Package ‘bcmaps’

January 24, 2024

Title  Map Layers and Spatial Utilities for British Columbia
Version  2.2.0
Description  Various layers of B.C., including administrative boundaries,
natural resource management boundaries, census boundaries etc. All
layers are available in BC Albers
(<https://spatialreference.org/ref/epsg/3005/> equal-area
projection, which is the B.C. government standard. The layers are
sourced from the British Columbia and Canadian government under open
licenses, including B.C. Data Catalogue (<https://data.gov.bc.ca>),
the Government of Canada Open Data Portal
(<https://open.canada.ca/en/using-open-data>), and Statistics Canada
License  Apache License (== 2.0) | file LICENSE
BugReports  https://github.com/bcgov/bcmaps/issues
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Description

British Columbia Air Zones

Usage

airzones(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().

force Should you force download the data?

Value

The spatial layer of airzones as an sf object.

Source

bcdata::bcdc_get_data(record = 'e8eefc4-2826-47bc-8430-85703d328516', resource = 'c495d082-b586-4df0-9e06-bd6b66a8acd9')

See Also

Other BC layers: bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecossections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()
available_layers  List available data layers

Description
A data.frame of all available layers in the bcmaps package. This drawn directly from the B.C. Data Catalogue and will therefore be the most current list layers available.

Usage
available_layers()

Value
A data.frame of layers, with titles, and a shortcut_function column denoting whether or not a shortcut function exists that can be used to return the layer. If TRUE, the name of the shortcut function is the same as the layer_name. A value of FALSE in this column means the layer is available via get_data() but there is no shortcut function for it.
A value of FALSE in the local column means that the layer is not stored in the bcmaps package but will be downloaded from the internet and cached on your hard drive.

Examples
## Not run:
available_layers()
## End(Not run)

bc_area  The size of British Columbia

Description
Total area, Land area only, or Freshwater area only, in the units of your choosing.

Usage
bc_area(what = "total", units = "km2")
Arguments

what Which part of BC? One of 'total' (default), 'land', or 'freshwater'.
units One of 'km2' (square kilometres; default), 'm2' (square metres), 'ha' (hectares), 'acres', or 'sq.mi' (square miles)

Details

The sizes are from Statistics Canada

Value

The area of B.C. in the desired units (numeric vector).

Examples

```r
## With no arguments, gives the total area in km^2:
b_area()

## Get the area of the land only, in hectares:
b_area(land, "ha")
```

bc_bbox

Get an extent/bounding box for British Columbia

Description

Get an extent/bounding box for British Columbia

Usage

bc_bbox(class = c("sf", "raster"), crs = 3005)

Arguments

class "sf","raster".
crs coordinate reference system: integer with the EPSG code, or character with proj4string. Default 3005 (BC Albers).

Value

an object denoting a bounding box of British Columbia, of the corresponding class specified in class.
Examples

```r
## Not run:
bc_bbox("sf")
bc_bbox("raster")

## End(Not run)
```

---

**bc_bound**

### BC Boundary

**Usage**

```r
bc_bound(ask = interactive(), force = FALSE)
```

**Arguments**

- `ask`: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force`: Should you force download the data?

**Value**

The spatial layer of `bc_bound` as an `sf` object

**Source**

`bcdata::bcdc_get_data('b9bd93e1-0226-4351-b943-05c6f80bd5da')`

**See Also**

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fwa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

**Examples**

```r
## Not run:
my_layer <- bc_bound()

## End(Not run)
```
Description

BC Boundary - High Resolution

Usage

bc_bound_hres(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
force Should you force download the data?

Value

The spatial layer of bc_bound_hres as an sf object

Source

bcddc_get_data(record = '30aeb5c1-4285-46c8-b60b-15b1a6f4258b', resource = '3d72cf36-ab53-4a2a-9988-a883d7488384', layer = 'BC_Boundary_Terrestrial_Multipart')

See Also

Other BC layers: airzones(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), eosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsd(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- bc_bound_hres()

## End(Not run)
Description

BC Major Cities Points

Usage

bc_cities(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().
force Should you force download the data?

Value

The spatial layer of bc_cities as an sf object.

