

Catchment Land Use Analysis

Rotorua Lakes

Proud Partners

All Lakes - catchment

- Land Use Map
 - The Land Use map is a part of the Land Use and Carbon Analysis System (LUCAS), with the output map being used to assess carbon stocks for Kyoto Protocol reporting.
- Land Use Classification map LCDB4
- LiDAR derived slope information

Current composition of Rotorua catchment

- 💧 45% in productive grassland
- 💧 16% in natural forest
- 💧 16% in open water bodies and wetlands
- 💧 16% in forestry
- 💧 7% in urban / settlements

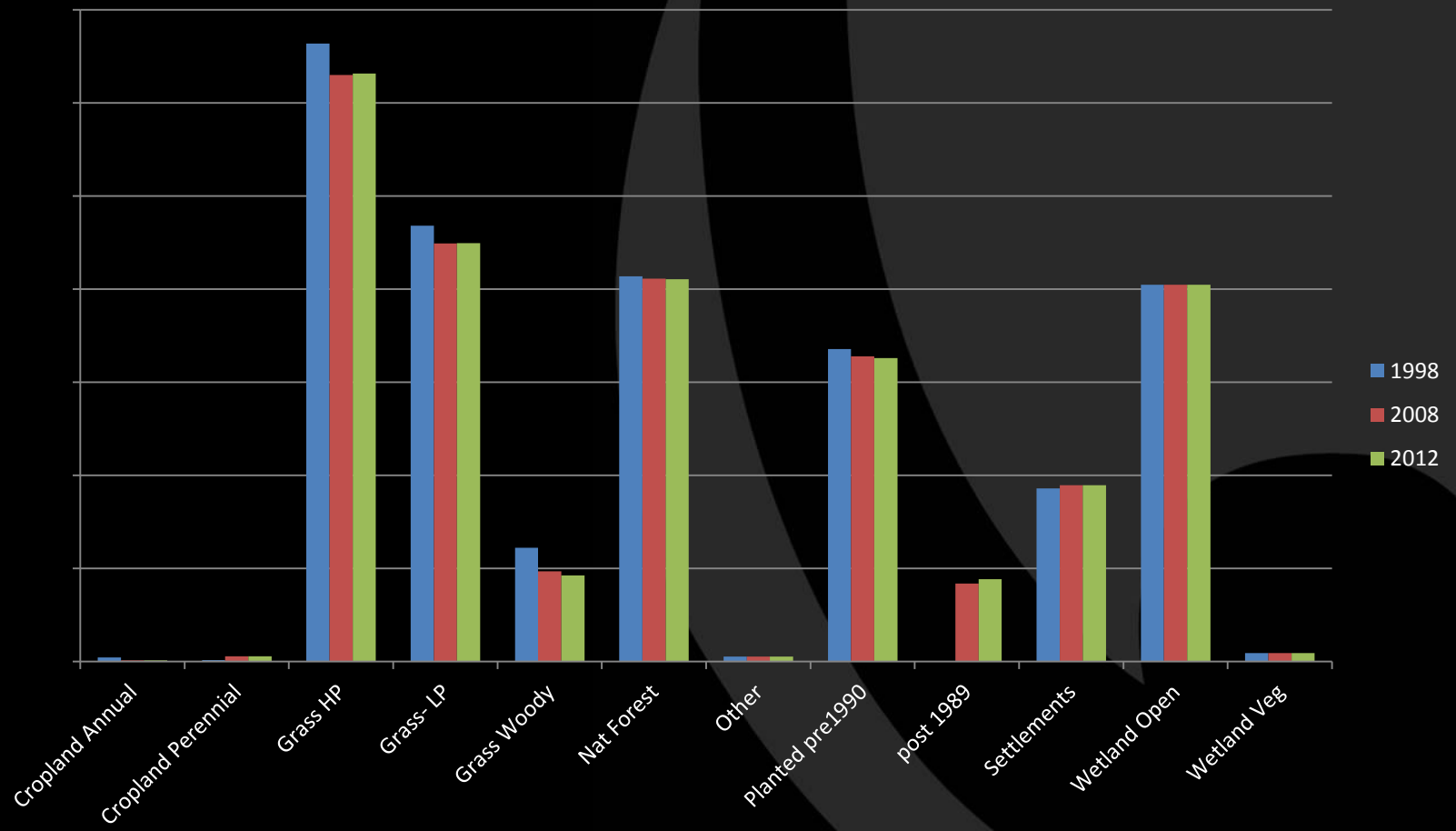
Land use change 1990 2012 - Rotorua

- Decrease of 370 ha of low producing grassland (95% to forestry)
- Decrease 644 ha of high producing grassland (95% to forestry)
- Decrease 595 ha of grass with woody content (90% to forestry)
- Total of 1,600ha of productive grassland

Land use change 1990 2012 - Rotorua

- 💧 Gained 1,770 ha of 'Kyoto' forests
- 💧 Increase of 74 ha of urban development
- 💧 Increase of 82 ha of perennial cropland

