

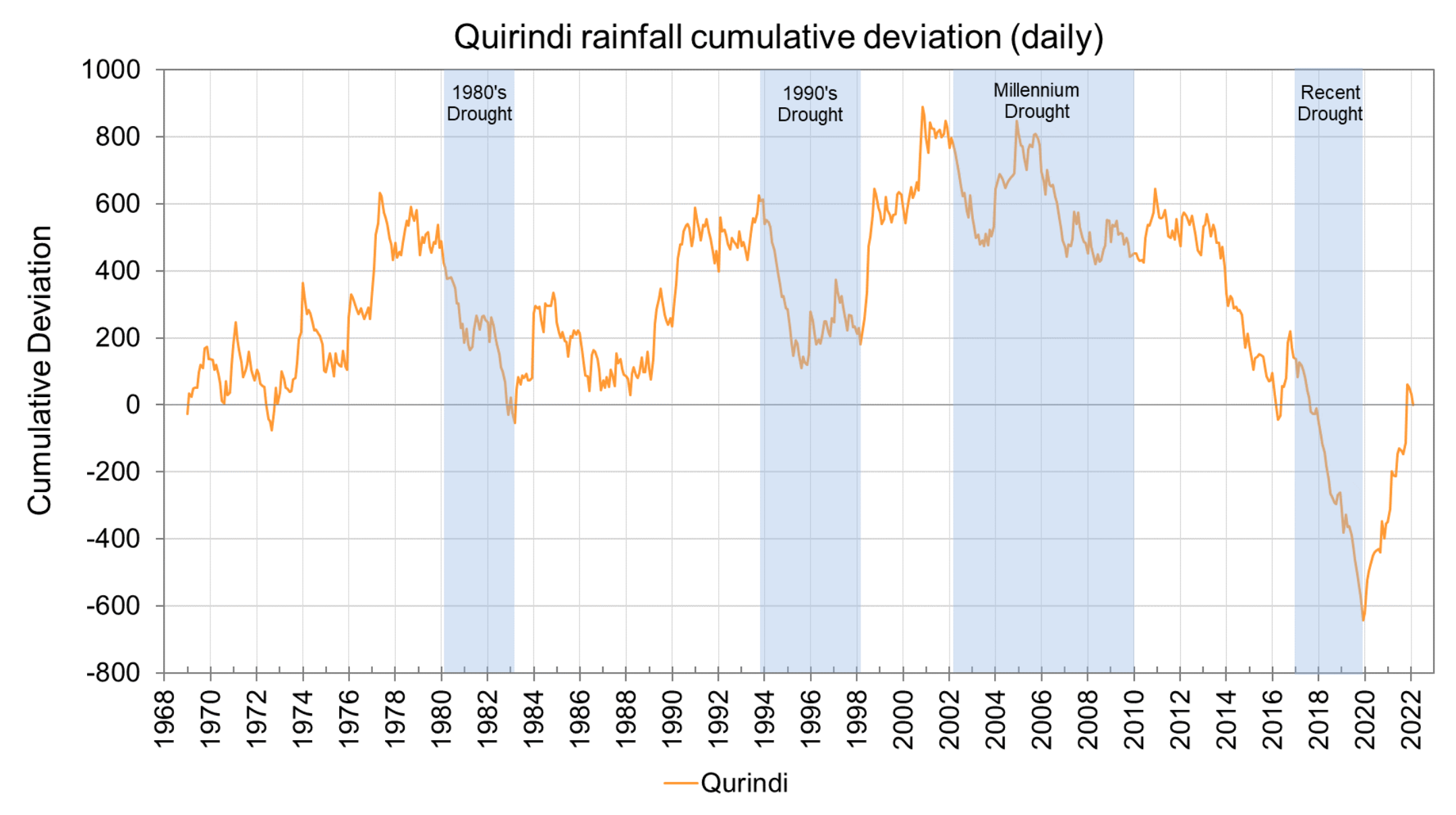
Upper Namoi Zone 8 groundwater source

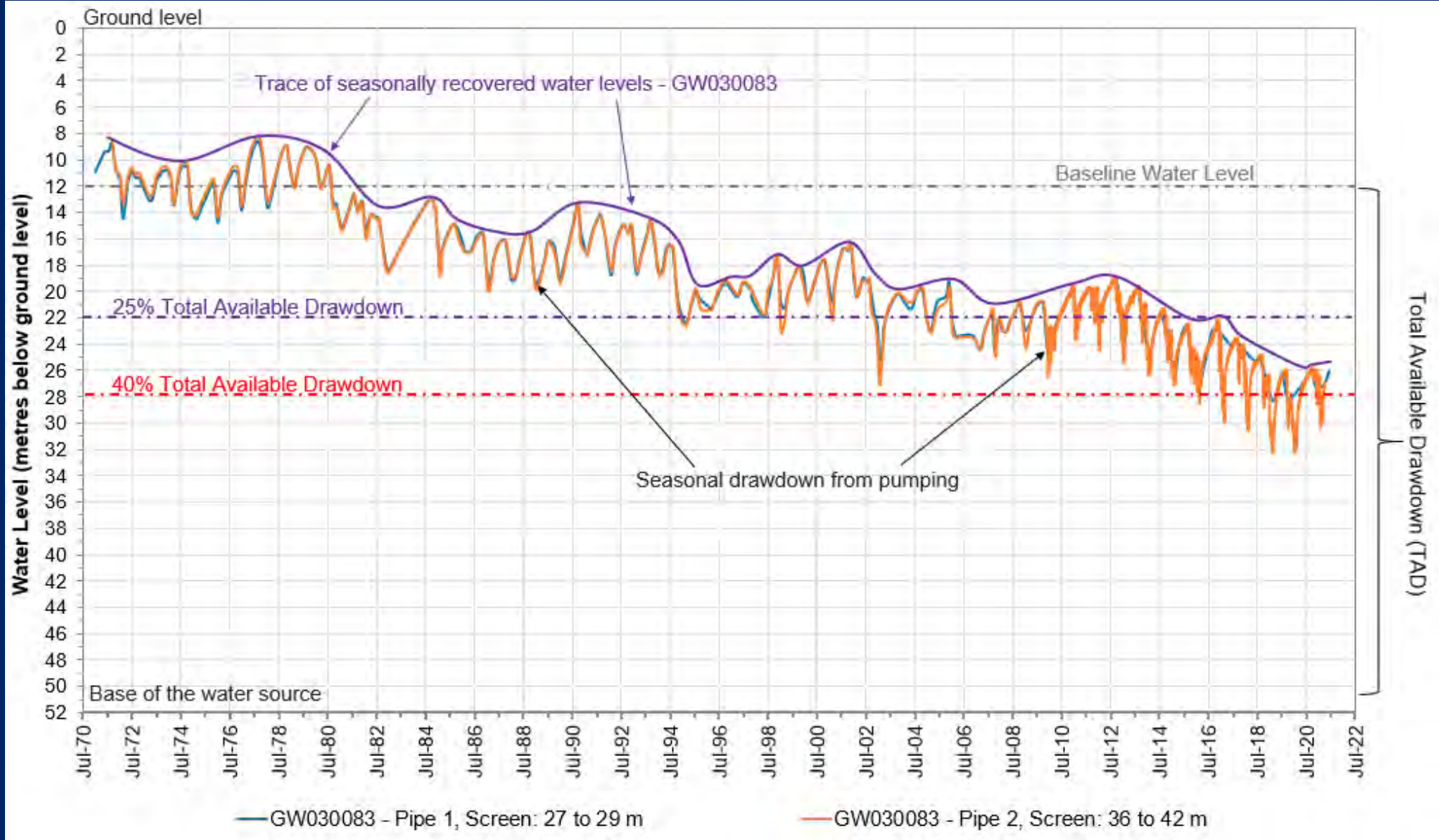
Water level trends

Introduction

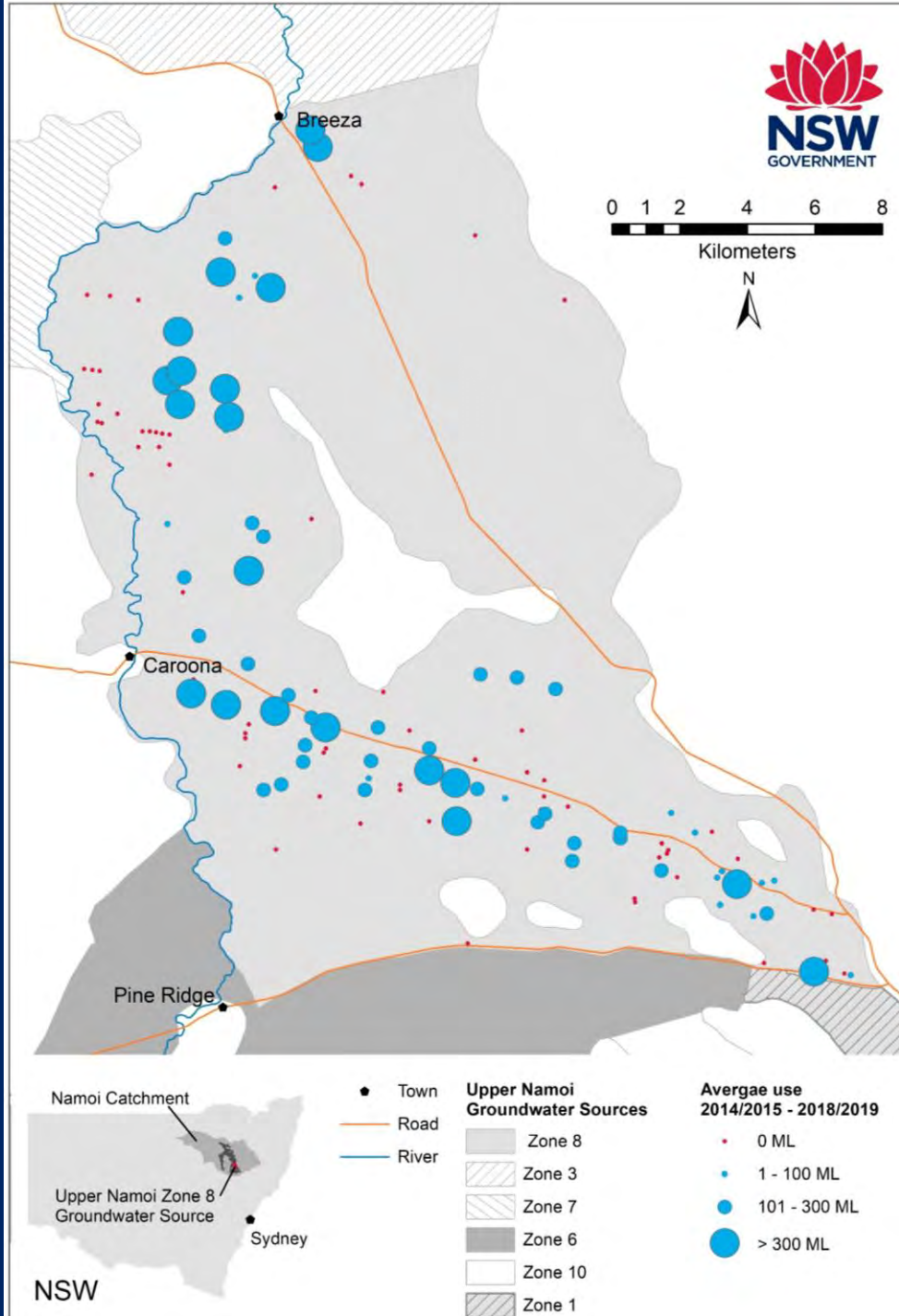
- History of declining groundwater levels
- Water level analysis was conducted to determine how groundwater levels are responding to current water use and management frameworks

