

### **Upper Namoi Zone 8 groundwater source**

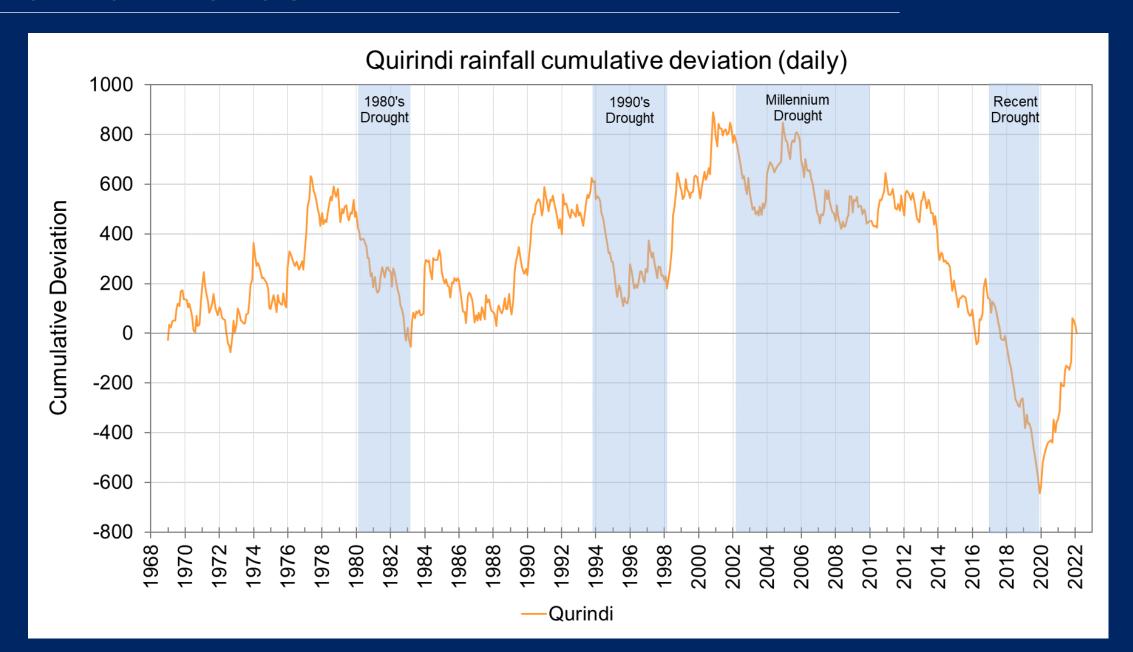
#### Water level trends

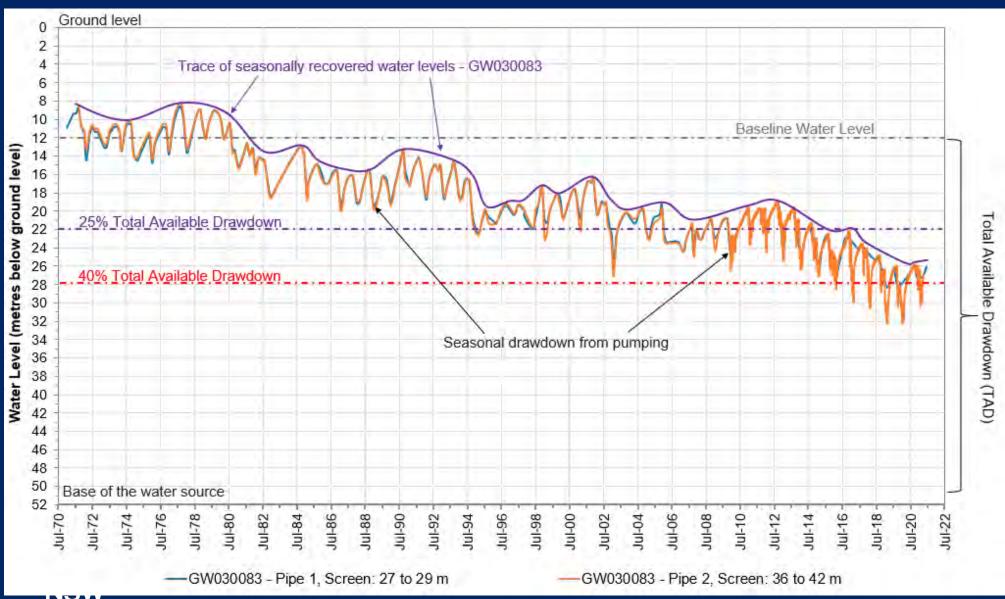
#### Introduction

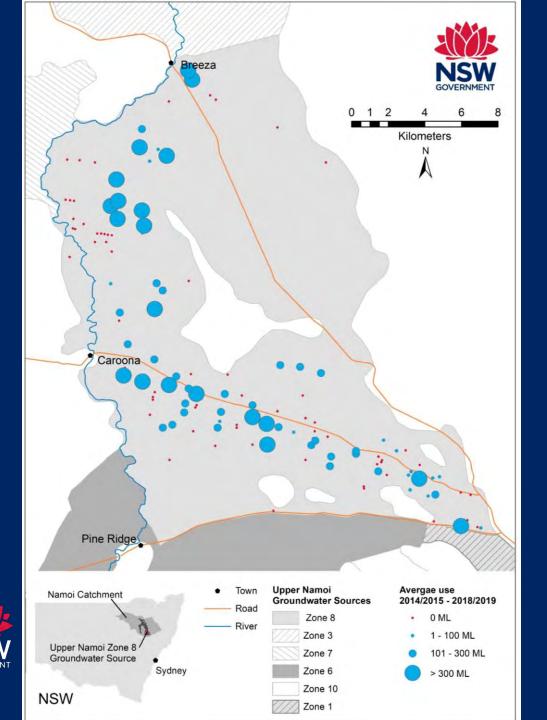
- History of declining groundwater levels
- Water level analysis was conducted to determine how groundwater levels are responding to current water use and management frameworks



