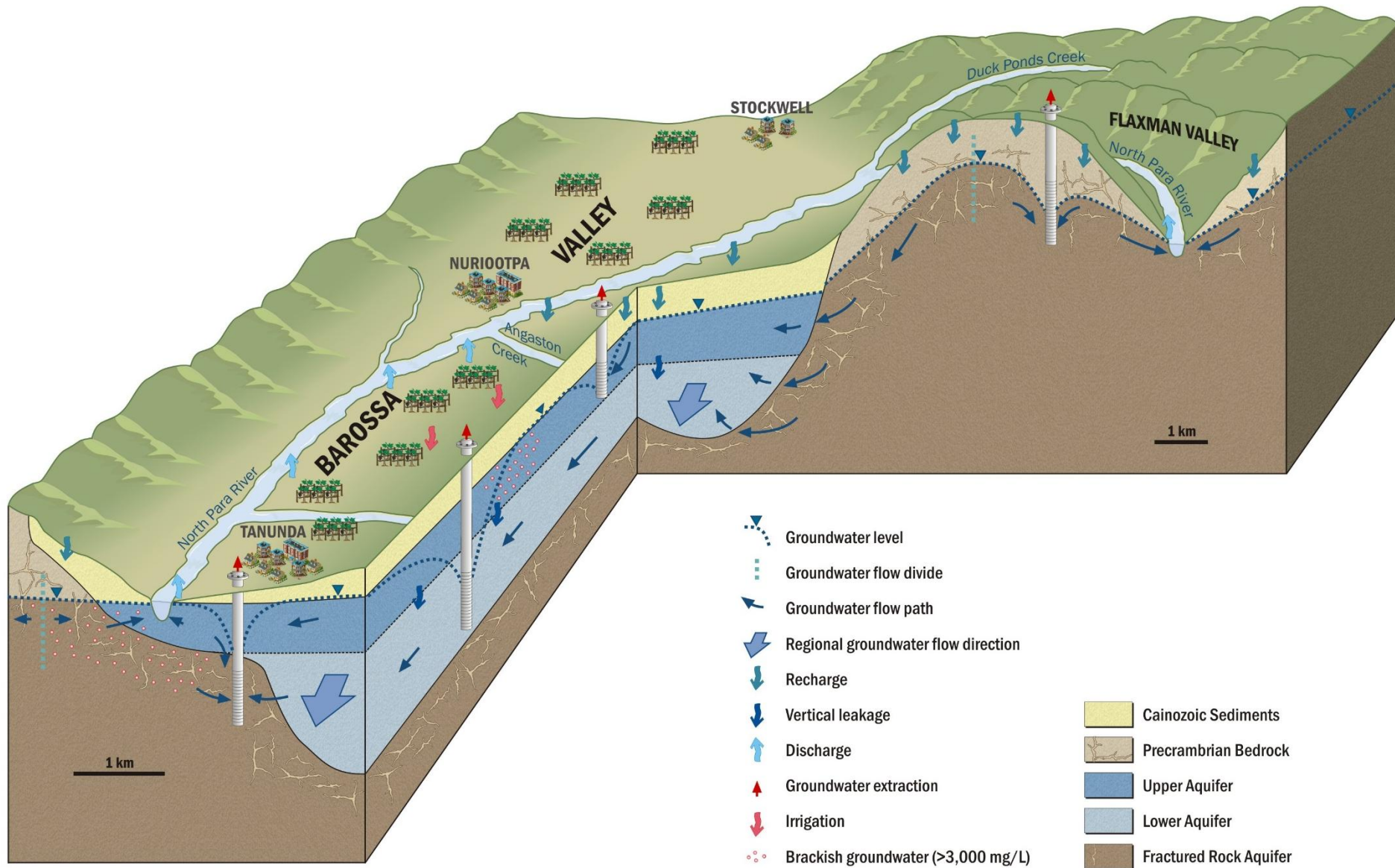
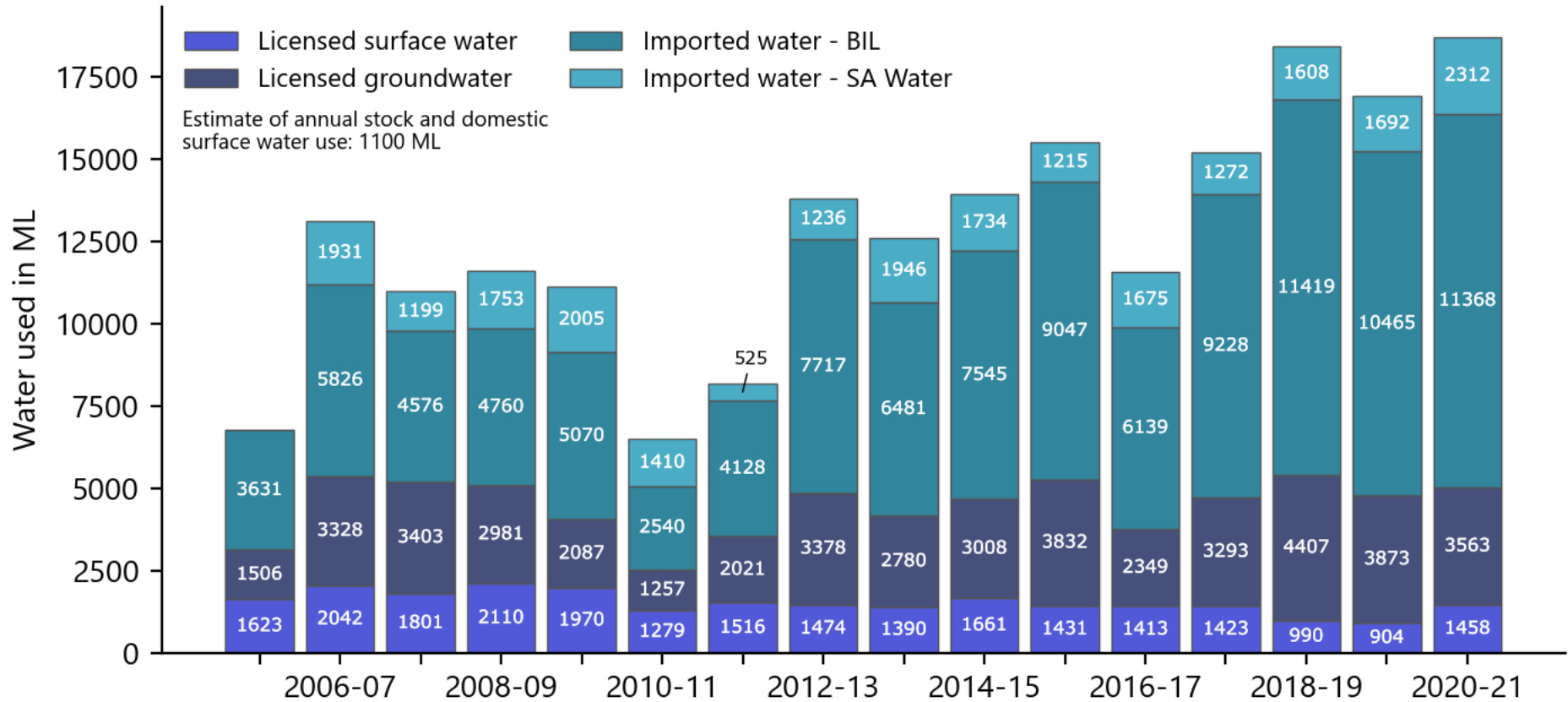


