

EP WATER ALLOCATION PLAN REVISION

Licensed
groundwater
extraction

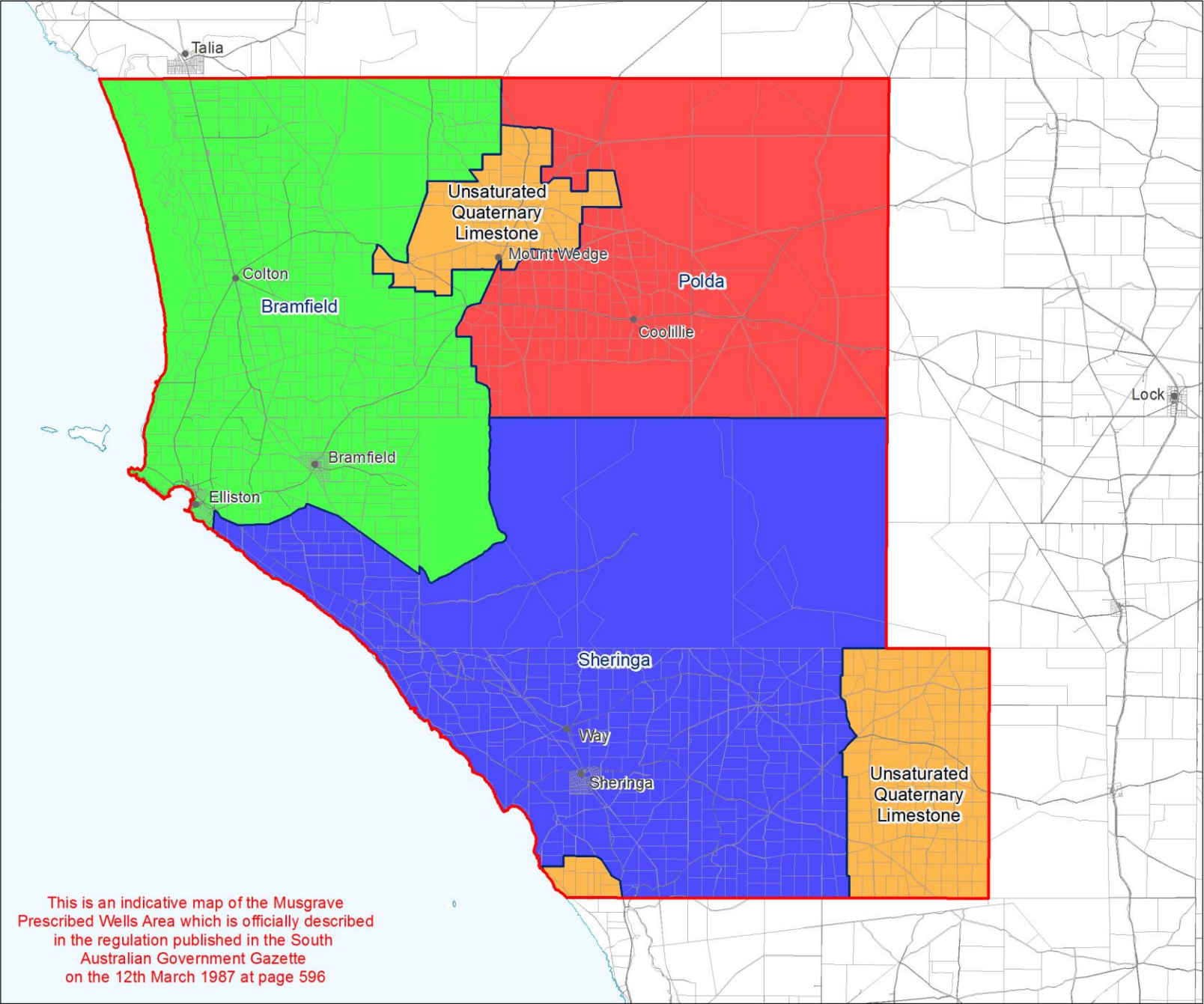


In the 2016 WAP, licensed groundwater extraction was regulated by:

