

## General Information

River Name	North Esk	Catchment Area (km <sup>2</sup> )	137
Station Name	Dalkeith Palace	SAAR (mm) 61-90	908
Station Number	19011	Mean Annual Rain (mm) 62-91	920
Grid Reference	NT333678	Mean Annual PE (mm) 62-91	505
EA Region	SEPA-SE	Observed flow record	1963 to 2005



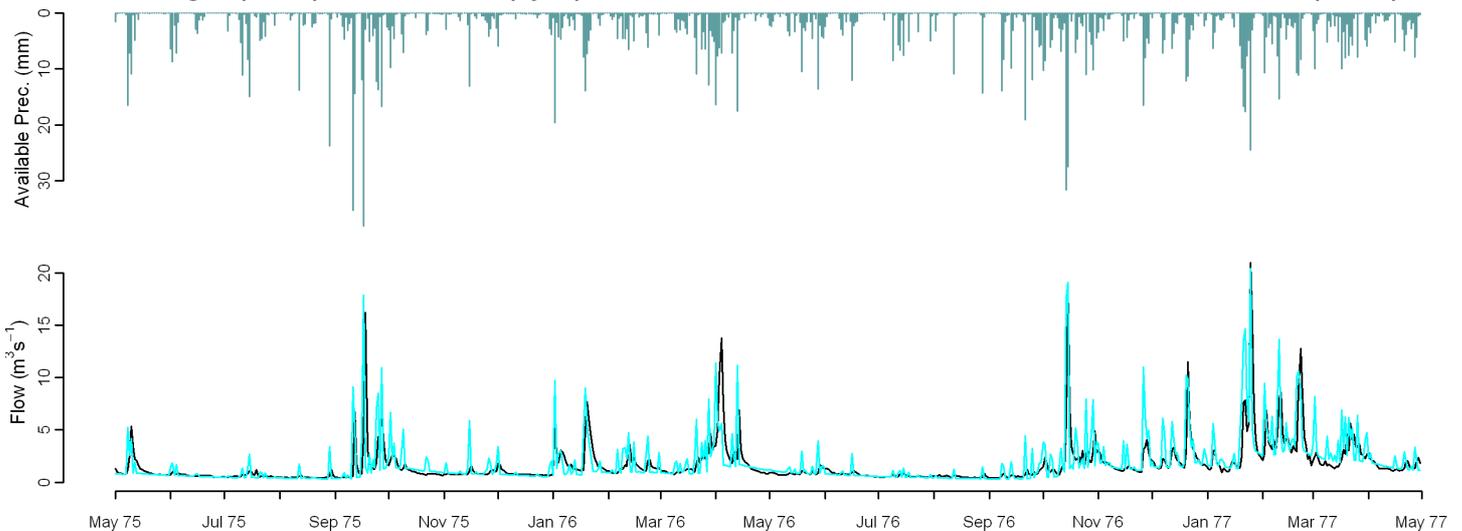
## Observed Data

## Comparison of gauged and simulated flow

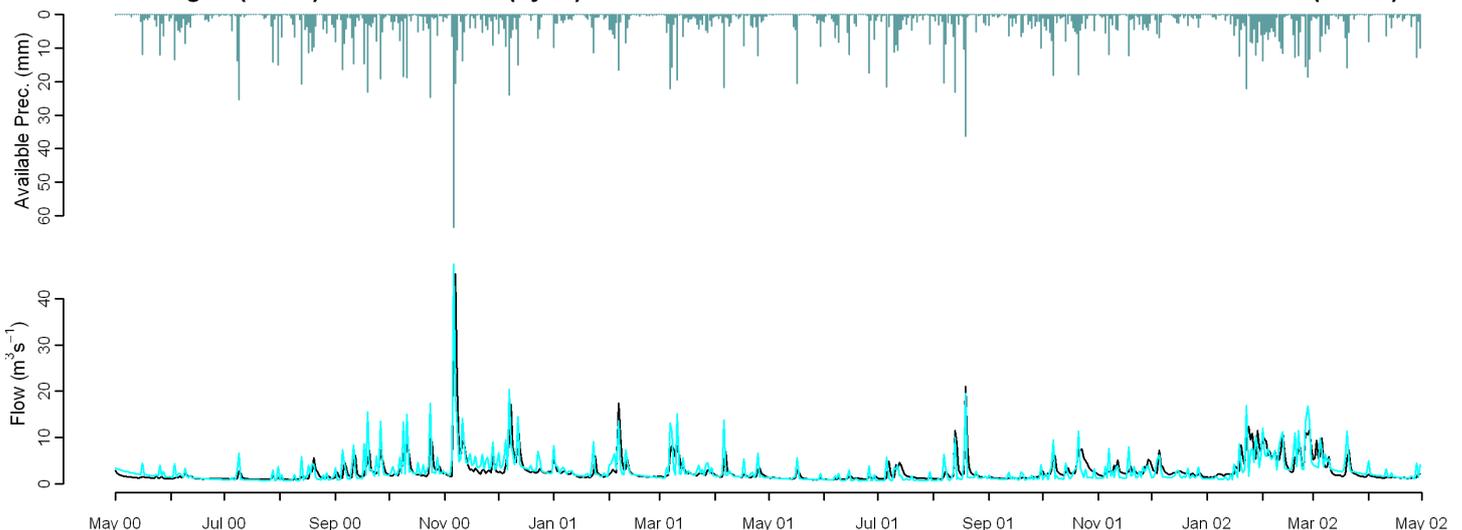
## Model used: PDM

	Mean Annual	J	F	M	A	M	J	J	A	S	O	N	D	Nash Sutcliffe
MORECS (1971-2005)	1.8	4.5	10.2	11.3	-2.0	-3.5	-6.1	-6.2	-8.5	-0.3	-7.4	5.5	5.7	0.45
Performance Band	1	1	2	2	1	1	1	1	1	1	1	1	1	2
FAO (1962-1991)	7.5	11.0	10.8	6.0	4.4	0.8	1.8	-3.1	7.3	6.7	6.5	5.3	15.7	0.31
	Q90	Q75	Q50	Q25	Q5	RP2	RP5	RP10	RP20					
MORECS (1971-2005)	-20.0	-11.8	-1.6	5.1	13.0	-7.8	-16.7	-21.7	-25.9					
Performance Band	1	1	1	1	1									