Source

bcdata::bcdc_get_data(record = 'b678c432-c5c1-4341-88db-0d6b6fa0c7f8', resource = '443dd858-2e37-4a8f-937a-f53359f16e64')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), censustract(), ecoprovinces(), ecoregions(), eosections(), fsa(), gw_aquifers(), health_chsas(), health_hahas(), health_lhas(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- bc_cities()

## End(Not run)
## bc_neighbours

**Boundary of British Columbia, provinces/states and the portion of the Pacific Ocean that borders British Columbia**

### Description

Boundary of British Columbia, provinces/states and the portion of the Pacific Ocean that borders British Columbia.

### Usage

```r
bc_neighbours(ask = interactive(), force = FALSE)
```

### Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force**: Should you force download the data?

### Value

The spatial layer of `bc_neighbours` as an `sf` object.

### Source

```r
bcdata::bcdc_get_data("b9bd93e1-0226-4351-b943-05c6f80bd5da")
```

### Examples

```r
## Not run:
my_layer <- bc_neighbours()
## End(Not run)
```

## bec

**British Columbia BEC Map**

### Description

British Columbia BEC Map

### Usage

```r
bec(ask = interactive(), force = FALSE)
```
bec_colours

Arguments

ask Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().

force Should you force download the data?

Value

The spatial layer of bec as an sf object.

Source

bcdatalibs::bcdc_get_data(record = 'f358a53b-ffde-4830-a325-a5a03ff672c3', resource = '3ec24cb4-f78d-48a9-87e7-516763f00cc8')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecopovinces(), ecoregions(), ecossections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- bec()

## End(Not run)
Examples

```r
## Not run:
if (require(sf) && require(ggplot2)) {
  bec <- bec()
  ggplot() +
  geom_sf(data = bec[bec$ZONE %in% c("BG", "PP"),],
          aes(fill = ZONE, col = ZONE)) +
  scale_fill_manual(values = bec_colors()) +
  scale_colour_manual(values = bec_colours())
}
## End(Not run)
```

---

cded

**Canadian Digital Elevation Model (CDED)**

Description

Digital Elevation Model (DEM) for British Columbia produced by GeoBC. This data is the TRIM DEM converted to the Canadian Digital Elevation Data (CDED) format. The data consists of an ordered array of ground or reflective surface elevations, recorded in metres, at regularly spaced intervals. The spacing of the grid points is .75 arc seconds north/south. The data was converted into 1:50,000 grids for distribution. The scale of this modified data is 1:250,000 which was captured from the original source data which was at a scale of 1:20,000.

Usage

```r
cded(
  aoi = NULL,
  tiles_50K = NULL,
  .predicate = sf::st_intersects,
  dest_vrt = tempfile(fileext = ".vrt"),
  ask = interactive(),
  check_tiles = TRUE
)
```

Arguments

- **aoi**: Area of Interest. Currently supports sf and sp polygons, stars and raster objects.
- **tiles_50K**: a character vector of 1:50,000 NTS mapsheet tiles
- **.predicate**: geometry predicate function used to find the mapsheets from your aoi. Default `sf::st_intersects`.
- **dest_vrt**: The location of the vrt file. Defaults to a temporary file, but can be overridden if you’d like to save it for a project
- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
check_tiles  Should the tiles that you already have in your cache be checked to see if they need updating? Default TRUE. If you are running the same code frequently and are confident the tiles haven’t changed, setting this to FALSE will speed things up.

Value

path to a .vrt file of the cded tiles for the specified area of interest

Examples

```r
## Not run:
vic <- census_subdivision()[census_subdivision()$CENSUS_SUBDIVISION_NAME == "Victoria", ]
vic_cded <- cded(aoi = vic)
## End(Not run)
```

cded_stars  Get Canadian Digital Elevation Model (CDED) as a stars object

Description

Get Canadian Digital Elevation Model (CDED) as a stars object

Usage

```r
cded_stars(
  aoi = NULL,
  tiles_50K = NULL,
  .predicate = sf::st_intersects,
  dest_vrt = tempfile(fileext = "vrt"),
  ask = interactive(),
  check_tiles = TRUE,
  ...
)
```

