

Package: tceqcrp (via r-universe)

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Title Scripted Downloads from the TCEQ CRP Water Quality Portal

Version 0.1.0

Description Programmatic access to the Texas Commission on Environmental Quality (TCEQ) Clean Rivers Program (CRP) public data portal. Handles JSF session state, basin/station selection, and download of tab-delimited water quality data files.

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Encoding UTF-8

Roxygen list(markdown = TRUE)

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Repository <https://mps9506.r-universe.dev>

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crp_basins	CRP river basin codes
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Description

CRP river basin codes

Usage

crp_basins()

Value

A tibble mapping basin numbers to basin names.

crp_data_types	CRP data type codes
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Description

CRP data type codes

Usage

crp_data_types()

Value

A tibble mapping menu values to data type labels.

crp_download	<i>Download CRP water quality data</i>
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Description

Download CRP water quality data

Usage

```
crp_download(  
  form,  
  startdate,  
  enddate,  
  data_type,  
  basin,  
  format = "14",  
  segment_rows,  
  param_code = "",  
  path = tempfile(fileext = ".txt"),  
  quiet = FALSE  
)
```

Arguments

- form A crp_form from [crp_select_basin\(\)](#) (must be the basin-selected form, which carries the correct ViewState).
- startdate, enddate Date strings in "MM/DD/YYYY" format.
- data_type Data type code. See [crp_data_types\(\)](#).
- basin Basin number. See [crp_basins\(\)](#).
- format Output format code (default "14", combined). See [crp_formats\(\)](#).
- segment_rows Integer vector of table rows. See [crp_rows_for_segments\(\)](#).
- param_code Optional parameter code filter.
- path File path to write the downloaded data to.
- quiet Suppress progress messages.

Value

Invisibly, a list with path, post_resp, and stream_resp.

Examples

```
## Not run:
form <- crp_get_form()
form2 <- crp_select_basin(form, 12)
st <- crp_stations(form2)
rows <- crp_rows_for_ids(st, c("1201", "1202"))
crp_download(form2, "01/01/2020", "12/31/2020",
              data_type = 1, basin = 12, station_rows = rows,
              path = "brazos.txt")

## End(Not run)
```

crp_formats	<i>CRP output format codes</i>
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Description

CRP output format codes

Usage

```
crp_formats()
```

Value

A tibble mapping menu values to output-format labels.

crp_get_form	<i>Start a CRP session</i>
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Description

Fetches the CRP query page, establishes a session, and captures the JSF ViewState token needed for subsequent requests.

Usage

```
crp_get_form()
```

Value

An object of class crp_form.

Examples

```
## Not run:
form <- crp_get_form()

## End(Not run)
```

crp_list_segments	<i>List segments available in a basin</i>
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Description

List segments available in a basin

Usage

```
crp_list_segments(basin)
```

Arguments

basin Basin number (1-25). See [crp_basins\(\)](#).

Value

A tibble with row, segment_id, segment_desc.

crp_query	<i>Download CRP data in a single call</i>
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Description

Download CRP data in a single call

Usage

```
crp_query(  
  basin,  
  startdate,  
  enddate,  
  data_type,  
  segment_ids,  
  format = "14",  
  param_code = "",  
  path = tempfile(fileext = ".txt"),  
  read = TRUE,  
  clean_names = FALSE,  
  quiet = FALSE  
)
```

Arguments

basin	Basin number (1-25). See crp_basins() .
startdate, enddate	Date strings "MM/DD/YYYY".
data_type	Data type code. See crp_data_types() .
segment_ids	Character vector of segment IDs.
format	Output format code (default combined).
param_code	Optional parameter code filter.
path	File path to write to.
read	If TRUE (default), return the parsed tibble; otherwise the file path.
clean_names	If TRUE, convert column names to snake_case (requires the janitor package). Ignored when read = FALSE.
quiet	Suppress messages.

Value

A tibble (if read = TRUE) or the file path (invisibly).

Examples

```
## Not run:
brazos <- crp_query(
  basin      = 12,
  startdate  = "01/01/2020",
  enddate    = "12/31/2020",
  data_type  = 1,
  segment_ids = "1202",
  clean_names = TRUE
)

## End(Not run)
```

crp_read

Read a downloaded CRP data file

Description

Read a downloaded CRP data file

Usage

```
crp_read(path, clean_names = FALSE, ...)
```

Arguments

path Path to a file written by `crp_download()`.
 clean_names If TRUE, convert column names to snake_case (requires the janitor package).
 ... Passed on to `readr::read_delim()`.

Value

A tibble.

crp_rows_for_segments *Find segment table rows by segment ID*

Description

Find segment table rows by segment ID

Usage

```
crp_rows_for_segments(segments, ids)
```

Arguments

segments A tibble from `crp_segments()`.
 ids Character vector of segment IDs (e.g. `c("1202", "1202A")`).

Value

Integer vector of row values for `crp_download()`.

crp_segments *Extract the segment table for the selected basin*

Description

Extract the segment table for the selected basin

Usage

```
crp_segments(form)
```

Arguments

form A crp_form from `crp_select_basin()`.

Value

A tibble with columns row, segment_id, segment_desc.

crp_select_basin	<i>Select a river basin and retrieve its segment list</i>
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Description

Select a river basin and retrieve its segment list

Usage

```
crp_select_basin(form, basin)
```

Arguments

form	A crp_form from crp_get_form() .
basin	Basin number (1-25). See crp_basins() .

Value

A new crp_form with the segment table populated and a fresh ViewState. Pass this to [crp_segments\(\)](#) and [crp_download\(\)](#).

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