Package 'tigris'

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Type Package

Title Load Census TIGER/Line Shapefiles

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Description Download TIGER/Line shapefiles from the United States Census Bureau (<https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>) and load into R as 'sf' objects.

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URL https://github.com/walkerke/tigris

BugReports https://github.com/walkerke/tigris/issues

Depends R (>= 4.1)

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`address_ranges` *Download an address range features shapefile into R*

Description

Download an address range features shapefile into R

Usage

```
address_ranges(state, county, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code of the state of the county you'd like to download the roads for. Can also be state name or abbreviation (case-insensitive).
`county`	The three-digit FIPS code of the county you'd like the roads for. Can also be a county name.
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.

- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other transportation functions: primary_roads(), primary_secondary_roads(), rails(), roads()

---

alaska_native_regional_corporations

Download an Alaska Native Regional Corporation shapefile into R.

Description

From the US Census Bureau: "ANRCs are corporations created according to the Alaska Native Claims Settlement Act. They are organized under the laws of the State of Alaska as "Regional Corporations," to conduct both the for-profit and non-profit affairs of Alaska Natives within defined regions of Alaska." For more information, please see the Census technical documentation at the link provided.

Usage

```
alaska_native_regional_corporations(cb = FALSE, year = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch5GARM.pdf

Other native/tribal geometries functions: `native_areas()`, `tribal_block_groups()`, `tribal_census_tracts()`, `tribal_subdivisions_national()`

---

append_geoid *Retrieve GEOID from the Census Geocoder by address*

Description

Returns GEOID for 2020 geographies.

Usage

```
append_geoid(address, geoid_type = "block")
```

Arguments

`address`	A tibble/data frame with (at a minimum, others can be present) either character columns street, city, and state OR numeric columns lat and lon. Lat/lon columns take priority.
`geoid_type`	GEOID level to return, `c('county', 'tract', 'block group', 'block')`. Defaults to block.

Value

the original tibble with GEOIDs appended as a new column called `geoid`.

Author(s)

Josie Kressner, <josie@transportfoundry.com>

Examples

```
## Not run:
airports <- dplyr::data_frame(
  street = "700 Catalina Dr", city = "Daytona Beach", state = "FL"
)
append_geoid(airports, 'tract')

## End(Not run)
```

---

area_water *Download an area water shapefile into R*

Description

From the US Census Bureau: "The area hydrography shapefile contains the geometry and attributes of both perennial and intermittent area hydrography features, including ponds, lakes, oceans, swamps, glaciers, and the area covered by large streams represented as double-line drainage."

Usage

```
area_water(state, county, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code of the state of the county you'd like to download the water features for. Can also be state name or abbreviation (case-insensitive).
`county`	The three-digit FIPS code of the county you'd like the water features for. Can also be a county name.
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.

- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other water functions: coastline(), linear_water()

Examples

```
## Not run:
library(tigris)

dallas_water <- area_water("TX", "Dallas")

plot(dallas_water$geometry)


## End(Not run)
```

---

blocks *Download a Census block shapefile into R*

Description

Description from the US Census Bureau (see link for source): Census blocks are statistical areas bounded on all sides by visible features, such as streets, roads, streams, and railroad tracks, and by non-visible boundaries such as city, town, township, and county limits, and short line-of-sight extensions of streets and roads. Generally, census blocks are small in area; for example, a block in a city. Census blocks in suburban and rural areas may be large, irregular and bounded by a variety of features, such as roads, streams, and/or transmission line rights-of-way. In remote areas census blocks may encompass hundreds of square miles. Census blocks cover all territory in the United States, Puerto Rico, and the Island areas. Blocks do not cross the boundaries of any entity for which the Census Bureau tabulates data.

Usage

```
blocks(state, county = NULL, year = NULL, ...)
```

Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation.
county	The three-digit FIPS code (string) of the county you'd like to subset for, or a vector of FIPS codes if you desire multiple counties. Can also be a county name or vector of names.
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Details

This function will download an entire block shapefile for a selected state into R, and optionally subset by county. **A warning:** Census block shapefiles are often very large, especially for large states - for example, the block file for Texas is 462MB zipped! If you have a slow or unreliable internet connection, or insufficient memory, this may prove burdensome given that you have to first download by state and then subset.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other general area functions: block_groups(), counties(), county_subdivisions(), places(), pumas(), school_districts(), states(), tracts(), zctas()

Examples

```
## Not run:
# Simple example using Rose Island, American Samoa
# Be careful with Census blocks for states!

library(tigris)
library(leaflet)

rose_island <- blocks(state = "AS", county = "Rose Island")

leaflet(rose_island) %>%
  addTiles() %>%
  addPolygons()


## End(Not run)
```

---

block_groups *Download a Census block groups shapefile into R, and optionally subset by county*

Description

Description from the US Census Bureau (see link for source):Standard block groups are clusters of blocks within the same census tract that have the same first digit of their 4-character census block number. For example, blocks 3001, 3002, 3003..., 3999 in census tract 1210.02 belong to Block Group 3. Due to boundary and feature changes that occur throughout the decade, current block groups do not always maintain these same block number to block group relationships. For example, block 3001 might move due to a census tract boundary change but the block number will not change, even if it does not still fall in block group 3. However, the GEOID for that block, identifying block group 3, would remain the same in the attribute information in the TIGER/Line Shapefiles because block GEOIDs are always built using the decennial geographic codes.

Usage

```
block_groups(state = NULL, county = NULL, cb = FALSE, year = NULL, ...)
```

Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation. When NULL and combined with cb = TRUE, a national dataset of block groups will be returned for years 2019 and later.
county	The three-digit FIPS code (string) of the county you'd like to subset for, or a vector of FIPS codes if you desire multiple counties. Can also be a county name or vector of names.
cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Details

Block groups delineated for the 2010 Census generally contain between 600 and 3,000 people. Most block groups were delineated by local participants in the Census Bureau's Participant Statistical Areas Program (PSAP). The Census Bureau delineated block groups only where a local or tribal government declined to participate or where the Census Bureau could not identify a potential local participant.

A block group usually covers a contiguous area. Each census tract contains at least one block group and block groups are uniquely numbered within census tract. Within the standard census geographic hierarchy, block groups never cross county or census tract boundaries, but may cross the boundaries of county subdivisions, places, urban areas, voting districts, congressional districts, and American Indian, Alaska Native, and Native Hawaiian areas.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other general area functions: blocks(), counties(), county_subdivisions(), places(), pumas(), school_districts(), states(), tracts(), zctas()

Examples

```
## Not run:
library(tigris)

benton_bgs <- block_groups("Oregon", "Benton")

plot(benton_bgs$geometry)

## End(Not run)
```

`call_geolocator` *Call geolocator for one address*

Description

Call geolocator for one address

Usage

```
call_geolocator(street, city, state, zip = NA)
```

Arguments

`street`	A character string indicating a street name and number
`city`	A character string indicating a city
`state`	A two-digit character string with a state postal code
`zip`	A five-digit character string with a postal zip code. Optional parameter.

Value

A character string representing the Census block of the supplied address.

`call_geolocator_latlon` *Call geolocator for one address with lat/lon, adds option to set benchmark and vintage if not provided it will default to the most recent.*

Description

Call geolocator for one address with lat/lon, adds option to set benchmark and vintage if not provided it will default to the most recent.

Usage

```
call_geolocator_latlon(lat, lon, benchmark, vintage)
```

Arguments

`lat`	A numeric value
`lon`	A numeric value
`benchmark`	time period when a snapshot of address ranges was taken. Defaults to `"Public_AR_Current"`; see https://geocoding.geo.census.gov/geocoder/benchmarks for available benchmarks.
`vintage`	census or survey that the address range relates to, e.g. `"Census2020_Current"`. Defaults to `"Current_Current"`; available vintages depend on the benchmark, see https://geocoding.geo.census.gov/geocoder/vintages?benchmark=Public_AR_Current. ACS vintages don't include blocks, so they return `NA`.

Value

A character string representing the Census block of the supplied lat/lon.

Author(s)

Josie Kressner, <josie@transportfoundry.com>

Mark Richards, <Mark.Richards.002@gmail.com>

`coastline` *Download a shapefile of the US coastline into R*

Description

Download a shapefile of the US coastline into R

Usage

