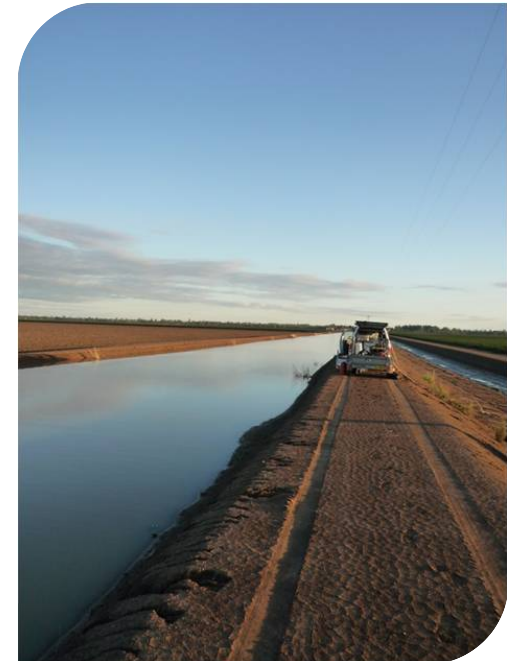


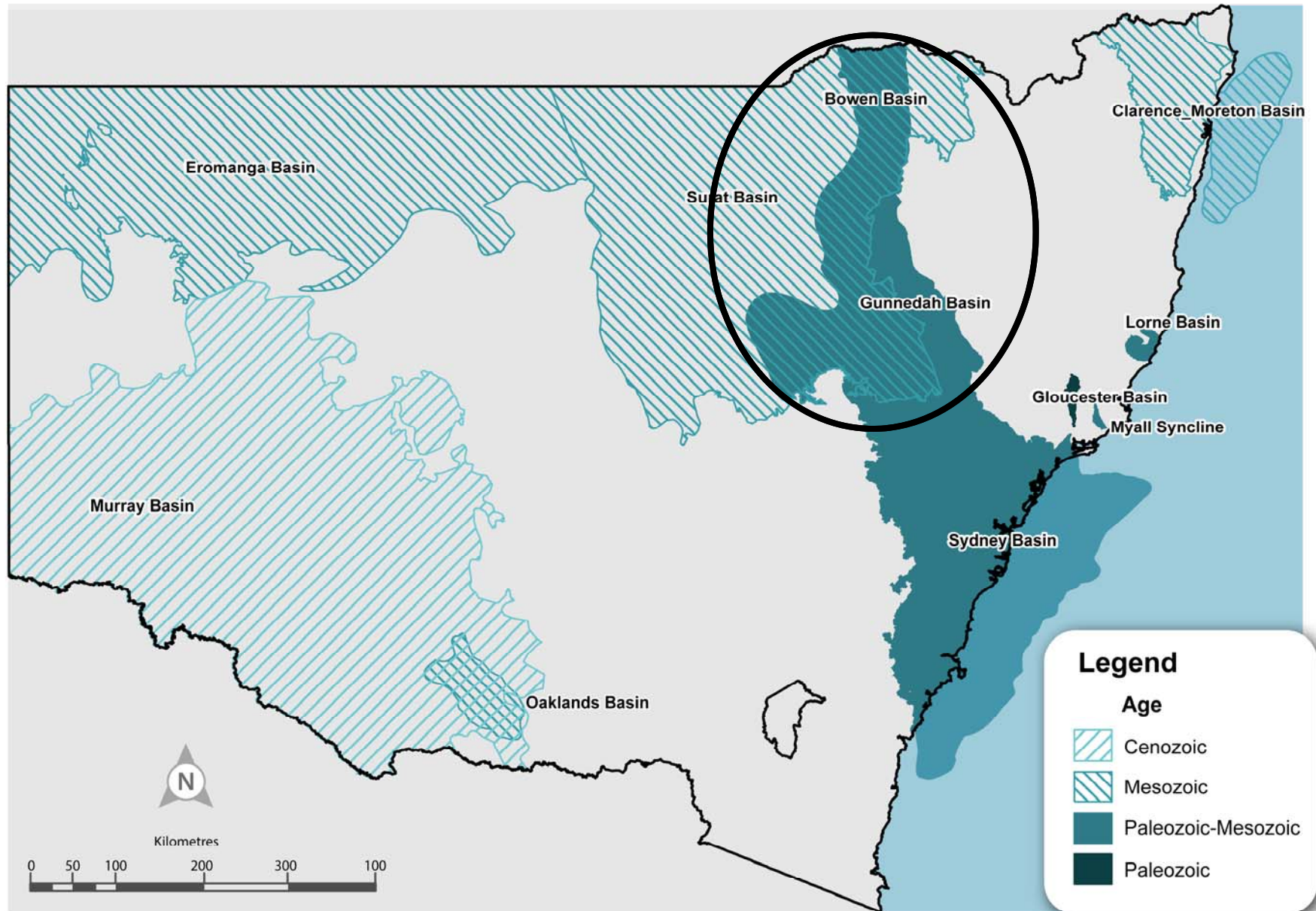
Groundwater

Gunnedah Basin NSW

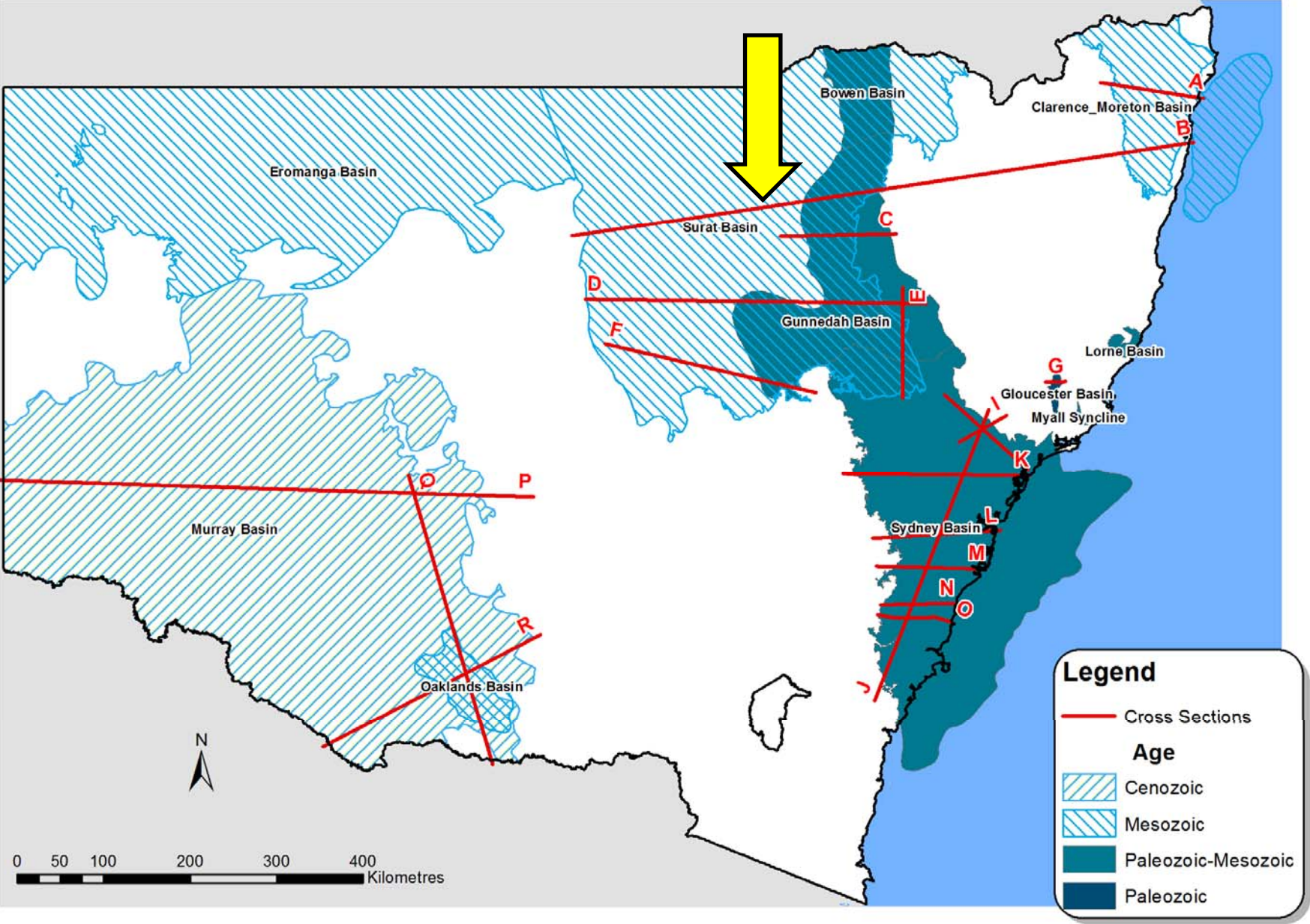
What water information can tell us



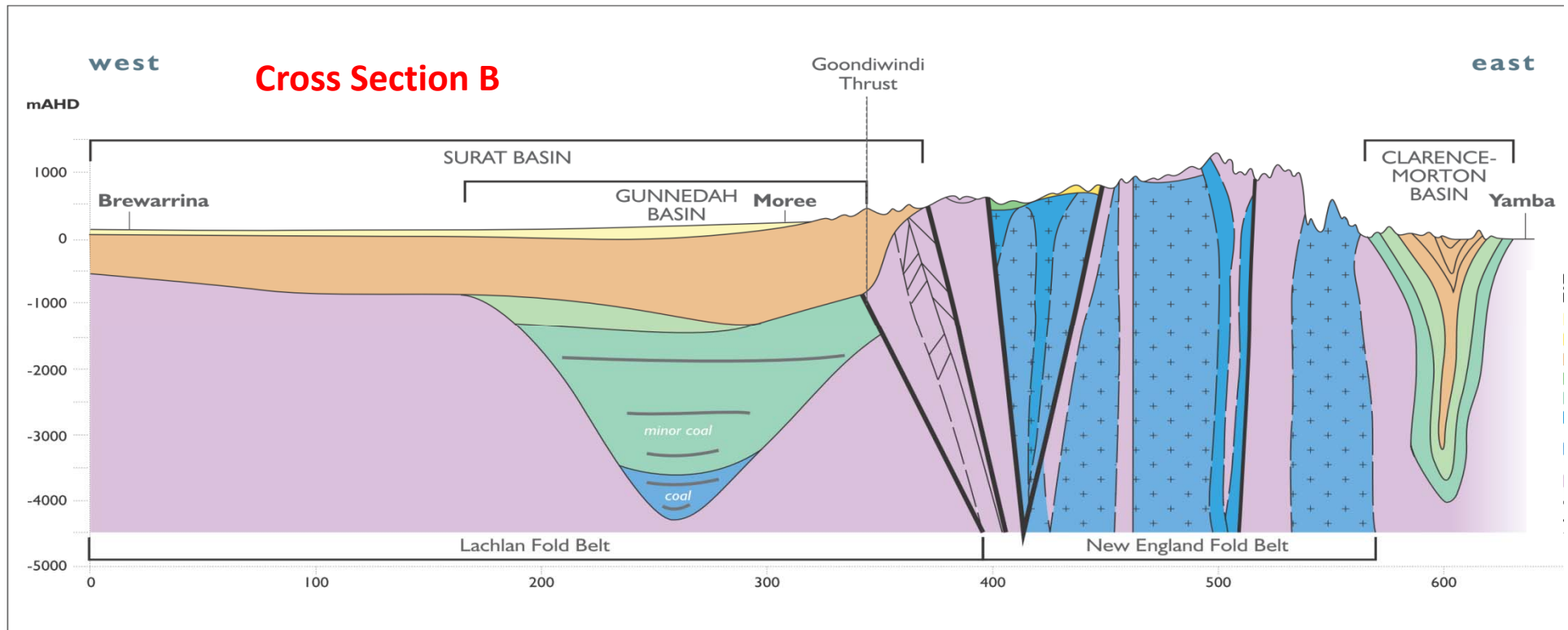
Sedimentary basins in NSW that contain coal