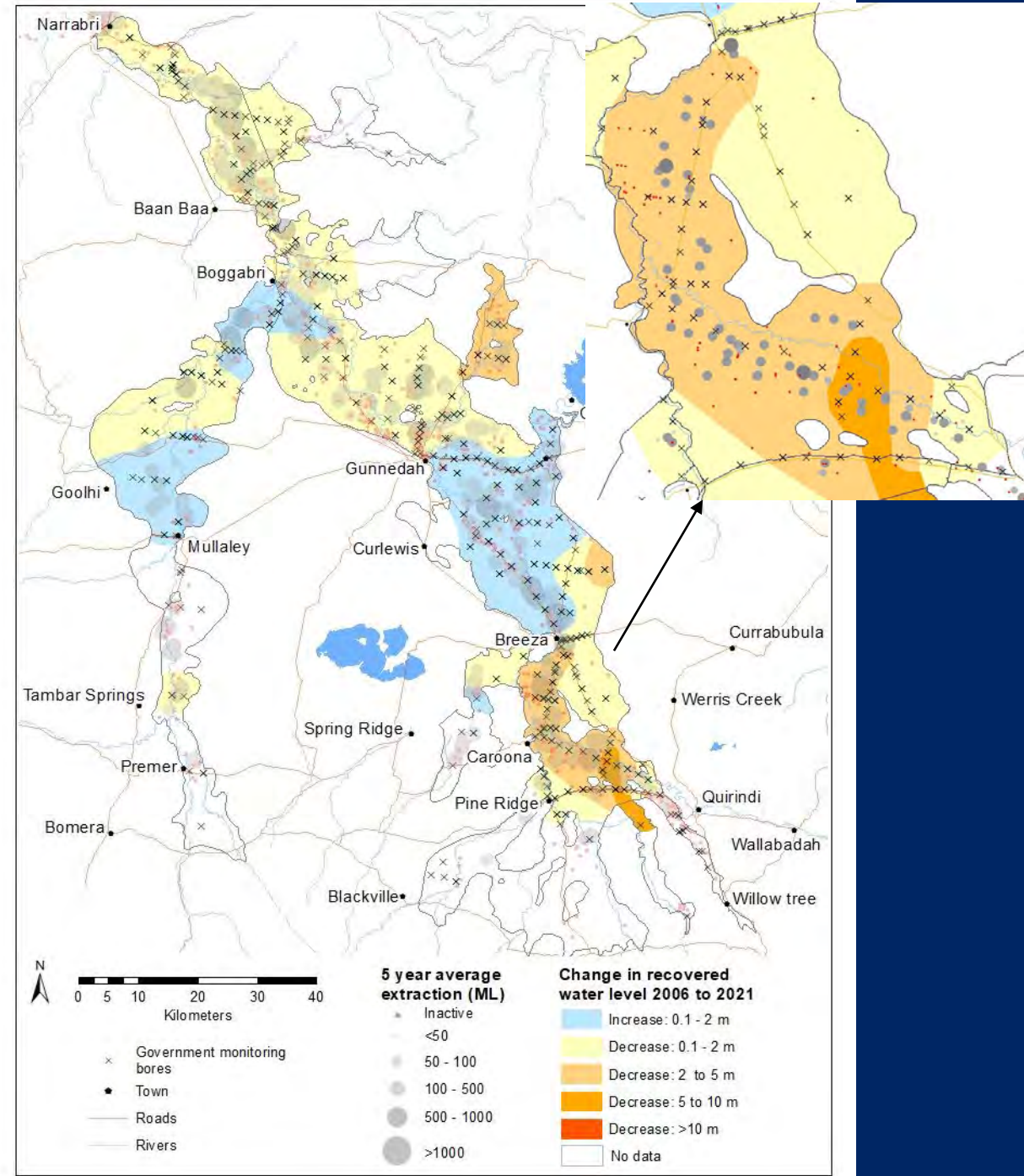
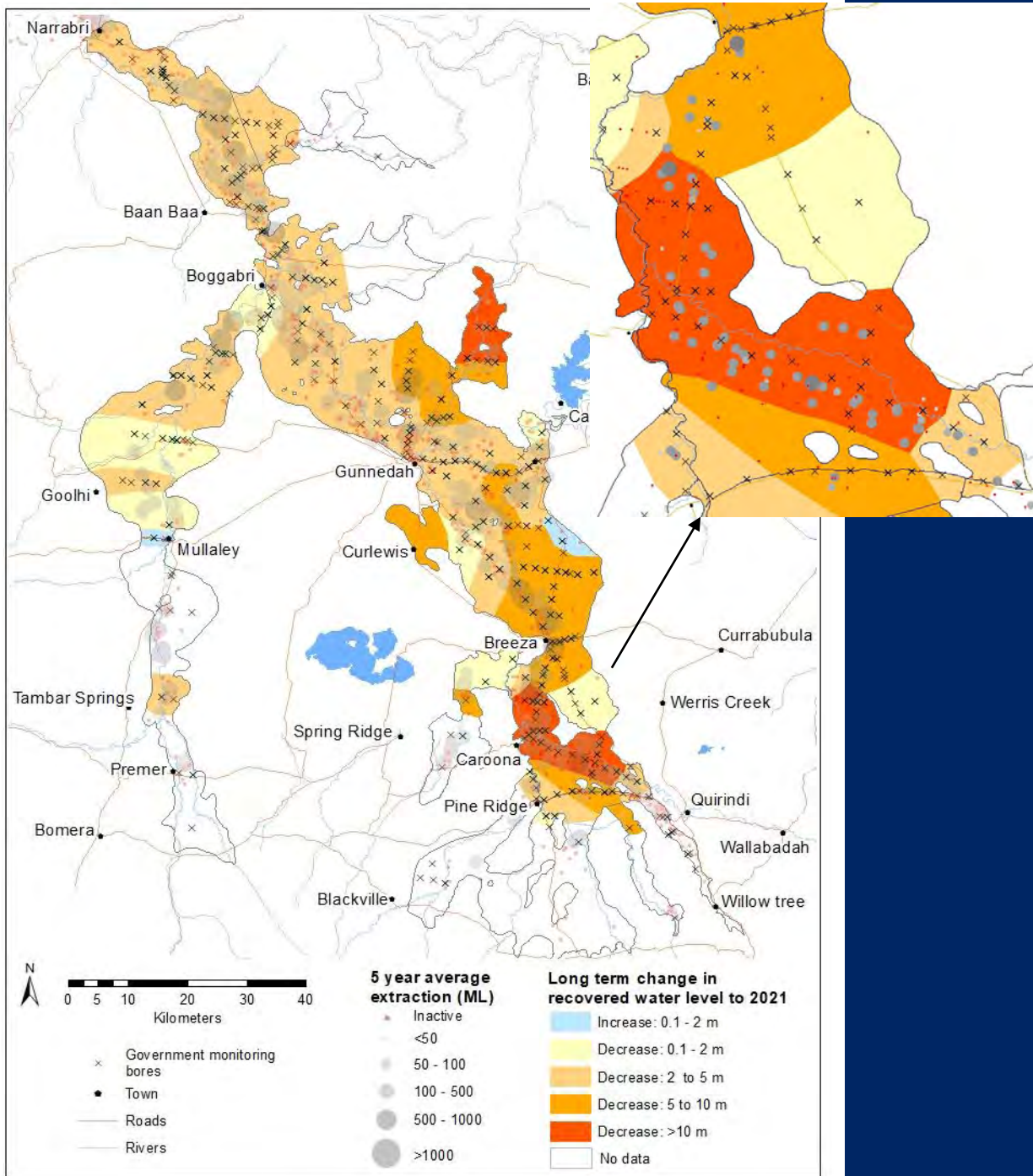
Rainfall trends