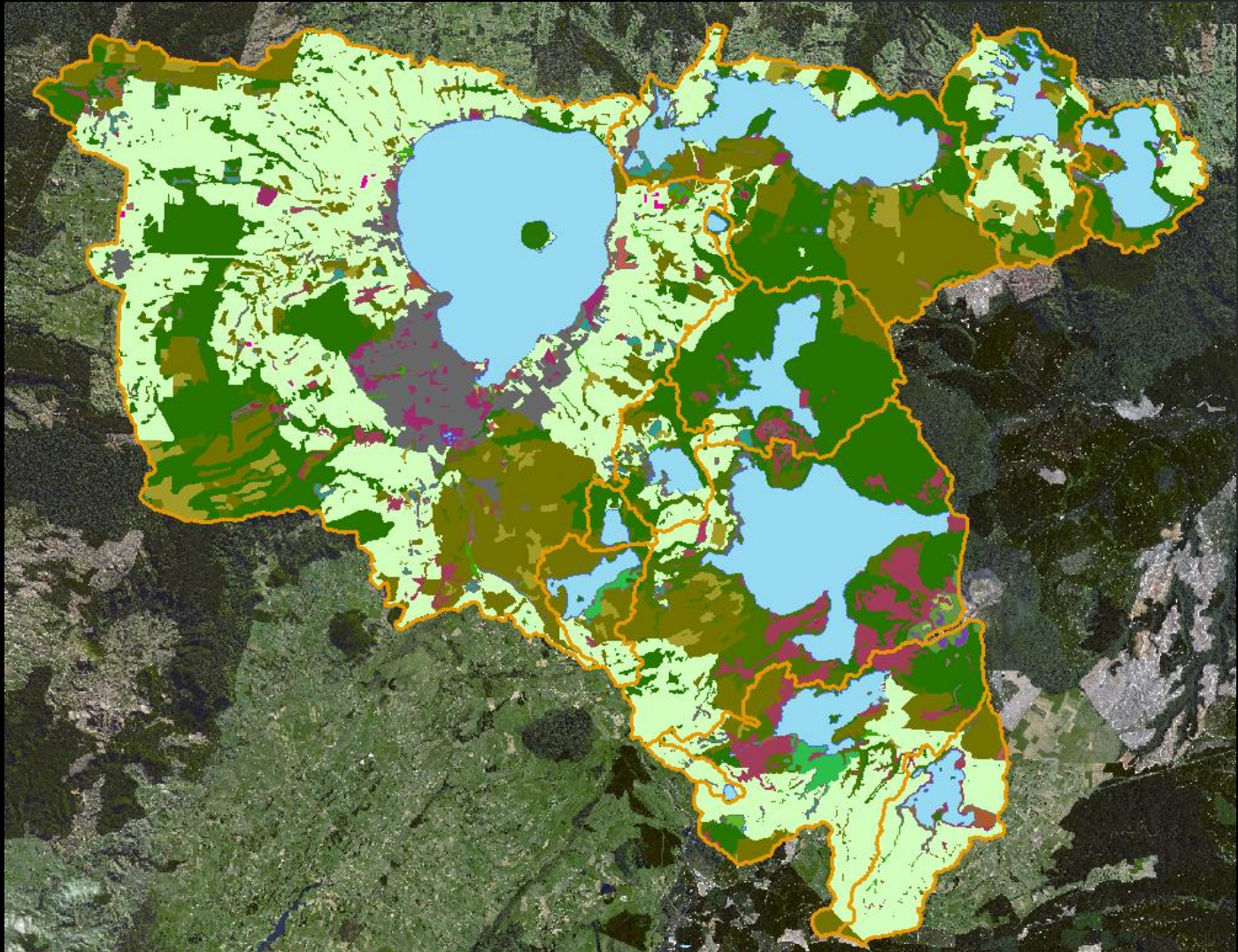
Change since 1990 - Rotorua



	1998	2008	2012	Difference (Ha)
Cropland Annual	86	28	28	- 58
Cropland Perennial	29	111	111	82
Grass HP	13,275	12,600	12,631	- 644
Grass- LP	9,358	8,978	8,987	- 371
Grass Woody	2,443	1,934	1,848	- 595
Nat Forest	8,272	8,224	8,209	- 63
Other	104	104	104	-
Planted pre1990	6,711	6,554	6,518	- 193
post 1989	-	1,672	1,769	1,769
Settlements	3,716	3,790	3,790	74
Wetland Open	8,094	8,094	8,094	-
Wetland Veg	179	179	179	-



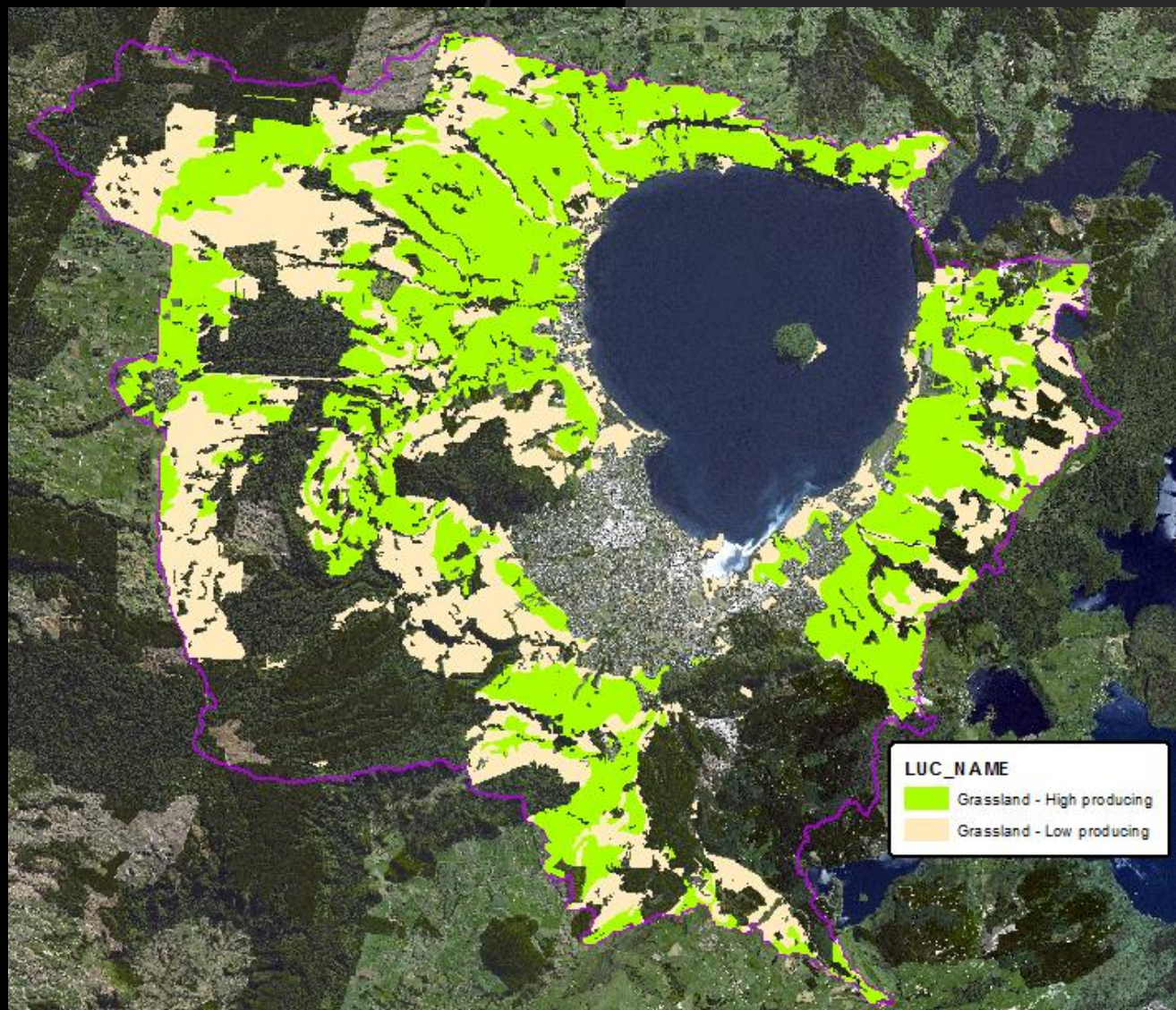
LCDB



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Rotorua – productive grassland