#### Rainfall trends

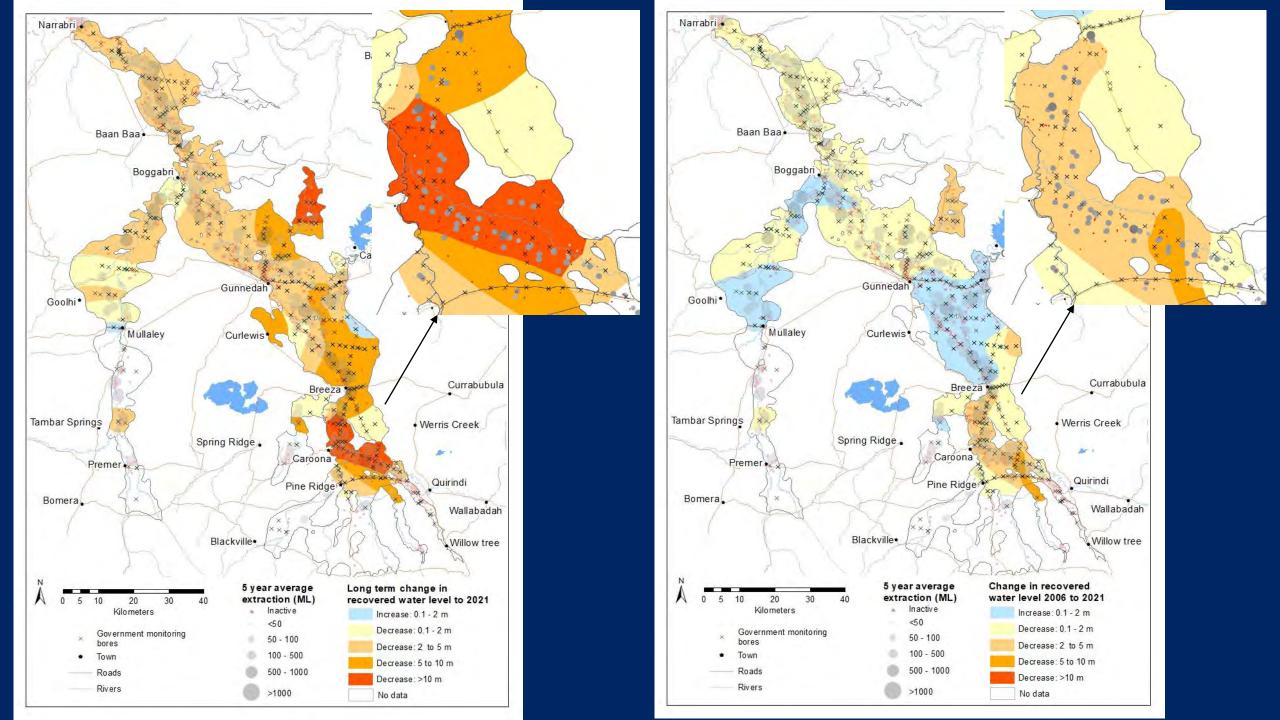


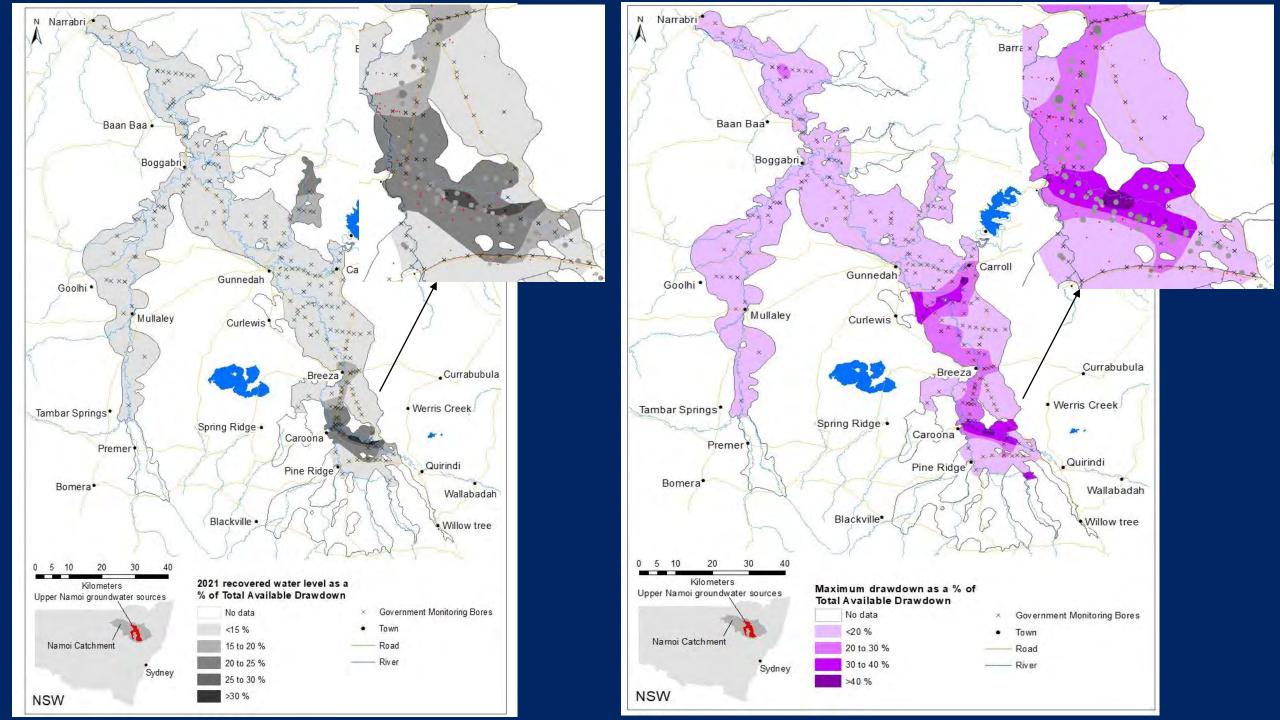




