



StorageManager
WIMMERA-GLENELG SYSTEM

Water Resource Update and Seasonal Outlook

Scott Smith
Storage Manager

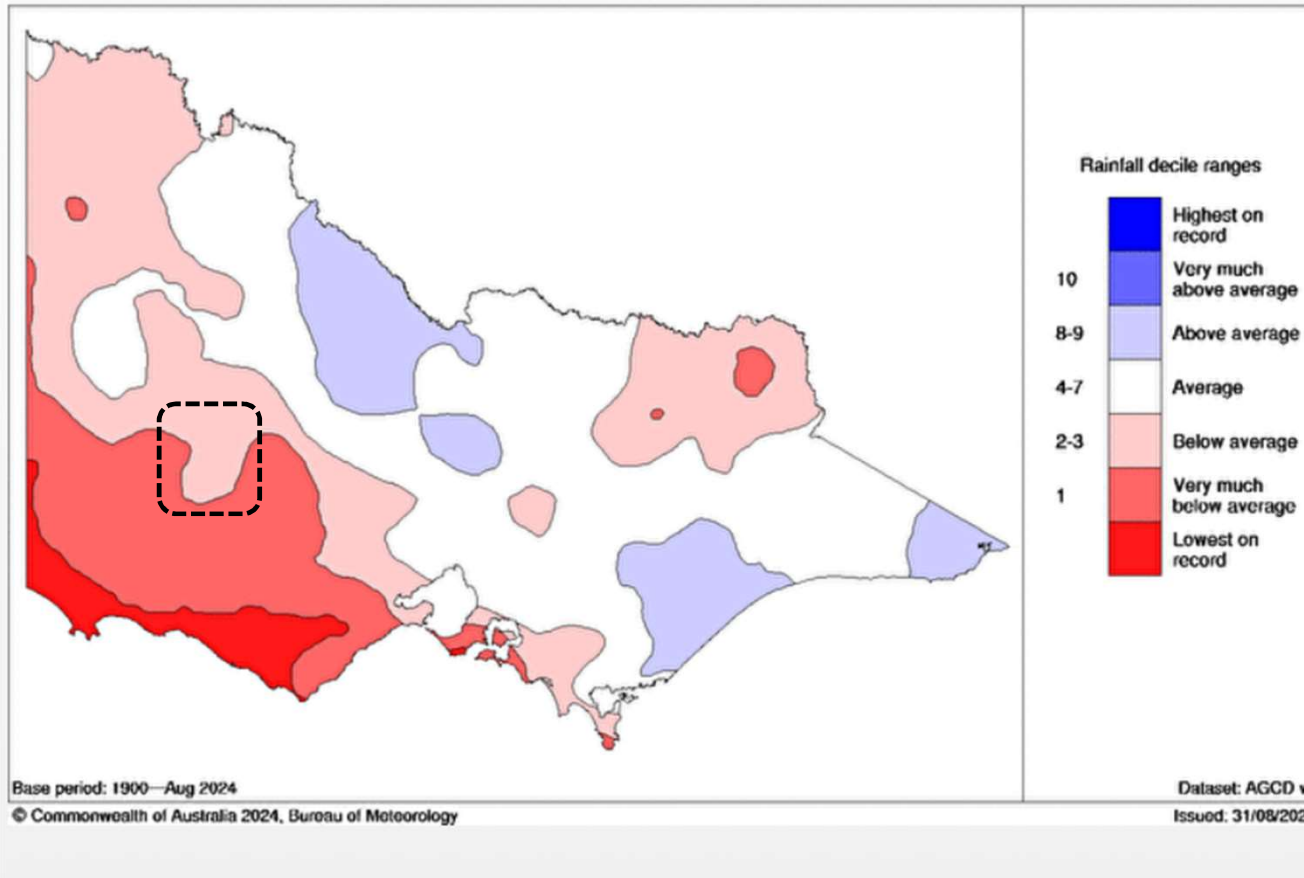


12 Month Rainfall



StorageManager
WIMMERA-GLENELG SYSTEM

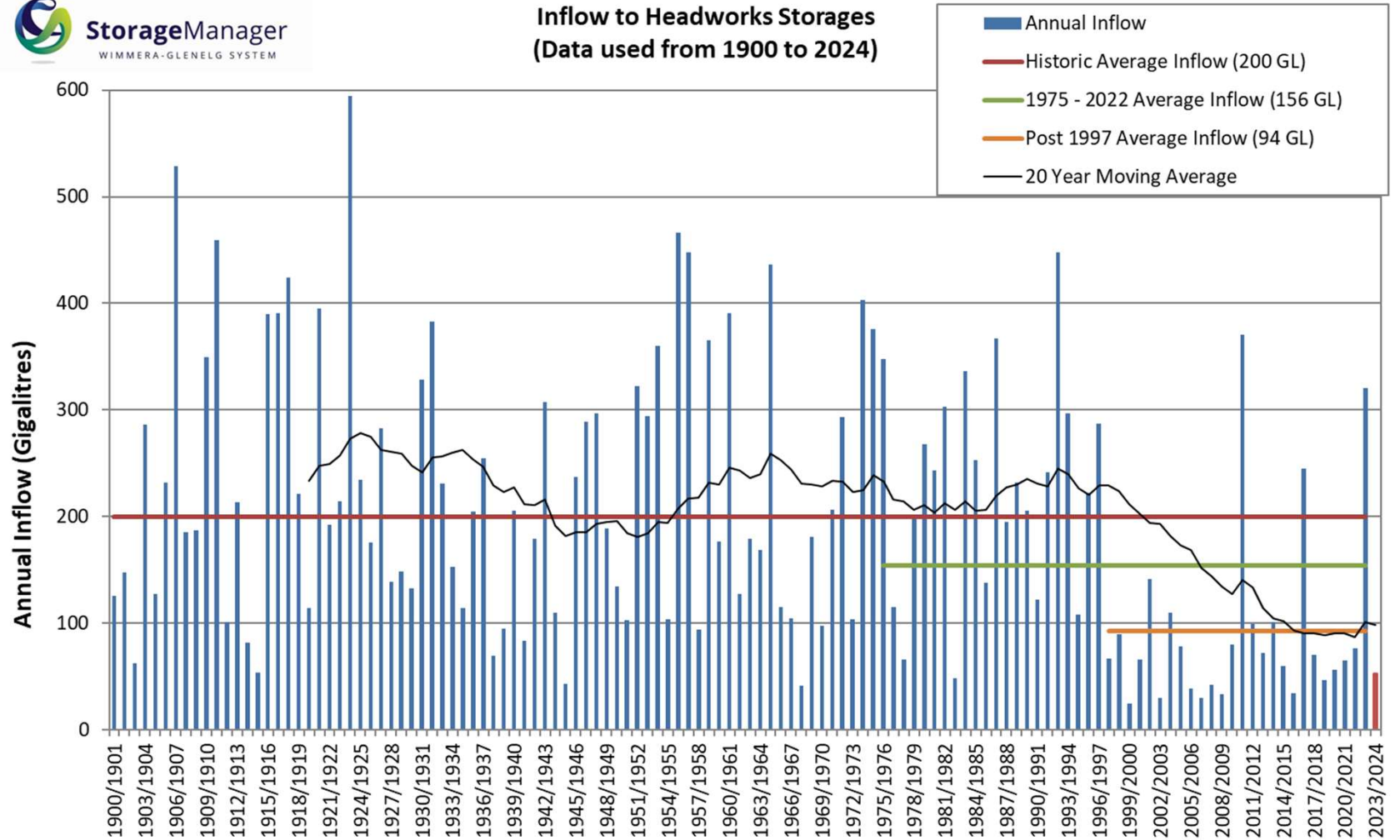
Twelve-monthly rainfall deciles for Victoria 01/09/2023 – 31/08/2024



2023/24 Water Year Inflow

- 52,753 ML excl. Taylors Lake
 - ≈ 26.5% of historic average inflow
 - ≈ 320,345 ML 2022/23
- 12th worst inflow year on record (124 years)
- 9/12 lowest inflow years have occurred since 1997.