22,600ha of
productive
grassland
(41% of
catchment)



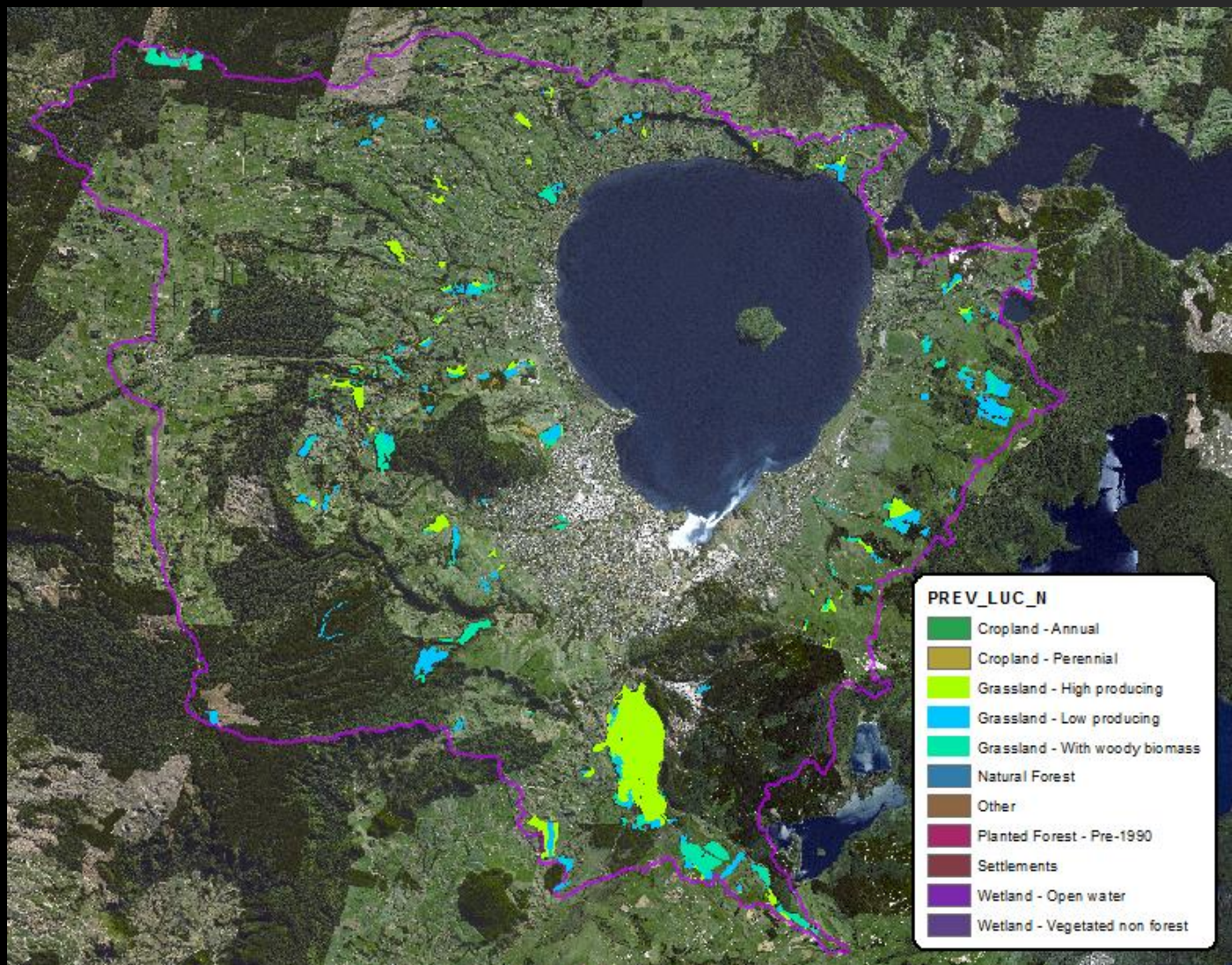
Deforestation – 1990-2012

231 ha



