

## General Information

|                |               |                                   |              |
|----------------|---------------|-----------------------------------|--------------|
| River Name     | Dove          | Catchment Area (km <sup>2</sup> ) | 399          |
| Station Name   | Rocester Weir | SAAR (mm) 61-90                   | 1021         |
| Station Number | 28008         | Mean Annual Rain (mm) 62-91       | 1026         |
| Grid Reference | SK112397      | Mean Annual PE (mm) 62-91         | 587          |
| EA Region      | EA-M          | Observed flow record              | 1962 to 2005 |



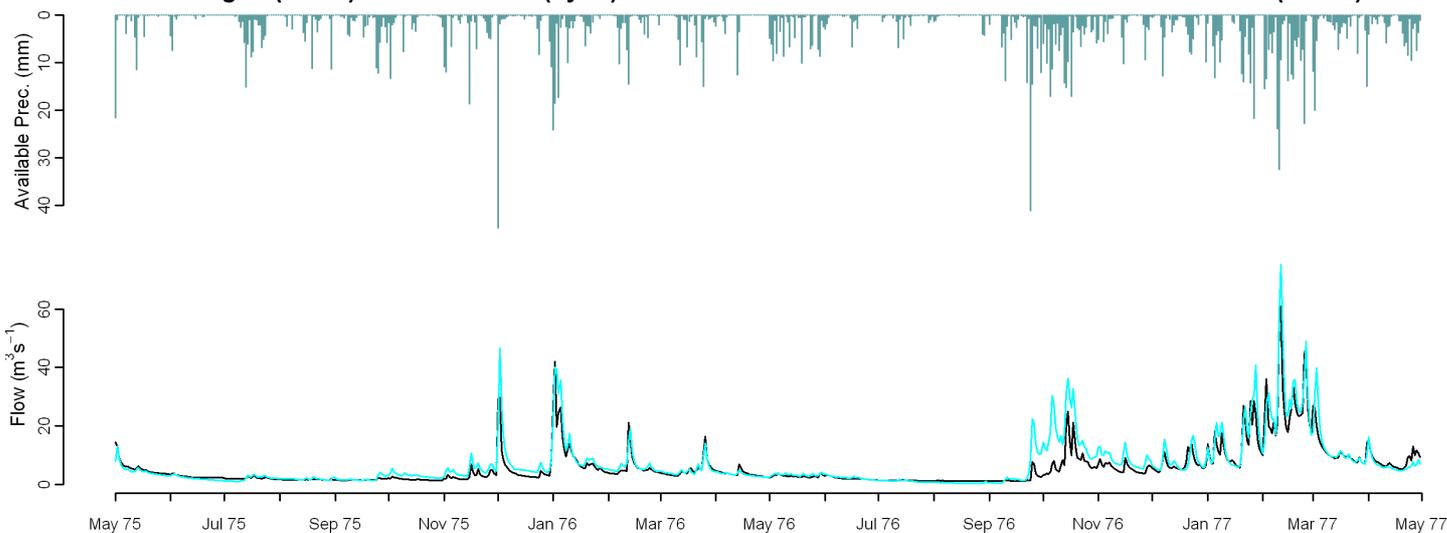
## Observed Data

## Comparison of gauged and simulated flow

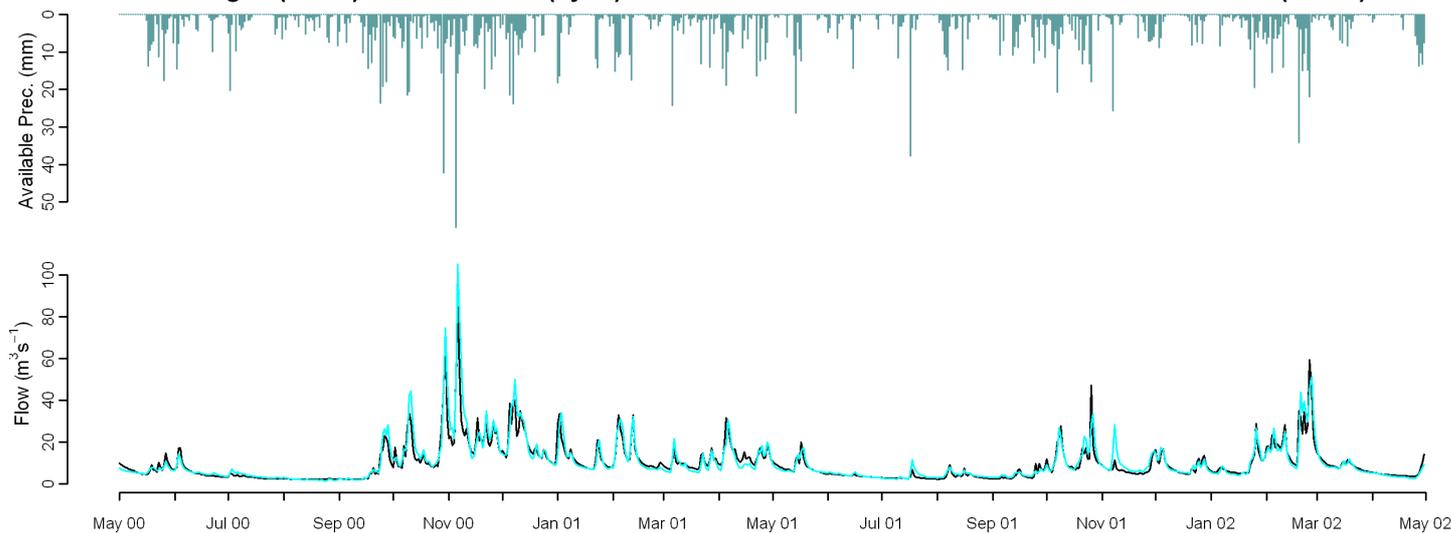
## Model used: CERF

|                    | Mean Annual | J    | F   | M    | A     | M     | J   | J    | A    | S    | O    | N    | D    | Nash Sutcliffe |
|--------------------|-------------|------|-----|------|-------|-------|-----|------|------|------|------|------|------|----------------|