Arguments

- **aoi**  Area of Interest. Currently supports sf and sp polygons, stars and raster objects.
- **tiles_50K**  a character vector of 1:50,000 NTS mapsheet tiles
- **.predicate**  geometry predicate function used to find the mapsheets from your aoi. Default sf::st_intersects.
- **dest_vrt**  The location of the vrt file. Defaults to a temporary file, but can be overridden if you’d like to save it for a project
- **ask**  Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
check_tiles  Should the tiles that you already have in your cache be checked to see if they need updating? Default TRUE. If you are running the same code frequently and are confident the tiles haven’t changed, setting this to FALSE will speed things up.

... Further arguments passed on to \texttt{stars::read\_stars}

Value

a \texttt{stars} object of the cded tiles for the specified area of interest

Examples

\begin{verbatim}
## Not run:
vic <- census_subdivision()[census_subdivision()$CENSUS_SUBDIVISION_NAME == "Victoria", ]
vic_cded <- cded_stars(aoi = vic)
## End(Not run)
\end{verbatim}

\section*{Description}

Get Canadian Digital Elevation Model (CDED) as a \texttt{terra} object

\section*{Usage}

\begin{verbatim}
cded_terra(
aoi = NULL,
tiles_50K = NULL,  
.predicate = sf::st_intersects, 
.dest_vrt = tempfile(fileext = ".vrt"), 
.ask = interactive(), 
.check_tiles = TRUE, 
... 
)
\end{verbatim}

\section*{Arguments}

\begin{description}
\item[aoi] Area of Interest. Currently supports \texttt{sf} and \texttt{sp} polygons, \texttt{stars} and \texttt{raster} objects.
\item[tiles\_50K] a character vector of 1:50,000 NTS mapsheets tiles
\item[Predicate] geometry predicate function used to find the mapsheets from your aoi. Default \texttt{sf::st_intersects}.
\item[dest\_vrt] The location of the vrt file. Defaults to a temporary file, but can be overridden if you’d like to save it for a project
\item[ask] Should the function ask the user before downloading the data to a cache? Defaults to the value of \texttt{interactive()}.
\end{description}
check_tiles  Should the tiles that you already have in your cache be checked to see if they need updating? Default TRUE. If you are running the same code frequently and are confident the tiles haven’t changed, setting this to FALSE will speed things up.

...  Further arguments passed on to terra::rast()

Value

a terra object of the cded tiles for the specified area of interest

Examples

## Not run:
vic <- census_subdivision()[census_subdivision()$CENSUS_SUBDIVISION_NAME == "Victoria", ]
vic_cded <- cded_terra(aoi = vic)

## End(Not run)

census_dissemination_area

**Current Census Dissemination Areas**

Description

Current Census Dissemination Areas

Usage

census_dissemination_area(ask = interactive(), force = FALSE)

Arguments

ask  Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().

force  Should you force download the data?

Value

The spatial layer of census_dissemination_area as an sf object.

Source

bcdata::bcdc_get_data(record = 'a091fd65-d682-4a24-8c0e-68de7c87e3a3', resource = 'a7fa66d4-0f95-4c58-
census_division

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities().bec(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

```r
## Not run:
my_layer <- census_dissemination_area()
## End(Not run)
```

census_division

Current Census Division Boundaries

Description

Current Census Division Boundaries

Usage

census_division(ask = interactive(), force = FALSE)

Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
- **force**: Should you force download the data?

Value

The spatial layer of census_division as an sf object.

Source

bcdata::bcdc_get_data(record = 'ef17918a-597a-4012-8534-f8e71d8735b3', resource = '36b530c2-1de6-44a2-844f-d6f97c7e4f92')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities().bec(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()
Examples

```r
## Not run:
my_layer <- census_division()

## End(Not run)
```

census_economic

Current Census Economic Region Boundaries

Description

Current Census Economic Region Boundaries

Usage

census_economic(ask = interactive(), force = FALSE)

Arguments

- `ask` Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force` Should you force download the data?

Value

The spatial layer of `census_economic` as an `sf` object.

