

# Package ‘totalcensus’

December 11, 2020

**Type** Package

**Title** Extract Decennial Census and American Community Survey Data

**Version** 0.6.5

**Author** Guanglai Li

**Maintainer** Guanglai Li <liguanghai@gmail.com>

**Date** 2020-12-10

**Description** Download summary files from Census Bureau <<https://www2.census.gov/>> and extract data, in particular high resolution data at block, block group, and tract level, from decennial census and American Community Survey 1-year and 5-year estimates.

**URL** <https://github.com/GL-Li/totalcensus>

**BugReports** <https://github.com/GL-Li/totalcensus/issues>

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** true

**Depends** R (>= 3.5.0)

**Imports** stringr (>= 1.2.0), data.table (>= 1.10.1), magrittr (>= 1.5), purrr (>= 0.2.4), utils (>= 3.3.2)

**Suggests** knitr, rmarkdown, ggmap, ggplot2

**RoxygenNote** 7.1.1

**NeedsCompilation** no

**Repository** CRAN

**Date/Publication** 2020-12-11 05:40:02 UTC

## R topics documented:

convert_fips_to_names . . . . .	3
dict_acs1_geocomponent . . . . .	4
dict_acs1_summarylevel . . . . .	5

dict_acs1_table . . . . .	5
dict_acs5_geocomponent . . . . .	6
dict_acs5_summarylevel . . . . .	7
dict_acs5_table . . . . .	7
dict_acs_geoheader_2005_1year . . . . .	8
dict_acs_geoheader_2006_2008_1year . . . . .	9
dict_acs_geoheader_2009_1year . . . . .	9
dict_acs_geoheader_2009_5year . . . . .	10
dict_acs_geoheader_2010 . . . . .	10
dict_acs_geoheader_2011_now . . . . .	11
dict_all_geocomponent_2000 . . . . .	12
dict_all_geocomponent_2010 . . . . .	12
dict_all_summarylevel . . . . .	13
dict_cbsa . . . . .	14
dict_decennial_geocomponent_2000 . . . . .	15
dict_decennial_geocomponent_2010 . . . . .	15
dict_decennial_geoheader_2000 . . . . .	16
dict_decennial_geoheader_2010 . . . . .	16
dict_decennial_summarylevel_2000 . . . . .	17
dict_decennial_summarylevel_2010 . . . . .	18
dict_decennial_table_2000 . . . . .	18
dict_decennial_table_2010 . . . . .	19
dict_fips . . . . .	19
download_census . . . . .	20
download_generated_data . . . . .	20
lookup_acs1year_2005 . . . . .	21
lookup_acs1year_2006 . . . . .	21
lookup_acs1year_2007 . . . . .	22
lookup_acs1year_2008 . . . . .	22
lookup_acs1year_2009 . . . . .	23
lookup_acs1year_2010 . . . . .	23
lookup_acs1year_2011 . . . . .	24
lookup_acs1year_2012 . . . . .	24
lookup_acs1year_2013 . . . . .	25
lookup_acs1year_2014 . . . . .	25
lookup_acs1year_2015 . . . . .	26
lookup_acs1year_2016 . . . . .	26
lookup_acs1year_2017 . . . . .	27
lookup_acs1year_2018 . . . . .	27
lookup_acs1year_2019 . . . . .	28
lookup_acs5year_2009 . . . . .	28
lookup_acs5year_2010 . . . . .	29
lookup_acs5year_2011 . . . . .	29
lookup_acs5year_2012 . . . . .	30
lookup_acs5year_2013 . . . . .	31
lookup_acs5year_2014 . . . . .	31
lookup_acs5year_2015 . . . . .	32
lookup_acs5year_2016 . . . . .	33

*convert\_fips\_to\_names* 3

lookup_acs5year_2017 . . . . .	33
lookup_acs5year_2018 . . . . .	34
lookup_acs5year_2019 . . . . .	35
lookup_decennial_2000 . . . . .	35
lookup_decennial_2010 . . . . .	36
read_acs1year . . . . .	37
read_acs5year . . . . .	38
read_decennial . . . . .	40
search_cbsa . . . . .	42
search_fips . . . . .	43
search_geocomponents . . . . .	44
search_geoheaders . . . . .	45
search_summarylevels . . . . .	46
search_tablecontents . . . . .	47
search_tables . . . . .	48
set_path_to_census . . . . .	49
states_DC . . . . .	49
table_content_acs1year_all_years . . . . .	50

**Index** 51

---

*convert\_fips\_to\_names* *convert fips codes to names of a geographies*

---

**Description**

convert fips codes to names of a geographies

**Usage**

```
convert_fips_to_names(  
  FIPs,  
  states = NULL,  
  geo_header = "STATE",  
  in_states = NULL  
)
```

**Arguments**

FIPs	string vector of fips code such as c("021", "002")
states	string vector of state abbreviations having same length as FIPs
geo_header	string, taking values of "STATE", "COUNTY", "PLACE", "COUSUB" or "CBSA".
in_states	which states are these FIPs generated from. Use state abbreviations or "US" for national. Vector of unique states.

**Value**

vector of names corresponding to FIPs and states

**Examples**

```

aaa <- convert_fips_to_names(c("11", "44"))
# [1] "DC" "RI"

bbb <- convert_fips_to_names(c("001", "013"), states = c("RI", "MA"), geo_header = "COUNTY")
# [1] "Bristol County" "Hampden County"

```

---

dict\_acs1\_geocomponent

*List of geographic components used in ACS 1 year surveys*

---

**Description**

List of geographic components used in ACS 1 year surveys

**Usage**

```
dict_acs1_geocomponent
```

**Format**

A data.table with 28 rows and 9 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

**state\_2009\_to\_now** wheather a geocomponent available in state files since 2009

**state\_2007\_2008** wheather a geocomponent available in state files in 2007 and 2008

**state\_2005\_2006** wheather a geocomponent available in state files in 2005 and 2006

**US\_2009\_to\_now** wheather a geocomponent available in national files since 2009

**US\_2007\_2008** wheather a geocomponent available in national files in 2007 and 2008

**US\_2006** wheather a geocomponent available in national files in 2006

**US\_2005** wheather a geocomponent available in national files in 2005

---

 dict\_acs1\_summarylevel

*List of summary levels used in ACS 1 year surveys*


---

**Description**

List of summary levels used in ACS 1 year surveys

**Usage**

dict\_acs1\_summarylevel

**Format**

A data.table with 23 rows and 5 variables

**code** code of summary level

**summary\_level** description of summary level

**state\_2006\_to\_now** wheather a summary level available in state files since 2006

**state\_2005** wheather a summary level available in state files in 2005

**US\_2005\_to\_now** wheather a summary level available in national files since 2005

---

 dict\_acs1\_table

*List of summary levels used in ACS 1 year surveys*


---

**Description**

List of summary levels used in ACS 1 year surveys

**Usage**

dict\_acs1\_table

**Format**

A data.table with 1811 rows and 16 variables:

**table\_number** table number such as "C27013"

**table\_name** description of the table

**acs1\_2019** whether the table is available in 2019

**acs1\_2018** whether the table is available in 2018

**acs1\_2017** whether the table is available in 2017

**acs1\_2016** whether the table is available in 2016

**acs1\_2015** whether the table is available in 2015  
**acs1\_2014** whether the table is available in 2014  
**acs1\_2013** whether the table is available in 2013  
**acs1\_2012** whether the table is available in 2012  
**acs1\_2011** whether the table is available in 2011  
**acs1\_2010** whether the table is available in 2010  
**acs1\_2009** whether the table is available in 2009  
**acs1\_2008** whether the table is available in 2008  
**acs1\_2007** whether the table is available in 2007  
**acs1\_2006** whether the table is available in 2006  
**acs1\_2005** whether the table is available in 2005  
**universe** universe of the table

---

dict\_acs5\_geocomponent

*List of geographic components used in ACS 5 year surveys*

---

### Description

List of geographic components used in ACS 5 year surveys

### Usage

dict\_acs5\_geocomponent

### Format

A data.table with 19 rows and 4 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

**state\_2009\_to\_now** whether a geocomponent available in state files since 2009

**US\_2009\_to\_now** whether a geocomponent available in national files since 2009

---

 dict\_acs5\_summarylevel

*List of summary levels used in ACS 5 year surveys*


---

**Description**

List of summary levels used in ACS 5 year surveys

**Usage**

dict\_acs5\_summarylevel

**Format**

A data.table with 87 rows and 8 variables

**code** code of summary level

**summary\_level** description of summary level

**state\_2013\_to\_now** wheather a summary level available in state files since 2013

**state\_2012** wheather a summary level available in state files in 2012

**state\_2009\_to\_2011** wheather a summary level available in state files in 2009 - 2011

**US\_2011\_to\_now** wheather a summary level available in national files since 2011

**US\_2010** wheather a summary level available in national files in 2010

**US\_2009** wheather a summary level available in national files in 2009

**Source**

generated from lookup datasets of years 2009 - 2016

---

 dict\_acs5\_table

*List of summary levels used in ACS 5 year surverys*


---

**Description**

List of summary levels used in ACS 5 year surverys

**Usage**

dict\_acs5\_table

**Format**

A data.table with 1174 rows and 14 variables:

**table\_number** table number such as "C27013"

**table\_name** description of the table

**acs5\_2019** whether the table is available in 2019

**acs5\_2018** whether the table is available in 2018

**acs5\_2017** whether the table is available in 2017

**acs5\_2016** whether the table is available in 2016

**acs5\_2015** whether the table is available in 2015

**acs5\_2014** whether the table is available in 2014

**acs5\_2013** whether the table is available in 2013

**acs5\_2012** whether the table is available in 2012

**acs5\_2011** whether the table is available in 2011

**acs5\_2010** whether the table is available in 2010

**acs5\_2009** whether the table is available in 2009

**universe** universe of the table

---

dict\_acs\_geoheader\_2005\_1year

*List of geographic headers used in 2005 ACS 1 year survey*

---

**Description**

List of geographic headers used in 2005 ACS 1 year survey

**Usage**

dict\_acs\_geoheader\_2005\_1year

**Format**

A data.table with 35 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

**Source**

2005 ACS Summary File [technical documentation](#), page 12.

---

dict\_acs\_geoheader\_2006\_2008\_1year

*List of geographic headers used in 2006 - 2008 ACS 1 year survey*

---

### **Description**

List of geographic headers used in 2006 - 2008 ACS 1 year survey

### **Usage**

dict\_acs\_geoheader\_2006\_2008\_1year

### **Format**

A data.table with 51 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

### **Source**

2008 ACS Summary File [technical documentation](#), page 13.

---

dict\_acs\_geoheader\_2009\_1year

*List of geographic headers in 2009 ACS 1 year survey*

---

### **Description**

List of geographic headers in 2009 ACS 1 year survey

### **Usage**

dict\_acs\_geoheader\_2009\_1year

### **Format**

A data.table with 50 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

**Source**

2016 ACS Summary File [technical documentation](#), page 11.

---

dict\_acs\_geoheader\_2009\_5year

*List of geographic headers used in ACS 5 year survey ending 2009*

---

**Description**

List of geographic headers used in ACS 5 year survey ending 2009

**Usage**

dict\_acs\_geoheader\_2009\_5year

**Format**

A data.table with 51 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

**Source**

2009 ACS Summary File [technical documentation](#), page 12.

---

dict\_acs\_geoheader\_2010

*List of geographic headers used in 2010 ACS 1 and 5 year surveys*

---

**Description**

List of geographic headers used in 2010 ACS 1 and 5 year surveys

**Usage**

dict\_acs\_geoheader\_2010

**Format**

A data.table with 53 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

**Source**

2016 ACS Summary File [technical documentation](#), page 11.

---

dict\_acs\_geoheader\_2011\_now

*List of geographic headers used in American Community Survey since 2011*

---

**Description**

List of geographic headers used in American Community Survey since 2011

**Usage**

dict\_acs\_geoheader\_2011\_now

**Format**

A data.table with 53 rows and 4 variables

**reference** reference of the geoheader

**field** description of the geoheader

**start** starting position of the geoheader in geography file

**end** ending position of the geoheader in geography file

**Source**

2016 ACS Summary File [technical documentation](#), page 10.

---

dict\_all\_geocomponent\_2000

*List of all geographic components, 2000 version*

---

**Description**

This dataset contains all available geographic components and codes.

**Usage**

dict\_all\_geocomponent\_2000

dict\_all\_geocomponent\_2000

**Format**

A data.table with 99 rows and 2 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

A data.table with 99 rows and 2 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

**Source**

2000 Census Summary File 1 [technical documentation](#) page 7-15

---

dict\_all\_geocomponent\_2010

*List of all geographic components, 2010 version*

---

**Description**

This dataset contains all available geographic components and codes.

