

Package ‘echor’

April 23, 2018

Type Package

Title Access EPA 'ECHO' Data

Version 0.1.0

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Description An R interface to United States Environmental Protection Agency (EPA) Environmental Compliance History Online ('ECHO') Application Program Interface (API). 'ECHO' provides information about EPA permitted facilities, discharges, and other reporting info associated with permitted entities. Data are obtained from <<https://echo.epa.gov/>>.

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Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

Imports dplyr, httr, jsonlite, lubridate, purrr, sf, tibble, tidyr, utils

Suggests ggplot2, ggmap, ggrepel, here, httpptest, kableExtra, knitr, rmarkdown

BugReports <https://github.com/mps9506/echor/issues>

VignetteBuilder knitr

NeedsCompilation no

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Repository CRAN

Date/Publication 2018-04-23 08:27:14 UTC

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echoAirGetFacilityInfo

Downloads EPA ECHO permitted air emitter information

Description

Returns a dataframe or simplefeature dataframe of permitted facilities returned by the query. Uses EPA's ECHO API: https://echo.epa.gov/tools/web-services/facility-search-air#!/Facilities/get_air_rest_services_get_facility_info

Usage

```
echoAirGetFacilityInfo(output = "df", verbose = FALSE, ...)
```

Arguments

output	Character string specifying output format. output = 'df' for a dataframe or output = 'sf' for a simple features spatial dataframe. See (https://CRAN.R-project.org/package=sf) for more information about simple features.
verbose	Logical, indicating whether to provide processing and retrieval messages. Defaults to FALSE
...	Further arguments passed as query parameters in request sent to EPA ECHO's API. For more options see: https://echo.epa.gov/tools/web-services/facility-search-water#!/Facility_Information/get_air_rest_services_get_facility_info for a complete list of parameter options. Examples provided below.

Value

dataframe or sf dataframe suitable for plotting

Examples

```
## These examples require an internet connection to run
```

```
## Retrieve table of facilities by bounding box
echoAirGetFacilityInfo(xmin = '-96.407563',
  ymin = '30.554395',
  xmax = '-96.25947',
  ymax = '30.751984',
  output = 'df')
```

```
## Retrieve a simple features dataframe by bounding box
spatialdata <- echoAirGetFacilityInfo(xmin = '-96.407563',
  ymin = '30.554395',
  xmax = '-96.25947',
  ymax = '30.751984',
  output = 'sf')
```

echoGetCAAPR

Download EPA ECHO emissions inventory report data

Description

Download EPA ECHO emissions inventory report data

Usage

```
echoGetCAAPR(p_id, verbose = FALSE, ...)
```

Arguments

p_id	character string specify the identifier for the service. Required.
verbose	Logical, indicating whether to provide processing and retrieval messages. Defaults to FALSE
...	Additional arguments

Value

dataframe

Examples

```
## This example requires an internet connection to run
echoGetCAAPR(p_id = '110000350174')
```

echoGetEffluent	<i>Downloads EPA ECHO DMR records of dischargers with NPDES permits</i>
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Description

Downloads EPA ECHO DMR records of dischargers with NPDES permits

Usage

```
echoGetEffluent(p_id, verbose = FALSE, ...)
```

Arguments

p_id	Character string specify the identifier for the service. Required.
verbose	Logical, indicating whether to provide processing and retrieval messages. Defaults to FALSE
...	Further arguments passed on as query parameters sent to EPA's ECHO API. For more options see: https://echo.epa.gov/tools/web-services/effluent-charts#!/Effluent_Charts/get_eff_rest_services_get_effluent_chart

Value

Returns a dataframe.

Examples

```
## This example requires an internet connection to run
## Retrieve single DMR for flow
echoGetEffluent(p_id = 'tx0119407', parameter_code = '50050')
```

echoWaterGetFacilityInfo	<i>Downloads EPA ECHO water facility information</i>
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Description

Returns a dataframe or simplefeature dataframe of permitted facilities returned by the query. Uses EPA's ECHO API: <https://echo.epa.gov/tools/web-services/facility-search-water>.

Usage

```
echoWaterGetFacilityInfo(output = "df", verbose = FALSE, ...)
```

Arguments

output	Character string specifying output format. output = 'df' for a dataframe or output = 'sf' for a simple features spatial dataframe. See (https://CRAN.R-project.org/package=sf) for more information about simple features.
verbose	Logical, indicating whether to provide processing and retrieval messages. Defaults to FALSE
...	Further arguments passed as query parameters in request sent to EPA ECHO's API. For more options see: https://echo.epa.gov/tools/web-services/facility-search-water#!/Facility_Information/get_cwa_rest_services_get_facility_info for a complete list of parameter options. Examples provided below.

Value

returns a dataframe or simple features dataframe

Examples

```
## These examples require an internet connection to run

## Retrieve table of facilities by bounding box
echoWaterGetFacilityInfo(xmin = '-96.407563',
  ymin = '30.554395',
  xmax = '-96.25947',
  ymax = '30.751984',
  output = 'df')

## Retrieve a simple features dataframe by bounding box
spatialdata <- echoWaterGetFacilityInfo(xmin = '-96.407563',
  ymin = '30.554395',
  xmax = '-96.25947',
  ymax = '30.751984',
  output = 'sf')
```

echoWaterGetParams *Search parameter codes for Clean Water Act permits on EPA ECHO*

Description

Returns a dataframe of parameter codes and descriptions.

Usage

```
echoWaterGetParams(term = NULL, code = NULL, verbose = FALSE)
```

Arguments

term	Character string specifying the parameter search term. Partial or complete search phrase or word.
code	Character string specifying the parameter search code value.
verbose	Logical, indicating whether to provide processing and retrieval messages. Defaults to FALSE

Value

Returns a dataframe.

Examples

```
## These examples require an internet connection to run

## Retrieve parameter codes for dissolved oxygen
echoWaterGetParams(term = "Oxygen, dissolved")

echoWaterGetParams(code = "00300")
```

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