APPENDIX 5:
Copies of maps in A3 format

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OVERSEER® Nutrient budget modelling for the Tukituki catchment

Appendix 5: Maps on A3 paper

RE500/2013/020

May 2013

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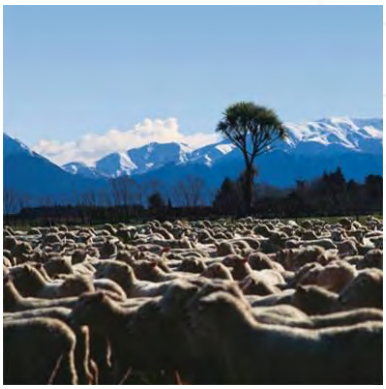

OVERSEER® Nutrient Budget modelling for the Tukituki Catchment

Appendix 5: Maps on A3 paper

Prepared for

Hawke's Bay Regional Investment Company Limited

Final

May 2013

Monique Benson[1] and David Wheeler[2]

[1] Hawke's Bay Regional Council

[2] AgResearch, Private Bag 3123, Hamilton

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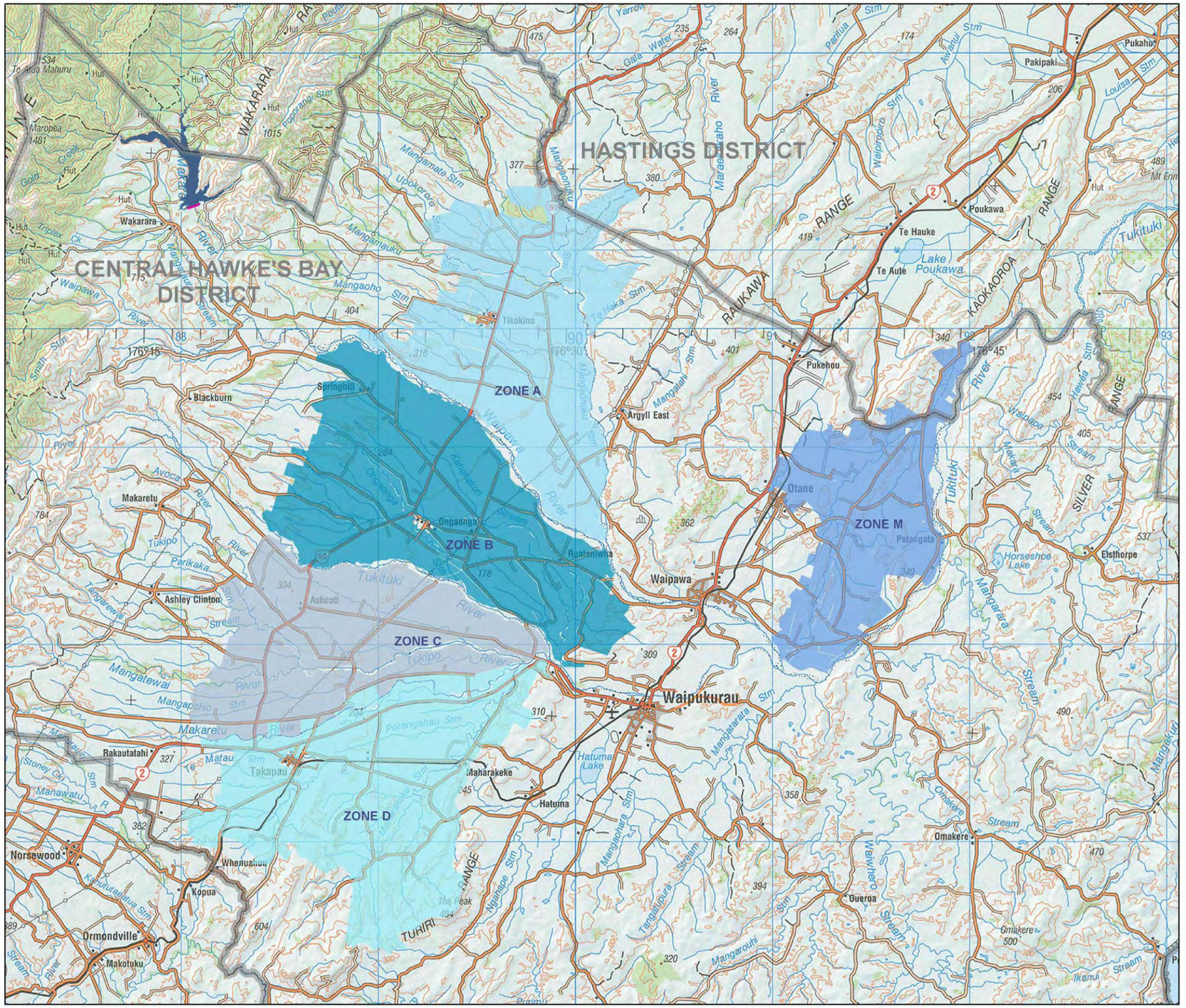

RUATANIWHA
Water Storage

Ruataniwha Water Storage Scheme

Overview Plan
Production Land Use Areas

N

1:180,000

0 2,500 5,000 7,500 10,000 Meters

Legend

- District Council Boundaries
- Dam Crest
- Reservoir Footprint

Production Land Use Areas

- Zone A
- Zone B
- Zone C
- Zone D
- Zone M

HAWKE'S BAY REGIONAL INVESTMENT COMPANY LTD

HAWKE'S BAY REGIONAL COUNCIL

DATA FROM: Farm information obtained from the Hawke's Bay Regional Council's Geographic Information Systems Database.

