

## General Information

|                |           |                             |              |
|----------------|-----------|-----------------------------|--------------|
| River Name     | Mole      | Catchment Area (km2)        | 328          |
| Station Name   | Woodleigh | SAAR (mm) 61-90             | 1306         |
| Station Number | 50006     | Mean Annual Rain (mm) 62-91 | 1314         |
| Grid Reference | SS660211  | Mean Annual PE (mm) 62-91   | 574          |
| EA Region      | EA-SW     | Observed flow record        | 1965 to 2005 |



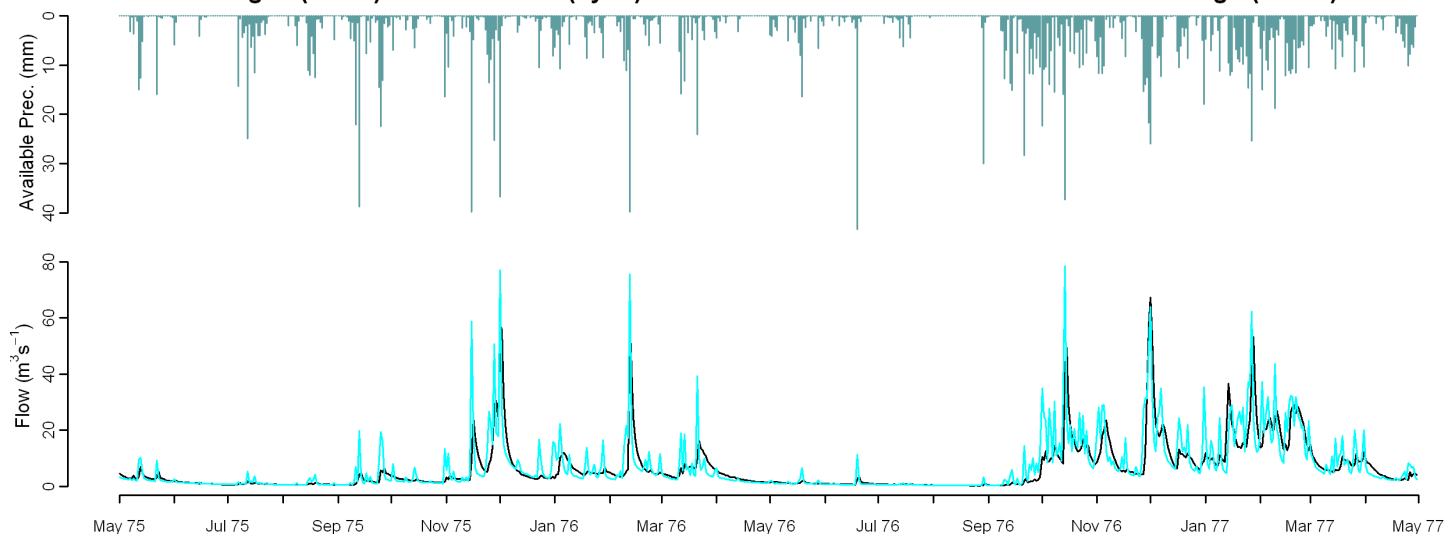
## Observed Data

## Comparison of gauged and simulated flow

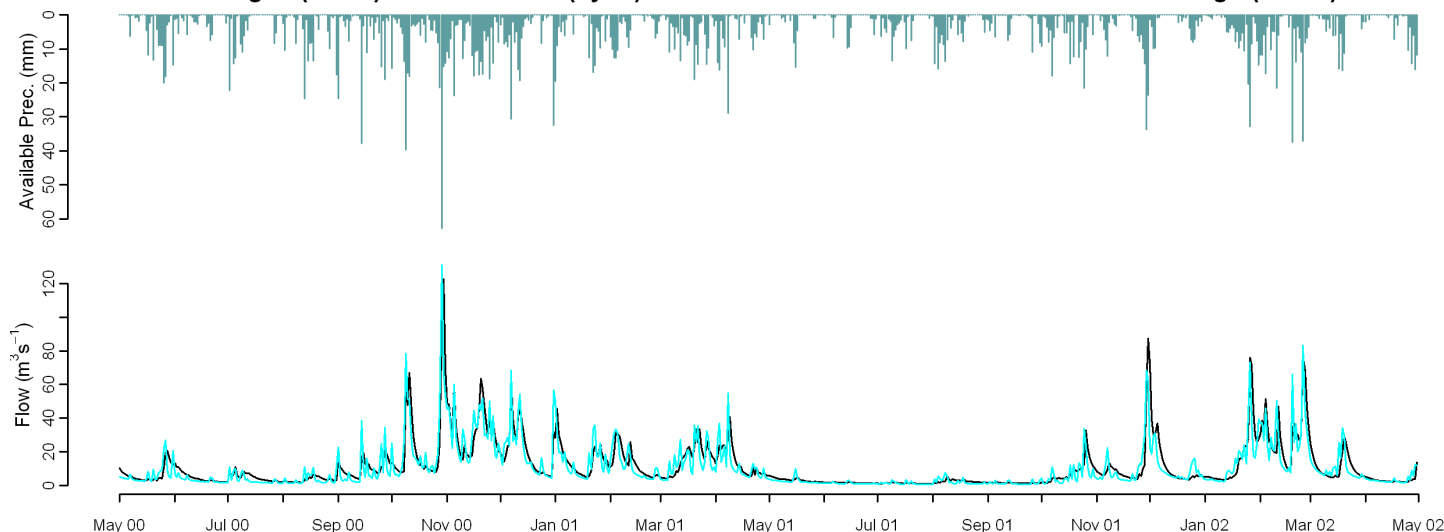
## Model used: PDM

|                    | Mean Annual | J     | F     | M    | A    | M     | J     | J     | A     | S     | O    | N   | D    | Nash Sutcliffe |
|--------------------|-------------|-------|-------|------|------|-------|-------|-------|-------|-------|------|-----|------|----------------|
