What we were not told:

- There was a community of 5,000 properties both residential & commercial,
- The catchment bordered a hydro lake of 500 hectares surface area controlled by Mini Creek power.

Objective:

Achieve the desired improvements in water quality at least economic & social disruption.

Methodology:

- Achieve as much" buy in" as possible for as long as possible by avoiding allocation of property rights,
- Support initiatives that lead towards desired outcomes,
- Those contributing to bear relative burden of change,
- Those benefiting to help contribute to solutions so that community pain is reduced,

Additional tools

- To support and expedite change, it was agreed that there should be a catchment charge.
- $10 per hectare per annum on properties over a hectare,
- $10 per property per annum on properties under a hectare,
- $10 per hectare of lake surface area per annum.
- Only DOC, native or QE2 land excluded.
- For every hectare of land converted to native there a rebate of $10/hectare on remaining property.
- For every hectare of land going into QE2 covenant then two hectares are rebated.
- Creation of Catchment Advisory Committee.
- Appointment of a catchment planner,

Fund size:

- 7800 ha's @ $10 = $78,000
- 5,000 prop's @ $10 = $50,000
- 500 ha's lake @ $10 = $5,000
- Total fund size **= $133,000**

Catchment Advisory Committee:

Co-chaired by Iwi,

- Representatives from Forest & Bird, sectors, LG & community,
- Have access to funds raised within the catchment,
- Mandated to appoint a catchment person to deliver the catchment target outcomes this may or may not be the same person doing the farm plans.
- To support the prioritises agreed by the CAC.

Actions could include but not limited to any or combination of the following:

- Wetlands creation,
- Bunding creation support,
- Point source improvement funding,
- Fencing/riparian support (particularly important if existing fences are to be moved),
- Creation of low e-coli water cress beds for human use, (may target specific stream),
- Creation of specific streams for native fauna with a view to creating a sustainable resource, e.g. tuna, koura etc
- Ecological corridors,
- Retirement of land, by purchase,
- Facilitate land swaps with forestry say 1: 5 (5 go to forestry for 1 returning to pasture)
- Provide appropriate access

Pathway:

Triage catchments,

- Appoint a person for farm management plans – with catchment goals in mind, one person to apply consistency, and to deliver to water outcomes, (some accountability)

Triage sub catchments,

- **All waterway fencing required under the plan change to be completed within five years of plan change notification.**
- **All setbacks required under plan change to implemented within the farm plans within five years of notification.**
- **Riparian planting required under farm plans to be completed within ten years of notification.**
- **Any restrictions around forage cropping, cultivation and soil disturbance identified in farm plans to be implemented at time of farm plan "sign off". Particular emphasis on winter forage crops on slopes or near waterways.**
- Commence plans – targeting GMP & BPO and recording where these will not achieve desired outcomes, timelines are part of plans,
- Report to participants – water quality data over time, acknowledging that change will not be immediate,
- **Support any sub-catchment initiatives to further understand sources & pathways, could/will be some real "hot spots", 80/20 rule**
- **For N & P move highest leachers to say 75 percentile, move others lesser %'s depending on where at.**
- **Identify mitigations beyond the scope and or capability of individual land users, e.g. wet lands and have process for implementation & funding**.
- Need to develop mechanisms to develop headroom, land swaps, land use change within properties, "land buyouts,"
- **For phosphorous triage to optimal levels of P based on Olsen P test for relative land use, then mitigate via fencing, set-backs, cropping management to prevent soils, faecal matter entering waterways.**
- Mitigations likely to have co-benefits of managing sediment & e-coli and vise versa.

Success looks like:

- Water quality improvement at least to targets,
- Community buy in & involvement – mind set change,
- Greater community engagement with water both for recreation & kai,
- Maintain at least the current vibrancy in communities, some of which are already struggling,
- If catchment program can create opportunities then that is a bonus, i.e. employment.

Use of "Headroom,"

- Land intensification under headroom needs to be at or below the relevant sector average.
- "Gains" made from mitigations will need to be accounted for re allocation.
- Headroom could/should be allocated through a consent process and "headroom" should have a limited life say 30 years?

Outstanding Issues:

- Poor data on "bell shaped" curves and what drives them. Dairy has best data but this has limitations.
- Ability to pay,
- Is there a better way to manage intensification than 10% on Overseer, e.g. proxy stock numbers, cow numbers?
- How to account for annual variation in Overseer due to climate etc
- There will still be social disruption & negative economic impact.
- I think land use change – understated.
- Speed of change only possible with support especially as farmers' ability to pay is undetermined.

OUTCOMES:

Nitrogen

	Reduction Required	Reduction achieved	% from sector exc' P/S	% from sector
TOTAL	40,000 KGS	48,144 KGS		
DAIRY		36,492 KGS	91%	75%
S & B		4,404 KGS	11%	9%
INT HORT		1,722 KGS	4.3%	3.5%
MARKET GARDEN		406 KGS	1%	0.8%
FORESTRY		120 KGS	0.3%	0.2%
POINT SOURCE		5,000 KGS		10.3%
Headroom		**8,144 kgs**		

Headroom if Iwi use rights **2,534 kgs**

PHOSPHORUS

	Reduction Required	Reduction achieved	% from sector achieved
TOTAL	2,000 KGS	2,640 KGS	

DAIRY		375 KGS	14.2%
S & B		589 KGS	22.3%
INT HORT		500 KGS	18.9%
MARKET GARDEN		300 KGS	11.3%
FORESTRY		75 KGS	2.8%
POINT SOURCE		800 KGS	30.0%

Headroom **640 kgs**

Headroom if Iwi use rights **323 kgs**

SEDIMENT

	Reduction Required	Reduction achieved	% from sector
TOTAL	30,000 KGS	316,000 kgs	
DAIRY		45,400 kgs	14.3%
S & B		185,800 kgs	58.7%
INT HORT		20,000 kgs	6.3%
MARKET GARDEN		35,000 kgs	11.0%
FORESTRY		30,000 kgs	9.4%

Headroom **286,000 kgs**

Headroom if Iwi use rights **52,000 kgs**