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Date: May 2013 - Final

Figure 1. Consent application area for the Ruataniwha Water Storage Scheme water use

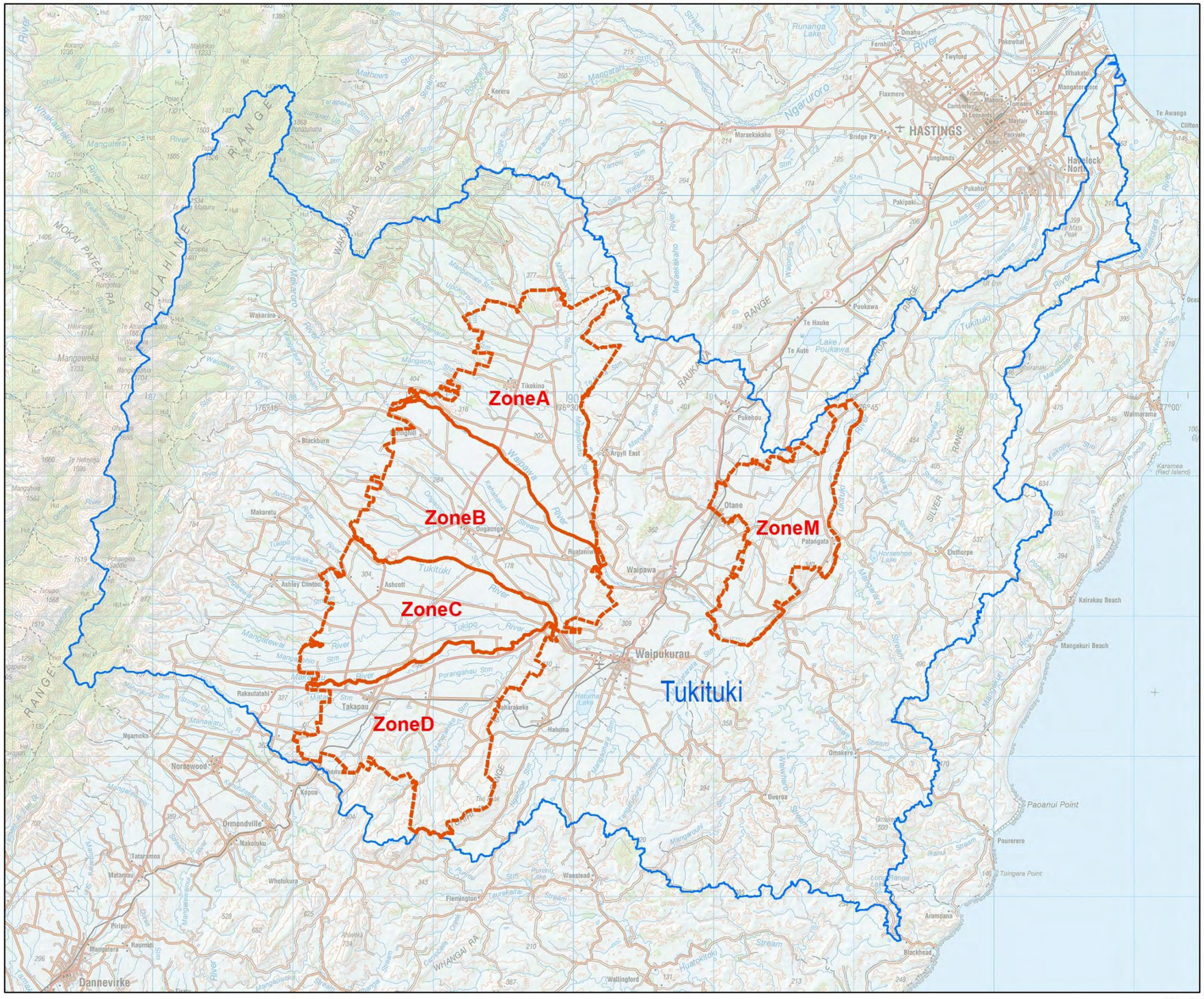


Figure 2. Potential irrigable zones A, B, C, D and M that form the outer boundaries of the consent application area, and the Tukituki catchment area.

