

# Package ‘tigris’

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**Type** Package

**Title** Load Census TIGER/Line Shapefiles into R

**Version** 0.1

**Date** 2015-10-11

**Description** Download TIGER/Line shapefiles from the United States Census Bureau and load into R as Spatial DataFrames.

**License** MIT + file LICENSE

**LazyData** TRUE

**Depends** R (>= 3.0.0)

**Suggests** acs, testthat, dplyr, ggplot2, ggthemes, leaflet, knitr

**Imports** stringr, magrittr, rgdal, rgeos, sp, utils, rappdirs, maptools, httr, uuid

**NeedsCompilation** no

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## R topics documented:

alaska_native_regional_corporations . . . . .	3
area_water . . . . .	3
blocks . . . . .	4
block_groups . . . . .	6
coastline . . . . .	7
combined_statistical_areas . . . . .	8
congressional_districts . . . . .	9
core_based_statistical_areas . . . . .	10
counties . . . . .	11
divisions . . . . .	13

filter_place . . . . .	13
filter_state . . . . .	14
fips_codes . . . . .	15
geo_join . . . . .	15
grep_place . . . . .	16
grep_state . . . . .	16
is_tigris . . . . .	17
landmarks . . . . .	17
linear_water . . . . .	18
list_counties . . . . .	19
list_places . . . . .	20
list_states . . . . .	20
lookup_code . . . . .	21
metro_divisions . . . . .	22
military . . . . .	22
nation . . . . .	23
native_areas . . . . .	24
new_england . . . . .	25
places . . . . .	26
primary_roads . . . . .	27
primary_secondary_roads . . . . .	28
pumas . . . . .	29
rails . . . . .	30
rbind_tigris . . . . .	31
regions . . . . .	31
roads . . . . .	32
school_districts . . . . .	33
states . . . . .	35
state_legislative_districts . . . . .	36
tigris . . . . .	37
tigris-exports . . . . .	37
tigris_type . . . . .	38
tracts . . . . .	38
tribal_block_groups . . . . .	39
tribal_census_tracts . . . . .	41
tribal_subdivisions_national . . . . .	42
urban_areas . . . . .	43
zctas . . . . .	43
<b>Index</b>	<b>45</b>

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`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, ...)
```

**Arguments**

<code>cb</code>	If <code>cb</code> is set to <code>TRUE</code> , download a generalized (1:500k) file. Defaults to <code>FALSE</code> (the most detailed TIGER/Line file)
<code>...</code>	arguments to be passed to the underlying <code>'load_tiger'</code> function, which is not exported. Options include <code>refresh</code> , which specifies whether or not to re-download shapefiles (defaults to <code>FALSE</code> ), and <code>year</code> , the year for which you'd like to download data (defaults to 2014).

**See Also**

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other native/tribal geometries functions: [native\\_areas](#); [tribal\\_block\\_groups](#); [tribal\\_census\\_tracts](#); [tribal\\_subdivisions\\_national](#)

---

`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, ...)
```

**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.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**See Also**

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other water functions: [coastline](#); [linear\\_water](#)

**Examples**

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

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

plot(dallas_water)

## 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, ...)
```

## 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.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## 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.

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other general area functions: [block\\_groups](#); [counties](#); [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)

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

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

## End(Not run)
```

---

block_groups	<i>Download a Census block groups shapefile into R, and optionally subset by county</i>
--------------	---

---

### 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, county = NULL, cb = FALSE, detailed = TRUE, ...)
```

### 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.
cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### 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.

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other general area functions: [blocks](#); [counties](#); [places](#); [pumas](#); [school\\_districts](#); [states](#); [tracts](#); [zctas](#)

### Examples

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

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

plot(benton_bgs)

## End(Not run)
```

---

coastline

*Download a shapefile of the US coastline into R*

---

### Description

Download a shapefile of the US coastline into R

### Usage

```
coastline(...)
```

### Arguments

... arguments to be passed to the underlying ‘load\_tiger’ function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you’d like to download data (defaults to 2014).

