

THE PROCESS FOR SETTING NITROGEN LEACHING LIMITS USING OVERSEER FOR A WASTEWATER DISCHARGE CONSENT

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More intensive farming operations potentially have a greater impact on the environment. Horizons Regional Council (HRC) acknowledged this when developing their combined regional plan (One Plan) by introducing resource consent requirements based on farming type and land class. As part of a project to irrigate wastewater from the Foxton community onto a bull beef operation, consent from HRC was required. The conditions associated with this consent specified nitrogen leaching limits as required under the One Plan due to the intensification of land use as a result of the new irrigation system.

The volume of wastewater requiring irrigation annually is variable. Also, the same farming operation will likely have different modelled leaching values as predicted using OVERSEER as a result of version updates during the course of the consent term. This introduces complications when having to meet set nutrient leaching compliance limits. Furthermore, HRC advisors wanted to limit stock class and numbers, despite a need for them to change to meet pasture seasonal growth, market demands and variability in stock class.

While it was preferable to not specify an annual consent limit for nitrogen leaching, and include it as a management function, recent environment court proceedings required the specification of a nominated limit.

For this project consent conditions were developed and proposed to the Environment Court that provided for seasonal variability and version changes. Variability was to be managed by ensuring nitrogen leaching losses did not exceed a nominated value (34 kg N/ha/y) when averaged over a rolling five year period; and version changes were managed by recalculating and the resetting of the consented nitrogen leaching limit using the initial input data file.

Editor's Note: An extended manuscript has not been submitted for this presentation.