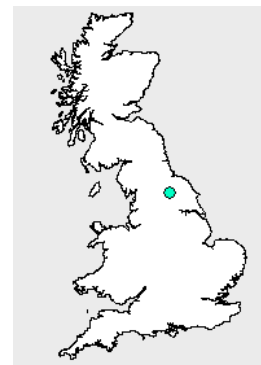


## General Information

|                |           |                             |              |
|----------------|-----------|-----------------------------|--------------|
| River Name     | Swale     | Catchment Area (km2)        | 1363         |
| Station Name   | Crakehill | SAAR (mm) 61-90             | 835          |
| Station Number | 27071     | Mean Annual Rain (mm) 62-91 | 846          |
| Grid Reference | SE425734  | Mean Annual PE (mm) 62-91   | 552          |
| EA Region      | EA-NE     | Observed flow record        | 1961 to 2005 |



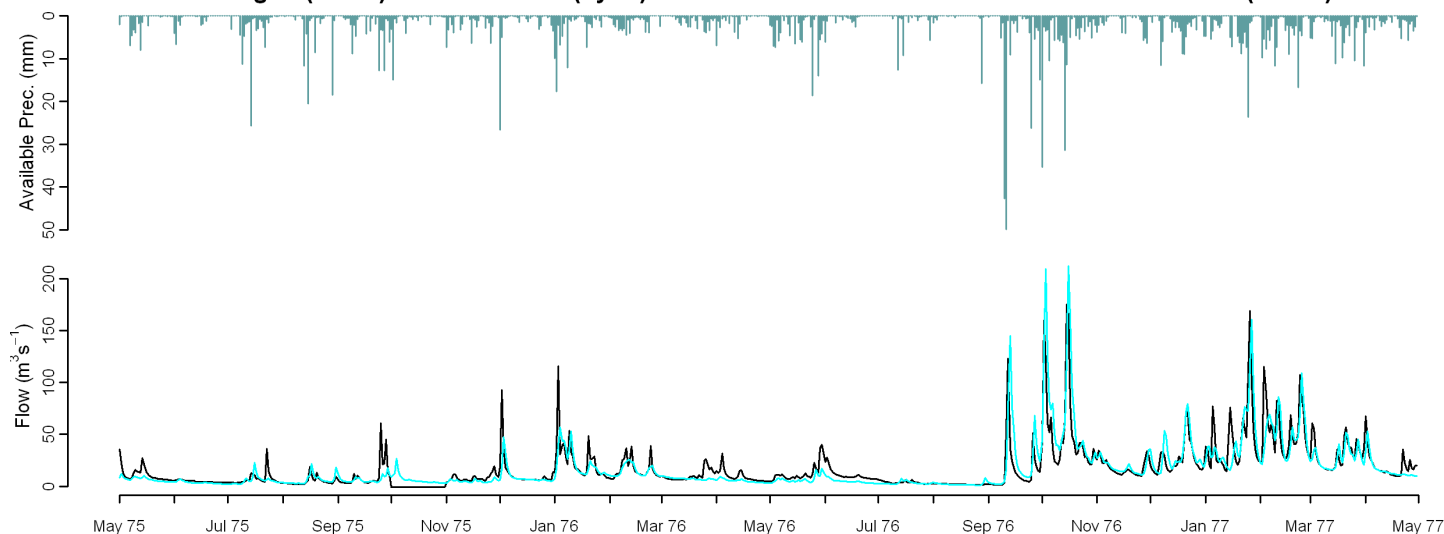
## Observed Data

## Comparison of gauged and simulated flow

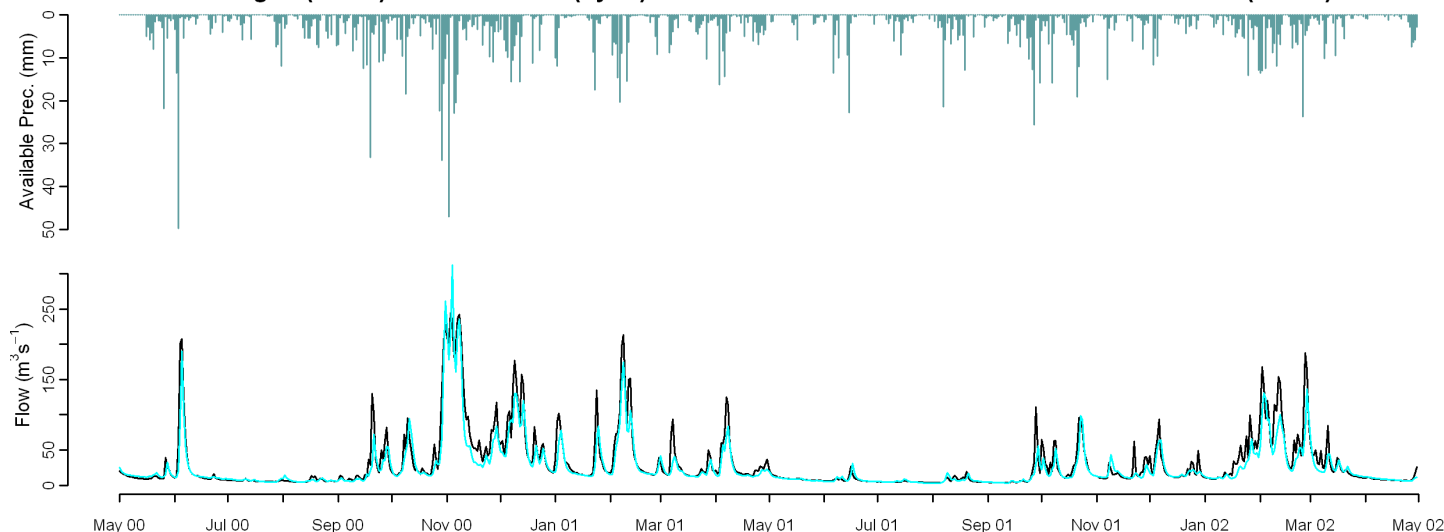
## Model used: CERF

|                    | Mean Annual | J     | F     | M     | A     | M     | J     | J     | A     | S     | O     | N     | D    | Nash Sutcliffe |
|--------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|----------------|
| MORECS (1971-2005) | -10.5       | -4.1  | -7.0  | -12.4 | -11.4 | -20.4 | -22.6 | -13.2 | -12.5 | -21.0 | -18.7 | -12.5 | -1.9 | 0.70           |
| Performance Band   | 2           | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 1    | 1              |
| MORECS (1962-1991) | -6.9        | 2.0   | 0.2   | -9.5  | -10.2 | -20.6 | -18.9 | -14.0 | -12.3 | -20.7 | -17.3 | -10.2 | 1.5  | 0.61           |
|                    | Q90         | Q75   | Q50   | Q25   | Q5    | RP2   | RP5   | RP10  | RP20  |       |       |       |      |                |
| MORECS (1971-2005) | -9.3        | -10.2 | -8.6  | -11.6 | -10.7 |       |       |       |       |       |       |       |      |                |
| Performance Band   | 1           | 1     | 1     | 1     | 1     |       |       |       |       |       |       |       |      |                |
| MORECS (1962-1991) | -9.9        | -10.3 | -10.4 | -12.6 | -3.2  |       |       |       |       |       |       |       |      |                |