### See Also

Other water functions: [area\\_water](#); [linear\\_water](#)

## Examples

```
## Not run:
library(tigris)
library(ggplot2)
library(ggthemes)
library(rgeos)
library(sp)

coast <- coastline()

# ggplot really doesn't like a ton of detailed lines so
# we use rgeos::gSimplify to get the structure to a reasonable size
# but we also lose the SpatialLinesDataFrame, so re-bind the
# data from the original spatial structure so we can use fortify

coast_simp <- gSimplify(coast, tol=1/200, topologyPreserve=TRUE)
coast_simp <- SpatialLinesDataFrame(coast_simp, coast@data)

coast_map <- fortify(coast_simp)

gg <- ggplot()
gg <- gg + geom_map(data=coast_map, map=coast_map,
                   aes(x=long, y=lat, map_id=id),
                   color="black", fill="white", size=0.25)
gg <- gg + coord_map(xlim=c(-125.0011, -66.9326),
                    ylim=c(24.9493, 49.5904))
gg <- gg + theme_map()
gg

## End(Not run)
```

---

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",
                           detailed = TRUE, ...)
```



**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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**See Also**

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other metro area functions: [core\\_based\\_statistical\\_areas](#); [metro\\_divisions](#); [new\\_england](#); [urban\\_areas](#)

---

congressional\_districts

*Download a congressional districts shapefile for the 114th Congress into R*

---

**Description**

Description from the US Census Bureau (see link for source): The 2014 TIGER/Line Shapefiles contain the 114th Congressional Districts. All congressional districts appearing in the 2014 TIGER/Line Shapefiles reflect the information provided to the Census Bureau by the states by May 1, 2014. The 114th Congressional District shapefile contains the areas in effect January 2015 to 2017.

**Usage**

```
congressional_districts(cb = FALSE, resolution = "500k", detailed = TRUE,
  ...)
```

**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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### Details

Congressional districts are the 435 areas from which people are elected to the U.S. House of Representatives and the five areas with nonvoting delegates from state equivalents. After the apportionment of congressional seats among the states based on decennial census population counts, each state is responsible for establishing the boundaries of the 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.

### See Also

Other legislative district functions: [state\\_legislative\\_districts](#)

### Examples

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

cd114 <- congressional_districts(cb = TRUE, resolution = '20m')

leaflet(cd114) %>%
  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",
  detailed = TRUE, ...)
```

**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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**See Also**

<http://www.census.gov/population/metro/>

Other metro area functions: [combined\\_statistical\\_areas](#); [metro\\_divisions](#); [new\\_england](#); [urban\\_areas](#)

---

counties	<i>Download a US Counties shapefile into R, and optionally subset by state</i>
----------	--

---

**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", detailed = TRUE,
  ...)
```

### 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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### See Also

[https://www.census.gov/geo/reference/gtc/gtc\\_cou.html](https://www.census.gov/geo/reference/gtc/gtc_cou.html)

Other general area functions: [block\\_groups](#); [blocks](#); [places](#); [pumas](#); [school\\_districts](#); [states](#); [tracts](#); [zctas](#)

### Examples

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

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

gg <- ggplot()
gg <- gg + geom_map(data=me_map, map=me_map,
  aes(x=long, y=lat, map_id=id),
  color="black", fill="white", size=0.25)
gg <- gg + coord_map()
gg <- gg + theme_map()
gg

## End(Not run)
```

---

divisions	<i>Download a US Census divisions cartographic boundary shapefile into R</i>
-----------	--

---

**Description**

Download a US Census divisions cartographic boundary shapefile into R

**Usage**

```
divisions(resolution = "500k")
```

**Arguments**

resolution	The resolution of the cartographic boundary file. Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).
------------	--