NSW cross sections

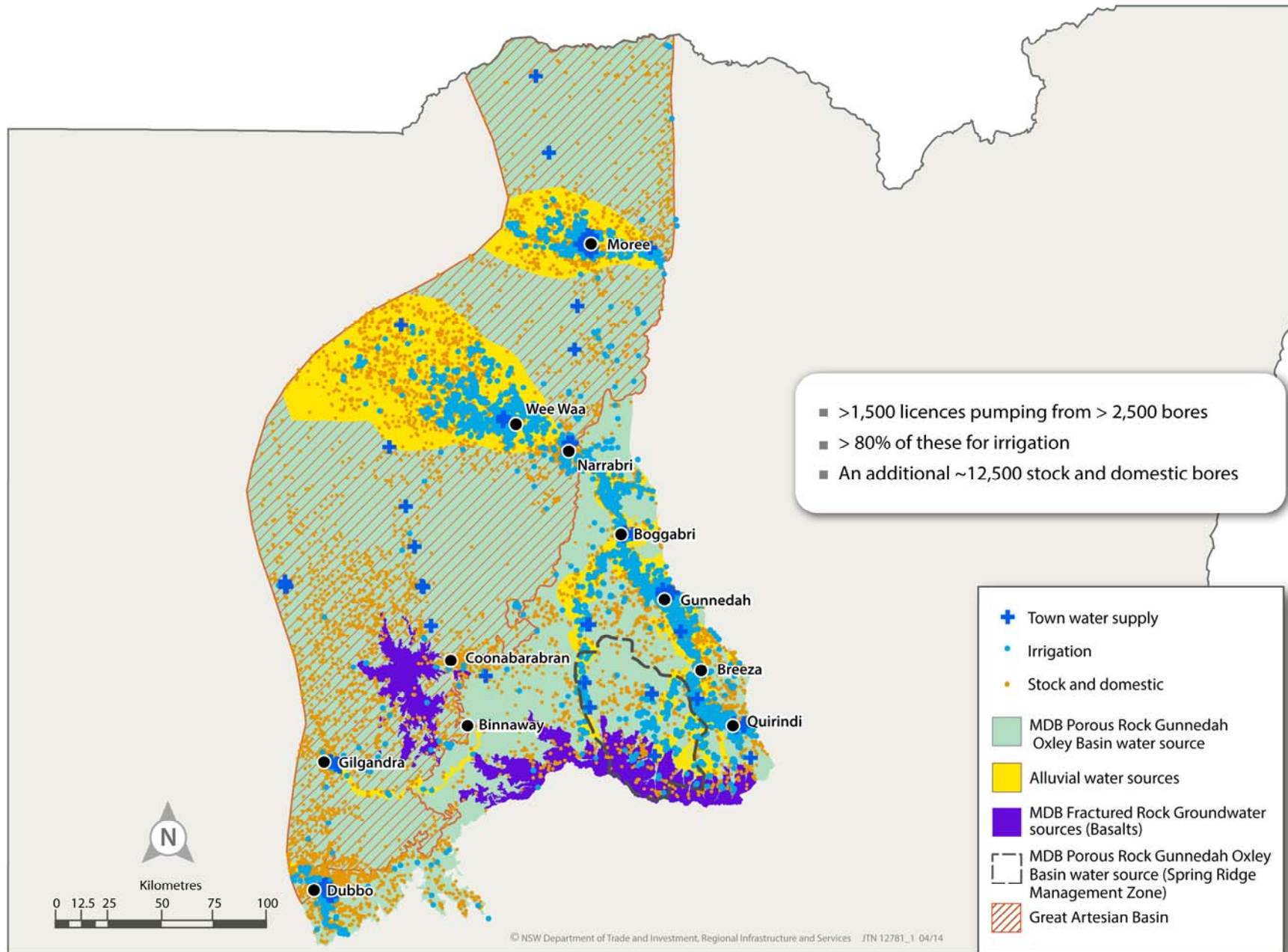


Section through both the Gunnedah and Clarence Moreton Basins

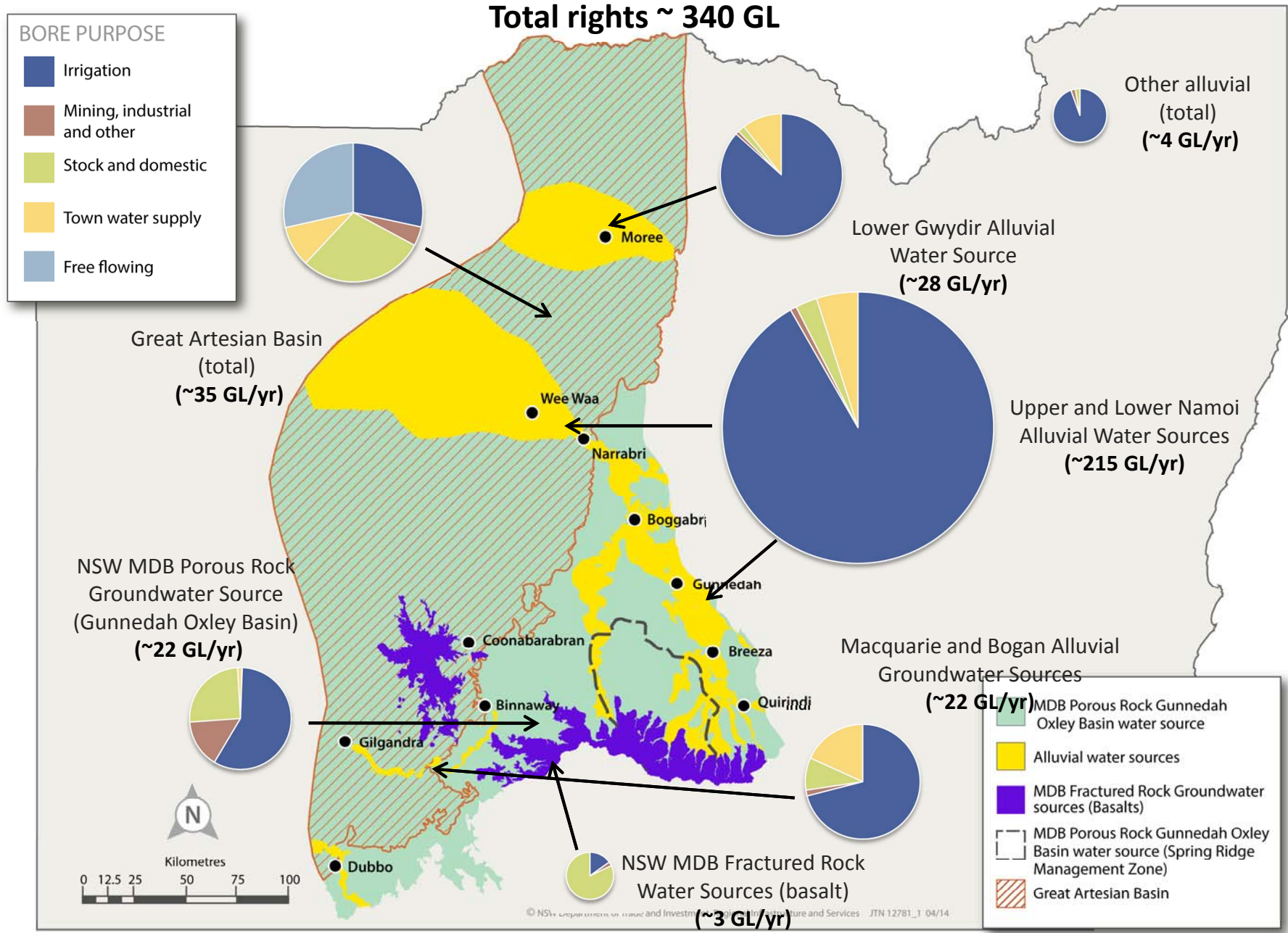


KEY	
	Quaternary - alluvium
	Tertiary - basalts
	Cretaceous - sandstone, shale
	Jurassic - sandstone, shale
	Triassic - sandstone, shale
	Permian - coal, sandstone, siltstone and shale
	Permian - intrusive and granite
	Carboniferous
	Coal measures
	Fault

