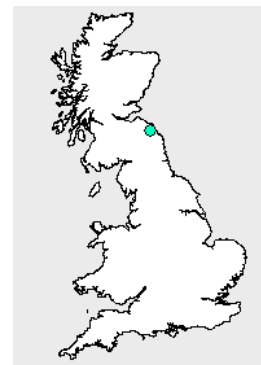


General Information

| | | | |
|----------------|----------|-----------------------------|--------------|
| River Name | Tweed | Catchment Area (km2) | 4390 |
| Station Name | Norham | SAAR (mm) 61-90 | 955 |
| Station Number | 21009 | Mean Annual Rain (mm) 62-91 | 983 |
| Grid Reference | NT898477 | Mean Annual PE (mm) 62-91 | 488 |
| EA Region | SEPA-SE | Observed flow record | 1962 to 2005 |



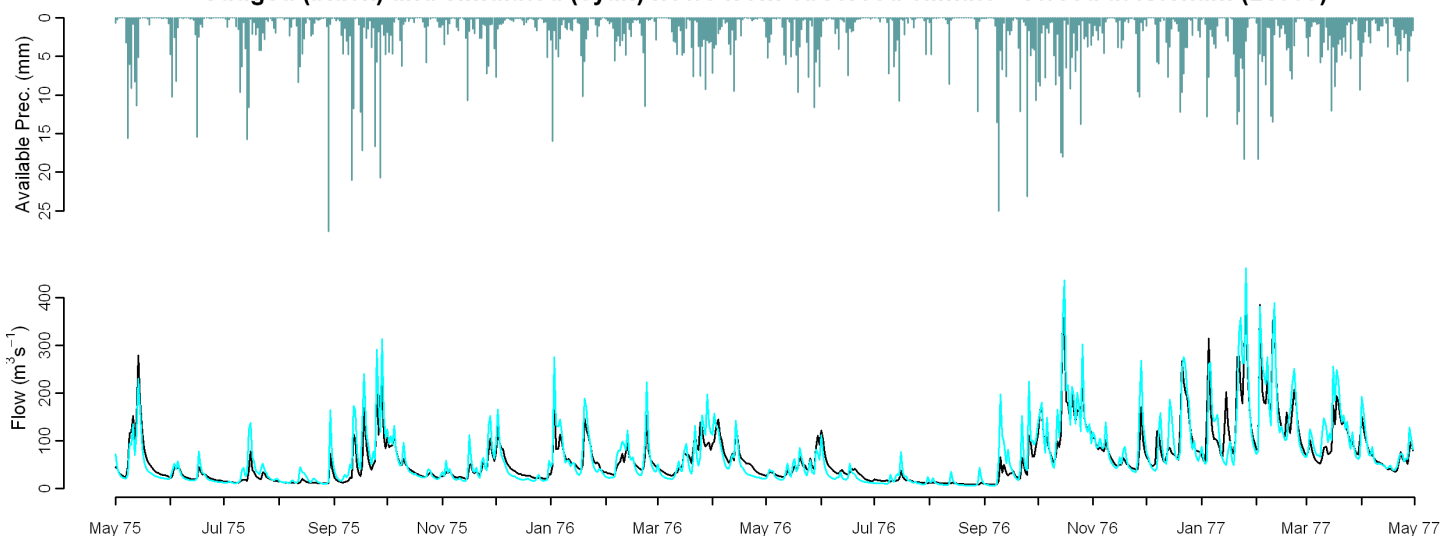
Observed Data

Comparison of gauged and simulated flow

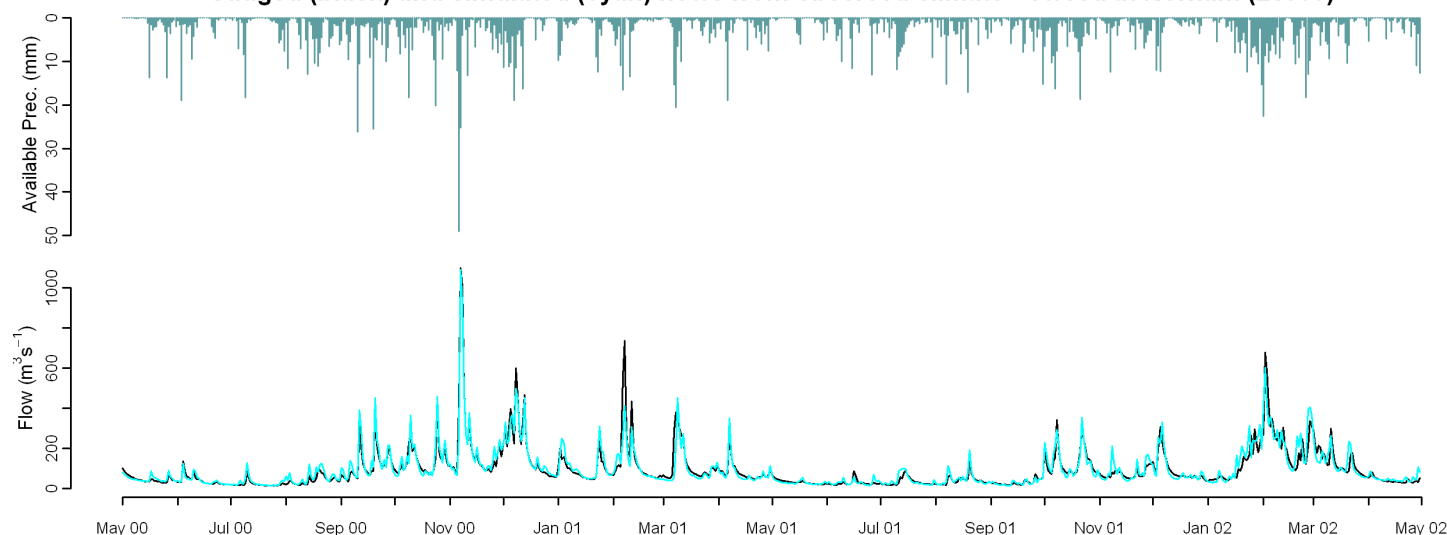
Model used: CLASSIC

| | Mean Annual | J | F | M | A | M | J | J | A | S | O | N | D | Nash Sutcliffe |
|--------------------|-------------|-----|-----|-----|------|------|------|------|-------|-------|-------|------|-----|----------------|
| MORECS (1971-2005) | 6.1 | 0.6 | 2.4 | 5.5 | 2.1 | 0.7 | 4.9 | 15.6 | 15.3 | 21.3 | 11.7 | 8.8 | 5.1 | 0.84 |
| Performance Band | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| FAO (1962-1991) | 7.7 | 3.6 | 1.3 | 3.8 | 2.4 | 3.1 | 10.3 | 13.1 | 12.8 | 21.4 | 14.8 | 11.9 | 6.5 | 0.80 |
| | Q90 | Q75 | Q50 | Q25 | Q5 | RP2 | | | RP5 | RP10 | RP20 | | | |
| MORECS (1971-2005) | 4.0 | 7.9 | 2.2 | 7.1 | 11.9 | -7.5 | | | -11.8 | -12.3 | -11.6 | | | |
| Performance Band | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| FAO (1962-1991) | 7.2 | 7.4 | 2.4 | 7.3 | 14.3 | 1.1 | | | -3.4 | -5.0 | -5.7 | | | |