**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)
```

---

filter_place	<i>Filter a places Spatial object for only those places matching the contents of the place vector.</i>
--------------	--

---

**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	<i>Filter a states Spatial object for only those states matching the contents of the state vector.</i>
--------------	--

---

**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 3,236 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 2015-07-01

---

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

---

**Description**

The pages of StackOverflow are littered with questions about how to merge a regular data frame to a spatial data frame in R. The `merge` function from the `sp` package operates under a strict set of assumptions, which if violated will break your data. This function wraps a couple StackOverflow answers I've seen that work in a friendlier syntax.

**Usage**

```
geo_join(spatial_data, data_frame, by_sp, by_df)
```

**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.

**Value**

a SpatialXxxDataFrame object

---

grep_place	<i>Find places matching a term in a places object</i>
------------	---

---

**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 <code>places</code>
term	equivalent to the <code>pattern</code> argument of <code>grep</code>

**Examples**

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

## End(Not run)
```

---

grep_state	<i>Find states matching a term in a state object</i>
------------	--

---

**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", ...)
```

**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".
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**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.

**See Also**

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc\\_Ch3.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_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, ...)
```

**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.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**See Also**

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other water functions: [area\\_water](#); [coastline](#)

**Examples**

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

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

plot(dallas_water)

## End(Not run)
```

---

list_counties	<i>Return a data frame of county names &amp; FIPS codes for a given state</i>
---------------	---

---

**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	<i>Return a list of all the places in a places object</i>
-------------	---

---

**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	<i>Return a list of all the states in a state object</i>
-------------	--

---

**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)
```

---

lookup_code	<i>Look up state and county codes</i>
-------------	---------------------------------------

---

### Description

Function to look up the FIPS codes for states and optionally counties you'd like 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. The 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	<i>Download a metropolitan divisions shapefile into R.</i>
-----------------	--

---

### 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(...)
```

### Arguments

... arguments to be passed to the underlying ‘load\_tiger’ function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you’d like to download data (defaults to 2014).

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other metro area functions: [combined\\_statistical\\_areas](#); [core\\_based\\_statistical\\_areas](#); [new\\_england](#); [urban\\_areas](#)

---

military	<i>Download the Military Installation National Shapefile into R</i>
----------	---

---

### 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(...)
```

### Arguments

... arguments to be passed to the underlying ‘load\_tiger’ function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you’d like to download data (defaults to 2014).

## 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 2014 military shapefiles contain few values in the ANSICODE field.

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc\\_Ch3.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_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")
```

## Arguments

**resolution**      The resolution of the cartographic boundary file. Defaults to '5m'; options include '5m' (1:5 million) and '20m' (1:20 million).

## 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	<i>Download an American Indian / Alaska Native / Native Hawaiian Areas shapefile into R.</i>
--------------	--

---

### 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, detailed = TRUE, ...)
```

### Arguments

cb	If cb is set to TRUE, download a generalized (1:500k) file. Defaults to FALSE (the most detailed TIGER/Line file)
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.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)
library(ggthemes)

nat <- native_areas(cb = TRUE)

nat_map <- fortify(nat)

gg <- ggplot()
gg <- gg + geom_map(data=nat_map, map=nat_map,
```



```
      aes(x=long, y=lat, map_id=id),
      color="black", fill="white", size=0.25)
gg <- gg + coord_map(xlim=c(-179.1506, -129.9795), # alaska
                    ylim=c(51.2097, 71.4410))
gg <- gg + theme_map()
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, ...)
```

## 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'.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other metro area functions: [combined\\_statistical\\_areas](#); [core\\_based\\_statistical\\_areas](#); [metro\\_divisions](#); [urban\\_areas](#)

**Examples**

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

ne <- new_england(cb = TRUE)

plot(ne)

## End(Not run)
```

---

places

---

*Download a Census-designated places shapefile into R*


---

**Description**

Census Designated Places (CDPs) are the statistical counterparts of incorporated places, and are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located.

