

Package ‘SWATmodel’

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Version 0.5.9

Title A multi-OS implementation of the TAMU SWAT model.

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Depends R (>= 2.10), EcoHydRology

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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SWATmodel-package *SWATmodel: A multi-OS / multi-platform implementation of the TAMU SWAT model in R.*

Description

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

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

dirname	Describe dirname
iyr	Describe iyr
nbyr	Describe nbyr
wsarea	Describe wsarea
elev	Describe elev
declat	Describe declat
declon	Describe declon
hist_wx	Describe hist_wx

Author(s)

Daniel Fuka

Examples

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

## End(Not run)
```

readSWAT	<i>Read output.* files from SWAT200*</i>
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Description

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

Usage

```
readSWAT(outfile_type)
```

Arguments

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

Author(s)

Daniel R. Fuka

Examples

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

  if (outfile=="sub"){
    varformat="x6,a4,1x,a8,1x,a4,a10,30a10"
    dataformat="x6,i4,1x,i8,1x,i4,f10,30f10"
  } else if (outfile=="rch"){
    varformat="x6,a4,1x,a8,1x,a5,30a12"
    dataformat="x6,i4,1x,i8,1x,i5,30f12"
  } 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

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

Arguments

<code>hist_wx</code>	Describe <code>hist_wx</code>
<code>elev</code>	Describe <code>elev</code>
<code>rch</code>	Describe <code>rch</code>

Author(s)

Daniel R. Fuka

`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

```
data(swat_general)
```

Examples

```
data(swat_general)
```

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