Source

`bcdata::bcdc_get_data(record = '1aebc451-a41c-496f-8b18-6f414cde93b7', resource = '3f0236cf-b1a1-4f1a-8e9e-86c2c3daff96')`

See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- census_economic()

## End(Not run)
```
census_metropolitan_area

Current Census Metropolitan Areas

Description
Current Census Metropolitan Areas

Usage
census_metropolitan_area(ask = interactive(), force = FALSE)

Arguments
ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().
force Should you force download the data?

Value
The spatial layer of census_metropolitan_area as an sf object.

Source
bcdata::bcdc_get_data(record = 'a6fb34b7-0937-4718-8f1f-43dba2c0f407', resource = 'f129a965-363e-4d7e-8319-a4010e002fdb')

See Also
Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census-economic(), census_subdivision(), census-tract(), ecoprovinces(), ecoregions(), ecossections(), fsa(), gw-aquifers(), health_chsa(), health_ha(), health_hsdh(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr-areas(), nr_districts(), nr-regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples
## Not run:
my_layer <- census_metropolitan_area()

## End(Not run)
census_subdivision

Current Census Subdivision Boundaries

Description

Current Census Subdivision Boundaries

Usage

census_subdivision(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().
force Should you force download the data?

Value

The spatial layer of census_subdivision as an sf object.

Source

bcdata::bcdc_get_data(record = '4c5618c6-38dd-4a62-a3de-9408b4974bb6', resource = '98bd1222-57bb-4504-92c2-4a5857ae7671')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_tract(), ecoprovinces(), ecoregions(), ecossections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- census_subdivision()

## End(Not run)
Description

Current Census Tract Boundaries

Usage

census_tract(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().

force Should you force download the data?

Value

The spatial layer of census_tract as an sf object.

Source

bcdata::bcdc_get_data(record = '539aae5b-12f6-4934-9592-9b27acc827f8', resource = 'be767db6-0d4e-4906-a89b-564637f14db9')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(),
census_division(), census_economic(), census_metropolitan_area(), census_subdivision(),
ecoprovinces(), ecoregions(), ecosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(),
health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(),
nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(),
water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- census_tract()

## End(Not run)
**combine_nr_rd**

**Combine Northern Rockies Regional Municipality with Regional Districts**

**Description**
Combine Northern Rockies Regional Municipality with Regional Districts

**Usage**
```r
combine_nr_rd()
```

**Value**
A layer where the Northern Rockies Regional Municipality has been combined with the Regional Districts to form a full provincial coverage.

---

**delete_cache**

**View and delete cached files**

**Description**
View and delete cached files
Show the files you have in your cache

**Usage**
```r
delete_cache(files_to_delete = NULL)
show_cached_files()
```

**Arguments**
- `files_to_delete` An optional argument to specify which files or layers should be deleted from the cache. Defaults to deleting all files pausing for permission from user. If a subset of files are specified, the files are immediately deleted.

**Value**
- `delete_cache()`: A logical of whether the file(s) were successful deleted
- `show_cached_files()`: a data.frame with the columns:
  - `file`, the name of the file,
  - `size_MB`, file size in MB,
  - `is_dir`, is it a directory? If you have cached tiles from the `cded()` functions, there will be a row in the data frame showing the total size of the cded tiles cache directory.
  - `modified`, date and time last modified
ecoprovinces

Examples

## Not run:
## See which files you have
show_cached_files()

## Delete your whole cache
delete_cache()

## Specify which files are deleted
delete_cache(c('regional_districts.rds', 'bc_cities.rds'))

## End(Not run)

---

ecoprovinces  British Columbia Ecoprovinces

Description

British Columbia Ecoprovinces

Usage

ecoprovinces(ask = interactive(), force = FALSE)

Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
- **force**: Should you force download the data?

Value

The spatial layer of ecoprovinces as an sf object.

Source

bcdata::bcdc_get_data(record = '51832f47-efdf-4956-837a-45fc2c9032dd', resource = '811fc6db-1a53-4574-8149-454f4a740682')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoregions(), ecossections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()
Examples

```r
## Not run:
my_layer <- ecoprovinces()