**Usage**

```
places(state, cb = FALSE, detailed = TRUE, ...)
```

**Arguments**

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation.
cb	If cb is set to TRUE, download a generalized (1:500k) cartographic boundary file. Defaults to FALSE (the most detailed TIGER/Line file).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying ‘load_tiger‘ function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you’d like to download data (defaults to 2014).

**Details**

The boundaries usually are defined in cooperation with local or tribal officials and generally updated prior to each decennial census.

These boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place or another legal entity boundary, have no legal status, nor do these places have officials elected to serve traditional municipal functions.

CDP boundaries may change from one decennial census to the next with changes in the settlement pattern; a CDP with the same name as in an earlier census does not necessarily have the same boundary.

CDPs must be contained within a single state and may not extend into an incorporated place.

There are no population size requirements for CDPs.

### See Also

[https://www.census.gov/geo/reference/gtc/gtc\\_place.html](https://www.census.gov/geo/reference/gtc/gtc_place.html)

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [pumas](#); [school\\_districts](#); [states](#); [tracts](#); [zctas](#)

---

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(...)
```

### Arguments

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you'd like to download data (defaults to 2014).

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other transportation functions: [primary\\_secondary\\_roads](#); [rails](#); [roads](#)

### Examples

```
## Not run:  
library(tigris)  
library(sp)  
  
rds <- primary_roads()  
  
plot(rds)
```

```
## 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, ...)
```

## 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).
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other transportation functions: [primary\\_roads](#); [rails](#); [roads](#)

## Examples

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

rds <- primary_secondary_roads()

plot(rds)

## 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, cb = FALSE, detailed = TRUE, ...)
```

**Arguments**

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation.
cb	If cb is set to TRUE, download a generalized (1:500k) states file. Defaults to FALSE (the most detailed TIGER/Line file)
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

**See Also**

<http://www.census.gov/geo/reference/puma.html>

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [places](#); [school\\_districts](#); [states](#); [tracts](#); [zctas](#)

**Examples**

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

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)
})

us_pumas <- rbind_tigris(pumas_list)

plot(us_pumas)

## 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(...)
```

### Arguments

... arguments to be passed to the underlying ‘load\_tiger’ function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you’d like to download data (defaults to 2014).

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other transportation functions: [primary\\_roads](#); [primary\\_secondary\\_roads](#); [roads](#)

### Examples

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

rls <- rails()

plot(rls)

## End(Not run)
```

---

rbind_tigris	<i>Row-bind tigris Spatial objects</i>
--------------	--

---

**Description**

Row-bind tigris Spatial objects

**Usage**

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

**Arguments**

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

**Value**

one combined Spatial object

**Examples**

```
## Not run:
library(sp)
library(rgeos)
library(maptools)
library(maps)
library(tigris)

me_ctys <- list_counties("me")
aw <- lapply(me_ctys$county_code[1:3], function(x) {
  area_water("Maine", x)
})
tmp <- rbind_tigris(aw)
tmp_simp <- gSimplify(tmp, tol=1/200, topologyPreserve=TRUE)
tmp_simp <- SpatialPolygonsDataFrame(tmp_simp, tmp@data)
plot(tmp_simp)

## End(Not run)
```

---

regions	<i>Download a US regions cartographic boundary shapefile into R</i>
---------	---

---

**Description**

Download a US regions cartographic boundary shapefile into R

**Usage**

```
regions(resolution = "500k")
```

**Arguments**

**resolution** The resolution of the cartographic boundary file. Defaults to '500k'; options include '5m' (1:5 million) and '20m' (1:20 million).