## Distribution of usage

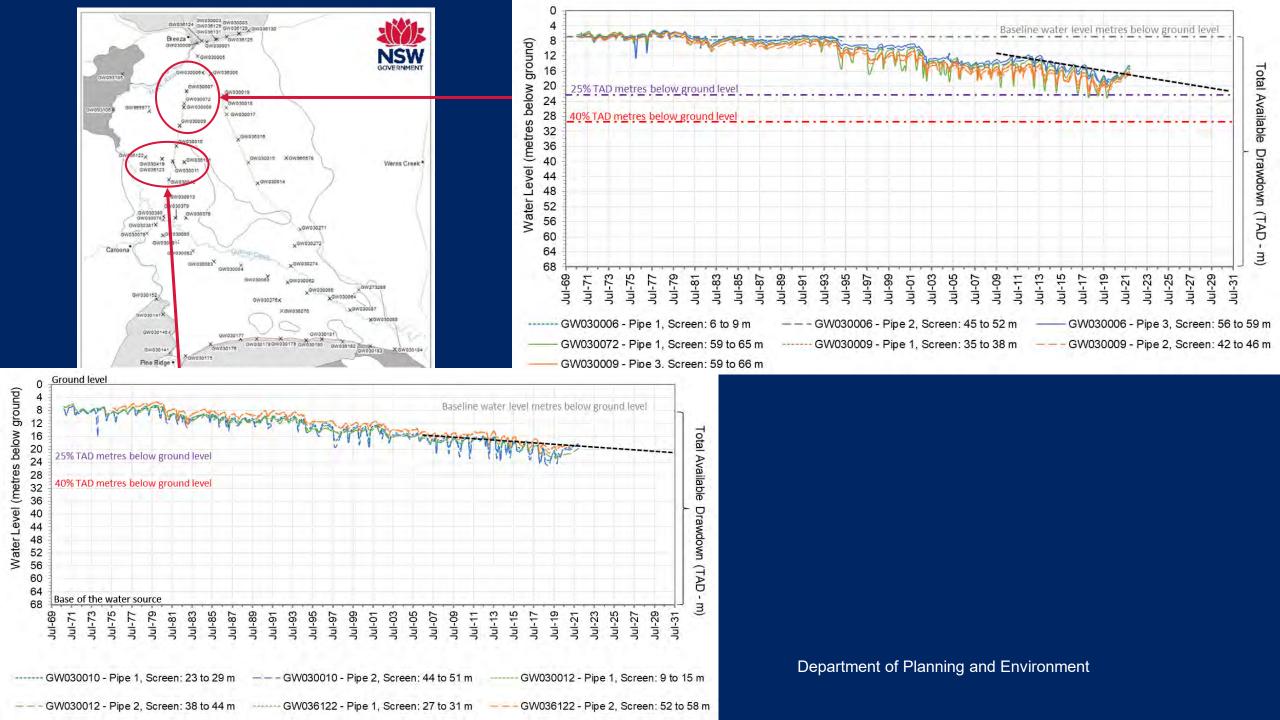