## End(Not run)
```

### Description

British Columbia Ecoregions

### Usage

```r
ecoregions(ask = interactive(), force = FALSE)
```

### Arguments

- `ask` Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
- `force` Should you force download the data?

### Value

The spatial layer of ecoregions as an sf object.

### Source

`bcdata::bcdc_get_data(record = 'd00389e0-66da-4895-bd56-39a0dd64aa78', resource = 'bd816a86-4f5e-4989-b1df-0b2f3f4a5f86')`

### See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

### Examples

```r
## Not run:
my_layer <- ecoregions()

## End(Not run)
```
ecosections

| ecosections | British Columbia Ecosections |

**Description**

British Columbia Ecosections

**Usage**

`ecosections(ask = interactive(), force = FALSE)`

**Arguments**

- **ask** Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force** Should you force download the data?

**Value**

The spatial layer of ecosections as an sf object.

**Source**

`bcdata::bcdc_get_data(record = 'ccc01f43-860d-4583-8ba4-e72d8379441e', resource = '6b6a3122-7a0b-4c0f-a72b-1e5c0e13d7e6')`

**See Also**

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()` , `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

**Examples**

```r
## Not run:
my_layer <- ecosections()
```

## End(Not run)
fsa

**British Columbia Forward Sortation Areas**

**Description**

British Columbia Forward Sortation Areas

**Usage**

```r
fsa(ask = interactive(), force = FALSE)
```

**Arguments**

- `ask`: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force`: Should you force download the data?

**Source**

http://www12.statcan.gc.ca/census-recensement/2011/geo/bound-limit/files-fichiers/2016/lfsa000b16a_e.zip

**See Also**

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hdsa()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

**Examples**

```r
## Not run:
my_layer <- fsa()
## End(Not run)
```
**get_layer**

*Get a B.C. spatial layer*

**Description**

Get a B.C. spatial layer

**Usage**

`get_layer(layer, ask = interactive(), force = FALSE)`

**Arguments**

- **layer**: the name of the layer. The list of available layers can be obtained by running `available_layers()`
- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force**: Should you force download the data?

**Value**

the layer requested

**Examples**

```r
## Not run:
get_layer("bc_bound_hres")
## End(Not run)
```

**gw_aquifers**

*British Columbia’s developed ground water aquifers*

**Description**

British Columbia’s developed ground water aquifers

**Usage**

`gw_aquifers(ask = interactive(), force = FALSE)`

**Arguments**

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force**: Should you force download the data?
Value
The spatial layer of gw_aquifers as an sf object.

Source
bcdata::bcdc_get_data(record = '099d69c5-1401-484d-9e19-c121cbb7977c', resource = '8f421e3a-ccd3-4fab-8198-53ad6e9e2af2')

See Also
Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecosections(), fsa(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples
## Not run:
my_layer <- gw_aquifers()
## End(Not run)
See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- health_chsa()
## End(Not run)
```

---

**health_ha**

*Health Authority Boundaries*

### Description

Health Authority Boundaries

### Usage

```r
health_ha(ask = interactive(), force = FALSE)
```

### Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force**: Should you force download the data?

### Value

The spatial layer of `health_ha` as an sf object.

### Source

`bcdata::bcdc_get_data(record = '7bc6018f-bb4f-4e5d-845e-c529e3d1ac3b', resource = '93b79a3c-2da4-4fd4-b953-2f5c690db430')`

### See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`
Examples

```r
## Not run:
my_layer <- health_ha()
## End(Not run)
```

---

### health_hsda

#### Health Service Delivery Area Boundaries

#### Description

Health Service Delivery Area Boundaries

#### Usage

```r
health_hsda(ask = interactive(), force = FALSE)
```

#### Arguments

- `ask`: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force`: Should you force download the data?

#### Value

The spatial layer of `health_hsda` as an `sf` object.

#### Source

`bcdata::bcdc_get_data(record = '71c930b9-563a-46da-a10f-ead49ccbc390', resource = 'c5dad467-229b-4378-852b-ff92479a65b6')`

#### See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

#### Examples

```r
## Not run:
my_layer <- health_hsda()
## End(Not run)
```
Local Health Area Boundaries

Usage

health_lha(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
force Should you force download the data?

