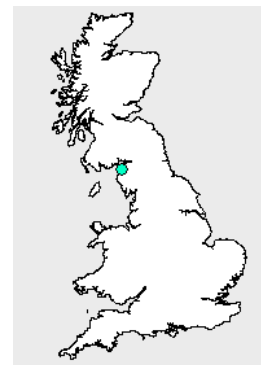


## General Information

River Name	Ellen	Catchment Area (km2)	96
Station Name	Bullgill	SAAR (mm) 61-90	1106
Station Number	75017	Mean Annual Rain (mm) 62-91	1116
Grid Reference	NY096384	Mean Annual PE (mm) 62-91	508
EA Region	EA-NW	Observed flow record	1976 to 2005



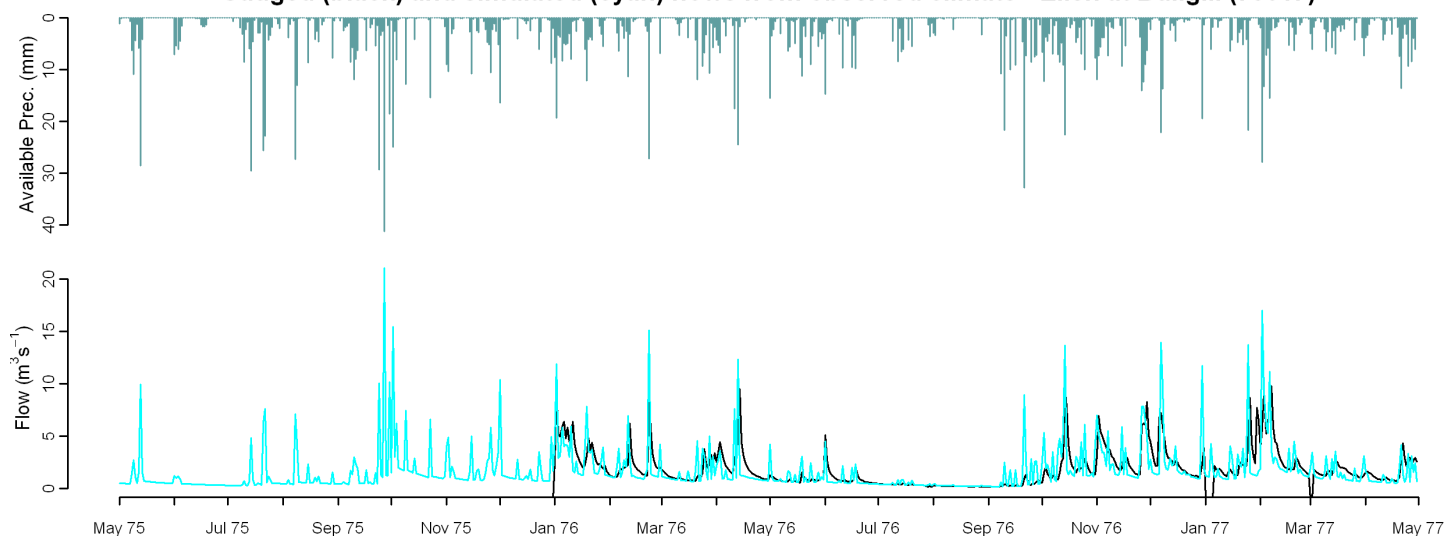
## Observed Data

## Comparison of gauged and simulated flow

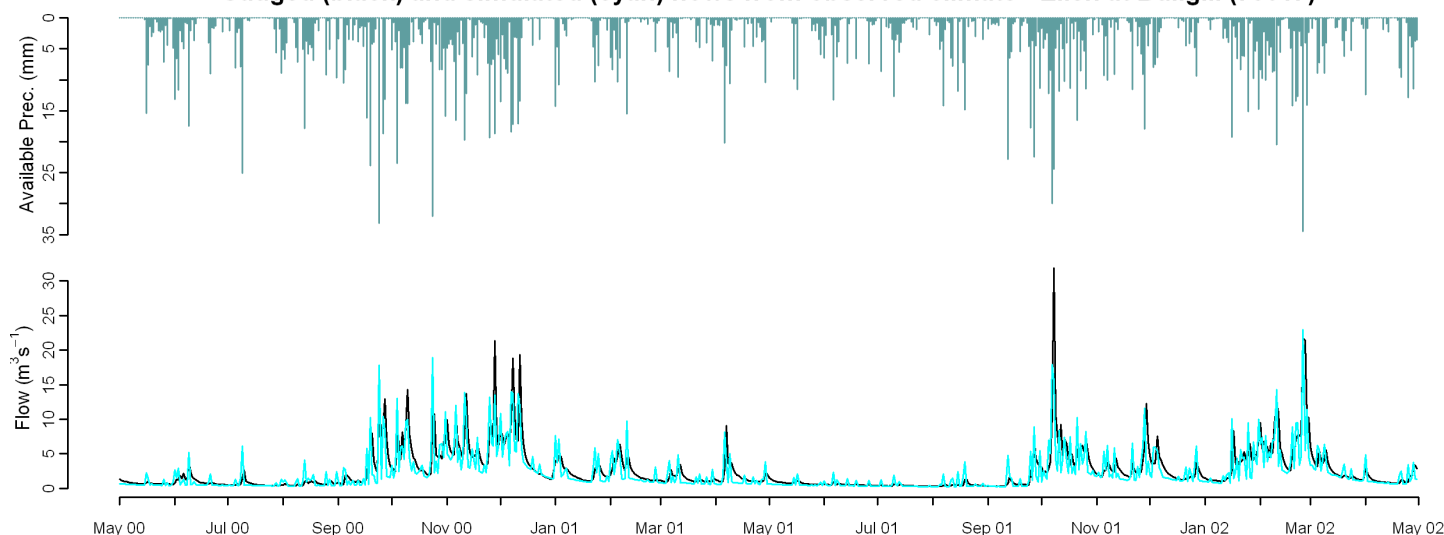
## Model used: PDM

	Mean Annual	J	F	M	A	M	J	J	A	S	O	N	D	Nash Sutcliffe
MORECS (1971-2005)	-7.6	-6.9	-10.1	-13.2	-19.6	-11.8	0.5	7.6	7.6	0.5	-1.8	-7.9	-7.2	0.51
Performance Band	1	1	2	2	2	2	1	1	1	1	1	1	1	2
FAO (1962-1991)	-2.4	-2.9	-6.0	-10.1	-19.0	-2.6	6.4	8.2	9.7	3.1	6.4	-2.2	1.3	0.45
	Q90	Q75	Q50	Q25	Q5	RP2			RP5	RP10	RP20			
MORECS (1971-2005)	-8.2	-14.5	-18.7	-15.4	6.0	-4.0			0.7	3.9	6.9			
Performance Band	1	1	2	2	1									
FAO (1962-1991)	-3.0	-10.8	-15.7	-10.5	12.8	6.7			9.4	9.3	8.5			

