Package 'bcmaps'

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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 (<https://www.statcan.gc.ca/en/reference/licence>).

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URL https://github.com/bcgov/bcmaps, https://bcgov.github.io/bcmaps/

BugReports https://github.com/bcgov/bcmaps/issues

Depends R (>= 2.10), sf (>= 1.0)

Imports bcdata (>= 0.4.1), httr (>= 1.3.1), jsonlite (>= 1.7.0), lifecycle (>= 1.0.3), methods, progress, rappdirs (>= 0.3.1), stats, utils, xml2

Suggests future (>= 1.12.0), future.apply (>= 1.2.0), ggplot2 (>= 3.0), glue (>= 1.1.1), knitr, lwgeom (>= 0.2.13), raster (>= 3.6-3), terra (>= 1.7.0), rmarkdown, sp (>= 2.0.0), stars (>= 0.6.3), testthat (>= 2.1.0), withr (>= 2.3)

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R topics documented:

`airzones` *British Columbia Air Zones*

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? 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 = 'e8eeefc4-2826-47bc-8430-85703d328516', resource = 'c495d082-b586-4df0-
```

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()`, `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 <- airzones()

## End(Not run)
```

`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

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

## Get the area of the land only, in hectares:
bc_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

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

## End(Not run)
```

---

bc_bound *BC Boundary*

Description

BC Boundary

Usage

```
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(), 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 <- bc_bound()

## End(Not run)
```

bc_bound_hres *BC Boundary - High Resolution*

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

```
bcdc_get_data(record = '30aeb5c1-4285-46c8-b60b-15b1a6f4258b', resource = '3d72cf36-ab53-4a2a-9988-a88
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(), 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 <- bc_bound_hres()

## End(Not run)
```

bc_cities *BC Major Cities Points*

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? 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-0d6befa0c7f8', resource = '443dd858-2e37-4a8f-
```

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), 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(), 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

```
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

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

Examples

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

## End(Not run)
```

bec *British Columbia BEC Map*

Description

British Columbia BEC Map

Usage

```
bec(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 bec as an sf object.

Source

bcdata::bcdc_get_data(record = 'f358a53b-ffde-4830-a325-a5a03ff672c3', resource = '3ec24cb4-f78d-48a9-

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(), 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 <- bec()

## End(Not run)
```

---

bec_colours *Biogeoclimatic Zone Colours*

Description

Standard colours used to represent Biogeoclimatic Zone colours to be used in plotting.

Usage

```
bec_colours()

bec_colors()
```

Value

named vector of hexadecimal colour codes. Names are standard abbreviations of Zone names.

Examples

```
## 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

```
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

```
## 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

```
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 stars::read_stars

Value

a stars 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_stars(aoi = vic)

## End(Not run)
```

---

cded_terra *Get Canadian Digital Elevation Model (CDED) as a* terra *object*

Description

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

Usage

```
cded_terra(
  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 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-
```

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

```
## 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-
```

See Also

Other BC layers: airzones(), bc_bound_hres(), bc_bound(), bc_cities(), bec(), census_dissemination_area(), 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

```
## 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-
```

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

```
## 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? 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-
```

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(), 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_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? 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-
```

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(), 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_subdivision()

## End(Not run)
```

census_tract *Current Census Tract Boundaries*

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? 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-
```

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

```
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

```
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

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 = '811fcedb-1a53-4574-
```

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(), 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 <- ecoprovinces()

## End(Not run)
```

`ecoregions` *British Columbia Ecoregions*

Description

British Columbia Ecoregions

Usage

```
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-
```

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

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

## End(Not run)
```

`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-
```

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

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

## End(Not run)
```

fsa *British Columbia Forward Sortation Areas*

Description

British Columbia Forward Sortation Areas

Usage

```
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_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 <- 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

```
## 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-c121ccb7977c', resource = '8f421e3a-ccd3-4fab-

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)
```

---

health_chsa *Community Health Service Areas - CHSA*

Description

Community Health Service Areas - CHSA

Usage

```
health_chsa(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_chsa as an sf object.

Source

bcdata::bcdc_get_data(record = '68f2f577-28a7-46b4-bca9-7e9770f2f357', resource = '59065b51-511a-4976-

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

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

## End(Not run)
```