# **Barossa PWRA: Groundwater processes & status of the resources**

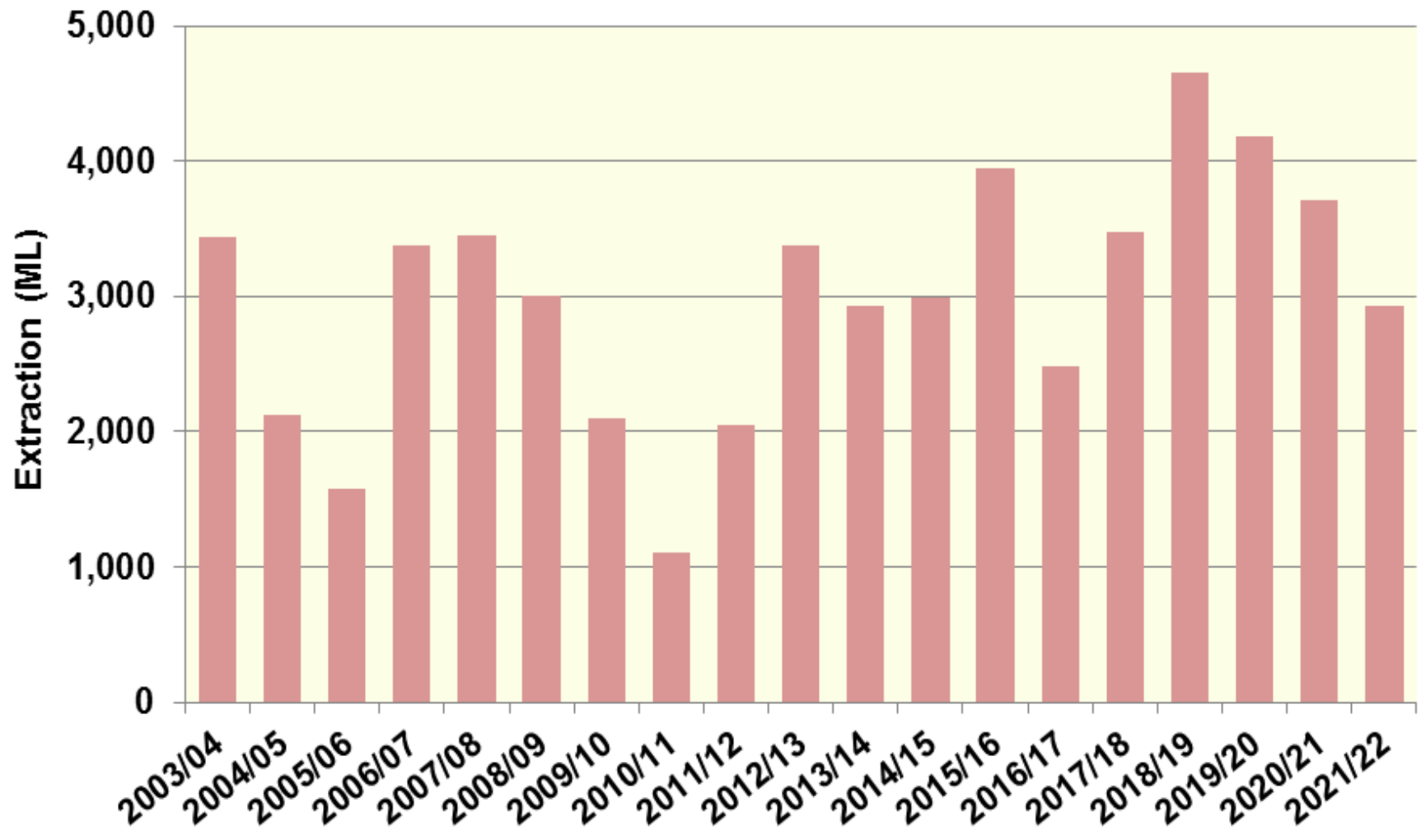
# Groundwater processes



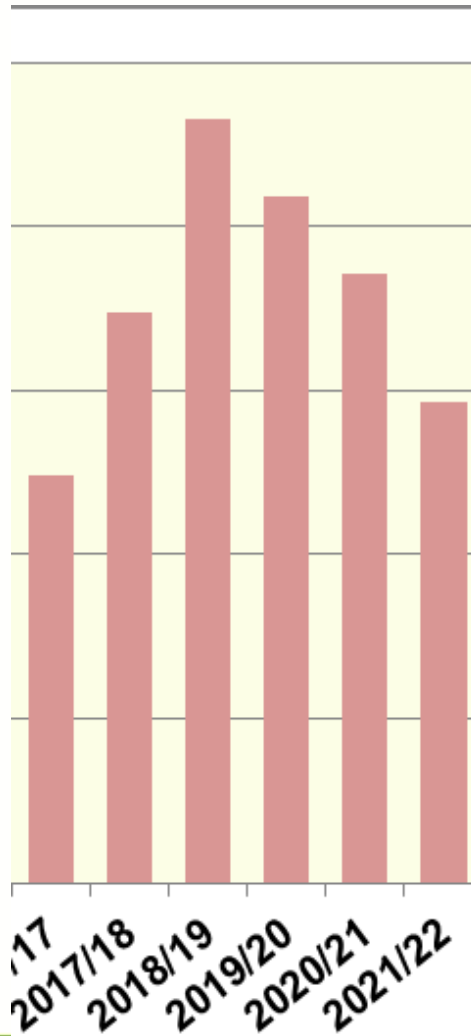
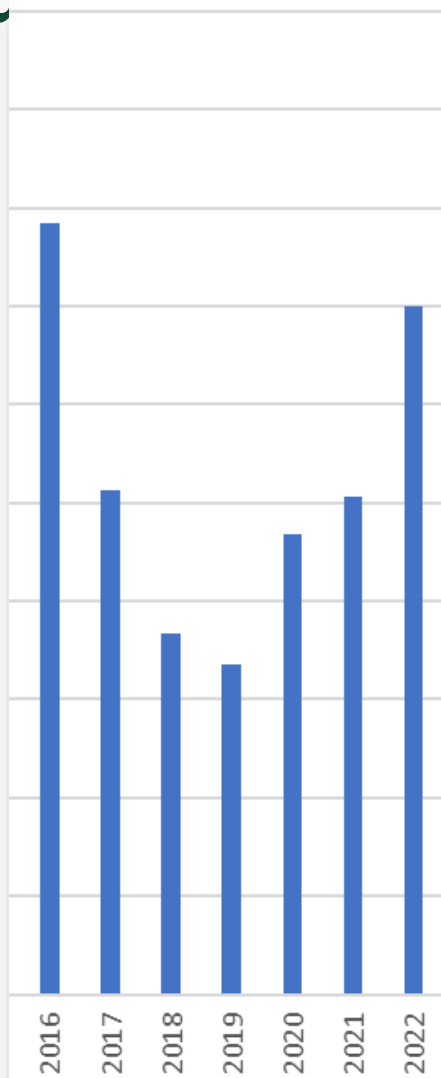
# Total Water Use