**Inflow to Headworks Storages
(Data used from 1900 to 2024)**

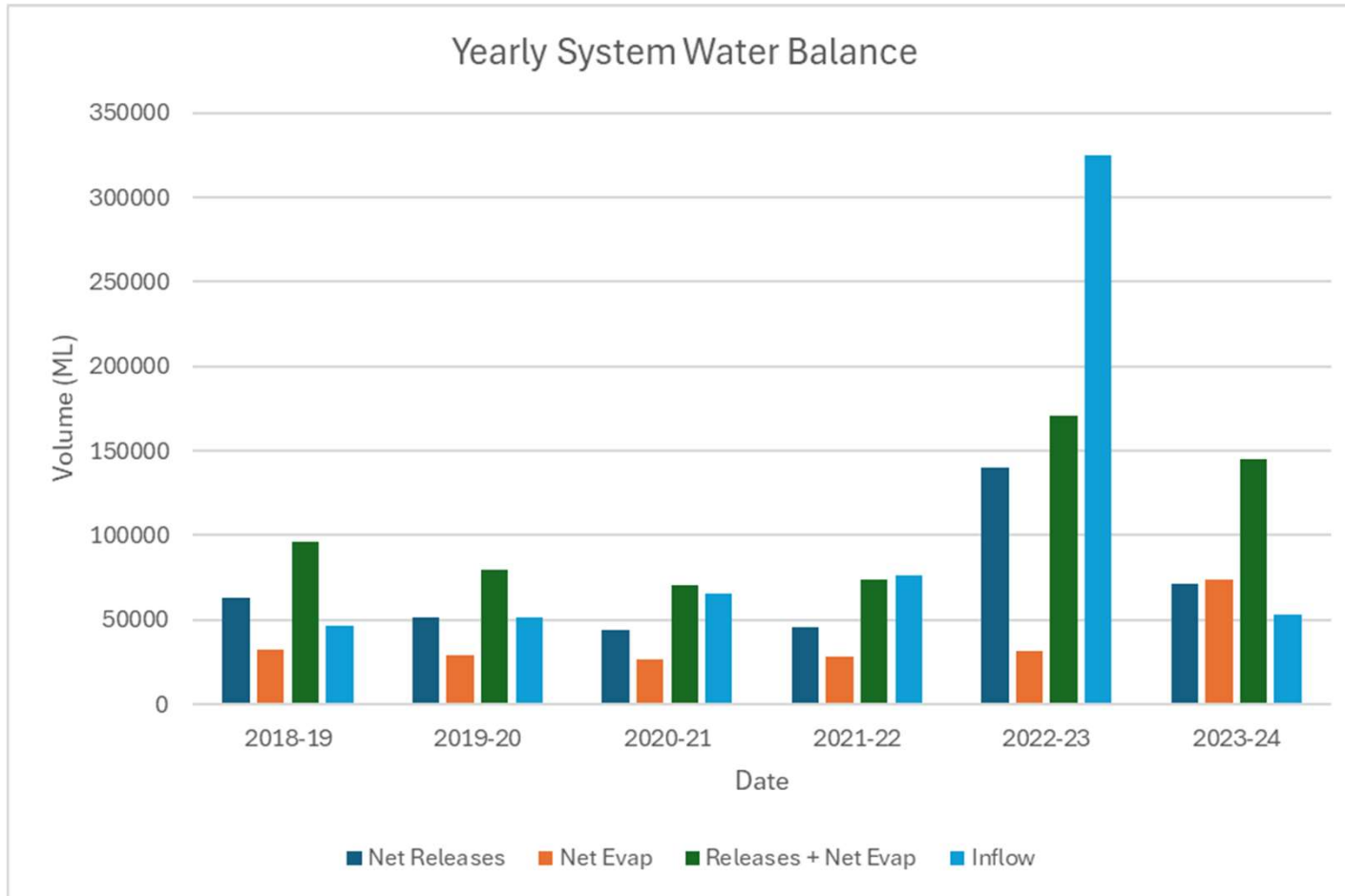


Note: Inflow data excludes Taylors Lake and Toolondo Reservoir.