---

health_ha *Health Authority Boundaries*

Description

Health Authority Boundaries

Usage

```
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-
```

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

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

## End(Not run)
```

`health_hsda` *Health Service Delivery Area Boundaries*

Description

Health Service Delivery Area Boundaries

Usage

```
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-
```

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

```
## Not run:
my_layer <- health_hsda()

## End(Not run)
```

health_lha *Local Health Area Boundaries*

Description

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-
```

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(), 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)
```

hydrozones *Hydrologic Zone Boundaries of British Columbia*

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? Defaults to 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-
```

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(), 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 <- hydrozones()

## End(Not run)
```

mapsheets_250K *NTS 250K Grid - Digital Baseline Mapping at 1:250,000 (NTS)*

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()`, `ecosections()`, `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

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

## End(Not run)
```

mapsheets_50K *NTS 50K Grid - Digital Baseline Mapping at 1:50,000 (NTS)*

Description

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

Usage

```
mapsheets_50K()
```

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)
```

`municipalities` *British Columbia Municipalities*

Description

British Columbia Municipalities

Usage

```
municipalities(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 `municipalities` as an `sf` object.

Source

```
bcdata::bcdc_get_data(record = 'e3c3c580-996a-4668-8bc5-6aa7c7dc4932', resource = '25c95b07-5882-47ff-
```

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(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), 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

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

## End(Not run)
```

---

nr_areas *British Columbia Natural Resource (NR) Areas*

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(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), health_lha(), hydrozones(), mapsheets_250K(), mapsheets_50K(), municipalities(), nr_districts(), nr_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

```
## Not run:
my_layer <- nr_areas()

## End(Not run)
```

---

nr_districts *British Columbia Natural Resource (NR) Districts*

Description

British Columbia Natural Resource (NR) Districts

Usage

```
nr_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 nr_districts as an sf object.

Source

```
bcdata::bcdc_get_data(record = '0bc73892-e41f-41d0-8d8e-828c16139337', resource = 'e6676e55-2a6f-4b2b-
```

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_regions(), regional_districts(), tsa(), water_districts(), water_precincts(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

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

## End(Not run)
```

`nr_regions` *British Columbia Natural Resource (NR) Regions*

Description

British Columbia Natural Resource (NR) Regions

Usage

```
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 = 'dfc492c0-69c5-4c20-a6de-2c9bc999301f', resource = 'ec636f64-9c5f-4704-
```

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()`, `regional_districts()`, `tsa()`, `water_districts()`, `water_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```
## 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-

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(), fsa(), gw_aquifers(), health_chsa(), health_ha(), health_hsda(), 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

```
## 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

```
tsa(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 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

```
## 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

```
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
df <- 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:
df <- data.frame(
  animalid = c("a", "b"),
  easting = c(500000, 800000),
  northing = c(5000000, 3000000)
)
utm_convert(df, easting = "easting", northing = "northing", zone = 11)
```

---

vrt_files *List the files that a vrt is built on*

Description

List the files that a vrt is built on

Usage

```
vrt_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

vrt_info *Get metadata about a .vrt file*

Description

Get metadata about a .vrt file

Usage

```
vrt_info(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

```
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

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

## End(Not run)
```

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

Description

British Columbia watercourses at 1:5M scale

Usage

```
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

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

## End(Not run)
```

`water_districts` *British Columbia's Water Management Districts*

Description

British Columbia's Water Management Districts

Usage

```
water_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 `water_districts` as an `sf` object.

Source

```
bcdata::bcdc_get_data(record = '92cb3ad8-9582-48a9-9e79-9a9d33601e50', resource = '07f9aa3f-0b66-4a49-
```

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_precincts()`, `watercourses_15M()`, `watercourses_5M()`, `wsc_drainages()`

Examples

```
## Not run:
my_layer <- water_districts()

## End(Not run)
```

water_precincts *British Columbia's Water Management Precincts*

Description

British Columbia's Water Management Precincts

Usage

```
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-
```

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(), watercourses_15M(), watercourses_5M(), wsc_drainages()

Examples

```
## Not run:
my_layer <- water_precincts()

## End(Not run)
```

wsc_drainages *Water Survey of Canada Sub-Sub-Drainage Areas*

Description

Water Survey of Canada Sub-Sub-Drainage Areas

Usage

```
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-
```

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

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

## End(Not run)
```

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