Package 'StreamCatTools'

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Type Package

Title 'StreamCatTools'

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Description Tools for using the 'StreamCat' and 'LakeCat' API and interacting with the 'StreamCat' and 'LakeCat' database. Convenience functions in the package wrap the API for 'StreamCat' on <https://api.epa.gov/StreamCat/streams/metrics>.

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Contents

`lc_fullname` *Lookup Full Metric Name*

Description

Function to retrieve a full metric name based on the short name using the LakeCat API.

Usage

```
lc_fullname(metric = NULL)
```

Arguments

`metric`	Short metric name Syntax: metric=value1 Values: metric

Value

A lookup of the full name for a given LakeCat metric

Author(s)

Marc Weber

Examples

```
fullname <- lc_fullname(metric='clay')
```

`lc_get_comid` *Get Lake COMIDs*

Description

Function to return NHDPlusV2 Waterbody COMIDS using either a dataframe with coordinates and a specified CRS or an sf object. The function generates a vector of NHDPlus Waterbody COMID values a user can then pass to lc_get_data function

Usage

```
lc_get_comid(
  dd = NULL,
  xcoord = NULL,
  ycoord = NULL,
  crsys = NULL,
  buffer = NULL
)
```

Arguments

`dd`	Name of data frame object. Can be a simple data frame with coordinate columns in a known CRS or an sf points data frame
`xcoord`	The x coordinate column if using a raw data frame
`ycoord`	The y coordinate column if using a raw data frame
`crsys`	The epsg code if using a raw data frame
`buffer`	The amount of buffer to use to extend search for a waterbody (simply passed to nhdplusTools::get_waterbodies)

Value

A new sf data frame with a populated 'COMID' column

Author(s)

Marc Weber

Examples

```
## Not run:

dd <- data.frame(x = c(-89.198,-114.125,-122.044),
y = c(45.502,47.877,43.730))

comids <- lc_get_comid(dd, xcoord='x',
                       ycoord='y', crsys=4269)

dd <- data.frame(x = c(-89.198,-114.125,-122.044),
y = c(45.502,47.877,43.730)) |>
   sf::st_as_sf(coords = c('x', 'y'), crs = 4326)

comids <- lc_get_comid(dd)

## End(Not run)
```

`lc_get_data` *Get LakeCat data*

Description

Function to return LakeCat metrics using the StreamCat API. The function allows a user to get specific metric data aggregated by area of interest, returned by comid(s), hydroregion(s), state(s), or county(ies).

Usage

```
lc_get_data(
  comid = NULL,
  metric = NULL,
  aoi = NULL,
  showAreaSqKm = NULL,
  showPctFull = NULL,
  state = NULL,
  county = NULL,
  region = NULL,
  conus = NULL,
  countOnly = NULL
)
```

Arguments

`comid`	Return metric information for specific COMIDs. Can be a comma-delimited list, a character vector, or any object that can be coerced to a comma-delimited list with `paste`. One of `comid`, `county`, `state`, or `region` is required unless `conus='true'`. Syntax: comid=<comid1>,<comid2>