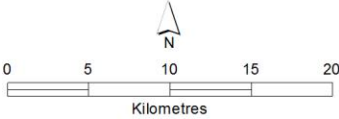
- Defining geographic locations of 'management areas' in three different aquifer groups and estimating their total 'resource capacity' (volume)
- Allocating a figure for 'non-consumptive demand' to protect aquifers, provide for groundwater-dependent-ecosystems and to manage risks
- Calculating the remaining volume ('consumptive pools') available for non-licensed demands, licensed demands and excess water
- Ensuring that autumn monitoring provided data on groundwater storage
- Comparing annual groundwater storage with trigger levels and using this to decide the maximum volume for licensed use for the next water year

Musgrave Prescribed Wells Area

Management Areas



- Management Areas
- Poldia
 - Bramfield
 - Sheringa
 - Unsaturated Quaternary Limestone
 - Musgrave Prescribed Wells Area
 - Property Boundary
 - Road
 - Town



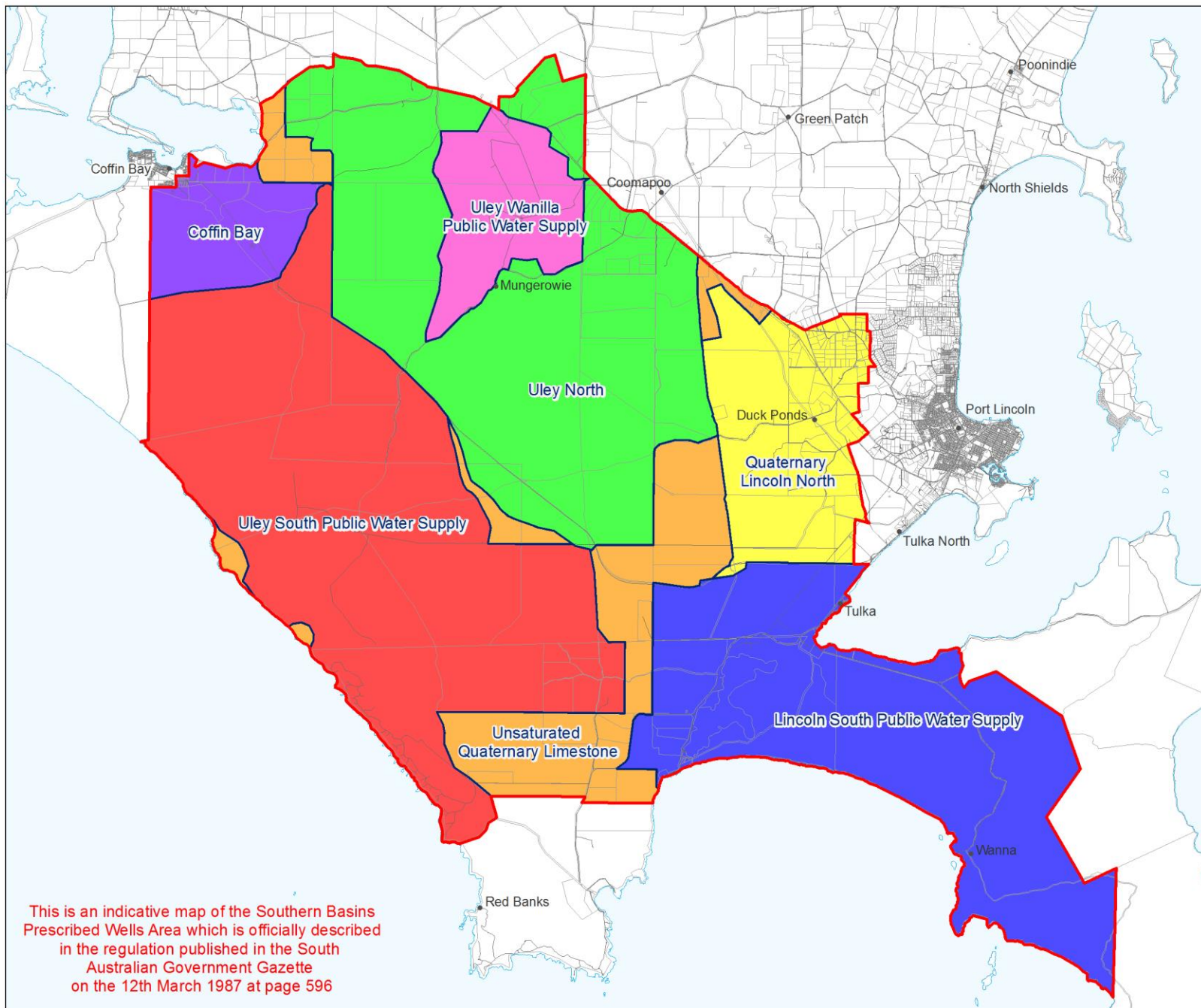
Produced by: Natural Resources Eyre Peninsula
Map Projection: Transverse Mercator Zone 53
Map Datum: Geocentric Datum of Australia 1994
Date: September 2014



