

Guided by Water: incorporating landcover-derived wetlands into the Western Cape Biodiversity Sector Plan

Biodiversity Planning Forum

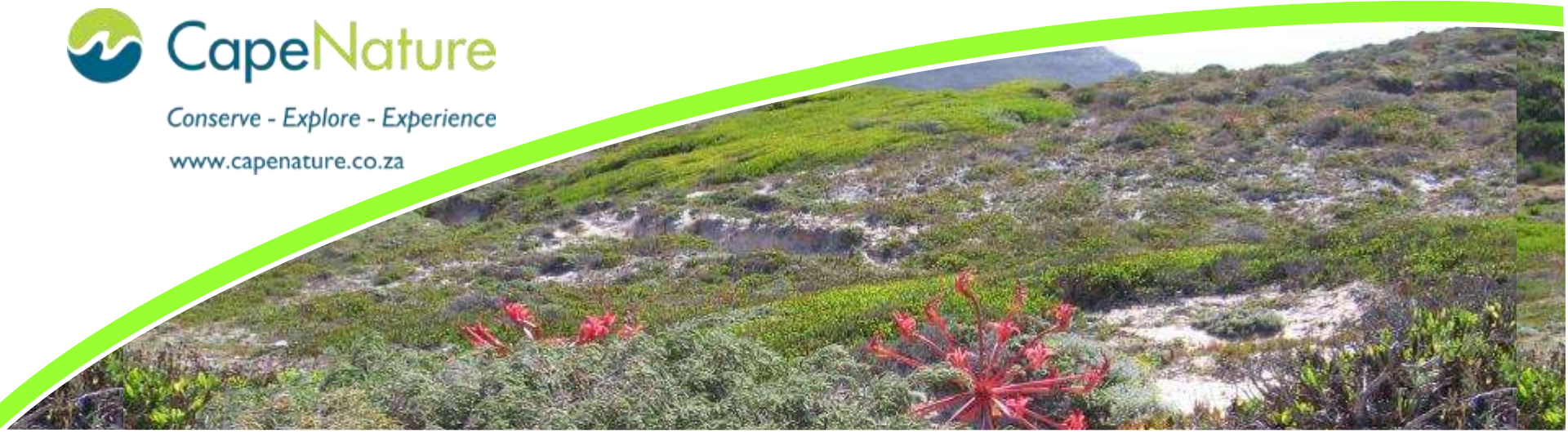
May 2016

Genevieve Pence



Conserve - Explore - Experience

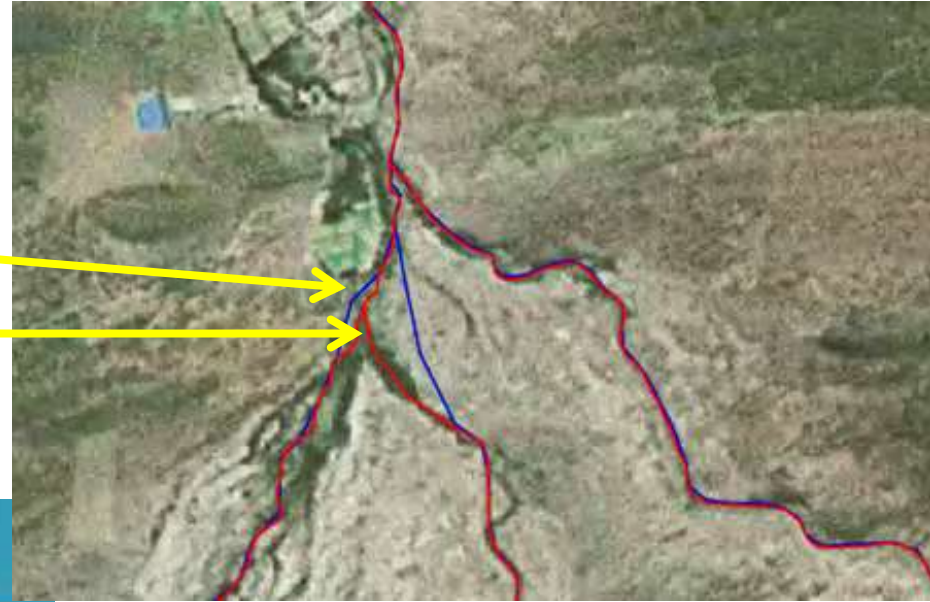
www.capenature.co.za



RIVERS

1:500K to

1:50K



Classification

- Water rivers seasonal
- Water rivers permanent
- Water pan water seasonal
- Water pan water permanent
- Water natural water seasonal
- Water natural water permanent
- Water estuarine (seasonal)