```
coastline(year = NULL, ...)
```

Arguments

year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

Other water functions: area_water(), linear_water()

---

combined_statistical_areas

Download a combined statistical areas shapefile into R

Description

Combined statistical areas are "two or more adjacent CBSAs that have significant employment interchanges." In turn, CSAs are composed of multiple metropolitan and/or micropolitan areas, and should not be compared with individual core-based statistical areas.

Usage

```
combined_statistical_areas(cb = FALSE, resolution = "500k", year = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
resolution	The resolution of the cartographic boundary file (if cb == TRUE). Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other metro area functions: core_based_statistical_areas(), metro_divisions(), new_england(), urban_areas()

`congressional_districts` *Download a congressional districts shapefile into R*

Description

Description from the US Census Bureau (see link for source): Congressional districts are the 435 areas from which members are elected to the U.S. House of Representatives. After the apportionment of congressional seats among the states, which is based on decennial census population counts, each state with multiple seats is responsible for establishing congressional districts for the purpose of electing representatives. Each congressional district is to be as equal in population to all other congressional districts in a state as practicable. The boundaries and numbers shown for the congressional districts are those specified in the state laws or court orders establishing the districts within each state.

Usage

```
congressional_districts(
  state = NULL,
  cb = FALSE,
  resolution = "500k",
  year = NULL,
  ...
)
```

Arguments

`state`	The two-digit FIPS code (string) of the state you want, or a vector of codes if you want multiple states. Can also be state name or state abbreviation. If `NULL` (the default), returns the entire United States.
`cb`	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
`resolution`	The resolution of the cartographic boundary file (if cb == TRUE). Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Details

Congressional districts for the 108th through 112th sessions were established by the states based on the result of the 2000 Census. Congressional districts for the 113th through 116th sessions were established by the states based on the result of the 2010 Census. Boundaries are effective until January of odd number years (for example, January 2015, January 2017, etc.), unless a state initiative or court ordered redistricting requires a change. All states established new congressional

districts in 2011-2012, with the exception of the seven single member states (Alaska, Delaware, Montana, North Dakota, South Dakota, Vermont, and Wyoming).

Each year returns the districts in effect for that year's Congress: the 118th Congress for 2022 and 2023, the 119th for 2024 and 2025, and the 120th for 2026. Older congressional district boundaries back to 2010 can be obtained by supplying the appropriate year.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/geography/guidance/geo-areas/congressional-dist.html

Other legislative district functions: `state_legislative_districts()`, `voting_districts()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

cd118 <- congressional_districts(cb = TRUE, resolution = '20m', year = 2022)

leaflet(cd118) %>%
   addTiles() %>%
   addPolygons()

## End(Not run)
```

`core_based_statistical_areas` *Download a core-based statistical area shapefile into R*

Description

Core-based statistical areas include both metropolitan areas and micropolitan areas. The US Census Bureau defines these areas as follows: "A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core." Please see the link provided for more information

Usage

```
core_based_statistical_areas(cb = FALSE, resolution = "500k", year = NULL, ...)
```

Arguments

`cb`	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
`resolution`	The resolution of the cartographic boundary file (if cb == TRUE). Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/metro-micro.html

Other metro area functions: `combined_statistical_areas()`, `metro_divisions()`, `new_england()`, `urban_areas()`

`counties` *Download a US Counties shapefile into R, and optionally subset by state*

Description

Description from the US Census Bureau (see link for source): The primary legal divisions of most states are termed counties. In Louisiana, these divisions are known as parishes. In Alaska, which has no counties, the equivalent entities are the organized boroughs, city and boroughs, municipalities, and census areas; the latter of which are delineated cooperatively for statistical purposes by the state of Alaska and the Census Bureau. In four states (Maryland, Missouri, Nevada, and Virginia), there are one or more incorporated places that are independent of any county organization and thus constitute primary divisions of their states. These incorporated places are known as independent cities and are treated as equivalent entities for purposes of data presentation. The District of Columbia and Guam have no primary divisions, and each area is considered an equivalent entity for purposes of data presentation. All of the counties in Connecticut and Rhode Island and nine counties in Massachusetts were dissolved as functioning governmental entities; however, the Census Bureau continues to present data for these historical entities in order to provide comparable geographic units at the county level of the geographic hierarchy for these states and represents them as nonfunctioning legal entities in data products. The Census Bureau treats the following entities as equivalents of counties for purposes of data presentation: municipios in Puerto Rico, districts and islands in American Samoa, municipalities in the Commonwealth of the Northern Mariana Islands, and islands in the U.S. Virgin Islands. Each county or statistically equivalent entity is assigned a three-character numeric Federal Information Processing Series (FIPS) code based on alphabetical sequence that is unique within state and an eight-digit National Standard feature identifier.

Usage

```
counties(state = NULL, cb = FALSE, resolution = "500k", year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code (string) of the state you want, or a vector of codes if you want multiple states. Can also be state name or state abbreviation.
`cb`	If cb is set to TRUE, download a generalized (1:500k) counties file. Defaults to FALSE (the most detailed TIGER file).

resolution	The resolution of the cartographic boundary file (if cb == TRUE). Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch4GARM.pdf

Other general area functions: block_groups(), blocks(), county_subdivisions(), places(), pumas(), school_districts(), states(), tracts(), zctas()

Examples

```
## Not run:
library(tigris)
library(ggplot2)

me <- counties("Maine", cb = TRUE)

gg <- ggplot()
gg <- gg + geom_sf(data = me, color="black",
                   fill="white", size=0.25)
gg

## End(Not run)
```

`county_subdivisions` *Download a county subdivision shapefile into R*

Description

From the US Census Bureau (see link for source, and more information): "All counties and statistically equivalent entities consist of one or more geographic units that the Bureau of the Census recognizes as county subdivisions. The two major types of county subdivisions are minor civil divisions(MCDs) and census county divisions (CCDs). A State has either MCDs or their statistical equivalents, or CCDs; it cannot contain both."

Usage

```
county_subdivisions(state, county = NULL, cb = FALSE, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code (string) of the state you want, or a vector of codes for several states. Can also be state names or abbreviations.
`county`	The three-digit FIPS code (string) of the county you'd like to subset for, or a vector of FIPS codes if you desire multiple counties. Can also be a county name or vector of names. Only available for a single state.
`cb`	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch8GARM.pdf

Other general area functions: `block_groups()`, `blocks()`, `counties()`, `places()`, `pumas()`, `school_districts()`, `states()`, `tracts()`, `zctas()`

Examples

```
## Not run:
library(tigris)

or <- county_subdivisions('Oregon', c('Linn', 'Benton'))

plot(or$geometry)


## End(Not run)
```

`divisions` *Download a US Census divisions cartographic boundary shapefile into R*

Description

Download a US Census divisions cartographic boundary shapefile into R

Usage

```
divisions(resolution = "500k", year = NULL, ...)
```

Arguments

`resolution`	The resolution of the cartographic boundary file. Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

Other national cartographic boundary functions: `nation()`, `regions()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

divs <- divisions(resolution = '20m')

leaflet(divs) %>%
   addTiles() %>%
   addPolygons()

## End(Not run)
```

`erase_water` *Erase water area from an input polygon dataset*

Description

This function 'erases' water area from an input polygon dataset (typically a Census dataset). 'Erase' is defined in the traditional GIS sense as the removal of areas in an input layer from an erase layer, returning the modified input layer. A common use-case is to improve cartographic representation of locations where US Census polygons include more water area than desired (e.g. New York City, Seattle) or to support contiguity-based spatial analyses that might otherwise incorrectly assume that polygons across bodies of water are neighbors.

Usage

```
erase_water(input_sf, area_threshold = 0.75, year = NULL)
```

Arguments

`input_sf`	An input sf object, ideally obtained with the tigris package or through tidycensus.
`area_threshold`	The percentile rank cutoff of water areas to use in the erase operation, ranked by size. Defaults to 0.75, representing the water areas in the 75th percentile and up (the largest 25 percent of areas). This value may need to be modified by the user to achieve optimal results for a given location.
`year`	The year to use for the water layer (2011 or later); defaults to 2025 unless the `tigris_year` option is otherwise set.

