

Data Types for VELMA 2.0

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Input	Units/ Data value	File Type
DEM	meters	.asc
Gauge/Flow	Millimeters per day	.csv
Precipitation	Millimeters per day	.csv
Air Temp	Mean daily temp in Celcius	.csv
Cover Species ID	Species with ID numbers	.asc
Cover Species Age	Age in years	.asc
Chemistry Pools	observed DON, NH ₄ , DOC, and NO ₃ loss	.asc
Soil Parameters	Soil Parameterization ID numbers	.asc

DEM:

-**.asc** with elevation values in **meters** for each cell

Input Runoff – Gauge Station Flow Data File:

-**.csv** flow data value is **millimeters for each day** of simulation

Precipitation Driver Data File:

-**.csv** rain value is **millimeters for each day** of simulation
-data formatted one value per line in file, one line per day
-as many lines as there are for days between simulation forcing_start and forcing_end
-no headers, no commas, will also accept .txt file, but csv preferred

Air Temperature Driver Data File

-**.csv** temp value is **Celcius for mean daily temperature** for each day of simulation
-data formatted one value per line in file, one line per day
-as many lines as there are for days between simulation forcing_start and forcing_end
-no headers, no commas, will also accept .txt file, but csv preferred

Cover Species ID Map File:

-**.asc** values with cover **species ID numbers** for each cell
-ID number must be integers
-must correspond to simulators config for cover/.../uniqueID key values

Cover Species Age Map File:

-**.asc** values with age in **years** for each cell
-age in each cell reps cells cover species' age in yrs at the simulation start yr
-must correspond to simulators config for calibration/.../year key values

Observed Chemistry Pools/Stream Chemistry Data Files

-**.asc** values for **observed DON, NH₄, DOC, and NO₃ loss values** each day of simulation (doesn't say units?)
-formatted as four comma-separated values per line, one line per day

Soil Parameters ID Map File:

-**.asc** values containing **soil parametrization ID numbers** for each cell
-ID number must be integer
-must correspond with simulator config /soil/.../uniqueID