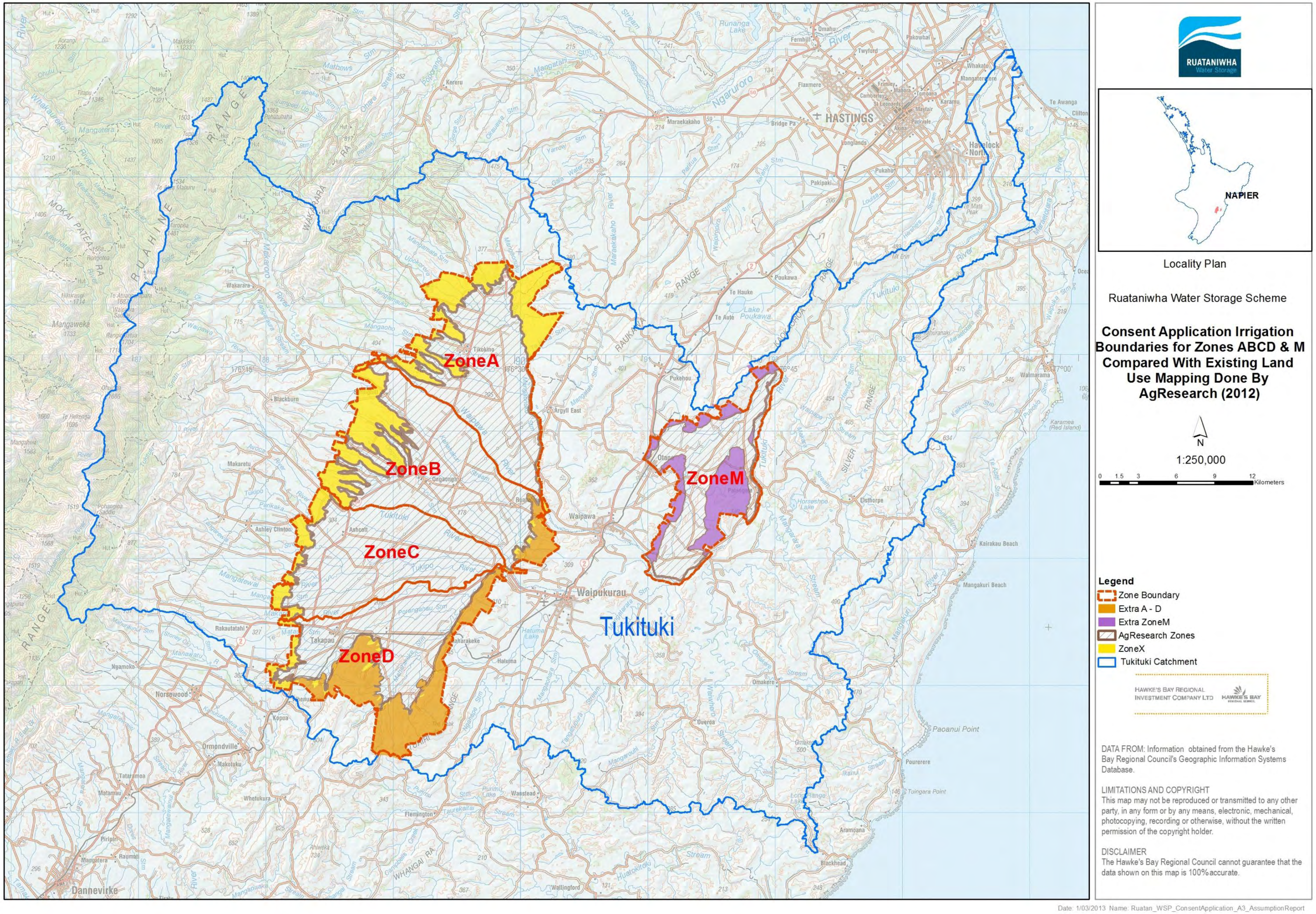


Figure 3. Additional land area added to the consent application area potential irrigable zones as a result of including full parcel boundaries.

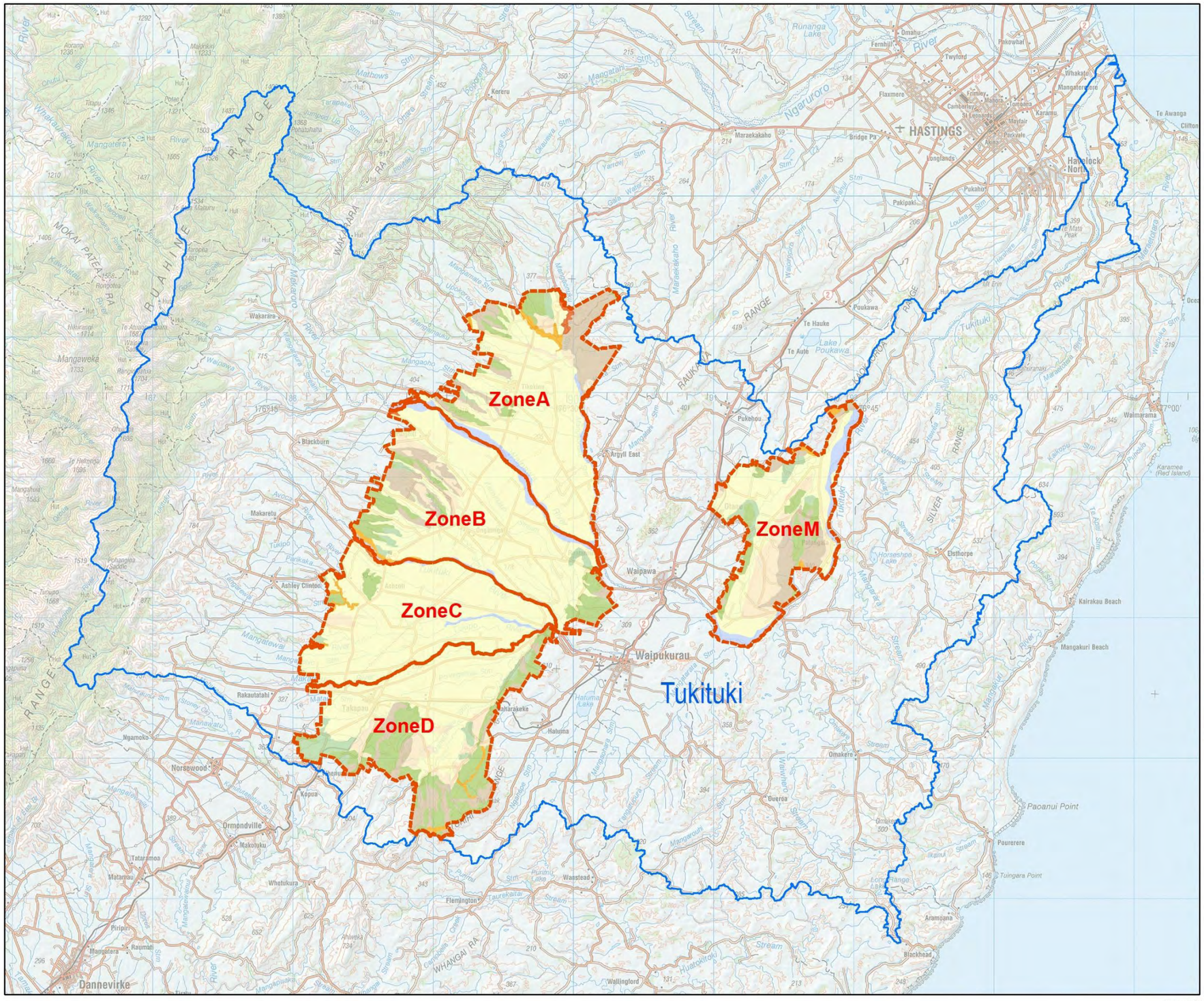


Figure 4. Land slope across the Ruataniwha Water Storage Scheme consent application area, Tukituki River catchment.