FAO (1962-1991)	-14.3	-2.7	7.7	9.2	17.3	-12.0	-15.6	-16.0	-15.6					

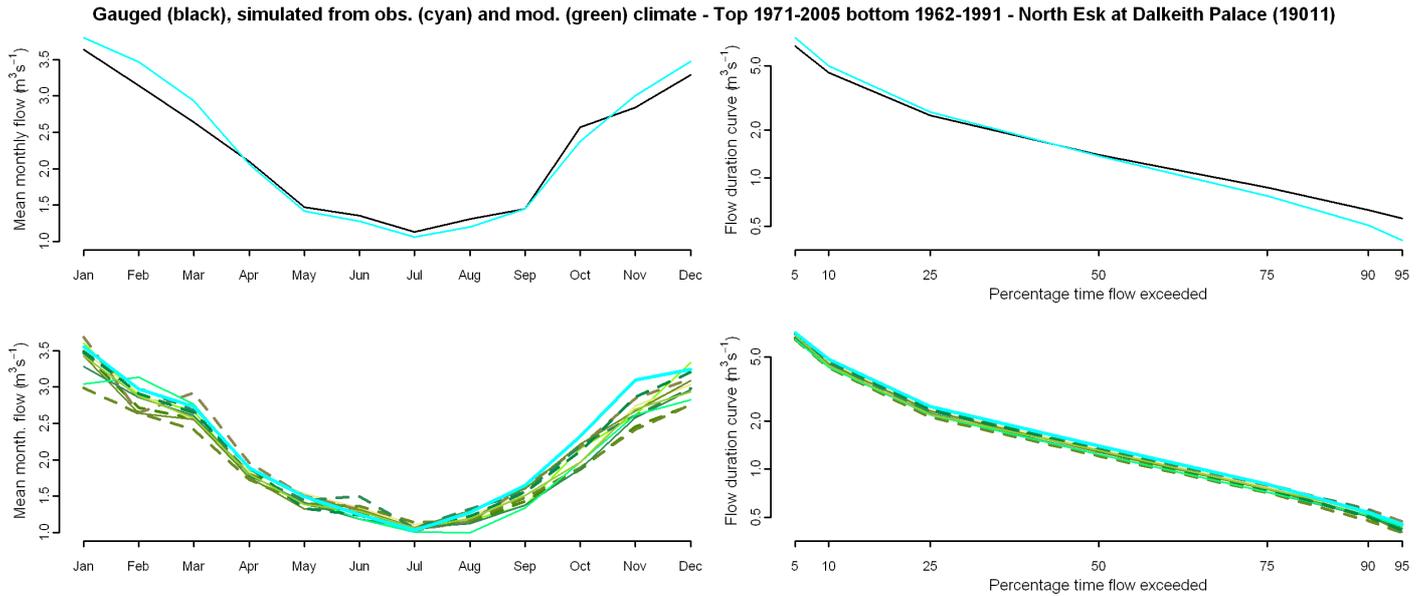
Gauged (black) and simulated (cyan) flows from observed climate - North Esk at Dalkeith Palace (19011)



Gauged (black) and simulated (cyan) flows from observed climate - North Esk at Dalkeith Palace (19011)



## 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	-9	-5	-1	-7	-11	-9	-4	-9	-4	-8
January	2	-3	1	5	-2	-11	-9	-2	-13	-2	-4
April	-7	-9	-1	6	-8	-8	-5	-2	-4	0	-7
July	1	4	5	-1	2	-2	2	-1	-2	0	1
October	-9	-20	-17	-4	-9	-20	-14	-13	-20	-9	-8
Q90	-1	-5	-5	4	-7	-11	-7	0	-5	-6	1
Q75	-5	-7	-3	-1	-9	-11	-11	-1	-11	-7	-7
Q50	-9	-12	-5	-2	-10	-14	-11	-5	-12	-7	-7
Q25	-6	-12	-5	0	-7	-13	-9	-6	-12	-4	-12
Q5	-3	-7	-4	0	-4	-9	-8	-2	-9	-1	-7
RP2	-5	-16	-14	-1	-5	-10	-10	-6	-10	-5	-9
RP10	-16	-21	-25	-17	-13	-17	-22	-16	-19	-7	-14

## Climate change graphs for 2050s