| MORECS (1971-2005) | -2.1        | 1.7   | 0.0   | -4.0 | -9.2 | -16.0 | -14.6 | -14.3 | -7.0  | 0.4   | 0.6  | 1.2 | -0.2 | 0.63           |
| Performance Band   | 1           | 1     | 1     | 1    | 1    | 2     | 2     | 2     | 1     | 1     | 1    | 1   | 1    | 2              |
| FAO (1962-1991)    | 5.1         | 6.5   | 1.7   | 2.1  | -2.5 | -0.7  | 2.4   | -3.2  | -2.6  | 12.2  | 12.9 | 9.2 | 6.1  | 0.55           |
|                    | Q90         | Q75   | Q50   | Q25  | Q5   | RP2   |       | RP5   | RP10  | RP20  |      |     |      |                |
| MORECS (1971-2005) | -20.4       | -17.8 | -16.7 | -6.5 | 10.5 | -0.4  |       | -9.1  | -13.2 | -16.0 |      |     |      |                |
| Performance Band   | 1           | 1     | 2     | 1    | 1    |       |       |       |       |       |      |     |      |                |
| FAO (1962-1991)    | -8.3        | -8.0  | -7.0  | 0.1  | 14.4 | 4.2   |       | -9.6  | -16.0 | -20.6 |      |     |      |                |

