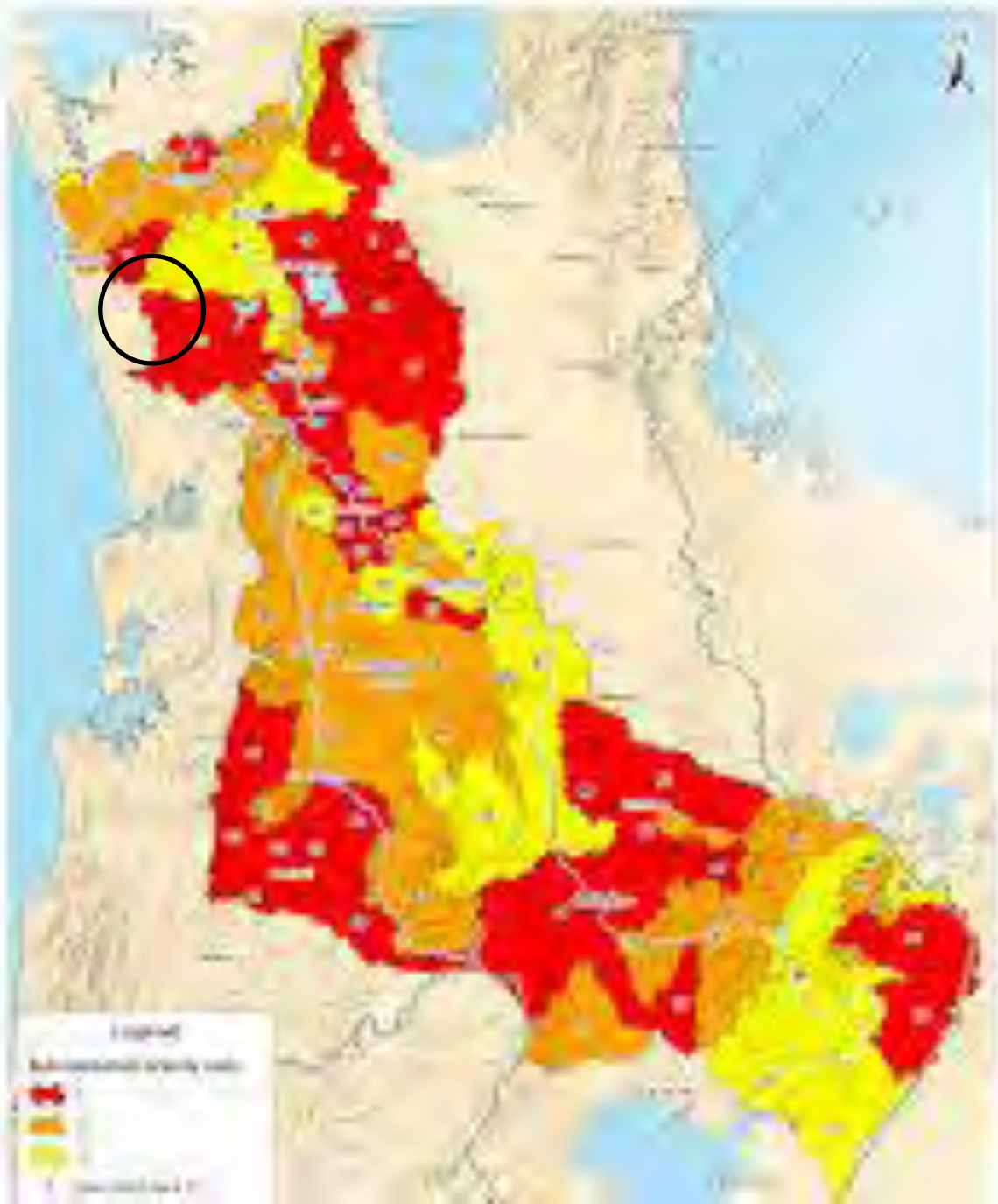


# Upper Maire Sub Catchment



Priority 1 lower Waikato River  
Riverine lake FMU  
Lake Whangape





# Upper Maire sub catchment

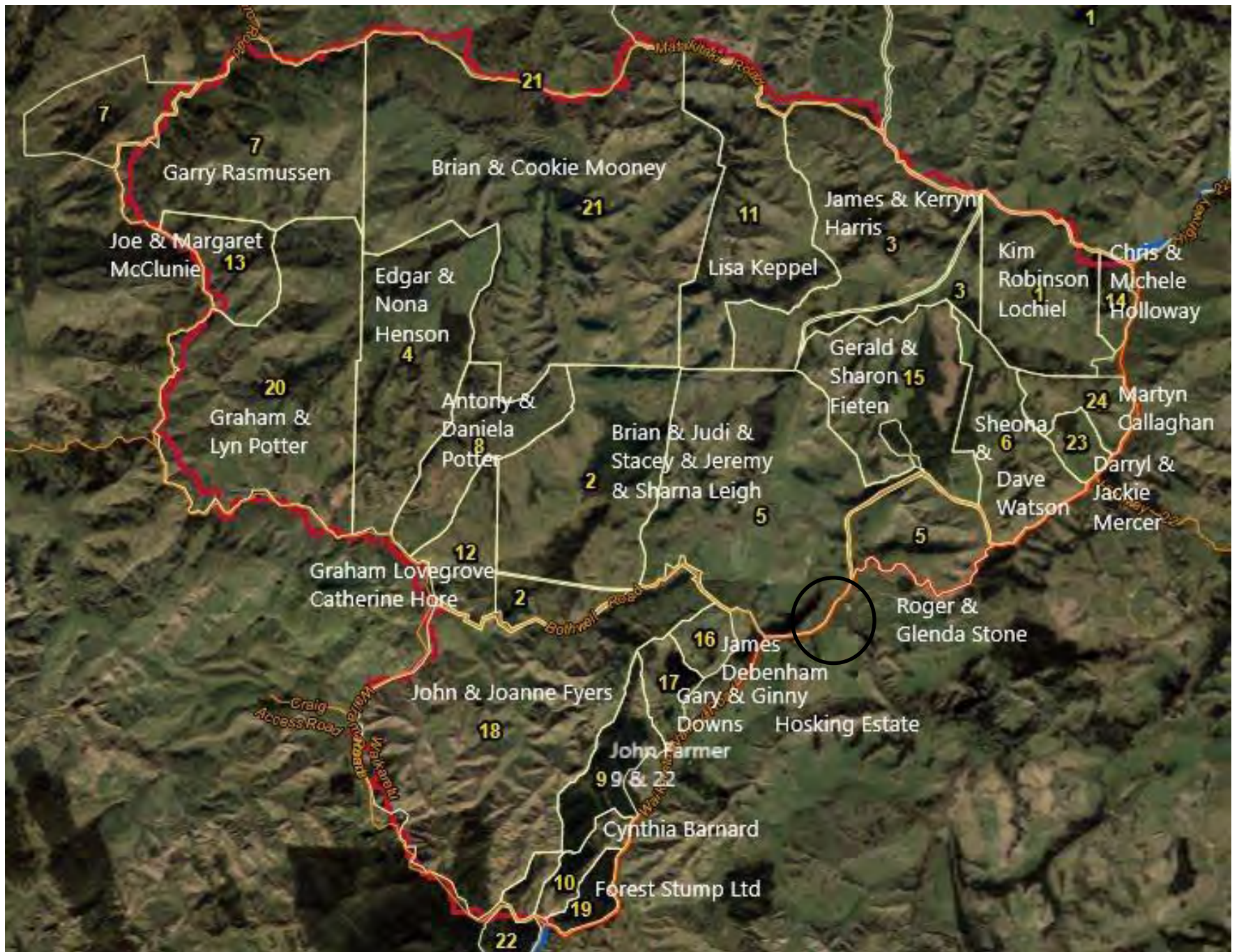