Details

The function works by identifying US counties that intersect the input polygon layer, then requesting water polygons (using `tigris::area_water()`) to be erased from those input polygons. The `area_threshold` parameter can be tuned to determine the percentile ranking of bodies of water (by area) to use; the default is a percentile ranking of 0.75, erasing the largest 25 percent of water bodies in the region.

Analysts will ideally have transformed the input coordinate reference system (CRS) of their data to a projected CRS to improve performance; see https://walker-data.com/census-r/census-geographic-data-and-appl
html#coordinate-reference-systems for more information on how to perform CRS transformations. Analysts should also use this function with caution; the function may generate sliver polygons or irregular geometries in the output layer, especially if the input sf object was not obtained with the tigris package. Also, the operation may be quite slow for large input areas.

Value

An output sf object representing the polygons in `input_sf` with water areas erased.

Examples

```
## Not run:

library(tigris)
library(sf)
options(tigris_use_cache = TRUE)
```

```
king_tracts <- tracts(state = "WA", county = "King", year = 2020)

# CRS: NAD 1983 / Washington North (State Plane)
king_erased <- king_tracts %>%
    st_transform(32148) %>%
    erase_water(area_threshold = 0.9)

plot(king_erased$geometry)

## End(Not run)
```

`filter_place` *Filter a* `places` *Spatial object for only those places matching the contents of the* `place` *vector.*

Description

Filter a `places` Spatial object for only those places matching the contents of the `place` vector.

Usage

```
filter_place(places, place)
```

Arguments

`places`	object returned from a call to `places`
`place`	a vector of full place names. The function performs the comparison in a case-insensitive manner.

Examples

```
## Not run:
places("Maine") %>% filter_place("berwick")

## End(Not run)
```

`filter_state` *Filter a* `states` *Spatial object for only those states matching the contents of the* `state` *vector.*

Description

Filter a `states` Spatial object for only those states matching the contents of the `state` vector.

Usage

```
filter_state(states, state)
```

Arguments

states	object returned from a call to states
state	a vector of full state names. The function performs the comparison in a case-insensitive manner.

Examples

```
## Not run:
states() %>% filter_state("south")

## End(Not run)
```

---

fips_codes *Dataset with FIPS codes for US states and counties*

Description

Built-in dataset for use with the lookup_code function. To access the data directly, issue the command data(fips_codes).

- county: County name, title-case
- county_code: County code. (3-digit, 0-padded, character)
- state: Upper-case abbreviation of state
- state_code: State FIPS code (2-digit, 0-padded, character)
- state_name: Title-case name of state

Usage

```
data(fips_codes)
```

Format

A data frame with 3,256 rows and 5 variables

Details

Dataset with FIPS codes for US states and counties

Built-in dataset for use with the lookup_code function. To access the data directly, issue the command data(fips_codes).

Note

Last updated 2023-05-18

geo_join *Easily merge a data frame to a spatial data frame*

Description

This function should be considered deprecated. Please update your workflow to use sf objects and dplyr's `*_join()` family of functions instead.

Usage

```
geo_join(spatial_data, data_frame, by_sp, by_df, by = NULL, how = "left")
```

Arguments

spatial_data	A spatial data frame to which you want to merge data.
data_frame	A regular data frame that you want to merge to your spatial data.
by_sp	The column name you'll use for the merge from your spatial data frame.
by_df	The column name you'll use for the merge from your regular data frame.
by	(optional) If a named argument is supplied to the by parameter, geo_join will assume that the join columns in the spatial data and data frame share the same name.
how	The type of join you'd like to perform. The default, 'left', keeps all rows in the spatial data frame, and returns NA for unmatched rows. The alternative, 'inner', retains only those rows in the spatial data frame that match rows from the target data frame.

Value

a joined spatial/data frame object

Examples

```
## Not run:

library(rnaturalearth)
library(WDI)
library(tigris)

dat <- WDI(country = "all", indicator = "SP.DYN.LE00.IN", start = 2012, end = 2012)

dat$SP.DYN.LE00.IN <- round(dat$SP.DYN.LE00.IN, 1)

countries <- ne_countries()

countries2 <- geo_join(countries, dat, 'iso_a2', 'iso2c')

nrow(countries2)
```

```
## [1] 177

countries3 <- geo_join(countries, dat, 'iso_a2', 'iso2c', how = 'inner')

nrow(countries3)

## [1] 169


## End(Not run)
```

---

grep_place *Find places matching a term in a* places *object*

Description

This is just shorthand for grep(term, list_places(places), value=TRUE, ignore.case=TRUE)

Usage

```
grep_place(places, term)
```

Arguments

places	object returned from a call to places
term	equivalent to the pattern argument of grep

Examples

```
## Not run:
places("Maine") %>% grep_place("south")

## End(Not run)
```

---

grep_state *Find states matching a term in a* state *object*

Description

This is just shorthand for grep(term, list_states(states), value=TRUE, ignore.case=TRUE)

Usage

```
grep_state(states, term)
```

Arguments

states	object returned from a call to state
term	equivalent to the pattern argument of grep

Examples

```
## Not run:
states() %>% grep_state("north")

## End(Not run)
```

---

is_tigris *Returns* TRUE *if* obj *has a* tigris *attribute*

Description

It's unlikely that said object was not created by this package

Usage

```
is_tigris(obj)
```

Arguments

obj	R object to test

Value

TRUE if obj was made by this package

---

landmarks *Download a point or area landmarks shapefile into R*

Description

Description from the US Census Bureau: "The Census Bureau includes landmarks in the MAF/TIGER database (MTDB) for locating special features and to help enumerators during field operations. Some of the more common landmark types include area landmarks such as airports, cemeteries, parks, and educational facilities and point landmarks such as schools and churches."

Usage

```
landmarks(state, type = "point", year = NULL, ...)
```

Arguments

state	The state for which you'd like to download the landmarks
type	Whether you would like to download point landmarks ("point") or area landmarks ("area"). #' Defaults to "point".
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Details

The Census Bureau adds landmark features to the database on an as-needed basis and makes no attempt to ensure that all instances of a particular feature were included. The absence of a landmark such as a hospital or prison does not mean that the living quarters associated with that landmark were excluded from the 2010 Census enumeration. The landmarks were not used as the basis for building or maintaining the address list used to conduct the 2010 Census.

Area landmark and area water features can overlap; for example, a park or other special land-use feature may include a lake or pond. In this case, the polygon covered by the lake or pond belongs to a water feature and a park landmark feature. Other kinds of landmarks can overlap as well. Area landmarks can contain point landmarks, but these features are not linked in the TIGER/Line Shapefiles.

Landmarks may be identified by a MAF/TIGER feature class code only and may not have a name. Each landmark has a unique area landmark identifier (AREAID) or point landmark identifier (POINTID) value.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc_Ch3.pdf

---

`linear_water` *Download an linear water shapefile into R*

Description

From the US Census Bureau: "The linear hydrography shapefile contains all linear features with "H" (Hydrography) type MTFCCs in the MAF/TIGER database by county. The shapefiles are provided at a county geographic extent and in linear elemental feature geometry. The linear hydrography shapefile includes streams/rivers, braided streams, canals, ditches, artificial paths, and aqueducts. A linear hydrography feature may include edges with both perennial and intermittent persistence."