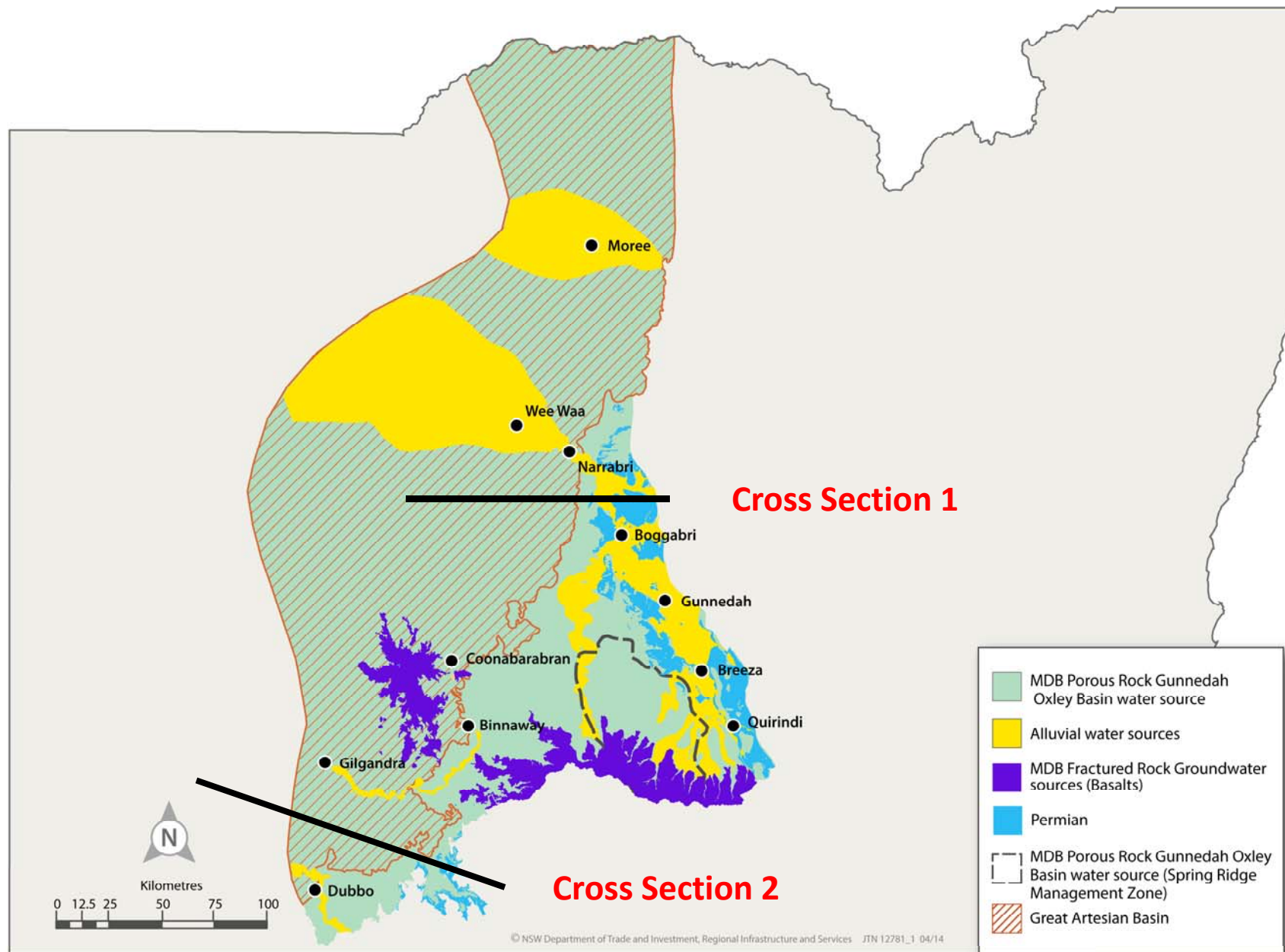
Distribution of groundwater extraction



Gunnedah Basin: Distribution and purpose of groundwater rights

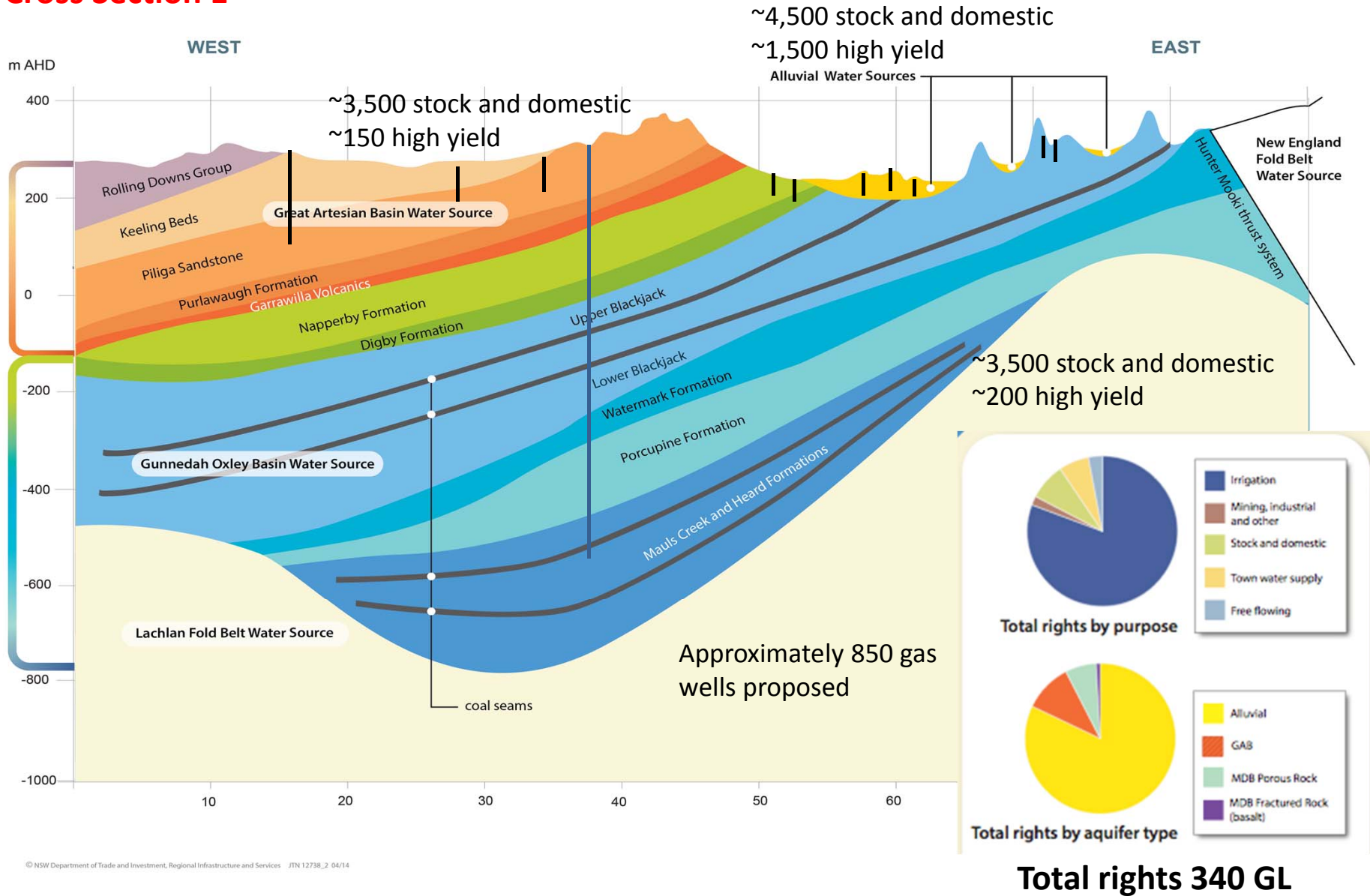


Gunnedah Basin: Areas of Permian outcrop



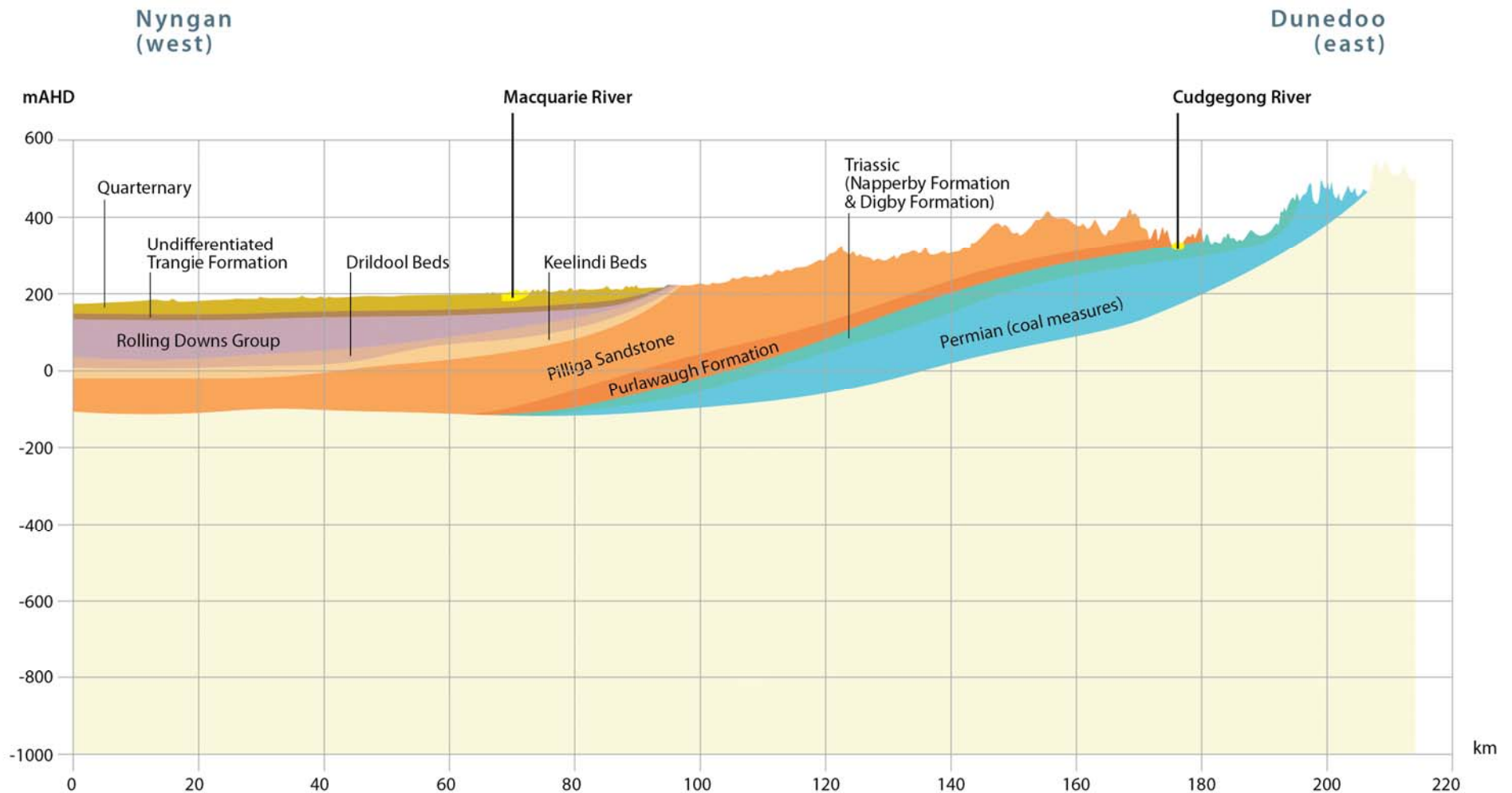
Gunnedah Basin: vertical distribution of groundwater rights

Cross Section 1

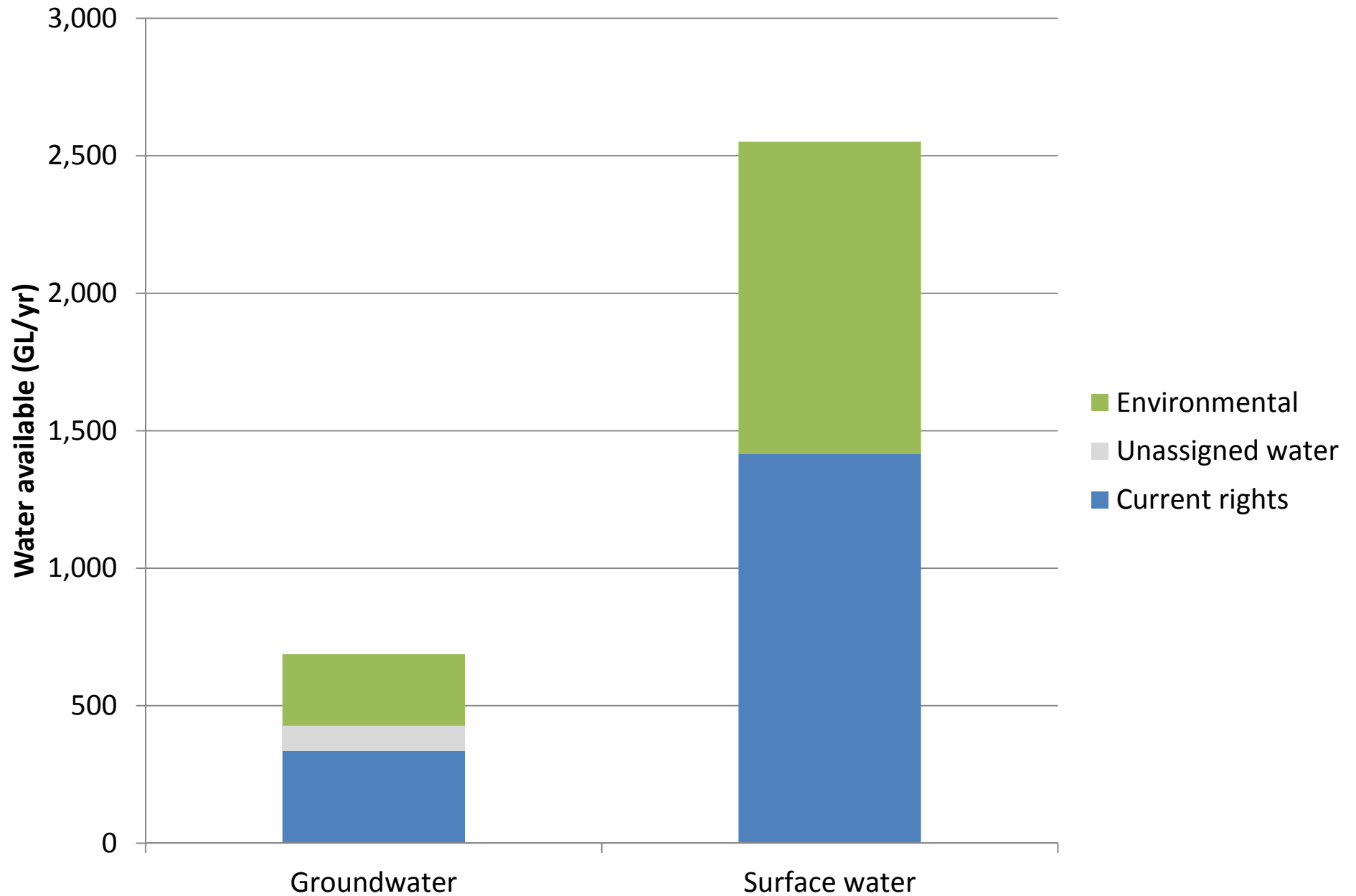


Gunnedah Basin: Cross section (south western basin)

