Package: nesRdata (via r-universe)

October 4, 2024

Title National Eutrophication Survey Data

Version 0.3.1

URL https://github.com/jsta/nesRdata

BugReports https://github.com/jsta/nesRdata/issues

Description Serves data from the United States Environmental Protection Agency (USEPA) National Eutrophication Survey <https://www.epa.gov/national-aquatic-resource-surveys>.

Depends R (>= 3.4.0)

Imports rappdirs, dplyr, purrr, readr, dataone

License GPL

Encoding UTF-8

LazyData true

RoxygenNote 7.0.2

Repository https://jsta.r-universe.dev

RemoteUrl https://github.com/jsta/nesrdata

RemoteRef HEAD

RemoteSha 4638bafe3928b3bb689787d80643d1781bd53b8e

Contents

cache_path *cache_path*

Description

Return path to OS agnostic cache location specified by the rappdirs package

Usage

```
cache_path()
```

nes *National Eutrophication Survey Data*

Description

A dataset containing hydrologic and water quality data for approximately 800 lakes in the continental United States.

Usage

```
nes
```

Format

An object of class `data.frame` with 775 rows and 39 columns.

Details

variable name	description
pdf	pdf identifier (474 - 477)
pagenum	page number of the pdf (not the report page number
storet_code	identifier which links measurement to coordinate locati
state	state where the water body resides
name	name of the water body
county	county where the water body resides
lake_type	natural or impoundment
drainage_area	the total drainage area
surface_area	the area of the water surface
mean_depth	the volume of the water body divided by the surface area in sq
total_inflow	the mean of the inflows of all tributaries and the immediate
retention_time	a mean value determined by dividing the lake volume, in cubic meters, by the mean annual outflow
retention_time_units	the units of time for each retention entry
alkalinity	alkalinity
conductivity	conductivity

secchi	secchi
tp	total phosphorus
po4	orthophosphate
tin	total inorganic nitrogen
tn	total nitrogen
p_pnt_source_muni	municipal point source phosphorus loading
p_pnt_source_industrial	industrial point source phosphorus loading
p_pnt_source_septic	septic point source phosphorus loading
p_nonpnt_source	nonpoint source phosphorus loading
p_total	total phosphorus loading
n_pnt_source_muni	municipal point source nitrogen loading
n_pnt_source_industrial	industrial point source nitrogen loading
n_pnt_source_septic	septic point source nitrogen loading
n_nonpnt_source	nonpoint source nitrogen loading
n_total	total nitrogen loading
p_total_out	total phosphorus outlet load
p_percent_retention	percent phosphorus retention
p_surface_area_loading	phosphorus surface area loading
n_total_out	total nitrogen outlet load
n_percent_retention	percent nitrogen retention
n_surface_area_loading	nitrogen surface area loading
lat	latitude
long	longitude

Examples

```
data(nes)
head(nes)
```

`nes_compile` *Compile data to R data (rds) object*

Description

Compile data from component flat files

Usage

```
nes_compile(version_id, format = "rds", folder = tempdir(), skip = NA)
```

Arguments

`version_id`	character nes version string
`format`	character choice of "rds" or "sqlite"
`folder`	file.path to data folder; set to cache_path() to have data persist between sessions.
`skip`	numeric vector of lines to skip on file read. optional.

Examples

```
## Not run:
nes_get("1")
nes_compile("1", format = "rds")

nes_get("1", dest_folder = cache_path(), compile = FALSE)
nes_compile("1", folder = cache_path())

## End(Not run)
```

---

nes_get *nes_get*

Description

Retrieves external files and store in file cache.

Usage

```
nes_get(version_id, dest_folder = tempdir(), skip = NA, compile = TRUE)
```

Arguments

version_id	character version id
dest_folder	file.path optional will default to the location returned by user_data_dir.
skip	numeric vector of lines to skip on file read. optional.
compile	logical perform on-the-fly compilation to rds?

Examples

```
## Not run:
nes_get(version_id = "5") # save to temp folder

nes_get(version_id = "5", dest_folder = cache_path()) # save to cache folder

## End(Not run)
```

nes_ingest *Ingest flat files*

Description

Ingest data from component flat files

Usage

```
nes_ingest(version_id, folder = NA, skip = NA)
```

Arguments

version_id	character nes version string
folder	file.path to data folder. optional.
skip	numeric vector of lines to skip on file read. optional.

Examples

```
## Not run:
nes_ingest("1")

## End(Not run)
```

nes_load *nes_load*

Description

Load files from local file system

Usage

```
nes_load(version_id, folder = tempdir(), format = "rds", fpath = NA)
```

Arguments

version_id	character database version string
folder	file.path to data folder; use cache_path() to load cached (non-temporary) data
format	character choice of rds or sqlite
fpath	file.path optionally specify custom location of rds file

Examples

```
## Not run:

# load from tempdir
nes_get("5")
dt  <- nes_load("5")

# load from cached
nes_get("5", dest_folder = cache_path())
dt  <- nes_load("5")

## End(Not run)
```

`nes_ls` *nes_ls*

Description

nes_ls

Usage

```
nes_ls(version_id, folder = temp_path(), ...)
```

Arguments

`version_id`	character version id
`folder`	file.path to NES data; pass cache_path() to use OS agnostic cache location specified by the rappdirs package.
`...`	extra arguments passed to list.files

Examples

```
nes_ls("1")
```

`nes_versions` *nes_versions*

Description

nes_versions

Usage

```
nes_versions()
```

Examples

```
nes_versions()
```

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