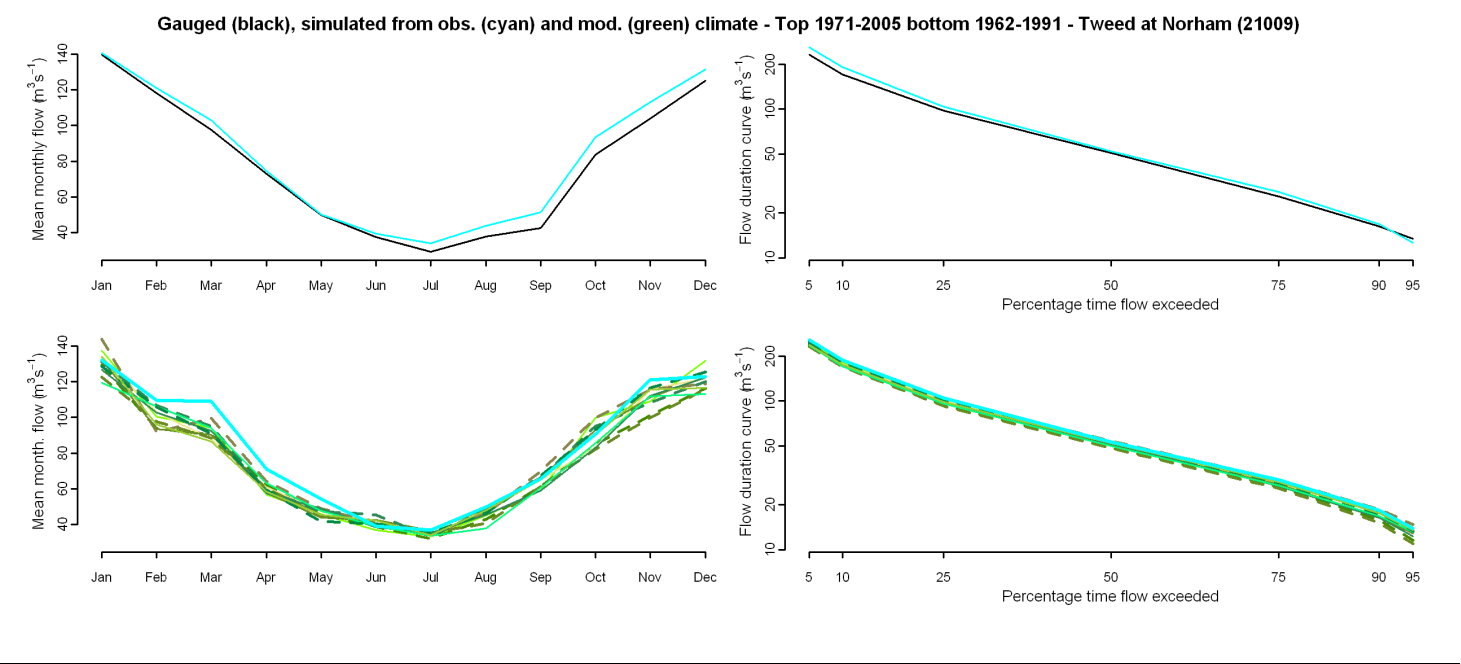
Gauged (black) and simulated (cyan) flows from observed climate - Tweed at Norham (21009)



Gauged (black) and simulated (cyan) flows from observed climate - Tweed at Norham (21009)



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 | -4 | -8 | -5 | -1 | -6 | -9 | -6 | -2 | -7 | -4 | -5 |
| January | 5 | -2 | 2 | 7 | 1 | -3 | -6 | 3 | -6 | -4 | 5 |
| April | -19 | -17 | -11 | -4 | -18 | -14 | -17 | -11 | -12 | -14 | -18 |
| July | -8 | -5 | -8 | -2 | -1 | -9 | -3 | -10 | -7 | -6 | -7 |
| October | 11 | -2 | -9 | 13 | 3 | -8 | 3 | 2 | -4 | 4 | 1 |
| Q90 | -2 | -14 | -12 | 3 | -14 | -18 | -13 | -4 | -9 | -8 | -4 |
| Q75 | -4 | -10 | -5 | 1 | -10 | -13 | -10 | -2 | -9 | -6 | -4 |
| Q50 | -3 | -8 | -2 | 2 | -6 | -9 | -3 | -1 | -6 | -2 | -3 |
| Q25 | -4 | -10 | -5 | -1 | -7 | -11 | -6 | -3 | -9 | -3 | -7 |
| Q5 | -5 | -8 | -8 | -3 | -6 | -9 | -8 | -3 | -9 | -6 | -8 |
| RP2 | 0 | -1 | 0 | 5 | 0 | -1 | -2 | 0 | 5 | -4 | 4 |
| RP10 | -9 | -4 | -6 | -5 | 2 | -9 | -16 | -4 | -6 | -3 | 7 |

Climate change graphs for 2050s