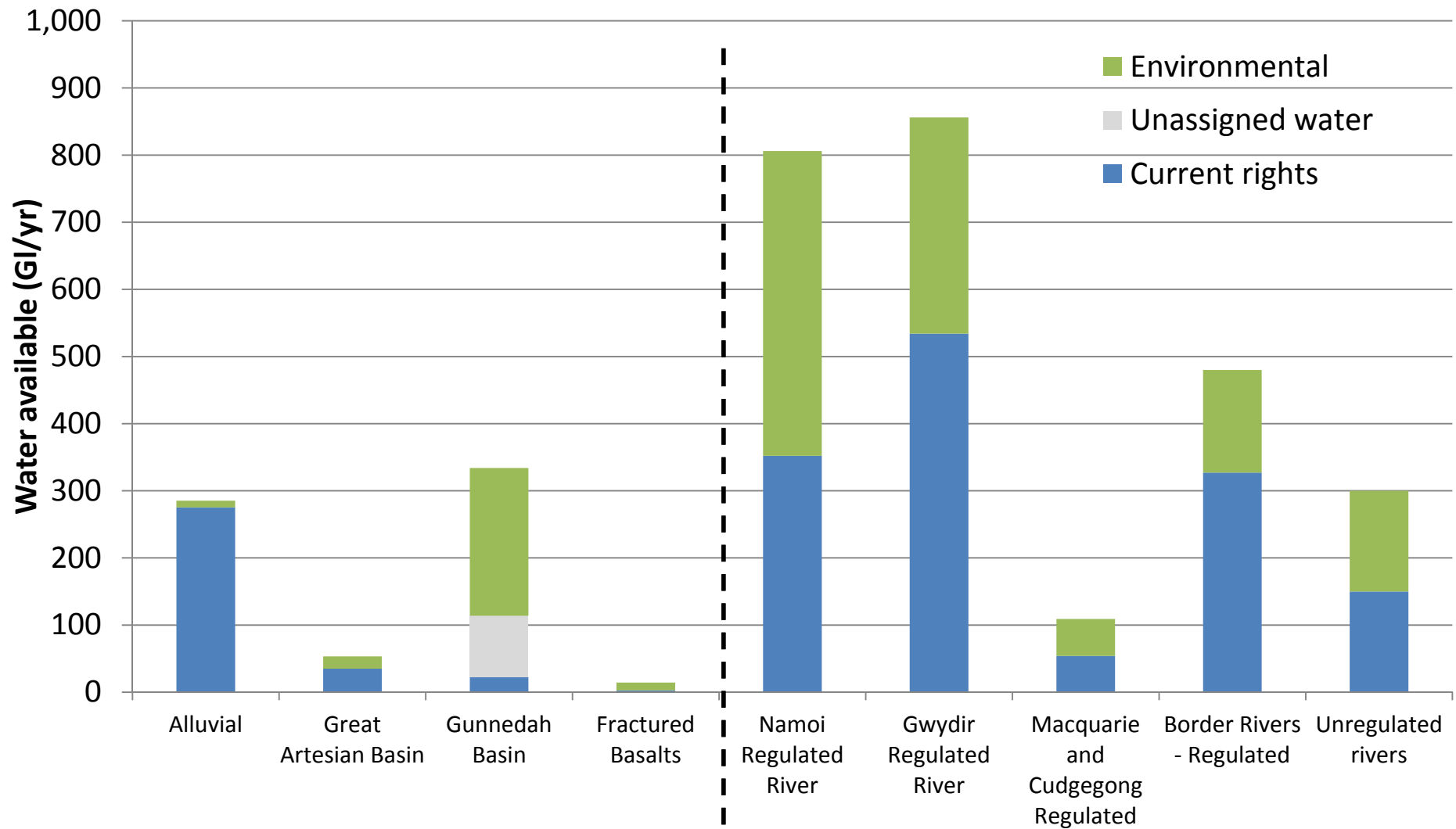
Cross Section 2



Available water in and overlying the Gunnedah Basin



Available water in and overlying the Gunnedah Basin



Groundwater

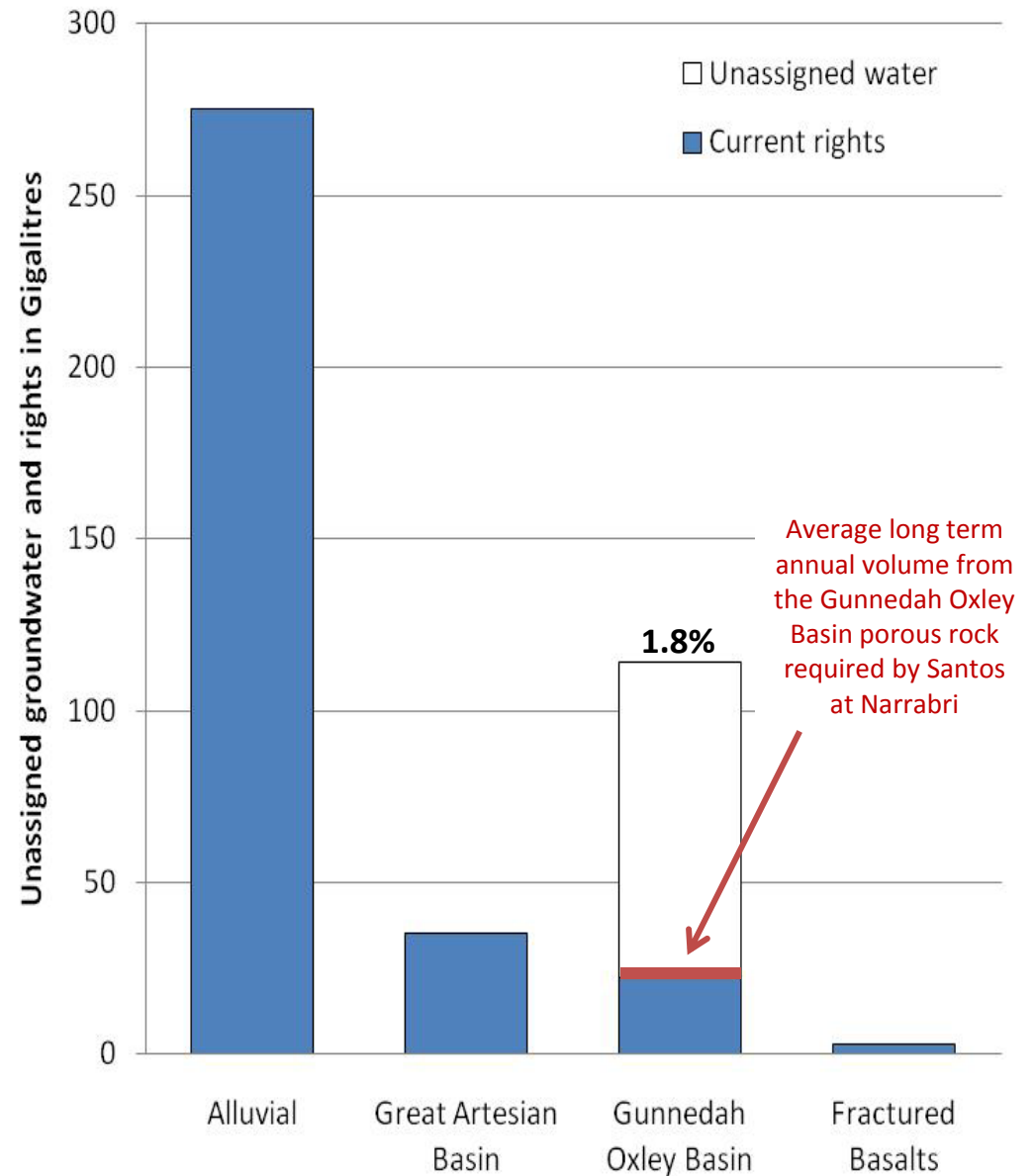
Surface water

Note: Environmental water in groundwater systems in this chart does not include storage, which in the Gunnedah Basin is approximately 8,000,000 GL

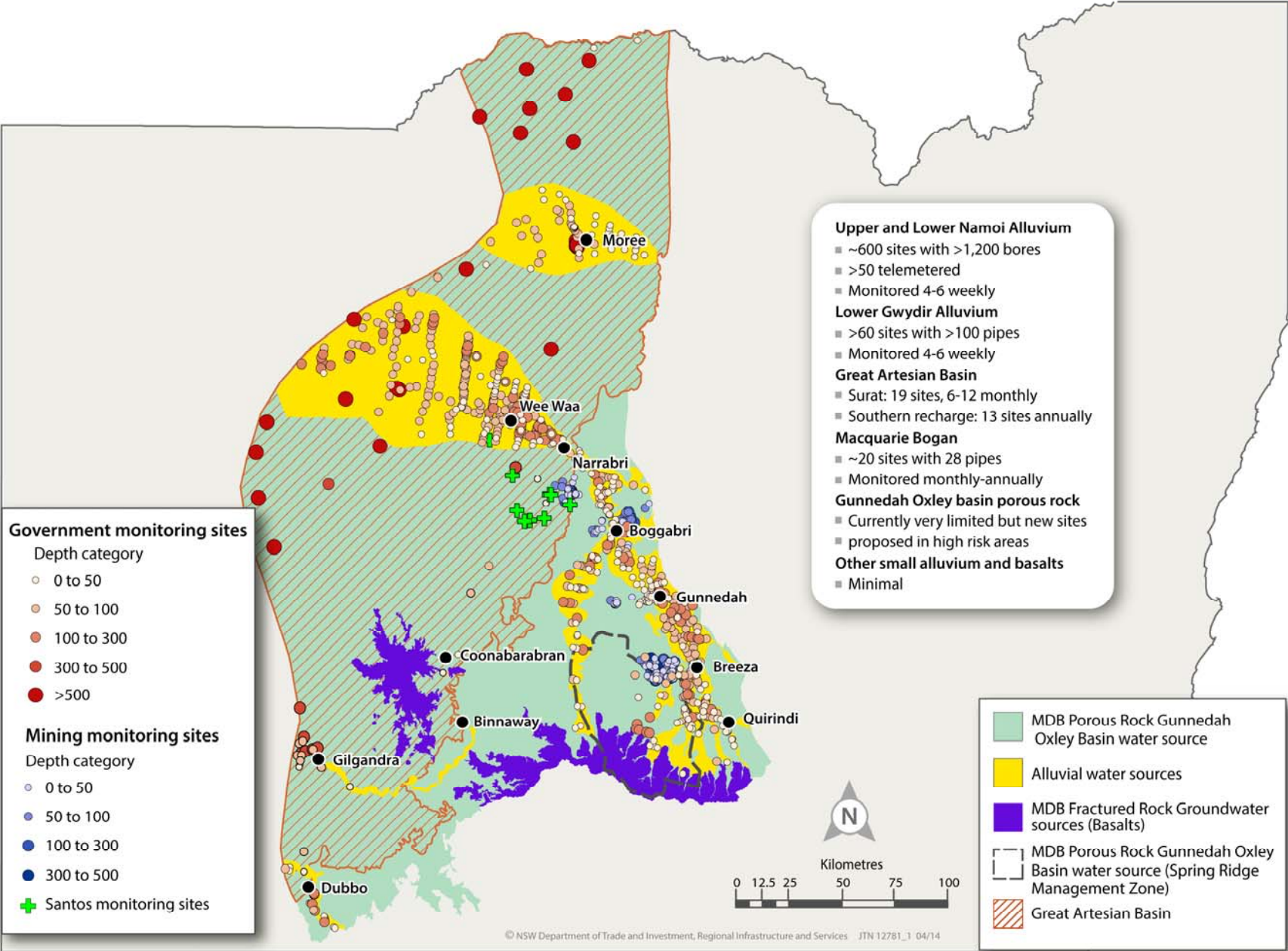
Gunnedah Basin Groundwater

Regional volumetric risk quantified

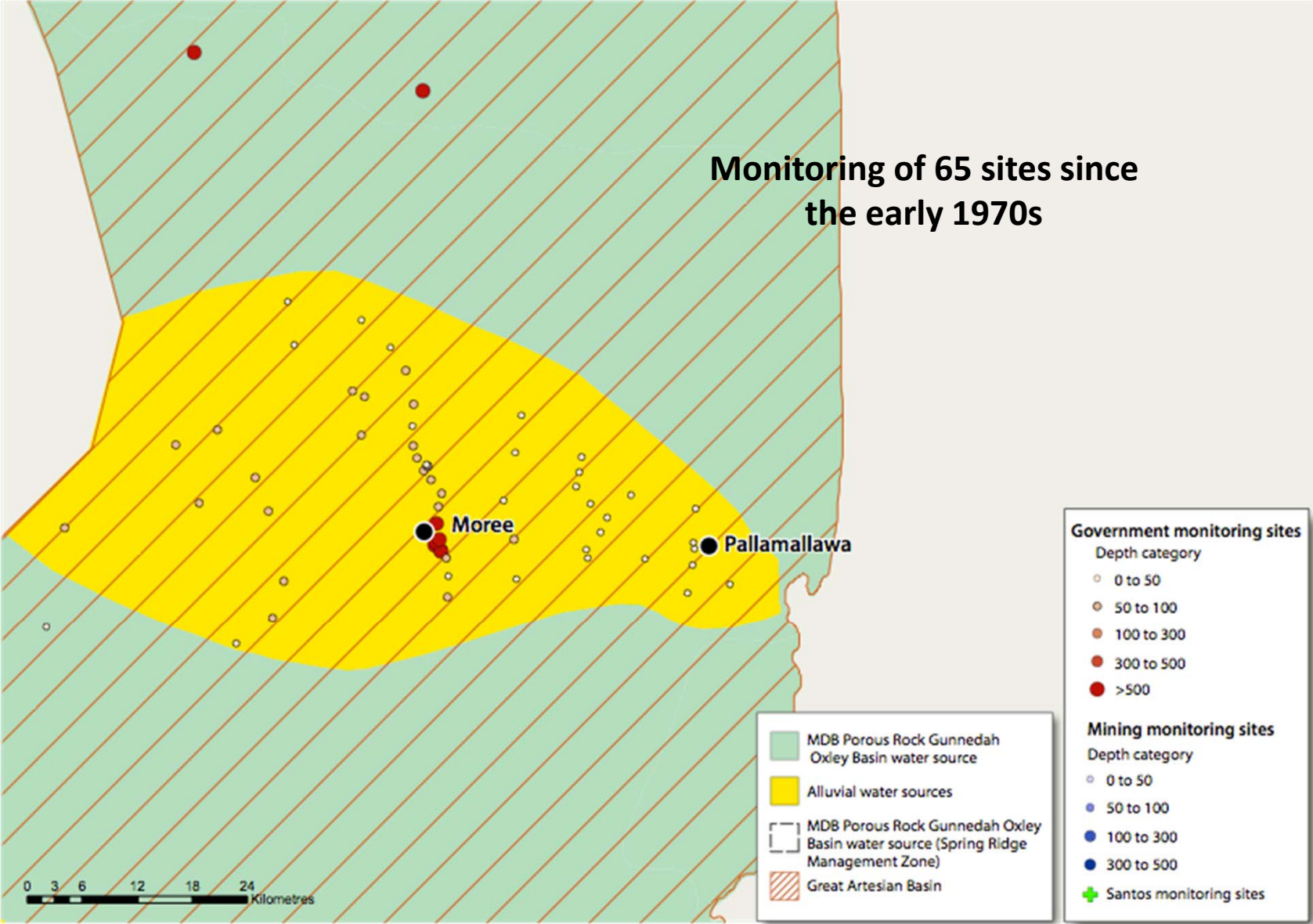
- CSG Narrabri Project average take estimated at 2 GL/yr. This represents:
 - 1.8% of the porous rock extraction limit
- Licences have to be obtained