**Usage**

dict\_all\_geocomponent\_2010

dict\_all\_geocomponent\_2010

**Format**

A data.table with 114 rows and 2 variables:

**code** code for the geocomponent, such as "01" and "M3"  
**geo\_component** description of the geographic component

A data.table with 114 rows and 2 variables:

**code** code for the geocomponent, such as "01" and "M3"  
**geo\_component** description of the geographic component

**Source**

2010 Census Summary File 1 [technical documentation](#) page 6-15

---

dict\_all\_summarylevel *List of all summary levels*

---

**Description**

List of all summary levels

**Usage**

dict\_all\_summarylevel

**Format**

A data.table with 216 rows and 2 variables

**code** code of summary level  
**summary\_level** description of summary level

**Source**

[Summary level code list](#)

---

dict_cbsa	<i>List CBSA code of Metropolitan Statistical Area/Micropolitan Statistical Area</i>
-----------	--

---

### Description

This dataset contains Metropolitan Statistical Area/Micropolitan Statistical Area CBSA code and title, plus associated metrodivision, CSA, state, and county code. Search for CBSA with function [search\\_cbsa](#).

### Usage

```
data("dict_cbsa")
```

### Format

A data.table with 1882 rows and 12 variables:

**CBSA** CBSA code

**CBSA\_title** CBSA title

**state\_full** full name of the state. A cbsa could include multiple states

**county** county or county equivalent

**CSA** code of the CSA to which the CBSA belongs

**CSA\_title** CSA title

**METDIV** metro division code

**METDIV\_title** metro division title

**metro\_micro** is the CBSA a metropolitan or a micropolitan statistic area

**STATE** FIPS of the state

**COUNTY** FIPS of the county

**central\_outlying** is the counry a central or outlying county in the CBSA

### Source

[List of CBSA](#)

---

dict\_decennial\_geocomponent\_2000

*List of geographic components and codes in census 2000*

---

### Description

This dataset contains the geographic components and codes used in Census 2000 summary file 1. Search geographic components with function [search\\_geocomponents](#).

### Usage

dict\_decennial\_geocomponent\_2000

### Format

A data.table with 98 rows and 4 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

**state\_file** wheather the geocomponent available in state files

**US\_file** wheather the geocomponent available in national files

### Source

2000 Census Summary File 1 [technical documentation](#) page 7-15

---

dict\_decennial\_geocomponent\_2010

*List of geographic components and codes in census 2010*

---

### Description

This dataset contains the geographic components and codes used in Census 2010 summary file 1 (with urban/rural update). Search geographic components with function [search\\_geocomponents](#).

### Usage

dict\_decennial\_geocomponent\_2010

### Format

A data.table with 96 rows and 4 variables:

**code** code for the geocomponent, such as "01" and "M3"

**geo\_component** description of the geographic component

**state\_file** wheather the geocomponent available in state files

**US\_file** wheather the geocomponent available in national files

**Source**

2010 Census Summary File 1 [technical documentation](#) page 6-15

---

dict\_decennial\_geoheader\_2000

*List of geographic headers in census 2000*

---

**Description**

This dataset has the complete list of geographic header references and their discription used in Census 2000 summary file 1. Search the dataset with function [search\\_geoheaders](#).

**Usage**

dict\_decennial\_geoheader\_2000

**Format**

A data.table with 83 rows and 4 variables

**reference** reference of the geoheader record

**field** description of the geoheader record field

**start** starting position of the geoheader in the record

**end** ending position of the geoheader in the record

**Source**

2000 Census Summary File 1 [technical documentation](#) page 2-7

---

dict\_decennial\_geoheader\_2010

*List of geographic headers in census 2010*

---

**Description**

This dataset has the complete list of geographic header references and their discription used in Census 2010 summary file 1 (with urban/rural update). Search the dataset with function [search\\_geoheaders](#).

**Usage**

dict\_decennial\_geoheader\_2010

### Format

A data.table with 101 rows and 4 variables

**reference** reference of the geoheader record

**field** description of the geoheader record field

**start** starting position of the geoheader in the record

**end** ending position of the geoheader in the record

### Source

2010 Census Summary File 1 [technical documentation](#) page 2-8

---

dict\_decennial\_summarylevel\_2000

*Summary levels available in Census 2000*

---

### Description

This data contains summary levels and codes used in census 2000 summary file 1. Search with function [search\\_summarylevels](#).

### Usage

```
dict_decennial_summarylevel_2000
```

### Format

A data.table with 114 rows and 4 variables

**code** code of summary level

**summary\_level** description of summary level

**in\_state\_file** wheather the summary level available in state files

**in\_US\_file** wheather the summary level available in national files

### Source

2000 Census Summary File 1 [technical documentation](#) page 4-1.

---

dict\_decennial\_summarylevel\_2010

*Summary levels available in Census 2010*

---

### Description

This data contains summary levels and codes used in census 2010 summary file 1 (with urban/rural update). Search with function [search\\_summarylevels](#).

### Usage

dict\_decennial\_summarylevel\_2010

### Format

A data.table with 165 rows and 4 variables

**code** code of summary level

**summary\_level** description of summary level

**in\_state\_file** wheather the summary level available in state files

**in\_US\_file** wheather the summary level available in national files

### Source

2010 Census Summary File 1 [technical documentation](#) page 4-16 state summary file with urban/rural update

---

dict\_decennial\_table\_2000

*Complete list of 2000 census tables*

---

### Description

This dataset contains all census tables in census 2000 summary file 1.

### Usage

dict\_decennial\_table\_2000

### Format

A data.table with 286 rows and 4 variables:

**table\_number** table number such as "H1", "PCT22G"

**table\_name** description of the table

**universe** universe of the data

**table\_ref** reference code such as "H0010", "PCT022G"

**Source**

2000 Census Summary File 1 [technical documentation](#) all across chapter 5.

---

dict\_decennial\_table\_2010

*Complete list of 2010 census tables*

---

**Description**

This dataset contains all census tables in census 2010 summary file 1 (with urban/rural update).

