

## General Information

River Name	Helmsdale	Catchment Area (km <sup>2</sup> )	551
Station Name	Kilphedir	SAAR (mm) 61-90	1118
Station Number	2001	Mean Annual Rain (mm) 62-91	1118
Grid Reference	NC997181	Mean Annual PE (mm) 62-91	476
EA Region	SEPA-NW	Observed flow record	1975 to 2005



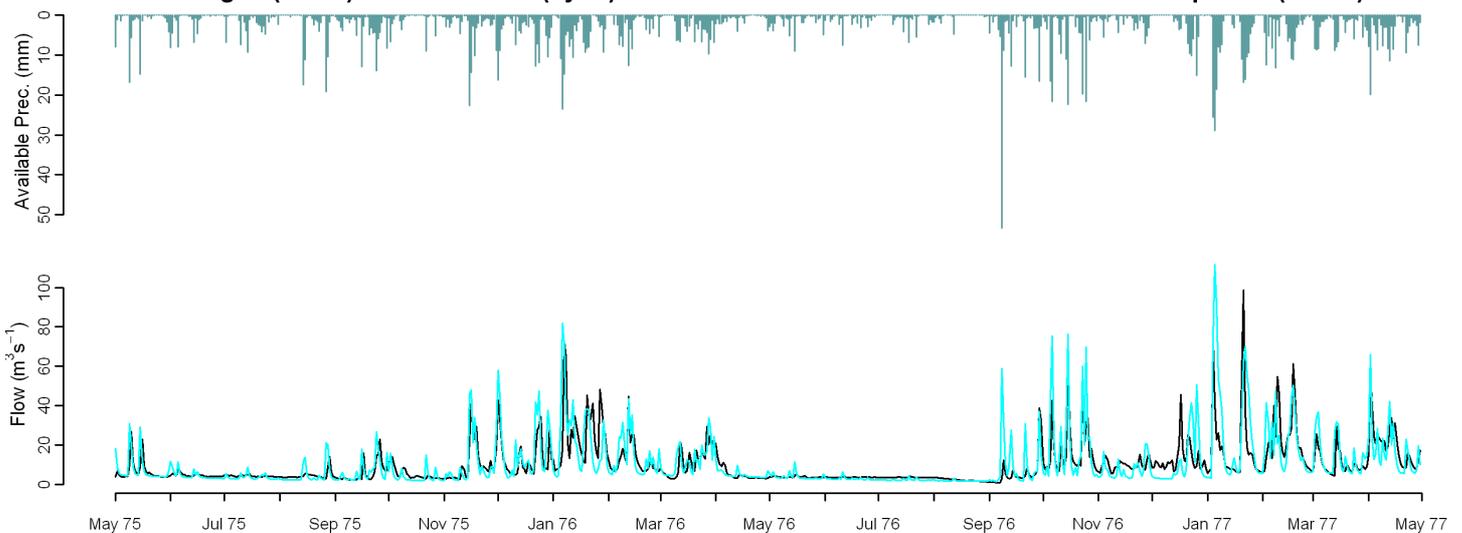
## Observed Data

## Comparison of gauged and simulated flow

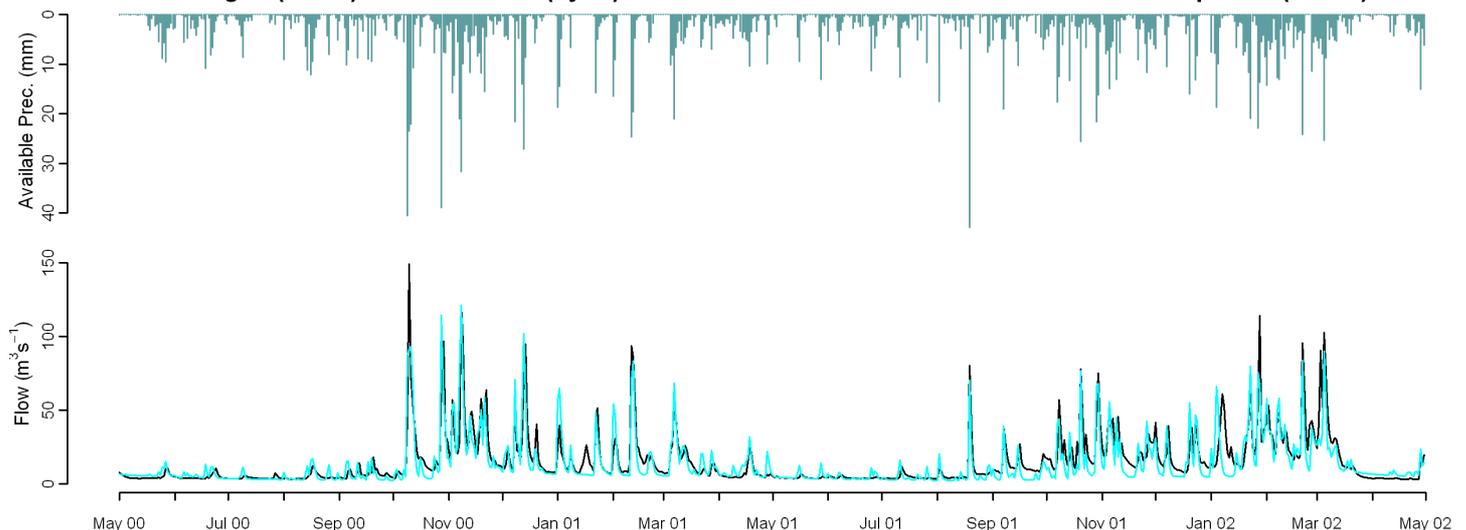
## Model used: PDM

	Mean Annual	J	F	M	A	M	J	J	A	S	O	N	D	Nash Sutcliffe
MORECS (1971-2005)	-4.0	0.5	6.6	0.9	3.6	2.2	-1.9	-12.3	-14.8	-12.1	-8.1	-9.9	-7.8	0.57
Performance Band	1	1	1	1	1	1	1	2	2	2	1	1	1	2
FAO (1962-1991)	4.6	11.3	12.1	13.6	13.0	12.7	-0.1	-9.1	-11.9	0.3	6.7	-0.8	-1.6	0.49
	Q90	Q75	Q50	Q25	Q5	RP2	RP5	RP10	RP20					
MORECS (1971-2005)	-19.4	-7.1	-17.6	-7.0	2.8	-8.6	-10.4	-10.3	-9.5					
Performance Band	1	1	2	1	1									