Usage

```
linear_water(state, county, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code of the state of the county you'd like to download the water features for. Can also be state name or abbreviation (case-insensitive).
`county`	The three-digit FIPS code of the county you'd like the water features for. Can also be a county name.
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other water functions: `area_water()`, `coastline()`

Examples

```
## Not run:
library(tigris)

dallas_water <- linear_water("TX", "Dallas")

plot(dallas_water$geometry)


## End(Not run)
```

`list_counties` *Return a data frame of county names & FIPS codes for a given state*

Description

Return a data frame of county names & FIPS codes for a given state

Usage

```
list_counties(state)
```

Arguments

`state`	String representing the state you'd like to look up. Accepts state names (spelled correctly), e.g. "Texas", or postal codes, e.g. "TX". Can be lower-case.

Value

data frame of county name and FIPS code or NULL if invalid state

list_places *Return a list of all the places in a* places *object*

Description

Return a list of all the places in a places object

Usage

```
list_places(places, sorted = TRUE)
```

Arguments

places	object returned from a call to places
sorted	return the list sorted or in the order found in the shapefile?

Examples

```
## Not run:
places("Maine") %>% list_places()

## End(Not run)
```

list_states *Return a list of all the states in a* state *object*

Description

Return a list of all the states in a state object

Usage

```
list_states(states, sorted = TRUE)
```

Arguments

states	object returned from a call to state
sorted	return the list sorted or in the order found in the shapefile?

Examples

```
## Not run:
states() %>% list_states()

## End(Not run)
```

load_tiger *Helper function to download Census data*

Description

Helper function to download Census data

Usage

```
load_tiger(
  url,
  refresh = getOption("tigris_refresh", FALSE),
  tigris_type = NULL,
  class = getOption("tigris_class", "sf"),
  progress_bar = TRUE,
  keep_zipped_shapefile = FALSE,
  filter_by = NULL,
  protocol = getOption("tigris_protocol", "http"),
  timeout = NULL
)
```

Arguments

url	URL for zipped shapefile in TIGER database (constructed in calling function).
refresh	Whether to re-download shapefiles if cached. Defaults to value of the global option "tigris_refresh" if that option is, and FALSE if not. This will override the behavior set in "tigris_refresh" option if a value (TRUE or FALSE) is provided.
tigris_type	Added as an attribute to return object (used internally).
class	Class of return object. Must be one of "sf" (the default) or "sp".
progress_bar	If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
keep_zipped_shapefile	If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
filter_by	Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
protocol	Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
timeout	No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

Value

sf or sp data frame

`lookup_code` *Look up state and county codes*

Description

Function to look up the FIPS codes for states and optionally counties you'd l ike to load data for. As the package functions require the codes to return the data correctly, this function makes it easy to find the codes that you need.

Usage

```
lookup_code(state, county = NULL)
```

Arguments

`state`	String representing the state you'd like to look up. Accepts state names (spelled correctly), e.g. "Texas", or postal codes, e.g. "TX". Can be lower-case.
`county`	The name of the county you'll like to search for. T he state that the county is located in must be supplied for this to work, as there are multiple counties with the same names across states. Can be lower-case.

Value

character string with an explanation of state/county FIPS codes

Examples

```
## Not run:
lookup_code("me")
## [1] "The code for Maine is '23'."

lookup_code("Maine")
## [1] "The code for Maine is '23'."

lookup_code("23")
## [1] "The code for Maine is '23'."

lookup_code(23)
## [1] "The code for Maine is '23'."

lookup_code("me", "york")
## [1] "The code for Maine is '23' and the code for York County is '031'."

lookup_code("Maine", "York County")
## [1] "The code for Maine is '23' and the code for York County is '031'."

## End(Not run)
```

`metro_divisions` *Download a metropolitan divisions shapefile into R.*

Description

Metropolitan divisions are subdivisions of metropolitan areas with population of at least 2.5 million. Please note: not all metropolitan areas have metropolitan divisions.

Usage

```
metro_divisions(year = NULL, ...)
```

Arguments

`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other metro area functions: `combined_statistical_areas()`, `core_based_statistical_areas()`, `new_england()`, `urban_areas()`

`military` *Download the Military Installation National Shapefile into R*

Description

Description from the US Census Bureau: "The Census Bureau includes landmarks such as military installations in the MAF/TIGER database for locating special features and to help enumerators during field operations. The Census Bureau adds landmark features to the database on an as-needed basis and does not attempt to ensure that all instances of a particular feature are included. For additional information about area landmarks, please see Section 3.12, Landmarks (Area and Point)."

Usage

```
military(year = NULL, ...)
```

Arguments

`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Details

This file does not include the three point landmarks identified as military installation features in the MAF/TIGER database. These point landmarks are included in the point landmark shapefile. Although almost all military installations have assigned 8-character National Standard (GNIS) codes, the Census Bureau has not loaded most of this data into the MAF/TIGER database. The 2020 military shapefiles contain few values in the ANSICODE field.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc_Ch3.pdf

---

`nation` *Download a US national boundary shapefile into R*

Description

Download a US national boundary shapefile into R

Usage

```
nation(resolution = "5m", year = NULL, ...)
```

Arguments

`resolution`	The resolution of the cartographic boundary file. Defaults to '5m'; options include '5m' (1:5 million) and '20m' (1:20 million).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

Other national cartographic boundary functions: `divisions()`, `regions()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

boundary <- nation(resolution = '20m')

leaflet(boundary) %>%
   addTiles() %>%
   addPolygons()

## End(Not run)
```

---

native_areas *Download an American Indian / Alaska Native / Native Hawaiian Areas shapefile into R.*

Description

Description from the Census Bureau: "This shapefile contain both legal and statistical American Indian, Alaska Native, and Native Hawaiian entities for which the Census Bureau publishes data. The legal entities consist of federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian home lands (HHLs)." For more information, please see the link provided.

Usage

```
native_areas(cb = FALSE, year = NULL, ...)
```

Arguments

`cb`	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch5GARM.pdf

Other native/tribal geometries functions: `alaska_native_regional_corporations()`, `tribal_block_groups()`, `tribal_census_tracts()`, `tribal_subdivisions_national()`

Examples

```
## Not run:
library(tigris)
library(ggplot2)

nat <- native_areas(cb = TRUE)

gg <- ggplot()
gg <- gg + geom_sf(data = nat, color="black", fill="white", size=0.25)
gg <- gg + coord_sf(xlim=c(-179.1506, -129.9795),  # alaska
                    ylim=c(51.2097, 71.4410))
gg <- gg + theme_void()
gg

## End(Not run)
```

new_england *Download a New England City and Town Area shapefile into R*

Description

From the US Census Bureau (see link for source): "In New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), the OMB has defined an alternative county subdivision (generally city and town) based definition of CBSAs known as New England city and town areas (NECTAs). NECTAs are defined using the same criteria as metropolitan and micropolitan statistical areas and are identified as either metropolitan or micropolitan, based, respectively, on the presence of either an urbanized area of 50,000 or more inhabitants or an urban cluster of at least 10,000 and less than 50,000 inhabitants." Combined NECTAs, or CNECTAs, are two or more NECTAs that have significant employment interchange, like Combined Statistical Areas; NECTA divisions are subdivisions of NECTAs.

Usage

```
new_england(type = "necta", cb = FALSE, year = NULL, ...)
```

Arguments

type	Specify whether to download the New England City and Town Areas file ('necta', the default), the combined NECTA file ('combined'), or the NECTA divisions file ('divisions').
cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file). Only available when type = 'necta'.
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.

- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other metro area functions: `combined_statistical_areas()`, `core_based_statistical_areas()`, `metro_divisions()`, `urban_areas()`

Examples

```
## Not run:
library(tigris)

ne <- new_england(cb = TRUE)

plot(ne$geometry)


## End(Not run)
```

---

places *Download Shapefiles which include both incorporated places (legal entities) and census designated places (statistical entities) into R*

Description

An incorporated place provides governmental functions for a concentration of people. Incorporated places may extend across county and county subdivision boundaries, but never across state boundaries. An incorporated place usually is a city, town, village, or borough, but can have other legal descriptions. CDPs are the statistical counterparts of incorporated places. CDPs are settled concentrations of population that are identifiable by name but not legally incorporated under the laws of the state in which the CDPs are located. For more information, read appropriate section on "Places" for the correct vintage (year) of your data in the TIGER/Line Shapefiles and TIGER/Line Files Technical Documentation available as of this writing here: https://www.census.gov/programs-surveys/geography/technical-documentation/complete-technical-documentation/tiger-geo-line.html.

