Package ‘cder’

February 22, 2023

Title Interface to the California Data Exchange Center (CDEC)

Version 0.3-1

Description Connect to the California Data Exchange Center (CDEC)

Web Service <http://cdec.water.ca.gov/>. 'CDEC' provides a centralized database to store, process, and exchange real-time hydrologic information gathered by various cooperators throughout California. The 'CDEC' Web Service <http://cdec.water.ca.gov/dynamicapp/wsSensorData> provides a data download service for accessing historical records.

License GPL (>= 3)

URL https://github.com/mkoohafkan/cder

BugReports https://github.com/mkoohafkan/cder/issues

Depends R (>= 3.4)

Imports utils, curl (>= 4.3), glue (>= 1.3), stringr (>= 1.4), dplyr (>= 1.1), readr (>= 1.3), lubridate (>= 1.7)

Encoding UTF-8

Suggests knitr (>= 1.26), rmarkdown (>= 2.0), testthat (>= 2.3)

VignetteBuilder knitr

RoxygenNote 7.2.3

Config/testthat/edition 3

NeedsCompilation no

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R topics documented:

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cdec_data_flags

Description
Open the data flag listing page.

Usage

cdec_data_flags(...) 

Arguments
... Additional arguments to pass to browseURL.

Functions

• cdec_data_flags(): CDEC Data Flag Information

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Description
CDEC Search Pages Open the CDEC station/group search page or map interface.

Usage

cdec_search_groups(...) 
cdec_search_stations(...) 
cdec_map(...) 

Arguments
... Additional arguments to pass to browseURL.

Functions

• cdec_search_groups(): CDEC Group search page.
• cdec_search_stations(): CDEC Station search page.
• cdec_map(): CDEC Map locator page.
cdec_meta

Description
Open the Metadata page for a station.

Usage
```r
cdec_meta(station, ...)```

Arguments
- `station`: The three-letter station code.
- `...`: Additional arguments to pass to `browseURL`.

---

cdec_query

Description
Query data from the CDEC web services.

Usage
```r
cdec_query(stations, sensors, durations, start.date, end.date, ...)```

Arguments
- `stations`: A vector of station codes.
- `sensors`: A vector of sensor numbers.
- `durations`: A vector of durations. Possible duration codes are "E" (event), "H" (hourly), "D" (daily), and "M" (monthly).
- `start.date`: The start date of the query.
- `end.date`: The end date of the query.
- `...`: Not used.

Details
Note that CDEC timestamps are in Pacific Time and Daylight Savings adjustments are reflected. In R, this is equivalent to the timezone "US/Pacific".

Value
A tibble.
Examples

```r
if(interactive()){
  cdec_query("NSL", 100, "E", Sys.Date() - 5, Sys.Date())
}
```

---

**cdec_query_group**

**Query CDEC Group**

**Description**

Query group data from the CDEC web services.

**Usage**

```r
cdec_query_group(groups, start.date, end.date, ...)
```

**Arguments**

- **groups**: A vector of group codes.
- **start.date**: The start date of the query.
- **end.date**: The end date of the query.
- **...**: Not used.

**Details**

Note that CDEC timestamps are in Pacific Time and Daylight Savings adjustments are reflected. In R, this is equivalent to the timezone "US/Pacific".

**Value**

A tibble.

**Examples**

```r
if(interactive()){
  cdec_query_group("SR1", Sys.Date() - 5, Sys.Date())
}
```
cdec_sensors

---

**Description**

Open the Sensor listing page.

**Usage**

cdec_sensors(...)

**Arguments**

... Additional arguments to pass to browseURL.

---

cder

**Description**

Access the CDEC Web Service from R.

**Package options**

cder uses the following `options()` to configure behavior:

- `cder.timeout`: The maximum time to wait for a response from the CDEC Web API.

**Author(s)**

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**See Also**

Useful links:

- [https://github.com/mkoohafkan/cder](https://github.com/mkoohafkan/cder)
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