EDHM Independent data description document

# MetData

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Units | Description | Notes |
| TAir | Cel | Average air temperature |  |
| TMax | Cel | Maximal air temperature |  |
| TMin | Cel | Minimal air temperature |  |
| Precipitation | mm | Total precipitation (rain and snow) |  |
| AirDensity | kg/m3 | Atmospheric density |  |
| AirPressure | kPa | Atmospheric pressure |  |
| VaporPressure | kPa | Vapor pressure | calc\_saturated\_vapor\_pressure |
| VaporPressDeficit | kPa | Atmospheric vapor pressure deficit |  |
| RelativeHumidity | % | Relative humidity |  |
| WindSpeed | m/s | Wind speed |  |
| WindH | m | height at which wind is measured |  |
| ShortWave | W/m2 | Incoming shortwave radiation |  |
| LongWave | W/m2 | Incoming longwave radiation |  |
| SunHour | h | Sun hour in one day |  |

# VegData

|  |  |  |
| --- | --- | --- |
| Variable | Description | Units |
| LAI | current leaf area index | m2/m2 |
| Albedo | current vegetation albedo | 100% |
| Fetch | Average fetch length for each vegetation | no data |
| VegHeight | vegetation height | m |
| TrunkRatio | ratio of trunk height to tree height, default = 0.2 | 100% |
| Displacement | vegetation displacement | no data |
| Roughness | vegetation roughness length | m |
| WindAttenuation | wind attenuation through canopy, default = 0.5 | no data |
| IsOverstory | TRUE = overstory present, important for snow accumulation in canopy | LOGICAL |
| MaxIntercept |  |  |

# GeoData

|  |  |  |
| --- | --- | --- |
| Variable | Description | Units |
| Latitude |  | deg |
| Longitude |  | deg |
| Elevation |  | m |

# LandData

|  |  |  |
| --- | --- | --- |
| Variable | Description | Units |
| LagOneSlope | Lag-one autocorrelation of terrain slope within vegetation tile | N/A |
| SigmaSlope | Standard deviation of terrain slopes within vegetation tile | N/A |
| MaxSnowDistribSlope | Maximum slope of snow depth distribution [m]. This should equal 2\*depth\_min, where depth\_min = minimum snow pack depth below which coverage < 1. Comment, ported from user\_def.h, with questionable units: SiB uses 0.076; Rosemount data imply 0.155cm depth ~ 0.028mm swq. | m |

# SoilData

|  |  |  |
| --- | --- | --- |
| Variable | Description | Units |
| Porosity |  | 100% |
| FieldCapacity |  | 100% |
| WiltingPoint |  | 100% |
| WettingFrontSoilSuctionHead |  | mm |
| SaturatedSoilSuctionHead |  | mm |
| SaturatedHydraulicConductivity |  | mm/d |

# TimeData

|  |  |  |
| --- | --- | --- |
| Variable | Description | Units |
| NDay | Oder of the day of the year | N/A |
| NMon | Oder of the month of the year | N/A |
|  |  |  |