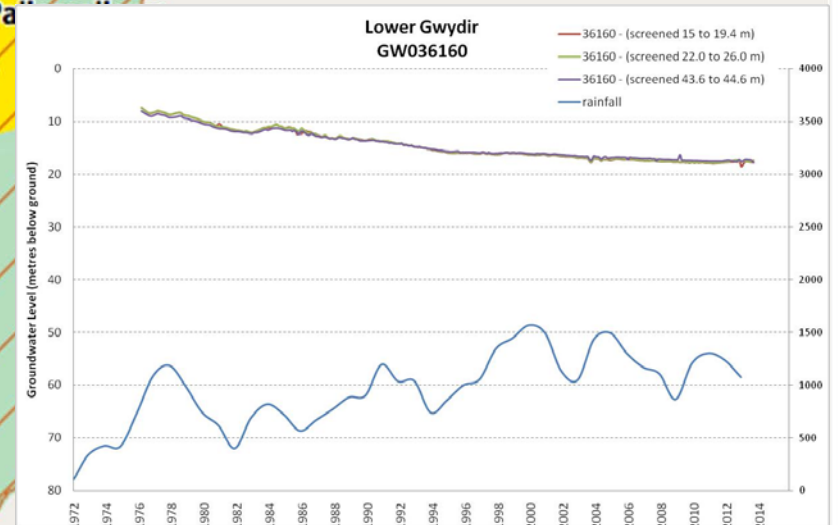
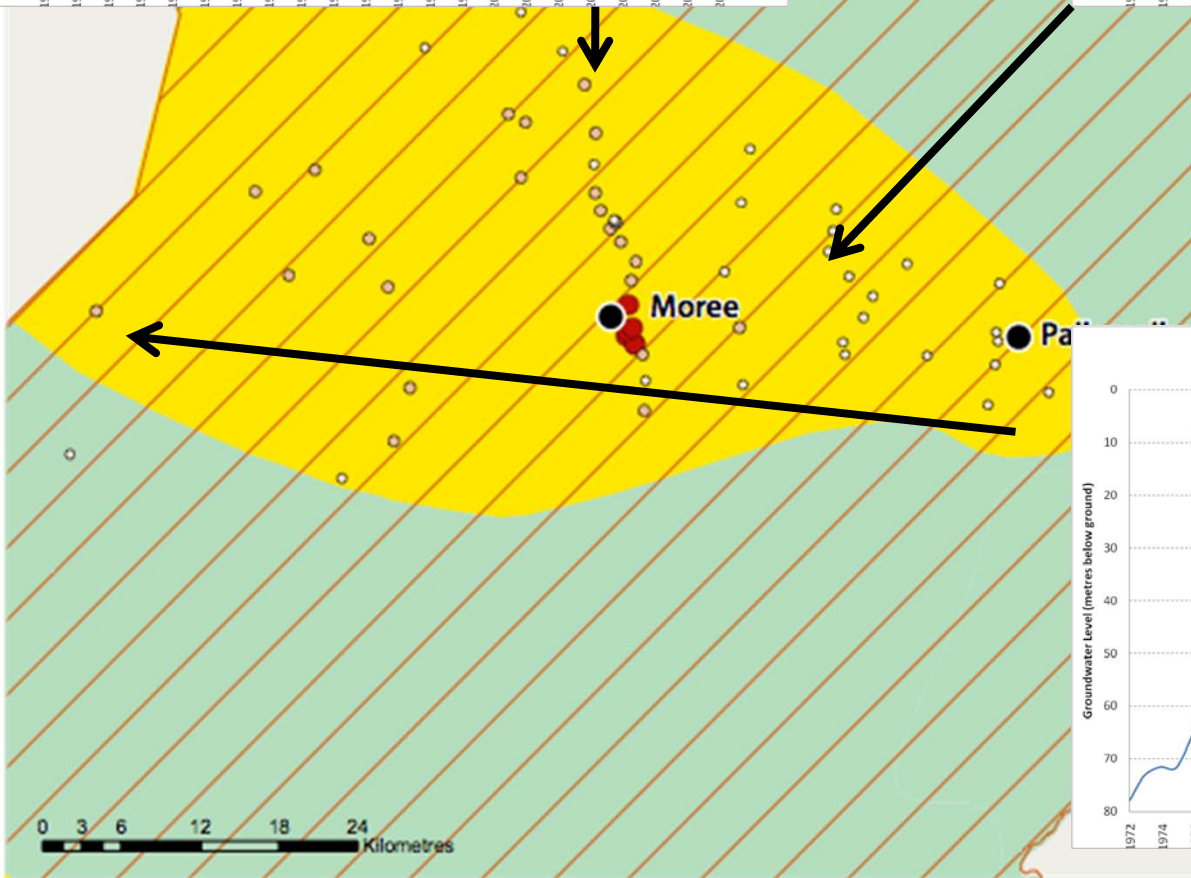
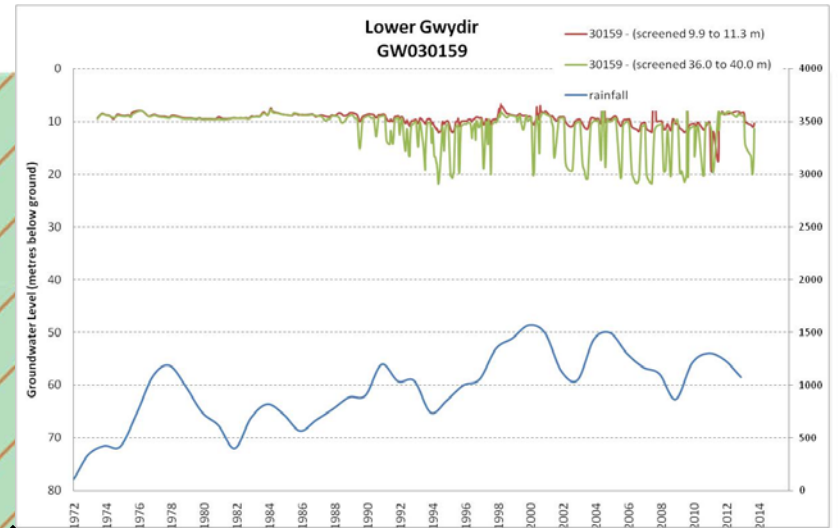
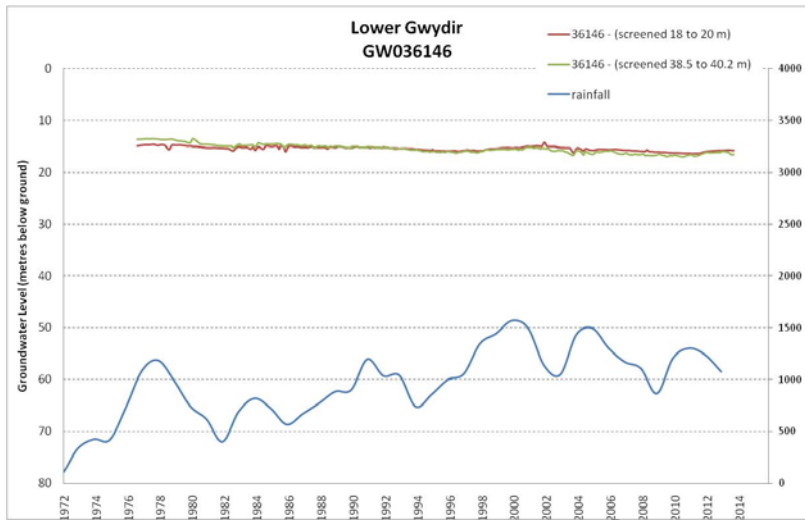