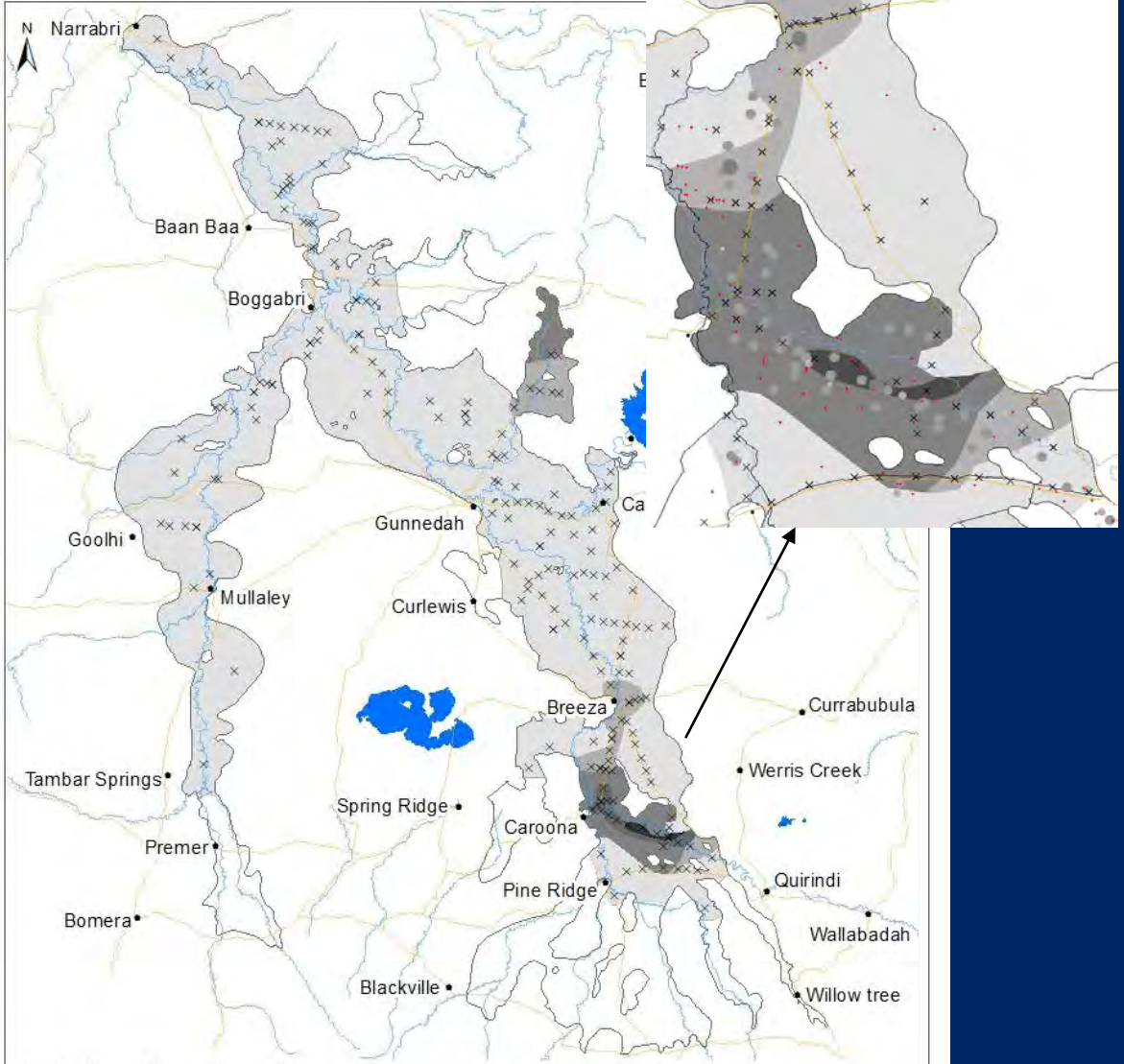




Distribution of usage



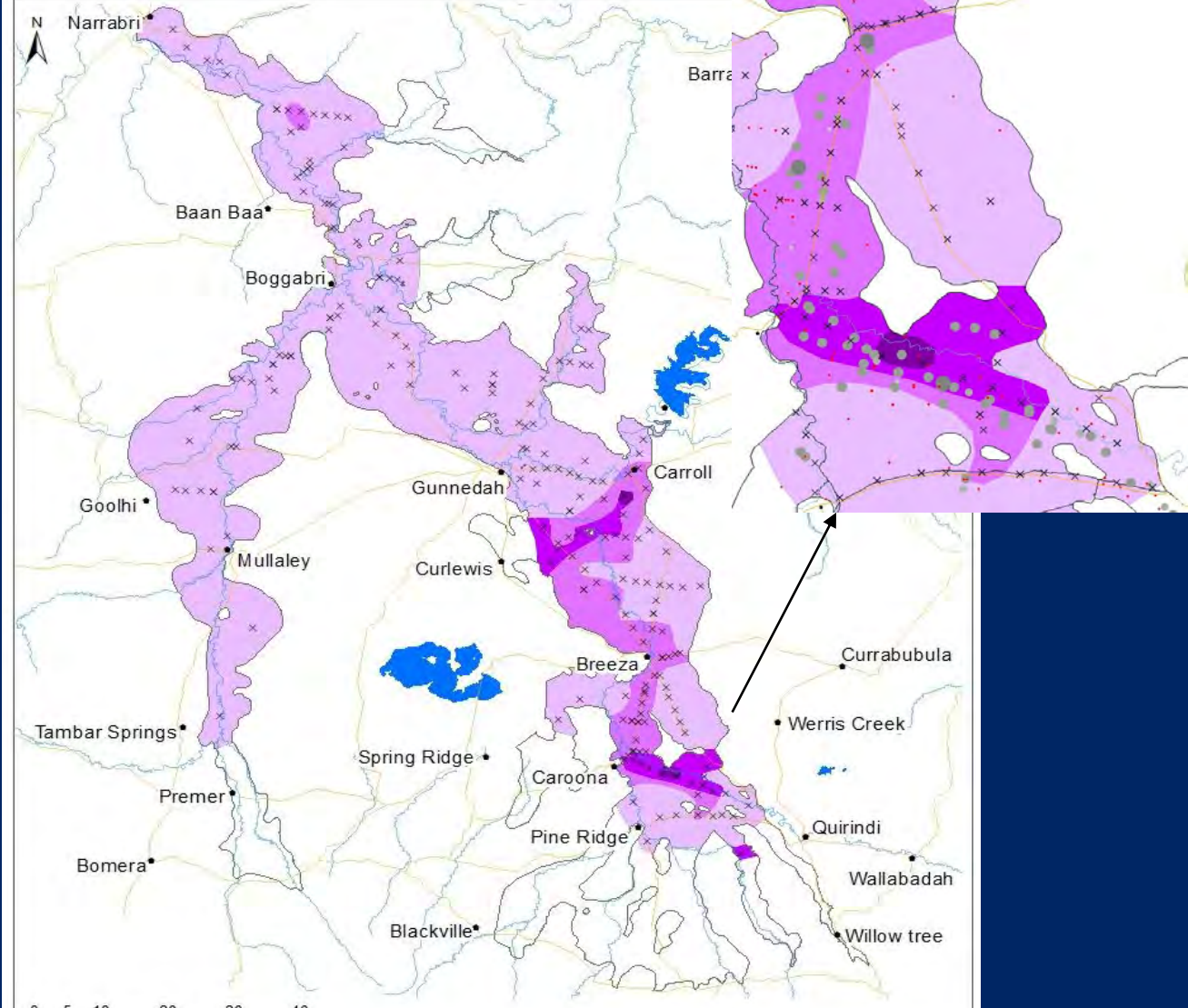




2021 recovered water level as a % of Total Available Drawdown

- No data
- <15 %
- 15 to 20 %
- 20 to 25 %
- 25 to 30 %
- >30 %

- × Government Monitoring Bores
- Town
- Road
- River



Maximum drawdown as a % of Total Available Drawdown

- No data
- <20 %
- 20 to 30 %
- 30 to 40 %
- >40 %

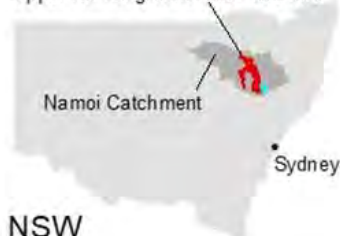
- × Government Monitoring Bores
- Town
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- River