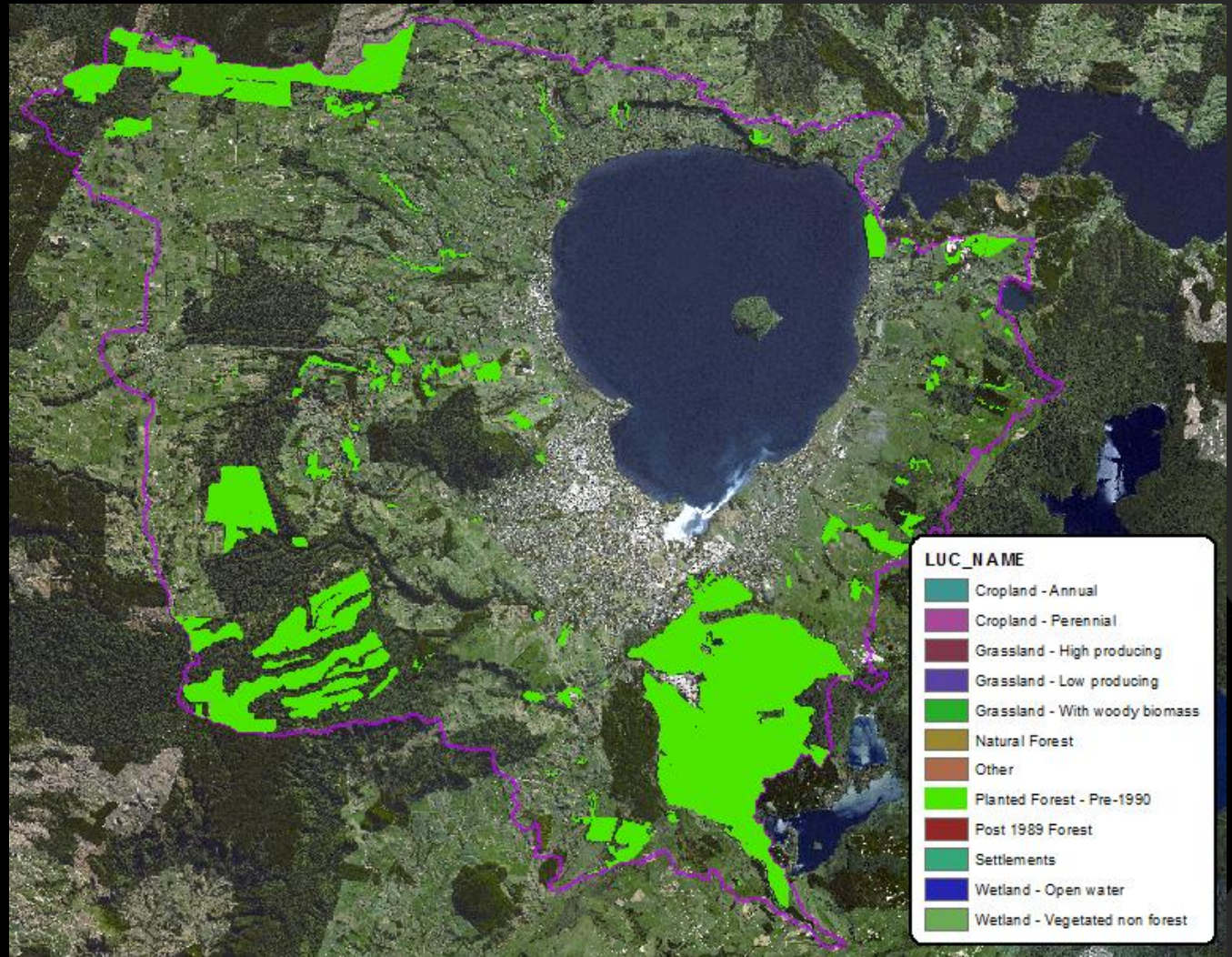
Post 1989 'Kyoto' forestry

1,770 ha

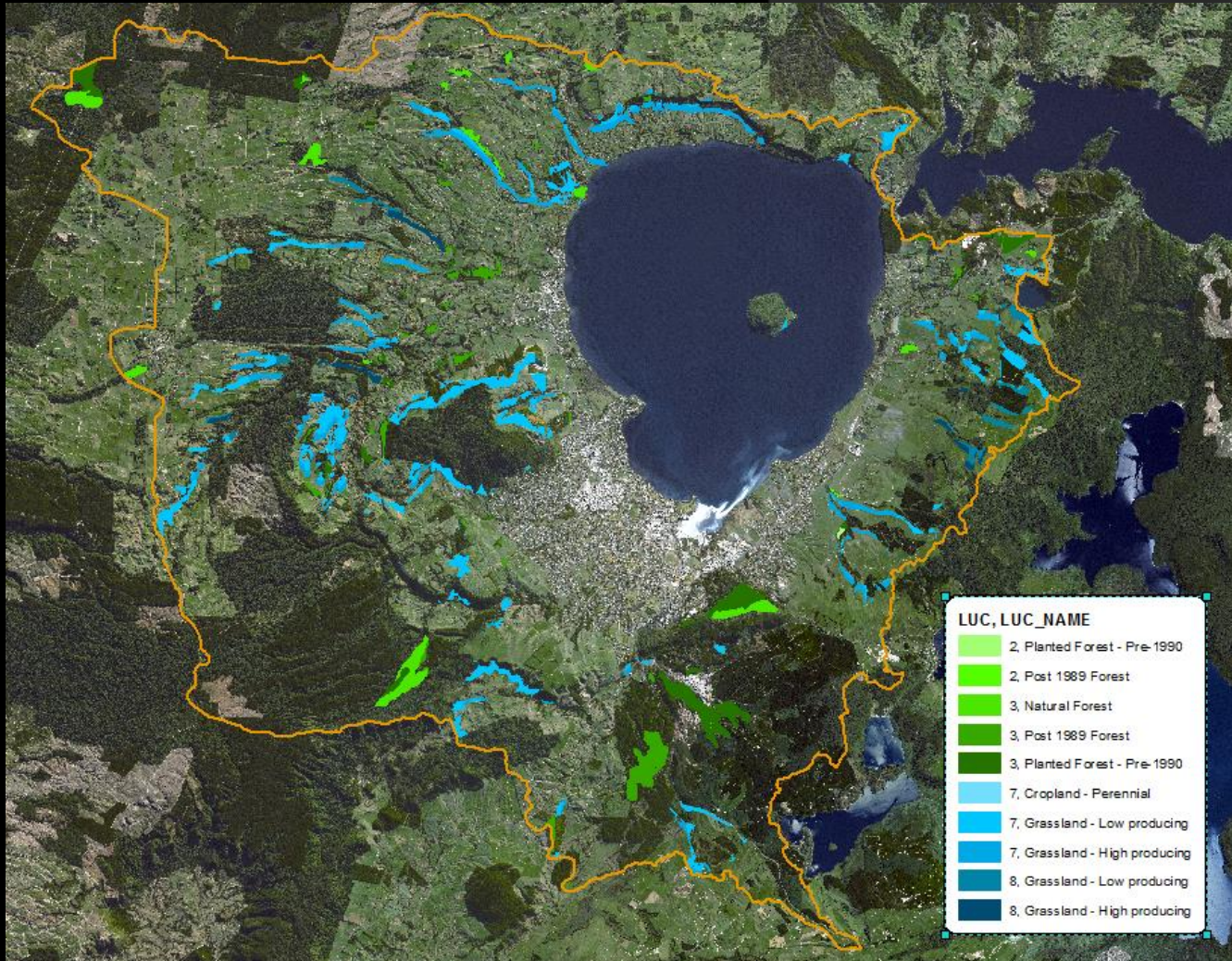


Forestry 25+ years

6,518ha
12% of
Catchment

