

General Information

| | | | |
|----------------|--------------|-----------------------------|--------------|
| River Name | Brathay | Catchment Area (km2) | 57 |
| Station Name | Jeffy Knotts | SAAR (mm) 61-90 | 2766 |
| Station Number | 73014 | Mean Annual Rain (mm) 62-91 | 2847 |
| Grid Reference | NY360034 | Mean Annual PE (mm) 62-91 | 489 |
| EA Region | EA-NW | Observed flow record | 1976 to 2005 |



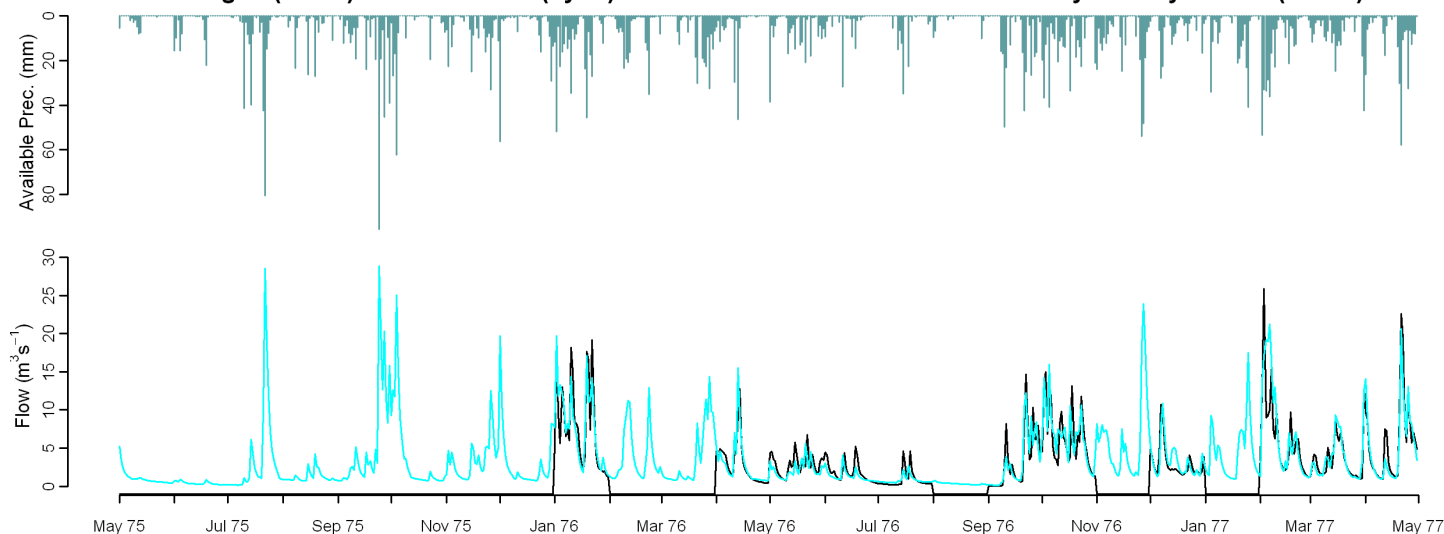
Observed Data

Comparison of gauged and simulated flow

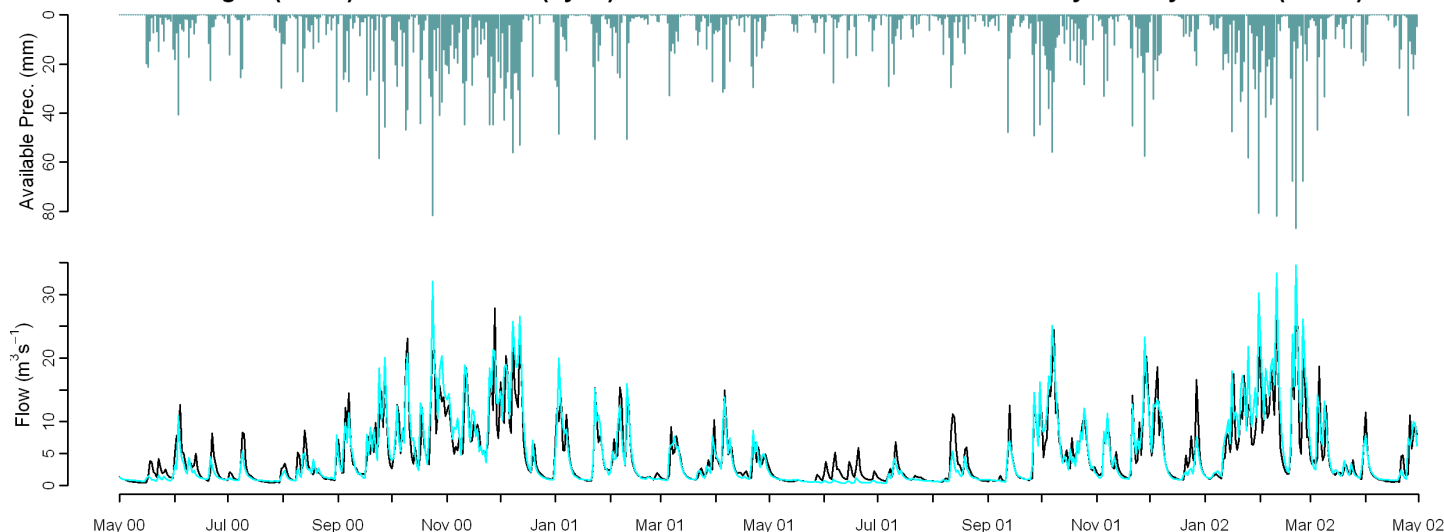
Model used: CERF

| | Mean Annual | J | F | M | A | M | J | J | A | S | O | N | D | Nash Sutcliffe |
|--------------------|-------------|------|-------|------|------|-------|-------|-------|-------|------|-----|------|------|----------------|
| MORECS (1971-2005) | 6.4 | 16.6 | 18.5 | 13.7 | -3.2 | -13.4 | -25.2 | -20.8 | -12.8 | -3.0 | 8.2 | 15.3 | 17.7 | 0.70 |
| Performance Band | 1 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 1 |
| MORECS (1962-1991) | 9.7 | 19.6 | 17.5 | 22.5 | -0.6 | -16.6 | -24.9 | -16.6 | -13.6 | -7.1 | 5.5 | 22.5 | 24.7 | 0.67 |
| | Q90 | Q75 | Q50 | Q25 | Q5 | | | | | | | | | |
| MORECS (1971-2005) | 20.2 | -3.0 | -10.9 | 5.9 | 8.4 | | | | | | | | | |
| Performance Band | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| MORECS (1962-1991) | 32.4 | 1.9 | -9.3 | 6.1 | 7.2 | | | | | | | | | |