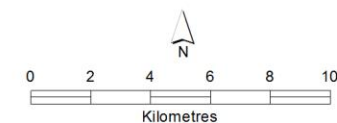
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Southern Basins Prescribed Wells Area

Management Areas



- Management Areas
- Coffin Bay
 - Uley Wanilla Public Water Supply
 - Uley North
 - Uley South Public Water Supply
 - Lincoln South Public Water Supply
 - Quaternary Lincoln North
 - Unsaturated Quaternary Limestone
 - Southern Basins Prescribed Wells Area
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Composite Rankings		Accessibility Risk		
		Low	Moderate	High
Environmental Risk	Low	50% consumptive	60% consumptive	70% consumptive
		50% non-consumptive	40% non-consumptive	30% non-consumptive
	Moderate	40% consumptive	50% consumptive	60% consumptive
		60% non-consumptive	50% non-consumptive	40% non-consumptive
	High	20% consumptive	30% consumptive	40% consumptive
		80% non-consumptive	70% non-consumptive	60% non-consumptive

Composite rankings		Accessibility Risk		
		Low	Moderate	High
Environmental Risk	Low	Uley North		Uley South PWS
	Moderate	Sheringa		
	High			Coffin Bay
				Polda
				Bramfield
				Uley Wanilla PWS
				Lincoln South PWS

Risk assessment matrix ratios



LANDSCAPE

SOUTH AUSTRALIA

EYRE PENINSULA

Management Areas risk assessment matrix

PWA	Management Area	Non-Consumptive Demands (%)	Consumptive Demands (%)
Southern Basins	Coffin Bay	60	40
	Uley Wanilla PWS	60	40
	Uley North	50	50
	Uley South PWS	30	70
	Lincoln South PWS	60	40
Musgrave	Polda	60	40
	Bramfield	60	40
	Sheringa	60	40

PWA	Management Area	Non-Consumptive Demands (%)	Consumptive Demands (%)
Southern Basins	Coffin Bay	60	40
	Uley Wanilla PWS	72.7289*	27.2711*
	Uley North	50	50
	Uley South PWS	48.5	51.5
	Lincoln South PWS	60	40
	Polda	97.6384*	2.3616*
Musgrave	Bramfield	60	40
	Sheringa	60	40