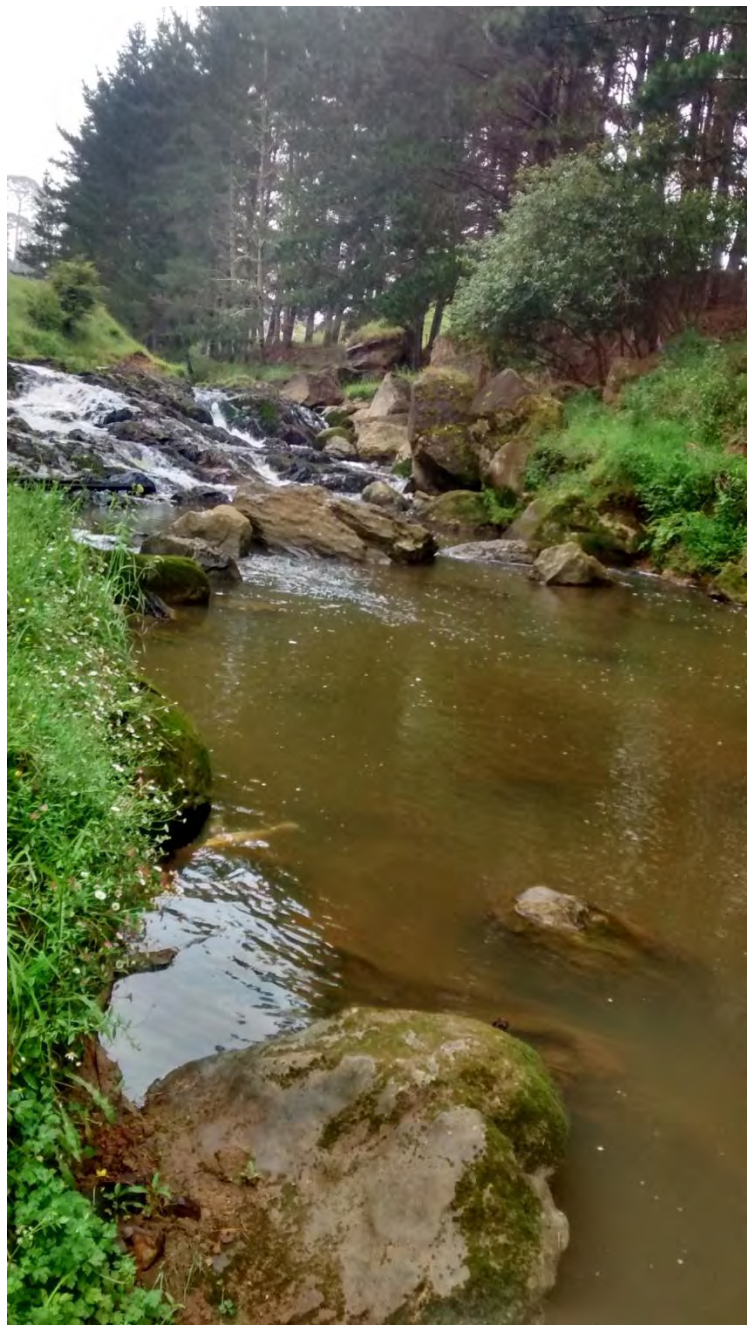
**Legend**

- Maire to Whangape
- Upper Maire catchment

# Upper Maire Subcatchment

- 15 farmers >20ha
- 4000 ha hill country
- Low intensity family farms
  - Low N use
  - Sheep and cattle – dairy farming
  - No winter crops – limited cropping / regrassing
  - Exit waterfall prevents Koi carp
  - High flood zone
- 2018 formed Upper Maire Land Care Society