- Water estuarine (permanent)
- Water sea (combined seasonal _permanent)
- Water seasonal (dams)
- Water permanent (dams)
- Wetlands estuarine
- Wetlands floodplain
- Wetlands valley-bottom
- Wetlands seeps / highland
- Wetland pans
- Wetlands other
- Dams50

Overall User Accuracy = 98%

Wetlands, valley-bottom = 90%

Wetlands, other = 93%

Semi-automated, seasonally-defined,
spectral foundation classes

Wetlands:

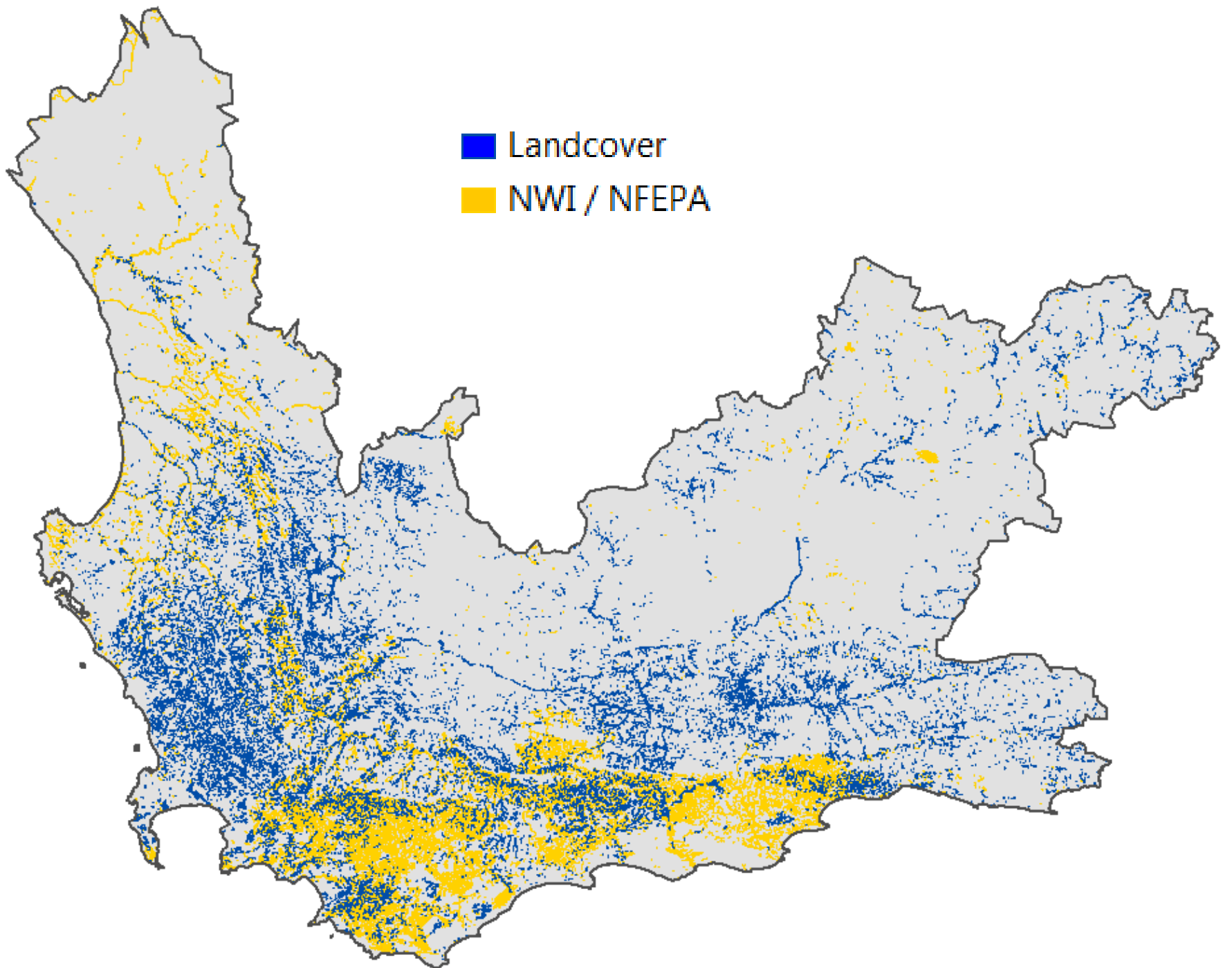
90m SRTM based terrain model to
generate 'mask', then
single ("wettest") or dual ("flush") date
methodology;