`metric`	Name(s) of metrics to query. Must be character string with comma-delimited list of metrics. **Not** *case-sensitive*. Syntax: name=<name1>,<name2>
`aoi`	Specify the area of interest described by a metric. By default, all available areas of interest for a given metric are returned. *Case-sensitive*. Syntax: areaOfInterest=<value1>,<value2> Values: catchment|watershed|
`showAreaSqKm`	Return the area in square kilometers of a given area of interest. The default value is false. Values: true|false
`showPctFull`	Return the pctfull for each dataset. The default value is false. Values: true|false
`state`	Return metric information for COMIDs within a specific state. Use a state's abbreviation to query for a given state. One of `comid`, `county`, `state`, or `region` is required unless `conus='true'`. If specified *and valid*, `comid` and `county` are ignored. *Case-sensitive*. Syntax: state=<state1>,<state2>
`county`	Return metric information for COMIDs within a specific county. Users must use the FIPS code, not county name, as a way to disambiguate counties. One of `comid`, `county`, `state`, or `region` is required unless `conus='true'`. If specified *and valid*, `comid` is ignored. Syntax: county=<county1>,<county1>
`region`	Return metric information for COMIDs within a specified hydroregion. Hydroregions are specified using full name i.e. `'Region01'`, `'Region03N'`, `'Region10L'` One of `comid`, `county`, `state`, or `region` is required unless `conus='true'`. If specified *and valid*, `comid`, `county`, and `state` are ignored. *Case-sensitive*. Syntax: region=<regionid1>,<regionid2>
`conus`	Return all COMIDs in the conterminous United States. Character string (**Not** *case-sensitive*) or logical. The default value is false. If true, `comid`, `county`, `state`, and `region` are ignored. Values: true|false
`countOnly`	Return a CSV containing only the row count (ROWCOUNT) and the column count (COLUMNCOUNT) that the server expects to return in a request. The default value is false. Values: true|false

Value

A tibble of desired StreamCat metrics. If data are missing for all rows of a given metric, then the column for that metric will not exist. If data are missing for only some rows, then they will be specified with NA.

Author(s)

Marc Weber

Examples

```
## Not run:
df <- lc_get_data(comid='23794487', aoi='cat', metric='fert')

df <- lc_get_data(metric='pcturbmd2006', aoi='ws',
comid='24083377')

df <- lc_get_data(metric='pctgrs2006', aoi='ws', region='Region01')
```

```
df <- lc_get_data(metric='pctwdwet2006', aoi='ws', county='41003')

df <- lc_get_data(metric='pcturbmd2006', aoi='ws',
comid='24083377', showAreaSqKm=FALSE, showPctFull=TRUE)

df <- lc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid='23783629,23794487,23812618')

df <- lc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid=c('23783629','23794487','23812618'))

df <- lc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid='23783629,23794487,23812618',
countOnly=TRUE)



## End(Not run)
```

`lc_get_metric_names` *Get LakeCat Metric Names*

Description

Function to filter LakeCat metrics metrics by category, area of interest, dataset or year. Use 'lc_get_params(categories)' or 'lc_get_params(datasets)' to see all the valid category or dataset options

Usage

```
lc_get_metric_names(category = NULL, aoi = NULL, year = NULL, dataset = NULL)
```

Arguments

`category`	Filter LakeCat metrics based on the metric category
`aoi`	Filter LakeCat metrics based on the area of interest
`year`	Filter LakeCat metrics based on a particular year or years
`dataset`	Filter LakeCat metrics based on the dataset name

Value

A dataframe of merics and description that match filter criteria

Author(s)

Marc Weber

Examples

```
## Not run:
metrics <- lc_get_metric_names(category='Natural')
metrics <- lc_get_metric_names(category = c('Anthropogenic','Natural'),
aoi=c('Cat','Ws'))
## End(Not run)
```

`lc_get_nlcd` *Get NLCD Data*

Description

‘r lifecycle::badge("deprecated")‘ ‘lc_nlcd()‘ was renamed to ‘lc_get_nlcd()‘ to create a more consistent API. Function to specifically retrieve all NLCD metrics for a given year using the StreamCat API.