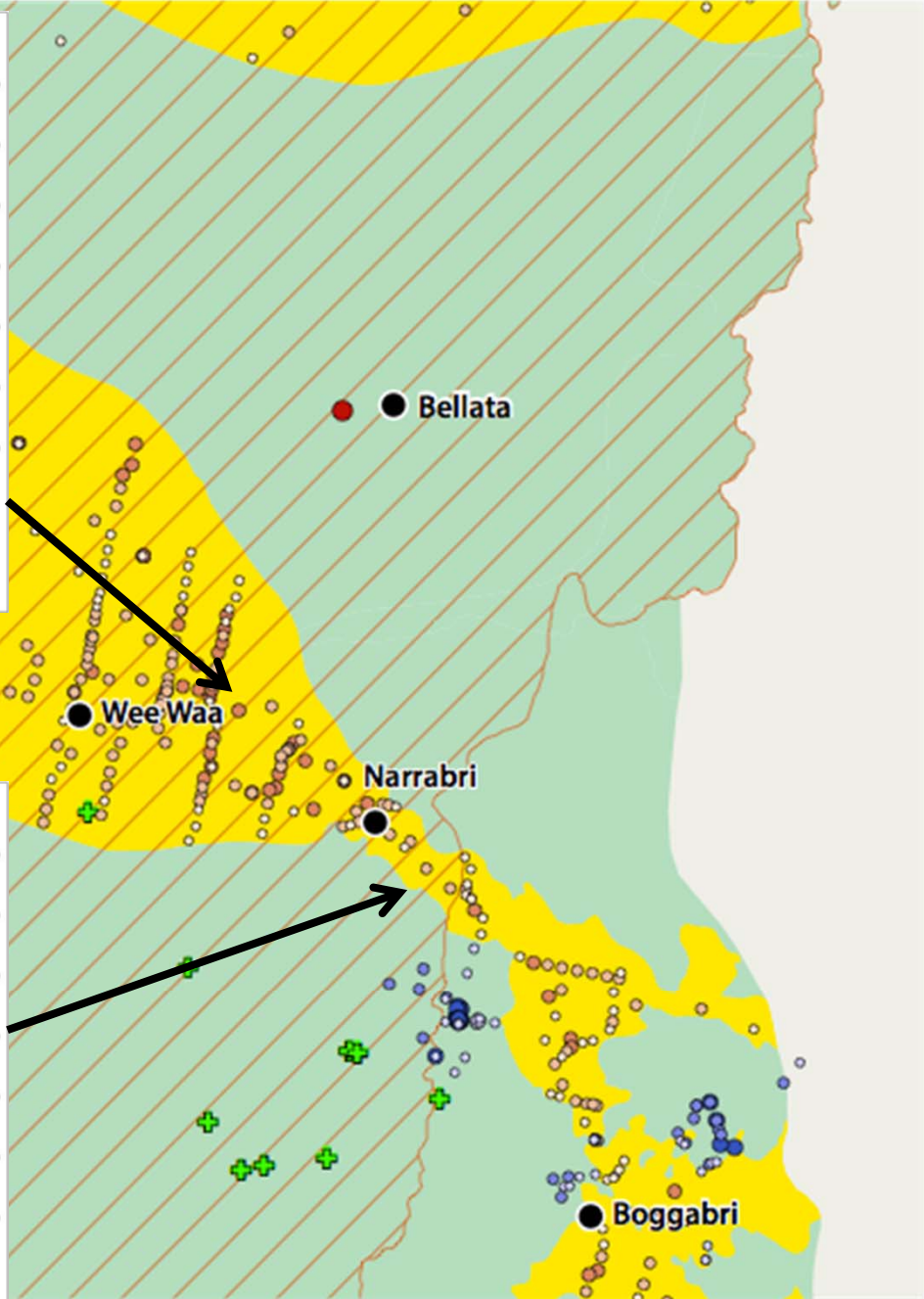
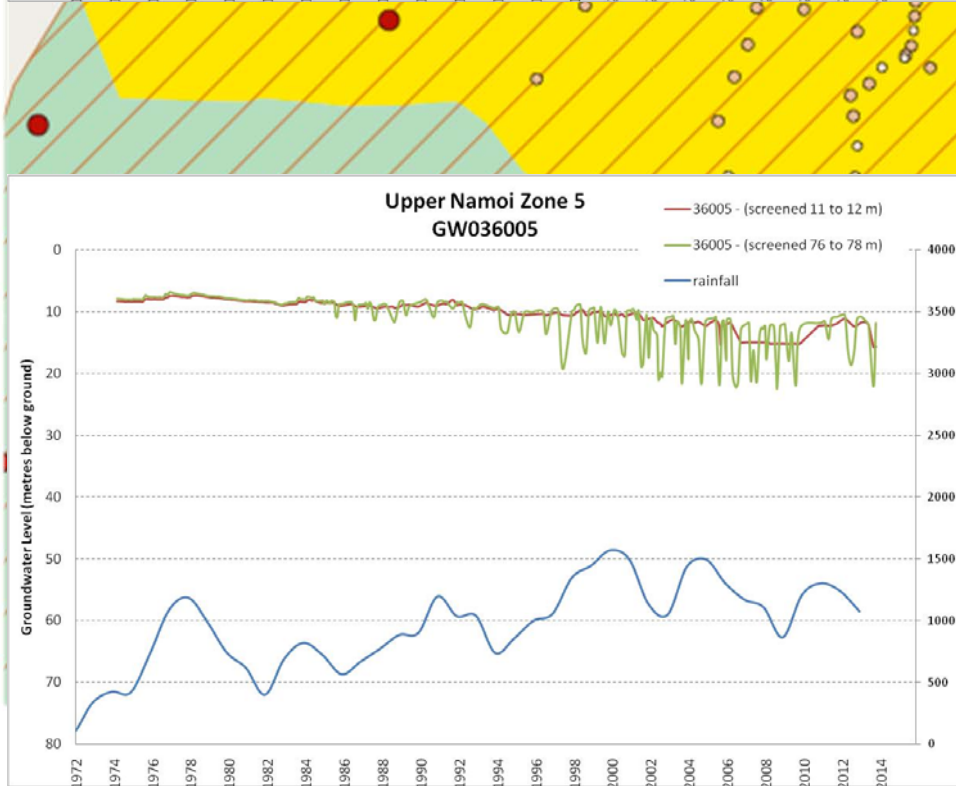
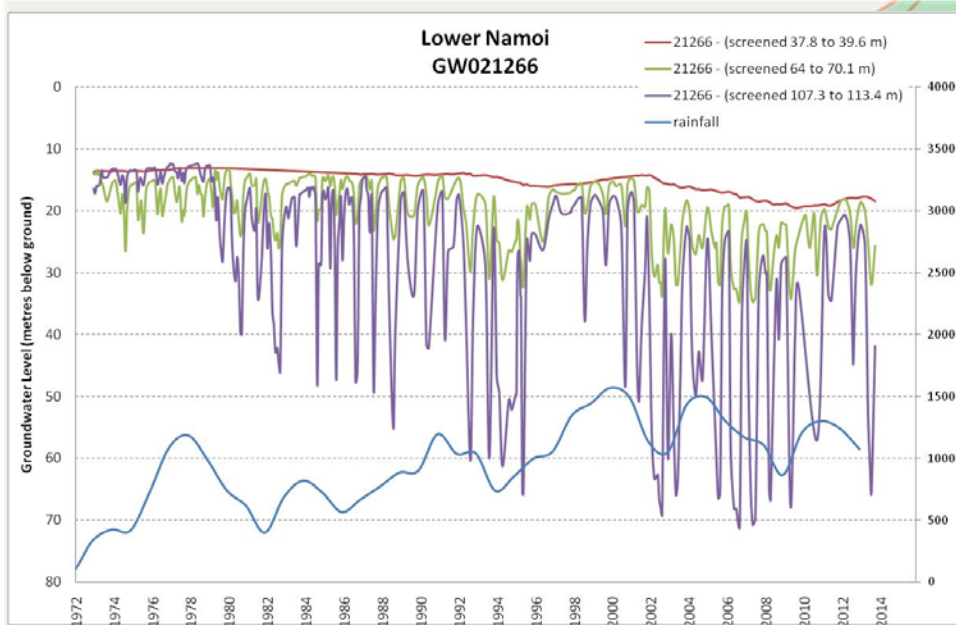
Gunnedah Basin: Groundwater monitoring sites

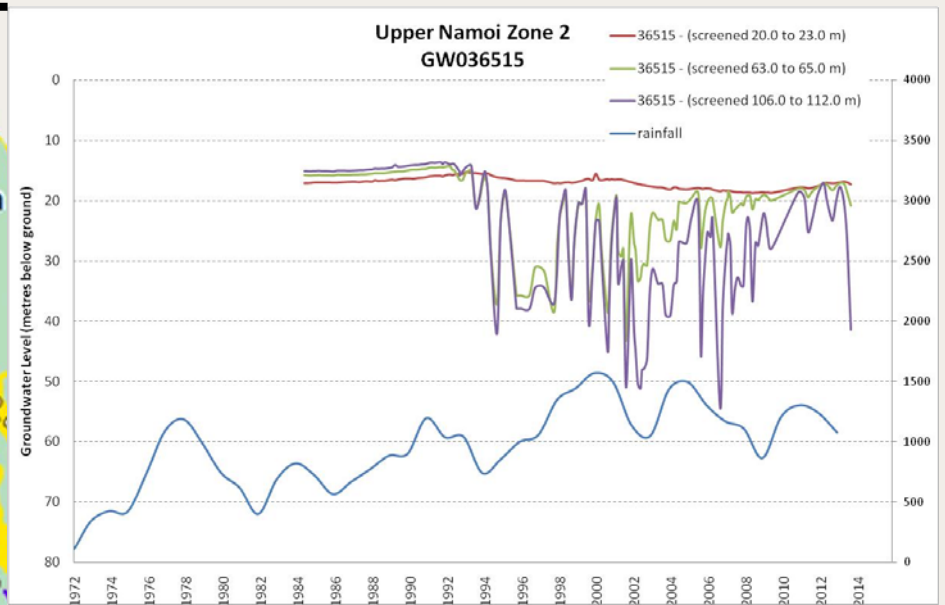
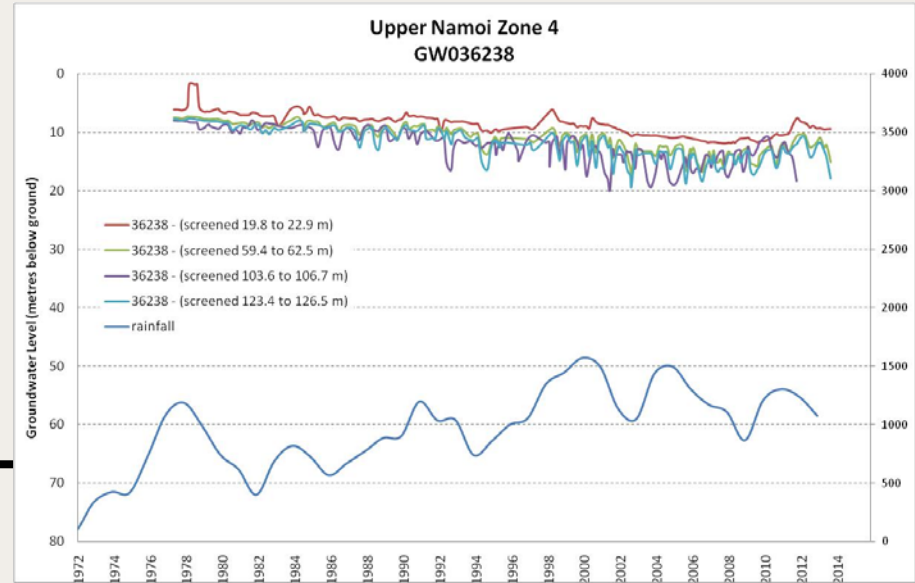
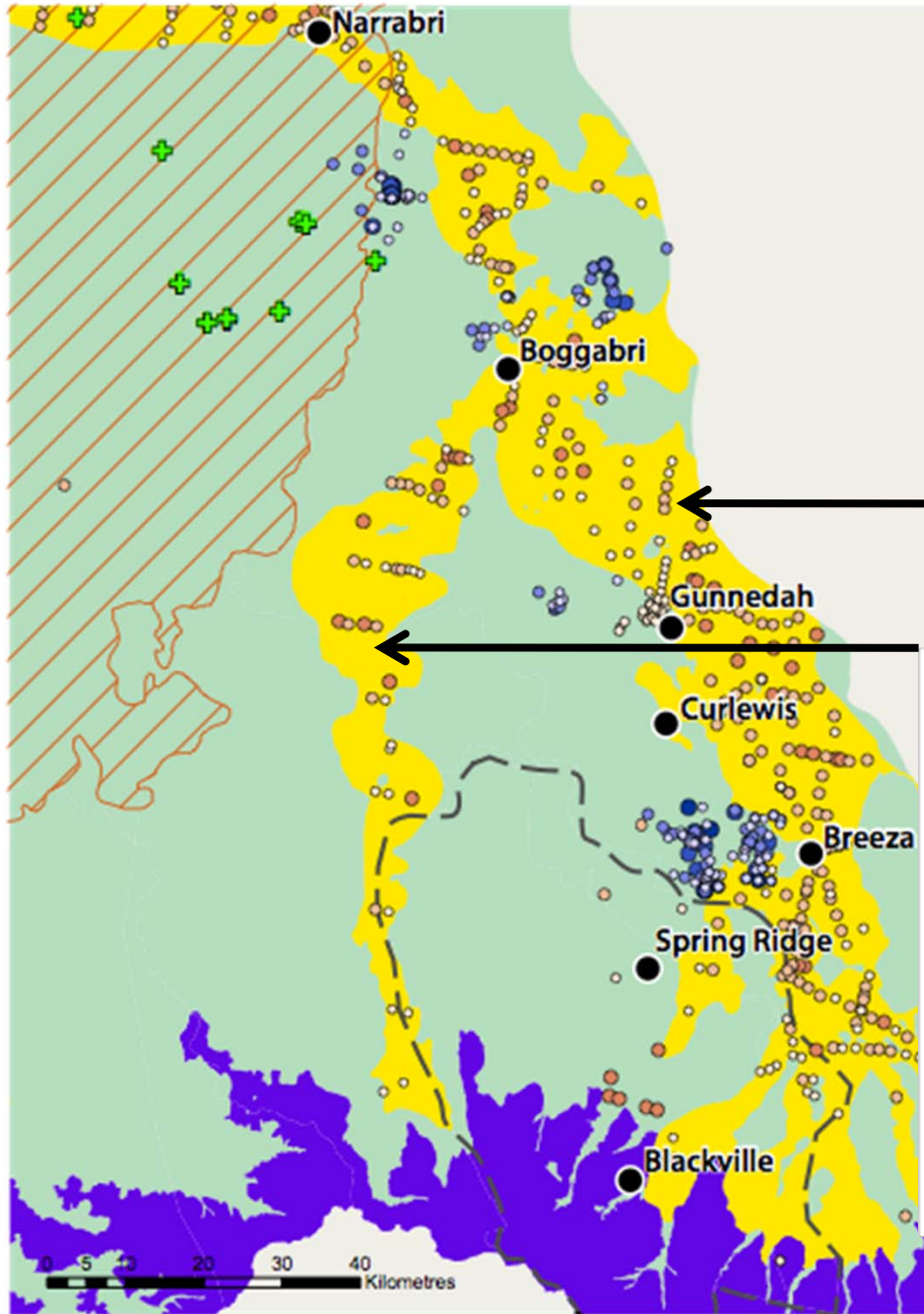