Preliminary allocations of resource capacity

Final allocations to different demands

Management Area	Recharge Zone	Recharge Rate (mm)	Area of Recharge (km²)	Resource Capacity (ML) (Total Demand)	Non-Consumptive Demand (ML [%])	Consumptive Demands (ML)	Non-Licensed Demand			Maximum Volume of Water Available for Licensed Use (ML)*	Licensed Demand (ML) *	Excess Water (ML) *
							Domestic Demands (ML)	Stock Demands (ML)	Minister's Authorisations (ML)			
Polda	Polda lens	5.6	37.21	208	203 (97.6)	5	0.84	3.6	5	43	33	10
	Polda East A lens	0	0.07	0	0 (97.6)	0	0	0				
	Polda East B lens	0	0.72	0	0 (97.6)	0	0	0				
	Polda brackish	11.2	273.84	3067	2995 (97.6)	72	1.68	23.34				
	Tinline lens	0	3.13	0	0 (97.6)	0	0	0.03				
	Talia East lens	0	6.15	0	0 (97.6)	0	0	0.24				
Bramfield	Bramfield lens	2.2	99.46	218.8	131 (60)	88	7.56	9.57	5	1188	1188	0
	Bramfield brackish	5	639.93	3200	1920 (60)	1280	13.44	134.41				
	Talia lens	0	44.17	0	0 (60)	0	0.56	9.24				
Sheringa	Sheringa A lens	0	36.23	0	0 (60)	0	0.28	0.88	5	1406	33	1373
	Sheringa B lens	0.7	38.99	27	16 (60)	11	0.28	0.58				
	Kappawanta lens	11.4	48.86	557	334 (60)	223	0	0				
	Sheringa brackish	5.9	519.82	3067	1840 (60)	1227	2.8	44.45				
Unsaturated Quat Limestone				11	0	11	5.6	0	5	0	0	0
Tertiary Sands				68	0	68	1.12	62.27	5	0	0	0
Basement				67	0	67	0	62.27	5	0	0	0