Usage

```
lc_get_nlcd(
  year = "2019",
  comid = NULL,
  aoi = NULL,
  showAreaSqKm = NULL,
  showPctFull = NULL,
  state = NULL,
  county = NULL,
  region = NULL,
  conus = NULL,
  countOnly = NULL
)
```

Arguments

`year`	Years(s) of NLCD metrics to query. Only valid NLCD years are accepted (i.e. 2001, 2004, 2006, 2008, 2011, 2013, 2016, 2019) Syntax: year=<year1>,<year2>
`comid`	Return metric information for specific COMIDs Syntax: comid=<comid1>,<comid2>
`aoi`	Specify the area of interest described by a metric. By default, all available areas of interest for a given metric are returned. Syntax: areaOfInterest=<value1>,<value2> Values: catchment|watershed|riparian_catchment|riparian_watershed|other
`showAreaSqKm`	Return the area in square kilometers of a given area of interest. The default value is false. Values: true|false
`showPctFull`	Return the pctfull for each dataset. The default value is false. Values: true|false
`state`	Return metric information for COMIDs within a specific state. Use a state's abbreviation to query for a given state. Syntax: state=<state1>,<state2>

county	Return metric information for COMIDs within a specific county. Users must use the FIPS code, not county name, as a way to disambiguate counties. Syntax: county=<county1>,<county1>
region	Return metric information for COMIDs within a specified hydroregion. Syntax: region=<regionid1>,<regionid2>
conus	Return all COMIDs in the conterminous United States. The default value is false. Values: truelfalse
countOnly	Return a CSV containing only the row count (ROWCOUNT) and the column count (COLUMNCOUNT) that the server expects to return in a request. The default value is false. Values: truelfalse

Value

A tibble of desired StreamCat metrics

Author(s)

Marc Weber

Examples

```
## Not run:

df <- lc_get_nlcd(comid='23783629', year='2019', aoi='ws') # Will show a deprecation warning

df <- lc_get_nlcd(comid='23783629', year='2019', aoi='ws')

df <- lc_get_nlcd(year='2016', aoi='cat',
comid='23783629,23794487,23812618', showAreaSqKm=FALSE, showPctFull=TRUE)

df <- lc_get_nlcd(year='2016', aoi='cat',
comid='23783629,23794487,23812618', countOnly=TRUE)

df <- lc_get_nlcd(year='2016, 2019', aoi='cat,ws',
comid='23783629,23794487,23812618')

## End(Not run)
```

---

lc_get_nni *Get NNI*

Description

Function to get all NNI data available for a given year.

Usage

```
lc_get_nni(
  year,
  aoi = NULL,
  comid = NULL,
  showAreaSqKm = TRUE,
  showPctFull = NULL,
  countOnly = NULL
)
```

Arguments

year	Years(s) of NNI metrics to query. Only valid NNI years are accepted (1987:2017) Syntax: year=<year1>,<year2>
aoi	Specify the area of interest described by a metric. By default, all available areas of interest for a given metric are returned. Syntax: areaOfInterest=<value1>,<value2> Values: catchment|watershed
comid	Return metric information for specific COMIDs Syntax: comid=<comid1>,<comid2>
showAreaSqKm	Return the area in square kilometers of a given area of interest. The default value is true. Values: true|false
showPctFull	Return the pctfull for each dataset. The default value is false. Values: true|false
countOnly	Return a CSV containing only the row count (ROWCOUNT) and the column count (COLUMNCOUNT) that the server expects to return in a request. The default value is false. Values: true|false

Value

A tibble of desired StreamCat metrics

Author(s)

Selia Markley

Examples

```
df <- lc_get_nni(year='1987, 1990, 2005, 2017', aoi='cat,ws',
comid='23783629,23794487,23812618')

df <- lc_get_nni(year='2015', aoi='cat',
comid='23783629', countOnly=TRUE)

df <- lc_get_nni(comid='23783629', year='2011, 2012', aoi='ws')
```

lc_get_params *Get LakeCat Parameters*

Description

Function to return available LakeCat parameters using the StreamCat API.