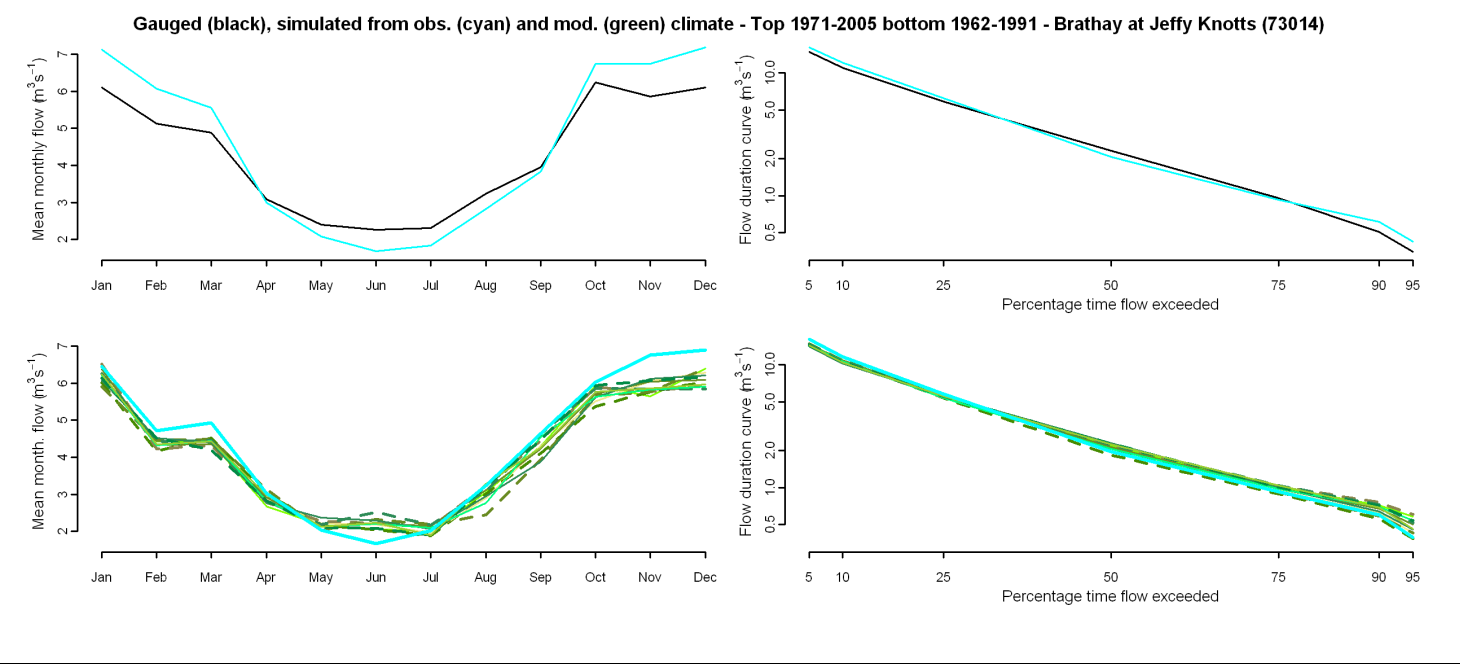
Gauged (black) and simulated (cyan) flows from observed climate - Brathay at Jeffy Knotts (73014)



Gauged (black) and simulated (cyan) flows from observed climate - Brathay at Jeffy Knotts (73014)



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 | -6 | -4 | -1 | -4 | -5 | -6 | -2 | -5 | -4 | -4 |
| January | -3 | -5 | -2 | -2 | -1 | -4 | -8 | -1 | -4 | -9 | 2 |
| April | -11 | -4 | -6 | -3 | -5 | 1 | -7 | -7 | -12 | -6 | -5 |
| July | -1 | -1 | 2 | 11 | 6 | 6 | 0 | 7 | 1 | -9 | -6 |
| October | 0 | -2 | -11 | 1 | -5 | -4 | 3 | -4 | -5 | 0 | -3 |
| Q90 | 20 | -7 | 1 | 27 | 9 | -3 | 3 | 18 | 15 | 14 | 16 |
| Q75 | 8 | -4 | 2 | 12 | 3 | -2 | 6 | 11 | 5 | 7 | 11 |
| Q50 | 12 | -5 | 5 | 12 | 7 | 2 | 15 | 14 | 6 | 13 | 14 |
| Q25 | -5 | -7 | -3 | -5 | -5 | -4 | -4 | -2 | -6 | -6 | -4 |
| Q5 | -12 | -7 | -10 | -8 | -9 | -9 | -12 | -8 | -10 | -11 | -11 |
| RP2 | -12 | -11 | -12 | -10 | -11 | -11 | -15 | -13 | -10 | -8 | -13 |
| RP10 | -15 | -16 | -17 | -17 | -11 | -18 | -19 | -18 | -19 | -12 | -19 |

Climate change graphs for 2050s

