*Supporting Information S3 – Univariate regression model statistics*

Table 1. Statistics for univariate linear regression models comparing FDis with hydrological metrics. p.adj represents p values which have been adjusted to control the false discovery rate. Relationships which remained significant following adjustment are shown in bold typeface. \* All models are linear apart from M\_MinM and CVMDFSummer, for which a quadratic model (df = 2,12) provided a substantially better fit.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **metric** | **p** | **p.adj** | **R2** | **F(1,13)** |
| *CVAnnHSPeak* | **0.0010** | **0.0152** | **0.5773** | **17.7500** |
| *M\_MinM* | **0.0094** | **0.0278** | **0.5404** | **\*7.0560** |
| *MDFMDFSummer* | **0.0031** | **0.0230** | **0.5032** | **13.1700** |
| *CVMDFSummer* | **0.0218** | **0.0325** | **0.4716** | **\*5.3560** |
| *CVMDFWinter* | **0.0096** | **0.0278** | **0.4143** | **9.1940** |
| *CVAnnMRateRise* | **0.0110** | **0.0278** | **0.4031** | **8.7810** |
| *CVAnnMRateFall* | **0.0129** | **0.0278** | **0.3896** | **8.2990** |
| *MDFMDFSpring* | **0.0134** | **0.0278** | **0.3862** | **8.1800** |
| *AS20YrARI* | **0.0148** | **0.0278** | **0.3774** | **7.8790** |
| *M\_MDFM* | **0.0209** | **0.0325** | **0.3470** | **6.9080** |
| *M\_MaxM* | **0.0258** | **0.0325** | **0.3275** | **6.3300** |
| *CVMDFSpring* | **0.0260** | **0.0325** | **0.3269** | **6.3130** |
| *CVMDFAutumn* | **0.0342** | **0.0386** | **0.3009** | **5.5950** |
| *CVAnnHSNum* | **0.0360** | **0.0386** | **0.2961** | **5.4680** |
| *HSPeak* | 0.0648 | 0.0648 | 0.2384 | 4.0690 |
| *MDFMDFWinter* | 0.0881 | 0.0780 | 0.2073 | 3.4010 |
| *C\_MaxM* | 0.0885 | 0.0780 | 0.2069 | 3.3920 |
| *C\_MDFM* | 0.1086 | 0.0861 | 0.1859 | 2.9680 |
| *MDFMDFAutumn* | 0.1091 | 0.0861 | 0.1854 | 2.9590 |
| *C\_MinM* | 0.1361 | 0.1021 | 0.1626 | 2.5240 |
| *MRateRise* | 0.1556 | 0.1072 | 0.1488 | 2.2720 |
| *MRateFall* | 0.1572 | 0.1072 | 0.1477 | 2.2530 |
| *MDFAnnHSNum* | 0.7270 | 0.4741 | 0.0097 | 0.1273 |