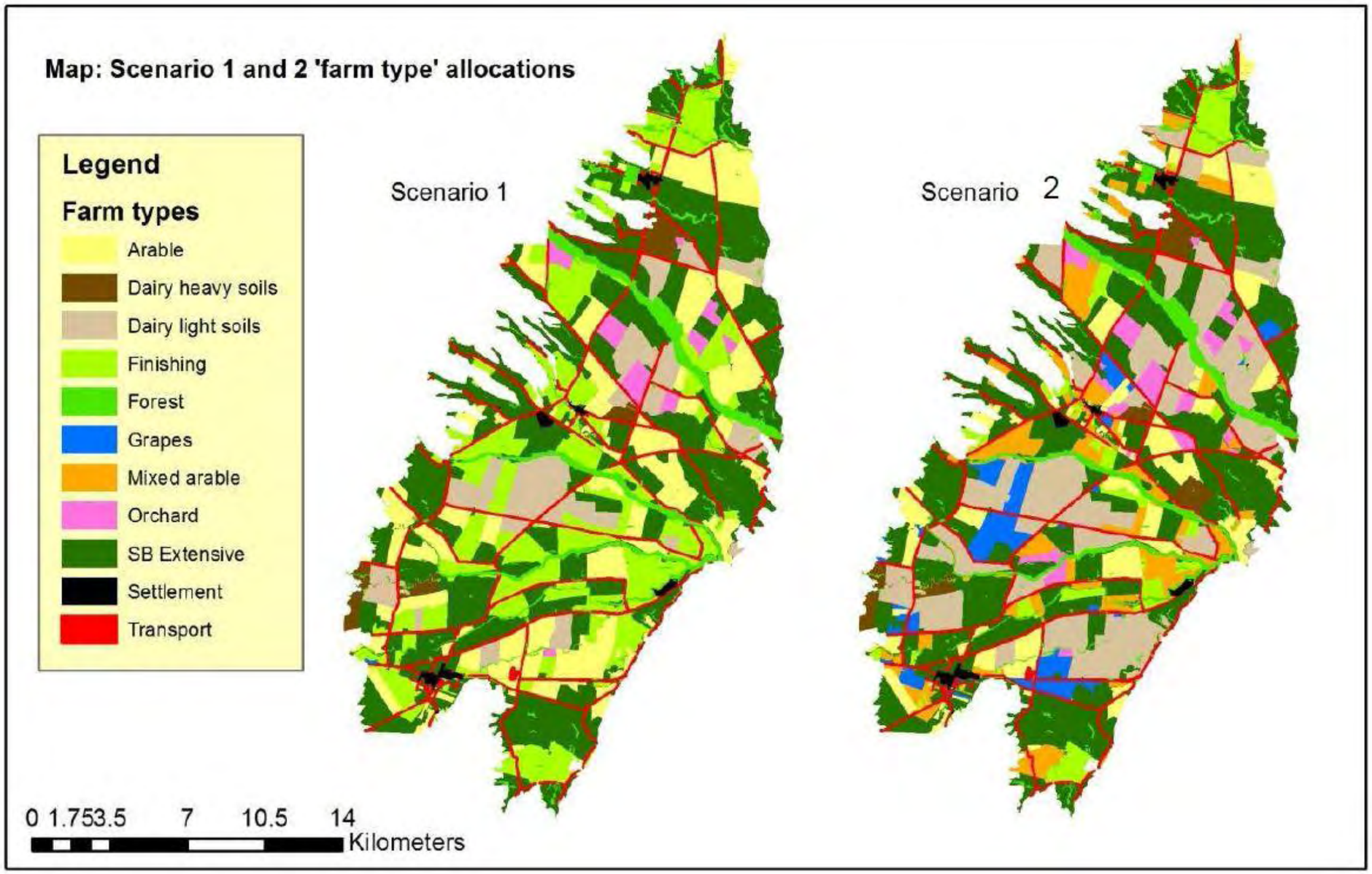
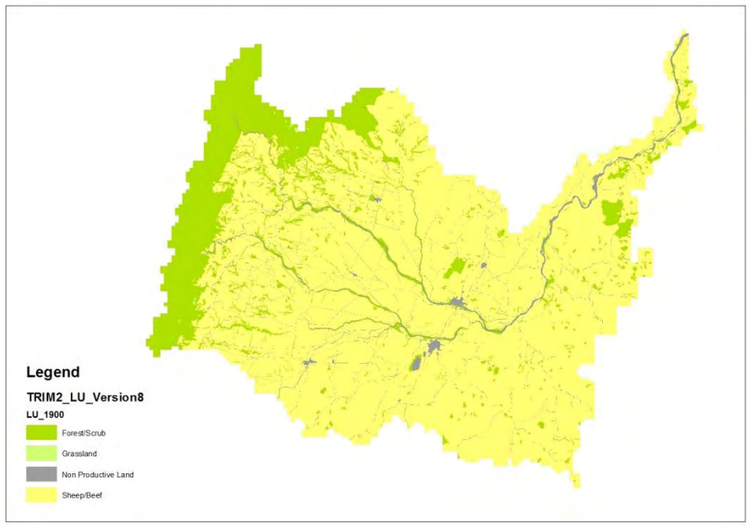
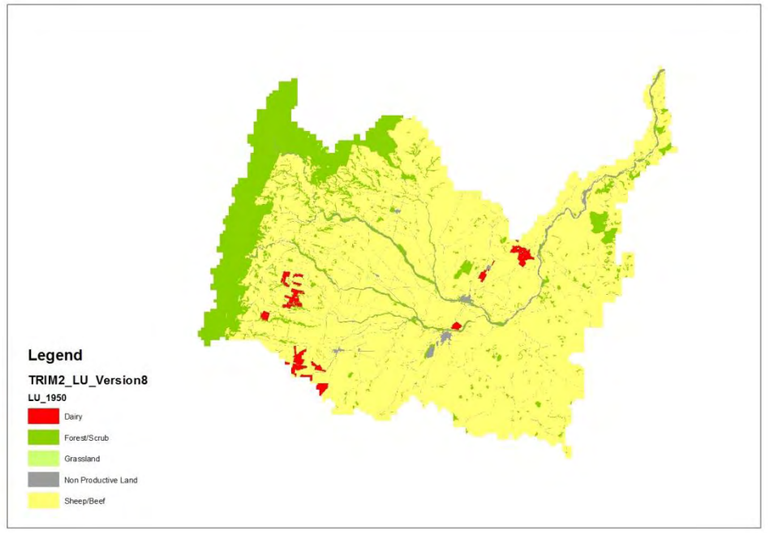