| MORECS (1971-2005) | 6.8         | 5.2  | 1.0 | -4.7 | -10.9 | -13.0 | 2.6 | 13.8 | 20.9 | 25.8 | 26.5 | 19.8 | 12.2 | 0.78           |
| Performance Band   | 1           | 1    | 1   | 1    | 1     | 2     | 1   | 2    | 2    | 2    | 2    | 2    | 2    | 1              |
| MORECS (1962-1991) | 5.9         | 5.9  | 0.4 | -3.0 | -8.0  | -13.6 | 0.7 | 8.0  | 18.8 | 25.5 | 25.3 | 18.3 | 12.5 | 0.76           |
|                    | Q90         | Q75  | Q50 | Q25  | Q5    | RP2   |     | RP5  |      | RP10 |      | RP20 |      |                |
| MORECS (1971-2005) | 6.5         | 14.4 | 5.0 | 0.5  | 11.4  |       |     |      |      |      |      |      |      |                |
| Performance Band   | 1           | 1    | 1   | 1    | 1     |       |     |      |      |      |      |      |      |                |
| MORECS (1962-1991) | 5.1         | 19.1 | 5.4 | 0.1  | 9.1   |       |     |      |      |      |      |      |      |                |

Gauged (black) and simulated (cyan) flows from observed climate - Dove at Rocester Weir (28008)