**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, ...)
```

**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.

**...** arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you'd like to download data (defaults to 2014).



## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other transportation functions: [primary\\_roads](#); [primary\\_secondary\\_roads](#); [rails](#)

## Examples

```
## Not run:
library(tigris)
library(ggplot2)
library(ggthemes)
library(rgeos)
library(sp)

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

# for ggplot, we need to simplify the lines otherwise it'll take
# forever to plot. however, gSimplify whacks the SpatialLinesDataFrame
# so we need to re-bind the data from the original object to it so
# we can use "fortify"

roads_simp <- gSimplify(roads, tol=1/200, topologyPreserve=TRUE)
roads_simp <- SpatialLinesDataFrame(roads_simp, roads@data)

roads_map <- fortify(roads_simp) # this takes a bit

gg <- ggplot()
gg <- gg + geom_map(data=roads_map, map=roads_map,
                   aes(x=long, y=lat, map_id=id,
                       color="black", fill="white", size=0.25)

gg <- gg + coord_map()
gg <- gg + theme_map()
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, type = "unified", ...)
```

## Arguments

state	The two-digit FIPS code (string) of the state you want. Can also be state name or state abbreviation.
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
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## 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.

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [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)
```

---

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", detailed = TRUE, ...)
```

### 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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### See Also

[https://www.census.gov/geo/reference/gtc/gtc\\_state.html](https://www.census.gov/geo/reference/gtc/gtc_state.html)

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [places](#); [pumas](#); [school\\_districts](#); [tracts](#); [zctas](#)

### Examples

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

states <- states(detailed=FALSE)

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, house = "upper", cb = FALSE,
  detailed = TRUE, ...)
```

## Arguments

state	The two-digit FIPS code (string) of the state. Can also be state name or abbreviation (case-insensitive)
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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## See Also

Other legislative district functions: [congressional\\_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

*Download and use U.S. Census TIGER shapefiles in R*

---

### Description

Use option `tigris_use_cache` to tell `tigris` to cache Census shapefile downloads. This is TRUE by default. e.g. `options(tigris_use_cache=TRUE)`

### Details

Use option `tigris_refresh` to force a refresh of cached `tigris` Shapefiles. e.g. `options(tigris_refresh=TRUE)`

Use option `tigris_year` to change the year for which you'd like to download data. e.g. `options(tigris_year = 2013)`. The default year for the package is 2014.

### Note

Three options control behavior of various `tigris` functions. See Description for more information.

### Author(s)

Kyle Walker

Kyle Walker (@kyle\_e\_walker)

---

tigris-exports

*tigris exported operators*

---

### Description

The following functions are imported and then re-exported from the `tigris` package to enable use of the `magrittr` pipe operator with no additional library calls

---

tigris_type	<i>Get the type of tigris object obj is</i>
-------------	---

---

**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	<i>Download a Census tracts shapefile into R, and optionally subset by county</i>
--------	---

---

**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, county = NULL, cb = FALSE, detailed = TRUE, ...)
```

**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.

cb                        If cb is set to TRUE, download a generalized (1:500k) tracts file. Defaults to FALSE (the most detailed TIGER/Line file)

detailed (deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## 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.

## See Also

[https://www.census.gov/geo/reference/gtc/gtc\\_ct.html](https://www.census.gov/geo/reference/gtc/gtc_ct.html)

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [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)
```

## 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(...)
```

## Arguments

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include `refresh`, which specifies whether or not to re-download shapefiles (defaults to FALSE), and `year`, the year for which you'd like to download data (defaults to 2014).

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.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(...)
```

## Arguments

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.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 (OTSAAs)." For more information, please see the link provided.

## Usage

```
tribal_subdivisions_national(...)
```

## Arguments

... arguments to be passed to the underlying 'load\_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

## See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.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, detailed = TRUE, ...)
```

### 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).
detailed	(deprecated) Setting detailed to FALSE returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
...	arguments to be passed to the underlying 'load_tiger' function, which is not exported. Options include refresh, which specifies whether or not to re-download shapefiles (defaults to FALSE), and year, the year for which you'd like to download data (defaults to 2014).

### See Also

[http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014\\_TechDoc.pdf](http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf)

Other metro area functions: [combined\\_statistical\\_areas](#); [core\\_based\\_statistical\\_areas](#); [metro\\_divisions](#); [new\\_england](#)

---

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, detailed = TRUE, ...)
```