**Usage**

dict\_decennial\_table\_2010

**Format**

A data.table with 333 rows and 4 variables:

**table\_number** table number such as "H1", "PCT22G"

**table\_name** description of the table

**universe** universe of the data

**table\_ref** reference code such as "H0010", "PCT022G"

**Source**

2010 Census Summary File 1 [technical documentation](#) chapter 5.

---

dict\_fips

*List of FIPS code as of 2016 in the US*

---

**Description**

This dataset contains a list of FIPS of states, counties, county subdivisions, places, consolidated cities, and their names and summary levels as well as full name and abbreviation of state. It does NOT contain FIPS of many small areas. Search for FIPS with function [search\\_fips](#).

**Usage**

data("dict\_fips")

**Format**

A data.table with 43934 rows and 9 variables:

**state\_full** full name of a state such as "Alabama"

**state\_abbr** abbreviation of a state such as "AL"

**STATE** FIPS code of the state

**SUMLEV** summary level of the entry in the row

**COUNTY** FIPS code of county

**CUSUB** FIPS of COUnTy SUBdivision

**PLACE** FIPS code of place

**CONCIT** FIPS code of CONsolidated CITY

**NAME** name of the entry in the row

**Source**

List of FIPS as of 2016

---

download_census	<i>download census data</i>
-----------------	-----------------------------

---

**Description**

Download decennial census and ACS 5-year and 1-year data from United States Census bureau. It also download generated data from Census 2010 if not exist.

**Usage**

```
download_census(survey, year, states = c(states_DC, "US", "PR"))
```

**Arguments**

survey	Which survey to download from, "decennial", "acs5year", or "acs1year"
year	year or ending year of the survey
states	vector of abbreviations of states such as c("MA", "RI")

---

download_generated_data	<i>Download data generated from Census 2010</i>
-------------------------	---

---

**Description**

This function downloads data generated from Census 2010 from Census 2010.

**Usage**

```
download_generated_data()
```

---

lookup\_acs1year\_2005 *ACS 1-year 2005 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2005

**Format**

A data.table with 27246 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2006 *ACS 1-year 2006 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2006

**Format**

A data.table with 27986 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2007 *ACS 1-year 2007 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2007

### Format

A data.table with 29709 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2008 *ACS 1-year 2008 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2008

### Format

A data.table with 34403 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2009 *ACS 1-year 2009 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2009

**Format**

A data.table with 34408 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2010 *ACS 1-year 2010 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2010

**Format**

A data.table with 35240 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2011 *ACS 1-year 2011 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2011

### Format

A data.table with 34454 rows and 6 variables

**file\_segment** sequence number of segment data files, from "0001" to "0165"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2012 *ACS 1-year 2012 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2012

### Format

A data.table with 34394 rows and 6 variables

**file\_segment** sequence number of segment data files, from "0001" to "0165"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2013 *ACS 1-year 2013 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2013

**Format**

A data.table with 32752 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0165"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2014 *ACS 1-year 2014 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2014

**Format**

A data.table with 31711 rows and 6 variables

**file\_segment** sequence number of segment data files, from "0001" to "0165"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2015 *ACS 1-year 2015 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2015

### Format

A data.table with 31751 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0165"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2016 *ACS 1-year 2016 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2016

### Format

A data.table with 31835 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2017 *ACS 1-year 2017 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2017

**Format**

A data.table with 33749 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2018 *ACS 1-year 2018 file segment and table lookup data*

---

**Description**

There is slightly difference in the lookup tables of each year.

**Usage**

lookup\_acs1year\_2018

**Format**

A data.table with 35502 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs1year\_2019 *ACS 1-year 2019 file segment and table lookup data*

---

### Description

There is slightly difference in the lookup tables of each year.

### Usage

lookup\_acs1year\_2019

### Format

A data.table with 35527 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0166"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2009 *ACS 5-year 2009 file segment and table lookup data*

---

### Description

ACS 5-year 2009 file segment and table lookup data

### Usage

lookup\_acs5year\_2009

### Format

A data.table with 21207 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2010 *ACS 5-year 2010 file segment and table lookup data*

---

**Description**

ACS 5-year 2010 file segment and table lookup data

**Usage**

lookup\_acs5year\_2010

**Format**

A data.table with 21487 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2011 *ACS 5-year 2011 file segment and table lookup data*

---

**Description**

ACS 5-year 2011 file segment and table lookup data

**Usage**

lookup\_acs5year\_2011

**Format**

A data.table with 21038 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2012 *ACS 5-year 2012 file segment and table lookup data*

---

**Description**

ACS 5-year 2012 file segment and table lookup data

**Usage**

lookup\_acs5year\_2012

**Format**

A data.table with 22527 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2013 *ACS 5-year 2013 file segment and table lookup data*

---

**Description**

ACS 5-year 2013 file segment and table lookup data

**Usage**

lookup\_acs5year\_2013

**Format**

A data.table with 22711 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2014 *ACS 5-year 2014 file segment and table lookup data*

---

**Description**

ACS 5-year 2014 file segment and table lookup data

**Usage**

lookup\_acs5year\_2014

**Format**

A data.table with 22627 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2015 *ACS 5-year 2015 file segment and table lookup data*

---

**Description**

ACS 5-year 2015 file segment and table lookup data

**Usage**

lookup\_acs5year\_2015

**Format**

A data.table with 22910 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2016 *ACS 5-year 2016 file segment and table lookup data*

---

**Description**

ACS 5-year 2016 file segment and table lookup data

**Usage**

lookup\_acs5year\_2016

**Format**

A data.table with 22958 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2017 *ACS 5-year 2017 file segment and table lookup data*

---

**Description**

ACS 5-year 2017 file segment and table lookup data

**Usage**

lookup\_acs5year\_2017

**Format**

A data.table with 25070 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2018 *ACS 5-year 2018 file segment and table lookup data*

---

**Description**

ACS 5-year 2018 file segment and table lookup data

**Usage**

lookup\_acs5year\_2018

**Format**

A data.table with 26996 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

**Source**

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_acs5year\_2019 *ACS 5-year 2019 file segment and table lookup data*

---

### Description

ACS 5-year 2019 file segment and table lookup data

### Usage

lookup\_acs5year\_2019

### Format

A data.table with 27039 rows and 7 variables

**file\_segment** sequence number of segment data files, from "0001" to "0122"

**table\_content** description of columns in a table

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**restriction** restrictions applied the the table\_content

**table\_number** table number such as "B01001"

**table\_name** description of table. A table has multiple columns (table\_content)

**universe** the universe of the data

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

---

lookup\_decennial\_2000 *Lookup data files and table contents of Census 2000*

---

### Description

This dataset includes all data fields of data files in census 2000 summary file 1. Function [search\\_tablecontents](#) searches content in this dataset.

