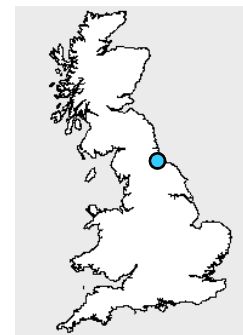


General Information

Borehole Name	Swan House	Grid Reference	NZ 25201981
Borehole ID	NZ21/29	Mean Annual Rainfall (mm)	657
Principal Aquifer	Lower Magnesian Limestone	Period of observed level data	1974 - 2005
EA Region	North East		



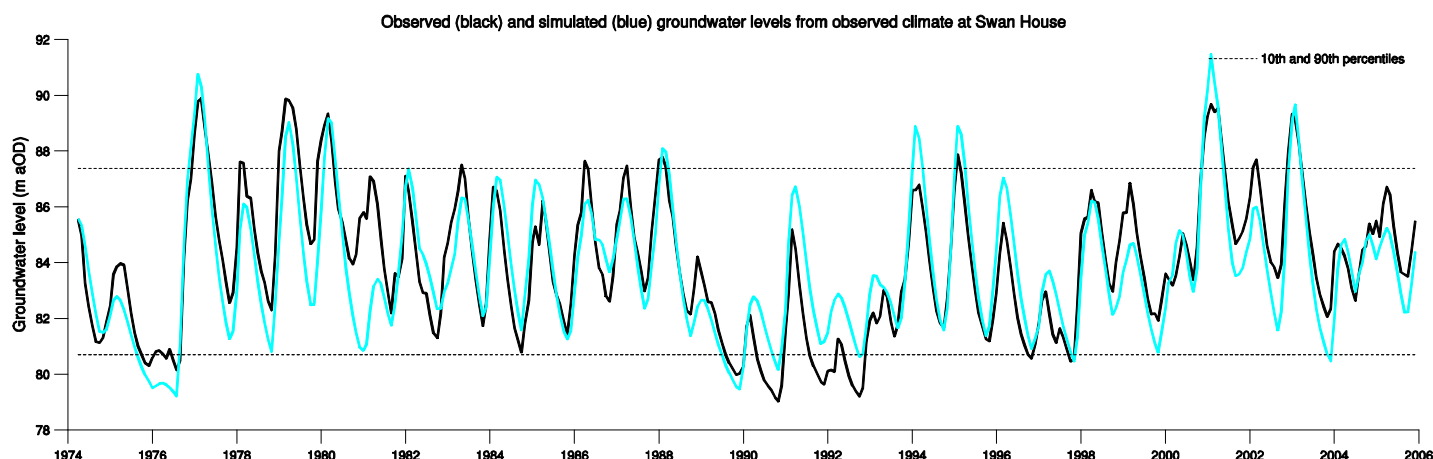
Observed Data

Comparison of observed and simulated levels (m)

Model used: R-Groundwater

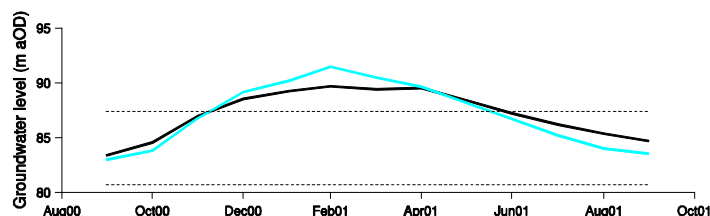
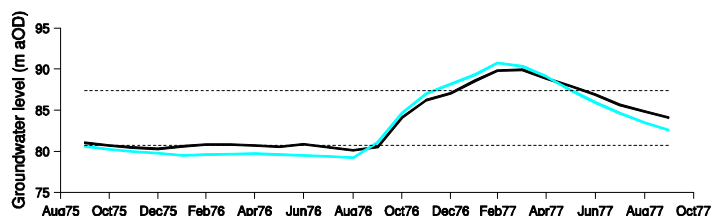
	Mean Annual	J	F	M	A	M	J	J	A	S	O	N	D	NSE	RMSE
1974 - 2005	-0.16	-0.71	-0.17	-0.03	0.08	0.08	0.13	0.06	-0.02	-0.13	-0.31	-0.40	-0.56	0.72	1.30
Performance	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

	L90	L75	L50	L25	L10		%
1974 - 2005	0.39	0.00	-0.32	-0.44	-0.35	Error (sim-obs) in range (max-min)	12.68
Performance	1	1	1	1	1	Performance	2

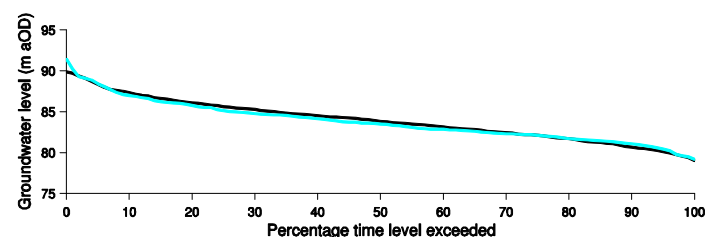
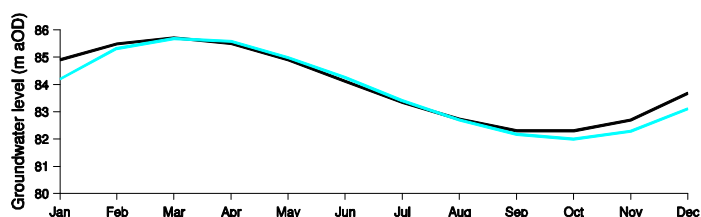