Usage

```
places(state = NULL, cb = FALSE, year = NULL, ...)
```

Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation. When NULL and combined with cb = TRUE, a national dataset of places will be returned for years 2019 and later.
cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file (2010 and later). Defaults to FALSE (the most detailed TIGER/Line file).
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch9GARM.pdf

Other general area functions: block_groups(), blocks(), counties(), county_subdivisions(), pumas(), school_districts(), states(), tracts(), zctas()

`population_centers` *Download Census centers of population into R*

Description

Description from the Census Bureau: "The concept of the center of population as used by the U.S. Census Bureau is that of a balance point. The center of population is the point at which an imaginary, weightless, rigid, and flat (no elevation effects) surface representation of the 50 states (or 48 conterminous states for calculations made prior to 1960) and the District of Columbia would balance if weights of identical size were placed on it so that each weight represented the location of one person." For more information, please see the link provided.

Usage

```
population_centers(
  geography = c("state", "county", "tract", "block group"),
  state = NULL,
  year = 2020
)
```

Arguments

`geography`	One of `"state"`, `"county"`, `"tract"`, or `"block group"`.
`state`	The state for which to download data. Required for county, tract, and block group centers, except 2000 tracts. State centers and 2000 tract centers come from national files, which are filtered to `state` if it is supplied.
`year`	The decennial Census year: 2000, 2010, or 2020 (the default).

Details

Centers of population are published as text files for the 50 states, the District of Columbia, and Puerto Rico; this function reads them and returns an sf object of points in NAD 1983 (EPSG:4269). Areas with no population have no center, so they are returned with empty geometries.

Value

An sf object of points.

See Also

https://www.census.gov/geographies/reference-files/time-series/geo/centers-population.html

Examples

```
## Not run:
library(tigris)
library(ggplot2)

ctrs <- population_centers("county", state = "WA", year = 2020)
wa_counties <- counties(state = "WA", year = 2020)

ggplot() +
  geom_sf(data = wa_counties, fill = "grey") +
  geom_sf(data = ctrs, color = "red")

## End(Not run)
```

`primary_roads` *Download a national primary roads shapefile into R*

Description

From the Census Bureau: "Primary roads are generally divided, limited-access highways within the Federal interstate highway system or under state management. These highways are distinguished by the presence of interchanges and are accessible by ramps and may include some toll highways."

Usage

```
primary_roads(year = NULL, ...)
```

Arguments

`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Value

an sf object with columns

- `LINEARID`: a unique line feature identifier (source)
- `FULLNAME`: display name (source)
- `RTTYP`: describes the types of roads used (source). Possible values are:
  - "C": county
  - "I": interstate
  - "M": common name
  - "O": other
  - "S": state regonized
  - "U": U.S.
- `MTFCC`: 5-digit geographic code assignment (see annual assignments)

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other transportation functions: `address_ranges()`, `primary_secondary_roads()`, `rails()`, `roads()`

Examples

```
## Not run:
library(tigris)

rds <- primary_roads()

plot(rds$geometry)


## End(Not run)
```

`primary_secondary_roads` *Download a primary & secondary roads shapefile into R*

Description

From the Census Bureau: "Primary roads are generally divided, limited-access highways within the Federal interstate highway system or under state management. These highways are distinguished by the presence of interchanges and are accessible by ramps and may include some toll highways. Secondary roads are main arteries, usually in the U.S. highway, state highway, or county highway system. These roads have one or more lanes of traffic in each direction, may or may not be divided, and usually have at-grade intersections with many other roads and driveways.

Usage

```
primary_secondary_roads(state, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code of the state of the county you'd like to download the roads for. Can also be state name or abbreviation (case-insensitive).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Value

an sf object with columns

- `LINEARID`: a unique line feature identifier (source)
- `FULLNAME`: display name (source)
- `RTTYP`: describes the types of roads used (source). Possible values are:
  - "C": county
  - "I": interstate
  - "M": common name
  - "O": other
  - "S": state regonized
  - "U": U.S.
- `MTFCC`: 5-digit geographic code assignment (see annual assignments)

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.

- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other transportation functions: `address_ranges()`, `primary_roads()`, `rails()`, `roads()`

Examples

```
## Not run:
library(tigris)

rds <- primary_secondary_roads()

plot(rds$geometry)


## End(Not run)
```

---

pumas *Download a Public Use Microdata Area (PUMA) shapefile into R*

Description

Public use microdata areas (PUMAs) are decennial census areas that have been defined for the tabulation and dissemination of Public Use Microdata Sample (PUMS) data, American Community Survey (ACS) data, and ACS period estimates. For the 2010 Census, the State Data Centers (SDCs) in each state, the District of Columbia, and the Commonwealth of Puerto Rico were given the opportunity to delineate PUMAs within their state or statistically equivalent entity. All PUMAs must nest within states and have a minimum population threshold of 100,000 persons. 2010 PUMAs were built on census tracts and cover the entirety of the United States, Puerto Rico, Guam, and the U.S. Virgin Islands. Because they do not meet the minimum population requirement, the Commonwealth of the Northern Mariana Islands and American Samoa do not contain any 2010 PUMAs.

Usage

```
pumas(state = NULL, cb = FALSE, year = NULL, ...)
```

Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation. When NULL and combined with cb = TRUE, a national dataset of PUMAs will be returned when year is either 2019 or 2020.
cb	If cb is set to TRUE, download a generalized (1:500k) states file. Defaults to FALSE (the most detailed TIGER/Line file)
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/geography/guidance/geo-areas/pumas.html

Other general area functions: block_groups(), blocks(), counties(), county_subdivisions(), places(), school_districts(), states(), tracts(), zctas()

Examples

```
## Not run:
library(tigris)

us_states <- unique(fips_codes$state)[1:51]

continental_states <- us_states[!us_states %in% c("AK", "HI")]
```

```
pumas_list <- lapply(continental_states, function(x) {
  pumas(state = x, cb = TRUE, year = 2017)
  })

us_pumas <- rbind_tigris(pumas_list)

plot(us_pumas$geometry)

## End(Not run)
```

`rails` *Download a national rails shapefile into R*

Description

National dataset for US railroads, including carlines, streetcars, monorails, mass transit, cog rail, incline rail, and trams.

Usage

```
rails(year = NULL, ...)
```

Arguments

`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other transportation functions: address_ranges(), primary_roads(), primary_secondary_roads(), roads()

Examples

```
## Not run:
library(tigris)

rls <- rails()

plot(rls$geometry)


## End(Not run)
```

---

rbind_tigris *Row-bind* tigris *Spatial objects*

Description

If multiple school district types are rbound, coerces to "sdall" and does it

Usage

```
rbind_tigris(...)
```

Arguments

...	individual (optionally names) tigris Spatial objects or a list of them

Value

one combined Spatial object

Examples

```
## Not run:
library(tigris)

me_ctys <- list_counties("me")
aw <- lapply(me_ctys$county_code[1:3], function(x) {
  area_water("Maine", x)
}) %>%
  rbind_tigris()

## End(Not run)
```

`regions` *Download a US regions cartographic boundary shapefile into R*

Description

Download a US regions cartographic boundary shapefile into R

Usage

```
regions(resolution = "500k", year = NULL, ...)
```

Arguments

`resolution`	The resolution of the cartographic boundary file. Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

Other national cartographic boundary functions: `divisions()`, `nation()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

us_regions <- regions(resolution = '20m')

leaflet(us_regions) %>%
   addTiles() %>%
   addPolygons()

## End(Not run)
```

`roads` *Download a roads shapefile into R*

Description

From the Census Bureau: "The content of the all roads shapefile includes primary roads, secondary roads, local neighborhood roads, rural roads, city streets, vehicular trails (4WD), ramps, service drives, walkways, stairways, alleys, and private roads."

