

# Package ‘wikilake’

February 9, 2021

**Title** Scrape Lake Metadata Tables from Wikipedia

**Version** 0.5.0

**Description** Scrape lake metadata tables from Wikipedia <<https://www.wikipedia.org/>>.

**Imports** rvest, stringi, WikipediR, xml2, sp, graphics, stringr, selectr, units, dplyr, tidy

**URL** <https://github.com/jsta/wikilake>

**BugReports** <https://github.com/jsta/wikilake/issues>

**Depends** R (>= 3.3.0), maps

**License** GPL (>= 2)

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.1.1

**Suggests** knitr, rmarkdown, testthat

**VignetteBuilder** knitr

**NeedsCompilation** no

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**Repository** CRAN

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wikilake-package	<i>Scrape Wikipedia lakes metadata</i>
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**Description**

Scrape Wikipedia lakes metadata

**Author(s)**

<stache12@msu.edu>

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dms2dd	<i>dms2dd</i>
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**Description**

Convert numeric coordinate vectors in degrees, minutes, and seconds to decimal degrees

**Usage**

```
dms2dd(x)
```

**Arguments**

x numeric vector of length 3 corresponding to degrees, minutes, and seconds

**Examples**

```
dt <- rbind(c(25,12,53.66),c(-80,32,00.61))
apply(dt, 1, function(x) dms2dd(x))
```

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get_lake_wiki	<i>get_lake_wiki</i>
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**Description**

get\_lake\_wiki

**Usage**

```
get_lake_wiki(lake_name, cond = NA)
```

**Arguments**

lake_name	character
cond	character stopping condition

**Examples**

```
## Not run:  
get_lake_wiki("Lake Nipigon")  
  
## End(Not run)
```

---

lake_clean	<i>Clean output of lake_wiki</i>
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**Description**

Currently the only operation is to standardize the units of numeric fields. See the output units with the `unit_key_` function.

**Usage**

```
lake_clean(dt)
```

**Arguments**

dt	output of the lake_wiki function
----	----------------------------------

**Examples**

```
## Not run:  
dt <- lake_wiki(c("Lake Mendota", "Flagstaff Lake (Maine)"))  
dt_clean <- lake_clean(dt)  
  
dt <- lake_wiki(c("Lake Mendota", "Trout Lake (Wisconsin)"))  
dt_clean <- lake_clean(dt)  
  
## End(Not run)
```

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lake_wiki	<i>lake_wiki</i>
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## Description

lake\_wiki

## Usage

```
lake_wiki(lake_name, map = FALSE, clean = TRUE, ...)
```

## Arguments

lake_name	character
map	logical produce map of lake location?
clean	logical enforce standardized units following wikilake::unit_key_()?
...	arguments passed to maps::map

## Examples

```
## Not run:
lake_wiki("Lake Peipsi")
lake_wiki("Flagstaff Lake (Maine)")
lake_wiki("Lake George (Michigan-Ontario)")
lake_wiki("Lake Michigan", map = TRUE, "usa")
lake_wiki("Lac La Belle, Michigan")
lake_wiki("Lake Antoine")
lake_wiki("Lake Baikal")
lake_wiki("Dockery Lake (Michigan)")
lake_wiki("Coldwater Lake")
lake_wiki("Bankson Lake")
lake_wiki("Fisher Lake (Michigan)")
lake_wiki("Beals Lake")
lake_wiki("Devils Lake (Michigan)")
lake_wiki("Lake Michigan")
lake_wiki("Fletcher Pond")
lake_wiki("Lake Bella Vista (Michigan)")
lake_wiki("Lake Mendota")
lake_wiki("Lake Mendota", map = TRUE, "usa")
lake_wiki("Lake Nipigon", map = TRUE, regions = "Canada")
lake_wiki("Trout Lake (Wisconsin)")

# a vector of lake names
lake_wiki(c("Lake Mendota", "Trout Lake (Wisconsin)"))
lake_wiki(c("Lake Mendota", "Trout Lake (Wisconsin)"), map = TRUE)

# throws warning on redirects
lake_wiki("Beals Lake")
```

```
# ignore notability box
lake_wiki("Rainbow Lake (Waterford Township, Michigan)")

## End(Not run)
```

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map_lake_wiki	<i>map_lake_wiki</i>
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### Description

map\_lake\_wiki

### Usage

```
map_lake_wiki(res, ...)
```

### Arguments

res	data.frame output of get_lake_wiki
...	arguments passed to maps::map

### Examples

```
## Not run:
map_lake_wiki(lake_wiki("Corey Lake"), database = "usa")

map_lake_wiki(lake_wiki("Lake Nipigon"), regions = "Canada")

## End(Not run)
```

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milakes	<i>Michigan Lakes</i>
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### Description

Metadata of Michigan lakes scraped from Wikipedia.

### Format

A data frame with 48 columns and 177 rows:

- Name: lake name
- Location: location description
- Primary inflows: rivers and streams
- Basin countries: countries

- Surface area: hectares
- Max. depth: meters
- Surface elevation: meters
- Lat: decimal degrees
- Lon: decimal degrees
- Primary outflows: rivers and streams
- Average depth: meters
- Max. length: meters
- Max. width: meters

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parse\_unit\_brackets *Parse string representation of units package quantities*

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### Description

Parse string representation of units package quantities

### Usage

```
parse_unit_brackets(x, target_unit = NA)
```

### Arguments

x                    character string with unit in brackets  
target\_unit        target unit to convert to. optional

### Examples

```
x <- "1 [m]"
x <- "8.5 [m]"
parse_unit_brackets(x, "feet")
```

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tidy\_lake\_df            *tidy\_lake\_df*

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### Description

tidy\_lake\_df

### Usage

```
tidy_lake_df(lake)
```

### Arguments

lake                    data.frame output of get\_lake\_wiki

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