Comparison of observed and simulated levels (observed climate)

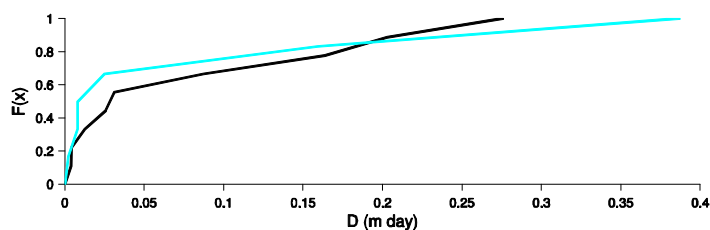
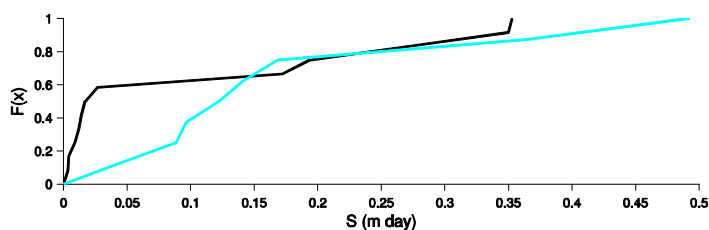
Selected observed (black) and simulated (blue) groundwater levels at Swan House



Statistics from observed (black) and simulated (blue) groundwater levels from observed climate at Swan House

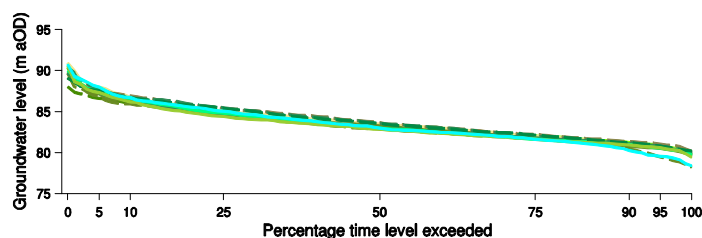
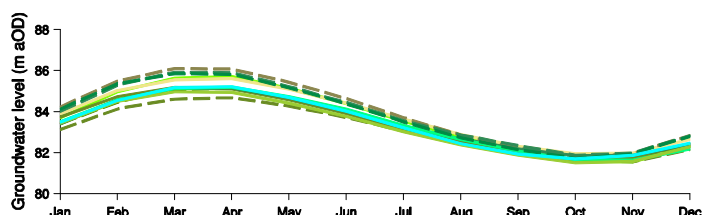


Surplus (S) and Deficit (D) distributions from observed (black) and simulated (blue) groundwater levels from observed climate at Swan House



Difference (m) between levels simulated from observed climate and Future Flows Climate

Comparison of groundwater levels simulated using observed climate (blue) and Future Flows Climate (green)



(m)	afgcx	afixa	afixc	afixh	afixi	afixj	afixk	afixl	afixm	afixo	afixq
Annual	0.24	-0.03	0.38	0.56	0.02	-0.26	0.06	0.47	0.03	0.41	-0.15
Jan	0.22	-0.09	0.41	0.74	0.26	-0.36	-0.07	0.53	0.02	0.64	-0.04
Feb	0.41	-0.08	0.48	0.92	0.18	-0.43	0.01	0.72	0.02	0.79	-0.04
Mar	0.47	-0.09	0.40	0.93	0.00	-0.56	-0.04	0.75	-0.03	0.68	-0.21
Apr	0.49	-0.07	0.40	0.85	-0.09	-0.53	-0.05	0.68	-0.01	0.59	-0.27
May	0.45	-0.01	0.40	0.73	-0.11	-0.43	-0.02	0.54	0.05	0.47	-0.27
Jun	0.39	0.01	0.41	0.60	-0.11	-0.32	0.00	0.42	0.10	0.37	-0.26
Jul	0.32	0.03	0.41	0.48	-0.05	-0.17	0.03	0.34	0.12	0.28	-0.18
Aug	0.32	0.12	0.44	0.42	0.10	0.02	0.23	0.43	0.21	0.30	-0.07
Sep	0.16	0.06	0.38	0.28	0.09	0.11	0.25	0.40	0.15	0.20	-0.05
Oct	-0.10	-0.09	0.25	0.07	-0.04	-0.06	0.14	0.17	-0.04	0.01	-0.19
Nov	-0.32	-0.19	0.11	0.08	-0.13	-0.31	0.00	0.11	-0.22	0.06	-0.29
Dec	-0.13	-0.16	0.21	0.39	-0.02	-0.30	-0.06	0.38	-0.27	0.35	-0.16

Climate change graphs for 2050s

Change between future (2041–2070) and control (1961–1990) simulated levels at Swan House