NSW

NSW

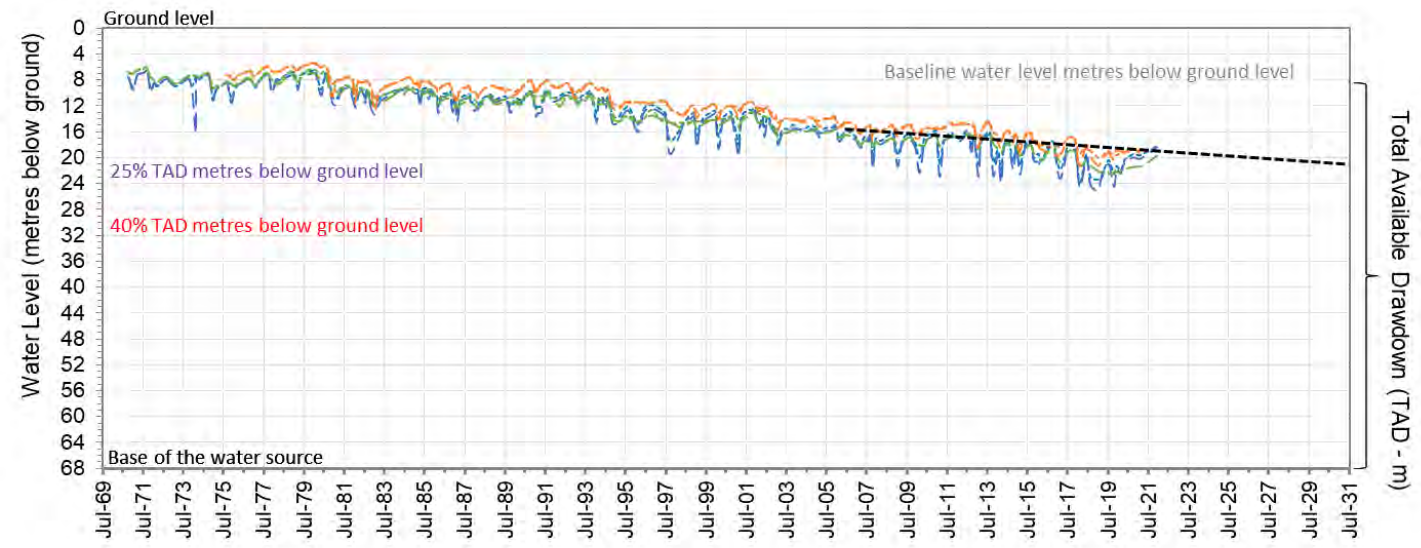
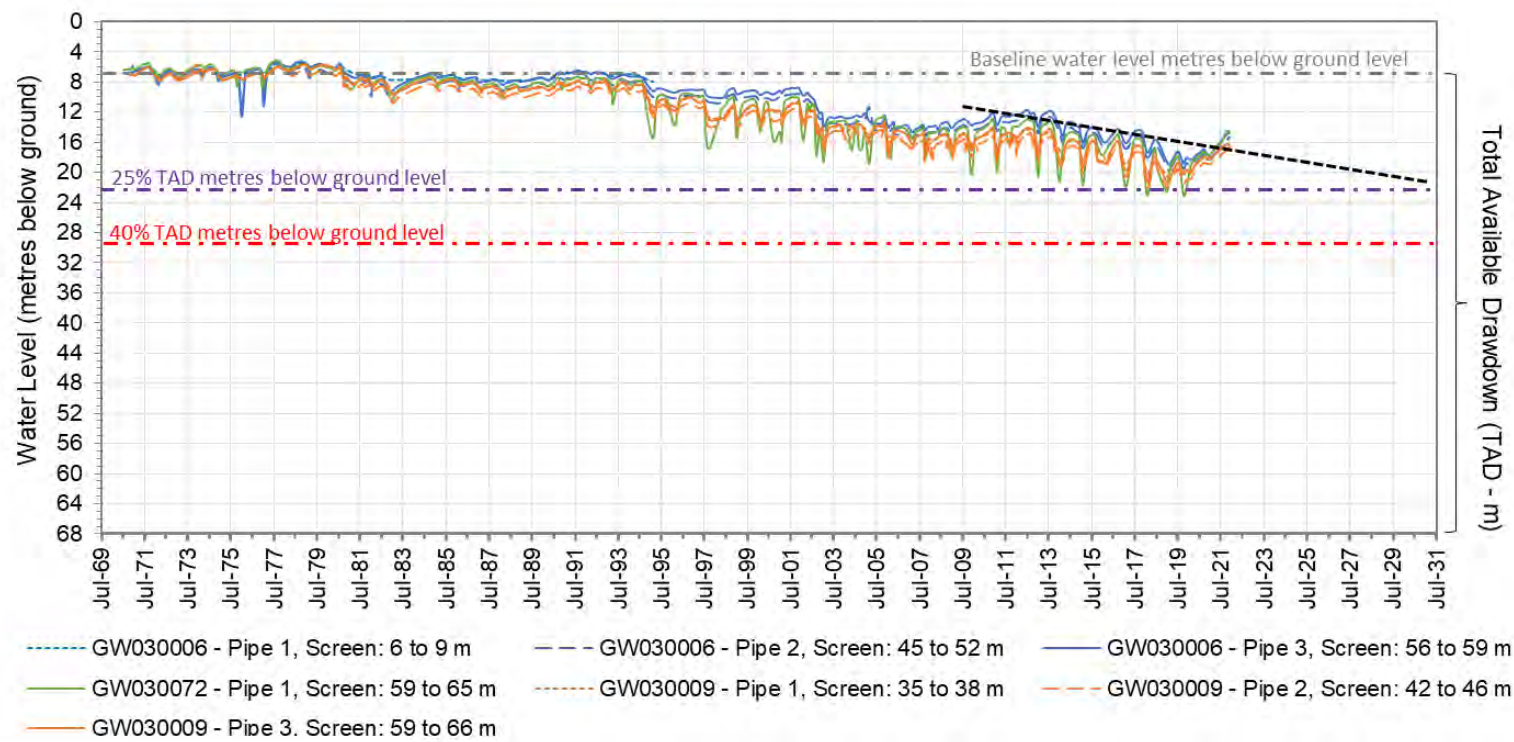
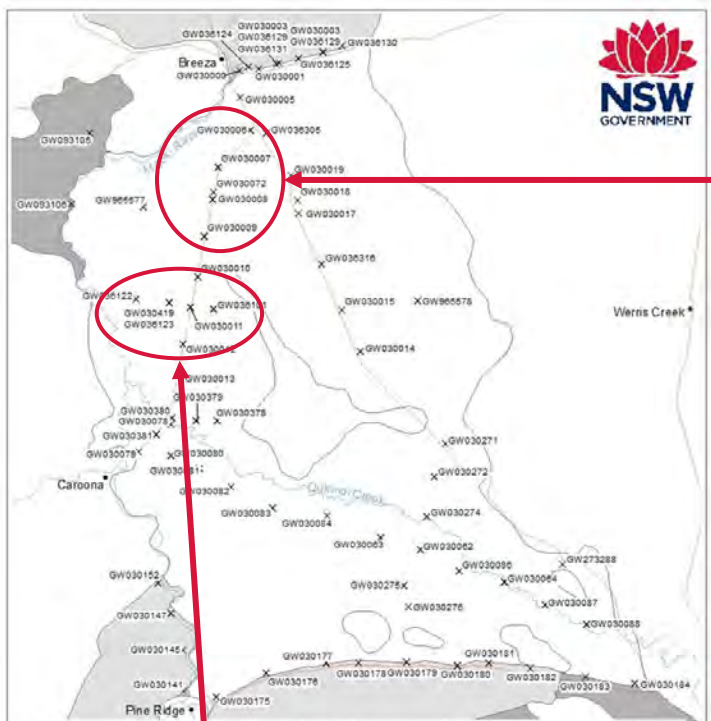


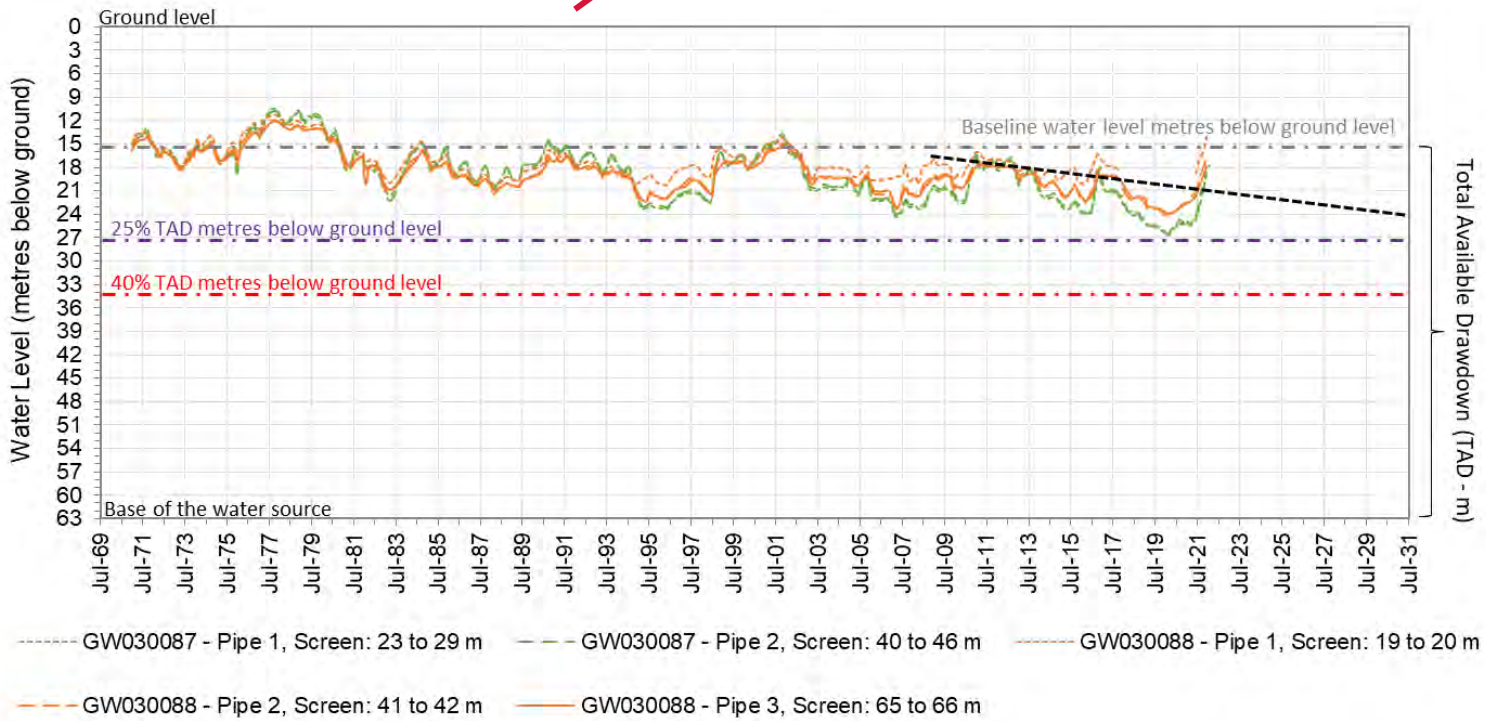
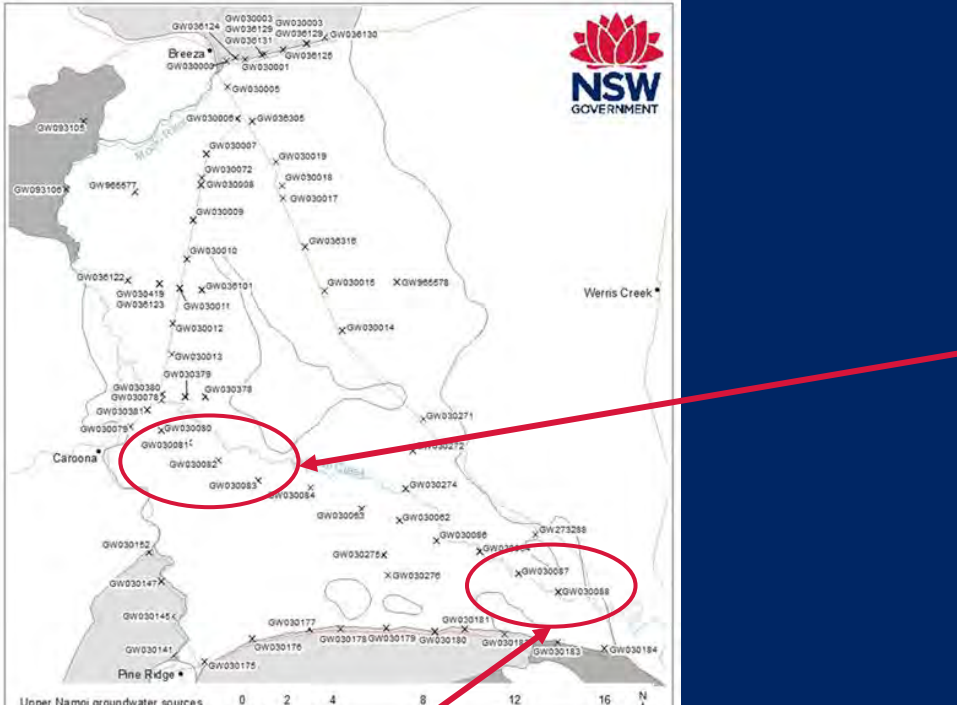
Upper Namoi groundwater sources