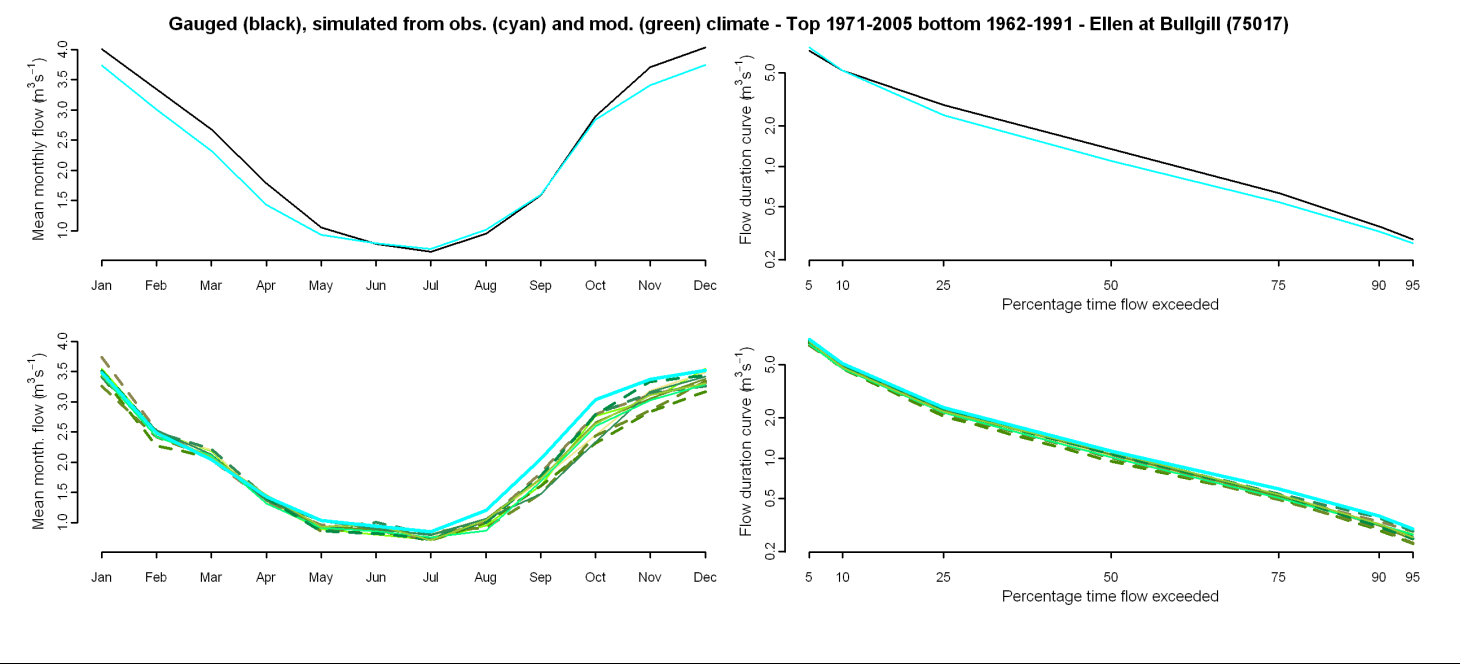
Gauged (black) and simulated (cyan) flows from observed climate - Ellen at Bullgill (75017)



Gauged (black) and simulated (cyan) flows from observed climate - Ellen at Bullgill (75017)



Comparison of gauged and simulated flow (observed and modelled climate)



Percentage difference between flow simulated from observed climate and Future Flows Climate

	afgcx	afixa	afixc	afixh	afixi	afixj	afixk	afixl	afixm	afixo	afixq
Annual	-6	-11	-7	-3	-6	-10	-7	-5	-9	-5	-7
January	2	0	2	8	3	-3	-4	1	-3	-1	-2
April	-6	-10	-6	-3	-6	-3	-3	-1	-11	-2	-2
July	-14	-15	-12	-15	-6	-8	-10	-11	-14	-17	-17
October	-10	-22	-23	-6	-15	-21	-19	-13	-18	-10	-7
Q90	-13	-22	-15	-9	-18	-20	-13	-5	-13	-18	-14
Q75	-12	-15	-13	-11	-13	-17	-11	-10	-15	-11	-10
Q50	-7	-16	-9	-4	-6	-11	-2	-5	-11	-5	-3
Q25	-6	-13	-5	-1	-5	-9	-8	-4	-9	-5	-8
Q5	-7	-7	-6	-3	-4	-10	-6	-1	-9	-4	-5
RP2	-10	-11	-13	-5	-9	-20	-16	-16	-13	-7	-12
RP10	-10	-17	-6	-4	-13	-17	-18	-20	-14	-6	-14

Climate change graphs for 2050s

