Package ‘SWATmodel’

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Title A multi-OS implementation of the TAMU SWAT model.
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Description The Soil and Water Assessment Tool is a river basin or watershed scale model developed by Dr. Jeff Arnold for the USDA-ARS.
License GPL-2
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**Description**

The Soil and Water Assessment Tool is a river basin or watershed scale model developed by Dr. Jeff Arnold for the USDA-ARS.
build_swat_basic

Details

Package: SWATmodel
Type: Package
Version: 0.5.9
Date: 2011-12-22
License: GPL-2
LazyLoad: yes

Included Functions:
GSOD_history

Author(s)
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build_swat_basic        Extracts a simple 9 HRU, 3 subbasin SWAT initialization

Description
Extracts a simple 9 HRU, 3 subbasin SWAT initialization

Usage
build_swat_basic(dirname, iyr, nbyr, wsarea, elev, declat, declon, hist_wx)

Arguments

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Author(s)
Daniel Fuka
Examples

```r
## Not run:
build_swat_basic(dirname="test", iyr="1979", nbyr=13, wsarea=40, elev=200, declat=45, declon=-72, hist.wx=hist.wx)

## End(Not run)
```

readSWAT Read output.* files from SWAT200*

Description

A function to read output.* files from SWAT200* runs.

Usage

```r
readSWAT(outfile_type)
```

Arguments

- `outfile_type` outfile_type ie. "sub","rch",etc.

Author(s)

Daniel R. Fuka

Examples

```r
## The function is currently defined as
function(outfile){

if (outfile="sub"){
  varformat="x6,a4,lx,a8,1x,a4,a10,30a10"
  dataformat="x6,14,1x,18,1x,14,f10,30f10"
} else if (outfile="rch"){
  varformat="x6,a4,lx,a8,1x,a5,30a12"
  dataformat="x6,14,1x,18,1x,15,30f12"
} else { print("You need to add your file type to this function if it is not output.sub or output.rch")}

print(varformat)
print(dataformat)
vfrformat = unlist(strsplit(as.character(varformat), ","))
dfrformat = unlist(strsplit(as.character(dataformat), ","))
outvars=read.fortran(paste("output",outfile,sep=""),vfrformat,skip=8,nrows=1)
outdata=read.fortran(paste("output",outfile,sep=""),dfrformat,skip=9,col.names=outvars)
return(outdata)
}
```
runSWAT2005

This runs the SWAT2005 executable in the current directory.

Description

This function runs the SWAT2005 executable in the current directory.

Usage

runSWAT2005(hist_wx,elev,rch)

Arguments

hist_wx Describe hist_wx
elev Describe elev
rch Describe rch

Author(s)

Daniel R. Fuka

runSWAT2009

This runs the SWAT2009 executable in the current directory.

Description

This function runs the SWAT2009 executable in the current directory.

Usage

runSWAT2009(hist_wx,elev,rch)

Arguments

hist_wx Describe hist_wx
elev Describe elev
rch Describe rch

Author(s)

Daniel R. Fuka
runSWAT2012

**This runs the SWAT2012 executable in the current directory.**

**Description**

This function runs the SWAT2012 executable in the current directory.

**Usage**

```r
runSWAT2012(hist_wx,elev,rch)
```

**Arguments**

- **hist_wx**: Describe hist_wx
- **elev**: Describe elev
- **rch**: Describe rch

**Author(s)**

Daniel R. Fuka

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**swat_general**

All files required for a general SWAT run.

**Description**

All files required for a general SWAT run. This initialization has 3 subbasin init, with 3 HRUs per subbasin.

**Usage**

```r
data(swat_general)
```

**Examples**

```r
data(swat_general)
```
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