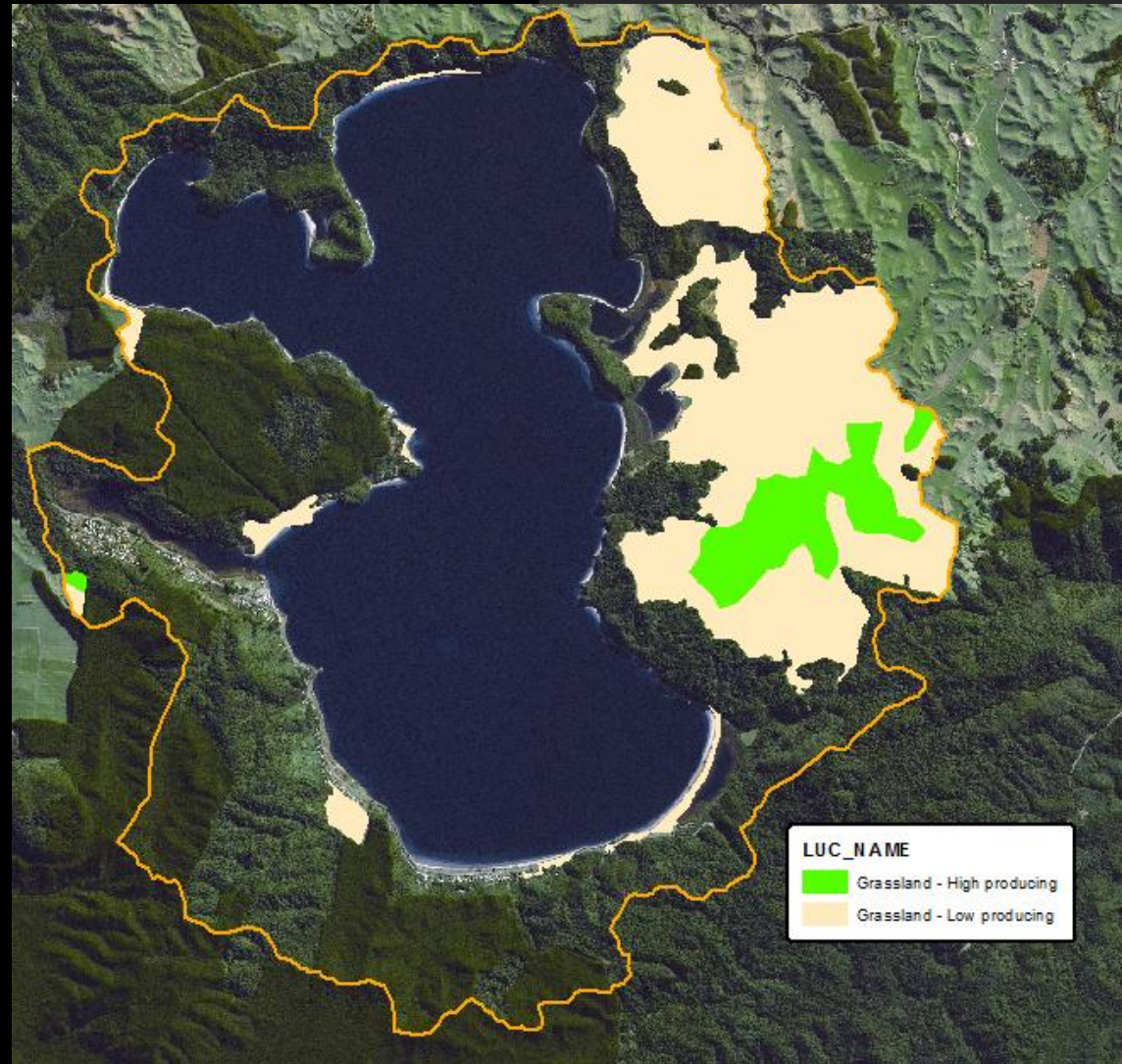


Poorly allocated land - LUC



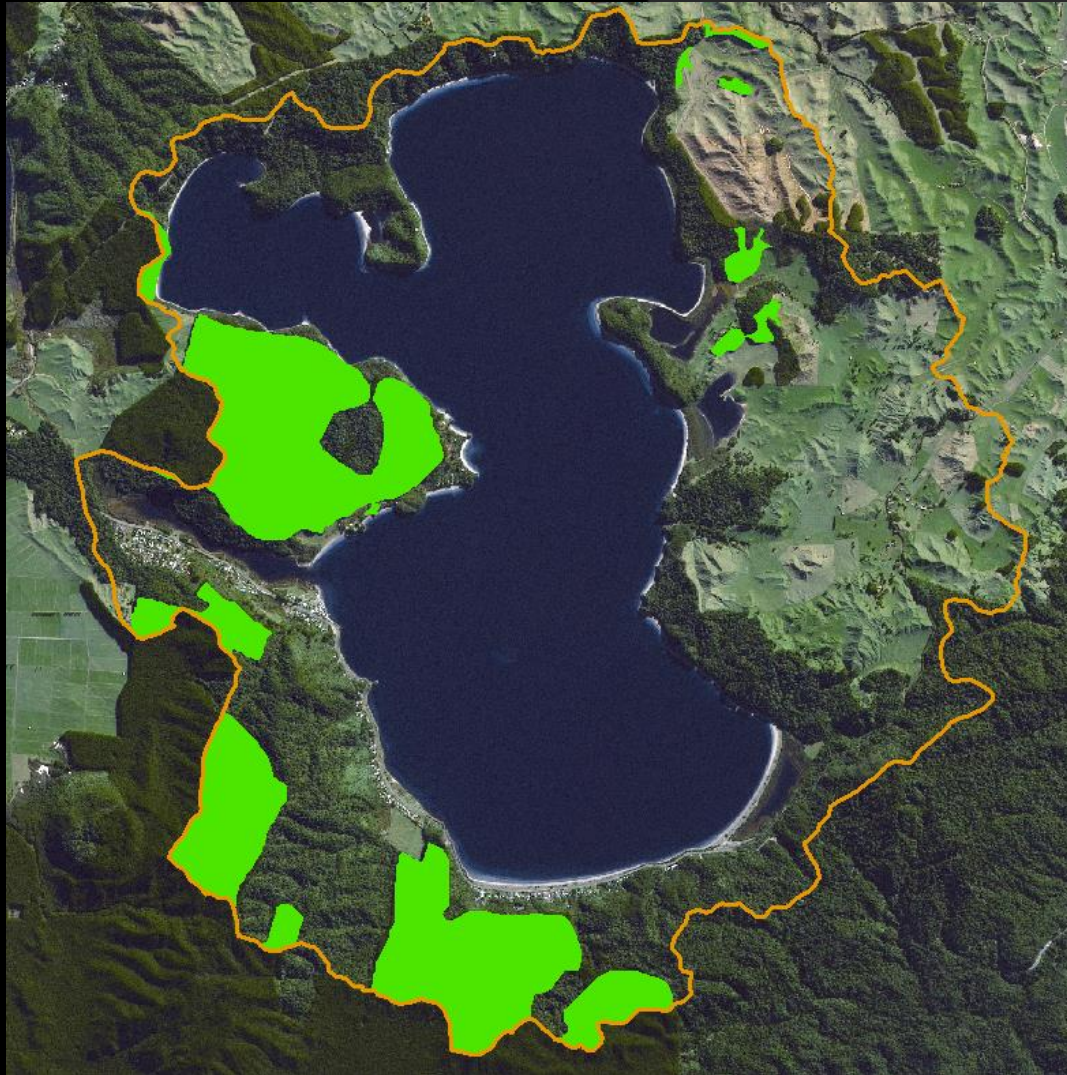
Rotomā – Productive grassland

490ha
18% of