### Usage

lookup\_decennial\_2000

**Format**

A data.table with 8321 rows and 6 variables:

**file\_segment** sequence number of segment data files, from 1 to 48

**table\_content** description of columns in a decennial table

**reference** reference of table content, such as "PCT0240019"

**table\_number** table number such as "H1", "PCT22G"

**table\_name** description of table, which has many table\_content

**universe** the universe of the decennial data

**Source**

2000 Census Summary File 1 [technical documentation](#) chapter 7.

---

lookup\_decennial\_2010 *Lookup data files and table contents of Census 2010*

---

**Description**

This dataset includes all data fields of data files in census 2010 summary file 1 (with urban/rural update). Function [search\\_tablecontents](#) searches content in this dataset.

**Usage**

```
lookup_decennial_2010
```

**Format**

A data.table with 9199 rows and 6 variables:

**file\_segment** sequence number of segment data files, from 1 to 48

**table\_content** description of columns in a decennial table

**reference** reference of table content, such as "PCT0240019"

**table\_number** table number such as "H1", "PCT22G"

**table\_name** description of table, which has many table\_content

**universe** the universe of the decennial data

**Source**

2010 Census Summary File 1 [technical documentation](#) chapter 6.

---

read_acs1year	<i>Read summary file 1 of ACS 1-year estimates</i>
---------------	--

---

## Description

This function retrieves data from summary file of ACS 1-year estimates. In addition to selected geographic headers and table contents, it also returns total population and coordinates of selected geographic areas, as well as summary levels and geographic components.

## Usage

```
read_acs1year(
  year,
  states,
  table_contents = NULL,
  areas = NULL,
  geo_headers = NULL,
  summary_level = NULL,
  geo_comp = "total",
  with_margin = FALSE,
  dec_fill = NULL,
  show_progress = TRUE
)
```

## Arguments

year	year of the estimate
states	vector of state abbreviations, such as "IN" and c("MA", "RI").
table_contents	selected references of contents in census tables. Users can choose a name for each reference, such as in c("abc = B01001_009", "fff = B00001_001"). Try to make names meaningful. To find the references of table contents of interest, search with function <a href="#">search_tablecontents</a> .
areas	For metro area, in the format like "New York metro". For county, city, or town, must use the exact name as those in <a href="#">dict_fips</a> in the format like "kent county, RI", "Boston city, MA", and "Lincoln town, RI". And special examples like "Salt Lake City city, UT" must keep the "city" after "City".
geo_headers	vector of references of selected geographic headers to be included in the return. Search with <a href="#">search_geoheaders</a>
summary_level	select which summary level to keep, default to keep all. It takes strings including "state", "county", "county subdivision", "place", "tract", "block group", and "block" for the most common levels. It also take code. Search all codes with <a href="#">search_summarylevels</a> .
geo_comp	select which geographic component to keep, "*" to keep every geo-component, "total" for "00", "urban" for "01", "urbanized area" for "04", "urban cluster" for "28", "rural" for "43". Others should input code, which can be found with

function `search_geocomponents`. Availability of geocomponent depends on summary level.

`with_margin` read also margin of error in addition to estimate

`dec_fill` whether to fill `geo_headers` codes with data from decennial census. The '#' codes in ACS summary file are incomplete. "dec2010" using decennial census 2010 data.

`show_progress` whether to show progress in `fread()`

### Value

A data.table of selected data.

### Examples

```
## Not run:
# read summary data using areas of selected cities
aaa <- read_acs1year(
  year = 2016,
  states = c("UT", "RI"),
  table_contents = c("male = B01001_002", "female = B01001_026"),
  areas = c("Salt Lake City city, UT",
            "Providence city, RI",
            "PLACE = RI19180"),
  summary_level = "place",
  with_margin = TRUE
)

# read data using geoheaders - all major counties
bbb <- read_acs1year(
  year = 2015,
  states = c("UT", "RI"),
  table_contents = c("male = B01001_002", "female = B01001_026"),
  geo_headers = c("COUNTY"),
  summary_level = "county",
  with_margin = TRUE
)

## End(Not run)
```

---

read\_acs5year

*Read ACS 5-year estimates*

---

### Description

This function retrieves data from summary file of ACS 5-year estimates. In addition to selected geographic headers and table contents, it also returns total population and coordinates of selected geographic areas, as well as summary levels and geographic components.

**Usage**

```
read_acs5year(
  year,
  states,
  table_contents = NULL,
  areas = NULL,
  geo_headers = NULL,
  summary_level = NULL,
  geo_comp = "total",
  with_margin = FALSE,
  dec_fill = NULL,
  show_progress = TRUE
)
```

**Arguments**

<code>year</code>	ending year of the 5-year estimate
<code>states</code>	vector of state abbreviations, such as "IN" and <code>c("MA", "RI")</code> .
<code>table_contents</code>	selected references of contents in census tables. Users can choose a name for each reference, such as in <code>c("abc = B01001_009", "fff = B00001_001")</code> . Try to make names meaningful. To find the references of table contents of interest, search with function <a href="#">search_tablecontents</a> .
<code>areas</code>	For metro area, in the format like "New York metro". For county, city, or town, must use the exact name as those in <a href="#">dict_fips</a> in the format like "kent county, RI", "Boston city, MA", and "Lincoln town, RI". And special examples like "Salt Lake City city, UT" must keep the "city" after "City".
<code>geo_headers</code>	vector of references of selected geographic headers to be included in the return, like "COUNTY" or <code>c("PLACE", "CBSA")</code> . Search with <a href="#">search_geoheaders</a>
<code>summary_level</code>	select which summary level to keep, default to keep all. It takes string including "state", "county", "county subdivision", "place", "tract", "block group", and "block" for the most common levels. It also take code. Search all codes with <a href="#">search_summarylevels</a> .
<code>geo_comp</code>	select which geographic component to keep, "*" to keep every geo-component, "total" for "00", "urban" for "01", "urbanized area" for "04", "urban cluster" for "28", "rural" for "43". Others should input code, which can be found with function <a href="#">search_geocomponents</a> . Availability of geocomponent depends on summary level.
<code>with_margin</code>	read also margin of error in addition to estimate
<code>dec_fill</code>	whether to fill <code>geo_headers</code> codes with data from decennial census. The codes in ACS summary file are incomplete. "dec2010" using decennial census 2010 data
<code>show_progress</code>	whether to show progress in <code>fread()</code>

**Value**

A data.table of selected data.