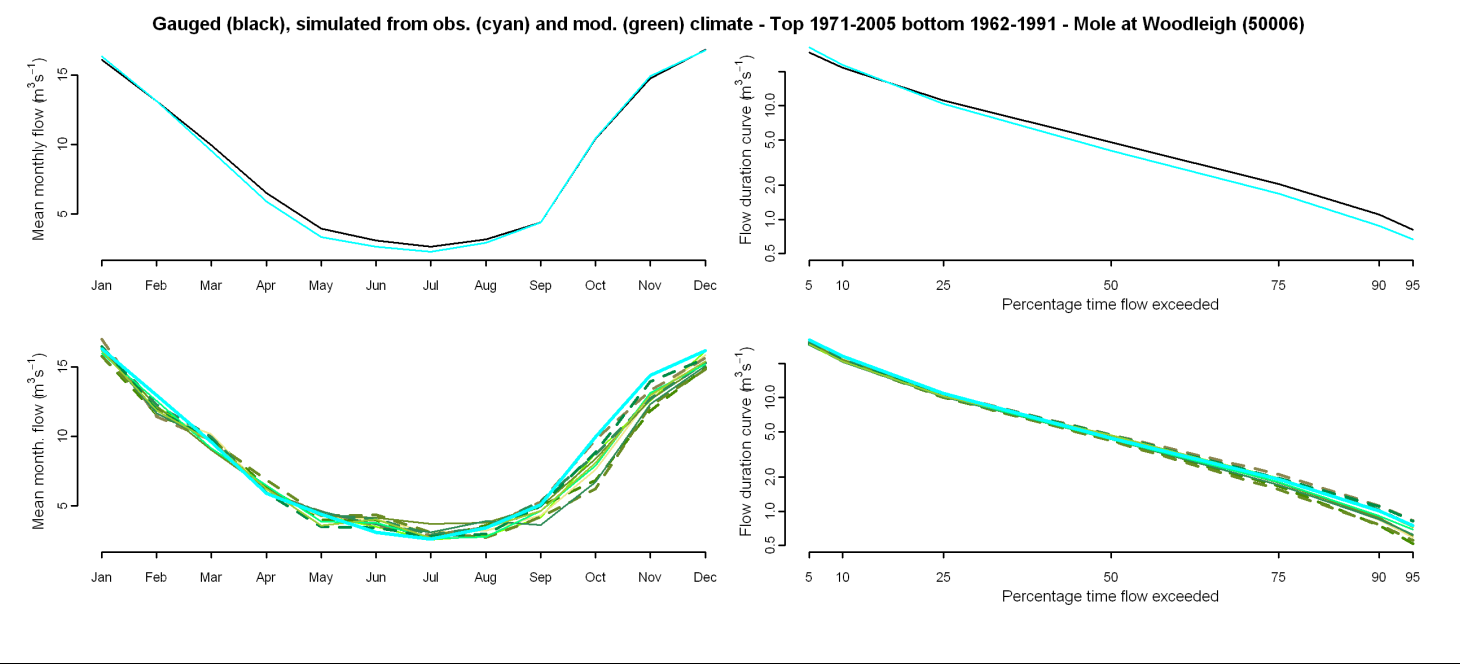
Gauged (black) and simulated (cyan) flows from observed climate - Mole at Woodleigh (50006)



Gauged (black) and simulated (cyan) flows from observed climate - Mole at Woodleigh (50006)



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  | -5    | -8    | -4    | 0     | -4    | -8    | -7    | -2    | -6    | -5    | -5    |
| January | 0     | -3    | 5     | 5     | 2     | -2    | -1    | 5     | -2    | -3    | 0     |
| April   | 4     | 0     | 3     | 2     | 5     | 13    | -1    | 1     | 6     | -2    | 8     |
| July    | -4    | 6     | 15    | 9     | 31    | 14    | 18    | 8     | 7     | 5     | 0     |
| October | -13   | -32   | -25   | 0     | -21   | -38   | -31   | -16   | -22   | -13   | -5    |
| Q90     | -1    | -26   | -16   | 9     | -16   | -26   | -15   | 1     | -9    | 7     | 0     |
| Q75     | 2     | -13   | -7    | 10    | -9    | -21   | -9    | 1     | -5    | 0     | -1    |
| Q50     | 3     | -6    | 1     | 8     | 2     | -7    | -1    | 4     | -2    | 4     | 4     |
| Q25     | -2    | -8    | -2    | 1     | -2    | -7    | -5    | -1    | -5    | -4    | -6    |
| Q5      | -10   | -7    | -5    | -5    | -6    | -8    | -8    | -4    | -9    | -10   | -8    |
| RP2     | -2    | -11   | -5    | -2    | -5    | -8    | -4    | -10   | -2    | -4    | -5    |
| RP10    | -3    | -9    | 4     | 3     | -2    | 8     | 4     | -10   | 2     | 7     | 8     |

Climate change graphs for 2050s