Value

The spatial layer of health_lha as an sf object.

Source

bcdata::bcdc_get_data(record = 'afd021d9-7722-4410-b506-d394c66e74fc', resource = 'd6e951d3-5103-475a-8bb6-b4d275e6343f')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), eosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- health_lha()

## End(Not run)
Description

Hydrologic Zone Boundaries of British Columbia

Usage

hydrozones(ask = interactive(), force = FALSE)

Arguments

ask            Should the function ask the user before downloading the data to a cache? Default is the value of interactive().
force          Should you force download the data?

Value

The spatial layer of hydrozones as an sf object.

Source

bcdata::bcdc_get_data(record = '329fd234-8835-4d44-9aaa-97c37bfc8d92', resource = 'baeb665e-85c7-4a7b-8e67-8b956785490a')

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), eosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsdha(), health_lha(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

```r
## Not run:
my_layer <- hydrozones()

## End(Not run)
```
mapsheets_250K

**Description**

NTS 250K Grid - Digital Baseline Mapping at 1:250,000 (NTS)

**Usage**

mapsheets_250K()

**Value**

The spatial layer of mapsheets_250K as an sf object.

**Source**

https://open.canada.ca/data/en/dataset/055919c2-101e-4329-bfd7-1d0c333c0e62

**See Also**

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecossections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_50K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

**Examples**

```r
## Not run:
my_layer <- mapsheets_250K()

## End(Not run)
```

mapsheets_50K

**Description**

NTS 50K Grid - Digital Baseline Mapping at 1:50,000 (NTS)

**Usage**

mapsheets_50K()
municipalities

Value

The spatial layer of mapsheets_50K as an sf object.

Source

https://open.canada.ca/data/en/dataset/055919c2-101e-4329-bfd7-1d0c333c0e62

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), ecosections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), municipalities(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

## Not run:
my_layer <- mapsheets_50K()

## End(Not run)
nr_areas

See Also

combine_nr_rd() to combine Regional Districts and the Northern Rockies Regional Municipality into one layer

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), census_division(), census_economic(), census_metropolitan_area(), census_subdivision(), census_tract(), ecoprovinces(), ecoregions(), esections(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsd(), health_la(), hydrozones(), mapsheets_250K(), mapsheets_50K(), nr_areas(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

```r
## Not run:
my_layer <- municipalities()

## End(Not run)
```

---

## Description

British Columbia Natural Resource (NR) Areas

## Usage

```
nr_areas(ask = interactive(), force = FALSE)
```

## Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
- **force**: Should you force download the data?

## Value

The spatial layer of `nr_areas` as an `sf` object.

## Source

bcdata::bcdc_get_data(record = 'c1861ba4-abb8-4947-b3e5-7f7c4d7257d5', resource = '4b317896-1a42-4c03-
See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fha()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mmapsheets_250K()`, `mmapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- nr_areas()
## End(Not run)
```
Examples

```r
## Not run:
my_layer <- nr_districts()

## End(Not run)
```

---

### Description

British Columbia Natural Resource (NR) Regions

#### Usage

```r
nr_regions(ask = interactive(), force = FALSE)
```

#### Arguments

- `ask` Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force` Should you force download the data?

#### Value

The spatial layer of `nr_regions` as an `sf` object.

#### Source

bcdata::bcdc_get_data(record = 'dfe492c0-69c5-4c20-a6de-2c999301f', resource = 'ec636f64-9c5f-4704-8e66-2dd43032c9b5')

#### See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fisa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsdh()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

#### Examples

```r
## Not run:
my_layer <- nr_regions()