Catchment



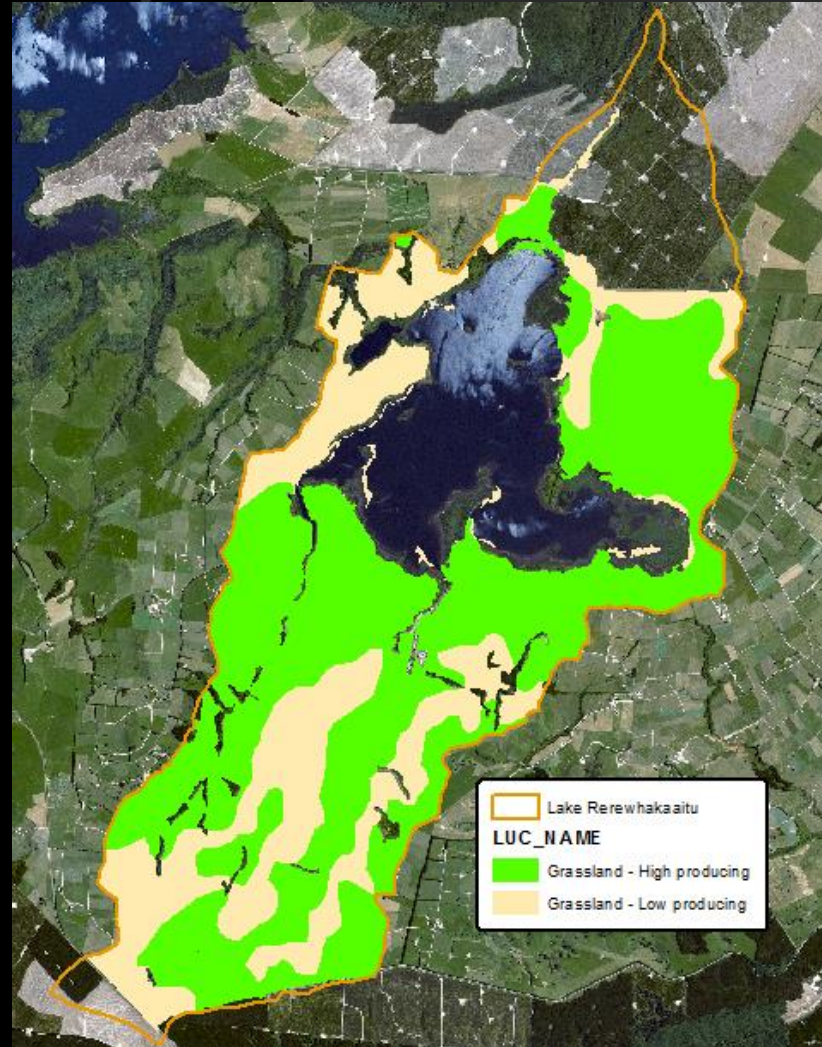
Rotomā Forestry 25+ years

350ha

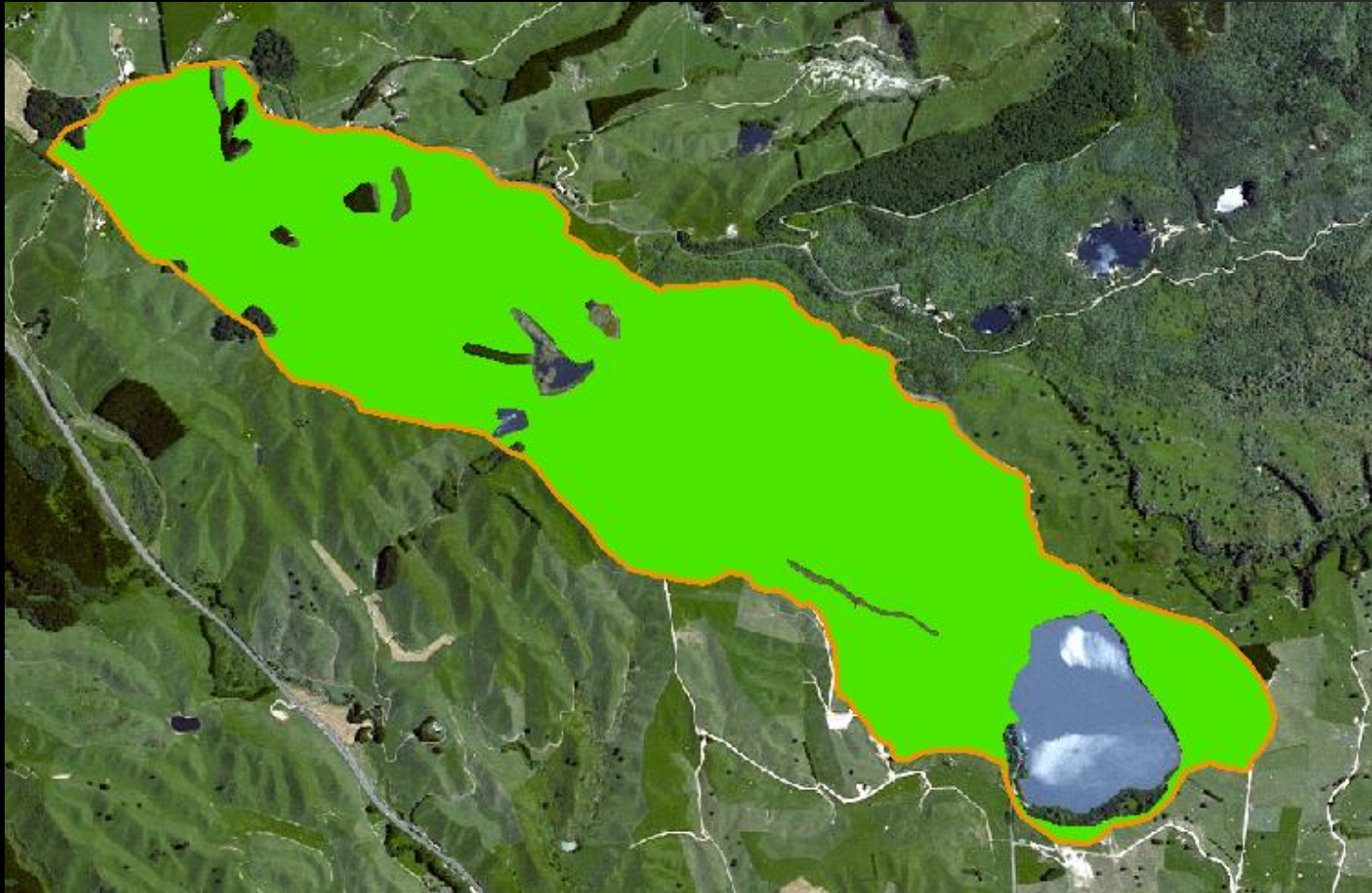


Rerewhakaaitu – Productive grassland