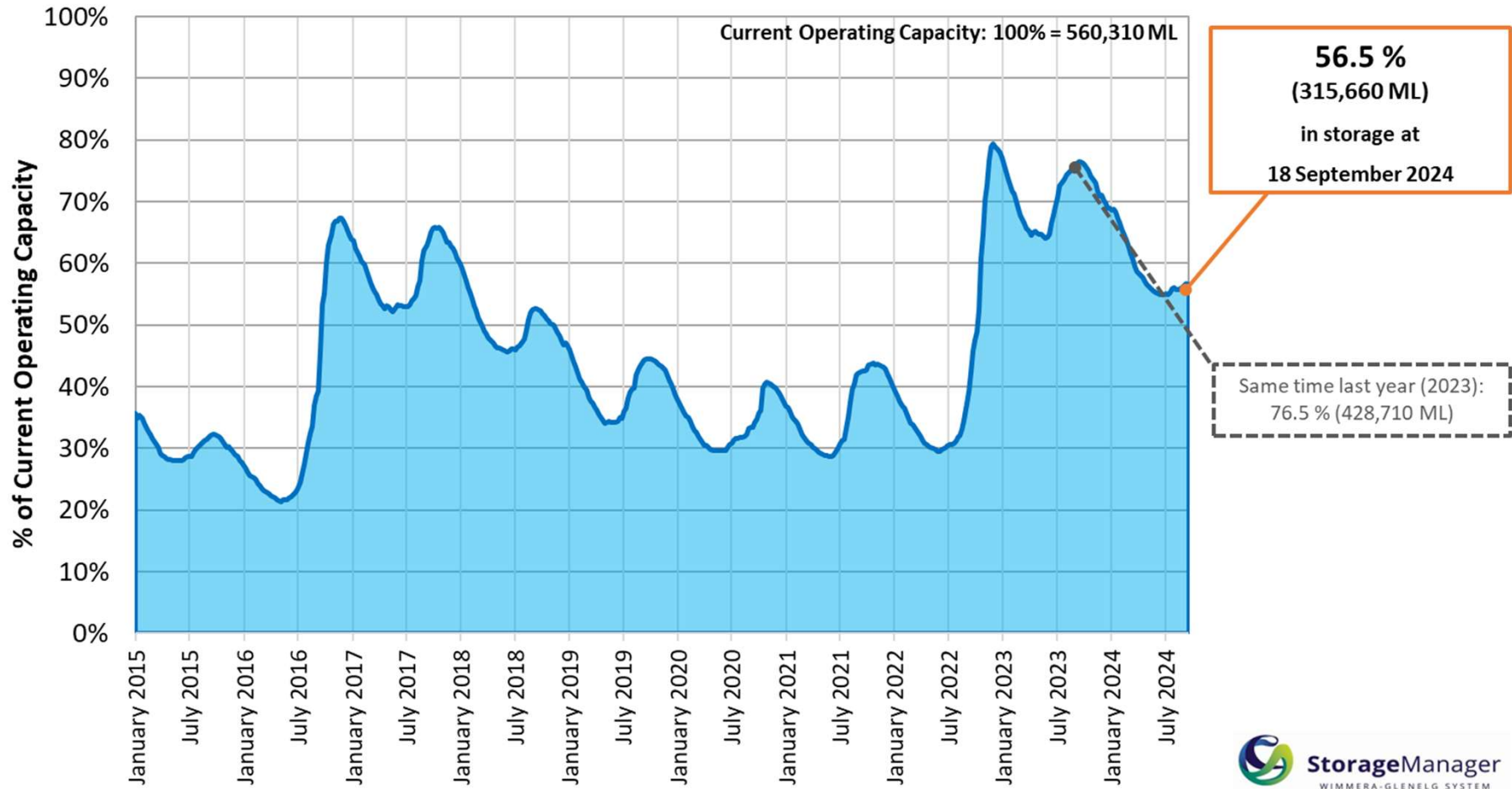
System Water Balance



StorageManager
WIMMERA-GLENELG SYSTEM



Total Volume Stored in Grampians Reservoirs as % of Operating Capacity

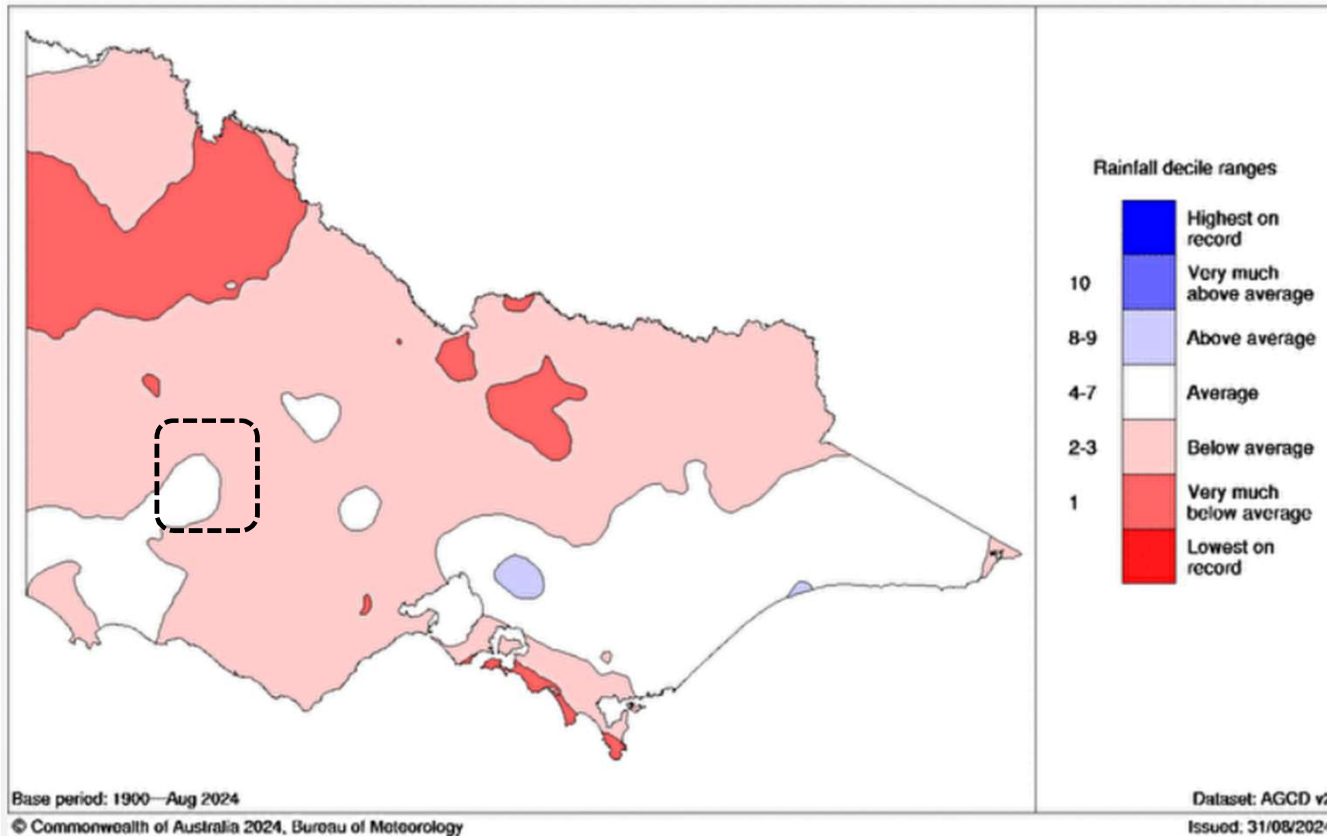


2024-25 Rainfall

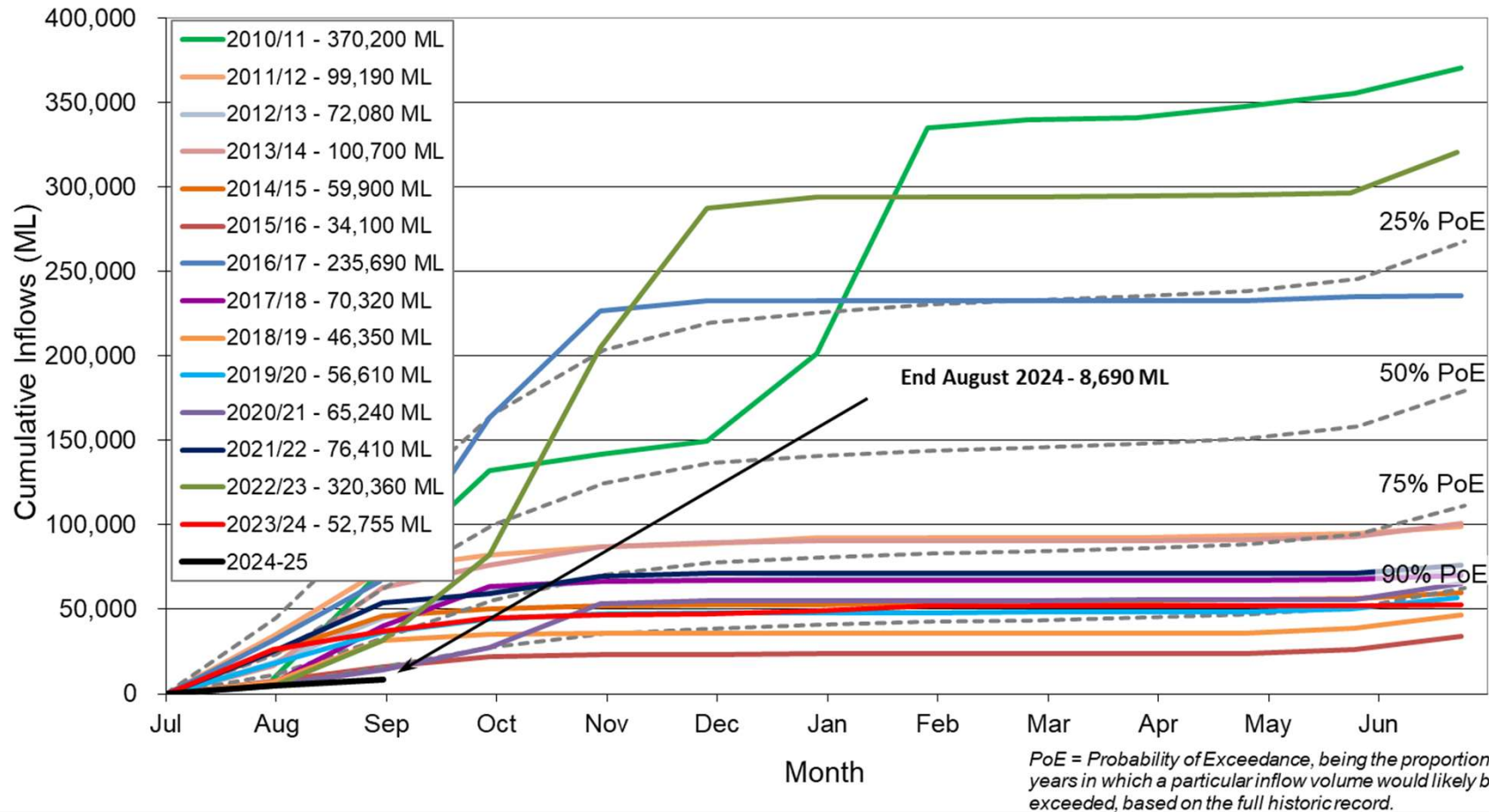


StorageManager
WIMMERA-GLENELG SYSTEM

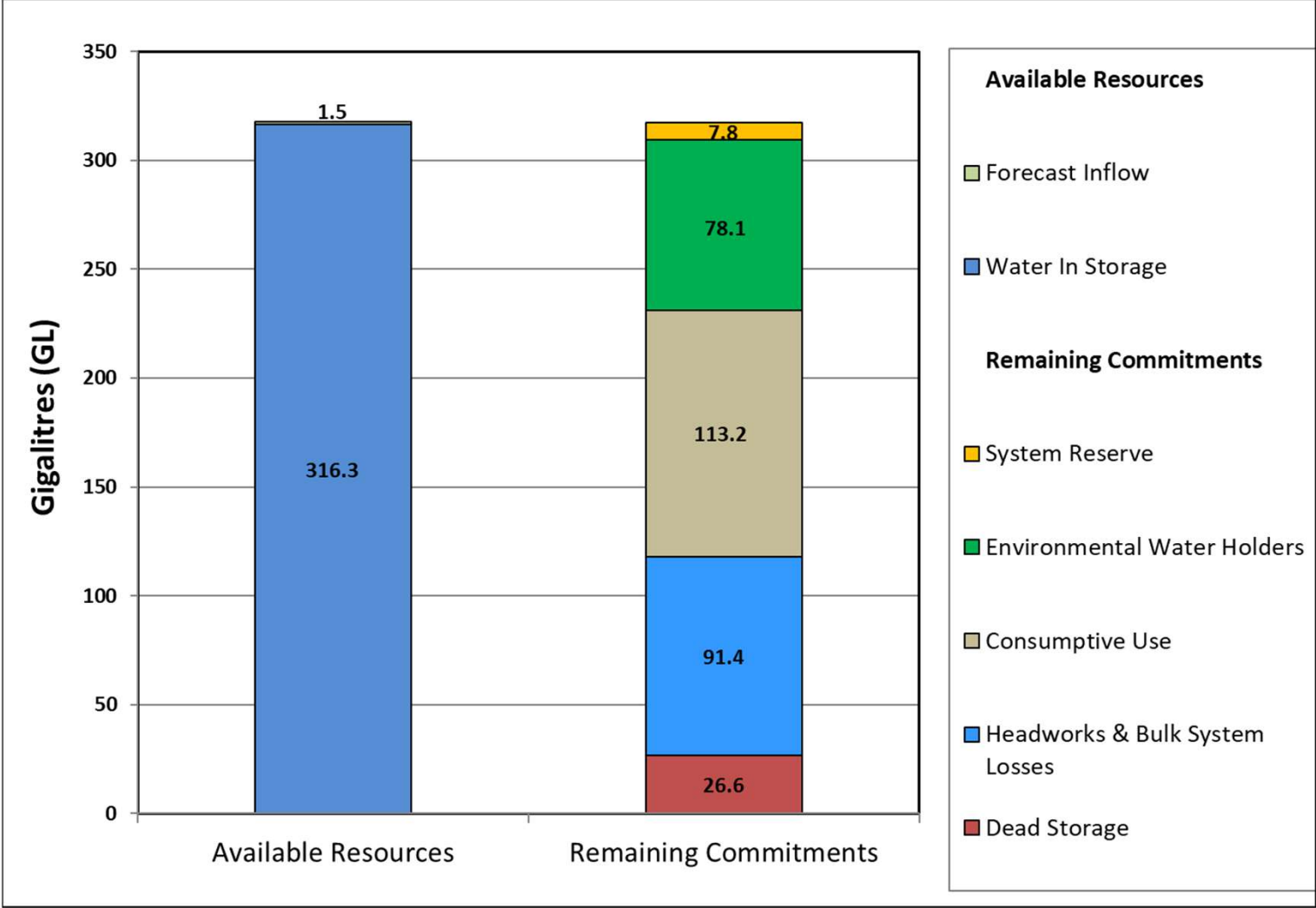
Two-monthly rainfall deciles for Victoria 01/07/2024 – 31/08/2024



Cumulative Natural Inflows to Water Storages (excluding Lower Headworks)



Resources & Commitments (4th Sep 2024)



Actual and Forecast Allocation



StorageManager
WIMMERA-GLENELG SYSTEM



StorageManager
WIMMERA-GLENELG SYSTEM

Seasonal Allocation for September 2024

	Entitlement (Megalitres)	Announced Allocation	Volume Available (Megalitres)
Grampians Wimmera Mallee Water			
Commonwealth Environmental Water Office	28,000	0.0%	16,118
Glenelg Compensation Flow	3,300	0.0%	4,409
Recreation	3,090	0.0%	1,585
Wimmera Mallee Pipeline Product	44,720	8.0%	90,983
Coliban Water			
Wimmera Mallee Pipeline Product	300	8.0%	390
Wannon Water			
Wimmera Mallee Pipeline Product	2,120	8.0%	7,632
Victorian Environmental Water Holder			
Wimmera Mallee Pipeline Product	40,560	8.0%	61,954
Wetlands	1,000	0.0%	1,047

Notes to this Table

This table presents the announced allocations for Wimmera-Glenelg system entitlements for the month shown on the table. The volumetric allocation is equivalent to the Entitlement (Megalitres) multiplied by the Announced Allocation percentage.