## Arguments

<code>cb</code>	If <code>cb</code> is set to <code>TRUE</code> , download a generalized (1:500k) ZCTA file. Defaults to <code>FALSE</code> (the most detailed TIGER/Line file). <b>A warning:</b> 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.
<code>starts_with</code>	Character vector specifying the beginning digits of the ZCTAs you want to return. For example, supplying the argument <code>starts_with = c("75", "76")</code> will return only those ZCTAs that begin with 75 or 76. Defaults to <code>NULL</code> , which will return all ZCTAs in the US.
<code>detailed</code>	(deprecated) Setting <code>detailed</code> to <code>FALSE</code> returns a 1:500k cartographic boundary file. This parameter will be removed in a future release.
<code>...</code>	arguments to be passed to the underlying <code>'load_tiger'</code> function, which is not exported. Options include <code>refresh</code> , which specifies whether or not to re-download shapefiles (defaults to <code>FALSE</code> ), and <code>year</code> , the year for which you'd like to download data (defaults to 2014).

## See Also

<https://www.census.gov/geo/reference/zctas.html>

Other general area functions: [block\\_groups](#); [blocks](#); [counties](#); [places](#); [pumas](#); [school\\_districts](#); [states](#); [tracts](#)

## Examples

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

library(tigris)
library(rgeos)
library(sp)

df <- zctas(cb = TRUE, starts_with = c("37", "38", "72"))

uas <- urban_areas()

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

mem_zcta <- df[as.vector(gIntersects(df, memphis_ua, byid = TRUE)), ]

plot(mem_zcta)

## End(Not run)
```

# Index

## \*Topic **datasets**

- fips\_codes, 15
- %>% (tigris-exports), 37
- alaska\_native\_regional\_corporations, 3, 24, 40–42
- area\_water, 3, 7, 19
- block\_groups, 5, 6, 12, 27, 29, 34, 35, 39, 44
- blocks, 4, 7, 12, 27, 29, 34, 35, 39, 44
- coastline, 4, 7, 19
- combined\_statistical\_areas, 8, 11, 22, 25, 43
- congressional\_districts, 9, 36
- core\_based\_statistical\_areas, 9, 10, 22, 25, 43
- counties, 5, 7, 11, 27, 29, 34, 35, 39, 44
- divisions, 13, 23, 32
- filter\_place, 13
- filter\_state, 14
- fips\_codes, 15
- geo\_join, 15
- grep\_place, 16
- grep\_state, 16
- is\_tigris, 17
- landmarks, 17
- linear\_water, 4, 7, 18
- list\_counties, 19
- list\_places, 20
- list\_states, 20
- lookup\_code, 21
- metro\_divisions, 9, 11, 22, 25, 43
- military, 22
- nation, 13, 23, 32
- native\_areas, 3, 24, 40–42
- new\_england, 9, 11, 22, 25, 43
- places, 5, 7, 12, 26, 29, 34, 35, 39, 44
- primary\_roads, 27, 28, 30, 33
- primary\_secondary\_roads, 27, 28, 30, 33
- pumas, 5, 7, 12, 27, 29, 34, 35, 39, 44
- rails, 27, 28, 30, 33
- rbind\_tigris, 31
- regions, 13, 23, 31
- roads, 27, 28, 30, 32
- school\_districts, 5, 7, 12, 27, 29, 33, 35, 39, 44
- state\_legislative\_districts, 10, 36
- states, 5, 7, 12, 27, 29, 34, 35, 39, 44
- tigris, 37
- tigris-exports, 37
- tigris-package (tigris), 37
- tigris\_type, 38
- tracts, 5, 7, 12, 27, 29, 34, 35, 38, 44
- tribal\_block\_groups, 3, 24, 39, 41, 42
- tribal\_census\_tracts, 3, 24, 40, 41, 42
- tribal\_subdivisions\_national, 3, 24, 40, 41, 42
- urban\_areas, 9, 11, 22, 25, 43
- zctas, 5, 7, 12, 27, 29, 34, 35, 39, 43