- x Government Monitoring Bores
- Town
- Road
- River

Upper Namoi Zone 8 Groundwater Source Monitoring bores

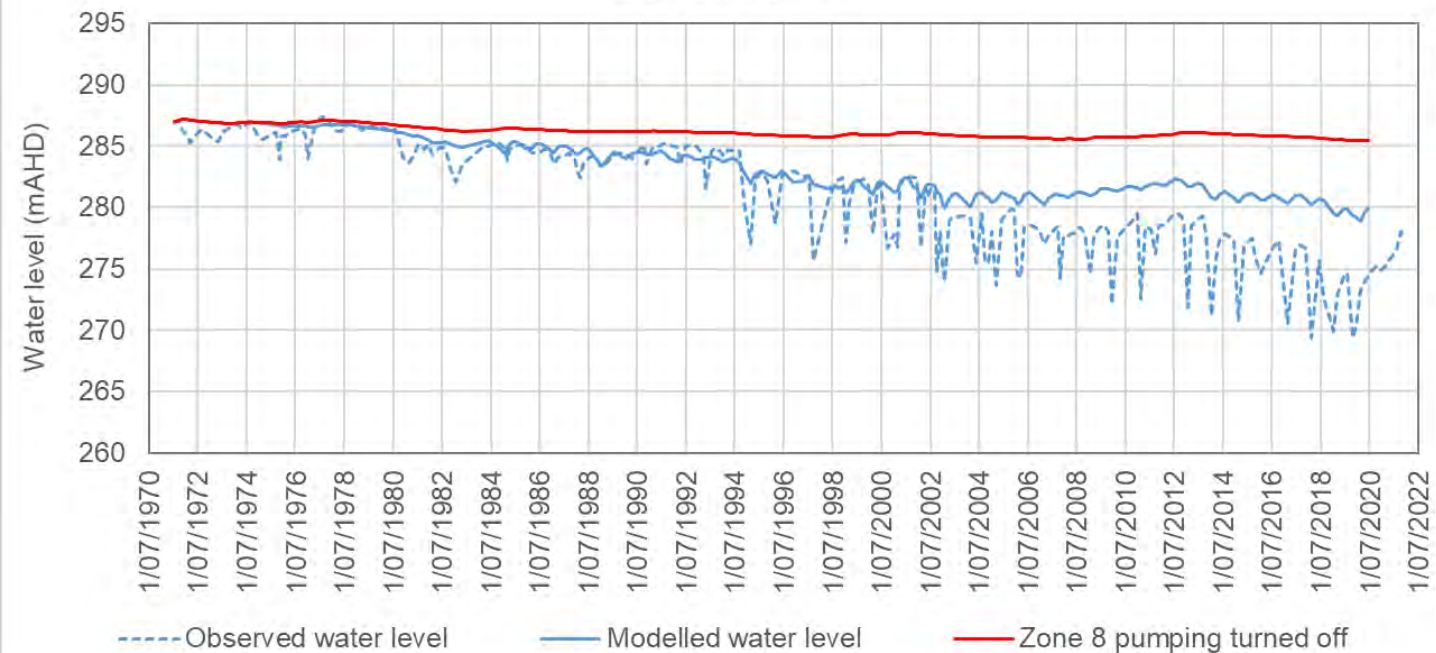




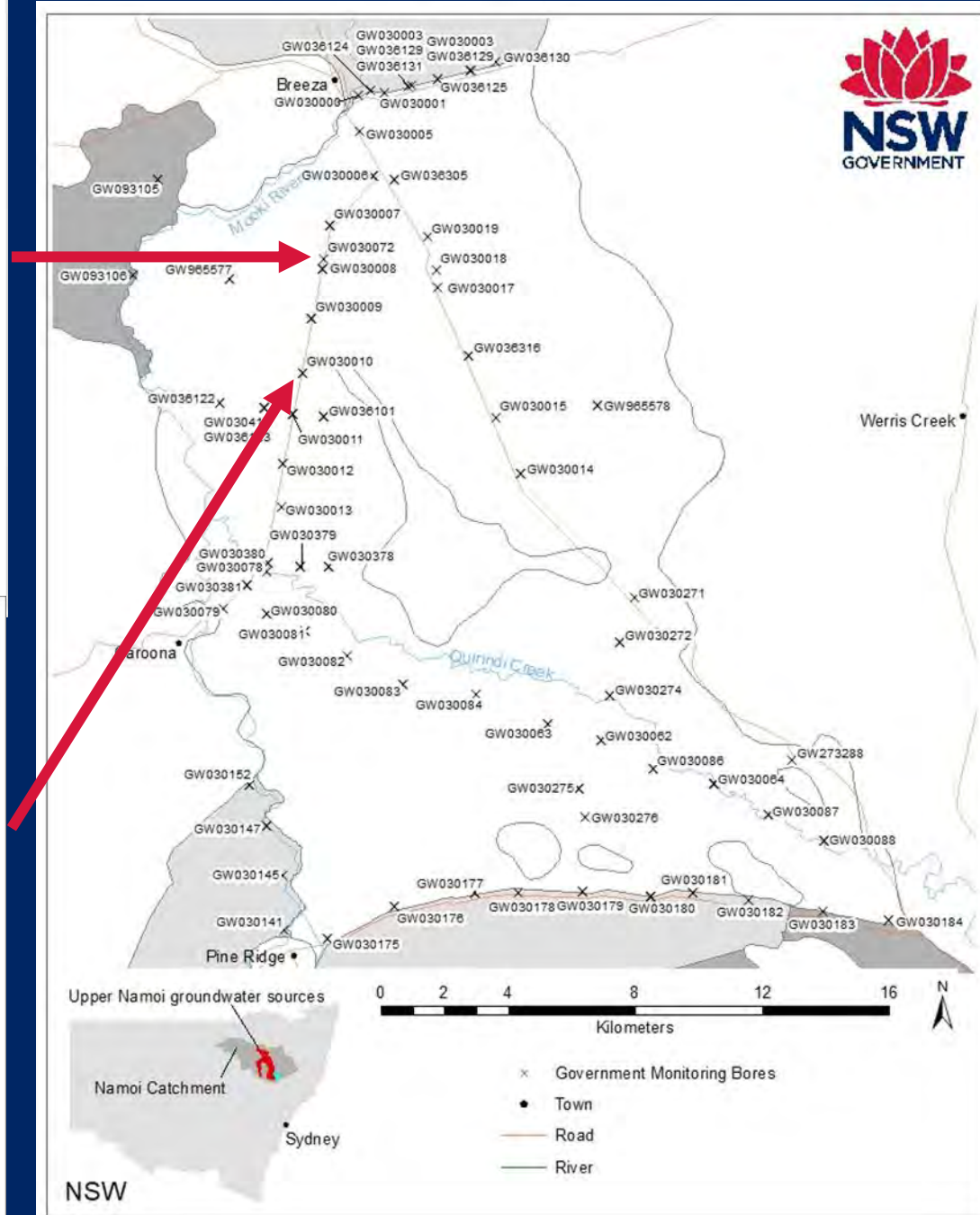
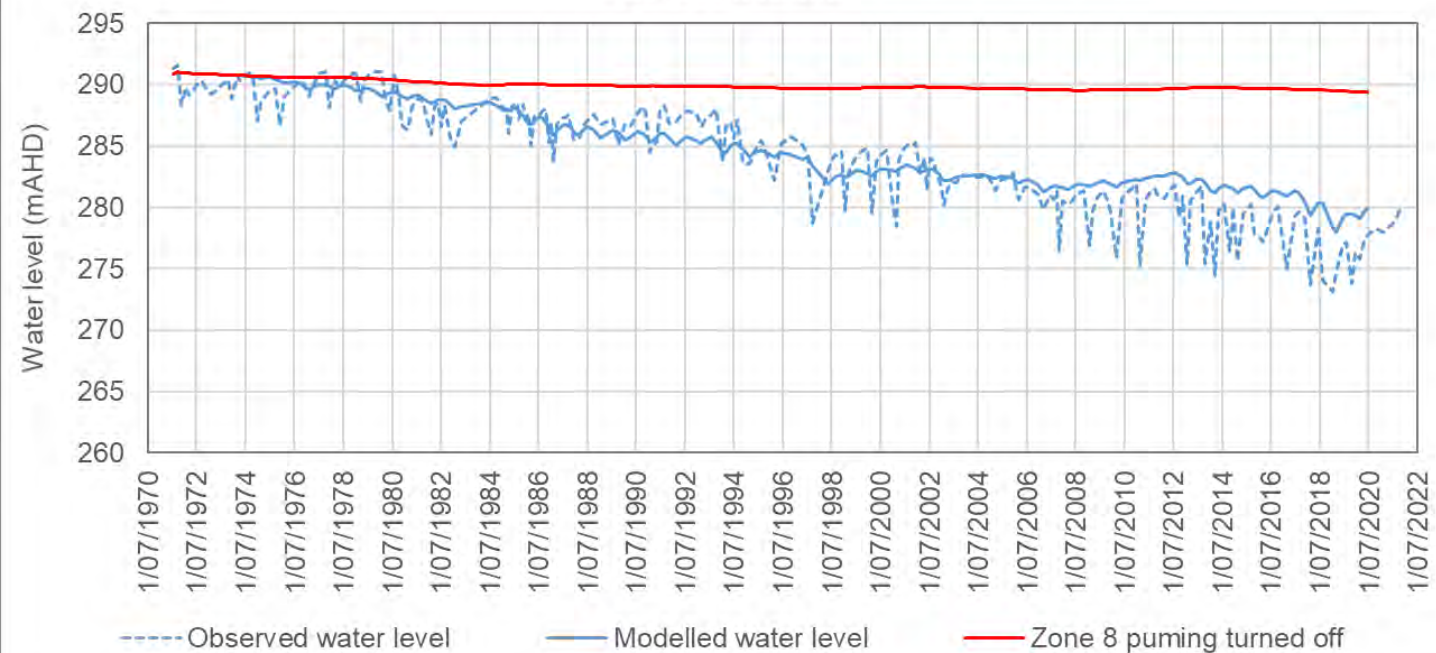
Model scenarios