StorageManager
WIMMERA-GLENELG SYSTEM

Jun-24

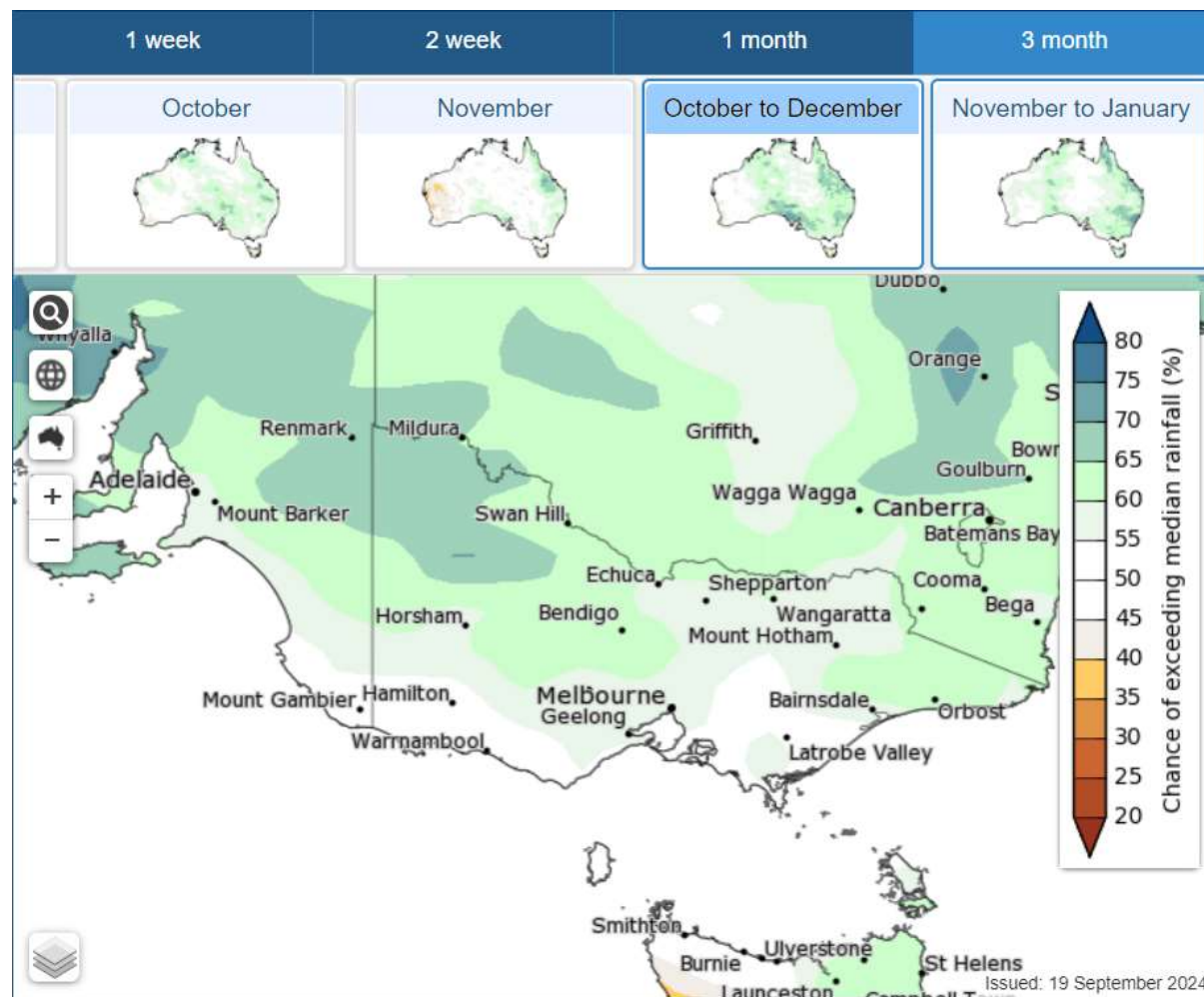
Seasonal Allocation Outlook for September 2024

	Entitlement Volume (Megalitres)	Drought 95% PoE	Very Dry 90% PoE	Dry 75% PoE	Average 50% PoE	Wet 25% PoE
Grampians Wimmera Mallee Water						
Commonwealth Environmental V	28,000	0%	0%	0%	0%	0%
Glenelg compensation flow	3,300	0%	0%	0%	0%	22%
Recreation	3,090	0%	0%	0%	0%	18%
Wimmera Mallee Pipeline produc	44,720	6%	9%	16%	34%	78%
Coliban Water						
Wimmera Mallee Pipeline produc	300	6%	9%	16%	34%	78%
Wannon Water						
Wimmera Mallee Pipeline produc	2,120	6%	9%	16%	34%	78%
Victorian Environmental Water Holder						
Wimmera Mallee Pipeline produc	40,560	6%	9%	16%	34%	78%
Wetlands	1,000	0%	0%	0%	0%	0%
Assumed inflow under Scenario (GL)^		8.5	16.2	34.3	68.6	126.5
Modelled Shortfall to making an allocation (GL)		0.0	0.0	0.0	0.0	0.0
Approximate System Reserve (GL)		5.7	8.1	14.2	20.0	20.0
Estimate of Rocklands Passing Flows for Month (GL)		0.0	0.4	1.4	5.5	8.8
Estimate of Lonsdale Passing Flows for Month (GL)		0.0	0.0	0.3	2.5	4.5

Rainfall Outlook

October to December 2024

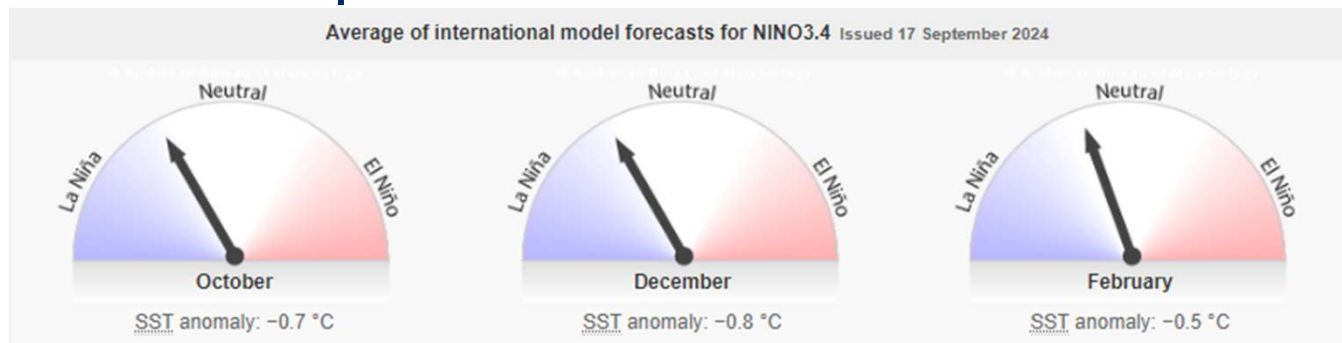
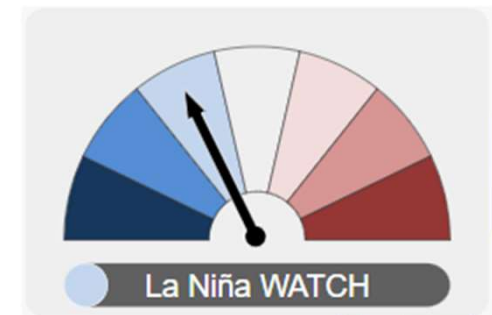
55-60% chance of exceeding median rainfall across the Wimmera – Glenelg Headworks System