# Groundwater Use



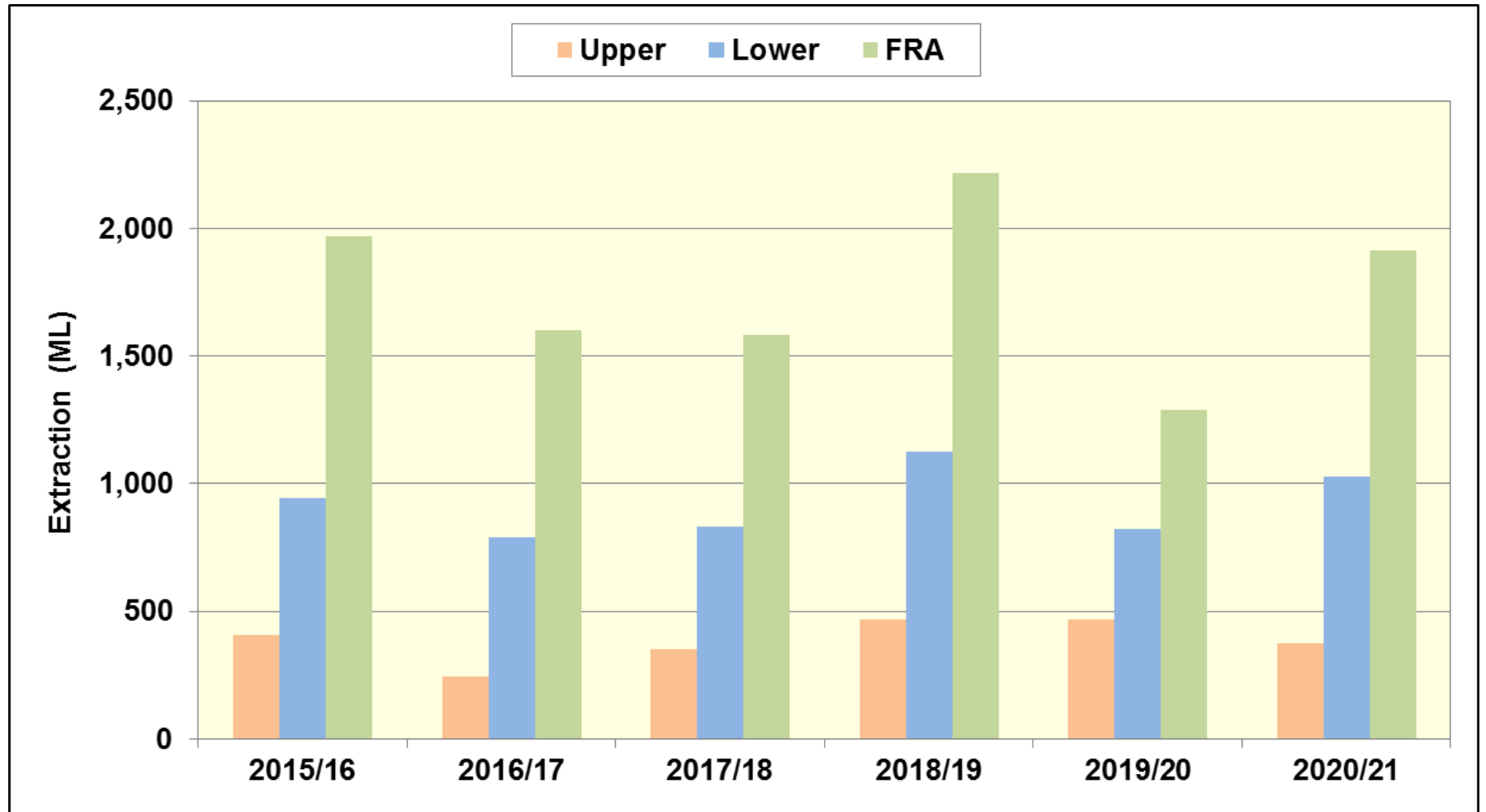
# Groundwater Use



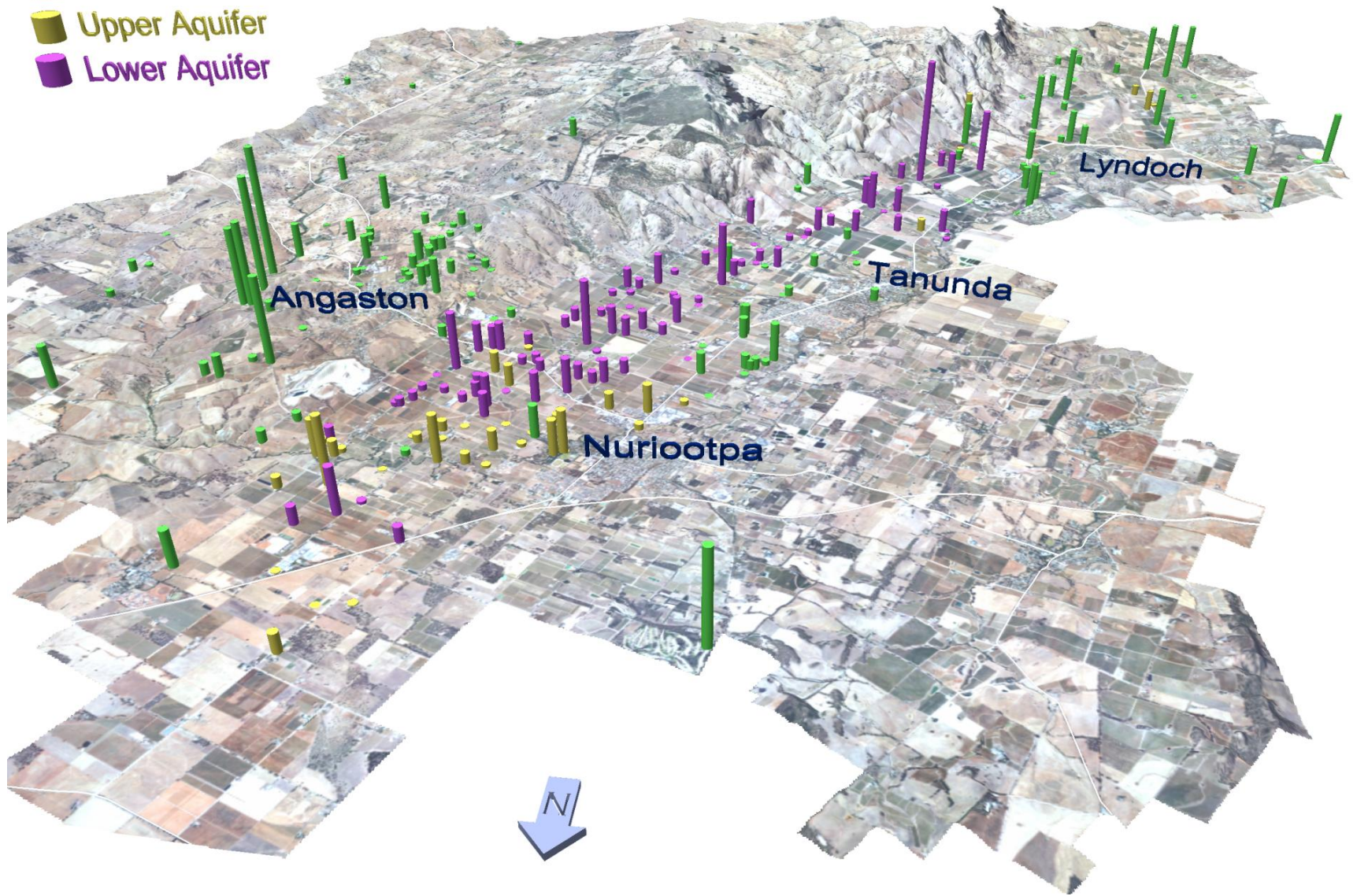
Government of South Australia

Department for Water

# Groundwater Use by Aquifer



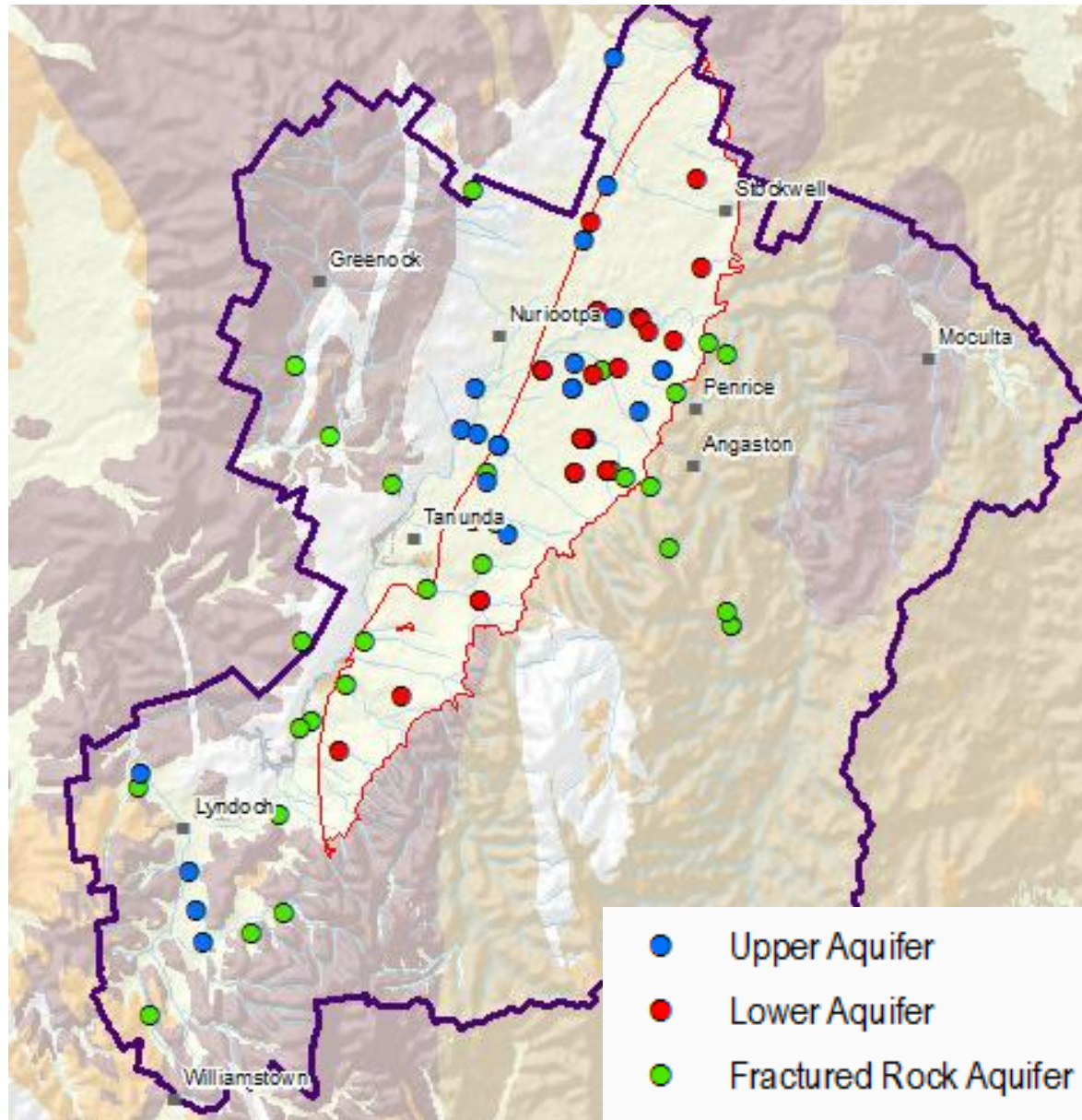
- Fractured Rock
- Upper Aquifer
- Lower Aquifer