- Groundwater levels under historic extraction were compared to modelled predictions for the same period with no groundwater extraction

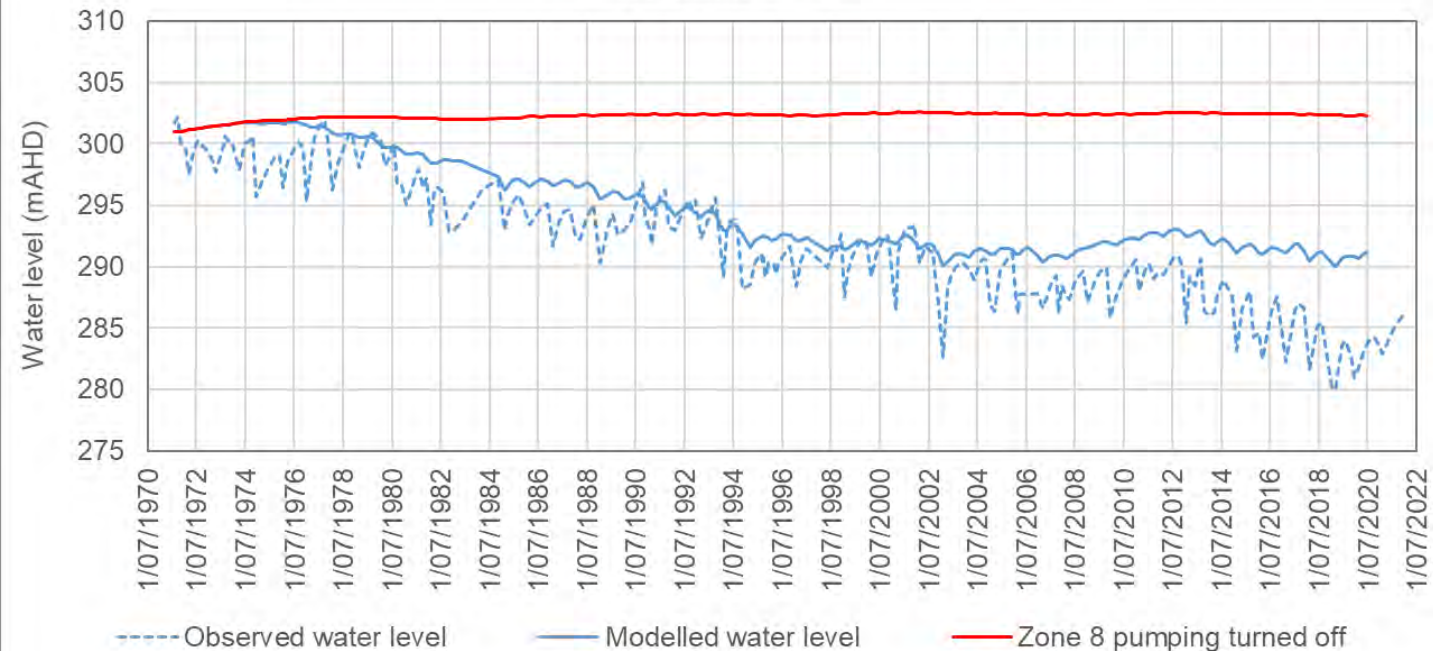
GW030072.1.1



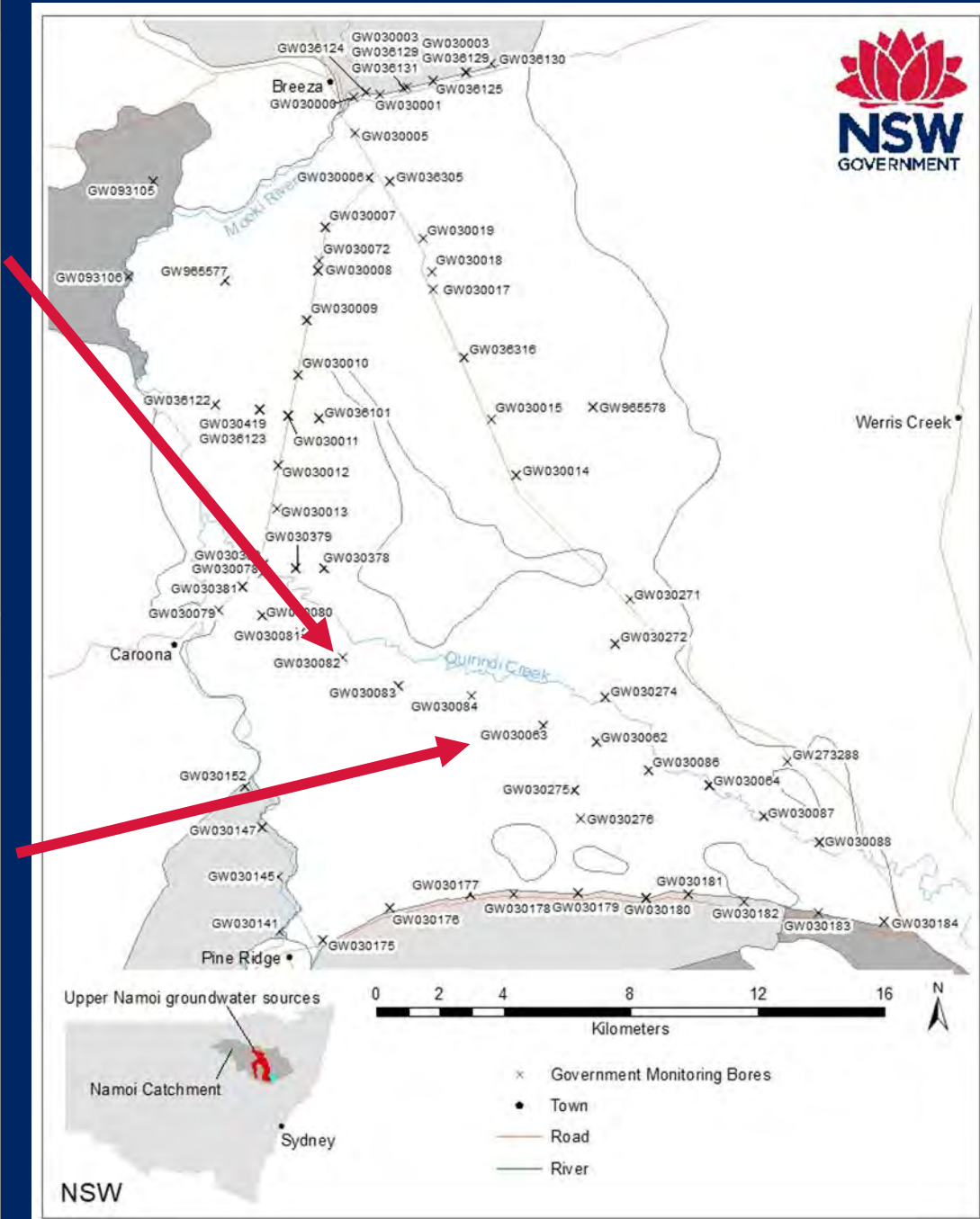
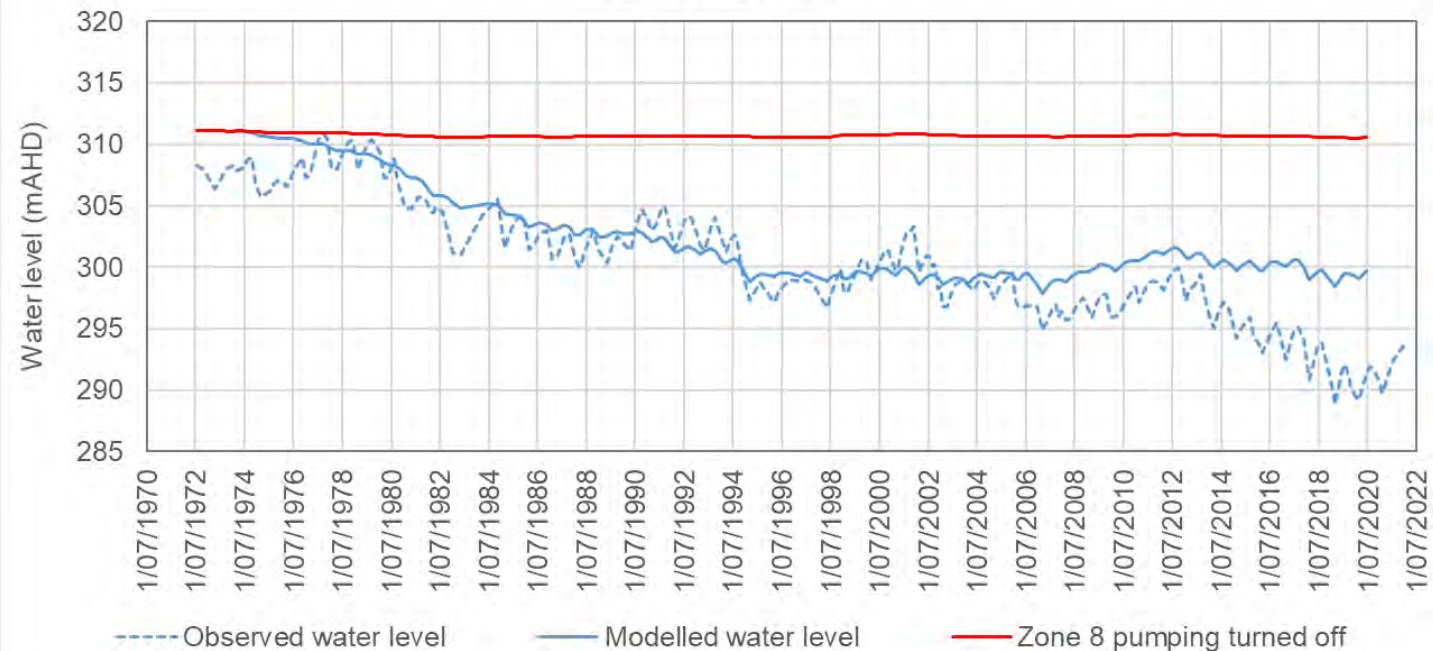
GW030010.2.2