Baseline water level data - Lower Gwydir

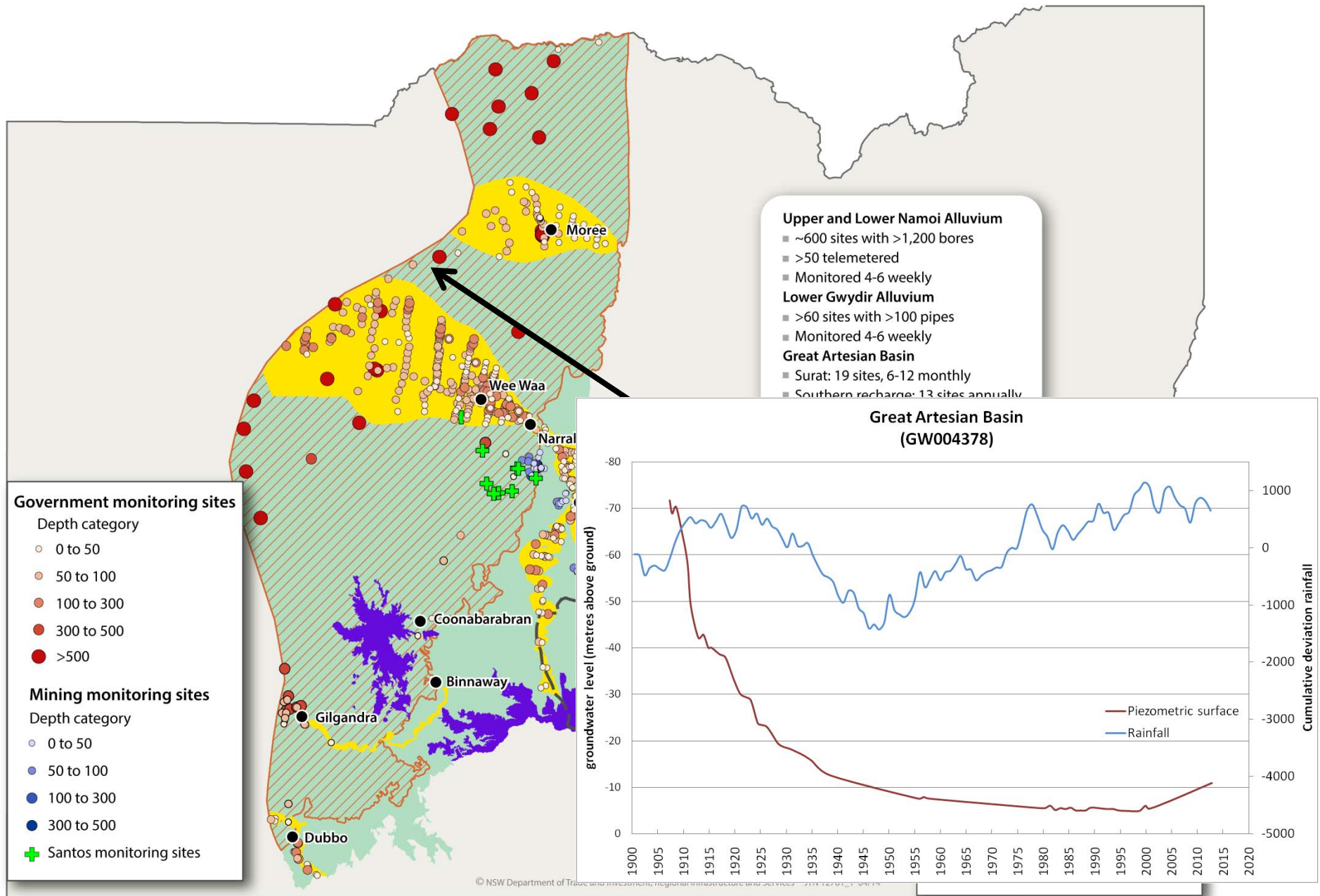






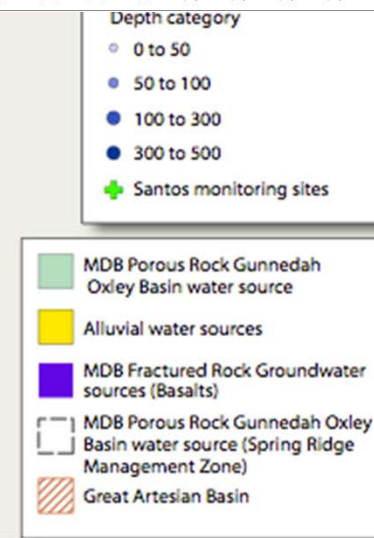
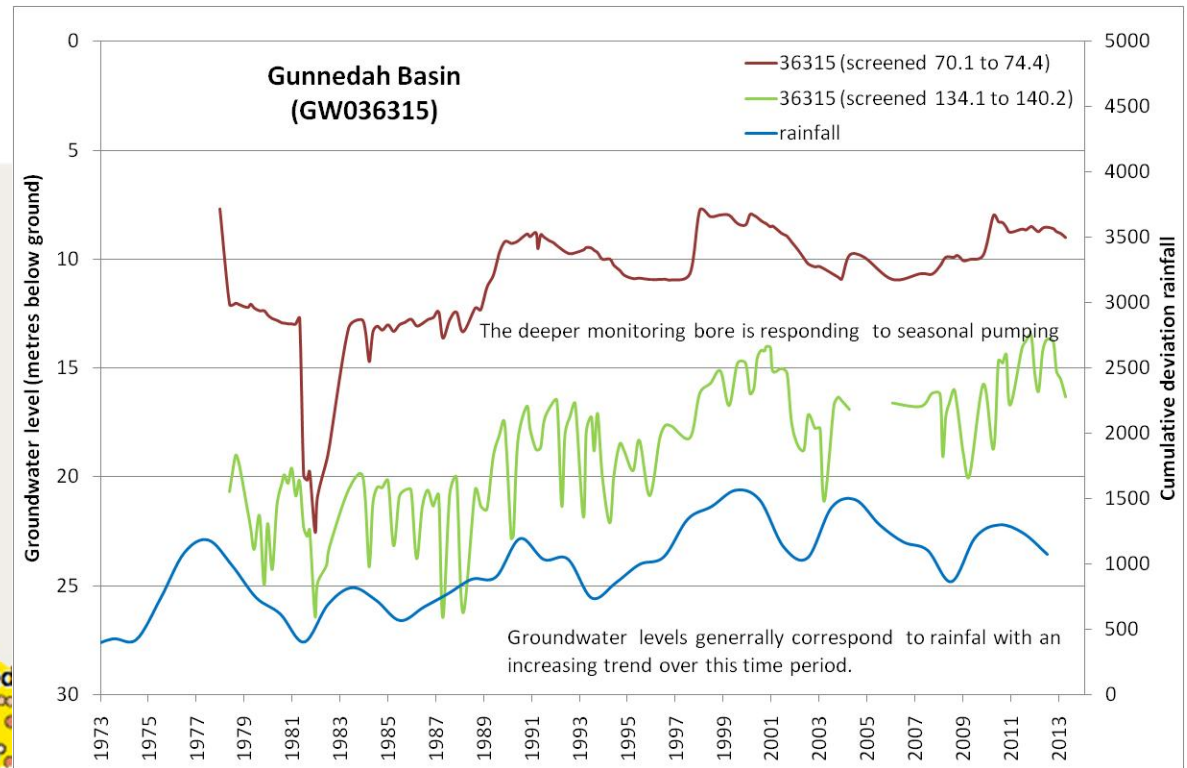
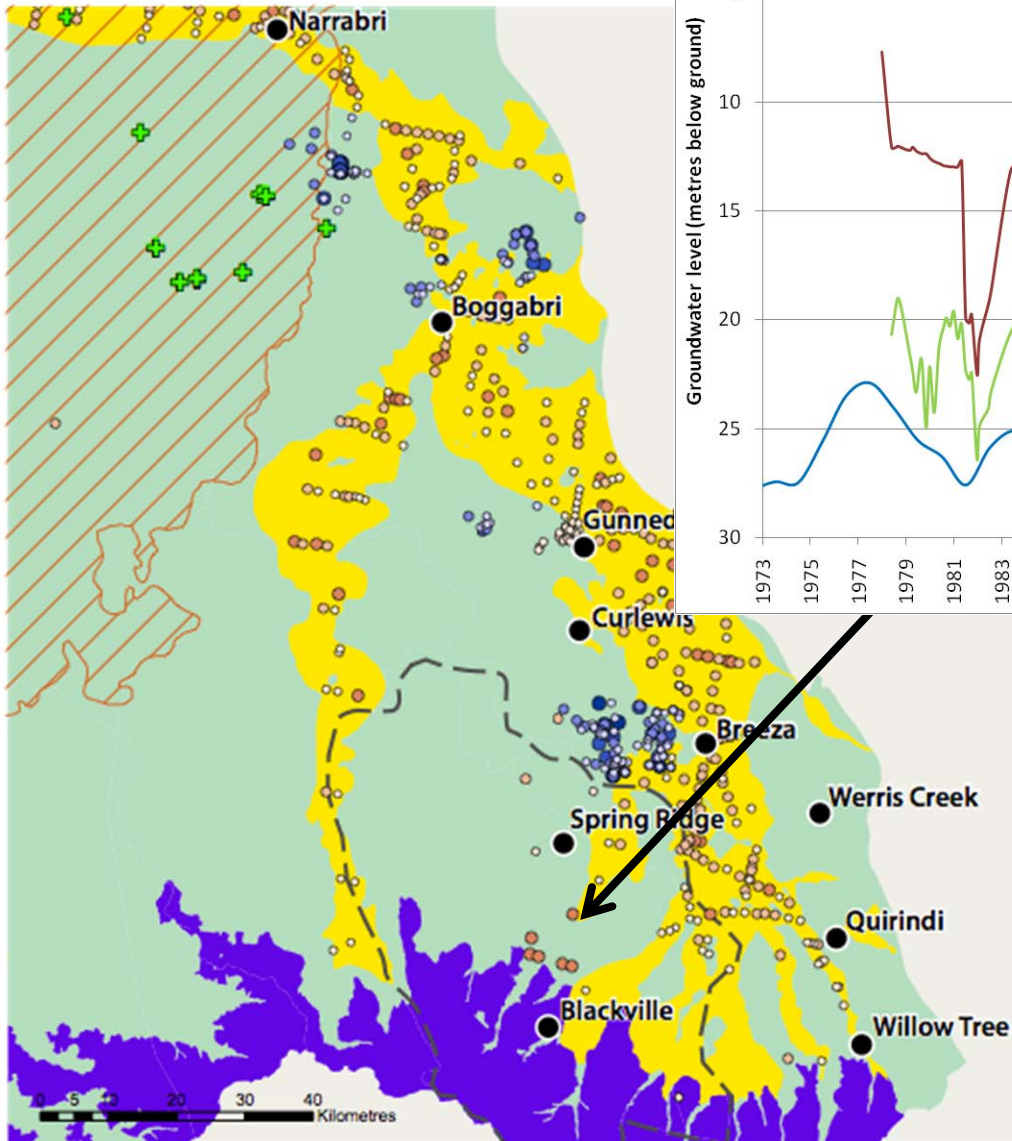