Indices applied (4 vs 8) re: 'wet veg'

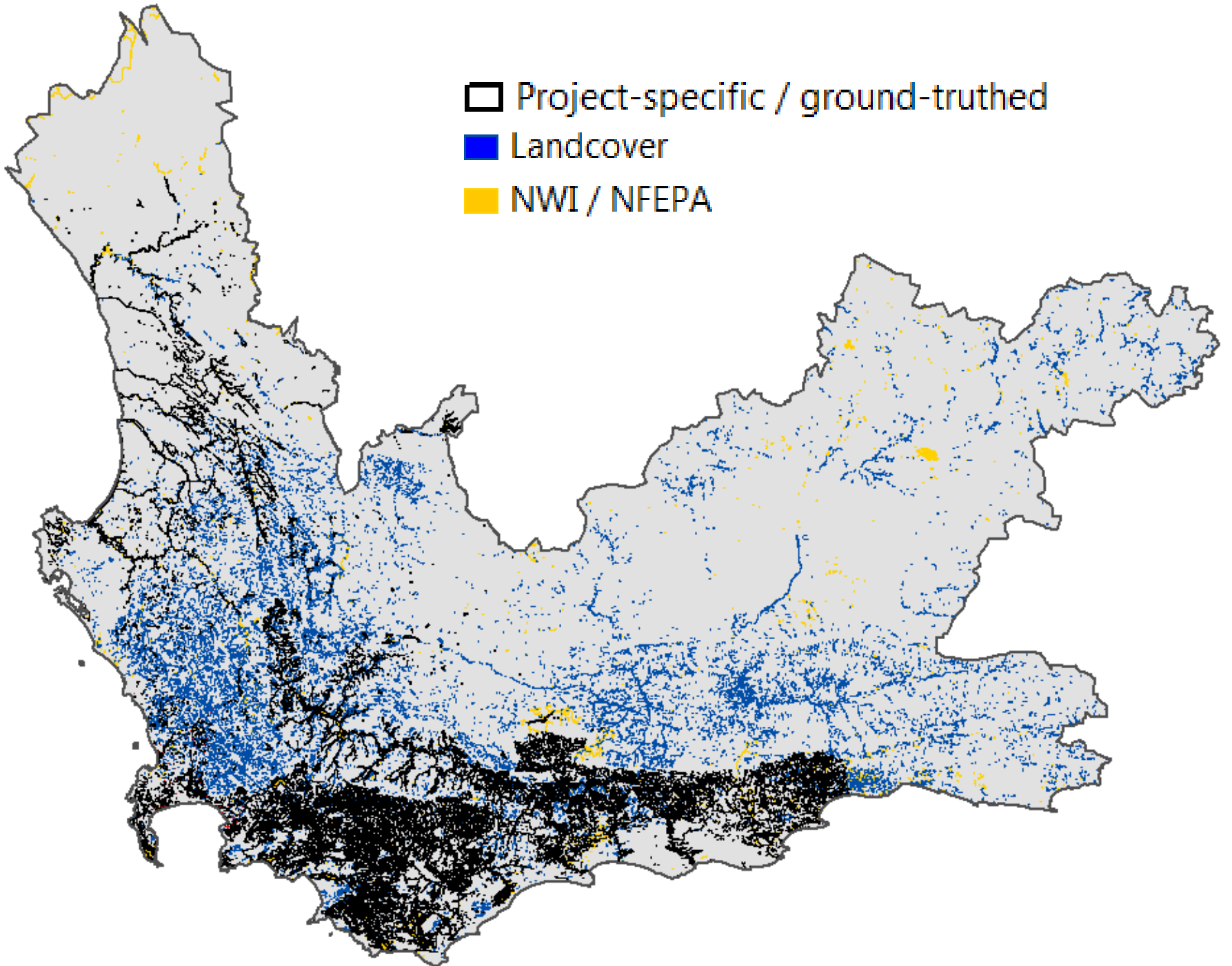
Subclass (HGM) typing method:
Modelled in vector environment,
Using rule-set &
Hammonds Landform Model