Usage

```
lc_get_params(param = NULL)
```

Arguments

param	List of available parameters in the API for the following options: name, areaofInterest, region, state, county. State and county return a data frame that includes FIPS codes, names and state abbreviations Syntax: param=<value1>,<value2> Values: namelarea

Value

A list of all the current LakeCat values for a given parameter

Author(s)

Marc Weber

Examples

```
## Not run:
params <- lc_get_params(param='variable_info')
params <- lc_get_params(param='metric_names')
params <- sc_get_params(param='categories')
params <- lc_get_params(param='aoi')
params <- lc_get_params(param='state')
params <- lc_get_params(param='county')
params <- sc_get_params(param='datasets')

## End(Not run)
```

`lc_get_watershed` *Get LakeCat Lake Watershed*

Description

Lookup function for a single COMID from S3 GeoParquet (optionally restricted to one HUC2). Queries one COMID from an S3-hosted, HUC2-partitioned GeoParquet dataset and returns an sf object. If 'huc2' is provided, only that partition is scanned (fastest). If not, the function tries a glob over all HUC2 partitions and falls back to a shallower pattern if needed. The function: - loads DuckDB httpfs (S3) extension, - pushes an equality filter on 'COMID' for row-group/file pruning, - converts WKB geometry to sf with the CRS you provide (default EPSG:4326).

Usage

```
lc_get_watershed(
  comid,
  huc2 = NA_character_,
  huc2_filter = NULL,
  bucket = "dmap-data-commons-ow",
  prefix = "data/streamcat/LakeCatWatersheds/",
  region = "us-east-1",
  install_missing = FALSE,
  keep_open = FALSE,
  verbose = TRUE,
  progress = TRUE,
  threads = 4,
  enable_object_cache = TRUE,
  skip_describe = FALSE,
  skip_counts = TRUE,
  sf_crs = 4326,
  retries = 5,
  retry_base_delay = 0.5,
  retry_max_delay = 8,
  url_style = c("path", "virtual_hosted"),
  s3_endpoint = NULL
)
```

Arguments

`comid`	Scalar COMID to query (numeric or character, required).
`huc2`	Optional two-digit HUC2 string (e.g., "01") to restrict search to one partition.
`huc2_filter`	Optional character vector of HUC2s to read (e.g., c("01","05")) for multi-partition pruning.
`bucket`	Character(1). S3 bucket (default "dmap-data-commons-ow").
`prefix`	Character(1). S3 prefix under the bucket (default "data/streamcat/LakeCatWatersheds/").

region	Character(1). S3 region (default "us-east-1").
install_missing	Logical. Install missing packages (duckdb, DBI, sf, wk) if needed (default FALSE).
keep_open	Logical. Keep the DuckDB connection open (default FALSE). Note: the connection is not returned.
verbose	Logical. Print progress messages (default TRUE).
progress	Logical. Show a simple progress bar (default TRUE).
threads	Integer or NULL. If set, 'PRAGMA threads' for DuckDB (parallelism).
enable_object_cache	Logical. Enable DuckDB object cache to speed repeated queries (default TRUE).
skip_describe	Logical. Skip DESCRIBE step (default FALSE).
skip_counts	Logical. Skip HUC2 counts step (default TRUE; no longer returned).
sf_crs	Integer or character. CRS for the output sf object (default 4326).
retries	Integer. Number of retries for transient S3/HTTP errors (default 5).
retry_base_delay	Numeric. Initial exponential backoff delay in seconds (default 0.5).
retry_max_delay	Numeric. Maximum backoff delay per attempt in seconds (default 8).
url_style	Character. S3 URL style used by DuckDB httpfs, one of "path" or "virtual_hosted". Passed to 'match.arg()', default "path".
s3_endpoint	Optional character(1). Custom S3 endpoint hostname (e.g., "s3.amazonaws.com"). NULL uses the default for the selected region.

Value

An sf object with zero or one+ rows (if multiple features share the same COMID).

`lc_plotnni` *Plot National Nutrient Inventory data for lakes*

Description

Function to plot time series of nitrogen and phosphorus budgets for a given lake COMID. This function allows a user to return a time series of major inputs, outputs, and derived metrics of nitrogen and phosphorus. Plot is returned as an object

Usage

```
lc_plotnni(comid, include.nue = FALSE)
```

Arguments

comid	Identifier of lake COMID user wants to plot NNI data for. Must be a character string with the COMID digit. Syntax: com=<COMID>
include.nue	Include time series of nitrogen use efficiency in the returned plot. The default value is false. Values: true|false

Value

Return plot as an object.