## Examples

```
## Not run:
# read data using areas
aaa <- read_acs5year(
  year = 2015,
  states = c("UT", "RI"),
  table_contents = c(
    "white = B02001_002",
    "black = B02001_003",
    "asian = B02001_005"
  ),
  areas = c(
    "Lincoln town, RI",
    "Salt Lake City city, UT",
    "Salt Lake City metro",
    "Kent county, RI",
    "COUNTY = UT001",
    "PLACE = UT62360"
  ),
  summary_level = "block group",
  with_margin = TRUE
)

# read data using geoheaders
bbb <- read_acs5year(
  year = 2015,
  states = c("UT", "RI"),
  table_contents = c("male = B01001_002", "female = B01001_026"),
  geo_headers = "PLACE",
  summary_level = "block group"
)

## End(Not run)
```

---

read\_decennial

*Read decennial census data*

---

## Description

This function retrieves data from summary file 1 (with urban/rural update) of decennial censuses. In addition to selected geographic headers and table contents, it also returns total population and coordinates of selected geographic areas, as well as summary levels and geographic components.

## Usage

```
read_decennial(
  year,
```

```

states,
table_contents = NULL,
areas = NULL,
geo_headers = NULL,
summary_level = NULL,
geo_comp = "total",
show_progress = TRUE
)

```

## Arguments

year	year of the decennial census
states	vector of state abbreviations, for example "IN" or c("MA", "RI").
table_contents	selected references of contents in census tables. Users can choose a name for each reference, such as in c("abc = PCT012F139", "fff = P0030008", "rural_p = P0020005"). Try to make names meaningful. To find the references of table contents of interest, search with function <a href="#">search_tablecontents</a> .
areas	For metro area, in the format like "New York metro". For county, city, or town, must use the exact name as those in <a href="#">dict_fips</a> in the format like "kent county, RI", "Boston city, MA", and "Lincoln town, RI". And special examples like "Salt Lake City city, UT" must keep the "city" after "City".
geo_headers	vector of references of selected geographic headers to be included in the return. Search with <a href="#">search_geoheaders</a>
summary_level	select which summary level to keep, default to keep all. It takes strings including "state", "county", "county subdivision", "place", "tract", "block group", and "block" for the most common levels. It also take code for level. Search all codes with <a href="#">search_summarylevels</a> .
geo_comp	select which geographic component to keep, "*" to keep every geo-component, "total" for "00", "urban" for "01", "urbanized area" for "04", "urban cluster" for "28", "rural" for "43". For all other geographic component, use code, which can be found with <a href="#">search_geocomponents</a> . Availability of geocomponent depends on summary level. State level contains all geographic component. County subdivision and higher level have "00", "01", and "43". Census tract and lower level have only "00".
show_progress	show progress of file reading if TRUE. Turn off if FALSE, which is useful in RMarkdown output.

## Value

A data.table whose columns include the selected geoheaders and table contents plus SUMLEV, GEOCOMP, and state.

## Examples

```

## Not run:
# read one table and one area from one state
aaa = read_decennial(

```

```

year = 2010,
states = "UT",
table_contents = c("urban = P0020002", "rural = P0020005"),
geo_headers = "CBSA",
summary_level = "tract"
)

# read multiple table contents and areas from multiple states
bbb = read_decennial(
  year = 2010,
  states = c("UT", "RI"),
  table_contents = c("urban = P0020002", "rural = P0020005"),
  areas = c(
    "place = ut62360",
    "Providence city, RI",
    "cousub = ri41500",
    "cbsa = 39300"
  ),
  summary_level = "block"
)

# read table contents of all county subdivisions in Providence metro
ccc <- read_decennial(
  year = 2010,
  states = "US",
  table_contents = c("urban = P0020002", "rural = P0020005"),
  geo_headers = "CBSA",
  summary_level = "county subdivision",
  geo_comp = "*"
)

## End(Not run)

```

---

search\_cbsa

*Search Core Based Statistical Area (CBSA)*


---

### Description

Search CBSA code of Core Based Statistical Area in dataset [dict\\_cbsa](#). The search also returns which CSA (Combined Statistical Area) that contains the CBSA. If the CBSA contains multiple counties, each county is returned as a row.

### Usage

```
search_cbsa(keywords = NULL, view = TRUE)
```

**Arguments**

keywords	keywords to be searched.
view	display the search result with View if TRUE.

**Details**

Quite often, multiple rows are returned. It is necessary to hand pick the right one you are really looking for.

**Value**

A data.table

**Examples**

```
# Change view = TRUE (default) to View the returned data.
aaa <- search_cbsa("providence", view = FALSE)

bbb <- search_cbsa("new york", view = FALSE)

## Not run:
# view all CBSA code
search_cbsa()

## End(Not run)
```

---

search\_fips

*Search FIPS Codes*

---

**Description**

Search FIPS code of a states, counties, county subdivisions, places, or consolidated cities in dataset [dict\\_fips](#). The search also returns summary levels.

**Usage**

```
search_fips(keywords = NULL, state = NULL, view = TRUE)
```

**Arguments**

keywords	keyword to be searched in NAMES or FIPS.
state	abbreviation of a state.
view	display the search result with View if TRUE.

## Details

Quite often, multiple rows are returned. It is necessary to hand pick the right one you are really looking for.

The function `search_fips` has changed summary level 061 to 060, and 162 to 160 in search results. The summary levels in `dict_fips` are 010, 040, 050, 061, 162, and 170. The level 061 is for Minor Civil Division (MCD)/Census County Division (CCD) (10,000+). It does not appear in those used in decennial census and ACS surveys, which instead have 060 for County Subdivision. Level 061 is part of 060 and is replaced with 060 in order to use the census data. Similarly, 162 is replaced with 160.

## Value

A data.table

## Examples

```
# Change view = TRUE (default) to View the returned data.table.

# Search fips of Lincoln in Rhode Island.
aaa <- search_fips("lincoln", "RI", view = FALSE)

# search FIPS number in all states
bbb <- search_fips("08375", view = FALSE)

## Not run:
# view all fips code
search_fips()

## End(Not run)
```

---

search\_geocomponents *Search Geographic Components*

---

## Description

Search the code or content of geographic components for `geo_comp` argument in function `read_decennial`, `read_acs1year`, and `read_acs5year`.