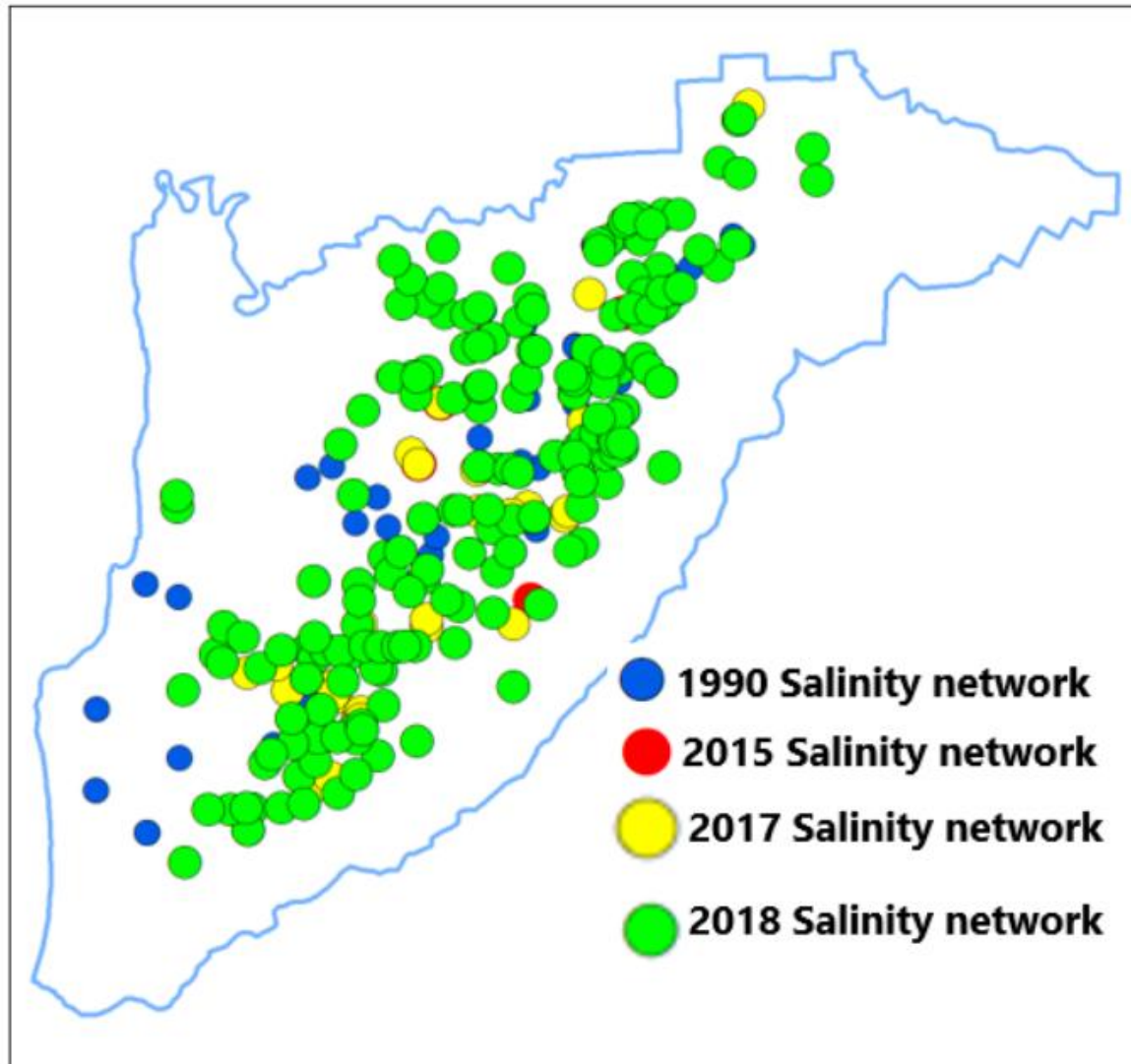
# Monitoring network – water level

## 58 wells in total

- 18 in the Upper
- 16 in the Lower
- 24 in the FRA



# Salinity sampling: citizen science



# Upper aquifer: groundwater levels

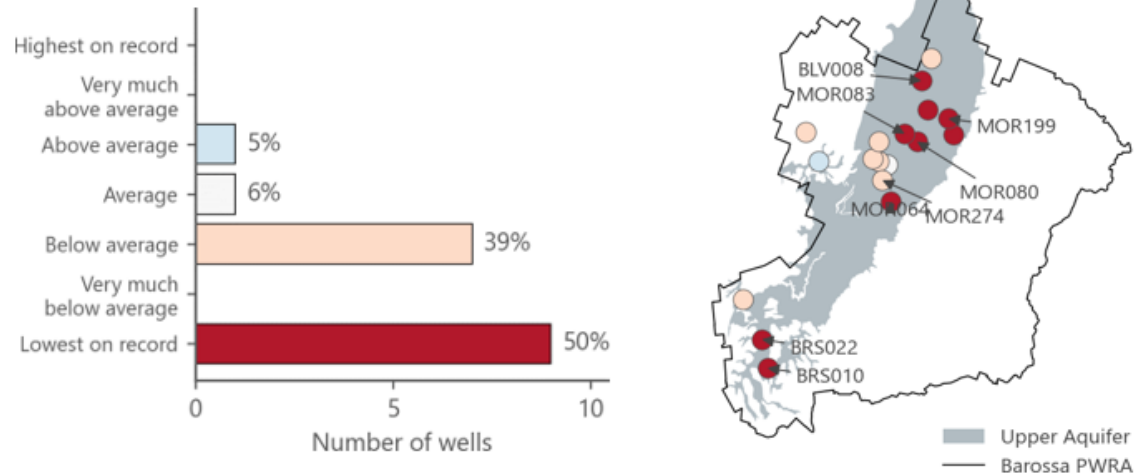


**Figure 5.1. 2020 recovered water levels for wells in the Upper Aquifer**

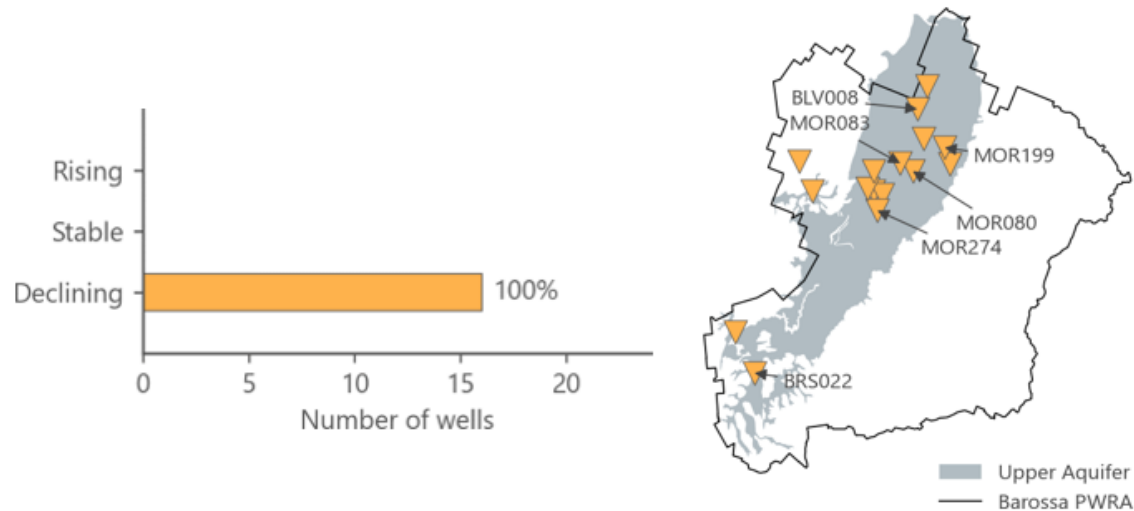