2,410ha
65% of
Catchment

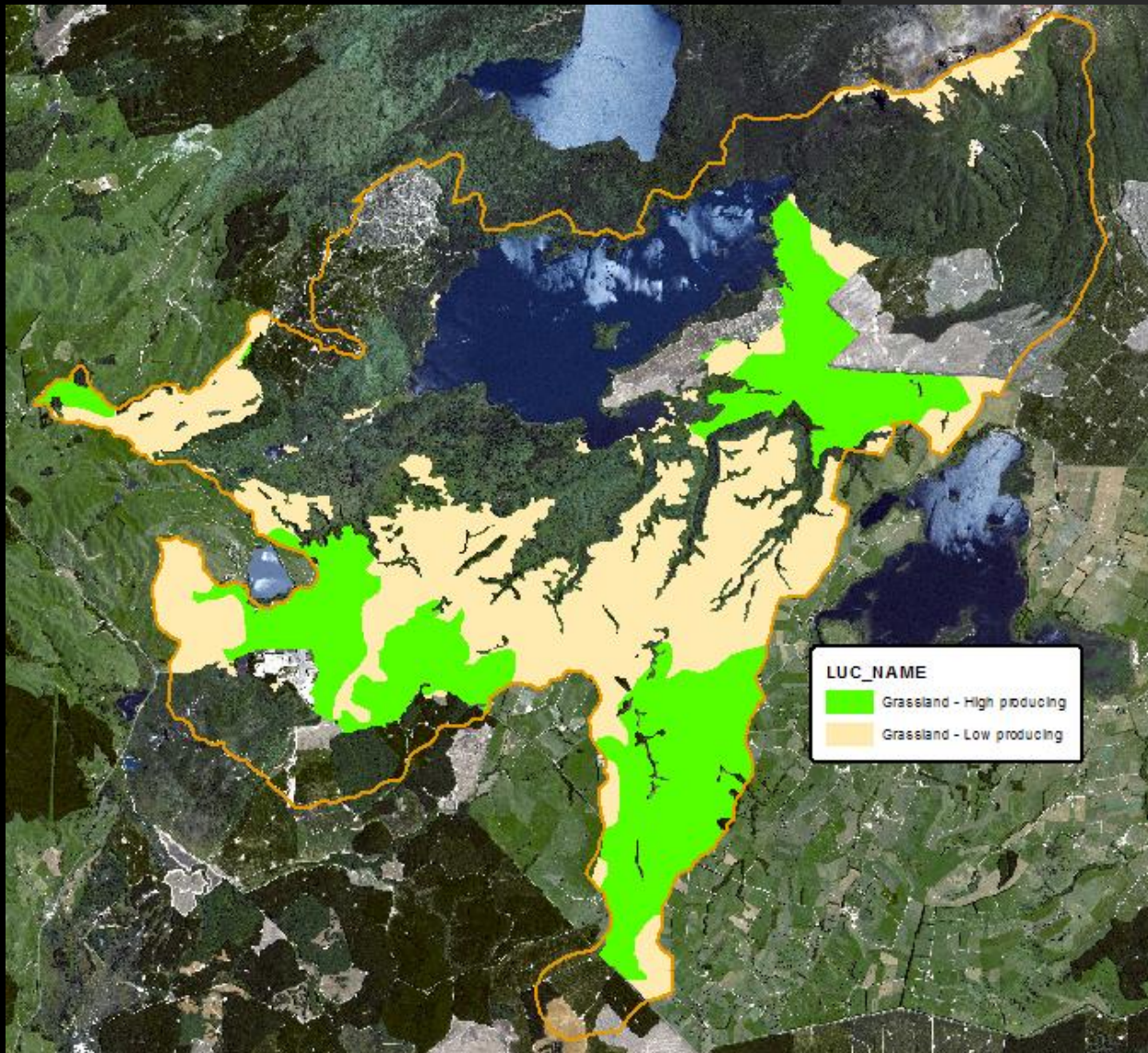


Ōkaro – Productive grassland



340ha grassland (87% of catchment)