Groundwater level monitoring - GAB

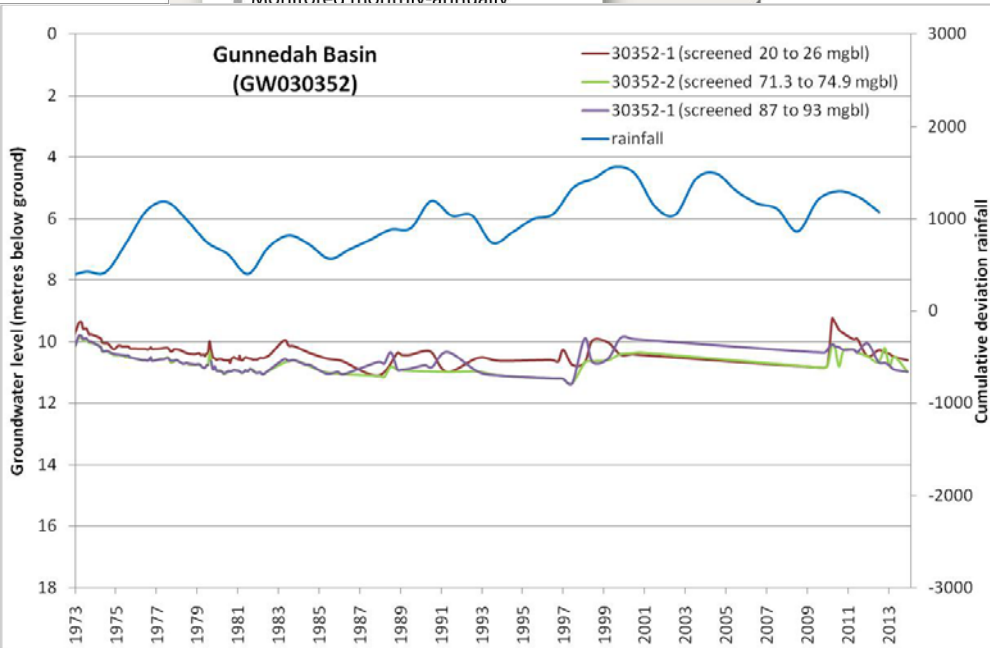
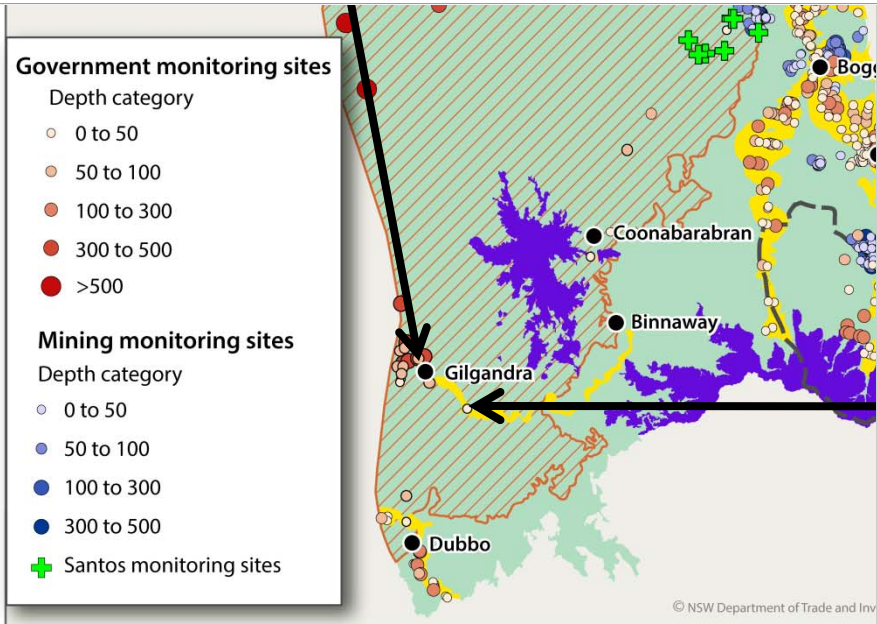
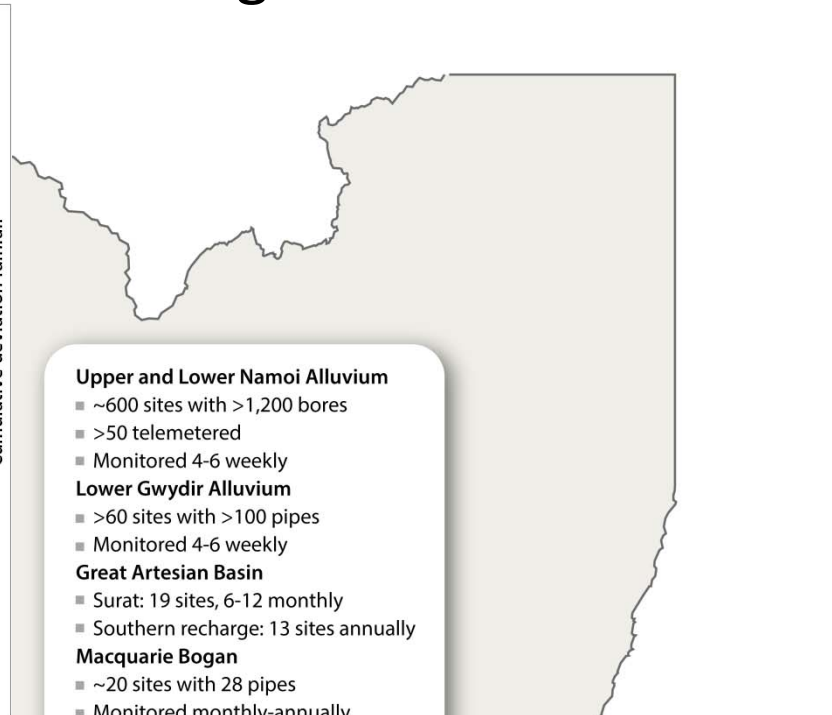
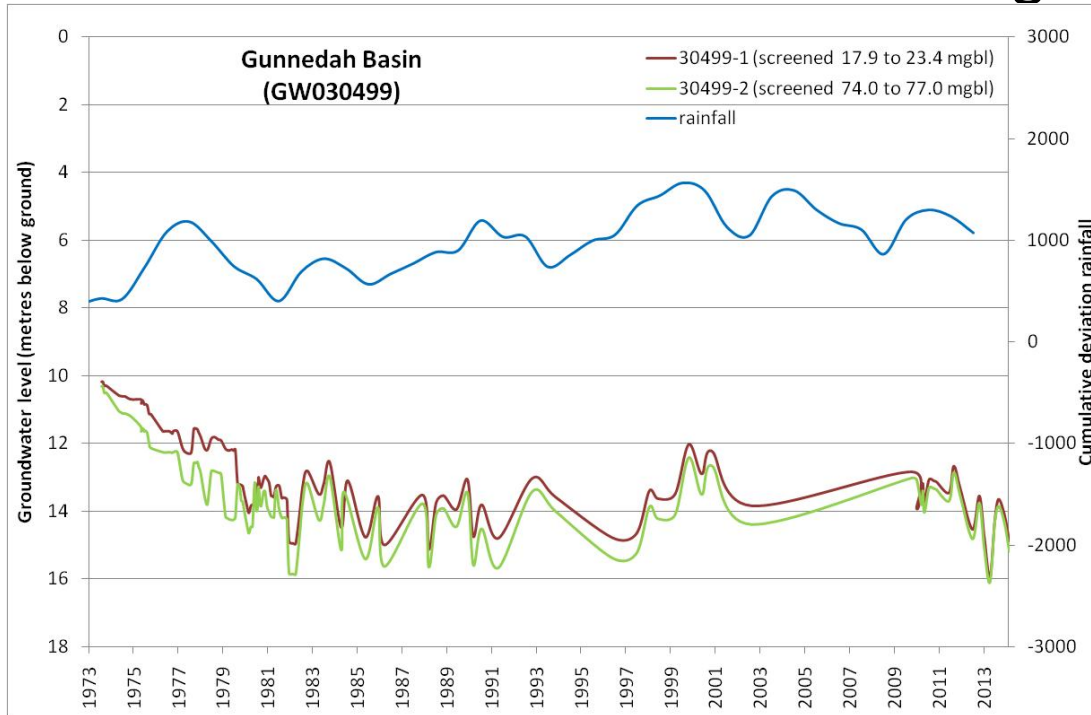


Baseline water level data - Gunnedah Basin

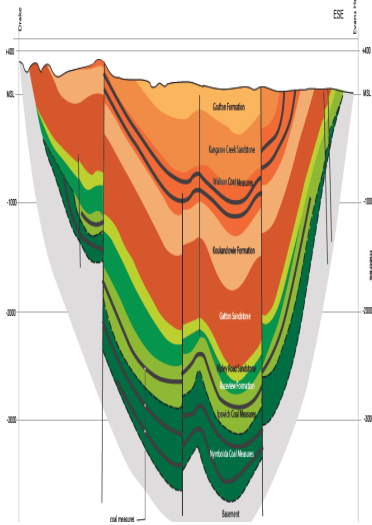
Monitoring ~ 10 bores in the Gunnedah Basin – Spring Ridge area since late 1970s



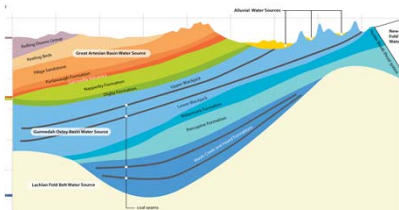
Groundwater level monitoring - Castlereagh Alluvium



Relative comparison of basin size



Clarence Moreton Basin



Gunnedah Basin

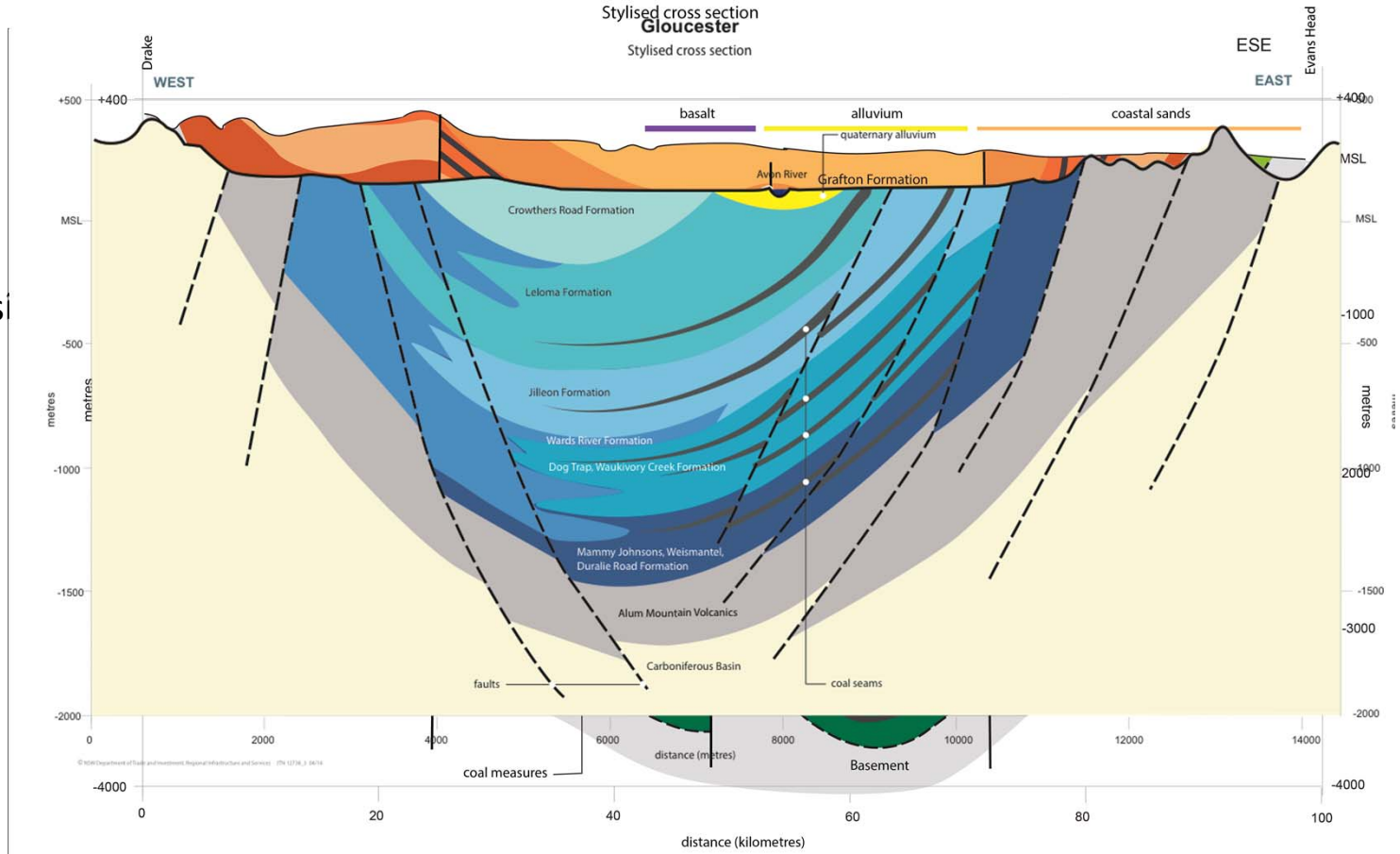


Gloucester Basin

Murray Basin



**Clarence Morton
Stylised cross section
Gloucester**
Stylised cross section



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