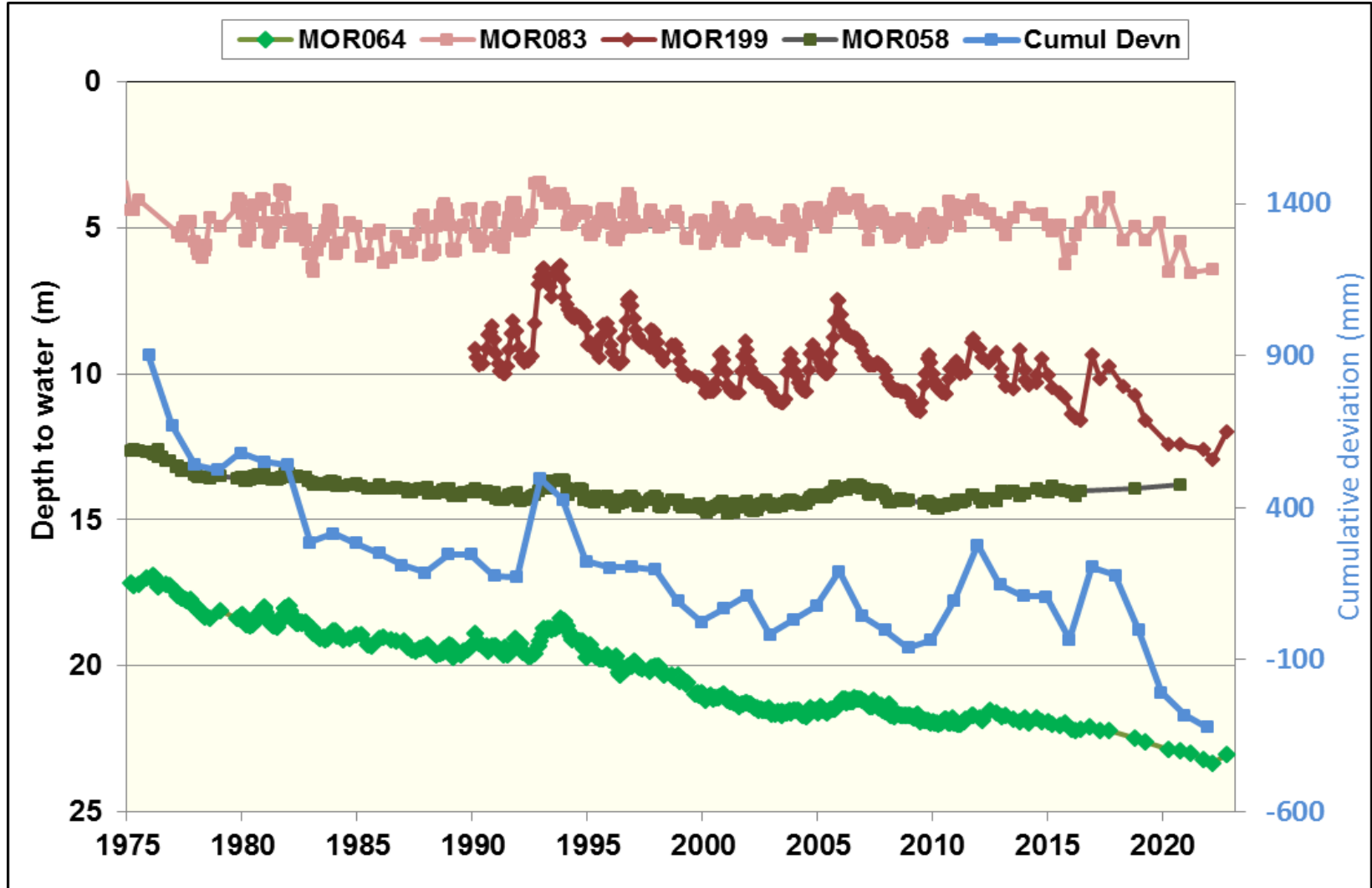


**Figure 5.2. 2016–20 trend in recovered water levels for wells in the Upper Aquifer**

# Upper aquifer



# Upper aquifer salinity

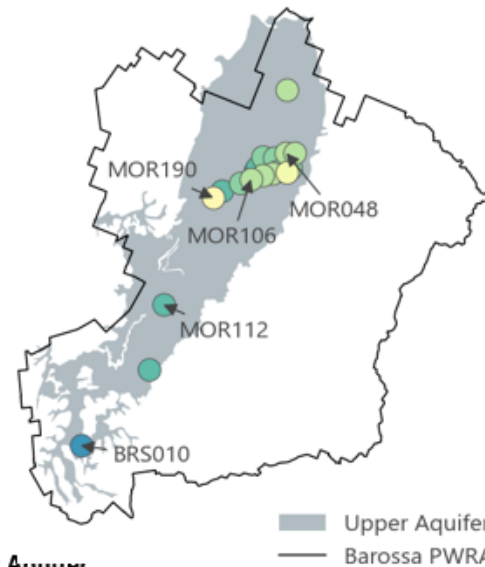
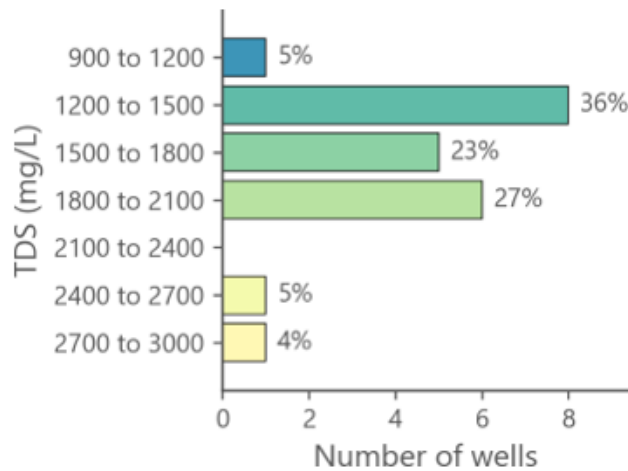


**Figure 5.4. 2020 salinity observations from wells in the Upper Aquifer**

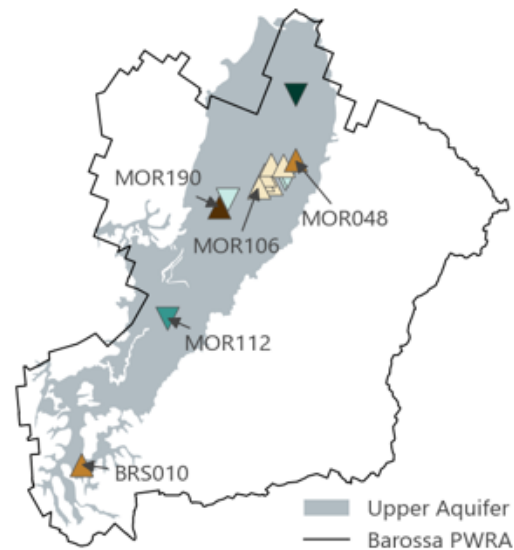
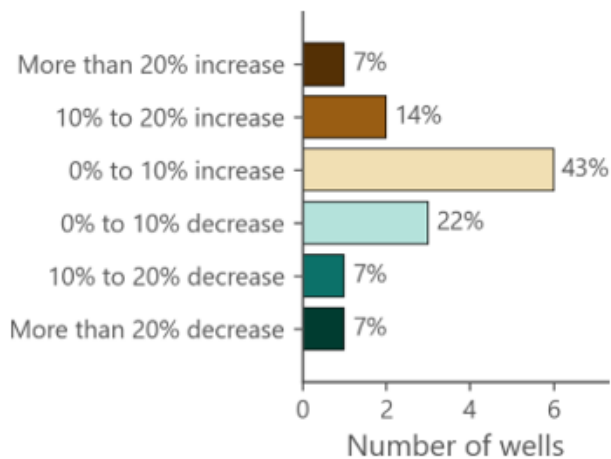