Figure B18: Comparison of farm type allocation between Scenario 1 (pre-storage) and Scenario 2 (post-storage). Please note Scenario 2 is allocated using a stratified random sampling technique and thus represents one of many possible land-use configurations. Similarly, the maps should not be used to infer land-use suitability for any given location.

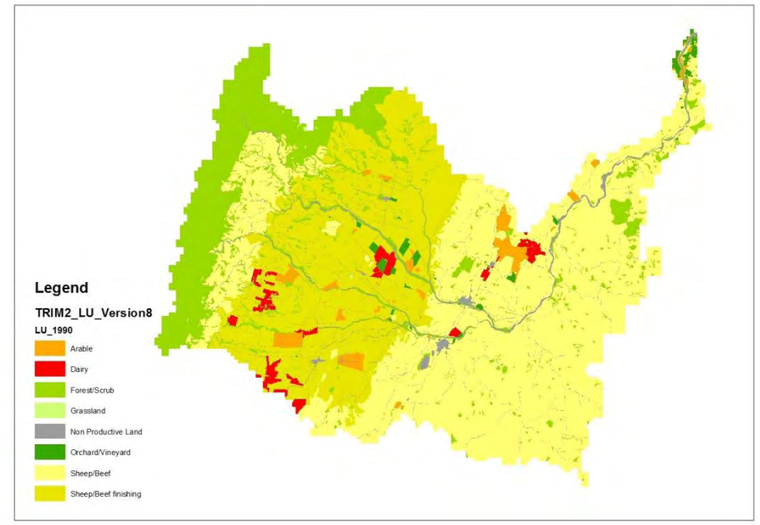
Figure 5. Current (scenario 1) and future (scenario 2) land use for zones ABCD. Copied from Green et al. (2012, section 2)