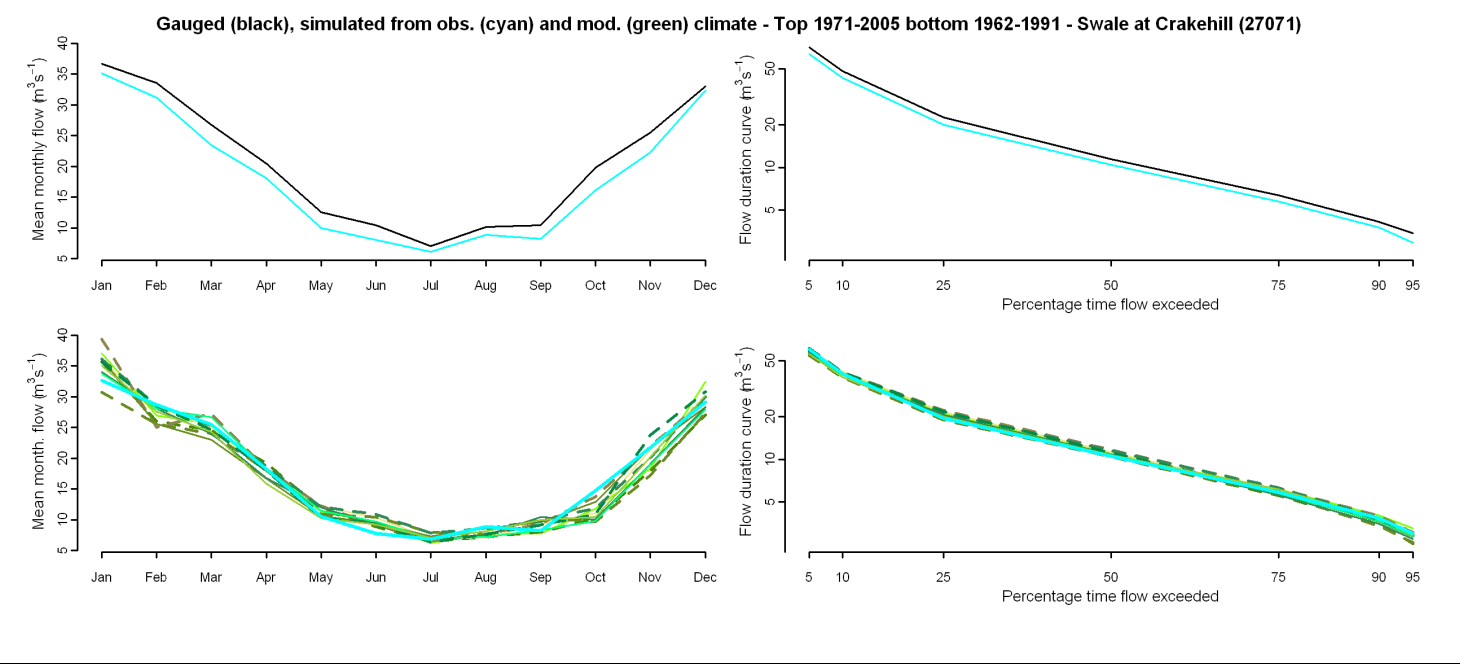
Gauged (black) and simulated (cyan) flows from observed climate - Swale at Crakehill (27071)



Gauged (black) and simulated (cyan) flows from observed climate - Swale at Crakehill (27071)



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  | 1     | -4    | 2     | 7     | -1    | -3    | -5    | 5     | -3    | 1     | -3    |
| January | 15    | 3     | 11    | 20    | 11    | -1    | 2     | 13    | 6     | 8     | 8     |
| April   | 2     | -6    | 2     | 5     | -8    | 0     | -8    | 9     | 2     | -1    | -10   |
| July    | -7    | 6     | 4     | -1    | 7     | 16    | -1    | 15    | -2    | -8    | 4     |
| October | -18   | -27   | -24   | -2    | -14   | -32   | -21   | -13   | -31   | -25   | -27   |
| Q90     | 6     | -9    | -5    | 8     | -9    | -12   | -12   | 0     | -6    | -6    | -1    |
| Q75     | 5     | -4    | 1     | 9     | -4    | -3    | -7    | 9     | -3    | -2    | 4     |
| Q50     | 4     | 0     | 5     | 13    | 0     | 0     | 1     | 11    | 0     | 5     | 1     |
| Q25     | 8     | 1     | 10    | 16    | 2     | 0     | 4     | 13    | 1     | 11    | 2     |
| Q5      | -5    | -9    | -1    | 1     | -4    | -8    | -8    | 5     | -4    | -4    | -9    |
| RP2     | -2    | -9    | -8    | 1     | 3     | 8     | -3    | 7     | 1     | -1    | 11    |
| RP10    | -11   | -12   | -11   | -12   | -9    | 2     | -2    | -6    | 2     | -10   | 4     |

Climate change graphs for 2050s