**Figure 5.5. Salinity trend in the 15 years to 2020 in the Upper Aquifer**

# Lower aquifer: groundwater levels

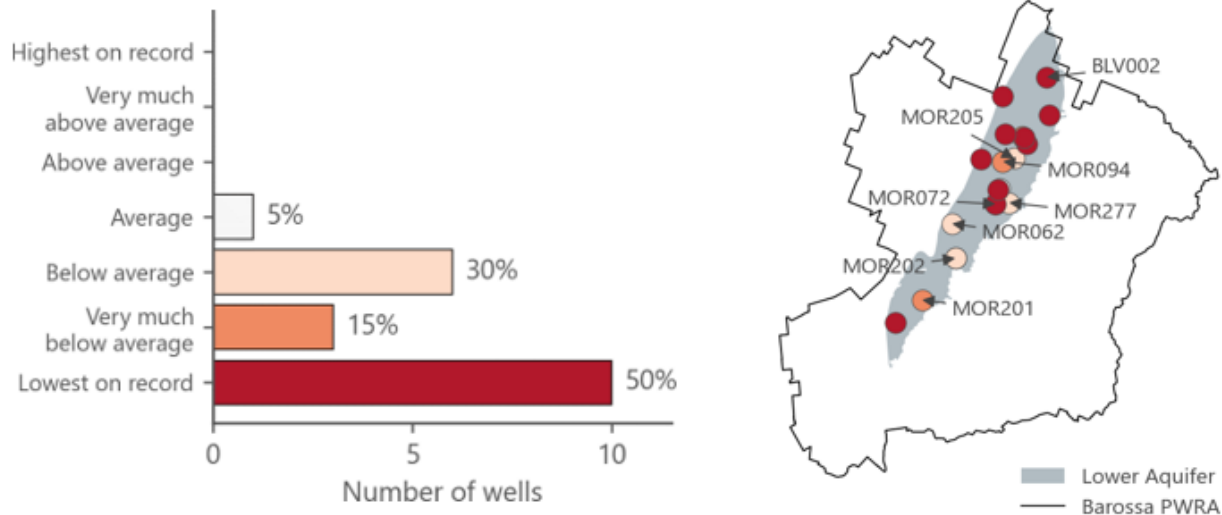


**Figure 5.7. 2020 recovered water levels for wells in the Lower Aquifer**

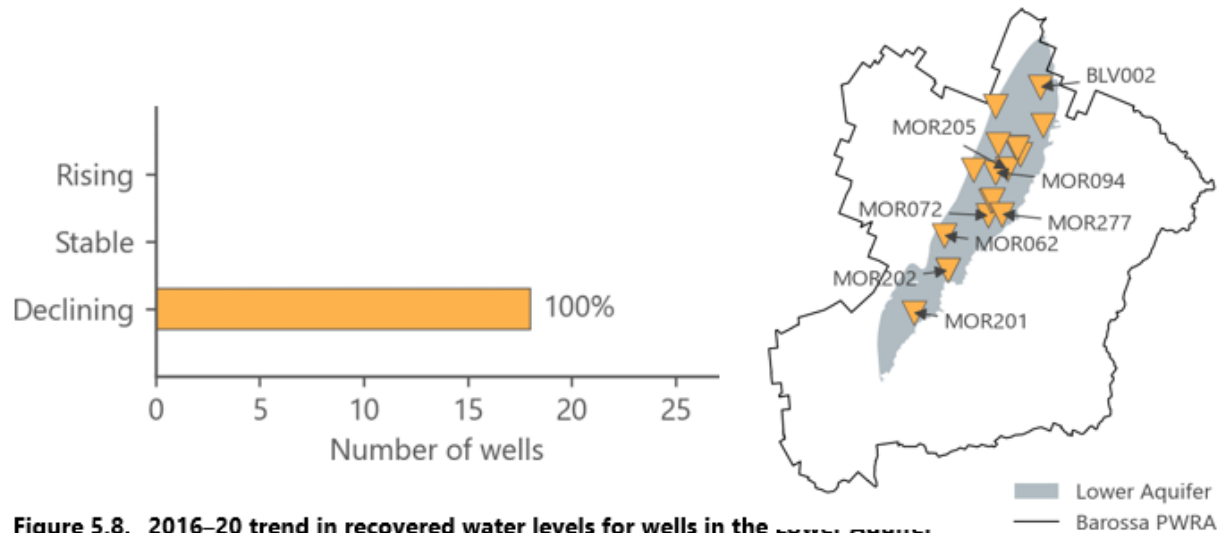
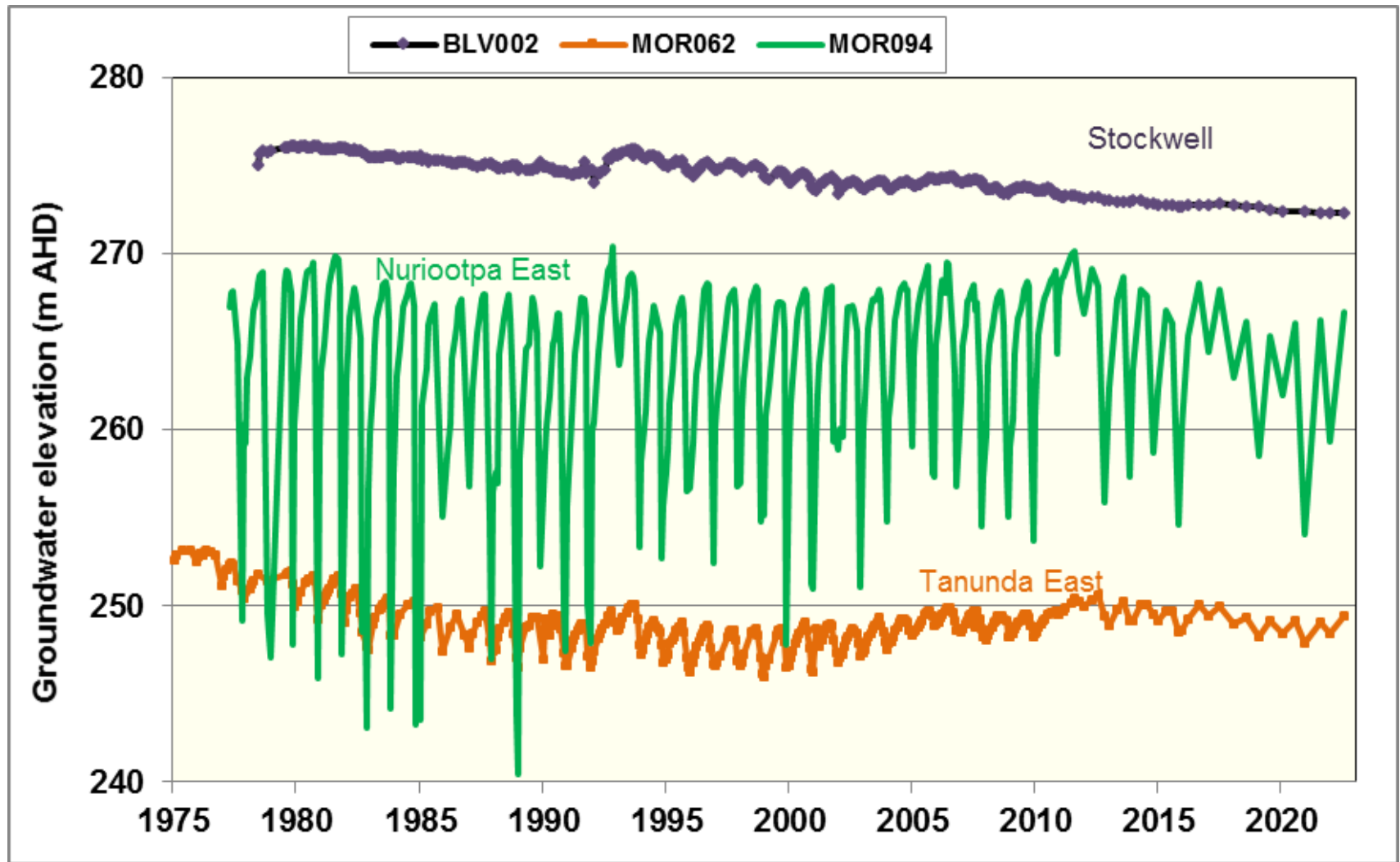