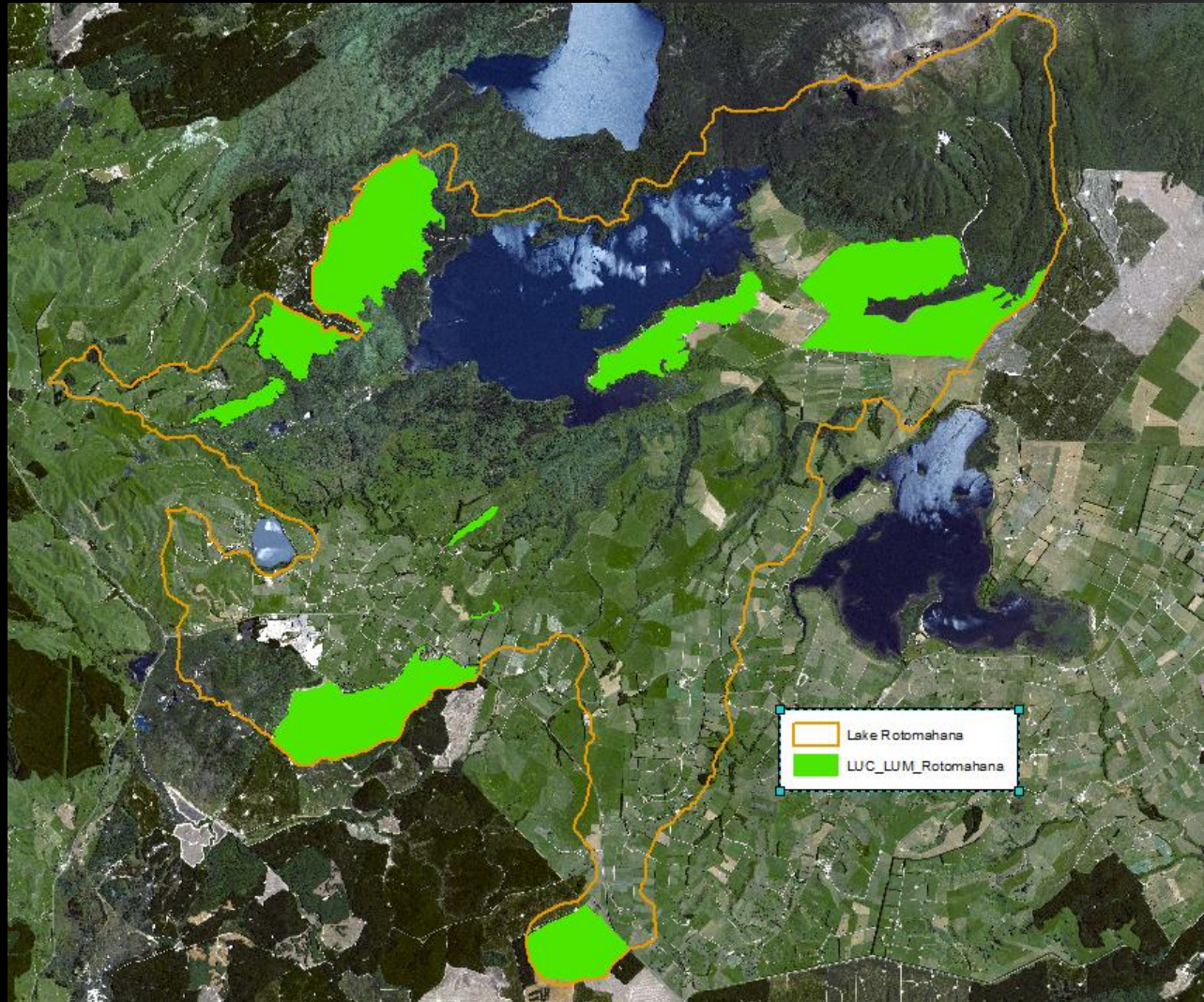
Rotomahana – Productive grasslands



3,240ha
39% of
catchment

Rotomahana - Forestry

1,160ha

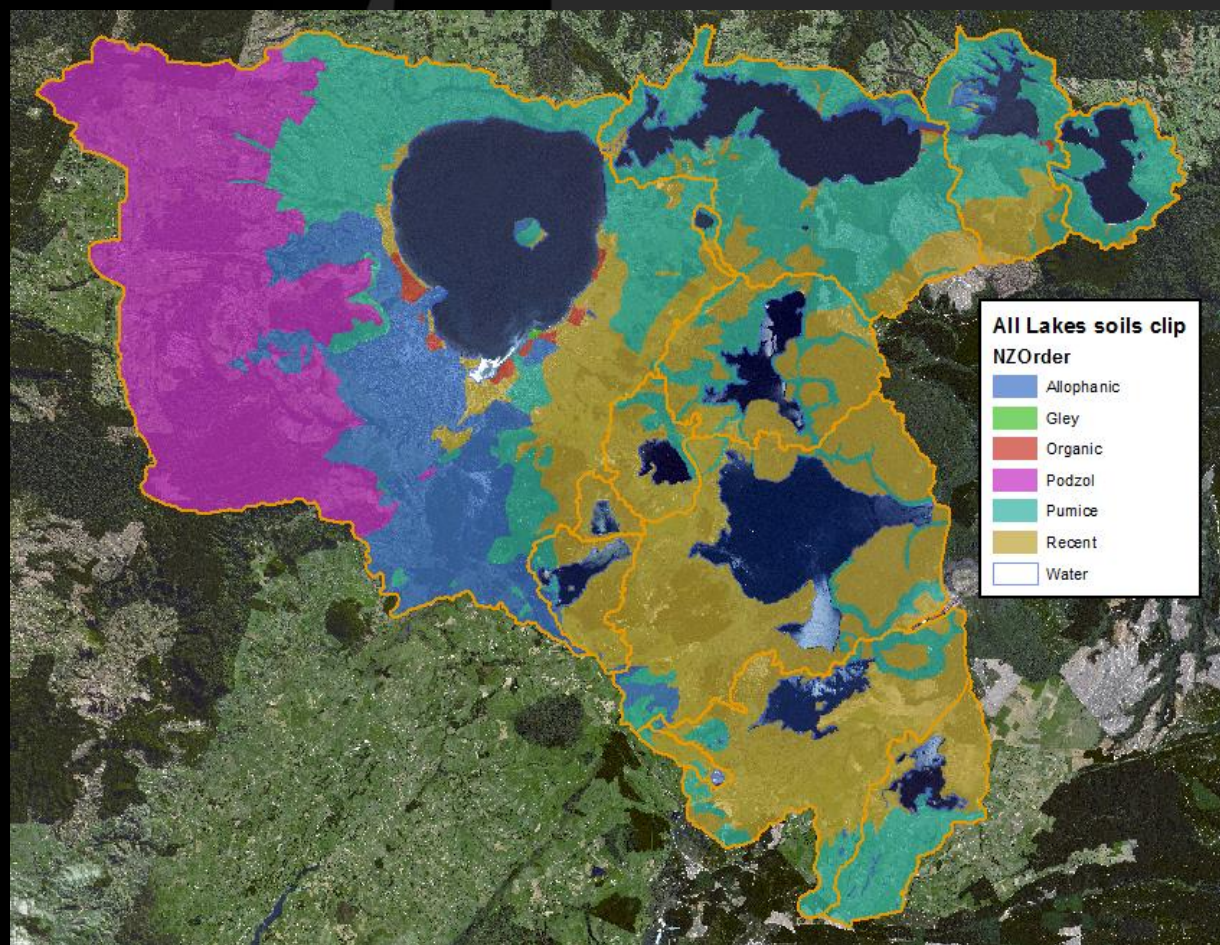


SOILS



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Allophanic	11.74%
Gley	0.02%
Organic	0.50%
Podzol	21.68%
Pumice	31.65%
Recent	34.42%



INTENSIFICATION



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- Surveys conducted for ROTAN work
- Have drawn heavily on local knowledge in the past
- Have a good base with readily available and easily analysable spatial data, but need to build on this
 - Agribase
 - Stats NZ

Livestock in the BoP

	As at June 30 1994	As at June 30 2002	As at June 30, 2006	As at June 30 2013	Change
Total beef cattle	164,806	134,815	117,435	92,984	Down 71,822
Calves - beef	39,976	27,853	23,341	17,990	Down 21,986
Total dairy cattle	285,752	331,410	300,509	314,679	Up 28,927
calves - dairy	184,232	214,406	194,045	194,323	Up 10,091
Total sheep	620,337	415,379	382,419	312,593	Down 307,744
Total lambs	436,279	367,584	314,053	274,857	Down 161,422
Total deer	81,873	73,027	60,163	38,554	Down 43,319
Fawns - weaned	24,757	29,179	21,693	16,409	Down 8,348
Total pigs	15,162	9,497	7,230	3,312	Down 11,850
Piglets weaned	17,868	13,281	
Total horses	2,456	2,846		1,870	Down 586
	1,855,630	1,605,996	1,438,756	1,280,852	Down 574,778 (31%)

<http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7423#>

GAPS



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