## Usage

```
search_geocomponents(survey, years = NULL, keywords = NULL, view = TRUE)
```

**Arguments**

survey	survey type, including "dec" (or "decennial"), "acs1" or "acs5".
years	year or ending year of the survey, can be a single year such as 2010 or a vector like 2014:2016.
keywords	keyword to search in code or description, in the form like "abc def dsdfs". Rows with all words are returned.
view	display the search result with View if TRUE

**Details**

The most frequently used geographic components are:

00 : all geographic component 01 : urban 43 : rural

**Value**

A data.table

**Examples**

```
# Change view = TRUE (default) to View the returned data.
aaa <- search_geocomponents("decennial", 2010, "urban", view = FALSE)
bbb <- search_geocomponents("acs5", 2011:2015, "43", view = FALSE)

## Not run:
# view all geocomponents
search_geocomponents("dec")
search_geocomponents("acs5")

## End(Not run)
```

---

search\_geoheaders      *Search Geographic Headers*

---

**Description**

Search in field reference or description of geographic header records to find the reference of "geo\_headers" argument in function [read\\_decennial](#), [read\\_acs1year](#), and [read\\_acs5year](#).

**Usage**

```
search_geoheaders(survey, years = NULL, keywords = NULL, view = TRUE)
```

**Arguments**

survey	survey type, including "dec" (or "decennial"), "acs1" or "acs5".
years	year or ending year of the survey, can be a single year such as 2010 or a vector like 2014:2016.
keywords	keyword to search in code or description, in the form like "abc def dsdfs". Rows with all words are returned.
view	display the search result with View if TRUE

**Value**

data.table matching the search criteria

**Examples**

```
# Change view = TRUE (default) to View the returned data.
# search geoheader that contains keyword "india" in decennial 2010
aaa <- search_geoheaders("decennial", 2000, "india", view = FALSE)

# search for latitude
bbb <- search_geoheaders("dec", 2010, "latitu", view = FALSE)

## Not run:
# browse all geoheaders in ACS i year in View()
search_geoheaders("acs1")

## End(Not run)
```

---

search\_summarylevels *Search Summary Levels*

---

**Description**

Search code or description of summary levels for summary\_level argument in function [read\\_decennial](#), [read\\_acs1year](#), and [read\\_acs5year](#).

**Usage**

```
search_summarylevels(survey, years = NULL, keywords = NULL, view = TRUE)
```

**Arguments**

survey	survey type, including "dec" (or "decennial"), "acs1" or "acs5".
years	year or ending year of the survey, can be a single year such as 2010 or a vector like 2014:2016.
keywords	keyword to search in code or description, in the form like "abc def dsdfs". Rows with all words are returned.
view	display the search result with View if TRUE

**Value**

A data.table of searched results.

**Examples**

```
# Change view = TRUE (default) to View the returned data.
aaa = search_summarylevels("decennial", 2010, "block", view = FALSE)
bbb <- search_summarylevels("acs5", 2009:2010, "40", view = FALSE)

## Not run:
# view all summary levels
search_summarylevels("decennial")
search_summarylevels("acs1")

## End(Not run)
```

---

search\_tablecontents    *Search Table Contents*

---

**Description**

Search in lookup datasets of each survey to find references of table\_contents argument in function [read\\_decennial](#), [read\\_acs1year](#), and [read\\_acs5year](#).

**Usage**

```
search_tablecontents(survey, years = NULL, keywords = NULL, view = TRUE)
```

**Arguments**

survey	survey type, including "dec" (or "decennial"), "acs1" or "acs5".
years	year or ending year of the survey, can be a single year such as 2010 or a vector like 2014:2016.
keywords	keyword to search in code or description, in the form like "abc def dsdfs". Rows with all words are returned.
view	display the search result with View if TRUE

**Value**

A data.table

**Examples**

```
# Change view = TRUE (default) to View the returned data.
# search by what you want
aaa <- search_tablecontents("dec", 2000, "federal prison", view = FALSE)

## Not run:
# view all decennial census table contents
search_tablecontents("dec")

# view all ACS 5 year table contents
search_tablecontents("acs5")

## End(Not run)
```

---

search\_tables

*Search Tables*


---

**Description**

Search table numbers and description.

**Usage**

```
search_tables(survey, years = NULL, keywords = NULL, view = TRUE)
```

**Arguments**

survey	survey type, including "dec" (or "decennial"), "acs1" or "acs5".
years	year or ending year of the survey, can be a single year such as 2010 or a vector like 2014:2016.
keywords	keyword to search in code or description, in the form like "abc def dsdfs". Rows with all words are returned.
view	display the search result with View if TRUE

**Value**

A data.table

**Examples**

```
# Change view = TRUE (default) to View the returned data.
aaa <- search_tables("dec", 2010, "occupancy", view = FALSE)
bbb <- search_tables("acs5", 2014:2016, "detailed race", view = FALSE)

## Not run:
# view all tables
search_tables("dec")
```

```
search_tables("acs1")  
## End(Not run)
```

---

set_path_to_census	<i>Set file path to directory storing downloaded census data</i>
--------------------	--

---

**Description**

Set file path to directory storing downloaded census data

**Usage**

```
set_path_to_census(path)
```

**Arguments**

path	path to directory holding all downloaded census data, such as "E:/my_census_data" and "~/my_census_data/".
------	--

---

states_DC	<i>Vector of the abbreviations of 50 states and DC</i>
-----------	--

---

**Description**

Abbreviation only

**Usage**

```
data("states_DC")
```

**Format**

A vector of 51 element

---

table\_content\_acs1year\_all\_years  
*ACS 1-year table contents of all years*

---

### Description

There is slightly difference in the table contents of each year.

### Usage

table\_content\_acs1year\_all\_years

### Format

A data.table with 27246 rows and 7 variables

**reference** reference of the table content, such as "B01001\_002". The reference is used to extract data of table content.

**table\_content** description of columns in a table

**table\_name** table names

**acs1\_2019** restriction and availability of table content in 2019

**acs1\_2018** restriction and availability of table content in 2018

**acs1\_2017** restriction and availability of table content in 2017

**acs1\_2017** restriction and availability of table content in 2016

**acs1\_2015** restriction and availability of table content in 2015

**acs1\_2014** restriction and availability of table content in 2014

**acs1\_2013** restriction and availability of table content in 2013

**acs1\_2012** restriction and availability of table content in 2012

**acs1\_2011** restriction and availability of table content in 2011

**acs1\_2010** restriction and availability of table content in 2010

**acs1\_2009** restriction and availability of table content in 2009

**acs1\_2008** restriction and availability of table content in 2008

**acs1\_2007** restriction and availability of table content in 2007

**acs1\_2006** restriction and availability of table content in 2006

**acs1\_2005** restriction and availability of table content in 2005

**universe** the universe of the data

### Source

Check for each year of ACS 1-year and 5-year [Sequence Number/Table Number Lookup File](#).