Courtesy of Bureau of Meteorology

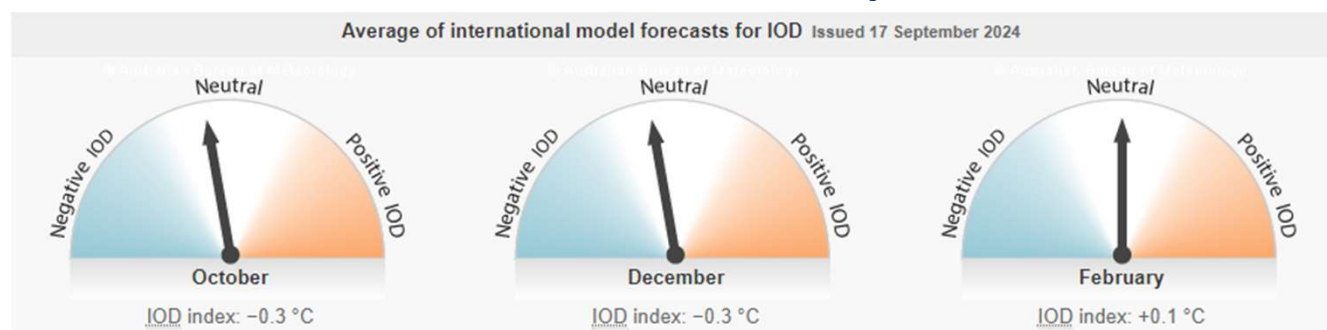
El Niño / La Niña (ENSO) Outlook

- Bureau of Meteorology suggest it's possible La Niña thresholds may be reached in coming months. If reached, it's likely to be relatively weak and short-lived.
- La Niña events typically effect winter- spring rainfall in eastern parts of Australia.

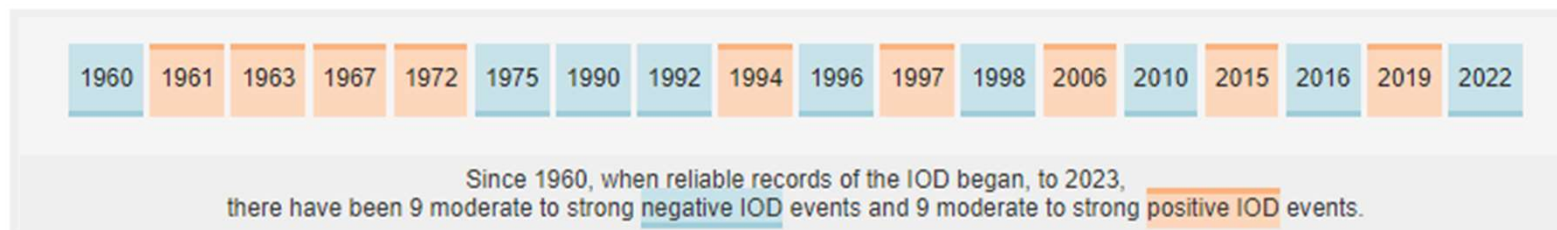


Indian Ocean Dipole (IOD) Outlook

- Indian Ocean Dipole (IOD) is currently neutral and unlikely to form between October to February.



Indian Ocean Dipole years



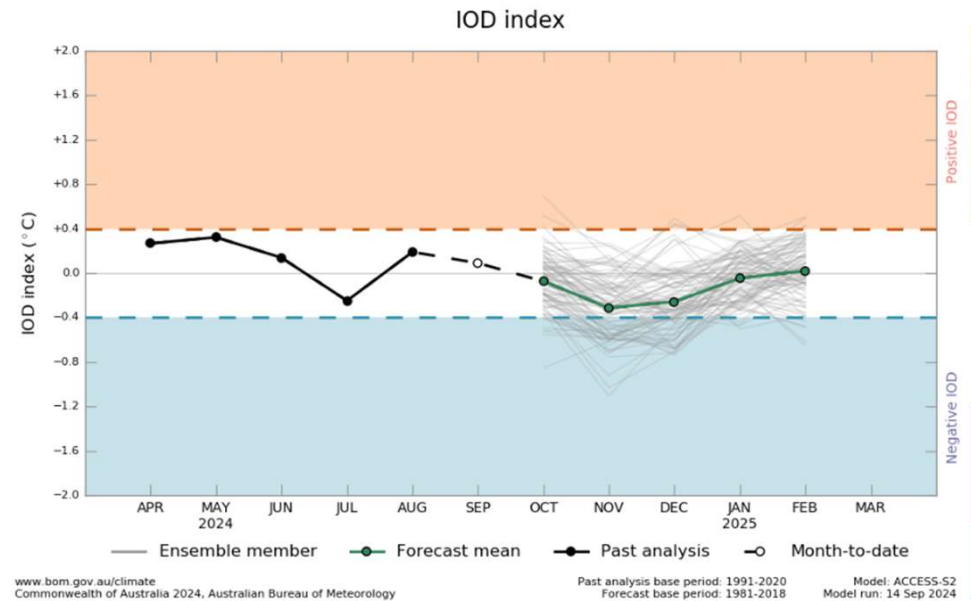
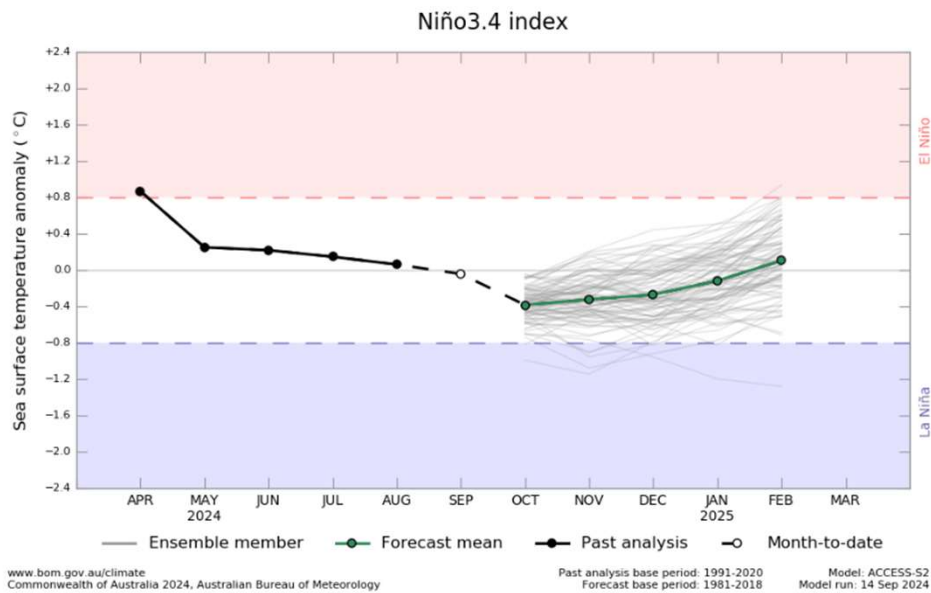
Climate Forecast



StorageManager
WIMMERA-GLENELG SYSTEM

ENSO

IOD



Storage Manager Operations



StorageManager
WIMMERA-GLENELG SYSTEM

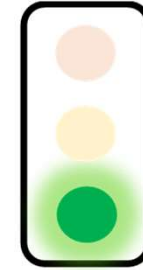
- Water availability expected to be sufficient to satisfy all entitlement holder demand (some challenges may exist for Lake Wartook & smaller systems).
- Transfers expected from Moora Reservoir & Lake Bellfield (delivery to Green Lake – Horsham).
- Allocations are expected to remain low unless significant inflow is received to storages.