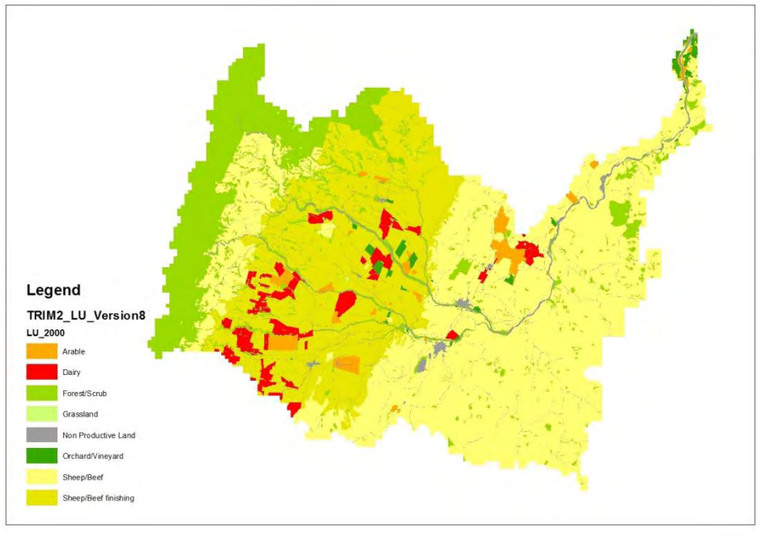
Historic land Use: 1900



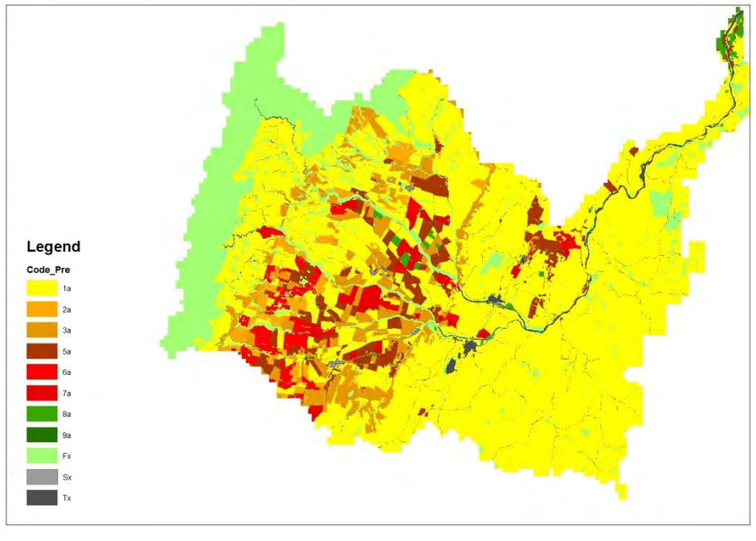
Historic land Use: 1950, 1970, 1980



Historic land Use: 1990

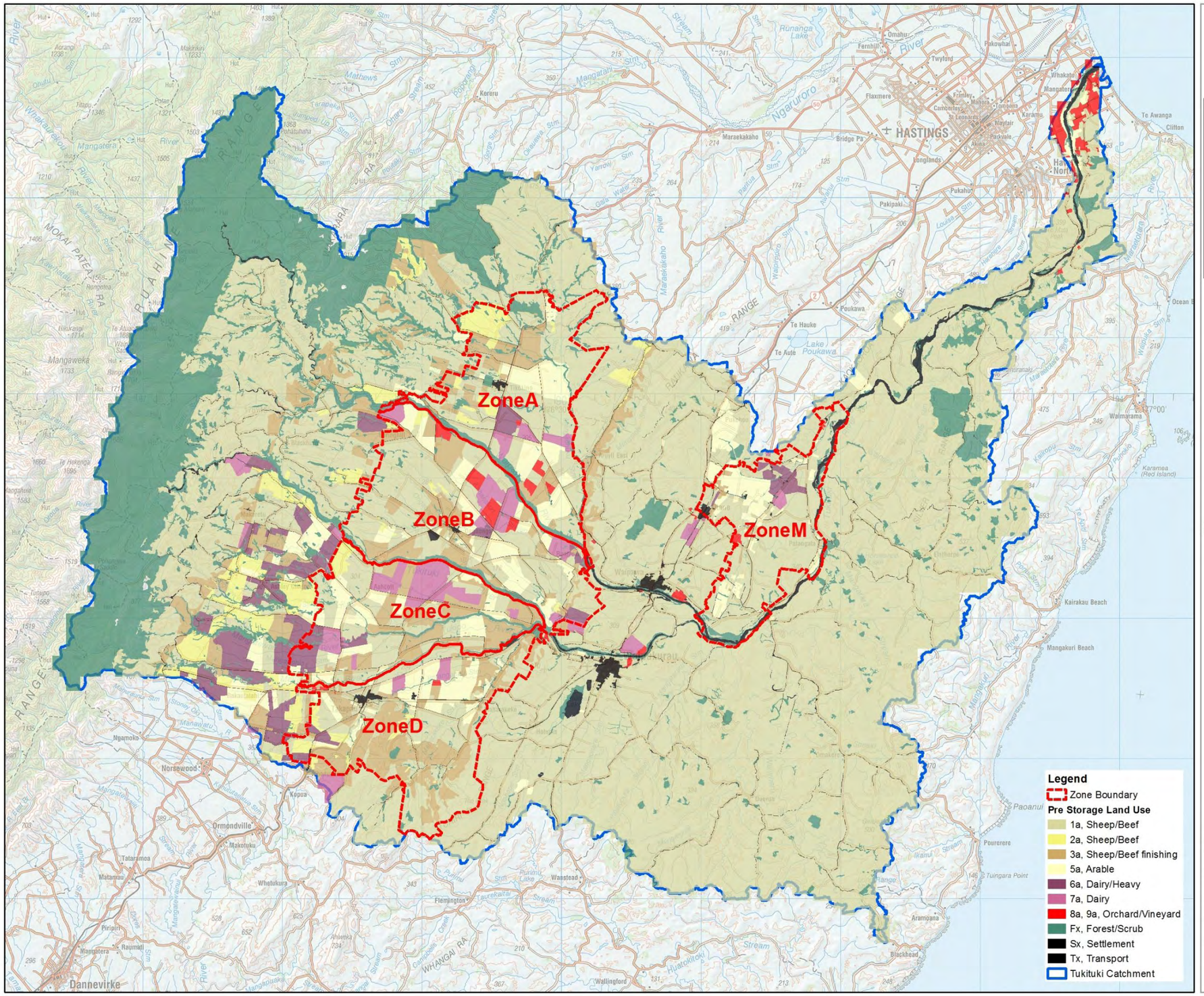


Historic land Use: 2000

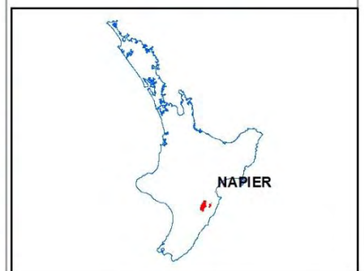


Current land Use: 2010

Figure 6. Historic land use for the Tukituki catchment for the years 1900, 1950, 1990, 2000 and 2010. Note that the layers for 1950, 1970, and 1980 are the same – hence only 1950 is shown.



RUATANIWHA Water Storage



Locality Plan

Ruataniwha Water Storage Scheme

Pre Storage Land Use Within Zones ABCD & M Consent Application Irrigation Boundaries