Usage

```
roads(state, county, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code (string) of the state you'd like to download the roads for. Can also be state name or abbreviation (case-insensitive).
`county`	A character vector of the three-digit FIPS code of the county or counties you'd like the roads for. Can also be a vector of county names.
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Value

an sf object with columns

- `LINEARID`: a unique line feature identifier (source)
- `FULLNAME`: display name (source)
- `RTTYP`: describes the types of roads used (source). Possible values are:
  - "C": county
  - "I": interstate
  - "M": common name

  - "O": other
  - "S": state regonized
  - "U": U.S.
- `MTFCC`: 5-digit geographic code assignment (see annual assignments)

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other transportation functions: `address_ranges()`, `primary_roads()`, `primary_secondary_roads()`, `rails()`

Examples

```
## Not run:
library(tigris)
library(ggplot2)

roads <- roads("Maine", "031")

gg <- ggplot()
gg <- gg + geom_sf(data = roads,
                   color="black", fill="white", size=0.25)
gg <- gg + theme_void()
gg

## End(Not run)
```

`school_districts` *Download a school district shapefile into R*

Description

From the US Census Bureau (see link for source): School Districts are single-purpose administrative units within which local officials provide public educational services for the area's residents. The Census Bureau obtains school district boundaries, names, local education agency codes, grade ranges, and school district levels biennially from state education officials. The Census Bureau collects this information for the primary purpose of providing the U.S. Department of Education with annual estimates of the number of children in poverty within each school district, county, and state. This information serves as the basis for the Department of Education to determine the annual allocation of Title I funding to states and school districts.

Usage

```
school_districts(state = NULL, type = "unified", cb = FALSE, year = NULL, ...)
```

Arguments

`state`	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation. When `NULL` and combined with `cb = TRUE`, a national dataset of school districts will be returned for years 2019 and later.
`type`	Specify whether you want to return a unified school district (the default, `'unified'`), an elementary school district (`'elementary'`), or a secondary school district (`'secondary'`). Please note: elementary and secondary school districts do not exist in all states
`cb`	if TRUE, download a generalized (1:500k) school districts file. Defaults to FALSE (the most detailed TIGER/Line file)
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Details

The Census Bureau creates pseudo-unified school districts for areas in which unified school districts do not exist. Additionally, elementary and secondary school districts do not exist in all states. Please see the link for more information on how the Census Bureau creates the school district shapefiles.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.

- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2020/TGRSHP2020_TechDoc.pdf

Other general area functions: block_groups(), blocks(), counties(), county_subdivisions(), places(), pumas(), states(), tracts(), zctas()

Examples

```
## Not run:
library(tigris)
library(leaflet)

schools <- school_districts("Maine")

leaflet(schools) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5)

## End(Not run)
```

---

shift_geometry *Shift and rescale Alaska, Hawaii, and Puerto Rico in a US-wide sf object*

Description

This function will shift and optionally rescale a US dataset for thematic mapping of Alaska, Hawaii, and Puerto Rico with respect to the continental United States. Features in the continental United States will have their CRS transformed to USA Contiguous Albers Equal Area Conic ('ESRI:102003'). Alaska, Hawaii, and Puerto Rico features are transformed to appropriate coordinate systems for those areas, then shifted and optionally re-scaled before being assigned the 'ESRI:102003' CRS. Options for users include `preserve_area` which allows for preservation of the area of AK/HI/PR relative to the continental US if desired, and two possible arrangements which are specified with `position = "below"` or `position = "outside"`

Usage

```
shift_geometry(
  input_sf,
  geoid_column = NULL,
  preserve_area = FALSE,
  position = c("below", "outside")
)
```

Arguments

`input_sf`	The input sf dataset
`geoid_column`	The GEOID column of the dataset that contains a state ID. If used, will speed up processing and avoid spatial overlay to infer locations. Defaults to `NULL`.
`preserve_area`	If TRUE, the areas of Alaska/Hawaii/Puerto Rico relative to the continental US will be preserved. Defaults to FALSE where Alaska is proportionally smaller and Hawaii/Puerto Rico are proportionally larger.
`position`	One of `"below"` (the default) or `"outside"`. If `"below"`, Alaska, Hawaii, and Puerto Rico will be placed below the continental United States. If `"outside"`, features will be moved outside the continental US; Alaska will be northwest of Washington, Hawaii southwest of California, and Puerto Rico southeast of Florida.

Details

`shift_geometry()`, while designed for use with objects from the tigris package, will work with any US dataset. If aligning datasets from multiple sources, you must take care to ensure that your options specified in `preserve_area` and `position` are identical across layers. Otherwise your layers will not align correctly.

The function is also designed to work exclusively with features in the continental United States, Alaska, Hawaii, and Puerto Rico. If your dataset includes features outside these areas (e.g. other US territories or other countries), you may get unworkable results. It is advisable to filter out those features before using `shift_geometry()`.

Polygons that span more than one of these areas, such as the West region from `regions()`, are split into parts, shifted, and recombined. Hawaii features are clipped to the main Hawaiian islands, so the uninhabited Northwestern Hawaiian Islands are dropped.

Work on this function is inspired by and adapts some code from Claus Wilke's book *Fundamentals of Data Visualization* (https://clauswilke.com/dataviz/geospatial-data.html); Bob Rudis's albersusa R package (https://github.com/hrbrmstr/albersusa); and the ggcart R package (https://uncoast-unconf.github.io/ggcart/).

Value

The input sf object with transformed geometry

Examples

```
## Not run:

# Shift and rescale AK/HI/PR
library(tigris)
library(ggplot2)

us_states <- states(cb = TRUE, resolution = "20m") %>%
  shift_geometry()

# Shift but preserve area
us_states_eqarea <- states(cb = TRUE, resolution = "20m") %>%
  shift_geometry(preserve_area = TRUE)

# Shift and rescale but position AK/HI/PR outside the continental US rather than below
us_states_outside <- states(cb = TRUE, resolution = "20m") %>%
  shift_geometry(position = "outside")

ggplot() +
  geom_sf(data = us_states_outside, color = "blue") +
  geom_sf(data = us_states_eqarea, color = "red") +
  geom_sf(data = us_states, fill = NA, color = "black", size = 0.1) +
  theme_void(base_size = 16) +
  labs(
     title = "Alaska, Hawaii, and Puerto Rico are shifted and not to scale."
  ) +
  theme(plot.title = element_text(hjust = 0.5))


## End(Not run)
```

---

states *Download shapefile for all states into R*

Description

States and Equivalent Entities are the primary governmental divisions of the United States. In addition to the 50 states, the Census Bureau treats the District of Columbia, Puerto Rico, American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands as the statistical equivalents of states for the purpose of data presentation.

Usage

```
states(cb = FALSE, resolution = "500k", year = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) states file. Defaults to FALSE (the most detailed TIGER/Line file)
resolution	The resolution of the cartographic boundary file (if cb == TRUE). Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch4GARM.pdf

Other general area functions: block_groups(), blocks(), counties(), county_subdivisions(), places(), pumas(), school_districts(), tracts(), zctas()

Examples

```
## Not run:
library(tigris)
library(leaflet)
```

```
states <- states(cb = TRUE)

leaflet(states) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5) %>%
  setView(-98.5795, 39.8282, zoom=3)

## End(Not run)
```

`state_legislative_districts` *Download a state legislative districts shapefile into R - upper or lower*

Description

This function allows you to download boundaries for state legislatures into R. Generally, state legislatures are comprised of an "upper" house, which is typically referred to as the Senate, and a "lower" house, which is often (but not exclusively) referred to as the House. The exception is Nebraska, which has a unicameral state legislature.