Water Security Outlook for GWMWater

Scott Smith
Manager Water Resources

All Systems

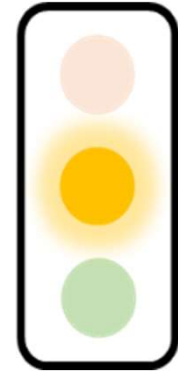
Status: General Monitoring



- Large volumes available from the Grampians system.
- Very high early allocations received in Goulburn (100%) and Murray Systems (88%), further increases to the Murray system is expected.
- No groundwater resource issues foreseen.
- High security of supply in both the Elmhurst and Buangor systems.

All Systems

Status: Heightened Awareness



Lake Wartook:

- Lake Wartook currently holds 17.9 GL or 61% of its maximum operating capacity.
- Current demand estimates total approximately 11.2 GL for 2024/25 (7.7 GL for the environment under a 'dry' climate scenario and 3.5 GL for GWMWater supply to Mt Zero and Brimpaen Storages).
- Current projections indicated that under 'drought' and 'very dry' climate scenarios Lake Wartook will drop below the Critical Needs Reserve of 5 GL by as early as March 2025.

East Grampians Urban System (Willaura & Lake Bolac):

- Very slow storage recovery driven by poor catchment flows on the eastern flank of the Grampians.

Figure 11: Comparison of estimated water availability and projected urban and rural pipeline demand to 2070 for Grampians supplied systems (no supply to large commercial users)

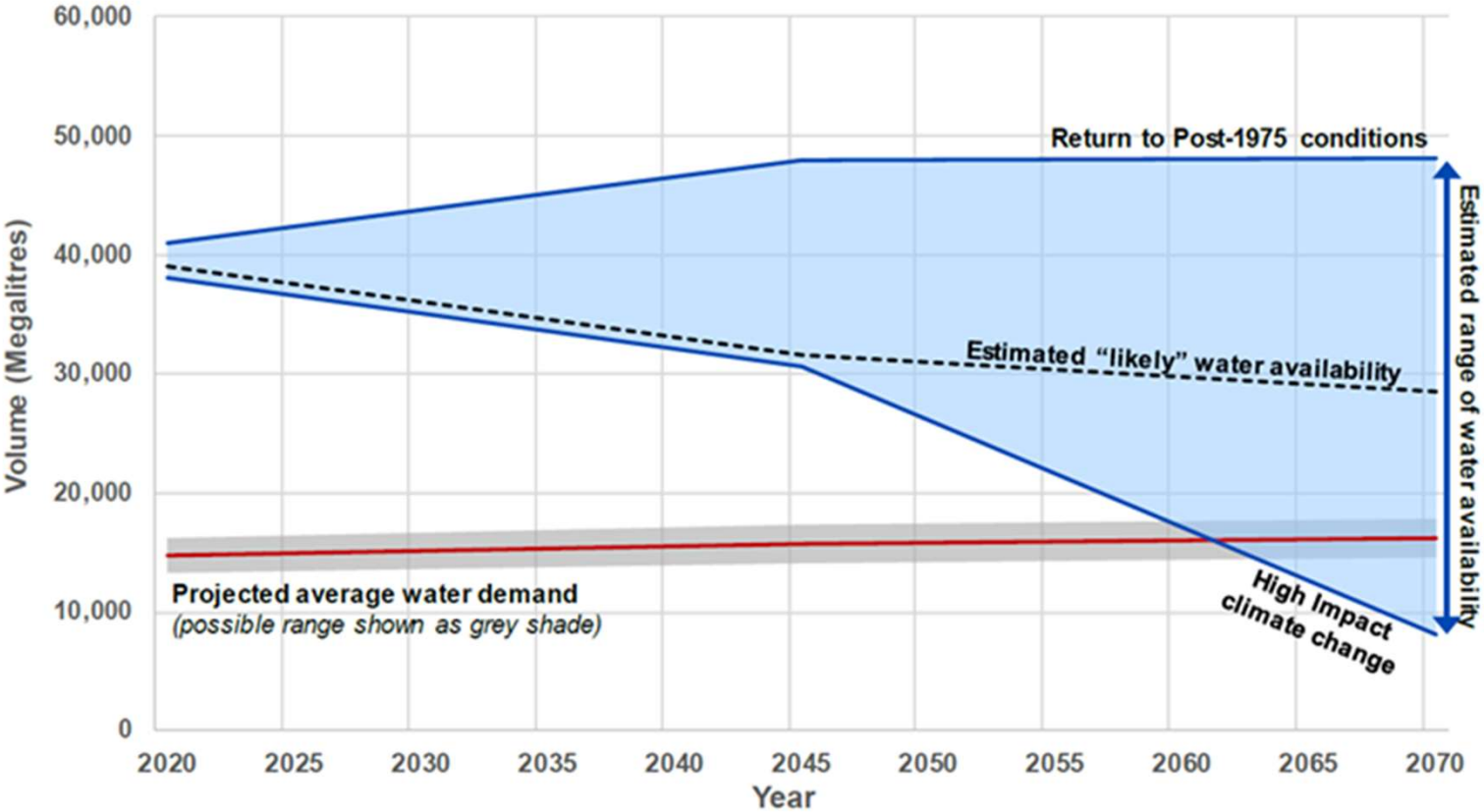
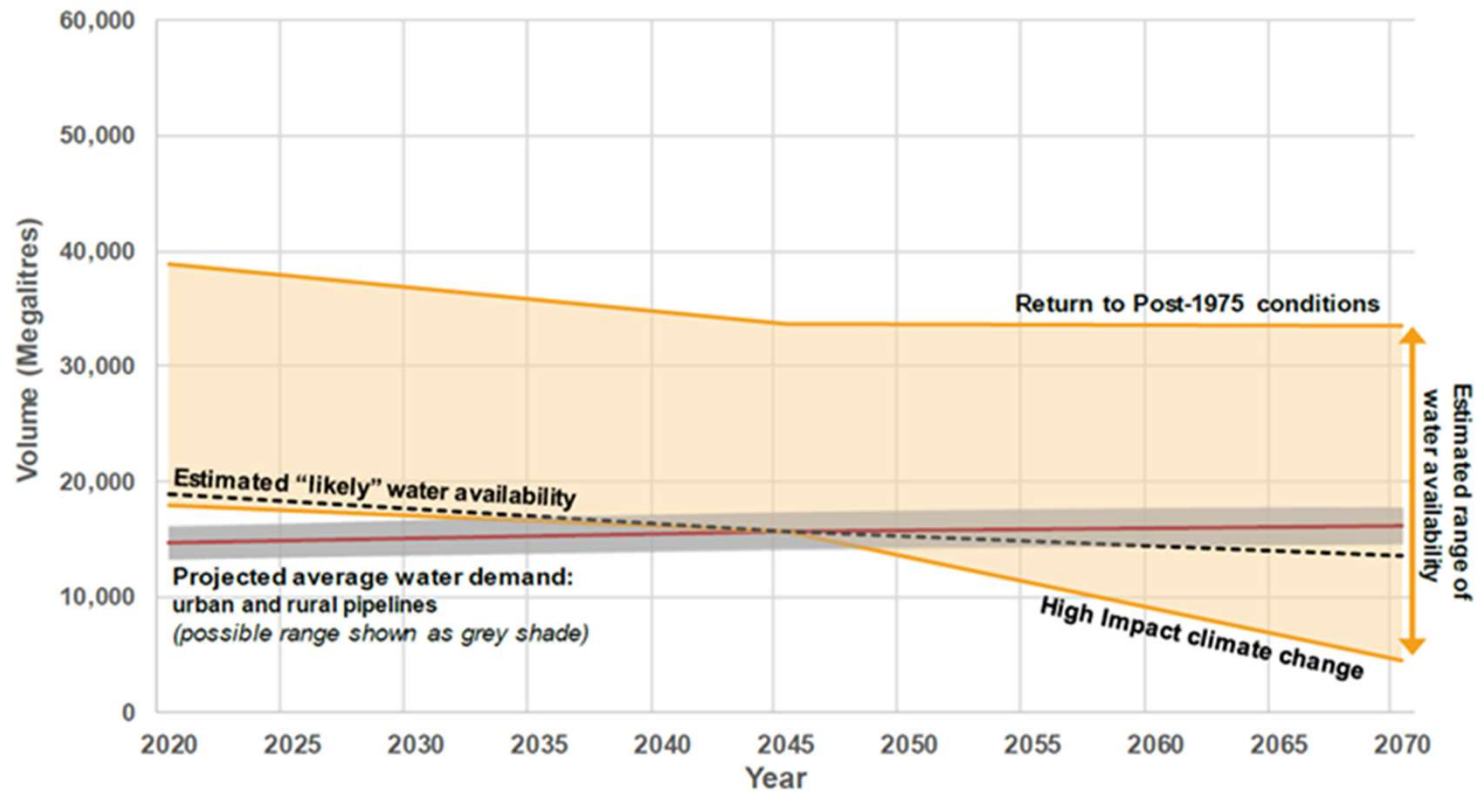