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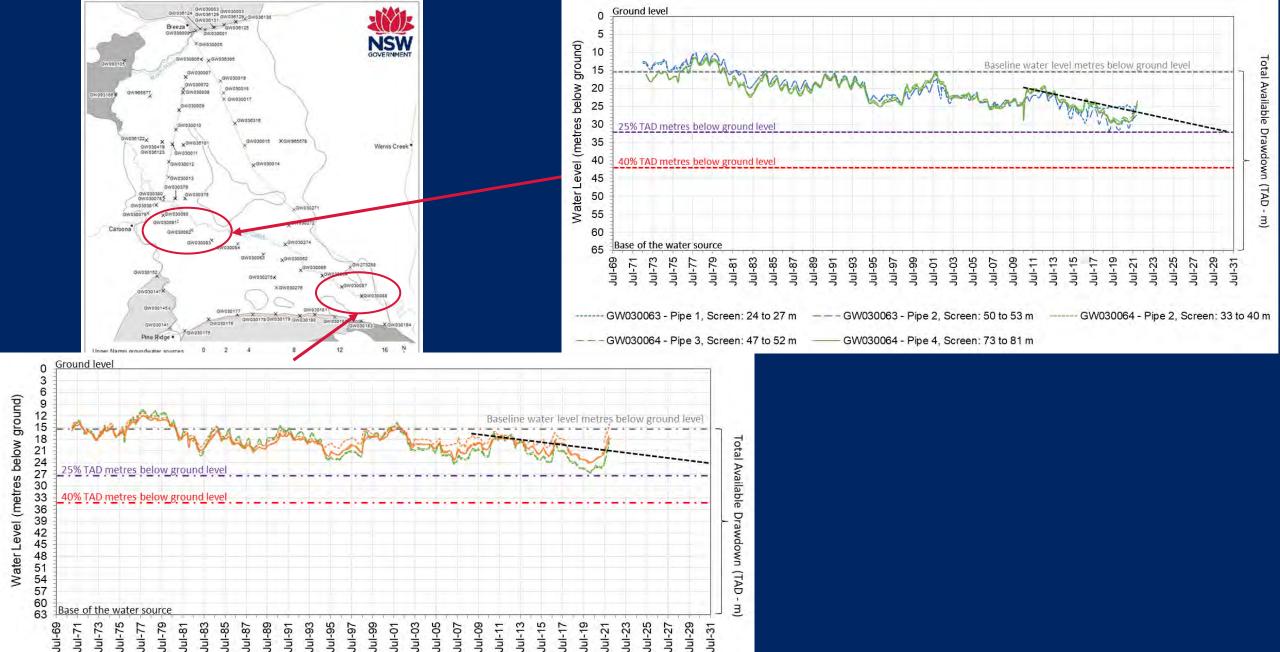