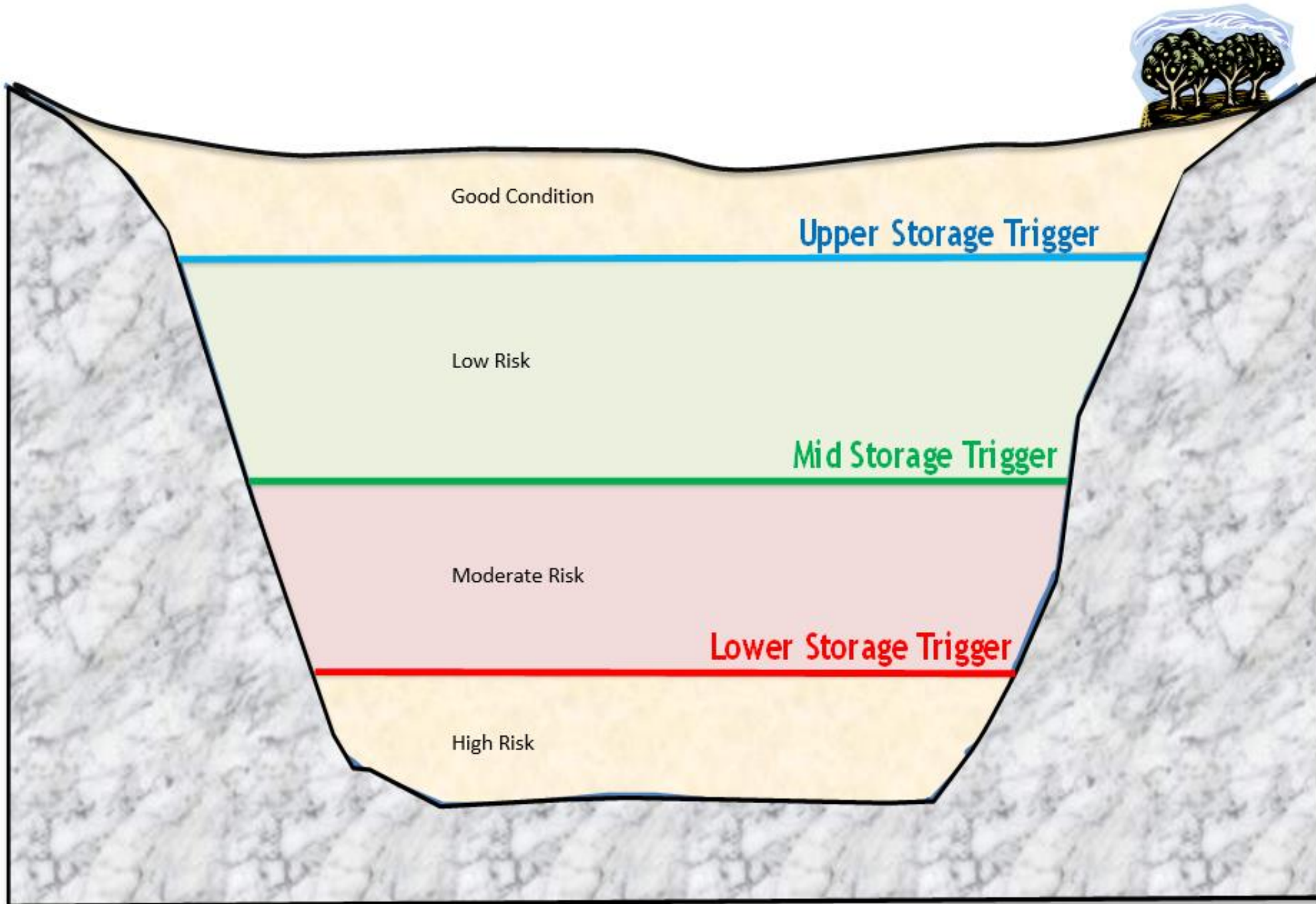
Musgrave Prescribed Wells Area

Resource
capacity and
how it has
been
allocated

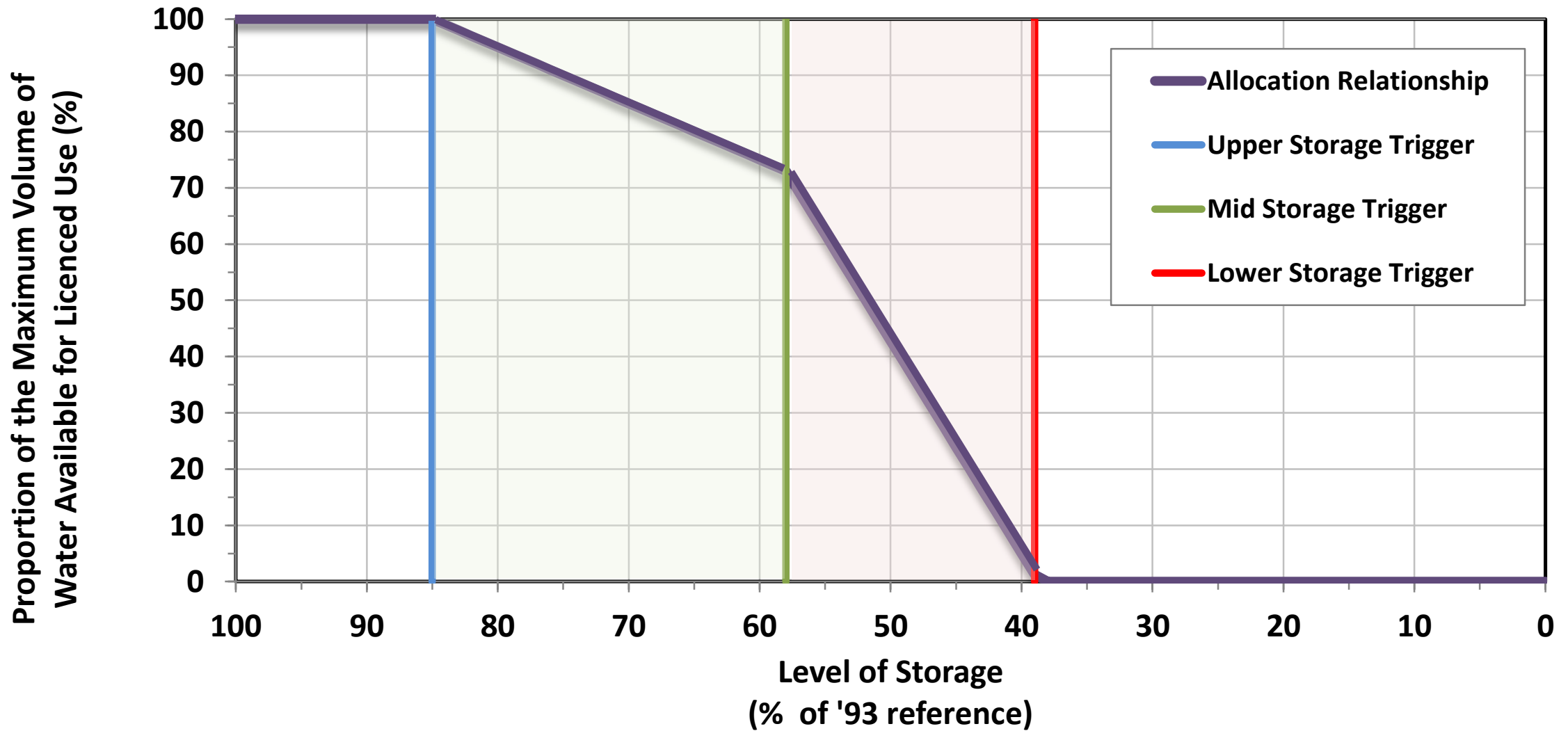
Management Area	Recharge Zone	Recharge Rate (mm)	Area of Recharge (km ²)	Resource Capacity (ML) (Total Demand)	Non-Consumptive Demand (ML [%])	Consumptive Demands (ML)	Non-Licensed Demand			Maximum Volume of Water Available for Licensed Use (ML) *	Licensed Demand (ML) *	Excess Water (ML) *
							Domestic Demands (ML)	Stock Demands (ML)	Minister's Authorisations (ML)			
Coffin Bay	Coffin Bay A lens	25	13.82	345.4	207 (60)	138	0.28	0	5	133	133	0
Uley Wanilla Public Water Supply	Uley Wanilla lens	20.5	14.33	293.8	214 (72.7)	80	1.4	0	5	231	231	0
	Uley Wanilla brackish	22.5	25.61	576.3	419 (72.7)	157	0	0				
Uley North	Coffin Bay B lens	0	0.42	0	0 (50)	0	0	0	5	527	239	288
	Coffin Bay C lens	1.9	5.47	10.4	5 (50)	5	0	0.43				
	Uley East A lens	73.5	5.48	402.5	201 (50)	201	0	3.31				
	Uley East B lens	0	2.42	0	0 (50)	0	0	0.07				
	Uley North brackish	7.5	92.97	697.3	349 (50)	349	0.56	18.49				
Uley South Public Water Supply	Uley South lens	129	65.42	8439.5	4093 (48.5)	4346	0	1.02	5	7266	7250	16
	Uley South brackish	129	43.06	5555.3	2694 (48.5)	2861	0	1.41				
	Uley South Tertiary Leakage	14	9.29	130.1	63 (48.5)	67	0	0				