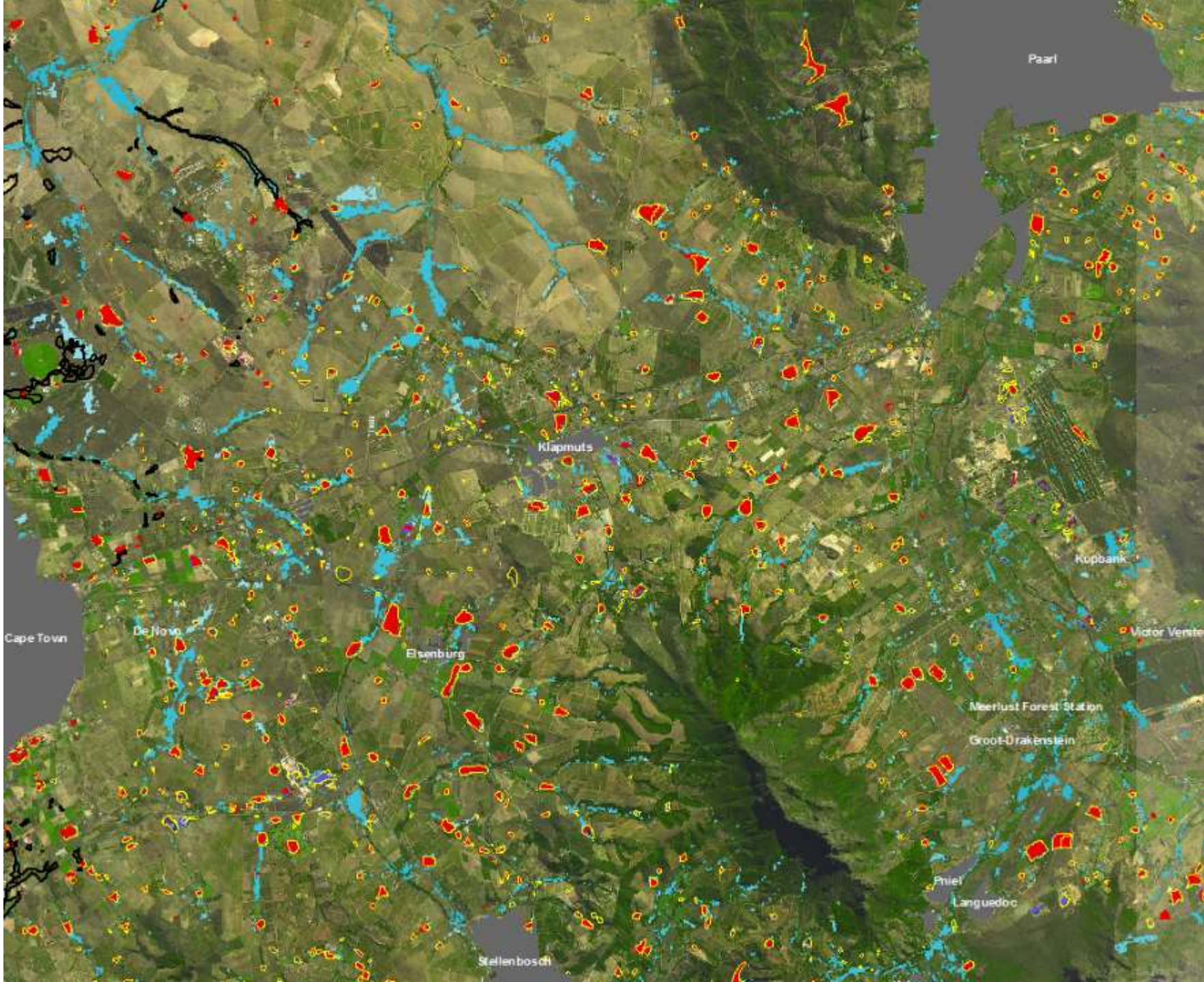
■ Landcover

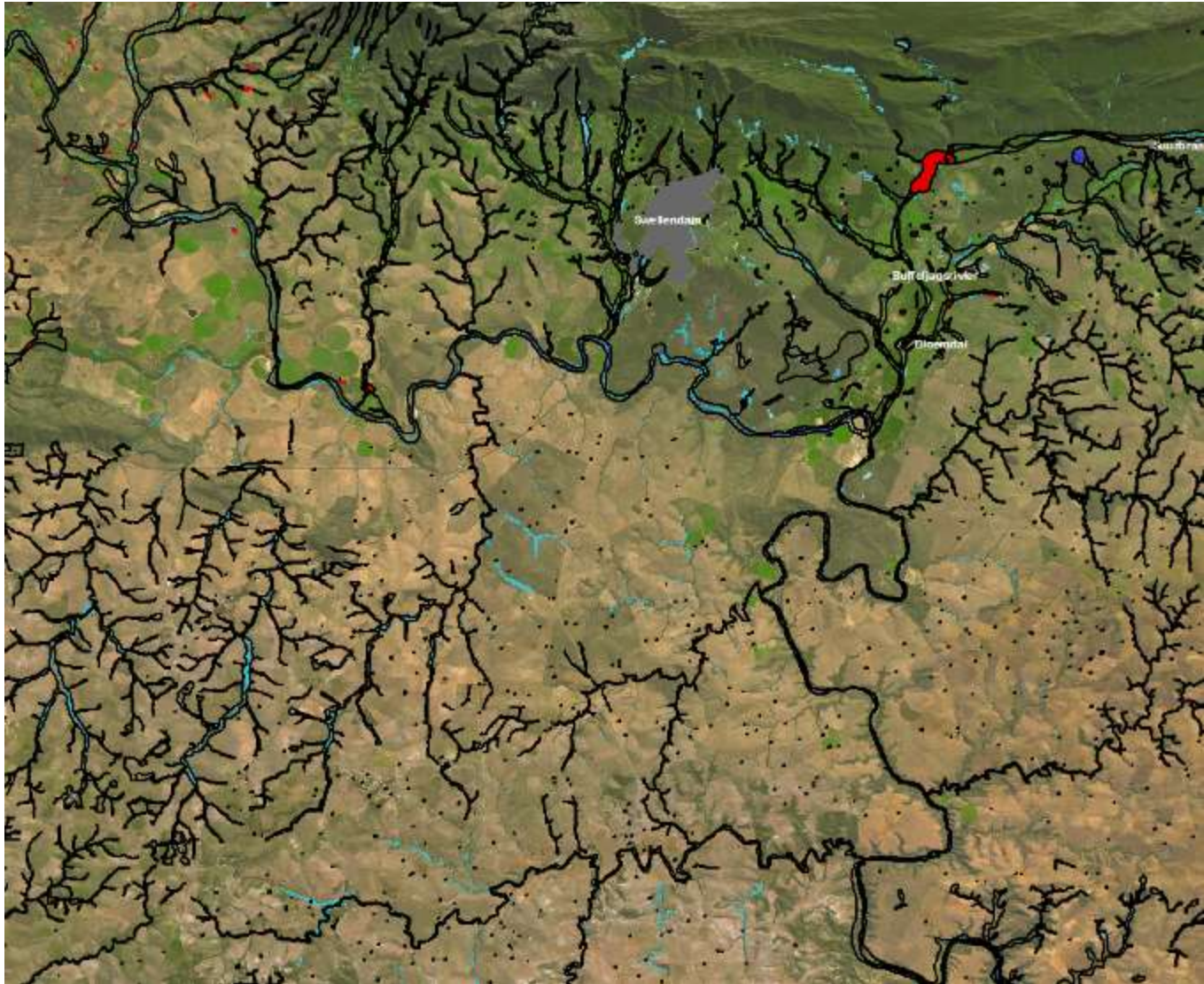
■ NWI / NFEPA

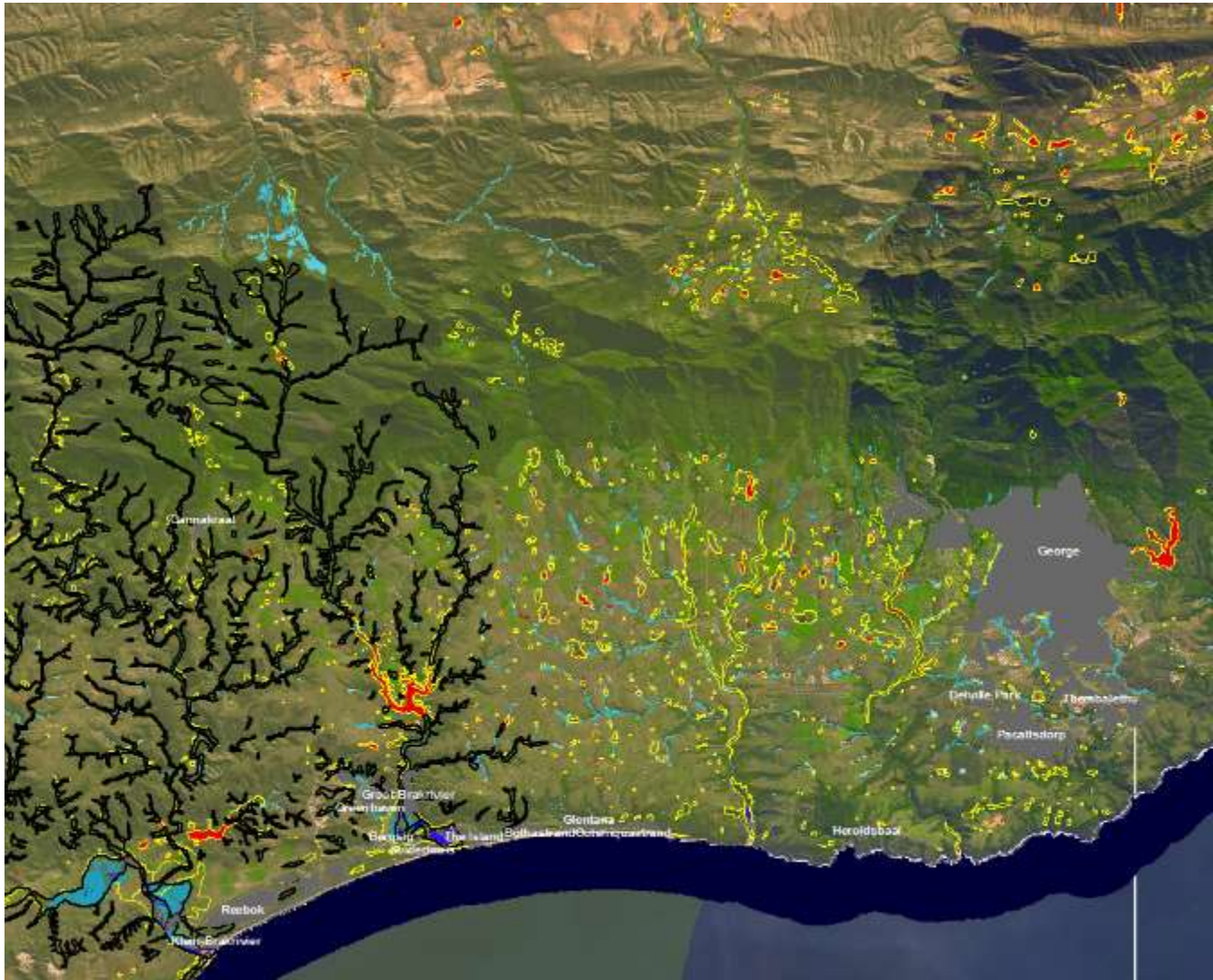