Author(s)

Selia Markley

Examples

```
## Not run:
p <- lc_plotnni(comid='23794487')
p <- lc_plotnni(comid='23794487', include.nue=TRUE)

## End(Not run)
```

---

sc_fullname *Lookup Full Metric Name*

Description

Function to retrieve a full metric name based on the short name using the StreamCat API.

Usage

```
sc_fullname(metric = NULL)
```

Arguments

metric	Short metric name Syntax: metric=value1 Values: metric

Value

A lookup of the full name for a given StreamCat metric

Author(s)

Marc Weber

Examples

```
fullname <- sc_fullname(metric='clay')
```

sc_get_comid *Get COMIDs*

Description

Function to return NHDPlusV2 COMIDS using either a dataframe with coordinates and a specified CRS or an sf object. The function generates a vector of COMID values a user can then pass to sc_get_data function

Usage

```
sc_get_comid(dd = NULL, xcoord = NULL, ycoord = NULL, crsys = NULL)
```

Arguments

dd	Name of data frame object. Can be a simple data frame with coordinate columns in a known CRS or an sf points data frame
xcoord	The x coordinate column if using a raw data frame
ycoord	The y coordinate column if using a raw data frame
crsys	The epsg code if using a raw data frame

Value

A new sf data frame with a populated 'COMID' column

Author(s)

Marc Weber

Examples

```
## Not run:

dd <- data.frame(x = c(-122.649,-100.348,-75.186,-106.675),
y = c(45.085, 35.405,42.403,38.721))

comids <- sc_get_comid(dd, xcoord='x',
                       ycoord='y', crsys=4269)

dd <- sf::st_point_on_surface(sf::read_sf(system.file("shape/nc.shp", package="sf")))

comids <- sc_get_comid(dd)

comids <- sc_get_comid(dd, xcoord='x',
ycoord='y', crsys=4269)

dd <- sf::read_sf(system.file("shape/nc.shp", package="sf"))
comids <- sc_get_comid(dd)
```

```
## End(Not run)
```

`sc_get_data` *Get StreamCat data*

Description

Function to return StreamCat catchment and watershed metrics using the StreamCat API. The function allows a user to get specific metric data aggregated by area of interest, returned by comid(s), hydroregion(s), state(s), or county(ies).

Usage

```
sc_get_data(
  comid = NULL,
  metric = NULL,
  aoi = NULL,
  showAreaSqKm = NULL,
  showPctFull = NULL,
  state = NULL,
  county = NULL,
  region = NULL,
  conus = NULL,
  countOnly = NULL
)
```

Arguments

`comid`	Return metric information for specific COMIDs. Can be a comma-delimited list, a character vector, or any object that can be coerced to a comma-delimited list with `paste`. One of `comid`, `county`, `state`, or `region` is required unless `conus='true'`. Syntax: comid=<comid1>,<comid2>
`metric`	Name(s) of metrics to query. Must be character string with comma-delimited list of metrics, or, if `metric='all'` then all metrics will be queried. **Not** *case-sensitive*. Syntax: name=<name1>,<name2>
`aoi`	Name(s) of areas of interest to query. If a metric does not have data for a given AOI, no data is returned for that AOI. Certain metrics that have no AOI specified for StreamCat need the AOI to be specified as `'other'`. These metrics include: BankfullDepth, BankfullWidth, ThalwagDepth (sic), CHEM_V2_1, CONN, HABT, HYD, ICI, IWI, TEMP, WettedWidth, prg_bmmi, and all the mast, msst, mwst metrics. *Case-sensitive*. Syntax: areaOfInterest=<value1>,<value2> Values: cat|ws|catrp100|wsrp100|other
`showAreaSqKm`	Return the area in square kilometers of a given area of interest. The default value is false. Values: true|false

