

# Managing Nitrogen Thresholds

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Sheep and Beef Sector

# Intro

- CSG said no to a property level limit
- CSG said no to no <10% intensification N Rule and opted for no land use change instead
- However now we are considering a fixed number to be held to N Reference Point with no flexibility at all
- No guarantees on future allocation framework or principles
- This leaves our sector uncomfortable with the management of N in the plan change

# Sheep and Beef Sector have come a long way in this process

- CSG has held the Sheep and Beef sector to account for the contaminants it is responsible for, primarily sediment
- We have been working hard to address this within the policy and the potential gains are exciting
- Modeling of WRCPC1 confirms this with significant improvements well beyond the 10% mark in the first ten years for many sites
- This includes the most aggressive stock exclusion policy in NZ
- Our sector will now be operating under consents

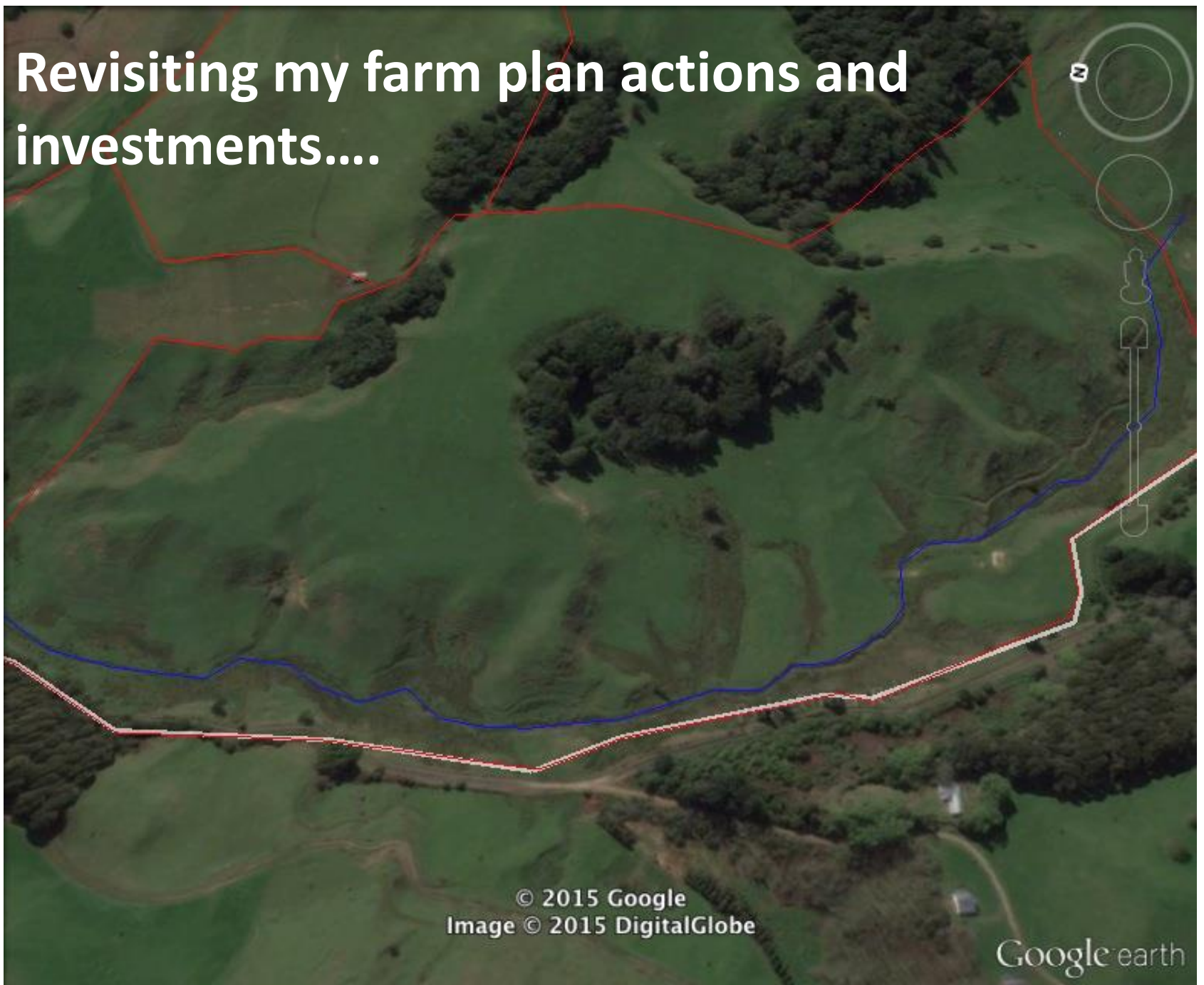
