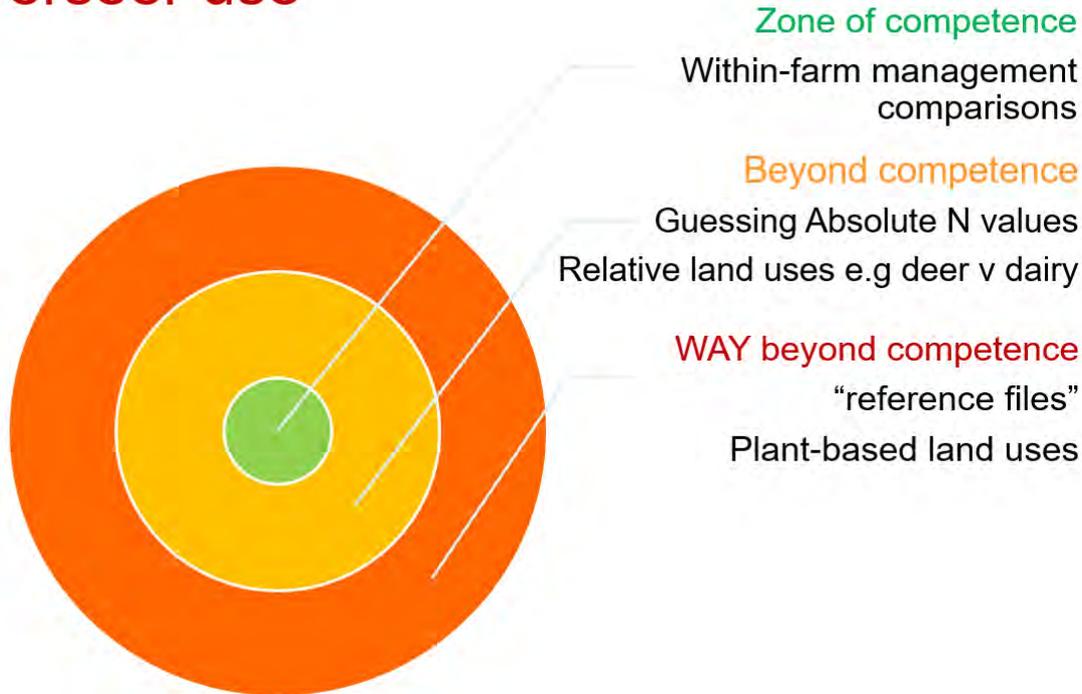
Thought to not use interactions that drive N contamination nor how those evolve over time



i.e. further independent scrutiny of the modelling processes by systems modellers is likely to cast further doubt on Overseer's use in this context



Overseer use





Does Overseer meet the Daubert court standard for credible science?

- a) can/has the method been tested;
- b) *the known or potential rate of error;*
- c) *whether the methods have been subjected to [independent] peer review;*
- d) whether there are standards controlling the technique's operation;
- e) the general acceptance of the method within the scientific community.



Timberlands requests:

1. Retain the tailored Farm Environment Plan approach in principle
2. Retain the consistent performance standards already in place in the Waikato Regional Plan (do not remove these, as proposed in the s42A)
3. Use a simpler technique to identify high-leach land uses and practices than presently proposed
4. Focus the rules on avoiding remedying and mitigating the high risk land uses and activities rather than capturing and constraining all activities