showPctFull	Return the pctfull for each dataset. The default value is false. Values: true|false
state	Return metric information for COMIDs within a specific state. Use a state's abbreviation to query for a given state. One of comid, county, state, or region is required unless conus='true'. If specified *and valid*, comid and county are ignored. *Case-sensitive*. Syntax: state=<state1>,<state2>
county	Return metric information for COMIDs within a specific county. Users must use the FIPS code, not county name, as a way to disambiguate counties. One of comid, county, state, or region is required unless conus='true'. If specified *and valid*, comid is ignored. Syntax: county=<county1>,<county1>
region	Return metric information for COMIDs within a specified hydroregion. Hydroregions are specified using full name i.e. 'Region01', 'Region03N', 'Region10L' One of comid, county, state, or region is required unless conus='true'. If specified *and valid*, comid, county, and state are ignored. *Case-sensitive*. Syntax: region=<regionid1>,<regionid2>
conus	Return all COMIDs in the conterminous United States. Character string (**Not** *case-sensitive*) or logical. The default value is false. If true, comid, county, state, and region are ignored. Values: true|false
countOnly	Return a CSV containing only the row count (ROWCOUNT) and the column count (COLUMNCOUNT) that the server expects to return in a request. The default value is false. Values: true|false

Value

A data frame of StreamCat metrics. If data are missing for all rows of a given metric, then the column for that metric will not exist. If data are missing for only some rows, then they will be specified with NA.

Author(s)

Marc Weber

Examples

```
## Not run:
df <- sc_get_data(comid='179', aoi='cat', metric='fert')

df <- sc_get_data(metric='pctgrs2006', aoi='ws', region='Region01')

df <- sc_get_data(metric='pctwdwet2006', aoi='ws', county='41003')

df <- sc_get_data(metric='pcturbmd2006', aoi='ws,rp100',
comid='1337420')

df <- sc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid='179,1337,1337420')

df <- sc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid='179,1337,1337420',
showAreaSqKm='true', showPctFull='true')
```

```
df <- sc_get_data(metric='pcturbmd2006,damdens',
aoi='cat,ws', comid='179,1337,1337420', countOnly='true')

df <- sc_get_data(metric='thalwagdepth', comid='179,1337,1337420', aoi='other')

df <- sc_get_data(metric='thalwagdepth', comid=c('179','1337','1337420'), aoi='other')

df <- sc_get_data(comid='179', aoi='ws', metric='all')

## End(Not run)
```

`sc_get_metric_names` *Get StreamCat Metric Names*

Description

Function to filter StreamCat metrics metrics by category, area of interest, dataset or year. Use 'sc_get_params(categories)' or 'sc_get_params(datasets)' to see all the valid category or dataset options

Usage

```
sc_get_metric_names(category = NULL, aoi = NULL, year = NULL, dataset = NULL)
```

Arguments

`category`	Filter StreamCat metrics based on the metric category
`aoi`	Filter StreamCat metrics based on the area of interest
`year`	Filter StreamCat metrics based on a particular year or years
`dataset`	Filter StreamCat metrics based on the dataset name

Value

A dataframe of merics and description that match filter criteria

Author(s)

Marc Weber

Examples

```
## Not run:
metrics <- sc_get_metric_names(category='Wildfire')
metrics <- sc_get_metric_names(category = c('Deposition','Climate'),
aoi=c('Cat','Ws'))
metrics <- sc_get_metric_names(aoi='Other',
dataset=c('Canal Density','Predicted Channel Widths Depths'))
```

```
## End(Not run)
```

---

sc_get_nni *Get NNI*

Description

Function to get all NNI data available for a given year.