**Figure 5.8. 2016–20 trend in recovered water levels for wells in the Lower Aquifer**

# Lower aquifer



# Lower aquifer: salinity

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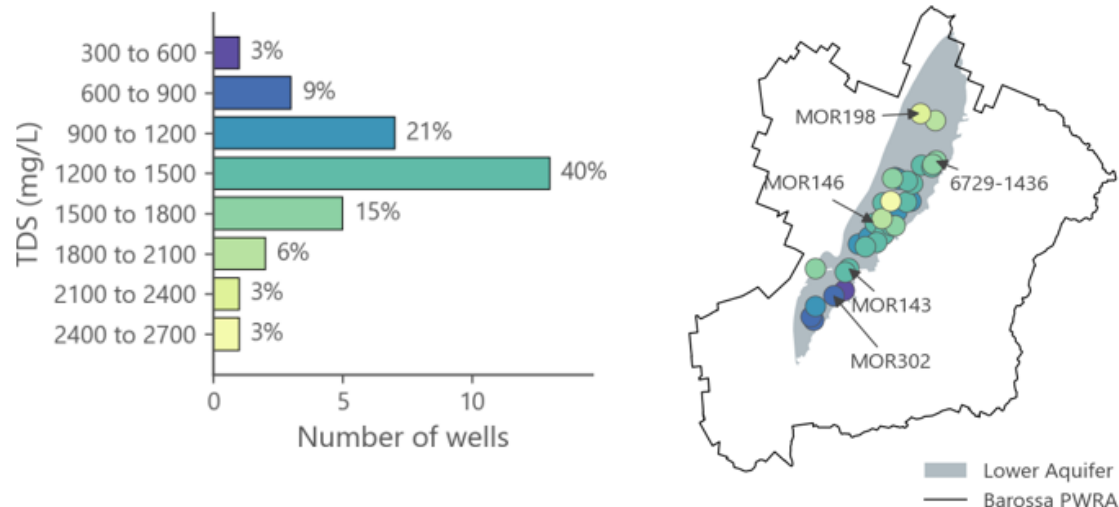