Usage

```
state_legislative_districts(
  state = NULL,
  house = "upper",
  cb = FALSE,
  year = NULL,
  ...
)
```

Arguments

`state`	The two-digit FIPS code (string) of the state. Can also be state name or abbreviation (case-insensitive). When `NULL` and combined with `cb = TRUE`, a national dataset of state legislative districts will be returned.
`house`	Specify here whether you want boundaries for the `upper` or `lower` house. Defaults to `upper`.
`cb`	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/geography/guidance/geo-areas/state-legis-dist.html

Other legislative district functions: `congressional_districts()`, `voting_districts()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

leg <- state_legislative_districts("Maine", "lower", cb = TRUE)

leaflet(leg) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5)

## End(Not run)
```

tigris-exports *tigris exported operators*

Description

tigris exported operators

Pipe operator

tigris_cache_dir *Set the cache directory to store shapefiles with tigris*

Description

By default, tigris uses the rappdirs package to determine a suitable location to store shapefiles on the user's computer. However, it is possible that the user would want to store shapefiles in a custom location. This function allows users to set the cache directory, and stores the result in the user's .Renviron so that tigris will remember the location.

Windows users: please note that you'll need to use double-backslashes or forward slashes when specifying your cache directory's path in R.

Usage

```
tigris_cache_dir(path)
```

Arguments

path	The full path to the desired cache directory

Examples

```
## Not run:
# Set the cache directory
tigris_cache_dir('PATH TO MY NEW CACHE DIRECTORY')

# Check to see if it has been set correctly
Sys.getenv('TIGRIS_CACHE_DIR')

## End(Not run)
```

tigris_type *Get the type of* tigris *object* obj *is*

Description

Get the type of tigris object obj is

Usage

```
tigris_type(obj)
```

Arguments

obj	R object to test

Value

character vector containing the tigris type of obj or NA if obj is not a code tigris object

tracts *Download a Census tracts shapefile into R, and optionally subset by county*

Description

Description from the US Census Bureau (see link for source): Census Tracts are small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program. The Census Bureau delineates census tracts in situations where no local participant existed or where state, local, or tribal governments declined to participate. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data.

Usage

```
tracts(
  state = NULL,
  county = NULL,
  cb = FALSE,
  resolution = "500k",
  year = NULL,
  ...
)
```

Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation. When NULL and combined with cb = TRUE, a national dataset of Census tracts will be returned for years 2019 and later.
county	The three-digit FIPS code (string) of the county you'd like to subset for, or a vector of FIPS codes if you desire multiple counties. Can also be a county name or vector of names.
cb	If cb is set to TRUE, download a generalized (1:500k) tracts file. Defaults to FALSE (the most detailed TIGER/Line file)
resolution	The resolution of the cartographic boundary file (if using cb = TRUE). Defaults to '500k'; the other option is '5m' (1:5 million). Resolution of '5m' is #' only available for the national Census tract file for years 2022 and later.
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Details

Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. A census tract usually covers a contiguous area; however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. Census tracts occasionally are split due to population growth or merged as a result of substantial population decline.

Census tract boundaries generally follow visible and identifiable features. They may follow non-visible legal boundaries, such as minor civil division (MCD) or incorporated place boundaries in some states and situations, to allow for census-tract-to-governmental-unit relationships where the governmental boundaries tend to remain unchanged between censuses. State and county boundaries always are census tract boundaries in the standard census geographic hierarchy.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.

- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch10GARM.pdf

Other general area functions: `block_groups()`, `blocks()`, `counties()`, `county_subdivisions()`, `places()`, `pumas()`, `school_districts()`, `states()`, `zctas()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

tarrant <- tracts("TX", "Tarrant", cb = TRUE)

leaflet(tarrant) %>%
  addTiles() %>%
  addPolygons(popup = ~NAME)

## End(Not run)
```

---

tribal_block_groups *Download a Tribal block groups shapefile into R.*

Description

From the US Census Bureau: "Tribal block groups are subdivisions of a tribal census tract. Tribal block groups were defined by federally recognized tribal government officials in the Census Bureau's Tribal Statistical Areas Program (TSAP) for the 2010 Census. If a tribal government declined to participate in TSAP, the Census Bureau delineated tribal block groups on the American Indian reservation and/or off-reservation trust land (ORTL). Tribal block groups are intended to generally contain between 600 and 3000 persons or between 240 and 1200 housing units. Many American Indian reservations and ORTLs have less than the minimum population thresholds for more than one tribal block group and in those cases one tribal block group was delineated that covers the entire American Indian reservation and/or ORTL. Unlike standard block groups, the cluster of blocks that comprises each tribal block group will not necessarily begin with the same first number of their 4-character census block number, but may contain blocks from several different standard census block groups." For more information, please see the link provided.

Usage

```
tribal_block_groups(cb = FALSE, year = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch5GARM.pdf

Other native/tribal geometries functions: alaska_native_regional_corporations(), native_areas(), tribal_census_tracts(), tribal_subdivisions_national()

Examples

```
## Not run:
library(tigris)
library(leaflet)

trib <- tribal_block_groups()
leaflet(trib) %>%
```

```
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5)

## End(Not run)
```

`tribal_census_tracts` *Download a Tribal Census tract shapefile into R.*

Description

From the US Census Bureau: "Tribal census tracts are relatively small statistical subdivisions of an American Indian reservation and/or off-reservation trust land (ORTL) and were defined by federally recognized tribal government officials in the Census Bureau's Tribal Statistical Areas Program (TSAP) for the 2010 Census. If a tribal government declined to participate in TSAP, the Census Bureau delineated tribal census tracts on the American Indian reservation and/or ORTL. Tribal census tracts are conceptually similar and equivalent to standard census tracts. Unlike standard census tracts, however, tribal census tracts may cross state, county, and standard census tract boundaries." For more information, please view the link provided.

Usage

```
tribal_census_tracts(cb = FALSE, year = NULL, ...)
```

Arguments

`cb`	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
`year`	the data year; defaults to 2025
`...`	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.

- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch5GARM.pdf

Other native/tribal geometries functions: `alaska_native_regional_corporations()`, `native_areas()`, `tribal_block_groups()`, `tribal_subdivisions_national()`

Examples

```
## Not run:
library(tigris)
library(leaflet)

trib <- tribal_census_tracts()
leaflet(trib) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5)

## End(Not run)
```

---

tribal_subdivisions_national

Download an American Indian Tribal Subdivision National shapefile into R.

Description

Definition from the US Census Bureau: "American Indian Tribal Subdivisions (AITS) are legally defined administrative subdivisions of federally recognized American Indian reservations and/or off-reservation trust lands or Oklahoma tribal statistical areas (OTSAs)." For more information, please see the link provided.

Usage

```
tribal_subdivisions_national(cb = FALSE, year = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.
- protocol Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- timeout No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch5GARM.pdf

Other native/tribal geometries functions: alaska_native_regional_corporations(), native_areas(), tribal_block_groups(), tribal_census_tracts()

Examples

```
## Not run:
library(tigris)
library(leaflet)

trib <- tribal_subdivisions_national()
leaflet(trib) %>%
  addProviderTiles("CartoDB.Positron") %>%
  addPolygons(fillColor = "white",
              color = "black",
              weight = 0.5)
```

```
## End(Not run)
```

---

urban_areas *Download an urban areas shapefile into R*

Description

Urban areas include both "urbanized areas," which are densely developed areas with a population of at least 50,000, and "urban clusters," which have a population of greater than 2,500 but less than 50,000. For more information, please see the link provided.

Usage

```
urban_areas(cb = FALSE, year = NULL, criteria = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file). Cartographic boundary urban areas are available through 2020.
year	the data year; defaults to 2025
criteria	If set to "2020" and the year is 2020, will download the new 2020 urban areas criteria. Not available for cartographic boundary shapefiles / other years at the moment.
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in ... are:

- class Desired class of return object: "sf" (the default) or "sp". sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- progress_bar If set to FALSE, do not display download progress bar (helpful for R Markdown documents). Defaults to TRUE.
- keep_zipped_shapefile If set to TRUE, do not delete zipped shapefile (stored in temporary directory or TIGRIS_CACHE_DIR depending on the configuration of global option "tigris_use_cache"). Defaults to FALSE.
- refresh Whether to re-download cached shapefiles (TRUE or FALSE) . The default is either FALSE or the value of global option "tigris_refresh" if it is set. Specifying this argument will override the behavior set in "tigris_refresh" global option.
- filter_by Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format c(xmin, ymin, xmax, ymax) that can be converted to a bbox. Geometries that intersect the input to filter_by will be returned.

- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html

Other metro area functions: `combined_statistical_areas()`, `core_based_statistical_areas()`, `metro_divisions()`, `new_england()`

`validate_county` *Check if county is a FIPS code or name*

Description

`validate_county()` checks if an input `county` is a FIPS code or name. If some or all input values are invalid, error if `require_county = TRUE`, return `NULL` if all inputs are invalid, or warn and return valid input values.

Usage