# Modeling N

- The WRCPC1 policy mix modeling shows some reduction (5%) in N from the 75%ile rule
- The total reduction not including load to come is 15%
- Reductions in N will be achieved as co benefits of other mitigations such as stock exclusion
- Property level overseer files do not account for N reductions from stock exclusion
- So while all farmers will be making reductions in N through different mitigations this will not always be recognized at a property scale level

# Low N Loss Systems

- Low N loss systems have little opportunity for mitigation of N through overseer
- Flexibility is required for some to allow for changes in stocking policy as markets shift to retain profitability
- Profitability will become critical to be able to afford the mitigations and meeting the short timeframes set by the WRCPC1 policy mix
- Better Land Optimisation through farm plans will provide more opportunities for retirement of marginal land but this involves significant costs..

# Revisiting my farm plan actions and investments....



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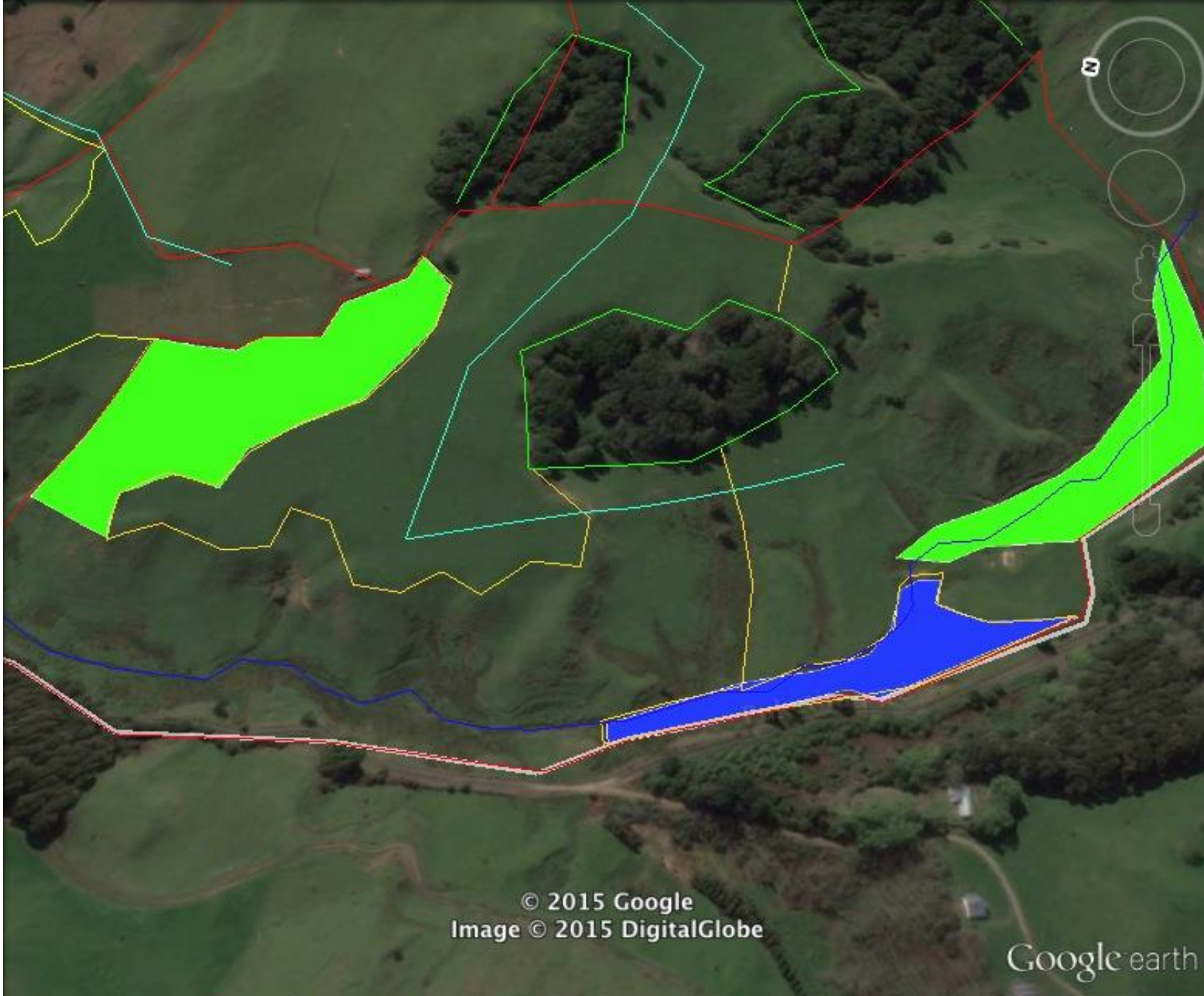