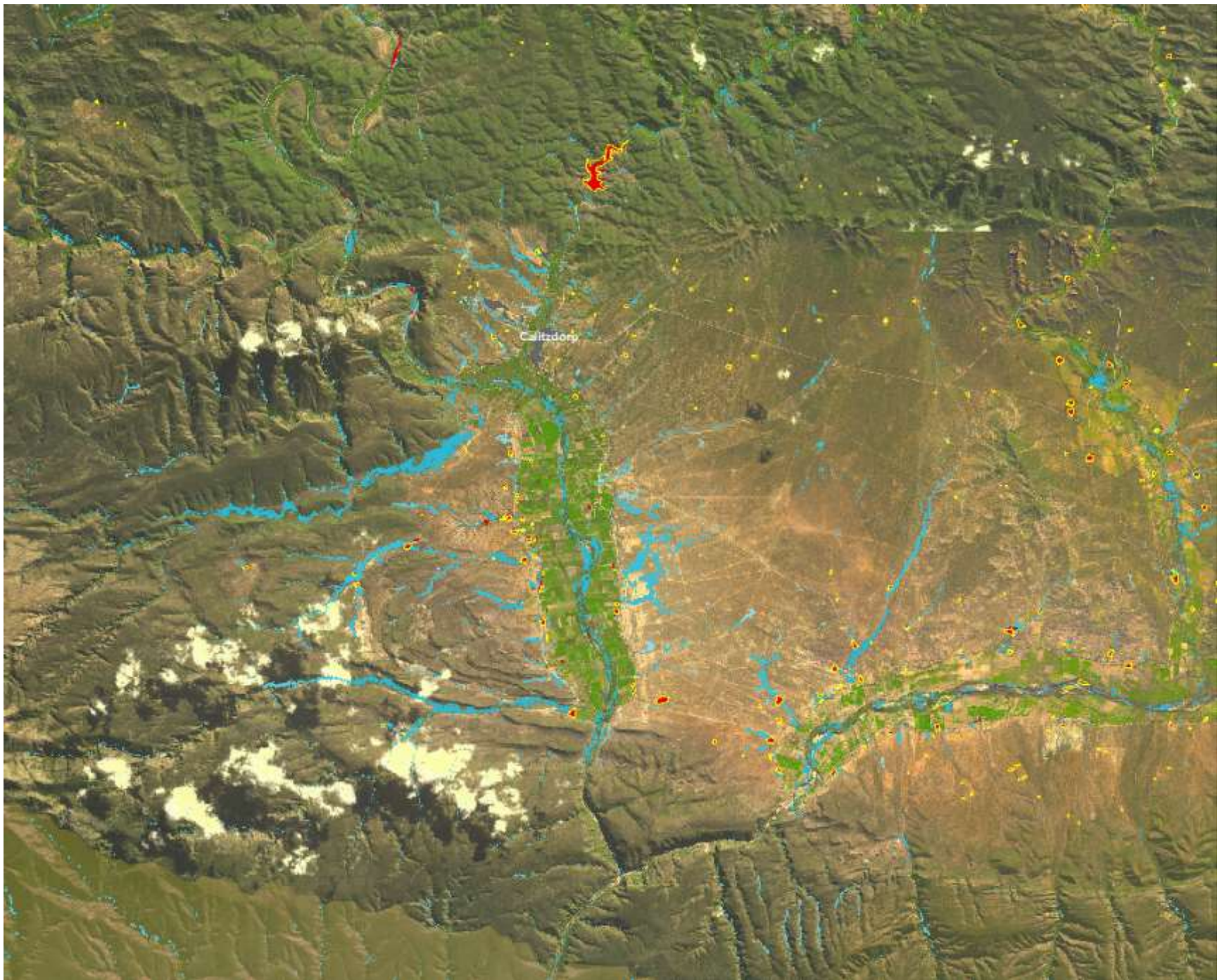
- Project-specific / ground-truthed
- Landcover
- NWI / NFEPA











Going forward

- Before final runs
 - Remove additional dams from integrated wetland layer
 - Dis-integrate?
- Next iteration / update
 - Improve wetland typing
 - NWI / NFEPA not as good as original project-based
 - Land cover-derived misses 'flats'
 - Use ground-truthing protocol to improve