#### GW030003 GW030003 GW036124 GW036129 GW036129 GW036130 GW036131 W036131 XX GW036125 XGW030005 GW030006X XGW036305 GW093105 GW030007 GW030019 GW030072 GW030018 € GW030008 GW965577 GW093106% X GW030017 GW030009 GW036316 GW036122X GW030419 GW030015 XGW965578 XGW03610 Werris Creek GW036123 GW030011 XGW030012 XGW030014 XGW030013 GW030379 GW030380 GW030378 GW030078 GW030381X XGW030271 GW030079 XGW030080 XGW030272 GW0300815 Caroona GW030082X GW030083X GW030274 GW030063 ×GW030062 GW273288 GW030086 GW030152 GW030275X XGW030087 XGW030276 GW030147X XGW030088 GW030145 C GW030181 GW030178 GW030179 GW030180 GW030182 GW030183 GW030176 GW030141 X GW030184 GW030175 Pine Ridge . Upper Namoi groundwater sources Kilometers Government Monitoring Bores Namoi Catchment Sydney - River NSW

# Upper Namoi Zone 8 Groundwater Source Monitoring bores





GW030088 - Pipe 1, Screen: 19 to 20 m

GW030087 - Pipe 1, Screen: 23 to 29 m

GW030088 - Pipe 2, Screen: 41 to 42 m

--- GW030087 - Pipe 2, Screen: 40 to 46 m

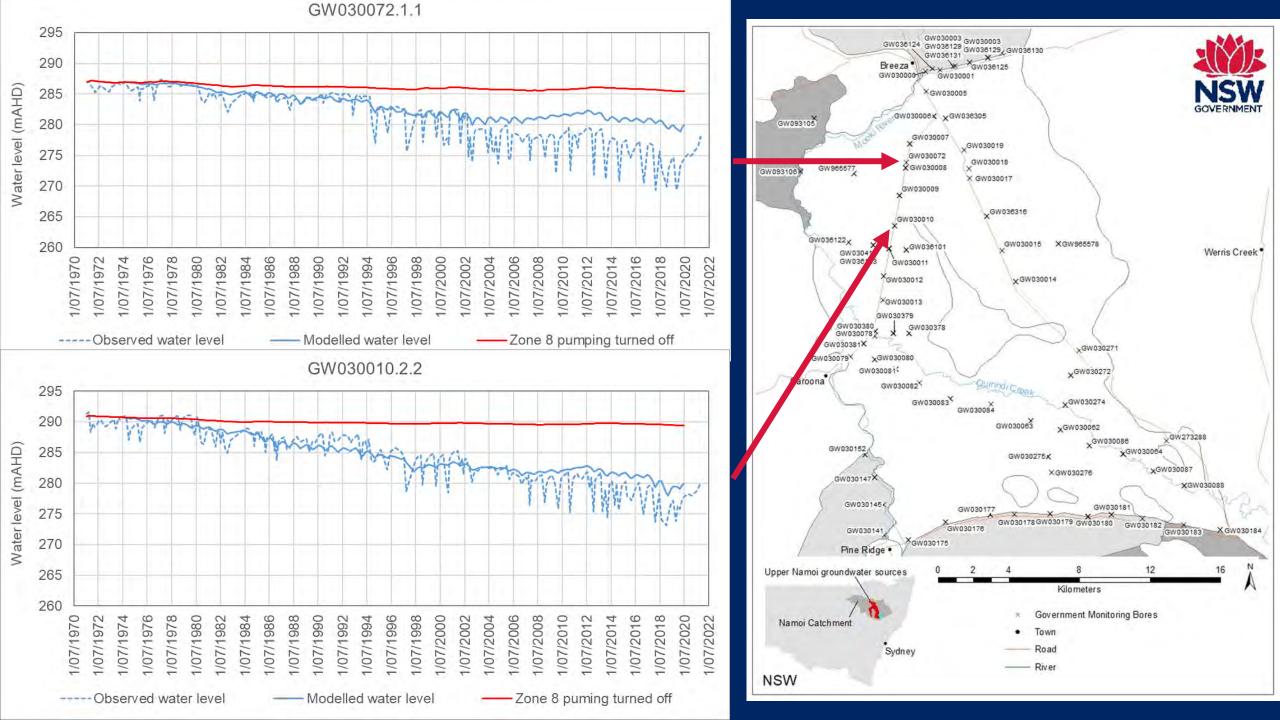
- GW030088 - Pipe 3, Screen: 65 to 66 m

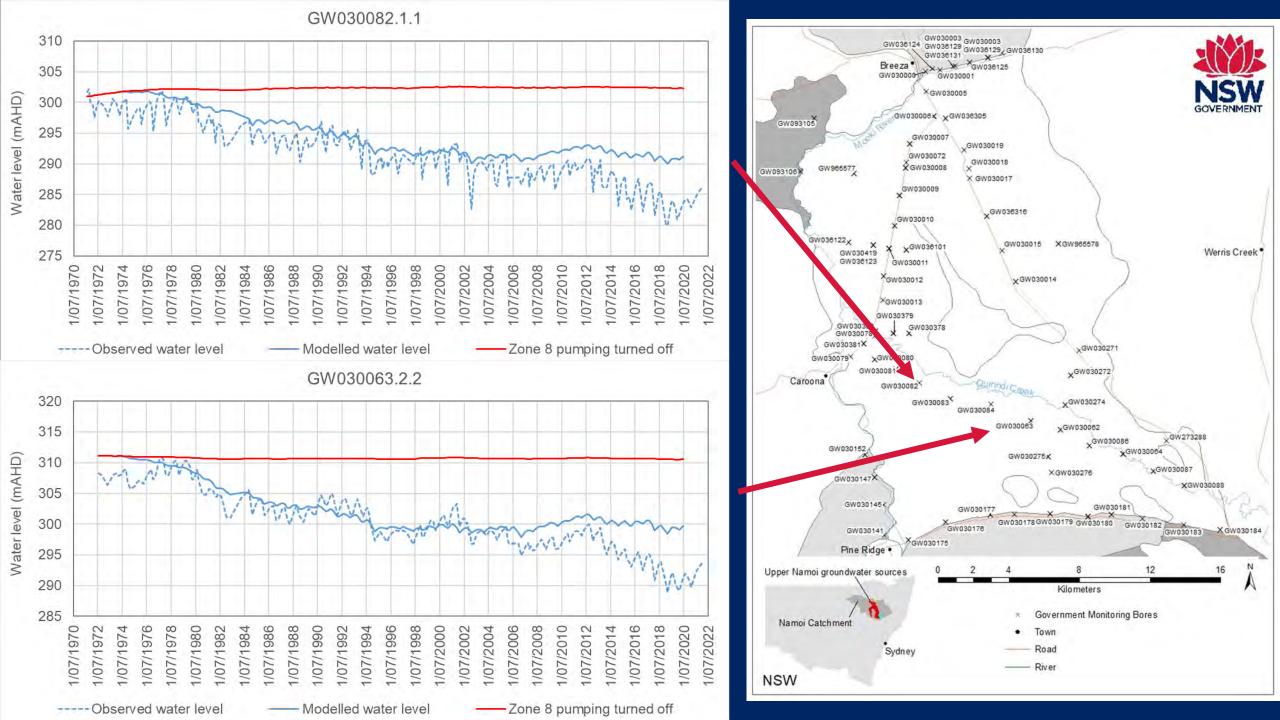
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#### Model scenarios