Figure 5.10. 2020 salinity observations in the Lower Aquifer

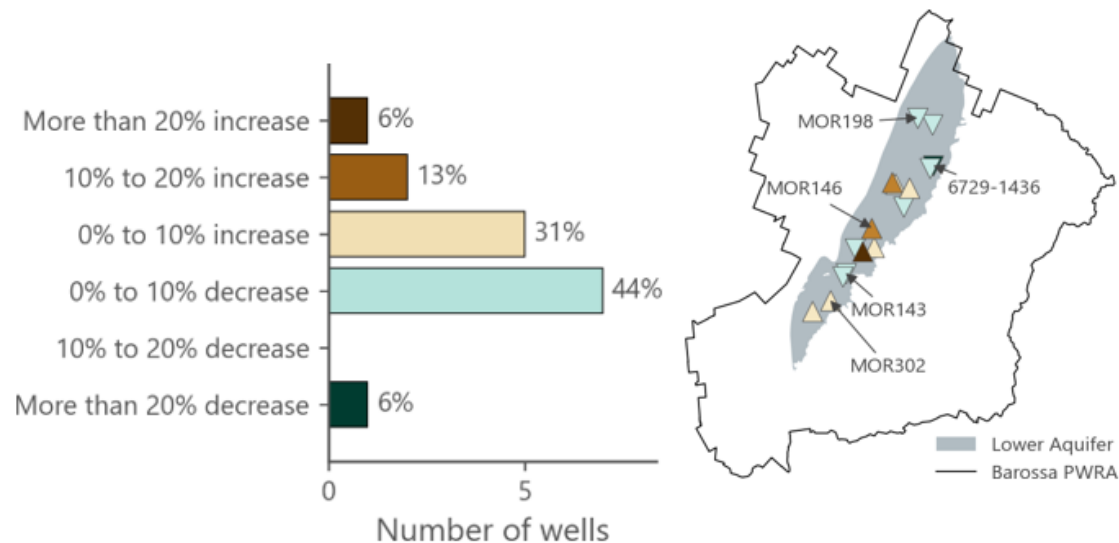


Figure 5.11. Salinity trend in the 15 years to 2020 in the Lower Aquifer

# Fractured rock aquifer: GW levels

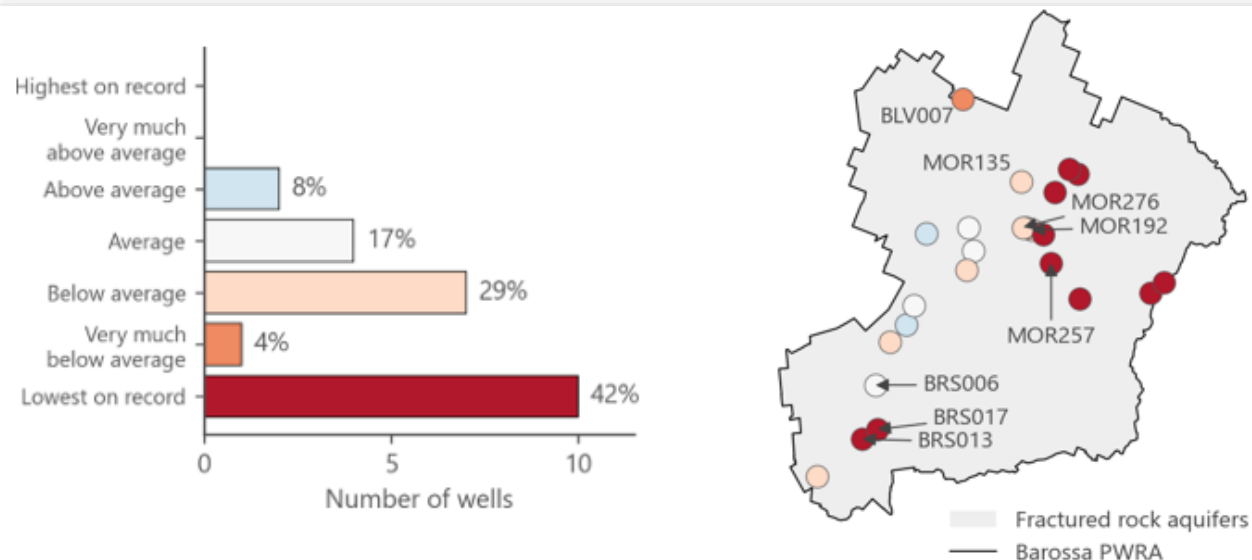


**Figure 5.13. 2020 recovered water levels for fractured rock aquifers**

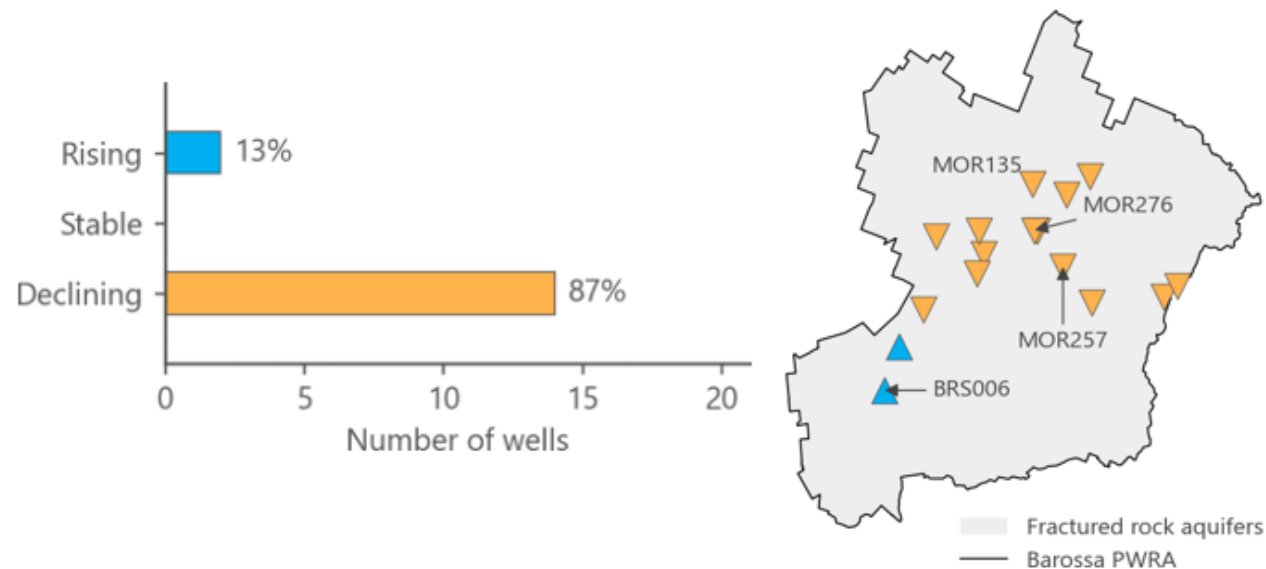
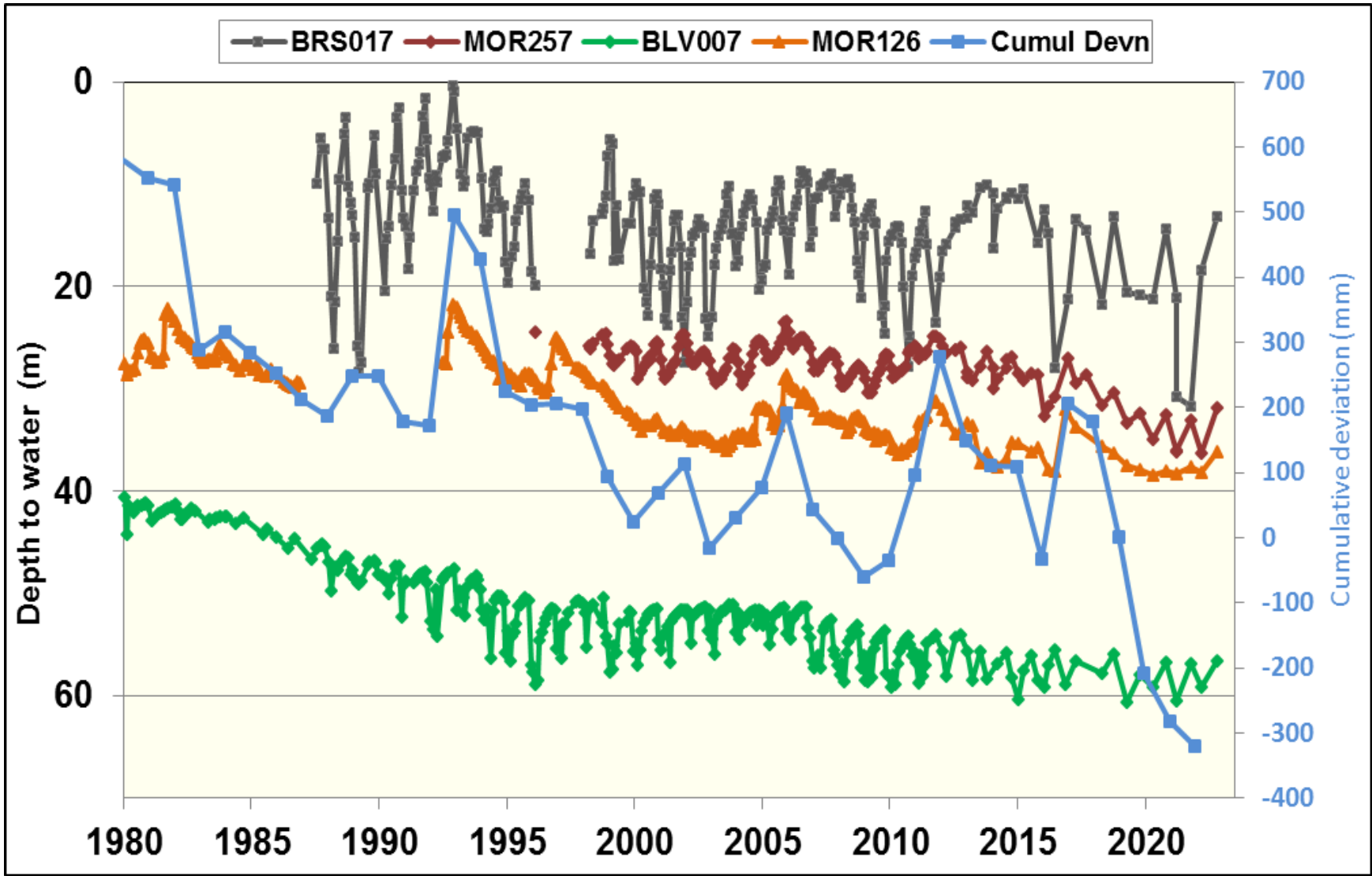


**Figure 5.14. 2016–20 trend in recovered water levels for wells in fractured rock aquifers**

# Fractured rock aquifer



# FRA: salinity

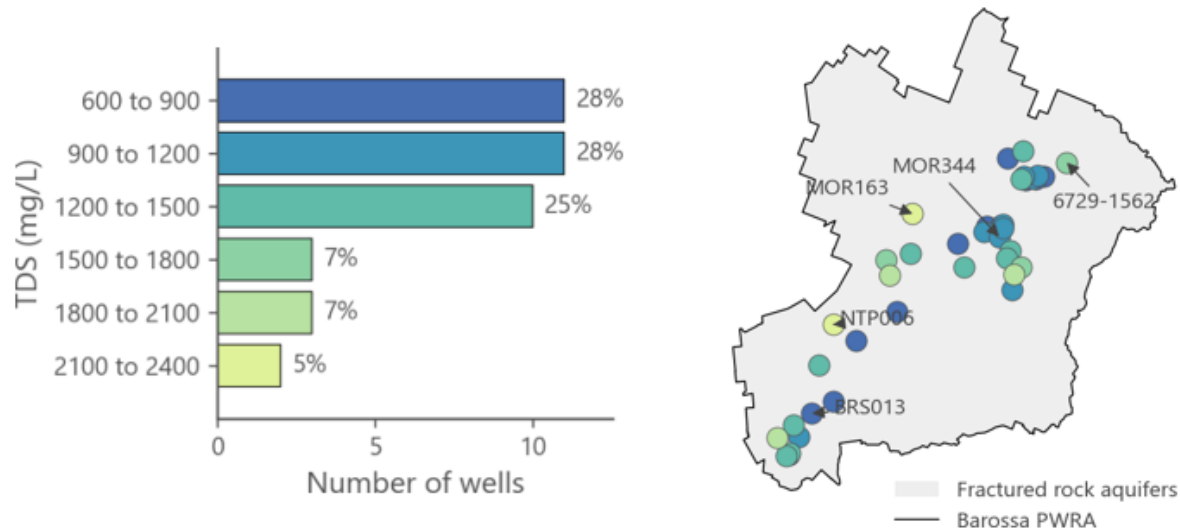


**Figure 5.16. 2020 salinity observations in fractured rock aquifers**

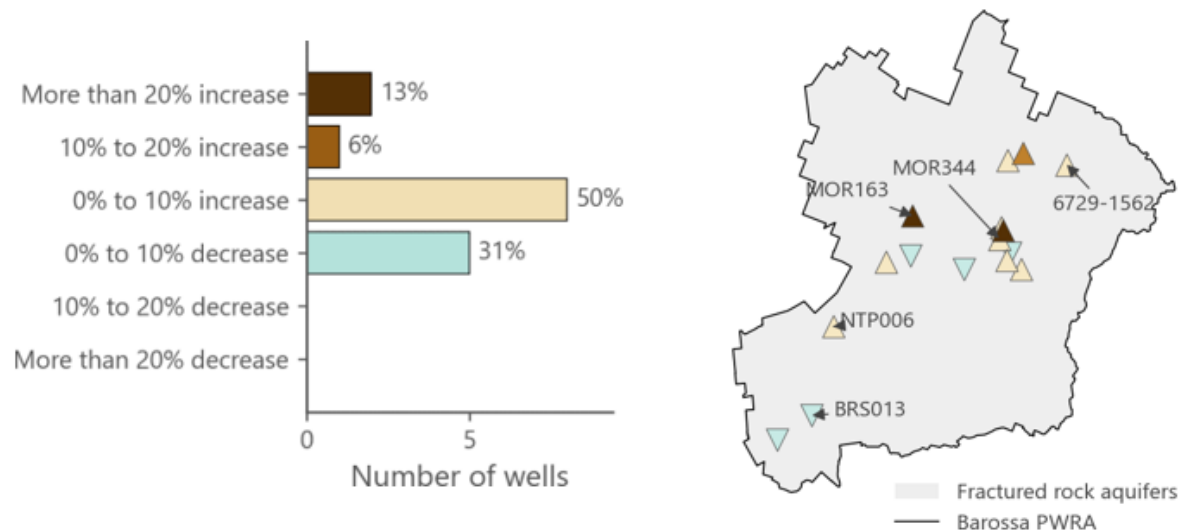


**Figure 5.17. Salinity trend in the 15 years to 2020 in fractured rock aquifers**

# Take home messages...

- Approximately 67% of water use was from imported sources
- 85% of groundwater wells show below-average water levels
- Five-year trends in water level indicate 96% of wells show declining water levels
- Correlation between rainfall, water use & water levels
- Projections of future climate indicate climate variability will intensify
- Has implications for approach to water resources management