```
validate_county(
  state,
  county,
  allow_null = TRUE,
  require_county = FALSE,
  multiple = FALSE,
  .msg = is_interactive(),
  error_call = caller_env()
)
```

Arguments

`state`	State name, abbreviation, or FIPS code. Not case sensitive. Single-digit FIPS codes are padded with "0" and longer FIPS codes (e.g. county FIPS codes) are subset to their first two digits.
`county`	County name or FIPS code. Not case sensitive.
`allow_null`	If `TRUE` (default), allow `NULL` input values by invisibly returning `NULL`.
`require_county`	If `FALSE` (default), warn instead of error on invalid input values.
`multiple`	If `FALSE` (default), require input to match a single state or county. If `TRUE`, allow multiple values.
`.msg`	If `TRUE` (default), show informative messages about FIPS code usage. Uses `is_interactive()` by default.
`error_call`	The execution environment of a currently running function.

Value

- NULL if input is NULL and allow_null = TRUE and require_county = FALSE
- valid county FIPS code if input is even pseudo-valid (i.e. single digit but w/in range)
- NULL if input is not a valid FIPS code and require_county = FALSE
- errors if input is not a valid FIPS code and require_county = TRUE

County names match from the start, so "Anne" matches "Anne Arundel County". A complete name wins over longer names it starts, so "Collin" is Collin County, not Collingsworth County. If a name still matches more than one county (e.g. "Baltimore" matches "Baltimore County" and "Baltimore city"), interactive sessions ask which county you mean; elsewhere it's an error.

---

validate_state *Check if state is a FIPS code, full name or abbreviation*

Description

validate_state() checks if input state values are FIPS codes, full names or abbreviations. If some or all input values are invalid, error if require_state = TRUE, return NULL if all inputs are invalid, or warn and return valid input values.

Usage

```
validate_state(
  state,
  allow_null = TRUE,
  require_state = FALSE,
  multiple = FALSE,
  .msg = is_interactive(),
  error_call = caller_env()
)
```

Arguments

state	State name, abbreviation, or FIPS code. Not case sensitive. Single-digit FIPS codes are padded with "0" and longer FIPS codes (e.g. county FIPS codes) are subset to their first two digits.
allow_null	If TRUE (default), allow NULL input values by invisibly returning NULL.
require_state	If FALSE (default), warn instead of error on invalid input values.
multiple	If FALSE (default), require input to match a single state or county. If TRUE, allow multiple values.
.msg	If TRUE (default), show informative messages about FIPS code usage. Uses is_interactive() by default.
error_call	The execution environment of a currently running function.

Value

- NULL if input is NULL and allow_null = TRUE and require_state = FALSE
- valid state FIPS code if input is even pseudo-valid (i.e. single digit but w/in range)
- NULL if input is not a valid FIPS code and require_state = FALSE
- errors if input is not a valid FIPS code and require_state = TRUE or if state matched multiple values

---

voting_districts *Download a voting districts shapefile into R*

Description

Obtain feature geometry for 2020 voting districts, which align with voting districts for the 2020 PL-94171 redistricting data from the US Census Bureau.

Usage

```
voting_districts(state = NULL, county = NULL, cb = FALSE, year = 2020, ...)
```

Arguments

state	The state for which you'd like to retrieve data. Can be a state name, state abbreviation, or FIPS code. When NULL and combined with cb = TRUE, a national dataset of voting districts will be returned.
county	The county for which you are requesting data. Can be a county name or FIPS code. If NULL (the default), data for the entire state will be returned.
cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
year	the data year; defaults to 2025
...	arguments to be passed to internal function load_tiger, which is not exported. See Additional Arguments.

Details

The US Census Bureau describes *voting districts* as follows: Voting district (VTD) is a generic term adopted by the Bureau of the Census to include the wide variety of small polling areas, such as election districts, precincts, or wards, that State and local governments create for the purpose of administering elections. Some States also use groupings of these entities to define their State and local legislative districts, as well as the districts they define for election of members to the U.S. House of Representatives. In a nationwide cooperative program for the 1980 census, the Census Bureau gave States the opportunity to request use of these election precinct boundaries as the boundaries of #' census enumeration districts (EDs) or, in some areas, census blocks.

Support for voting districts in tigris 1.5 and higher is aligned with the 2020 PL redistricting data. The argument cb = FALSE retrieves voting districts from the TIGER/Line PL shapefiles. A generalized version from the cartographic boundary dataset is available with the argument cb = TRUE.

Additional Arguments

Additional arguments that can be passed in ... are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class bbox, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www2.census.gov/geo/pdfs/reference/GARM/Ch14GARM.pdf

Other legislative district functions: `congressional_districts()`, `state_legislative_districts()`

Examples

```
## Not run: #'
library(tigris)

ia <- voting_districts("Iowa")

plot(ia$geometry)


## End(Not run)
```

---

zctas *Download a Zip Code Tabulation Area (ZCTA) shapefile into R*

Description

ZIP Code Tabulation Areas (ZCTAs) are generalized areal representations of United States Postal Service (USPS) ZIP Code service areas. Please see the link provided for information on how the Census Bureau creates ZCTAs, and for important information on the differences between ZCTAs and ZIP Codes.

Usage

```
zctas(cb = FALSE, starts_with = NULL, year = NULL, state = NULL, ...)
```

Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) ZCTA file. Defaults to FALSE (the most detailed TIGER/Line file). **A warning:** the detailed TIGER/Line ZCTA file is massive (around 502MB unzipped), and the generalized version is also large (64MB zipped). Be prepared for this especially if you have a slower internet connection.
starts_with	Character vector specifying the beginning digits of the ZCTAs you want to return. For example, supplying the argument `starts_with = c("75", "76")` will return only those ZCTAs that begin with 75 or 76. Defaults to NULL, which will return all ZCTAs in the US.
year	the data year; defaults to 2025
state	the state for which you are requesting data; only available for 2000 (TIGER/Line and CB shapefiles) and 2010 (TIGER/Line shapefiles only)
...	arguments to be passed to internal function `load_tiger`, which is not exported. See Additional Arguments.

Additional Arguments

Additional arguments that can be passed in `...` are:

- `class` Desired class of return object: `"sf"` (the default) or `"sp"`. sp classes should be considered deprecated as of tigris version 2.0, but legacy support is still available.
- `progress_bar` If set to `FALSE`, do not display download progress bar (helpful for R Markdown documents). Defaults to `TRUE`.
- `keep_zipped_shapefile` If set to `TRUE`, do not delete zipped shapefile (stored in temporary directory or `TIGRIS_CACHE_DIR` depending on the configuration of global option `"tigris_use_cache"`). Defaults to `FALSE`.
- `refresh` Whether to re-download cached shapefiles (`TRUE` or `FALSE`) . The default is either `FALSE` or the value of global option `"tigris_refresh"` if it is set. Specifying this argument will override the behavior set in `"tigris_refresh"` global option.
- `filter_by` Geometry used to filter the output returned by the function. Can be an sf object, an object of class `bbox`, or a length-4 vector of format `c(xmin, ymin, xmax, ymax)` that can be converted to a bbox. Geometries that intersect the input to `filter_by` will be returned.
- `protocol` Character string specifying the protocol to use for downloading files. Options are "ftp" or "http" (default). If "ftp", the URL will be modified to use FTP instead of HTTPS.
- `timeout` No longer used: downloads have no time limit. Kept so existing code that sets it keeps working.

See Also

https://www.census.gov/programs-surveys/geography/guidance/geo-areas/zctas.html

Other general area functions: `block_groups()`, `blocks()`, `counties()`, `county_subdivisions()`, `places()`, `pumas()`, `school_districts()`, `states()`, `tracts()`

Examples

```
## Not run:
# Example: get ZCTAs that intersect the Memphis, TN urbanized area

library(tigris)
zcta1 <- zctas(cb = TRUE, starts_with = c("37", "38", "72"))

uas <- urban_areas()

memphis_ua <- uas[grep("Memphis", uas$NAME10), ]

mem_zcta <- zcta1[memphis_ua, ]

plot(mem_zcta$geometry)


## End(Not run)
```

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