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**Economic Analysis**  
**During Farm Plan Implementation – Snapshot**  
***Momona Drystock***

	2009	2013	Region Ave 13/14
Effective Ha	445	430	320
Total S.U.	4480	5320	3228
S.U./ha	10.1	12.4	10.1
EBITR/ha	360	510	331

- Urea used = 0 kg
- Palm kernel used = 0 kg
- Current overseer N leaching = 12kg/ha/yr
- Efficiencies gained through Land Optimisation
- This year these efficiencies meant I could take on 150 dairy grazers to help pay for fencing



## Environmental Analysis

- Freshwater crayfish returning
- Last seen on farm in 1970's

# N Loss Risk

- What real gains are we going to make for the river by giving no flexibility to Low N loss farming systems?
- Where are the real gains for N?
- I don't profess to know the answer but lets just consider the following slide.....

# AgFirst Study – BOP 2012

- Two different farming systems in same local area
- Shows scope for improvements in N loss and \$

Farm System	Conventional	Non-Conventional
Milking Area (ha)	148	70
Cows milked at peak	520	175
175 Peak cows/ha	3.5	2.5
Kg liveweight/ha	1,820	1,300
Milk solids/ha	1,363	1,344
Milk solids/cow	388	538
<b>Nitrogen leached (kg/ha)</b>	<b>76</b>	<b>35</b>
Nitrogen conversion efficiency (%)	23%	43%
Nitrate concentration in drainage (ppm)	9	4

# Beef and Lamb N Threshold Alternative

Based on N Reference Point (NRP)

- 0 – 15kg N/ha/Yr: Permitted Activity
- 16 – 20: Controlled activity
- 21 – Max Cap: Non Complying Activity to increase past NRP
- Max Pastoral Cap – Dairy 75th percentile

# How could we fit the threshold concept into WRCPC1?

- Rule 6 – Controlled Activity Status for N leaching up to 20kg N/ha/yr
- Any increase in N leaching from the NRP up to 20 Kg N needs to be explained through the resource consent with consideration to all 4 contaminants in the farm plan
- Considers the overall risk of the farming system to water quality and the mitigation package as a whole



# Why?

- Acknowledges those that are low risk for N and reductions being made that are not accounted for at a property level through overseer
- Gives low end N loss farmers some flexibility to maintain profitability to enable effective mitigations for all contaminants
- Will motivate some to get on and do a farm plan faster and register their actions and timeframes with WRC
- Consistent with our policy selection criteria
- Leads to a better outcomes towards the V and S
- Farmer good will – We need to build on our sector engagement and keep our farmers on board