# What is our main contaminant?





# Sediment!



# Water quality testing

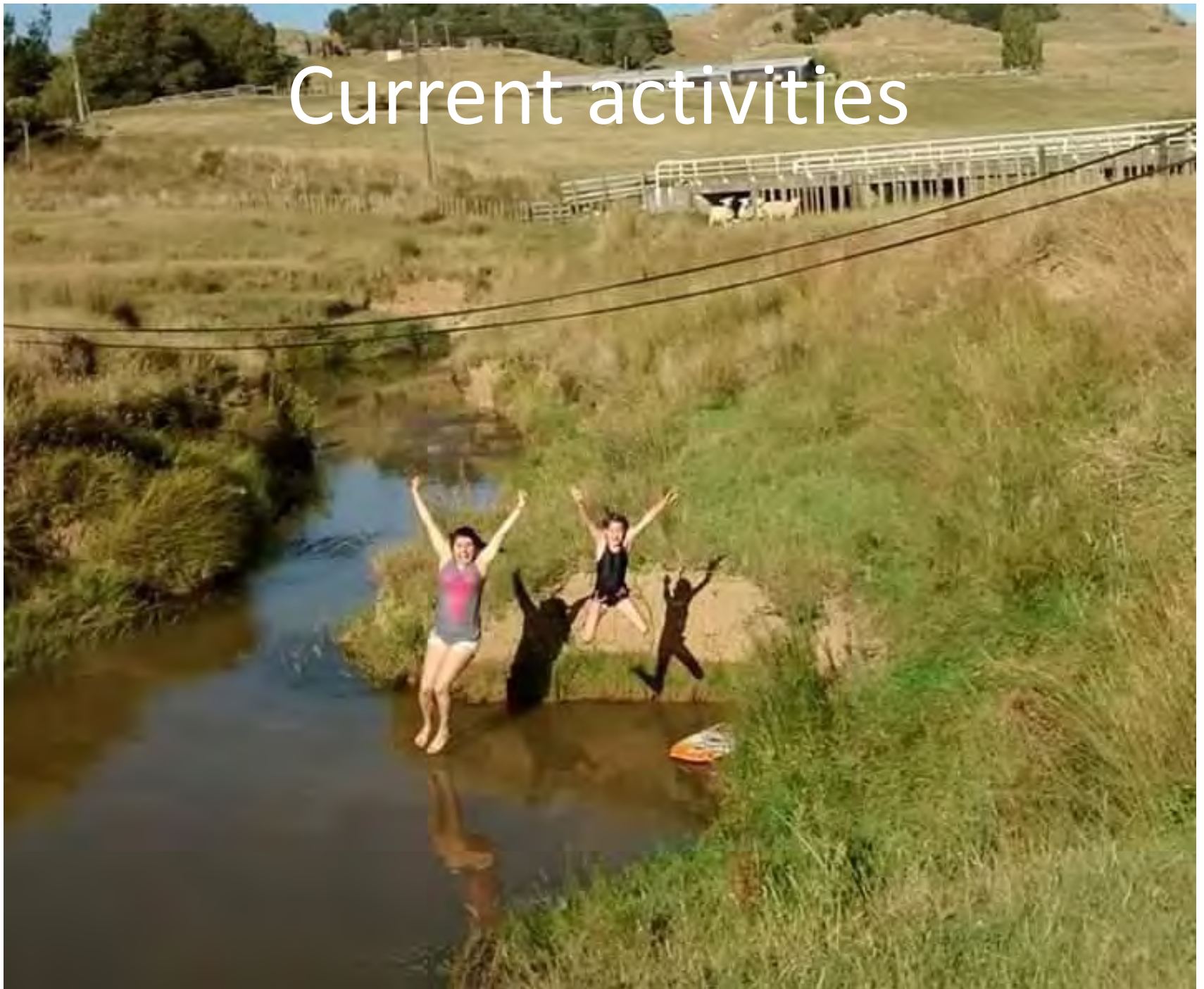




# Upper Maire Creek

- Taringapeka & Hutawai streams flow into Maire
- Deep with steep sides, mud base
- Cattle rarely ever go in stream, only to drink at certain spots
- No Koi Carp (Waterfall prevents)
- Well used!

# Current activities





# Concerns

- Nitrogen Reference Point
- Fencing water bodies for stock exclusion
- Crippling financial cost of mitigation strategies
- Improving water quality when 80 year targets met
- Lack of science and monitoring of our sub catchment when notified
- Does allowing Maori land to develop meet 80 year vision?

# Nitrogen Reference Point

- limits our ability to farm to the conditions
- raise stocking rate or change stock class where appropriate
- the effect on our businesses and future of our farming families.





# NRP example

- For example purchased neighbours farm, run down, very low stocking rate (130 bulls on 270ha) <4su/ha while on market 2010-2012
- Increase to 300 bulls plus sheep = 11 su/ha with bulls on good soil, sheep on hills, then use money to fund subdivision, water reticulation (\$100k) and fence off bush 4km @ \$20,000 /km
- However 46ha of bush so overall su/ha low.



# NRP continued

- Difficult to monitor and enforce – is Overseer fit for purpose?
- What about attenuation of Nitrogen?
- What about farms that have been low stocked for whatever reason in 2014/15 and 15/16
- We don't believe Overseer was designed to be a regulatory tool, certainly not on hill country farms with our soil types.
- It should be restricted to those sub catchments it was designed for with Nitrogen issues.

# NRP continued

- We oppose the grandfathering of the Nitrogen Reference Point as it allows existing high discharge rates to continue and limits the flexibility of other enterprises which may have low emission rates. This rewards existing polluters.
- We are concerned that a nitrogen reference point rewards the high nitrogen users and doesn't achieve the 80 year vision
- Consideration needs to be given to the level of water quality improvement required in the sub catchment – eg current contaminant levels

# Overseer...

- Robs Peter to pay Paul!
- Examples to reduce N leaching on dairy farms
  - Dairy farmer grazes cows off farm in winter
  - To grazer outside catchment?
  