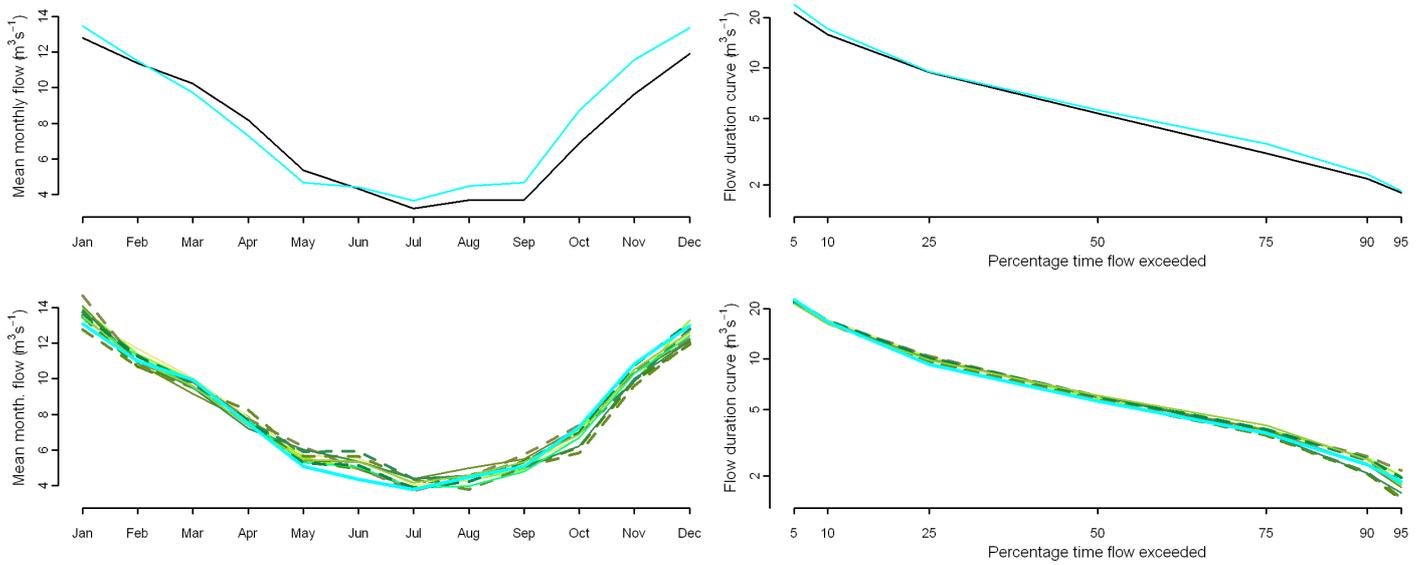


Gauged (black) and simulated (cyan) flows from observed climate - Dove at Rocester Weir (28008)



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

Gauged (black), simulated from obs. (cyan) and mod. (green) climate - Top 1971-2005 bottom 1962-1991 - Dove at Rocester Weir (28008)



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     | 0     | 4     | 6     | 3     | 0     | 0     | 4     | 0     | 2     | 2     |
| January | 9     | 0     | 5     | 10    | 8     | 0     | 5     | 7     | 2     | 1     | 4     |
| April   | 3     | 0     | 8     | 9     | 1     | 11    | -3    | 4     | 3     | 3     | 0     |
| July    | 5     | 13    | 14    | 2     | 16    | 17    | 17    | 18    | 5     | 0     | 10    |
| October | 1     | -12   | -8    | 8     | -2    | -16   | -8    | -1    | -8    | -3    | -4    |
| Q90     | 11    | -12   | 1     | 13    | -3    | -11   | -13   | 5     | 1     | 4     | 8     |
| Q75     | 6     | -2    | 2     | 5     | 1     | -4    | -1    | 7     | -2    | 4     | 12    |
| Q50     | 4     | 2     | 7     | 6     | 6     | 3     | 7     | 9     | 0     | 5     | 7     |
| Q25     | 9     | 3     | 12    | 13    | 6     | 5     | 7     | 11    | 3     | 9     | 6     |
| Q5      | -2    | -1    | 1     | -1    | -2    | -4    | -6    | 1     | -3    | -4    | -6    |
| RP2     | -5    | -1    | -6    | 3     | 5     | 4     | 8     | 3     | 5     | 0     | -2    |
| RP10    | -13   | 4     | -18   | -2    | 2     | -3    | -5    | -6    | 17    | -13   | -1    |

Climate change graphs for 2050s

Change between future (2040-2069) and control (1961-1990) simulated flow (green) - Dove at Rocester Weir (28008)