GW030082.1.1



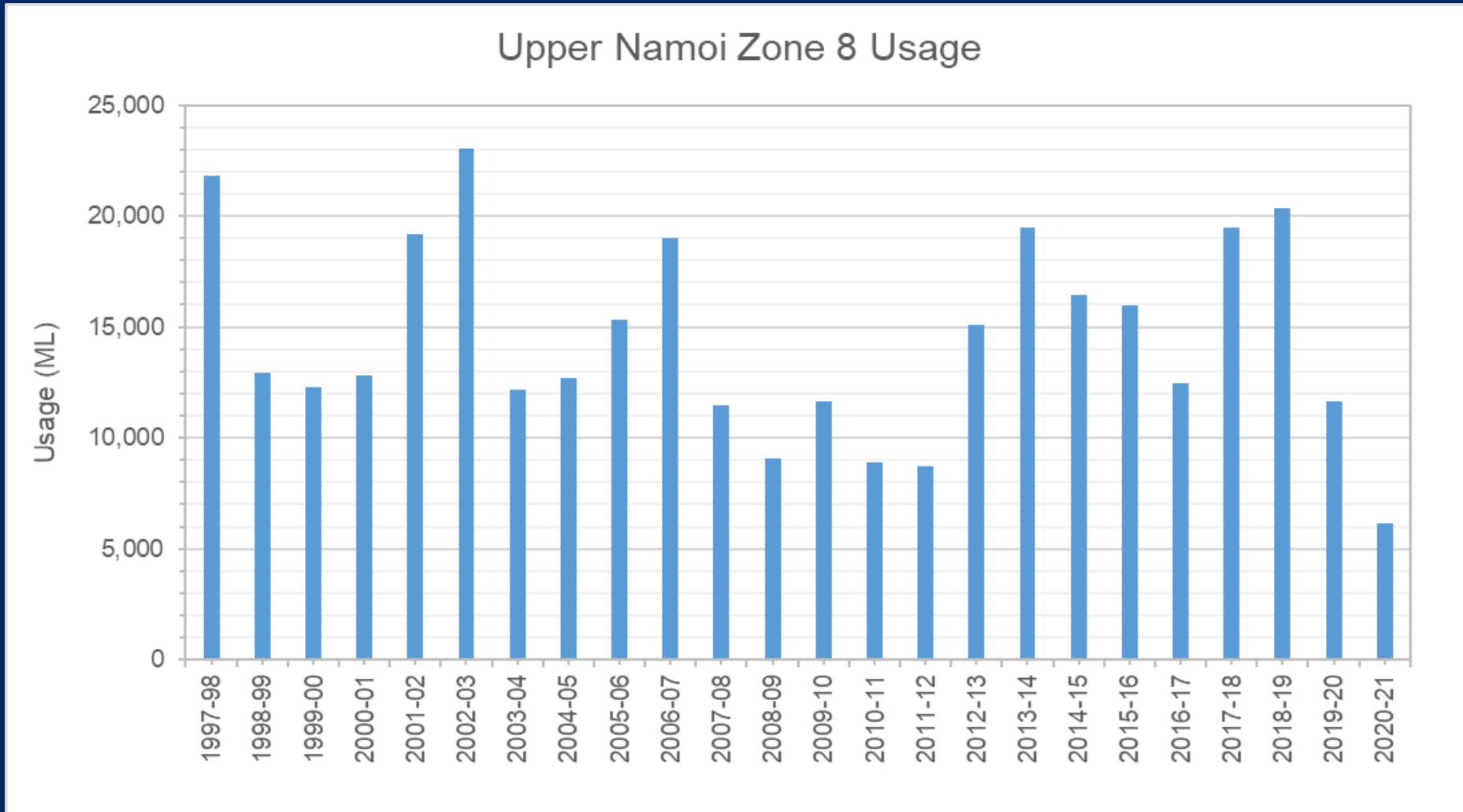
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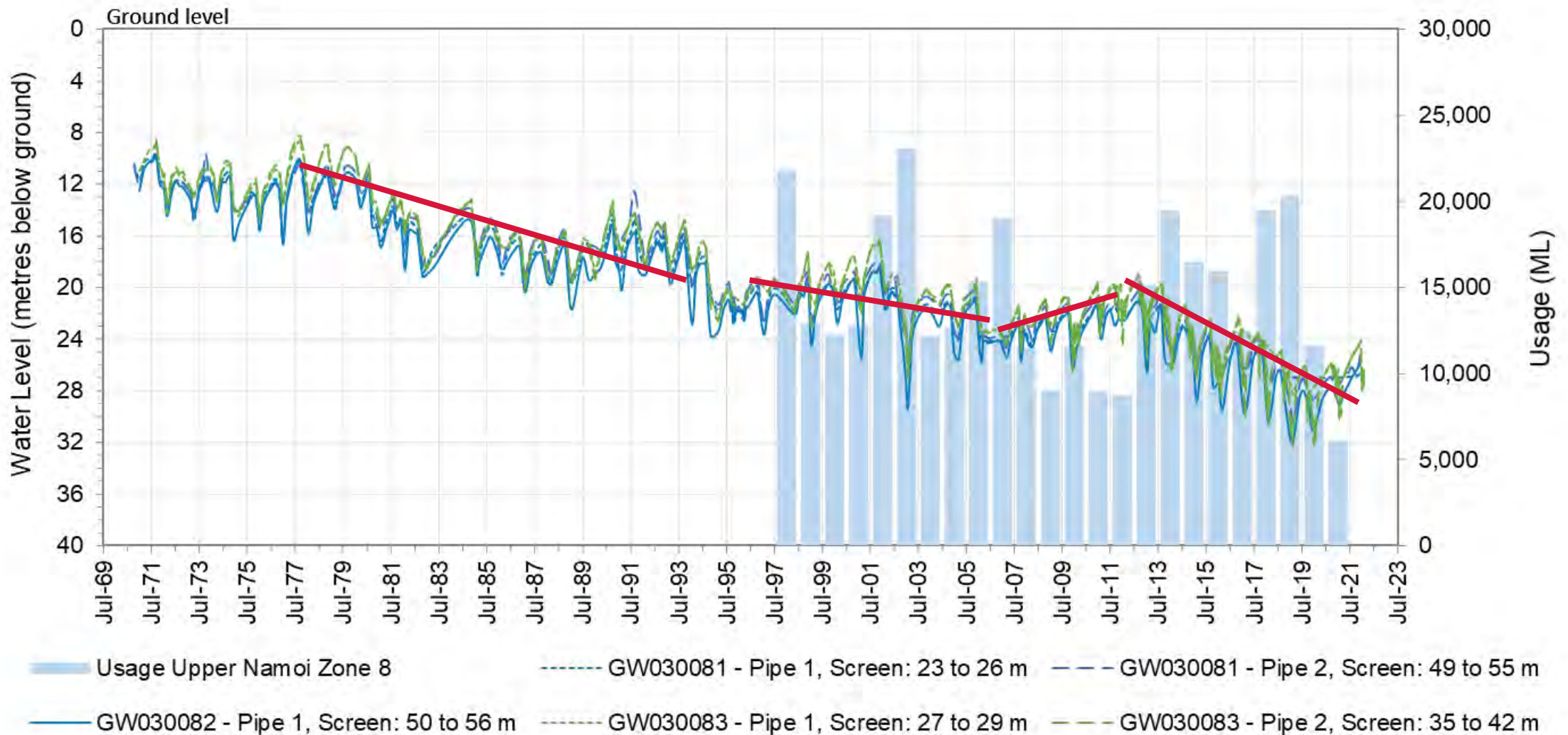