	Pantania lens	0	0.38	0	0 (48.5)	0	0	0				
	Mikkira lens	0	2.13	0	0 (48.5)	0	0	0.71				
Lincoln South Public Water Supply	Lincoln A lens	0	1.20	0	0 (60)	0	0	0.01	5	1826	929	897
	Lincoln B lens	0	3.95	0	0 (60)	0	0	0				
	Lincoln C lens	0	7.92	0	0 (60)	0	0	0				
	Lincoln South brackish	33	138.92	4584.2	2751 (60)	1834	1.4	1.41				
Quaternary Lincoln North				173	0	173	3.36	30.95	5	134	134	0
Unsaturated Quat Limestone				7	0	7	1.96	0	5	0	0	0
Tertiary Sands				29	0	29	1.12	23.02	5	0	0	0
Basement				484	0	484	0.28	23.02	5	455	455	0

Southern Basins Prescribed Wells Area

Resource capacity and how it has been allocated



Schematic representation of trigger levels in an aquifer



Schematic representation of
trigger levels in an aquifer

Some likely/potential changes in the revised 2026 Water Allocation Plan:

- Re-assess the resource capacity (total volume) of some/all aquifers
- Review estimates of environmental water requirements
- Re-calculate the size of the 'consumptive pools' available for non-licensed demands, licensed demands and excess water
- Develop water quality triggers to reduce salinity risks
- Review/revise the methodology that is used, when required, for adjusting volumes of groundwater available to water licence holders.