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





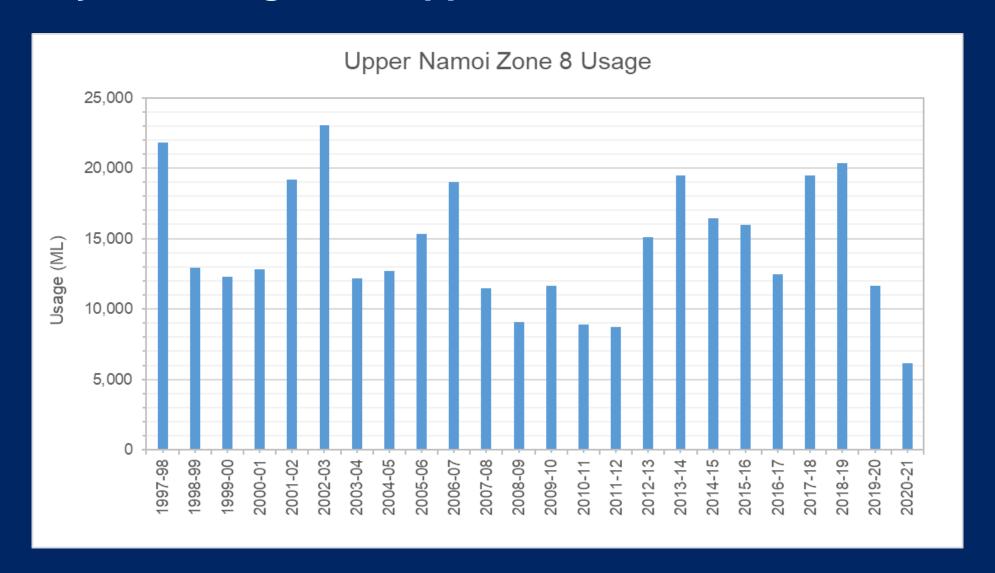


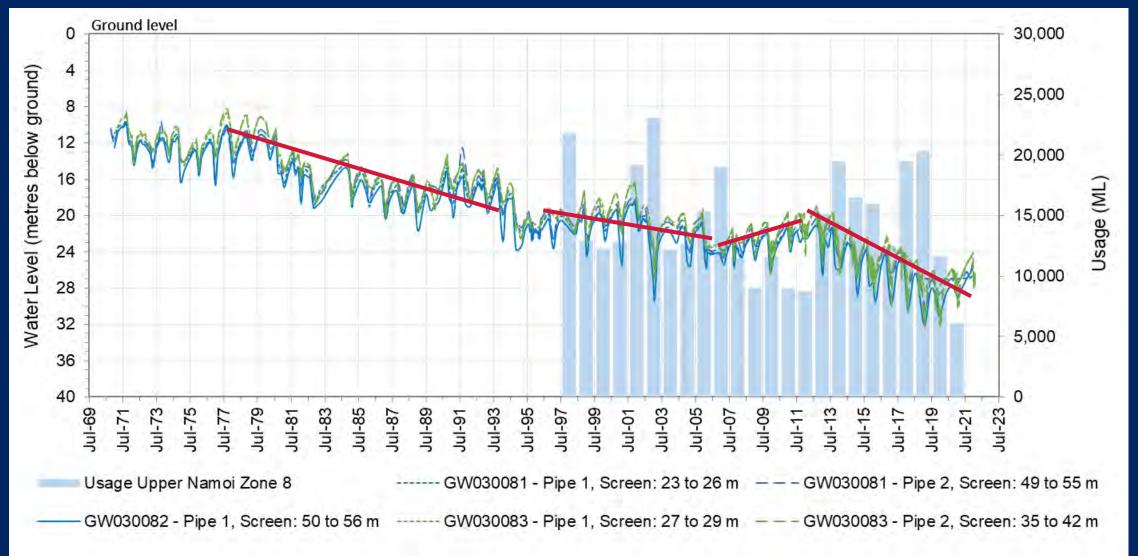
#### What the model shows

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

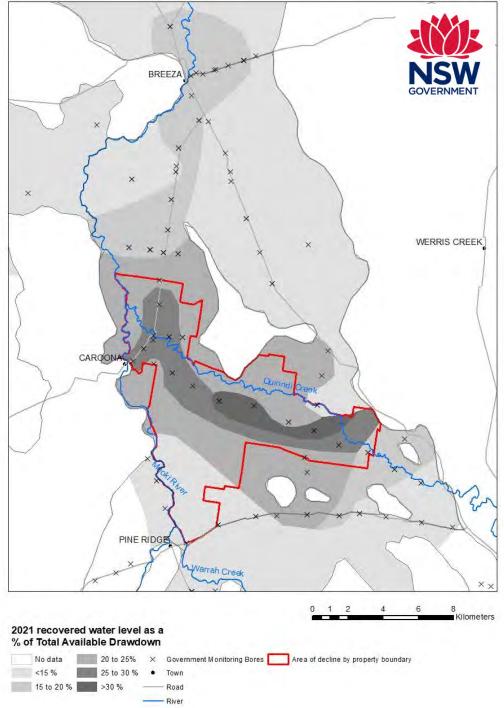






#### Area of decline





#### Licence information

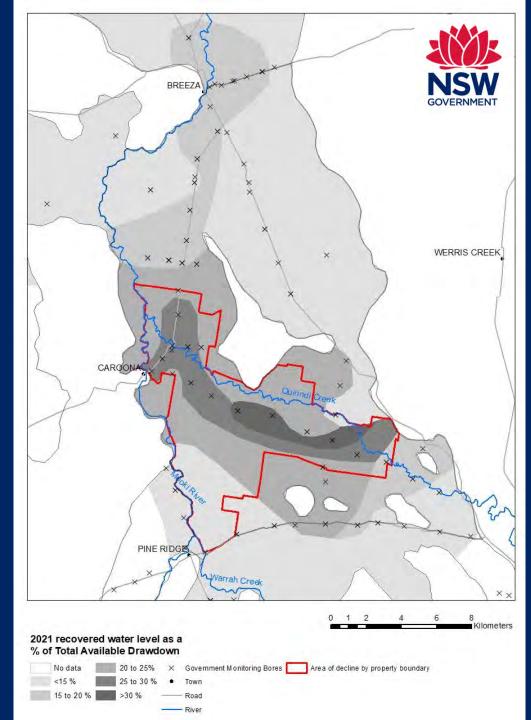
Category	All of Zone 8	Area of decline	Percentage
Total aquifer licences	62	30	48%
Number of Local Water Utility	1	1	100%
Total shares	16,172 ML	9,618 ML	59%
LTAAEL	16,114 ML	-	-
Average usage over last 5 years (excl. BLR)	14,016 ML	7026 ML	50%
BLR set aside	114 ML	-	-



#### **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%





#### 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**