What the model shows

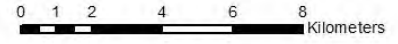
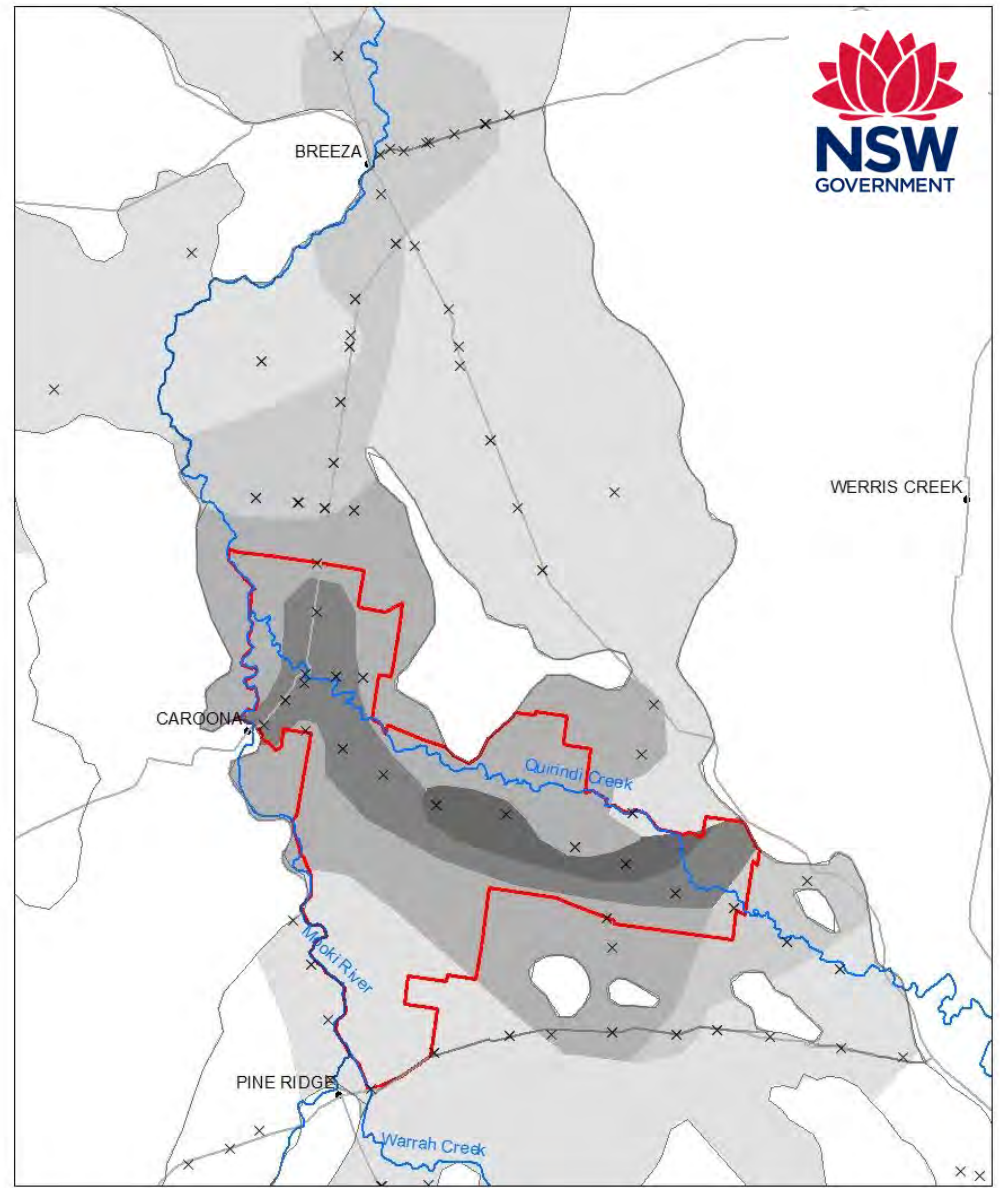
- The main influence on water level trends in Zone 8 is pumping

- Long term average annual extraction limit: 16,114 ML
- 5 year average use: approx. 14,000 ML





Area of decline



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- Town
- Road
- River
- Area of decline by property boundary

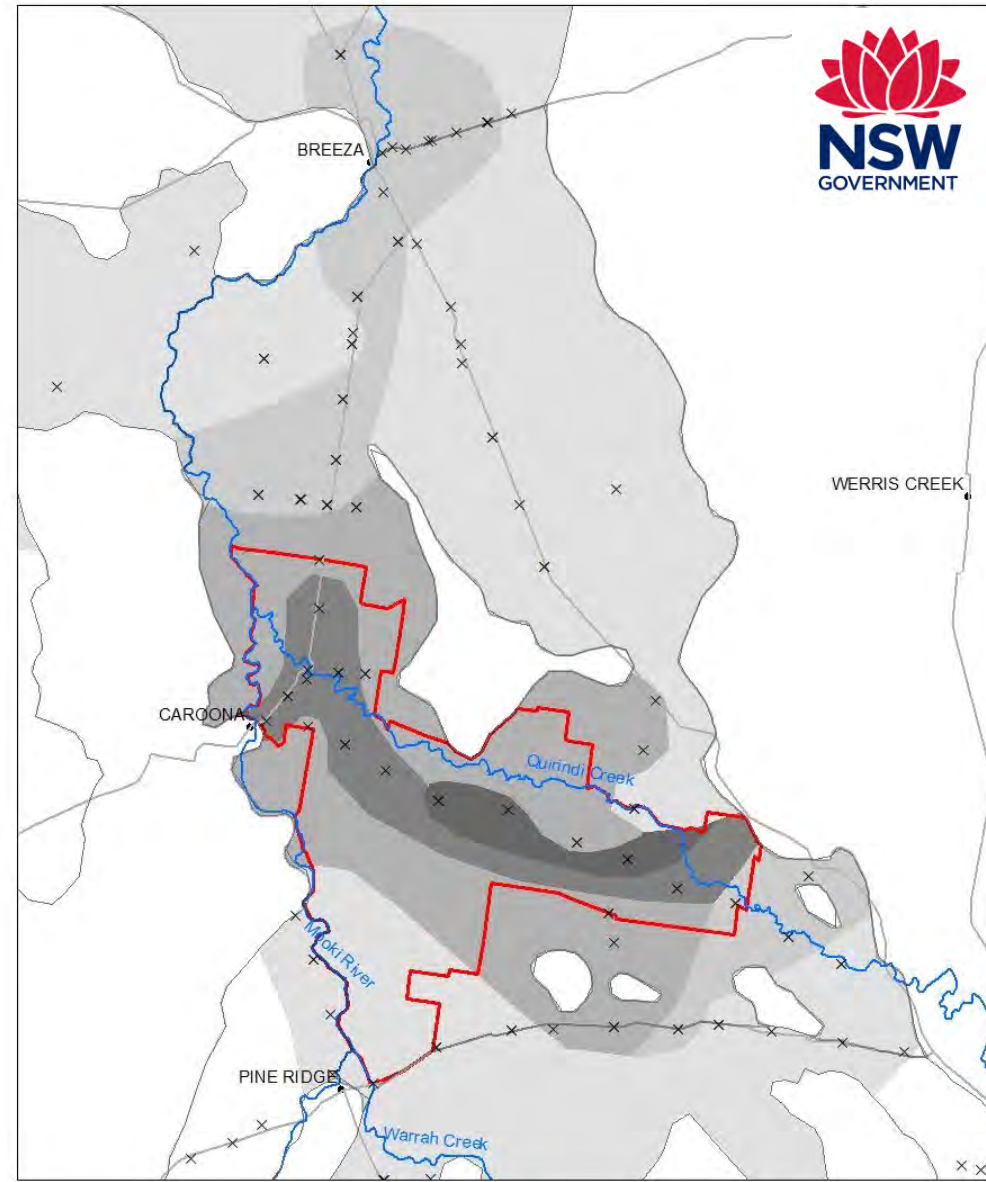
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Licence information

Category	All of Zone 8	Area of decline	Percentage
Total aquifer licences	62	30	48%
Number of Local Water Utility	1	1	100%
Total shares	16,172 ML	9,618 ML	59%
LTA AEL	16,114 ML	-	-
Average usage over last 5 years (excl. BLR)	14,016 ML	7026 ML	50%
BLR set aside	114 ML	-	-

Temporary trade (71T Dealing) statistics

Trade stats	5-year average
Trade in Zone 8	1240 ML
Trade into area of decline	111 ML
Trade out of area of decline	70 ML
Trade between licences in area of decline	263 ML
Usage in area of decline as % of total	50%



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Examples of local water level management tools applied in NSW

- Trade management areas:
 - Lower Murrumbidgee Deep Groundwater Source – local manage area under Section 71Z of the WMA 2000
 - Lower Namoi and Lower Gwydir groundwater sources – operational rules
- Cease to pump conditions set to trigger levels in monitoring bores
 - Lower Macquarie Zone 4
- Section 324 Order
 - Upper Lachlan Groundwater Source Management Zone 1 – order under Section 71Z and an order under Section 324 of the WMA 2000



Questions / Discussion

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Department of Planning and Environment