N

1:250,000

0 1.25 2.5 5 7.5 10 Kilometers

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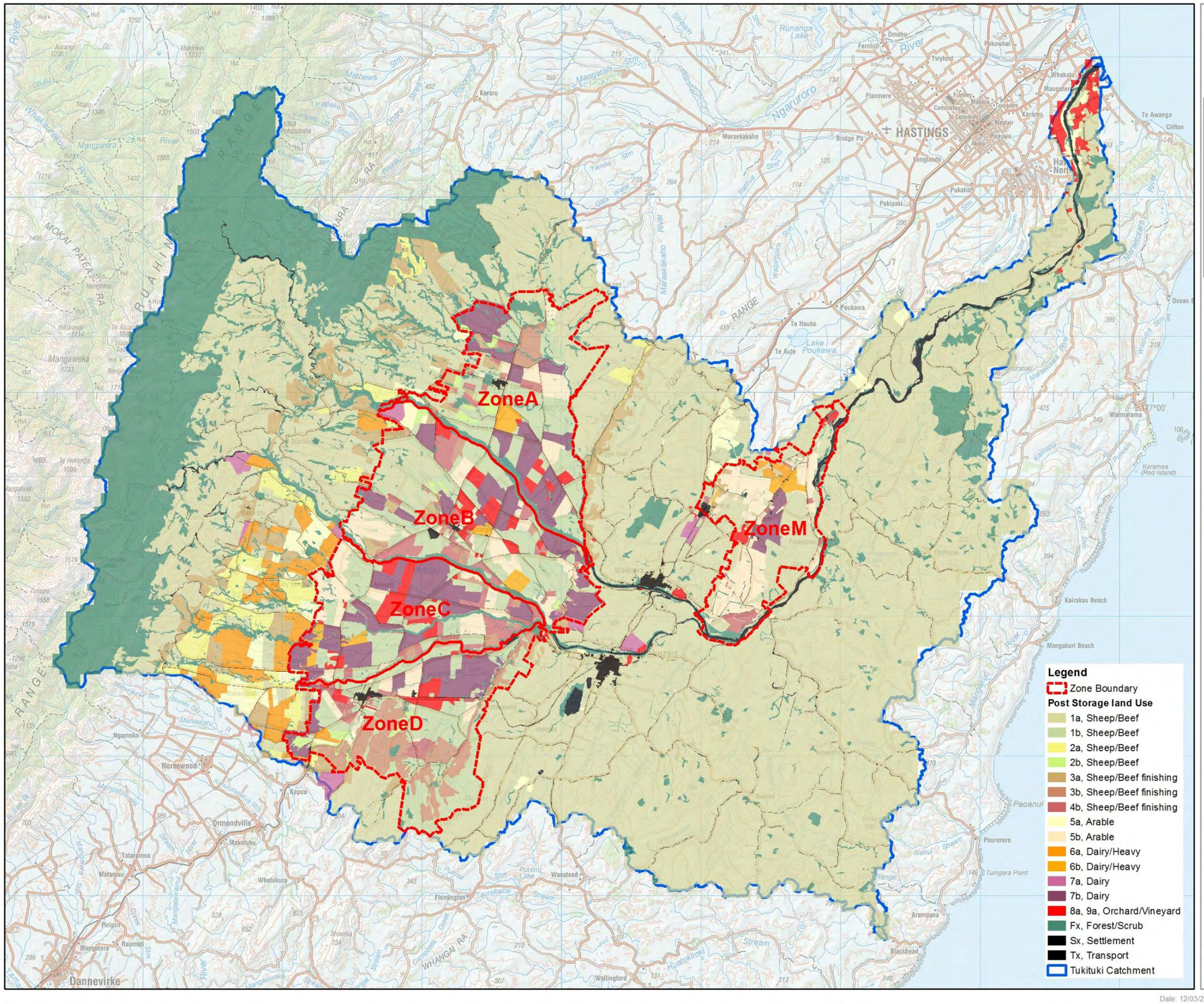
Date: 12/03/2013 Name: Ruatan_WSP_ConsentApplication_A3_AssumptionReport

Figure 7a. Current land use within the Tukituki catchment.



RUATANIWHA Water Storage

Locality Plan

Ruataniwha Water Storage Scheme

Post Storage Land Use Within Zones ABCD & M Consent Application Irrigation Boundaries

N

1:250,000

0 1.25 2.5 5 7.5 10 Kilometers

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Figure 8b. Likely future land use within the Tukituki catchment.