## End(Not run)
```
raster_by_poly  

Overlay a SpatialPolygonsDataFrame or sf polygons layer on a raster layer and clip the raster to each polygon. Optionally done in parallel

Description

Overlay a SpatialPolygonsDataFrame or sf polygons layer on a raster layer and clip the raster to each polygon. Optionally done in parallel

Usage

raster_by_poly(
  raster_layer,
  poly,
  poly_field,
  summarize = FALSE,
  parallel = FALSE
)

Arguments

raster_layer  the raster layer
poly  a SpatialPolygonsDataFrame layer or sf layer
poly_field  the field on which to split the SpatialPolygonsDataFrame
summarize  Should the function summarise the raster values in each polygon to a vector? Default FALSE
parallel  process in parallel? Default FALSE. If TRUE, it is up to the user to call future::plan() (or set options) to specify what parallel strategy to use.

Value

a list of RasterLayers if summarize = FALSE otherwise a list of vectors.

regional_districts  

British Columbia Regional Districts

Description

British Columbia Regional Districts

Usage

regional_districts(ask = interactive(), force = FALSE)
Arguments

ask Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().

force Should you force download the data?

Value

The spatial layer of `regional_districts` as an `sf` object.

Source

`bcdata::bcdc_get_data(record = 'd1aff64e-dbfe-45a6-af97-582b7f6418b9', resource = '57c7f719-dc87-415c-8be7-ef2f95289397')`

See Also

`combine_nr_rd()` to combine Regional Districts and the Northern Rockies Regional Municipality into one layer

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fda()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hdsa()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- regional_districts()
## End(Not run)
```

summarize_raster_list  

**Summarize a list of rasters into a list of numeric vectors**

Description

Summarize a list of rasters into a list of numeric vectors

Usage

`summarize_raster_list(raster_list, parallel = FALSE)`

Arguments

`raster_list` list of rasters

`parallel` process in parallel? Default FALSE. If TRUE, it is up to the user to call `future::plan()` (or set `options`) to specify what parallel strategy to use.
Value

a list of numeric vectors

transform_bc_albers Transform a Spatial* object to BC Albers projection

Description

The Spatial method has been removed as of bcmaps 2.0.0. The sf method is here to stay.

Usage

transform_bc_albers(obj)

Arguments

obj The sf object to transform.

Value

the sf object in BC Albers projection

tsa British Columbia Timber Supply Areas and TSA Blocks

Description

British Columbia Timber Supply Areas and TSA Blocks

Usage

gsa(ask = interactive(), force = FALSE)

Arguments

ask Should the function ask the user before downloading the data to a cache? De-
defaults to the value of interactive().

force Should you force download the data?

Value

The spatial layer of tsa as an sf object.

Source

bcdata::bcdc_get_data(record = '8daa29da-d7f4-401c-83ae-d962e3a28980', resource = '6851f8a6-77b9-4555-
See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- tsa()
## End(Not run)
```

---

**utm_convert**

*Convert a data.frame of UTM coordinates to an sf object with a single CRS*

**Description**

This can operate on a data frame containing coordinates from multiple UTM zones with a column denoting the zone, or a single zone for the full dataset.

**Usage**

```r
utm_convert(
x,
easting,
northing,
zone,
  crs = "EPSG:3005",
  datum = c("NAD83", "WGS84"),
  xycols = TRUE
)
```

**Arguments**

- **x**  
  data.frame containing UTM coordinates, with a zone column
- **easting**  
  the name of the 'easting' column
- **northing**  
  the name of the 'northing' column
- **zone**  
  the name of the 'zone' column, or a single value if the data are all in one UTM zone
- **crs**  
  target CRS. Default BC Albers (EPSG:3005)
- **datum**  
  The datum of the source data. "NAD83" (Default) or "WGS84"
- **xycols**  
  should the X and Y columns be appended to the output? TRUE or FALSE
Details

It supports data collected in either the NAD83 or WGS84 ellipsoid in the Northern hemisphere

Value

sf object in the chosen CRS

Examples

# Data with multiple zones, and a column denoting the zone
def <- data.frame(
animalid = c("a", "b", "c"),
zone = c(10, 11, 11),
easting = c(500000, 800000, 700000),
northing = c(5000000, 3000000, 1000000)
)
utm_convert(df, easting = "easting", northing = "northing", zone = "zone")

# Data all in one zone, specify a single zone:
def <- data.frame(
animalid = c("a", "b"),
easting = c(500000, 800000),
northing = c(5000000, 3000000)
)
utm_convert(df, easting = "easting", northing = "northing", zone = 11)

---

**vrtn_files**

*List the files that a vrt is built on*

Description

List the files that a vrt is built on

Usage

vrtn_files(vrt, omit_vrt = FALSE)

Arguments

vrt  path to a .vrt file
omit_vrt  omit the listing of the original vrt. Default FALSE

Value

character vector of tiles
**vrtnfo**

Get metadata about a .vrt file

**Description**

Get metadata about a .vrt file

**Usage**