# Index

## \* datasets

dict\_acs1\_geocomponent, 4  
dict\_acs1\_summarylevel, 5  
dict\_acs1\_table, 5  
dict\_acs5\_geocomponent, 6  
dict\_acs5\_summarylevel, 7  
dict\_acs5\_table, 7  
dict\_acs\_geoheader\_2005\_1year, 8  
dict\_acs\_geoheader\_2006\_2008\_1year, 9  
dict\_acs\_geoheader\_2009\_1year, 9  
dict\_acs\_geoheader\_2009\_5year, 10  
dict\_acs\_geoheader\_2010, 10  
dict\_acs\_geoheader\_2011\_now, 11  
dict\_all\_geocomponent\_2000, 12  
dict\_all\_geocomponent\_2010, 12  
dict\_all\_summarylevel, 13  
dict\_cbsa, 14  
dict\_decennial\_geocomponent\_2000, 15  
dict\_decennial\_geocomponent\_2010, 15  
dict\_decennial\_geoheader\_2000, 16  
dict\_decennial\_geoheader\_2010, 16  
dict\_decennial\_summarylevel\_2000, 17  
dict\_decennial\_summarylevel\_2010, 18  
dict\_decennial\_table\_2000, 18  
dict\_decennial\_table\_2010, 19  
dict\_fips, 19  
lookup\_acs1year\_2005, 21  
lookup\_acs1year\_2006, 21  
lookup\_acs1year\_2007, 22  
lookup\_acs1year\_2008, 22  
lookup\_acs1year\_2009, 23  
lookup\_acs1year\_2010, 23  
lookup\_acs1year\_2011, 24  
lookup\_acs1year\_2012, 24  
lookup\_acs1year\_2013, 25  
lookup\_acs1year\_2014, 25  
lookup\_acs1year\_2015, 26  
lookup\_acs1year\_2016, 26  
lookup\_acs1year\_2017, 27  
lookup\_acs1year\_2018, 27  
lookup\_acs1year\_2019, 28  
lookup\_acs5year\_2009, 28  
lookup\_acs5year\_2010, 29  
lookup\_acs5year\_2011, 29  
lookup\_acs5year\_2012, 30  
lookup\_acs5year\_2013, 31  
lookup\_acs5year\_2014, 31  
lookup\_acs5year\_2015, 32  
lookup\_acs5year\_2016, 33  
lookup\_acs5year\_2017, 33  
lookup\_acs5year\_2018, 34  
lookup\_acs5year\_2019, 35  
lookup\_decennial\_2000, 35  
lookup\_decennial\_2010, 36  
states\_DC, 49  
table\_content\_acs1year\_all\_years, 50

convert\_fips\_to\_names, 3

dict\_acs1\_geocomponent, 4  
dict\_acs1\_summarylevel, 5  
dict\_acs1\_table, 5  
dict\_acs5\_geocomponent, 6  
dict\_acs5\_summarylevel, 7  
dict\_acs5\_table, 7  
dict\_acs\_geoheader\_2005\_1year, 8  
dict\_acs\_geoheader\_2006\_2008\_1year, 9  
dict\_acs\_geoheader\_2009\_1year, 9  
dict\_acs\_geoheader\_2009\_5year, 10  
dict\_acs\_geoheader\_2010, 10  
dict\_acs\_geoheader\_2011\_now, 11  
dict\_all\_geocomponent\_2000, 12  
dict\_all\_geocomponent\_2010, 12

dict\_all\_summarylevel, 13  
dict\_cbsa, 14, 42  
dict\_decennial\_geocomponent\_2000, 15  
dict\_decennial\_geocomponent\_2010, 15  
dict\_decennial\_geoheader\_2000, 16  
dict\_decennial\_geoheader\_2010, 16  
dict\_decennial\_summarylevel\_2000, 17  
dict\_decennial\_summarylevel\_2010, 18  
dict\_decennial\_table\_2000, 18  
dict\_decennial\_table\_2010, 19  
dict\_fips, 19, 37, 39, 41, 43, 44  
download\_census, 20  
download\_generated\_data, 20

lookup\_acs1year\_2005, 21  
lookup\_acs1year\_2006, 21  
lookup\_acs1year\_2007, 22  
lookup\_acs1year\_2008, 22  
lookup\_acs1year\_2009, 23  
lookup\_acs1year\_2010, 23  
lookup\_acs1year\_2011, 24  
lookup\_acs1year\_2012, 24  
lookup\_acs1year\_2013, 25  
lookup\_acs1year\_2014, 25  
lookup\_acs1year\_2015, 26  
lookup\_acs1year\_2016, 26  
lookup\_acs1year\_2017, 27  
lookup\_acs1year\_2018, 27  
lookup\_acs1year\_2019, 28  
lookup\_acs5year\_2009, 28  
lookup\_acs5year\_2010, 29  
lookup\_acs5year\_2011, 29  
lookup\_acs5year\_2012, 30  
lookup\_acs5year\_2013, 31  
lookup\_acs5year\_2014, 31  
lookup\_acs5year\_2015, 32  
lookup\_acs5year\_2016, 33  
lookup\_acs5year\_2017, 33  
lookup\_acs5year\_2018, 34  
lookup\_acs5year\_2019, 35  
lookup\_decennial\_2000, 35  
lookup\_decennial\_2010, 36

read\_acs1year, 37, 44–47  
read\_acs5year, 38, 44–47  
read\_decennial, 40, 44–47

search\_cbsa, 14, 42  
search\_fips, 19, 43, 44  
search\_geocomponents, 15, 38, 39, 41, 44  
search\_geoheaders, 16, 37, 39, 41, 45  
search\_summarylevels, 17, 18, 37, 39, 41, 46  
search\_tablecontents, 35–37, 39, 41, 47  
search\_tables, 48  
set\_path\_to\_census, 49  
states\_DC, 49  
table\_content\_acs1year\_all\_years, 50