Usage

```
sc_get_nni(
  year,
  aoi = NULL,
  comid = NULL,
  showAreaSqKm = TRUE,
  state = NULL,
  county = NULL,
  region = NULL,
  conus = NULL,
  showPctFull = NULL,
  countOnly = NULL
)
```

Arguments

year	Years(s) of NNI metrics to query. Only valid NNI years are accepted (1987:2017) Syntax: year=<year1>,<year2>
aoi	Specify the area of interest described by a metric. By default, all available areas of interest for a given metric are returned. Syntax: areaOfInterest=<value1>,<value2> Values: catchment|watershed
comid	Return metric information for specific COMIDs Syntax: comid=<comid1>,<comid2>
showAreaSqKm	Return the area in square kilometers of a given area of interest. The default value is true. Values: true|false
state	Return metric information for COMIDs within a specific state. Use a state's abbreviation to query for a given state. Syntax: state=<state1>,<state2>
county	Return metric information for COMIDs within a specific county. Users must use the FIPS code, not county name, as a way to disambiguate counties. Syntax: county=<county1>,<county1>
region	Return metric information for COMIDs within a specified hydroregion. Syntax: region=<regionid1>,<regionid2>
conus	Return all COMIDs in the conterminous United States. The default value is false. Values: true|false

showPctFull	Return the pctfull for each dataset. The default value is false. Values: true|false
countOnly	Return a CSV containing only the row count (ROWCOUNT) and the column count (COLUMNCOUNT) that the server expects to return in a request. The default value is false. Values: true|false

Value

A tibble of desired StreamCat metrics

Author(s)

Selia Markley

Examples

```
## Not run:

df <- sc_get_nni(year='1987, 1990, 2005, 2017', aoi='cat,ws',
comid='179,1337,1337420')

df <- sc_get_nni(year='2015', aoi='cat',
comid='179', countOnly=TRUE)

df <- sc_get_nni(comid='179', year='2011, 2012', aoi='ws')

df <- sc_get_nni(year='2015, 2016, 2017', county='41003', aoi='ws')

## End(Not run)
```

---

sc_get_params *Get StreamCat Parameters*

Description

Function to return available StreamCat parameters using the StreamCat API.

Usage

```
sc_get_params(param = NULL)
```

Arguments

param	List of available parameters in the API for the following options: name, areaofInterest, region, state, county. State and county return a data frame that includes FIPS codes, names and state abbreviations Syntax: param=<value1>,<value2> Values: name|area

Value

A list of all the current StreamCat values for a given parameter

Author(s)

Marc Weber

Examples

```
## Not run:
params <- sc_get_params(param='variable_info')
params <- sc_get_params(param='metric_names')
params <- sc_get_params(param='categories')
params <- sc_get_params(param='aoi')
params <- sc_get_params(param='state')
params <- sc_get_params(param='county')
params <- sc_get_params(param='datasets')
## End(Not run)
```

---

sc_plotnni *Plot National Nutrient Inventory data for streams*

Description

Function to plot time series of nitrogen and phosphorus budgets for a given stream COMID. This function allows a user to return a time series of major inputs, outputs, and derived metrics of nitrogen and phosphorus. Plot is returned as an object

Usage

```
sc_plotnni(comid, include.nue = FALSE, include.inset = TRUE)
```

Arguments

comid	Identifier of stream COMID user wants to plot NNI data for. Must be a character string with the COMID digit. Syntax: com=<COMID>
include.nue	Include time series of nitrogen use efficiency in the returned plot. The default value is false. Values: true|false
include.inset	Include inset map that shows the location of the COMID and its basin. The default value is true. Values: true|false

Value

Return plot as an object.

Author(s)

Selia Markley

Examples

```
## Not run:
p <- sc_plotnni(comid='1337420')
p <- sc_plotnni(comid='1337420', include.nue=TRUE)
p <- sc_plotnni(comid='1337420', include.inset=FALSE)

## End(Not run)
```

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