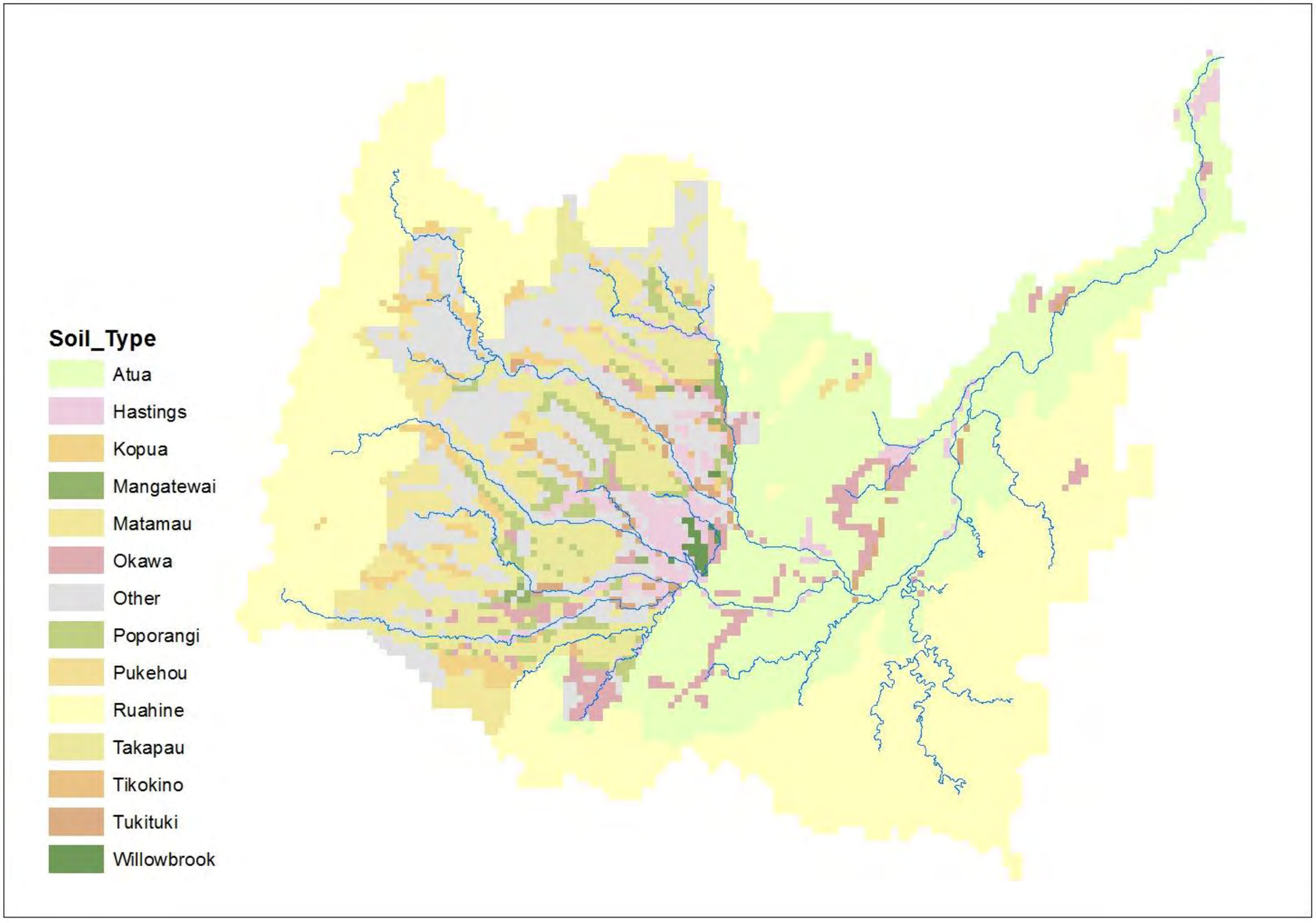

Figure 9. Map of the predominant soil types used within the Trim 2 modelling (Rutherford 2013).

Figure 10. NIWA 5 km grid cell references in the consent allocation area.

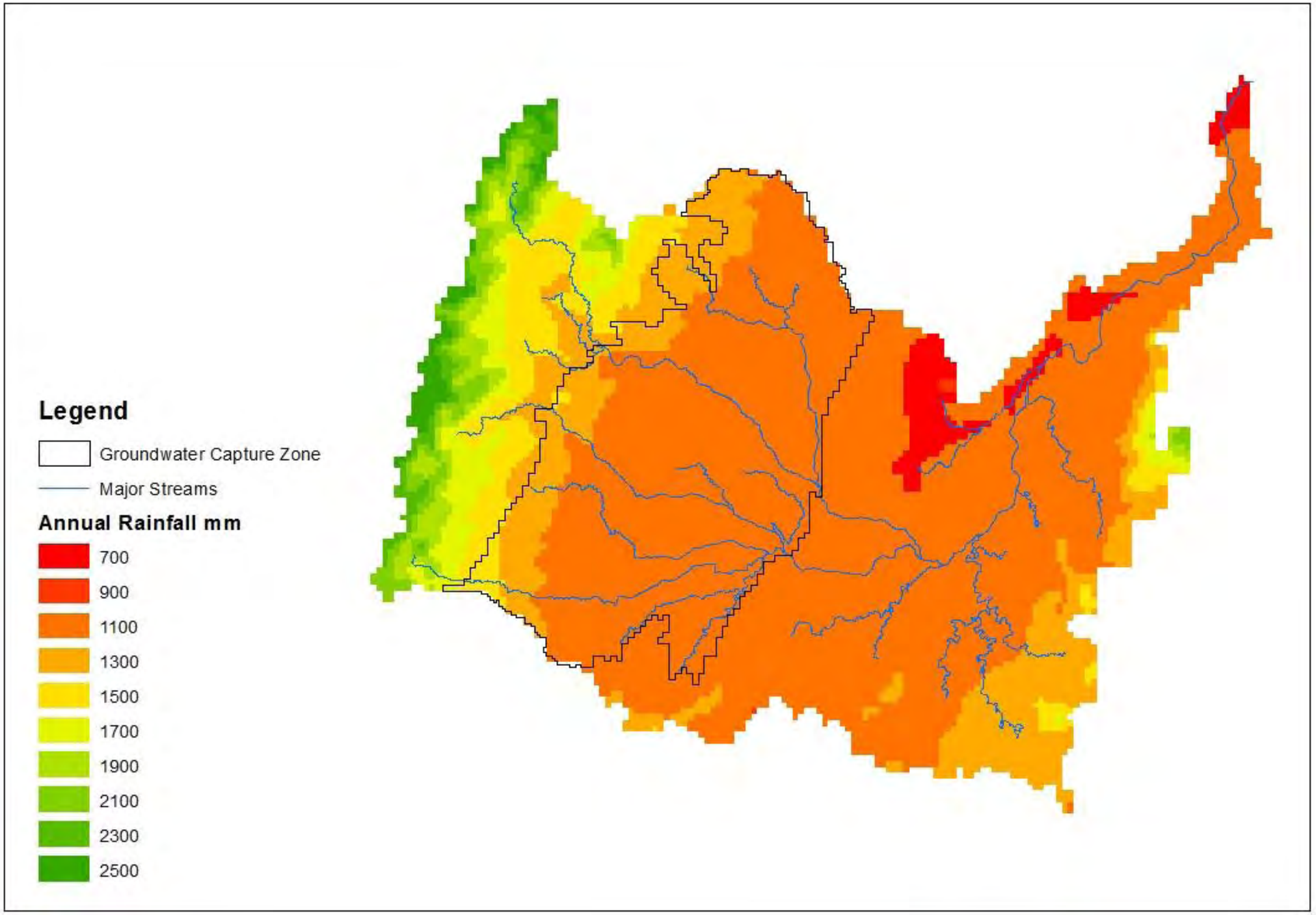

Figure 11. Spatial distribution of rainfall normals 1961-1990. Source: Rutherford (2013). Also shown is the groundwater capture zone (black outline) and major streams.