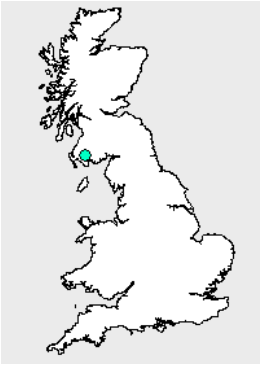
Catchment Fact Sheet 81002 Future Flows and Groundwater Levels

General Information

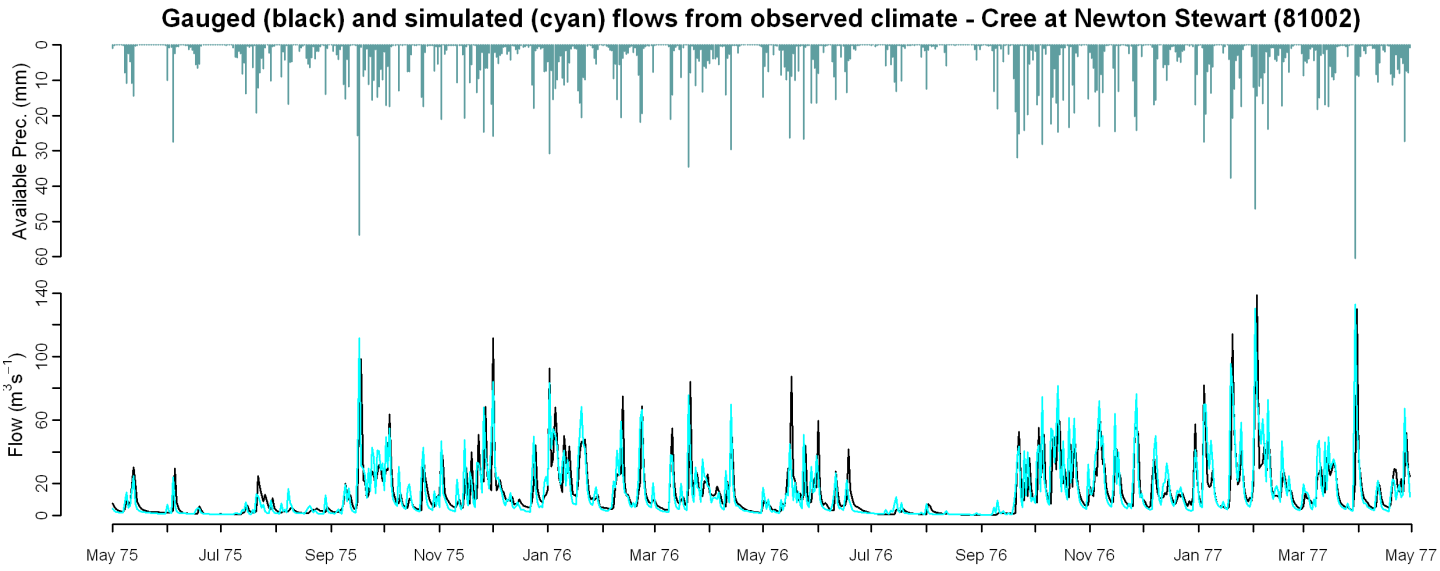
River Name	Cree	Catchment Area (km2)	368
Station Name	Newton Stewart	SAAR (mm) 61-90	1760
Station Number	81002	Mean Annual Rain (mm) 62-91	1799
Grid Reference	NX412653	Mean Annual PE (mm) 62-91	492
EA Region	SEPA-SW	Observed flow record	1963 to 2005