FAO (1962-1991)	-15.9	-0.3	-9.1	3.3	12.0	-1.5	-3.9	-5.6	-7.0					

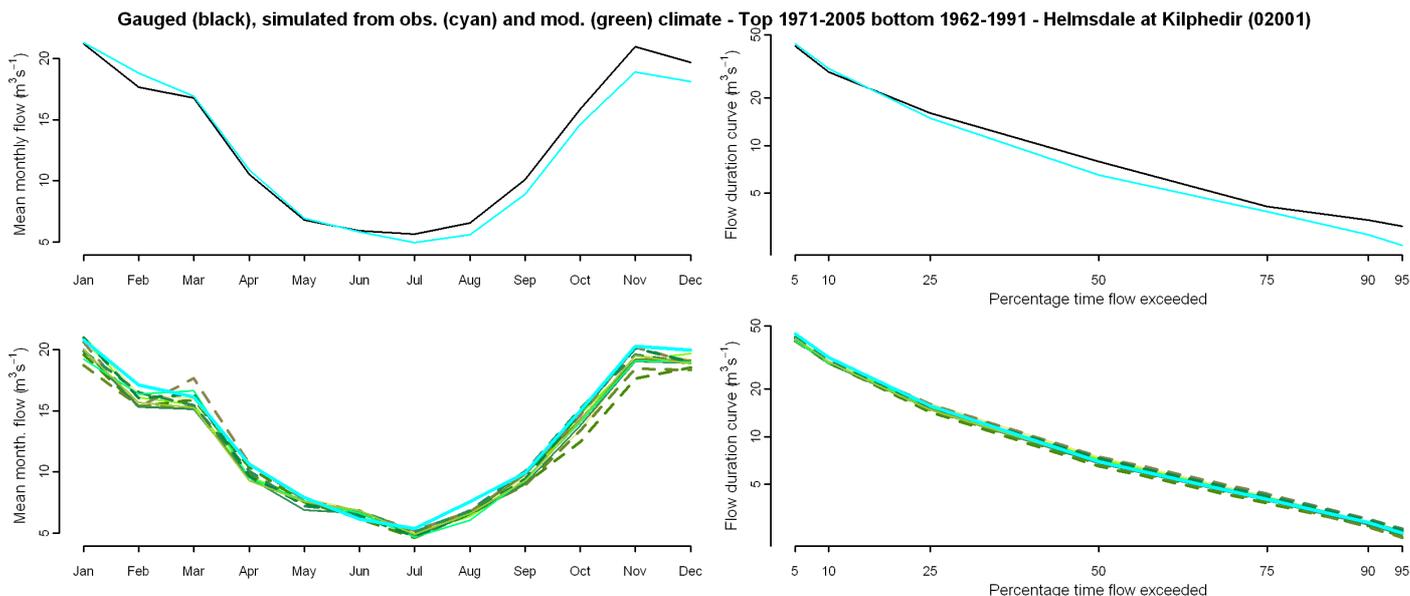
Gauged (black) and simulated (cyan) flows from observed climate - Helmsdale at Kilphedir (02001)



Gauged (black) and simulated (cyan) flows from observed climate - Helmsdale at Kilphedir (02001)



## 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
<b>Annual</b>	-3	-6	-2	0	-5	-7	-6	-2	-4	-3	-3
<b>January</b>	0	-4	3	-2	-3	-8	-5	-4	-9	1	-2
<b>April</b>	-7	2	1	3	-11	-9	-11	-4	-12	-7	-11
<b>July</b>	-5	-11	-2	3	-11	-6	-10	-5	-11	-9	-7
<b>October</b>	-2	-10	-9	5	-4	-10	-2	1	-3	1	-3
<b>Q90</b>	0	-4	-1	5	-2	-8	-4	4	0	1	0
<b>Q75</b>	2	-4	3	9	0	-3	-2	5	2	2	2
<b>Q50</b>	4	-4	6	8	-1	-4	-2	3	0	4	2
<b>Q25</b>	-2	-7	3	2	-5	-7	-6	-2	-3	-2	-5
<b>Q5</b>	-8	-6	-8	-4	-10	-11	-9	-5	-9	-7	-7
<b>RP2</b>	-5	-5	-7	-2	-3	3	-7	-10	-6	-3	2
<b>RP10</b>	-13	-11	-16	-18	-6	1	1	-19	-10	-13	4

## Climate change graphs for 2050s