  - Maize silage purchased off farm and fed
  - Where is maize silage grown?



# NRP Example

- Summer Autumn 2019 – for many driest January to May ever recorded
- Extremely difficult to feed livestock and grow feed until winter
- If fixed NRP then applying N fertiliser may not have been an option
- N fertiliser needs moisture, applying in April no result however Overseer predicts large N losses when applied in May...



# Permitted activity

- We think that the stocking rate in clause 5 should be increased to 13 (wintered) stock units per hectare of total enterprise land.
- Cattle have a greater impact on the environment and sheep dominate hill country farming therefore we propose a graduated Permitted activity rule.



# Permitted activity proposal for hill country Sheep and Beef

- Below 13 su/ha is not required unless your sheep : cattle ratio is above 30:70 (>70% cattle).
- Above 13 su/ha requires a NRP regardless of how many sheep are run.
- Sub catchment members know who high emitters are likely to be

# NRP proposal

- If farming less than 13 SU/ha then NRP can be estimated on
  - Stock units
  - N Fertiliser applied (rate and month)
  - If P a sub catchment issue, P applied
  - Type of stock – size, breeding/finishing, sheep:cattle ratio
- Removes the requirement for blanket NRP



# Stock exclusion & Water

- The cost of water reticulation - averages
- \$166/ha capital cost (\$98-\$280/ha)
  - 4000ha = \$664,000
- \$362/ha total capital (water + fencing + stock)
  - \$1,448,000
- Average increase was 0.5 SU/ha – not allowable with fixed NRP

*Economic Evaluation of Stock Water Reticulation on Hill Country Phil  
Journeaux, Erica van Reenen*

*2 December 2016*

# Stock exclusion

- We suggest that the schedule is amended to include “best practicable option” as an alternative to fencing of all waterways.
- impose significant costs on our farming activities
- financially crippling
- Important to our sub catchment?
- not practical or most cost effective
- better to follow the national freshwater standards that are more realistically achievable.

# Stock exclusion example 1

- Draining water bodies and wetlands must be excluded from cattle = swamps
- Limestone hill country full of swamps
- Fence with 1 or 2 wire electric?
- Buried cable every crossing?
- How do you muster? Sheep and cattle would get caught in islands between hot wires and then seek shortest route









# Stock exclusion Ex 1..

- However can fence above flood zone as volume and force of water removes fences and trees
- Fencing waterways then allows weeds to grow which need spraying. The maintenance involved with cleaning debris off fences and repairing fences after 4-5 flood events per year is cost and time prohibitive.
- Therefore sheep grazed riparian flood plains best for trapping sediment and contaminants

# Stock exclusion 2

- 2 wire electric or 8 wire post and batten?
- Post and batten \$20,000/ km
- If grazing cattle above fenced stream, sheep can cross 2 wire electric
- Therefore sheep will prefer cattle pasture and eat the cattle feed
- At most times of the year this is not satisfactory!











Once fenced – intensive cattle  
vs sheep and cattle?



# Creating sustainable fencelines







# Filter length to creek?





# Erosion – Slips - Sediment







Lots of native trees





Poplar pole planting



# Stock exclusion 25 vs 15 degrees

- Often one side of stream is flat, the other side sloping
- If one side fenced, sheep can cross stream when low and graze cattle pasture
- Therefore often both sides needs fencing – above flood zone
- What does this look like?









35 degrees





# Sheep and cattle co grazing

- There are many benefits of sheep and cattle co grazing pasture
- Sheep and cattle don't share parasites!
- Sheep and cattle graze differently – sheep can graze lower and much thicker pasture sward
- Cattle only pasture much sparser
- Sheep won't eat roughage
- Cattle prefer roughage at certain times

# Co grazing pasture

- At times of year it is very important to have sheep and cattle grazing the pasture
- Therefore fences need to be sheep proof (and goat proof)

# Stock water dams – fence off?



# Other Concerns

- Weed spraying fenced off waterways – chemical use in waterways
- Riparian planting high velocity flood zones
- Arsenic from treated posts leaching into waterways
- Climate change and the effect of rising sea water levels on river levels in 80 years

# Forestry compared to sheep grazing hills or cattle...?



# Other land uses – cropping?





Thank you for your time  
Questions?