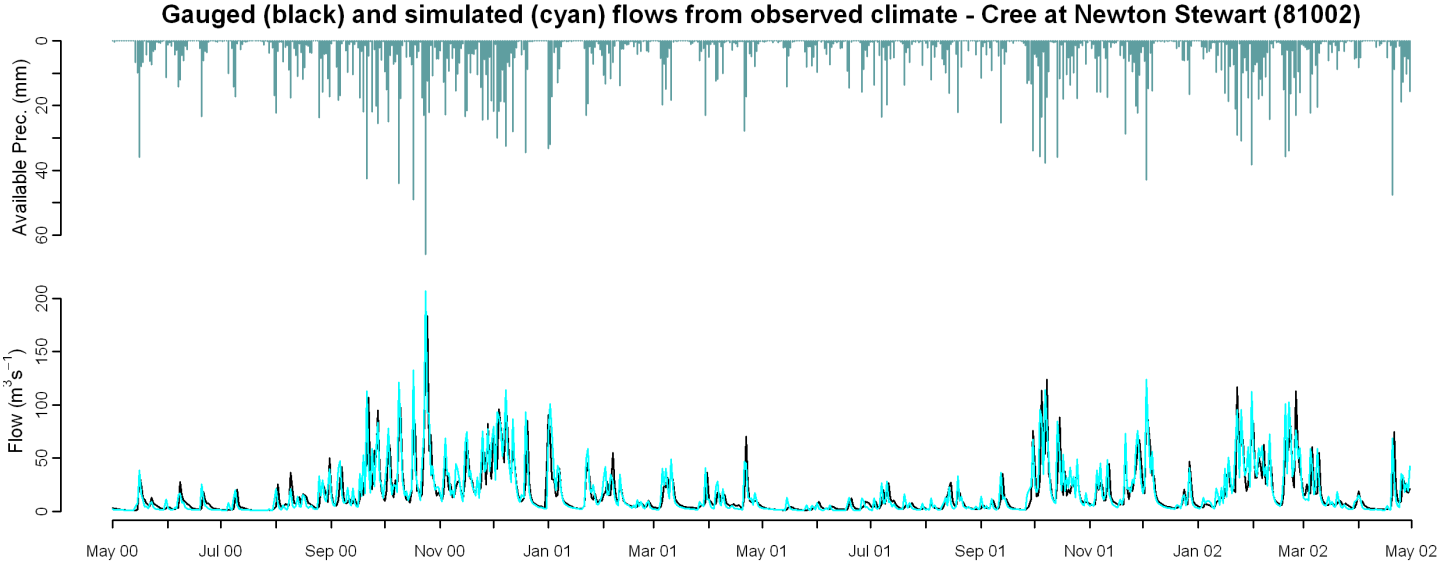


Observed Data Comparison of gauged and simulated flow Model used: PDM

	Mean Annual	J	F	M	A	M	J	J	A	S	O	N	D	Nash Sutcliffe
MORECS (1971-2005)	3.5	7.4	9.3	6.2	-1.8	-12.5	-11.4	-14.6	-4.9	-0.5	8.0	9.0	5.6	0.57
Performance Band	1	1	1	1	1	2	2	2	1	1	1	1	1	2
FAO (1962-1991)	4.7	7.2	10.0	9.2	-0.9	-5.6	-9.1	-17.1	-3.7	2.0	8.1	11.6	7.7	0.56

	Q90	Q75	Q50	Q25	Q5	RP2	RP5	RP10	RP20
MORECS (1971-2005)	-20.5	-21.3	-11.2	8.5	7.2	-3.0	-3.2	-3.5	-4.0
Performance Band	1	1	1	1	1				
FAO (1962-1991)	-21.9	-18.9	-8.2	8.7	6.1	-1.9	-1.3	0.1	1.8





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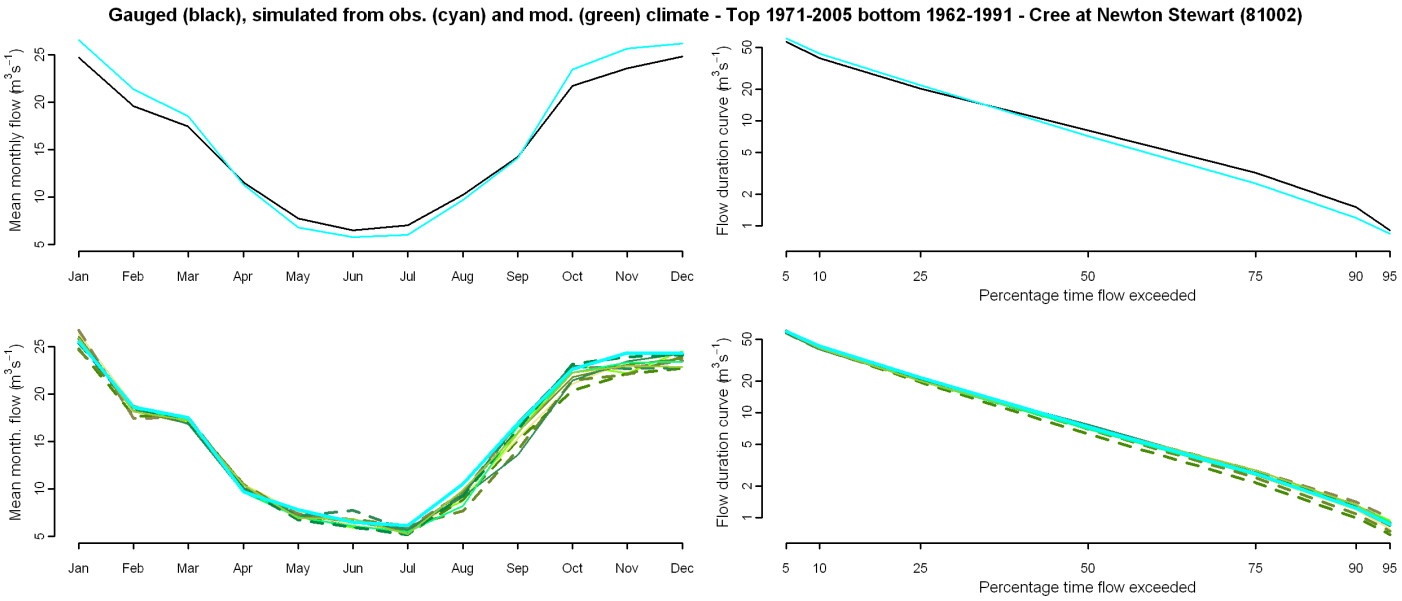
Comparison of gauged and simulated flow (observed and modelled climate)



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

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

Climate change graphs for 2050s