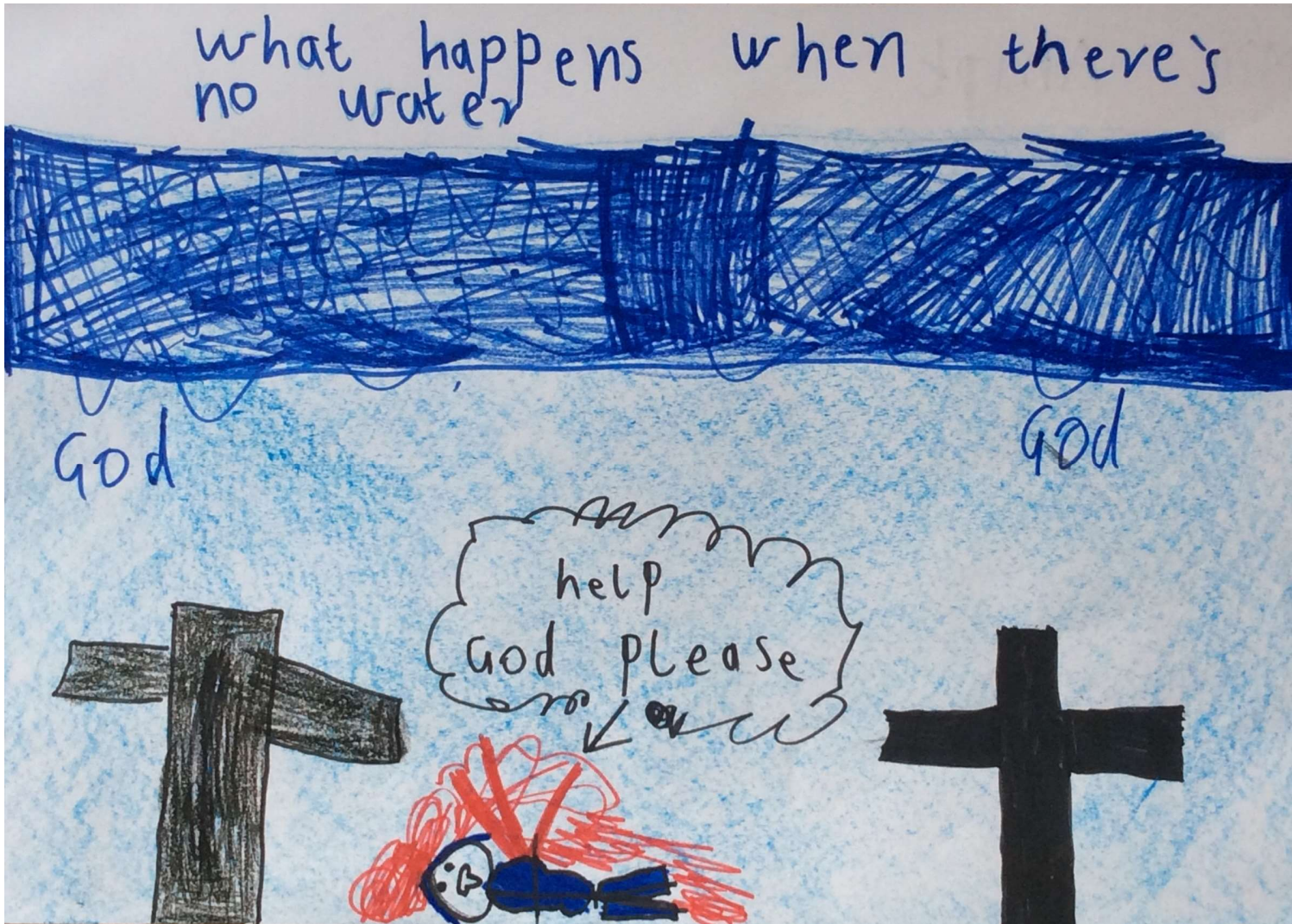
Figure 12: Comparison of estimated water availability and projected urban and rural pipeline demand to 2070 for Grampians supplied systems under full supply to large commercial users and sale of all Growth Water



Options currently being evaluated

Three option types:

- Augmentation (identify new sources of water)
- System efficiency upgrades (piping open channels)
- Cross connection with external systems (Murray / Goulburn)



StorageManager
WIMMERA-GLENELG SYSTEM



Questions



GWMWater



GWMWater