```r
vrtnfo(vrt, options = character(0), quiet = FALSE)
```

**Arguments**

- `vrt`: path to a .vrt file
- `options`: options to pass to gdalinfo. See here for possible options.
- `quiet`: suppress output to the console (default FALSE)

**Value**

character of vrt metadata

---

**watercourses_15M**

British Columbia watercourses at 1:15M scale

**Description**

British Columbia watercourses at 1:15M scale

**Usage**

```r
watercourses_15M(ask = interactive(), force = FALSE)
```

**Arguments**

- `ask`: Should the function ask the user before downloading the data to a cache? Defaults to the value of interactive().
- `force`: Should you force download the data?

**Value**

The spatial layer of `watercourses_15M` as an sf object.

**Source**

https://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/canvec_15M_CA_Hydro_fgdb.zip
See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```r
## Not run:
my_layer <- watercourses_15M()

## End(Not run)
```

---

**watercourses_5M**  
*British Columbia watercourses at 1:5M scale*

**Description**

British Columbia watercourses at 1:5M scale

**Usage**

```r
watercourses_5M(ask = interactive(), force = FALSE)
```

**Arguments**

- `ask`  
  Should the function ask the user before downloading the data to a cache?  
  Defaults to the value of interactive().

- `force`  
  Should you force download the data?

**Value**

The spatial layer of `watercourses_5M` as an `sf` object.

**Source**

https://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/canvec_5M_CA_Hydro_fgdb.zip

**See Also**

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `wsc_drainages()`
Examples

```r
## Not run:
my_layer <- watercourses_5M()
## End(Not run)
```

## Not run:
```r
my_layer <- water_districts()
## End(Not run)
```
**water_precincts**

---

**British Columbia’s Water Management Precincts**

**Description**

British Columbia’s Water Management Precincts

**Usage**

```r
water_precincts(ask = interactive(), force = FALSE)
```

**Arguments**

- `ask` Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- `force` Should you force download the data?

**Value**

The spatial layer of `water_precincts` as an `sf` object.

**Source**

`bcdata::bcdc_get_data(record = 'b5f436b4-532c-4ee2-ba27-90d55ec8c73f', resource = 'e482fd4a-be58-4541-8e0d-c39a764fd0a3')`

**See Also**

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hesda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

**Examples**

```r
## Not run:
my_layer <- water_precincts()
## End(Not run)
```
Description

Water Survey of Canada Sub-Sub-Drainage Areas

Usage

```r
wsc_drainages(ask = interactive(), force = FALSE)
```

Arguments

- **ask**: Should the function ask the user before downloading the data to a cache? Defaults to the value of `interactive()`.
- **force**: Should you force download the data?

Value

The spatial layer of `wsc_drainages` as an `sf` object.

Source

`bcdata::bcdc_get_data(record = '7ae18a3c-917b-4cb1-9aa8-51a172475dbb', resource = '4455072e-d33b-4685-9edd-cffda763dd45')`

See Also

Other BC layers: `airzones()`, `bc_bound_hres()`, `bc_bound()`, `bc_cities()`, `bec()`, `census_dissemination_area()`, `census_division()`, `census_economic()`, `census_metropolitan_area()`, `census_subdivision()`, `census_tract()`, `ecoprovinces()`, `ecoregions()`, `ecosections()`, `fsa()`, `gw_aquifers()`, `health_chsa()`, `health_ha()`, `health_hsda()`, `health_lha()`, `hydrozones()`, `mapsheets_250K()`, `mapsheets_50K()`, `municipalities()`, `nr_areas()`, `nr_districts()`, `nr_regions()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`

Examples

```r
## Not run:
my_layer <- wsc_drainages()

## End(Not run)
```
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